TortoiseSVN

Windows klient pre Subversion

Version 1.14

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Publication date 2020/05/17 12:04:50 (r28864)

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Predhovor

Správa verzií je umenie prevodu zmien na informácie. Je to dlhú dobu neodmysliteľná pomôcka pre programátorov, ktorí zvyčajne trávili svoj čas tvorbou malej zmeny na softvéry a potom vráteniu alebo kontrole týchto zmien na ďalší deň. Predstavte si tím takýchto programátorov, ktorí pracujú súčasne na rovnakom projekte - a prípadne aj súčasne na rovnakých súboroch! - a pochopíte, prečo je dobrý systém kontroly verzií potrebný pre *spravovanie možného chaosu*.

1. Čo je TortoiseSVN?

TortoiseSVN je bezplatný Windows klient s voľným zdrojovým kódom (free/open-source) pre systém správy verzií *Apache™ Subversion®* . To znamená, že TortoiseSVN spravuje súbory a adresáre v priebehu času. Súbory sú uložené v centrálnom *úložisku*. Úložisko je podoné ako bežnému súborovému serveru, s výnimkou, že si pamätá každú zmenu na vašich súboroch a adresároch. To vám umožní obnoviť staršie verzie vašich súborov a skúmať históriu, ako a kedy sa údaje zmenili, a kto to zmenil. To je dôvod, prečo mnoho ľudí rozmýšla o Subversion a systémoch správy verzií všeobecne ako akómsi “stroji času”.

Niektoré systémy správy verzií sú aj systémy správy konfigurácie softvéru (SCM). Tieto systémy sú špeciálne prispôsobené pre správu stromov zdrojových kódov, a majú mnoho vlastností, ktoré sú špecifické pre vývoj software - napríklad nativné pochopenie programovacích jazykov, alebo dodávajú nástroje pre budovanie softvéru. Subversion však nie je ani jeden z týchto systémov; je to všeobecný systém, ktorý môže byť použitý k správe *akéjkoľvek* kolekcií súborov, vrátane zdrojového kódu.

2. Vlastnosti TortoiseSVN

Čo robí TortoiseSVN tak dobrým klientom pre Subversion? Tu je krátky zoznam funkcií:

Intergrovanie do šelu

TortoiseSVN sa hladko integruje do systému Windows (t.j. Prieskumníka - Explorer). To znamená, že môžete ďalej pracovať s nástrojmi, s ktorými ste už oboznámení. A nemusíte prechádzať do inej aplikácie zakaždým, keď budete potrebovať funkcie pre správu verzií!

A nie ste ani nútení používať Prieskumníka (Windows Explorer). Kontextové menu TortoiseSVN pracuje v mnohých iných súborových správcoch v dialógoch Súbor/Otvoriť, ktorý je vo väčšine štandarných aplikáciach pre Windows. Mali by ste však mať na zretely, že TortoiseSVN je predovšetkým vyvýjaný ako rozšírenie pre Prieskumníka. Takže je možné, že nie všetky funkcie budú prístupné v iných aplikáciach, napr. prekrývacie ikonky nemusia byť zobrazené.

Prekrývané ikony
: Stav verziovaných súborovov a adresárov je zobrazený malou prekrývajúcou ikonkou. Takto môžete vidieť aký je stav vašej pracovnej kópie.

Grafické užívateľské rozhranie
: Keď si prechádzate zmeny v súboroch alebo zložkách, možete kliknúť na revíziu, aby ste videli komentáre odovzdávateľa. Môžete taktiež vidieť zoznam zmenených súborov - dvojklikom na súbor vidíte, čo presne bolo zmenené.

  Odovzdávacie okno obsahuje zoznam všetkých položiek, ktoré budú zahrnuté pri odovzdávaní a každá položka ma zaškrtávacie políčko, takže môžete vybrať položky, ktoré majú byť zahrnuté pri odovzdávaní. Neverziované súbory môžu byť taktiež v zozname, v prípade, že ste ich zabudli pridať ako nové.

Jednoduchý prístup k príkazom Subversion
: Všetky príkazy Subversion sú prístupné z kontextovej ponuky Prieskumníka (Explorer). TortoiseSVN si tam pridá svoju (pod)ponuku.

Keďže TortoiseSVN je klient pre Subversion, radi by sme ukázali niekoľko funkcií samotného Subversion:

Verziovanie adresárov
: CVS sleduje len históriu jednotlivých súborov, kým Subversion zahrňuje “virtuálny” verziovaný súborový systém, ktorý sleduje časové zmeny celých adresárových stromov. Verziované sú súbory *aj* adresáre. Výslekom je, že existujú skutočné klientské príkazy **presunúť** a **kopírovať**, ktoré pracujú so súbormi a adresármi.

Nedeliteľné odovzdania
: Odovzdanie je pridané do úložiska kompletne, alebo nie je vôbec pridané. Toto umožňuje vyvojárom vytvárať a odovzdávať zmeny ako logické celky.

Verziované metasúbory
: Každý súbor a adresár má neviditeľné “vlastnosti”. Môžete pridať a uložiť akýkoľvek pár kľúč/hodnota podľa vašeho želania. Vlastnosti sú verziované rovnako ako obsah.

Výber sieťovej vrstvy
: Subversion má abstraktný náhľad prístupu k úložisku, čo robí implementovanie nových sieťových mechanizmov ľahkým. Subversion “advanced” sieťový server je modul pre Apache server, ktorý komunikuje pomocou WebDAL/DeltaV - variantom HTTP. Toto dáva Subversion veľkú výhodu v stabilite, spolupráci a poskytuje rôzne kľúčové vlastnosti ako sú: autentifikácia, autorizácia, kompresia prenosu, prehliadanie úložiska. Menší samostatný Subversion server je tiež dostupný. Tento server používa vlastný protokol a môže byť jednoducho tunelovaný cez ssh.

Konzistentná manipulácia s dátami
: Subversion vyjadruje súbor rozdielov pomocou binárného algoritmu porovnania, ktorý pracuje zhodne pre textové (ľudský-čitateľný) a binárne (ľudské-nečitateľné) súbory. Oba typy súborov sú uložené rovnako skomprimované v úložisku, a rozdiely sú prenášané v oboch smeroch cez sieť.

Efektívne vetvenie a značkovanie
: Náklady na vetvenie a tagovánie nemusia byť úmerné veľkosti projektu. Subversion vytvára vetvy a značky jednoduchým kopírovaním projektu pomocou mechanizmu podobnému hard-link. Preto táto operácia môže trvať len veľmi krátko, konštantné množstvo času, a zaberať veľmi malý priestor v úložisku.

3. Licencia

TortoiseSVN je Open Source projekt vyvýjaný pod GNU General Public License (GPL). Jeho stiahnutie a používanie je bezplatné pre osobné aj obchodné používanie pre ľubovolný počet počítačov.

Although most people just download the installer, you also have full read access to the source code of this program. You can browse it on this link https://osdn.net/projects/tortoisesvn/scm/svn/. The current development line is located under `/trunk/`, and the released versions are located under `/tags/`.

4. Vývoj

TortoiseSVN aj Subversion sú vyvinuté spoločenstvom ľudí, ktorí na týchto projektoch pracovali. Pochádzajú z rôznych krajín celého sveta a spojili sa aby vytvorili nádherné programy.

4.1. História TortoiseSVN

V roku 2002, Tim KEMP zistil, že Subversion je veľmi dobrý systém na správu verzií, ale chýba mu dobré GUI - klientské grafické rozhranie. Myšlienka aby bol klient pre Subversion integrovaný do Windows šelu bola inšpirovaná podobným klientom pre CVS menovite TortoiseCVS. Tim študoval zdrojové kódy pre TortoiseCVS a použil ich ako základ pre TortoiseSVN. Potom začal project, registroval doménu `tortoisesvn.org` a poskytol zdrojové kódy online.

V tom čase Stefan KÜNG hľadal dobrý a voľne šíriteľný systém správy verzií a našiel Subversion a zdrojové kódy TortoiseSVN. Kedže TortoiseSVN ešte nebol vhodný na použitie, tak sa pripojil k projektu a začal programovať. Čoskoro prepísal väčšinu existujúceho kódu a začal pridávať príkazy a funkcie, až z pôvodného kódu neostalo nič.

Ako sa Subversion stával stabilným stával sa populárnejším pre viac a viac užívateľov, ktorí začali používať TortoiseSVN ako klienta pre Subversion. Užívateľská základňa rýchlo rástla (a rastie každým dňom). Vtedy Lübbe ONKEN ponúkol pomoc s peknými ikonkami a logom TortoiseSVN. A prevzal starostlivosť o stránku a koordináciul prekladov.

With time, other version control systems all got their own Tortoise client which caused a problem with the icon overlays in Explorer: the number of such overlays is limited and even one Tortoise client can easily exceed that limit. That's when Stefan Küng implemented the TortoiseOverlays component which allows all Tortoise clients to use the same icon overlays. Now all open source Tortoise clients and even some non-Tortoise clients use that shared component.

4.2. Poďakovania

Tim KEMP
za začatie projektu

Stefan KÜNG
za tvrdú prácu, aby TortoiseSVN bol tým, čím je teraz a vedenie projektu

Lübbe ONKEN
za nádherné ikonky, logo, vychytávanie chýb, preklad a organizovanie prekladov

Simon LARGE
za pomoc s dokumentaciou

Stefan FUHRMANN
za zásobník denníka a graf revízií

Kniha Subversion
za úžasný úvod do Subversion a kapitolu 2, ktorú sme sem okopírovali

Projekt štýlu Tigris
za niektoré štýly, ktoré sa použili v dokumentácií

Naši spolupracovníci
za záplaty, hlásenia chýb a nové nápady, a za pomoc iných, ktorý odpovedali na otázky v našich e-mailových konferenciách (mailing list)

Naši darcovia
za mnoho hodín dobrej hudby, ktoré nám poslali

5. Sprievodca čitateľa

Táto kniha je písaná pre počítačovo gramotných ľudí, ktorí chcú používať Subversion na správu dát, ale nechcú na to používať príkazový riadok. Kedže TortoiseSVN je rozšírenie Windows šelu, predpokladá sa, že je užívateľ zvyknutý na Prieskumníka (Windows Explorer) a vie ako ho používať.

Tento Predhovor objasňuje čo je TortoiseSVN projekt, a trochu pojednáva o kommunite ľudí, korý na ňom pracujú, a licenčné podmienky na jeho používanie a distibuciu.

Kapitola 1, *Začíname* vysvetľuje ako nainštalovať TortoiseSVN na váš počítač a ako ho začať používať.

V Kapitola 2, *Základná verzia-ovládacie prevedenie* dávame krátky úvod do správy verzií *Subversion*, ktoré je pod TortoiseSVN. Tento úvod je prevzatý z dokumentácie k Subversion a vysvetľujne rôzne prístupy k správe verziií, a ako funguje Subversion.

The chapter on Kapitola 3, *Úložisko* explains how to set up a local repository, which is useful for testing Subversion and TortoiseSVN using a single PC. It also explains a bit about repository administration which is also relevant to repositories located on a server.

Kapitola 4, *Sprievodca denného použitia* je najdôležiteľším odielom, keďže vysvetluje všetky hlavné funkcie TortoiseSVN a ako ich používať. Má formu tutoriálu. Začína od získania pracovnej kópie, cez úpravy až po odovzdanie zmien. Nasledovne sú rozobrané pokročilejšie témy.

The Kapitola 5, *Project Monitor* explains how you can monitor your Subversion projects so you don't miss important commits from your other team members.

Kapitola 6, *Program SubWCRev* je samostatný program zahrnutý v TortoiseSVN, ktorý može extrahovať informácie z vašej pracovnej kópie do súboru. Toto je užitočné pre vkladanie informácií o revízií do prekladu.

SekciaDodatok B, *Ako spravím ...* odpovedá ne niektoré časté otázky o vykonávaní úloh, ktoré niesú popísane inde.

Sekcia Dodatok D, *Automatizácia TortoiseSVN* ukazuje ako TortoiseSVN GUI dialógy môžu byť volané z príkazového riadka. Tot je výhodné pri skriptoch, ktoré potrebujú interakciu s užívateľom.

Dodatok E, *Krížová refencia príkazového riadka (Command Line Interface - CLI)* dáva informáciu o vzťahu medzi príkazmi TortoiseSVN a ich ekvivaltami v príkazovom klievtovi Subversion `svn.exe`.

6. Použitá terminológia

Aby bolo čítanie manuálu jednoduchšie mená obrazoviek a Menu TortoiseSVN sú vyznačené použitím iného písma. Napríklad: The Denník.

Položka menu je zobrazená šípkou. TortoiseSVN → Zobraziť denník znamená: vyberte*Zobraziť denník* z kontextového menu *TortoiseSVN*.

Tam, kde sa objavuje miestne kontextové menu v jednom z TortoiseSVN dialógov, je to zobrazené, takto: Kontextové Menu → Uložiť ako...

Tlačitka Uživateľského rozhrania sú zobrazené: Stlačte OK pre pokračovanie.

Užívateľské akcie sú vyznačené použitím tučného písma. **Alt+Akeycap>: stlaAltkeycap>-klA. Prav: stlapretiahnite polo**

Systémový vstup a výstup je označený s `odlišným` písmom.

Dôležité

Dôležité poznámky sú označené ikonkou.

Tip

Tipy, ktoré vám zjednodušujú život.

Výstraha

Miesta, kde treba byť opatrný v tom čo robíte.

Varovanie

Tam kde treba zvláštnu opatrnosť. Ak toto varovanie zanedbáte môže vás čakať zničenie dát, alebo podobná nepríjemnosť.

Kapitola 1. Začíname

Táto kapitola je zameraná pre ľudí, ktorý chcú zistiť o čom je TortoiseSVN. Vysvetľuje ako nainštalovat TortoiseSVN a nastaviť miestne úložisko a prblíži vám najviac používané operácie.

1.1. Inštalovanie TortoiseSVN

1.1.1. Požiadavky na systém

TortoiseSVN runs on Windows Vista or higher and is available in both 32-bit and 64-bit flavours. The installer for 64-bit Windows also includes the 32-bit extension parts. Which means you don't need to install the 32-bit version separately to get the TortoiseSVN context menu and overlays in 32-bit applications.

Support for Windows 98, Windows ME and Windows NT4 was dropped in version 1.2.0, and Windows 2000 and XP up to SP2 support was dropped in 1.7.0. Support for Windows XP with SP3 was dropped in 1.9.0. You can still download and install older versions if you need them.

1.1.2. Inštalácia

TortoiseSVN prichádza s ľahko použiteľným inštalátorom. Dvakrát kliknite na inštalačný súbor a postupujte podľa pokynov. Instalátor sa postará o zvyšok. Po inštalácií nezabudnite reštartovať.

Dôležité

You need Administrator privileges to install TortoiseSVN. The installer will ask you for Administrator credentials if necessary.

Dostupné sú aj jazykové balíčky, ktoré TortoiseSVN používateľské rozhranie prekladajú do mnohých jazykov. Pozrite Dodatok G, *Jazykové balíčky a Kontrola pravopisu* pre viac informácii ako ich nainštalovať.

If you encounter any problems during or after installing TortoiseSVN please refer to our online FAQ at https://tortoisesvn.net/faq.html.

1.2. Základné princípy

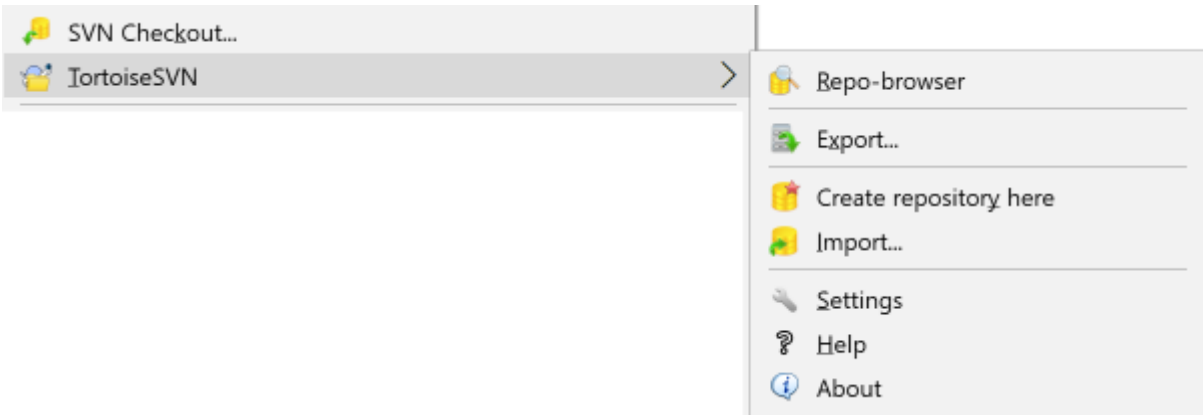
Predtím ako sa zakusneme do pracovnej kópie s reálnymi súbormi, je dôležité získať prehľad ako Subversion pracuje a aká terminológia je použitá.

Úložisko
: Subversion používa centrálnu databázu, ktorá obsahuje všetky kontrolované verzie s ich úplnou históriou. Databáza je opísaná ako *úložisko*. Úložisko sa normálne nachádza na serveri, na ktorom je spustený Subversion server program, ktorý poskytuje obsah Subversion klientom (ako TortoiseSVN) podľa požiadavok. Ak len zálohujete jednu vec, zálohujete úložisko ako jeho konečnú kópiu všetkých údajov.

Pracovná kópia
: Toto je miesto, kde skutočne pracujete. Každý vývojár má svoju vlastnú pracovnú kópiu, tiež známa ako sandbox (pieskovisko) na jeho vlastnom PC. Môžete si stiahnúť poslednú verziu z úložiska, pracovať na nej na miestnom PC bez toho, aby bola ovplyvňovaná ostatnými, a keď budete hotový so zmenami, môžete to odovzdať naspäť na uĺožisko.

  Subversion pracovná kópia neobsahuje informáciu o histórii projektu, ale nechá kópiu týchto súborov v úložisku, predtým než ste začali robiť zmeny. Takže to znamená, že je veľmi jednoduché zistiť presné zmeny, ktoré ste spravili.

Tiež musíte vedieť kde TortoiseSVN nájsť, pretože sa nenáchádza v ponuke programov. Je to preto, že TortoiseSVN je rozšírenie šelu, takže najprv spustite Prieskumníka (Windows Explorer). Kliknite pravým na adresár a mali by ste vidieť položky v kontextovom menu podobné ako je:



Obrázok 1.1. Menu TortoiseSVN pre neverzované zložky

1.3. Poďme na skúšobnú jazdu

Táto kapitola ukazuje ako vyskúšať niektoré najpoužívanejšie vlastnosti na malom testovacom úložisku. Prirodzene neukazuje všetko - nakoniec veď je to len Rýchly návod. Keď už bude všetko fungovať mali by ste si nájsť čas k prečítaniu zvyšku tohto užívateľského návodu, ktorý vás prevedie cez veci omnoho detailnejšie. Tiež vysvetľuje viac o správnom nastevní Subversion servera.

1.3.1. Vytvorenie úložiska

Pre reálny project bude vaše úložisko umiestnené niekde v bezpečí a Subversion server na jeho správu. Pe účely tohoto návodu použijeme miestne úložisko Subversion, ktoré je možné umietniť priamo na pevný disk počítača bez potreby servera.

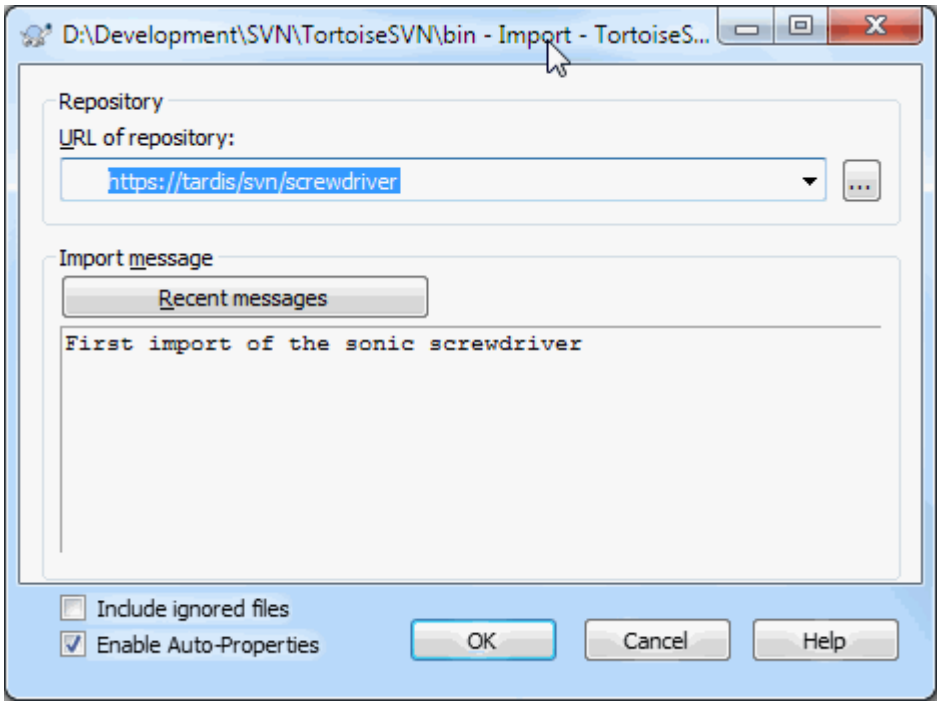
First create a new empty directory on your PC. It can go anywhere, but in this tutorial we are going to call it `C:\svn_repos`. Now right click on the new folder and from the context menu choose TortoiseSVN → Create Repository here.... The repository is then created inside the folder, ready for you to use. We will also create the default internal folder structure by clicking the Create folder structure button.

Dôležité

Možnosť vytvoriť miestne úložisko je zvlášť výhodna na skúšanie, ale pokiaľ nie ste jediný vývojár pracujúci na projekte na jednom PC, mali by ste vždy použiť Subversion server. V malých spoločnostiach sa stáva, že pri snahe vyhnúť sa serveru jednoducho sprístupnia úložisko ako sieťovú jednotku. Toto nikdy nerobte! Stratíte vaše data. Prečítajte si Oddiel 3.1.4, “Prístup k úložisku v zdielanej sieti”, aby ste pochopili prečo je to zlý nápad a ako server nastaviť.

1.3.2. Importovanie projektu

Už máme úložisko, ale ešte je úplne prázdne. Predpokladajme, že v adresáry `C:\Projects\Widget1` máme sadu súborov, ktoré chceme pridať. V Preskumníkovi (Windows Explorer) najdeme adresár `Widget1` a pravým na neho kliknite. Teraz vyberte TortoiseSVN → Importovať..., čo vyvolá dialógové okno :



Obrázok 1.2. Dialógové okno importovania

Úložisko Subversion je označené ako URL adresa, ktorá nám umožní zadať úložisko nachádzajúce sa kdekoľvek na internete. V našom prípade potrebujeme zadať meno našeho miestneho úložiska, ktorého URL adresa je `file:///c:/svn_repos/Widget1`. Všimnite si tri lomky za `file:` ako aj to, že sú použíte dopredné lomky.

Ďalšou dôležitou vlastnosťou dialógu je Import Message, kde môžete zadať správu popisujúcu čo robíme. Keď si budete prezerať históriu projektu, tieto správy sú cennými sprievodcami zmenami, aké boli vykonané a prečo. V tomto prípade jednoducho zadajte niečo ako “Naimportovanie projektu Widget1”. Kliknite na OK a adresár je pridaný do úložiska.

1.3.3. Získanie pracovnej kópie

Now that we have a project in our repository, we need to create a working copy to use for day-to-day work. Note that the act of importing a folder does not automatically turn that folder into a working copy. The Subversion term for creating a fresh working copy is `Checkout`. We are going to checkout the Widget1 folder of our repository into a development folder on the PC called `C:\Projects\Widget1-Dev`. Create that folder, then right click on it and select TortoiseSVN → Checkout.... Then enter the URL to checkout, in this case `file:///c:/svn_repos/trunk/Widget1` and click on OK. Our development folder is then populated with files from the repository.

Dôležité

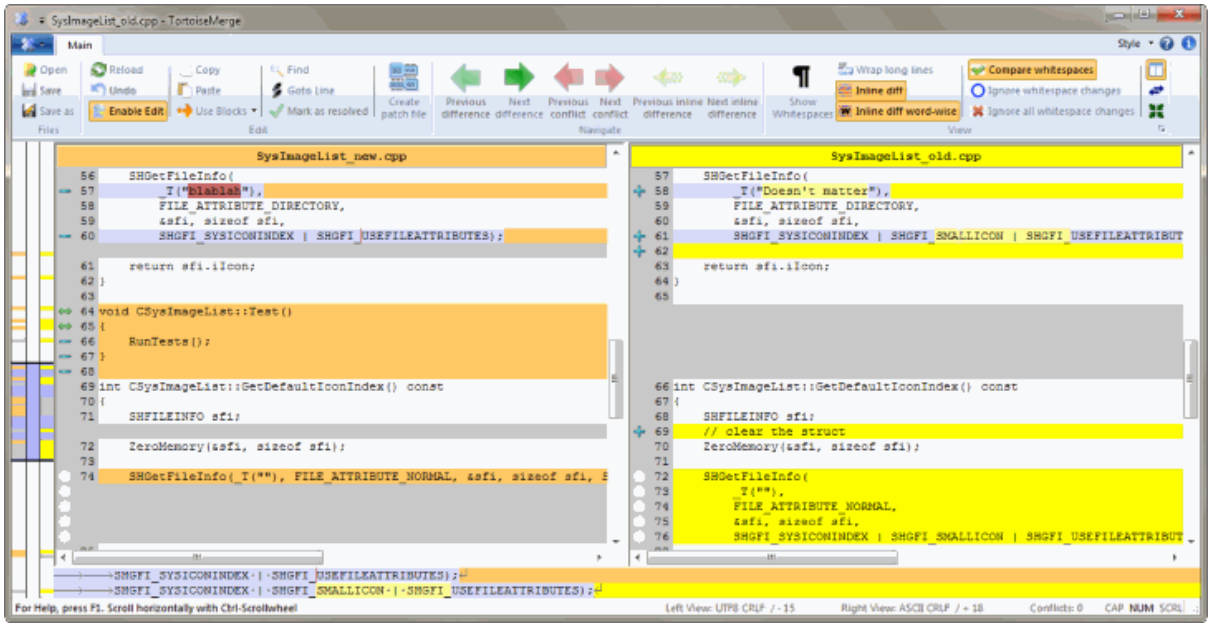
In the default setting, the checkout menu item is not located in the TortoiseSVN submenu but is shown at the top explorer menu. TortoiseSVN commands that are not in the submenu have `SVN` prepended: SVN Checkout...

Zbadáte, že zobrazenie adresára je rozdielne od pôvodného adresára. Každý súbor má zelenú značku v dolnom ľavom rohu. Toto sú stavové ikonky TortoiseSVN, ktoré sú len v pracovnej kópií. Zelený stav zobrazuje, že súbor nebol zmenený voči verzii z úložiska.

1.3.4. Robenie zmien

Time to get to work. In the `Widget1-Dev` folder we start editing files - let's say we make changes to `Widget1.c` and `ReadMe.txt`. Notice that the icon overlays on these files have now changed to red, indicating that changes have been made locally.

Ale aké sú tie zmeny? Pravým kliknutím na jeden zo zmenených súborov a vyberte TortoiseSVN → Porovnať. Bude spustený porovnávač súborov TortoiseSVN a zobrazí presne, ktoré riadky boli zmenené.



Obrázok 1.3. Prehliadač rozdielov

Dobre, tak keď sme spokojný so zmenami poďme aktualizovať úložisko. Tento úkon je označovaný `Odovzdať` zmien. Kliknite pravým na adresár `Widget1-Dev` a vyberte TortoiseSVN → Odovzdať. Odovzdávacie okno zobrazí zoznam zmenených súborov a každý so zaškrtávacím políčkom. Môžete chcieť vybrať len podmnožinu tíchto súborov, ale v našom prípade ideme odovzdať oba zmenené súbory. Zadajte správu denníka, o čom bola táto zmena a kliknite OK. Zobrazí sa okno s priebehom, kde budete vidieť súbory, ktoré sú odovzdávané a sme hotoví.

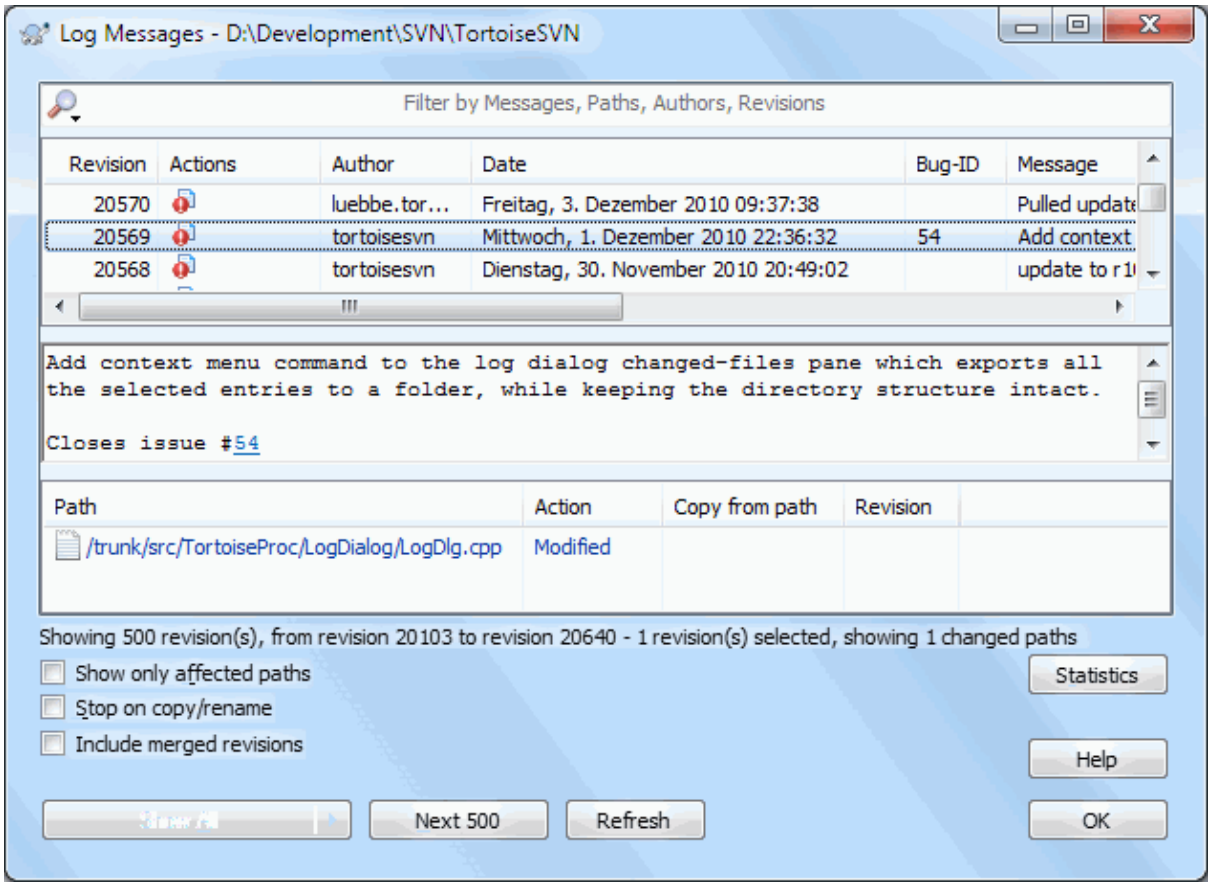
1.3.5. Pridanie viac súborov

Ako sa projekt vyvýja budete potrebovať pridávať nový súbor - povedzme pridáme novú vlastnost do súboru `Extras.c` a pridáme odkaz do existujúceho súboru `Makefile`. Pravým klikom na adresár a vyberte TortoiseSVN → Pridať. Dialóg pridania zobrazí všetky neverziované súbory, z ktorých môžete vybrať tie, ktoré chcete pridať. Iným spôsobom pridania súboru je kliknuím pravím na samoný súbor a vybrať TortoiseSVN → Pridať

Teraz, keď pojdete odovzdať adresár nové súbory sa zobrazia ako*Pridané* a existujúce súbory ako*Zmenené*. Poznamenávame, že môžete dvojklikom na zmenený súbor a skontrolovať, aké zmeny boli vykonané.

1.3.6. Prezeranie histórie projektu

One of the most useful features of TortoiseSVN is the Log dialog. This shows you a list of all the commits you made to a file or folder, and shows those detailed commit messages that you entered (you *did* enter a commit message as suggested? If not, now you see why this is important).



Obrázok 1.4. Dialóg denníka

OK, so I cheated a little here and used a screenshot from the TortoiseSVN repository.

Horný zoznam zobrazuje odovzdané revízie so začiatkom správy. Ak vyberiete jednu z týchto revízií stredný panel zobrazí celú správu denníka pre danú revíziu a spodný panel zobrazí zoznam zmien súborov a adresárov.

Každý z týchto panelov má kontextové menu poskytujúce mnoho spôsobov ako túto informáciu ďalej využiť. V spodnom panely dvoj-klik na súbor zobrazí čo sa presne zmenilo v danej revízií . Prečítajte si Oddiel 4.10, “Revision Log Dialog” aby ste sa dozvedeli viac.

1.3.7. Vrátenie zmien

Jedna z vlastností ktorú majú všetky systémy správy verzií je možnosť vrátenia zmien, ktoré ste vykonali. Ako by ste očakávali, TortoiseSVN robí toto ľahko dostupným.

Ak sa chcete zbaviť zmien, ktoré ste ešte neodovzdali a obnoviť svoj súbor do takého stavu ako bol, než ste ho začali upravovať, vašim priateľom je TortoiseSVN → Vrátiť. To odstáni vaše zmeny (do koša - pre každý prípad) a vráti súbor do odovzdanej verzie, s ktorou ste začali. Ak sa chcete zbaviť len niektorých zmien, môžete použiť TortoiseMerge na zobrazenie rozdielov a selektívne vrátiť zmenené riadky.

Ak chcete vrátiť zmeny z jednej revízie, spustite dialóg denníka a najdite príslušnú revíziu. Vyberte Kontextové menu → Vrátiť zmeny z revízie a zmeny budú vrátené.

1.4. A ďalej ...

Tento návod vám dal veľmi rýchly prehľad na niektoé najdôležitejšie a najužitočnejšie vlastnosti, ale samozrejme je omnoho viac toho, čo sme nespomenuli. Veľmi odporúčame, aby ste si našli čas a prečítali zvyšok tohoto návodu, zvlášť Kapitola 4, *Sprievodca denného použitia*, ktorý vás prevedie každodennými úkonmi omnoho detailnejšie.

Dali sme si záležať aby bol tento návod dosť informatívny a zároveň ľahko čitateľný, ale zistili sme že je toho mnoho. Najdite si čas a neobávajte sa skúšať na testovacom úložisku ako budete postupovať. Najlepšie je sa učiť používaním.

Kapitola 2. Základná verzia-ovládacie prevedenie

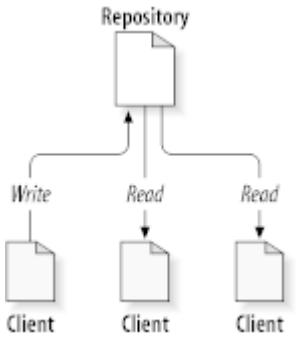
Táto kapitola je nepatrne zmenenou verziou kapitoly z knihy Subversion. On-line verzia knihy Subversion je prístupná tu: http://svnbook.red-bean.com/.

Táto kapitola je krátky, približný úvod do Subversion. Ak je pre vás ovládanie verzie novinkou, táto kapitola je definitívne pre vás. Začneme s diskusiou všeobecných ovládacích prevedení verzie, prepracujeme sa k špecifickým predstavám Subversion a ukážeme si jednoduché príklady Subversion v praxi.

Hoci príklady v tejto kapitole ukazujú ľudí zdieľajúcich súbory programového zdrojového kódu, nezabudnite, že Subversion je schopný spravovať hocijaké súbory - nie je obmedzený len na pomoc počítačovým programátorom.

2.1. Úložisko

Subversion je centralizovaný systém na zdieľanie informácií. V jeho jadre je *úložisko*, čo je centrálny zdroj dát. Úložisko skladuje informácie vo forme *stromu súborového systému* - typická hierarchia súborov a adresárov. Akékoľvek množstvo *klientov* sa napojí na úložisko a potom číta a píše do týchto súborov. Písaním dát klient vyrába informáciu dostupnú pre ostatných; čítaním dát získava klient informácie od ostatných.



Obrázok 2.1. Typický Klient/Server Systém

Prečo je teda tento systém zaujímavý? Doposiaľ všetko vyzerá ako definícia typického súborového servera. A samozrejme, úložisko *je* typ súborového servera, ale nie je to obyčajný druh. Čo robí Subversion úložisko výnimočným je, že *si pamätá každú zmenu*

When a client reads data from the repository, it normally sees only the latest version of the filesystem tree. But the client also has the ability to view *previous* states of the filesystem. For example, a client can ask historical questions like, " what did this directory contain last Wednesday? ", or " who was the last person to change this file, and what changes did they make? " These are the sorts of questions that are at the heart of any *version control system*: systems that are designed to record and track changes to data over time.

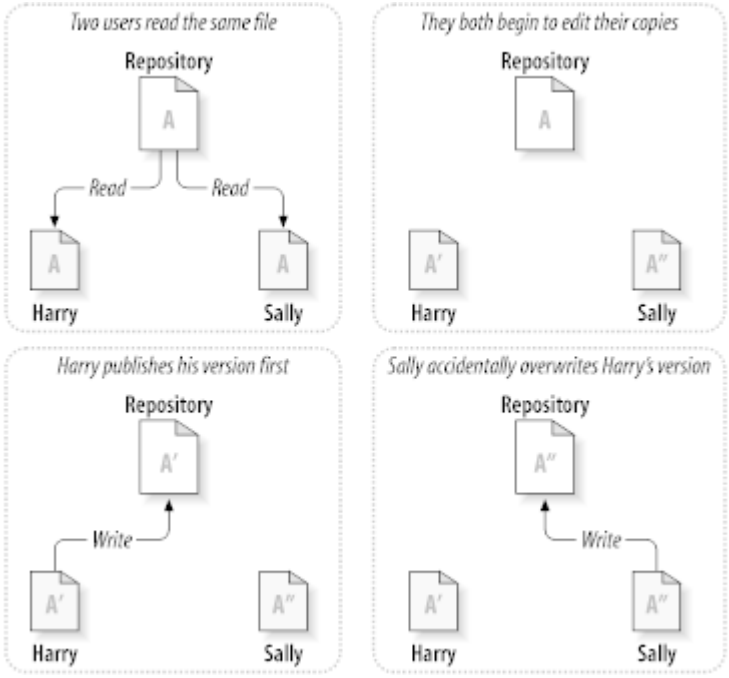
2.2. Modely verziovania

Všetky systémy správy verzií musia vyriešiť základný problém: ako systém umožní užívateľom zdieľať informácie, ale zabráni aby si stúpali po nohách? Je príliš jednoduché, aby si užívatelia v úložisku omylom navzájom prepisovali vykonané zmeny.

2.2.1. Problém zdieľania súborov

Predstavte si takúto situáciu: predpokladajme, že mame dvoch spolupracovníkov: Harry a Sally. Obidvaja sa rozhodnú upraviť ten istý súbor úložiska v jednom čase. Ak Harry odovzdá zmeny ako prvý potom je možné, že

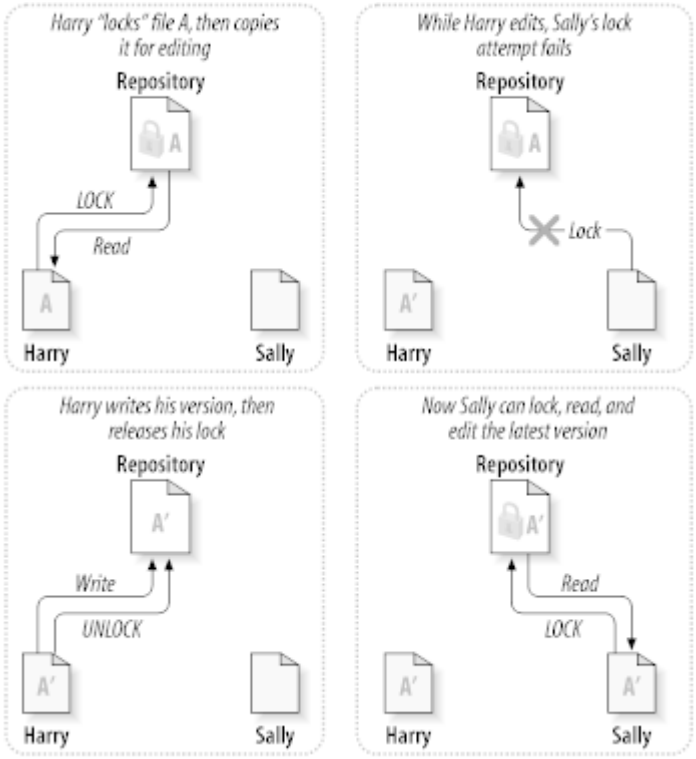
(o chvíľu) Sally ich môže omylom prepísať jej novou verziu súboru. Napriek tomu, že Harry-ho verzia nebude stratená, (pretože systém si pamätá každú zmenu), žiadna Harry-ho zmena *nebude* v Sally-nej novej verzií súboru, pretože nikdy nevidela Harry-ho zmeny. Harry-ho práca je teda efektívne stratená - alebo aspoň chýbajúca v poslednej verzií súboru - a to pravdepodobne omylom. Toto je určite situácia, ktorej sa chceme vyhnúť!



Obrázok 2.2. Problém, ktorému sa treba vyhnúť

2.2.2. Riešenie Zamknúť-Upraviť-Odomknúť

Veľa systémov na správu verzií používa model *zamknúť-upraviť-odomknúť*, aby sa vyhli tomuto problému, čo je veľmi jednoduché riešenie. V takomto systéme úložisko umožní menenie súborov v danom čase iba jednej osobe. Najprv Harry musí "zamknúť" súbor, aby ho mohol upravovať. Zamknutie sa podobá na požičanie si knihy z knižnice; keď Harry zamkol súbor, tak Sally ho nemôže zmeniť. Ak sa pokúsi súbor zamknúť, úložisko odmietne jej požiadavku. Všetko čo môže je čítať súbor a čakať kým Harry dokočí zmeny a uvoľní zámok. Keď Harry odomkne súbor jeho ťah skončil a Sally si može vziať svoj ťah zamknutím súboru a potom môže súbor upravovať.



Obrázok 2.3. Riešenie Zamknúť-Upraviť-Odomknúť

Problémom modelu zamknúť-upraviť-odomknúť je, žel je trochu reštriktívny a často vedie k zastaveniu užíateľov:

- *Zamykanie môže spôsobiť administratívne problémy.* Harry zamkne súbor a zabudne na to. Medzi tý Sally stále čaká, aby mohla upravovať súbor a má zviazané ruky. Potom Harry odíde na dovolenku. Sally teda musí požiadať administrátora aby uvoľnil Harry-ho zámok. Situácia končí nežiadaným oneskorením a stratou času.

- *Zamykanie môže spôsobiť nežiadanú serializáciu.* Čo ak Harry upravuje začiatok textového súboru Sally chce jednoducho upraviť koniec súboru v tom istom čase? Tieto zmeny sa neprekrývajú. Mohli by jednoducho a bez škody upravovať súbor súčasne, predpokladajúc, že by boli zmeny správne zlúčené. Nie je potreba aby v tejto situácií získavali ťah.

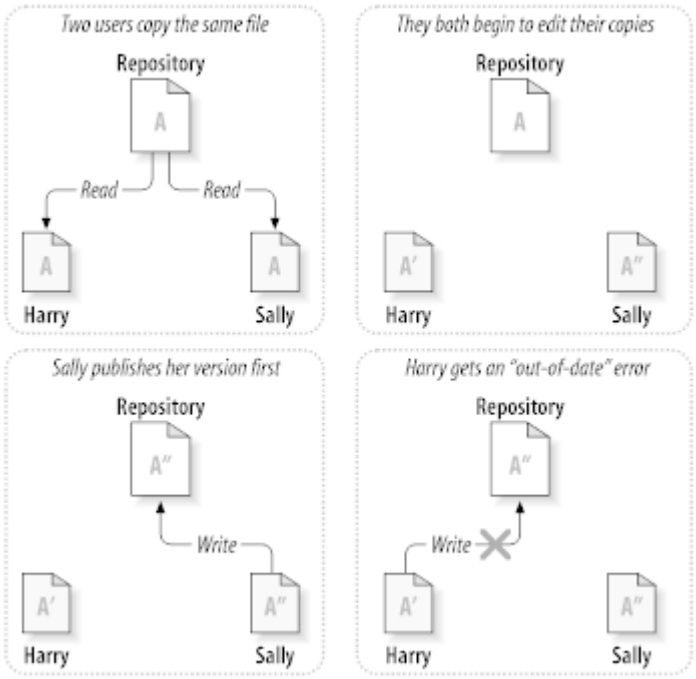
- *Zamykanie môže vyvolať falošný dojem zabezpečenia.* Predstierajme, že Harry zamyká a upravuje súbor A, zatiaľ čo Sally simultánne zamyká a upravuje súbor B. Ale predstavme si, že A a B závisia jeden na druhom a zmeny urobené v každom z nich sú významne nekompatibilné. Náhle A a B spolu nespolupracujú. Zamykací systém bol bezmocný predísť tomuto problému - hoci nejak poskytoval dojem falošného zabezpečenia. Pre Harryho a Sally je jednoduché predstaviť si, že pokiaľ uzamknú súbory, obidva začnú bezpečnú, izolovanú úlohu a teda im to včas zabráni v diskutovaní ich nekompatibilných zmien.

2.2.3. Riešenie Kopírovať-Upraviť-Zlúčiť

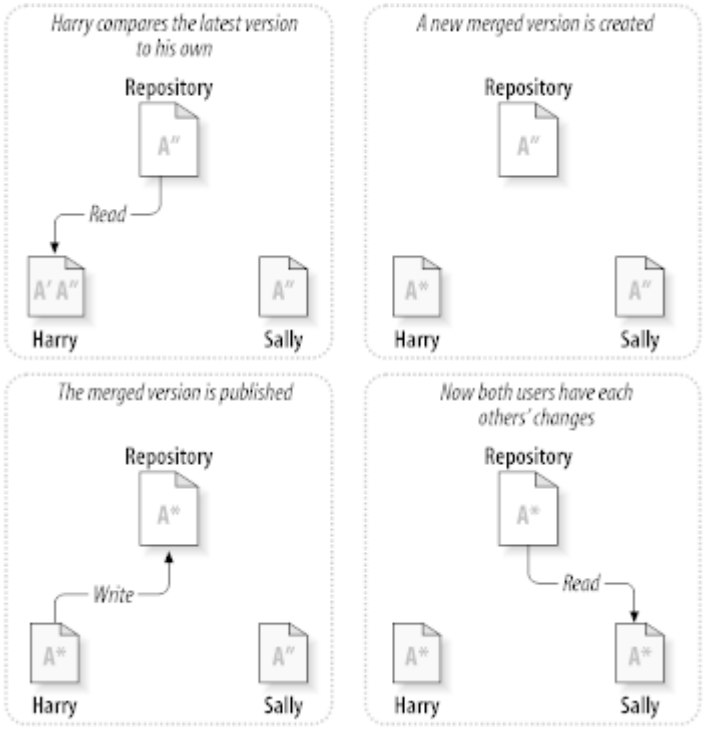
Subversion, CVS, and other version control systems use a *copy-modify-merge* model as an alternative to locking. In this model, each user's client reads the repository and creates a personal *working copy* of the file or project. Users then work in parallel, modifying their private copies. Finally, the private copies are merged together into a new, final version. The version control system often assists with the merging, but ultimately a human being is responsible for making it happen correctly.

Tu máme príklad. Povedzme že Harry a Sally vytvorili každý pracovné kópie toho istého projektu, zkopírovaného z úložiska. Pracujú súbežne a urobili zmeny do toho istéhu súboru `A` vo svojich kópiách. Sally uložila svoje zmeny do úložiska ako prvá. Keď Harry skúša uložiť jeho zmeny neskôr, úložisko ho informuje, že jeho súbor A je *neplatný*. Inými slovami oznamuje, že súbor A v úložisku bol nejakým spôsobom zmenený odkedy ho naposledy kopíroval. Preto Harry požiada svojho klienta *zlúčiť* všetky nové zmeny z úložiska do jeho pracovnej kópie súboru

A. Je pravdepodobné, že sa zmeny, ktoré urobila Sally nebudú prekrývať s jeho vlastnými; takže keď už Harry integroval obidve zmeny, uloží svoju pracovnú kópiu naspäť do úložiska.



Obrázok 2.4. Riešenie Kopírovať-Upraviť-Zlúčiť



Obrázok 2.5. ... Kopírovať-Upraviť-Zlúčiť (pokračovanie)

Ale čo ak sa Sallyine zmeny *prekryjú* s Harryho zmenami? Čo v takomto prípade? Táto situácia sa nazýva *konflikt* a zvyčajne nebýva problémom. Keď Harry požiada svojho klienta zlúčiť aktuálne zmeny z úložiska do jeho

pracovnej kópie, kópia súboru A je označená, že je v stave konfliktu: Harry bude schopný vidieť obidve sady konfliktných zmien a manuálne si vyberie jednu z nich. Zaznamenajte si, že softvér nemôže automatickyvyriešiť konflikty; len človek je schopný porozumieť a urobiť nevyhnutné inteligentné voľby. Potom ako Harry manuálne vyriešil prekrývajúce sa zmeny (možno prediskutovaním konfliktu so Sally!), môže bezpečne uložiť zlúčený súbor späť do úložiska.

Kopírovať-upraviť-zlúčiť model môže vyzerať trochu chaotický, ale v praxi, pracuje extrémne hladko. Užívatelia môžu pracovať paralelne, nemusia čakať jeden na druhého. Keď pracujú na tých istých súboroch, ukáže sa že sa väčšina ich súbežných zmien vôbec neprekrýva; konflikty sú zriedkavé. A množstvo času, ktoré zaberie na vyriešenie konfliktov je zďaleka menšie než čas stratený zamykacím systémom.

Na koniec, všetko sa zredukuje na jediný kritický faktor: komunikácia užívateľov. Ak užívatelia zle komunikujú, oba, syntaktické a významové konflikty narastajú. Žiadny systém neprinútí užívateľov perfektne komunikovať a taktiež nemôže odhaliť významové konflikty. Takže nemá význam si falošne nahovoriť, že systém zamykania predíde nejako konfliktom; v praxi, zamykanie zabraňuje produktivite viac než čokoľvek iné.

Avšak je jedna spoločná situácia kde zamknúť-upraviť-odomknúť model vychádza lepšie a to tam, kde sú nezlúčiteľné súbory. Napríklad ak vaše úložisko obsahuje nejaké grafické obrazy a dvaja ľudia zmenia obraz v tom istom čase, je nemožné aby boli tieto zmeny spolu zlúčené. Buď Harry, alebo Sally stratí svoje zmeny.

2.2.4. Čo robí Subversion?

Subversion používa kopírovať-upraviť-zlúčiť riešenie ako predvolené a v mnohých prípadoch je toto jediné, čo budete potrebovať. Avšak, od Verzie 1.2, Subversion tiež podporuje zamykanie súboru, takže ak máte nezlúčiteľné súbory alebo ak ste jednoducho nútený manažmentom zamykať, Subversion bude stále poskytovať funkcie, ktoré potrebujete.

2.3. Subversion v Akcii

2.3.1. Pracovné kópie

Už ste čítali o pracovných kópiách; teraz predvedieme ako Subversion klient vytvára a používa.

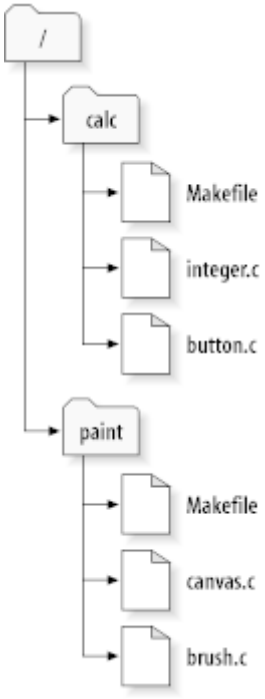
Pracovná kópia Subversion je obyčajný strom adresárov vo vašom lokálnom systéme, pozostávajúci zo zbierky súborov. Môžte tieto súbory upravovať akokoľvek si želáte a ak sú to súbory zdrojových kódov, môžte z nich zostaviť program bežnou cestou. Vaša pracovná kópia je váš vlastný súkromný pracovný priestor: Subversion nikdy nebude pripájať zmeny iných ľudí, ani sprístupňovať vaše zmeny druhým, pokiaľ mu vy výlučne neprikážete, aby tak urobil.

Potom ako ste urobili zmeny súborov vo vašej pracovnej kópii a overili, že všetky správne pracujú, Subversion vám poskytne príkaz na *zverejnenie* vaších zmien ostatným ľuďom pracujúcich s vami na vašom projekte (zapísaním do úložiska). Ak ostatní ľudia publikujú ich vlastné zmeny, Subversion vám poskytne príkaz na zlúčenie týchto zmien vo vašom pracovnom adresári (načítaním z úložiska).

A working copy also contains some extra files, created and maintained by Subversion, to help it carry out these commands. In particular, your working copy contains a subdirectory named `.svn`, also known as the working copy *administrative directory* . The files in this administrative directory help Subversion recognize which files contain unpublished changes, and which files are out-of-date with respect to others' work. Prior to 1.7 Subversion maintained `.svn` administrative subdirectories in every versioned directory of your working copy. Subversion 1.7 takes a completely different approach and each working copy now has only one administrative subdirectory which is an immediate child of the root of that working copy.

Typické úložisko Subversion často drží súbory (alebo zdrojový kód) pre niekoľko projektov; obyčajne, každý projekt je podadresár v strome súborového systému úložiska. V tejto zostave, pracovná kópia užívateľa bude obvykle odpovedať príslušnemu pod-stromu úložiska.

Napríklad, predpokladajme, že máte úložisko, ktoré obsahuje dva softvérové projekty.



Obrázok 2.6. Súborový systém úložiska

Inými slovami, koreňový adresár úložiska má dva podadresáre: `maľovať` a `kalkulovať`.

To get a working copy, you must *check out* some subtree of the repository. (The term *check out* may sound like it has something to do with locking or reserving resources, but it doesn't; it simply creates a private copy of the project for you.)

Suppose you make changes to `button.c`. Since the `.svn` directory remembers the file's modification date and original contents, Subversion can tell that you've changed the file. However, Subversion does not make your changes public until you explicitly tell it to. The act of publishing your changes is more commonly known as *committing* (or *checking in*) changes to the repository.

Aby ste zverejnili vaše zmeny ostatným môžete použiť príkaz **odovzdať**.

Teraz boli vaše zmeny do `button.c` odovzdané do úložiska; ak iný užívateľ získa pracovnú kópiu `/kalkulovať`, uvidí vaše zmeny v najnovšej verzii vášho súboru.

Predpokladajmem, že máte spolupracovníka, Sally, ktorá získala pracovnú kópiu `/kalkulovať` v tom istom čase ako vy. Keď odovzdáte vašu zmenu do `button.c`, Sallyina pracovná kópia ostane nezmenená; Subversion zmení len pracovné kópie na užívateľovu požiadavku.

Doviesť jej projekt do aktuálneho stavu, Sallz môže požiadať Subversion o *aktualizovanie* jej pracovnej kópie, využitím príkazu Subversion: **aktualizovať**. Tento príkaz včlení vaše zmeny do jej pracovnej kópie, takisto ako všetky ostatné, ktoré boli odovzdané odkedy ich Sally získala.

Všimnite si, že Sally nepotrebovala špecifikovať, ktoré súbory chce aktualizovať; Subversion používa informácie v `.svn` adresári a ďalšie informácie v úložisku na rozhodnutie, ktoré súbory by mali byť aktualizované.

2.3.2. URL úložiska

Úložiská Subversion môžu byť prístupné mnohými rozlišnými metódami - na lokálnom disku alebo cez rôzne sieťové protokoly. Hoci pozícia úložiska je vždy URL. Schéma URL udáva prístupovú metódu:

Schéma	Metódy prístupu
`file://`	Priamy prístup k úložisku na miestnom, alebo sieťovom disku.

Schéma	Metódy prístupu
`http://`	Prístup cez WebDAV protokol k Subversion-ovému Apache serveru.
`https://`	Rovnako ako `http://`, ale s SSL kryptovaním.
`svn://`	Neautentifikovaný TCP/IP prístup cez vlastný protokol k `svnserve` serveru.
`svn+ssh://`	autentifikovaný, šifrovaný TCP/IP prístup pomocou vlastného protokolu k `svnserve` serveru

Tabuľka 2.1. URL na prístup k úložisku

Pre väčšiu časť, Subversion URL adresa používa štandardnú skladbu, dovoľuje špecifikovať mená serverov a čísla portov ako súčasť URL. `file://` prístupová metóda je obyčajne používaná pre lokálny prístup, hoci môže byť použitá s cestami UNC do sieťového hostiteľa. URL preto zoberie podobu `file://hostname/path/to/repos`. Pre lokálny prístroj, je od `hostname` URL časti požadované, aby bola neprítomná alebo `localhost`. Kvôli tomu, sa lokálne cesty objavujú s tromi lomkami, `file:///path/to/repos`.

Taktiež, užívatelia `file://` schémy v platforme Windowsu budú musieť používať neoficiálne "štandardnú" skladbu pre prístup do úložísk, ktoré sú na tom istom prístroji, ale na inej mechanike než je klientova súčasná pracujúca mechanika. Obidva s dvoch nasledujúcich URL cestných skladieb bude pracovať kde `X` je mechanika na ktorej úložisko spočíva:

```
file:///X:/path/to/repos
...
file:///X|/path/to/repos
...
```

Zapamätajte si, že URL používa obyčajné lomky hoci prirodzená (nie-URL) forma cesty vo Windowse používa spätnú lomku.

You can access a FSFS repository via a network share, but this is *not* recommended for various reasons:

- You are giving direct write access to all users, so they could accidentally delete or corrupt the repository file system.
- Not all network file sharing protocols support the locking that Subversion requires. One day you will find your repository has been subtly *corrupted*.
- You have to set the access permissions in just the right way. SAMBA is particularly difficult in this respect.
- If one person installs a newer version of the client which upgrades the repository format, then everyone else will be unable to access the repository until they also upgrade to the new client version.

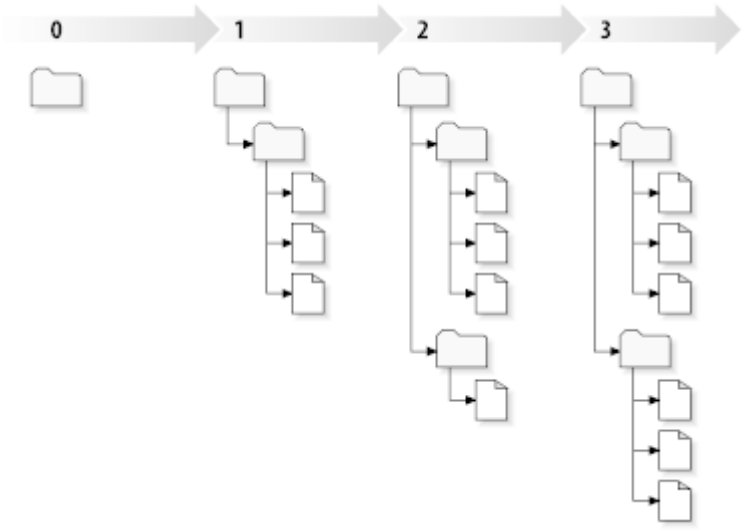
2.3.3. Revízie

Akciou **odovzdať** môžeme uverejniť zmeny pre ľubovólny počet súborov a zložiek ako jednu nedeliteľnú akciu. Vo vašej pracovnej kópii môžete meniť obsah súborov, vytvárať, mazať, premenovávať a kopírovať súbory a zložky a potom vykonať celú množinu zmien ako celok.

V úložiskui je každá prijatá zmena považovaná ako nedeliteľná akcia: buď všetky zmeny sú vykonané, alebo žiadna z nich sa neuskutoční. Subversion si zachováva túto nedelitelnosť ako výsledok pri pádoch programu, pádoch systému, problémami zo sieťou a inými užívateľskými akciami.

Zakaždým, keď úložisko prijme zmeny, vytvorí nový stav súborového stromu s názvom *revision*. Každej revízii je priradené unikátne číslo o jedna vačšie ako mala predchádzajúca revízia. Úplne prvá revízia v novo vytvorenom úložisku je označená číslom nula a nebosahuje nič okrem koreňový adresár.

Vhodný spôsob ako si predstaviť úložisko je ako skupinu stromov. Predstavte si rad revíznych čísel začínajúcich nulou ťiahnucich sa z ľava do prava. Každé revizné číslo má strom súborov a každý strom je "snímok"



Obrázok 2.7. Úložisko

Globálne číslo revízie

Unlike those of many other version control systems, Subversion's revision numbers apply to *entire trees* , not individual files. Each revision number selects an entire tree, a particular state of the repository after some committed change. Another way to think about it is that revision N represents the state of the repository filesystem after the Nth commit. When a Subversion user talks about ``revision 5 of `foo.c`", they really mean ``foo.c as it appears in revision 5." Notice that in general, revisions N and M of a file do *not* necessarily differ!

Je dôležité poznamenať, že pracovná kópie namusí nutne vždy zodpovedať jednej revízií. Môže taktiež obsahovať súbory z viacero rôznych revizií. Napríklad predpokladajme, ze získate pracovnú kópiu z úložiska s aktuálnou revíziou 4:

```
calc/Makefile:4
integer.c:4
button.c:4
```

Teraz, pracovný adresár zodpovedá presne revízií 4 v úložisku. Ašak predpokladajme, že ste urobili zmeny v `button.c`, a tieto zmeny ste odovzdali. Predpokladajúc, že neboli vykonané žiadne ine zmeny, vaše odovzdanie vytvorí v úložisku reviíziu 5 a vaša pracovná bude teraz vyzerať takto:

```
calc/Makefile:4
integer.c:4
button.c:5
```

Predpokladajme, že teraz Sally odovzdá zmenu v `integer.c` vytvoriac tak revíziu 6. Ak použijete **aktualizovať** na zaktualizovanie vašej pracovnej kópie, bude vaša pracovná kópia vyzerať nasledovne:

```
calc/Makefile:6
integer.c:6
button.c:6
```

Sallyne zmeny v `integer.c` sa zobrazia v pracovnej kópii a vaše zmeny budú v súbore `button.c`. V tomto prípade je text súboru `Makefile` rovnaký v revíziach 4, 5 aj 6 ale Subverzia označí vašu pracovnú kópiu súboru `Makefile` z revíziou 6 čo naznačuje, že je stále aktuálna. Takže potom, čo ste si vyčistili aktualizácie v koreni pracovnej kópie, bude to zodpovedať presne jednej revízii v úložiskui.

2.3.4. Ako pracovné kópie vyhľadávajú úložiská.

Pre každý súbor v pracovnom adresári Subverzia zaznamenáva dve základné informácie `.svn/`v administratívnej oblasti:

- what revision your working file is based on (this is called the file's *working revision*), and
- čas, kedy bola naposledy aktualizovaná lokálna kópia v repoiztári.

Vzhľadom na tieto informácie pri komunikácii s úložiskom, Subverzia vie rozpoznať, v ktorom z nasledujúcich štyroch stavoch sa nachádzajú rozpracované súbory:

Nezmenený a aktuálny
: Súbor nebol zmenený v pracovnom adresáry ani neboli odovzdané zmeny do úložiska. Príkaz **odovzdať** aj **aktualizovať** budú bez efektu.

Lokálne zmenené a aktuálne
: Súbor bol zmenený v pracovom adresáry, ale neboli odovzdané žiadne zmeny do úložsika od jeho základnej revízie. Miestne zmeny, ktoré neboli odovzdené do úložiska, môžu byť odovzdané pomocou **odovzdať**. Príkaz **aktualizovať** nevykoná nič.

Nezmenené a zastaralé
: Súbor nebol menení v pracovnom adresáry, ale bol zmenení v úložisku. Súbor by mal byť eventuálne aktulizovaný, aby bol zhodný s aktuálnou revíziou. Príkaz **odovdzať** na tomto súbore neurobí nič, a príkaz **aktualizovať** príme poslesné zmeny do pracovnej kópie.

Miestne zmenené a zastaralé
: Súbory boli zmenené aj v pracovnej zložke aj v úložisku. Príkaz **odovzdať** súbor zlyhá s chybou *zastaralý*. Súbor mal by byť najskôr aktualizovaný, príkaz **aktualizovať** sa pokúsi zlúčiť vydané zmeny s lokálnymi zmenami. Ak subverzia nedokáže dokončiť presvedčivo zlúčenie týchto súborov automaticky, nechá na užívateľovi, aby vyriešil tento problém sám.

2.4. Súhrn

V tejto kapitole sme prebrali niekoľko základných konceptov Subversion:

- Predstavili sme pojmy centrálneho úložiska, klientské pracovné kópie, a rad revíznych stromov repozitára.
- Ukázali sme si niekoľko jednoduchých príkladov, ako dvaja spolupracovníci môžu použiť subverzie na vydanie a prijímanie zmenie od seba navzájom, pomocou modelu ' kopírovať-upraviť-zlúčiť' '.
- Hovorili sme v skratke o tom, ako subverzia vyhľadáva a spravuje informácie v pracovnej kópii.

Kapitola 3. Úložisko

Nezáleží na tom, aký protokol používate pre prístup k svojim úložiskám, vždy je potrebné vytvoriť aspoň jedno úložisko. To sa môže vykonať s pomocou klienta príkazového riadku Subversion alebo s TortoiseSVN.

Ak nemáte vytvorené úložisko so subverziou, je čas to urobiť teraz.

3.1. Vytvorenie úložiska

3.1.1. Vytvorenie úložiska pomocou príkazového riadku

1. Vytvorte prázdnu zložku s názvom SVN (napr. `D:\SVN\`), ktorá sa bude používať pre všetky vaše úložiská ako koreňová (root).

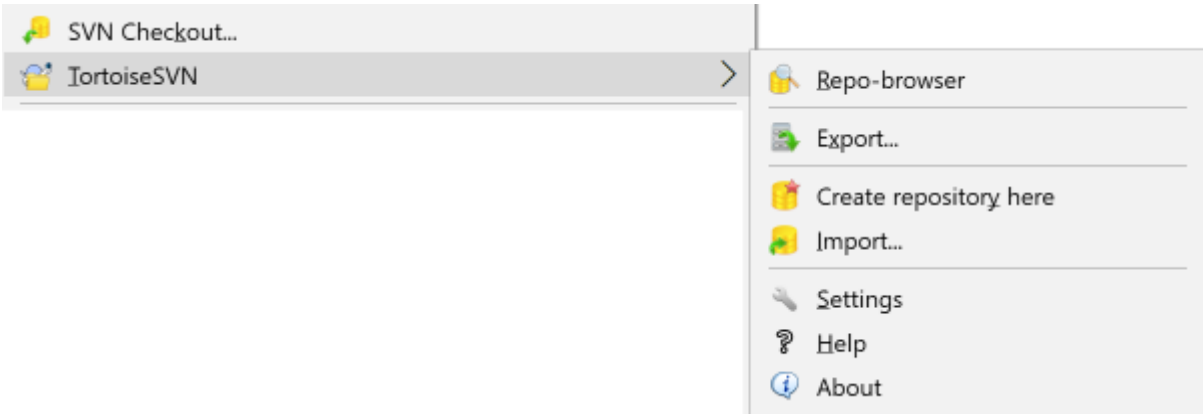
2. Vytvorte si ďalšiu zložku `MyNewRepository` v `D:\SVN\`.

3. Open the command prompt (or DOS-Box), change into `D:\SVN\` and type

```
svnadmin create --fs-type fsfs MyNewRepository
```

Teraz máte nové úložisko nachádzajúce sa v `D:\SVN\MyNewRepository`.

3.1.2. Vytvorenie úložiska s TortoiseSVN



Obrázok 3.1. Menu TortoiseSVN pre neverzované zložky

1. Otvorte Prieskumníka (Windows Explorer)

2. Vytvorte novú zložku s názvom napr. `SVNRepository`

3. Na novo vytvorenú zložku použite pravý klik a vyberte TortoiseSVN → vytvoriť úložisko tu....

   Po tomto kroku je úložisko vytvorené vo vnútri novej zložky. *Neupravujte tieto súbory!!!* Ak sa vyskytnú nejaké chyby, preverte, aby zložka bola prázdna a nebola chránená proti zápisu.

   Taktiež si budete môcť vybrať, či chcete vytvoriť adresárovú štruktúru v úložisku. Viac o možnostiach rozloženia adresárov v úložisku nájdete v Oddiel 3.1.5, “Návrh úložiska”.

   TortoiseSVN nastaví vlastnú ikonu,pri vytvorení úložiska, takže viete ľahko identifikovať miestne úložsko. Keď vytvoríte úložisko pomocou oficiálneho príkazového riadku, tak tomuto adresáru sa nepriradí ikona.

Tip

We also recommend that you don't use `file://` access at all, apart from local testing purposes. Using a server is more secure and more reliable for all but single-developer use.

3.1.3. Lokálny prístup do úložiska

Pre prístup k vašemu lokálnemu úložisku potrebujete cestu ku tej zložke. Len pre pripomenutie, Subversion očakáva, že všetky úložiská sa nachádzajú v `file:///C:/SVNRepository/`. Všimnite si použitie dopredných lomiek pri zápise.

Pre prístup k úložisku, ktoré sa nachádza v zdielanej sieti môžete použit mapovanie disku, alebo použiť UNC cestu. Pre UNC cesty je formát zápisu `file://ServerName/path/to/repos/`. Všimnite si, že na začiatku sú iba 2 lomky.

Pred SVN 1.2, UNC cesty mali trochu nezrozumiteľný tvar `file:///\ServerName/path/to/repos`. Tento zápis je stále podporovaný, ale nie je odporúčaný.

3.1.4. Prístup k úložisku v zdielanej sieti

Although in theory it is possible to put a FSFS repository on a network share and have multiple users access it using `file://` protocol, this is most definitely *not* recommended. In fact we would *strongly* discourage it, and do not support such use for various reasons:

- Po prvé dávate užívateľovi právo na zápis do úložiska, takže hociktorý užívateľ môže náhodne zmazať celé úložisko, alebo ho môže nejakým iným spôsobom spraviť nepoužiteľným.
- Po druhé nie všetky protokoly na zdieľanie súborov podporujú uzamykanie, ktoré Subversion vyžaduje, takže si môžete nájsť svoje úložisko poškodené. Toto sa nemusí stať hneď, ale jedného dňa sa stane, že dvaja užívatelia sa pokúsia otvoriť úložiská v rovnakom čase.
- Po tretie, prístupové práva musia byť nastavené. Môžete to obísť zdielaním pomocou Windowsu, ale SAMBA je dosť zložitá na nastavenie.
- If one person installs a newer version of the client which upgrades the repository format, then everyone else will be unable to access the repository until they also upgrade to the new client version.

`file://` prístup je určený pre miestne zdielanie, pre jedného užívateľa iba a predovšetkým na testovanie a ladenie. Keď chcete zdielať úložisko *skutočne* potrebujete nastaviť správne server a nie je to až také ťažké ako si myslíte. Prečítajte si Oddiel 3.5, “Pristupovanie k úložisku” pre pokyny pri výbere nastavenie servera.

3.1.5. Návrh úložiska

Predtým ako importujete údaje do úložiska mali by ste najskôr porozmýšlať, ako budú zoradené. Ak použijete jeden z odporučených návrhov, tak neskôr si uľahčíte mnohé veci.

Existujú určité štandardy a odporúčané spôsoby ako organizovať úložisko. Väčšinou postačuje vytvoriť `trunk` adresár, v ktorom je “hlavná vetva”, `branches` adresár, ktorý obsahuje kópie vetiev a `tags` adresár s obsahom menných kópii. Ak je v úložisku iba jeden projekt, tak stačí vytvoriť tieto hlavné adresáre:

```
/trunk
/branches
/tags
```

Keďže toto rozloženie je najčastejšie používané, TortoiseSVN vám pri vytváraní úložiska ponúkne vytvorenie zodpovedajúcej adresárovej štruktúry.

Ak úložisko obsahuje viacero projektov, ľudia často indexujú ich vrstvy podla vetiev:

```
/trunk/paint
/trunk/calc
/branches/paint
/branches/calc
/tags/paint
/tags/calc
```

...alebo podľa projektov:

```
/paint/trunk
/paint/branches
/paint/tags
/calc/trunk
/calc/branches
/calc/tags
```

Indexovanie projektu má zmysel iba vtedy, keď projekty nie sú podobné a každý je udržiavaný osobitne. Pre podobné projekty, ktoré chcete spravovať spoločne, alebo projekty, ktoré sú štandardne distribuované v jednom balíčku je lepšie indexovať podľa vetiev. Tento spôsob ma iba jednu hlavnú líniu a vzťahy medzi podprojektami su jednoduchšie viditeľné.

Ak použijete ako vrcholové adresáre `/trunk /tags /branches`, máte kópiu celej hlavnej línie pre vetvy aj značky a takáto štruktúra ponúka lepšiu felxibilitu.

Pre nesúvisiace projekty môžete použiť oddelené úložiská. Keď odovzdáte zmeny, tak sa mení revízne čislo celého úložiska, nie revizné číslo projektu. Pri zdielaní 2 rôznych projektoch v jednom úložisku môže nastať množstvo prerušení v revíznych číslach. Subversion a TortoiseSVN projekty sa tvária ako pod jednou adresou, ale ich úplná nezávislosť úložísk poskytuje nezávislý vývoj a žiadny zmätok v build číslach.

Samozrejme nemusíte dodržiavať tieto štandardné návrhy. Môžete si vytvoriť hocaké rozčlenenie, ktoré vyhovuje najviac pre vás alebo váš tím. Zapamätajte si, že akýkoľvek spôsob si vyberiete, nie je to nemeniteľné. Môžete si pretvoriť vaše úložisko kedykoľvek. Pretože vetvy a menovky sú bežné adresáre, TortoiseSVN ich môže premenovať alebo presunúť ako vy chcete.

Zmena jedného návrhu na iný je len záležitosť, ktorú vykonáva server. Ak nemáte radi spôsob akým sú organizované veci v úložisku, stačí sa len pohrať s adresármi.

Takže, ak ešte nemáte vytvorenú základnú štruktúru adresáru vo vnútri úložiska mali by ste tak urobiť teraz. Sú dva sposoby ako to docieliť. Ak chcete jednoducho vytvoriť `/trunk /tags /branches` štruktúru, môžete použiť úložiskový prehliadač na vytvorenie 3 adresárov (3 oddelené odovzdávanie). Ak chcete vytvoriť hlbšiu štruktúru, potom je jednoduchšie vytvoriť adresár na disku a importovať ho v jednom odovzdaní nasledovne

1. vytvorte si na vašom pevnom disku prázdny adresár
2. vytvorte si požadovanú vrcholovú štruktúru adresárov vo vnútri daného adresára - nevkladajte tam žiadne súbory zatiaľ!
3. importujte túto štruktúru do úložiska cez pravý klik na adresári, ktorý obsahuje túto adresárovú štruktúru a vyberte TortoiseSVN → Import.... V import dialógu napíšte URL vášho úložiska a kliknite OK. Takto sa importuje váš dočasný adresár do koreňového úložiska pre vytvorenie základného rozčlenenia úložiska.

Note that the name of the folder you are importing does not appear in the repository, only its contents. For example, create the following folder structure:

```
C:\Temp\New\trunk
```

```
C:\Temp\New\branches
C:\Temp\New\tags
```

Import `C:\Temp\New` into the repository root, which will then look like this:

```
/trunk
/branches
/tags
```

3.2. Záloha úložiska

Nevyhnutne dôležité je, aby ste vykonávali pravidelné zálohy pri použití akéhokoľvek druhu úložiska. Pri zlyhaní serveru, sa dá ešte používať posledná verziu súborov, ale bez úložiska sú všetky predchádzajúce zmeny navždy stratené.

The simplest (but not recommended) way is just to copy the repository folder onto the backup medium. However, you have to be absolutely sure that no process is accessing the data. In this context, access means *any* access at all. If your repository is accessed at all during the copy, (web browser left open, WebSVN, etc.) the backup will be worthless.

The recommended method is to run

```
svnadmin hotcopy path/to/repository path/to/backup
```

to create a copy of your repository in a safe manner. Then backup the copy.

The `svnadmin` tool is installed automatically when you install the Subversion command line client. The easiest way to get this is to check the option to include the command line tools when installing TortoiseSVN, but if you prefer you can download the latest version of command line tools directly from the *Subversion* [https://subversion.apache.org/packages.html#windows] website.

3.3. Serverovské pripnuté (hook) skripty

A hook script is a program triggered by some repository event, such as the creation of a new revision or the modification of an unversioned property. Each hook is handed enough information to tell what that event is, what target(s) it's operating on, and the username of the person who triggered the event. Depending on the hook's output or return status, the hook program may continue the action, stop it, or suspend it in some way. Please refer to the chapter on *Hook Scripts* [http://svnbook.red-bean.com/en/1.8/svn.reposadmin.create.html#svn.reposadmin.create.hooks] in the Subversion Book for full details about the hooks which are implemented.

Tieto pripnuté skripty sú vykonávané serverom, na ktorom sa nachádza úložisko. TortoiseSVN dovoľuje tiež prispôsobovať skripty na strane užívateľa, ktoré sú vykonávané lokálne po nejakej udalosti. Pre viac informácii pozrite Oddiel 4.31.8, “Klientské (pripnuté) skripty”.

Sample hook scripts can be found in the `hooks` directory of the repository. These sample scripts are suitable for Unix/Linux servers but need to be modified if your server is Windows based. The hook can be a batch file or an executable. The sample below shows a batch file which might be used to implement a pre-revprop-change hook.

```
rem Only allow log messages to be changed.
if "%4" == "svn:log" exit 0
echo Property '%4' cannot be changed >&2
exit 1
```

Note that anything sent to stdout is discarded. If you want a message to appear in the Commit Reject dialog you must send it to stderr. In a batch file this is achieved using `>&2`.

Prvoradé pripnutia

Ak pripnutý skript nepríjme vaše odovzdanie, potom je toto rozhodnutie konečné, Ale môžete vytvoriť naliehajúci mechanizmus do samotného skriptu použitím techniky *špeciálneho výrazu*. Ak skript odmietne operáciu, najskôr prehľadá denníkové správy, či sa tam nenachádzajú špeciálne výrazy, buď fixné výrazy alebo súbor s predponou. Ak nájde čarovné slovo, potom dovolí pokračovať v odovzdávaní. Ak výraz nie je nájdený, potom zablokuje odovzdávanie so správou napríklad "Nepovedali ste čarovné slovíčko". :-)

3.4. Získané odkazy

Ak si chcete spraviť úložisko dostupné pre ostatných, môžete chcieť zahrnúť odkaz na úložisko z vášho webu. Jeden spôsob ako spraviť link prístupný je použiť *checkout link* pre ostatných užívateľov TortoiseSVN.

Pri inštalácii TortoiseSVN, inštalátor registruje nový `tsvn:` protokol. Ak TortoiseSVN užívateľ klikne na takýto odkaz, získavací dialóg automaticky otvorí zadanú adresu s úložiskom.

Pre zaradenie takéhoto odkazu na vašu vlastnú web stránku potrebujete pridať nasledovný kód:

```
<a href="tsvn:http://projekt.domena.org/svn/trunk">
</a>
```

Of course it would look even better if you included a suitable picture. You can use the *TortoiseSVN logo* [https://tortoisesvn.net/images/TortoiseCheckout.png] or you can provide your own image.

```
<a href="tsvn:http://projekt.domena.org/svn/trunk">
<img src=TortoiseCheckout.png></a>
```

Taktiež môžete vytvoriť odkaz pre určitú verziu napríklad

```
<a href="tsvn:http://projekt.domena.org/svn/trunk?100">
</a>
```

3.5. Pristupovanie k úložisku

Pre použitie TortoiseSVN (alebo iného ľubovoľného klienta Subversion) potrebujete miesto, kde sa úložisko bude nachádzať. Môžete ho mať buď lokálne a pristupovať ku nemu pomocou `file://` protokolu, alebo ho môžete umiestniť na server a pristupovať ku nemu cez `http://` alebo aj `svn://` protokol. Tieto dva protokoly môžu byť aj šifrované. Stači použiť `https://` alebo `svn+ssh://`, alebo aj `svn://` s SASL.

If you are using a public hosting service such as *SourceForge* [https://sourceforge.net] or your server has already been setup by someone else then there is nothing else you need to do. Move along to Kapitola 4, *Sprievodca denného použitia*.

Ak nemáte server a pracujete sám, alebo skúšate Subversion a TortoiseSVN izolovane, potom lokálne úložisko je asi najlepšia možnosť. Iba vytvorte úložisko na vašom počítači ako je popísané v Kapitola 3, *Úložisko*. Môžete preskočiť zvyšok tejto kapitoly a pokračovať priamo na Kapitola 4, *Sprievodca denného použitia*, aby ste zistili ako ho začať používať.

Ak rozmýšlate nad nastavením úložiska pre viacero užívateľov v zdielanej sieti, zamyslite sa ešte raz. Pozrite si Oddiel 3.1.4, "Prístup k úložisku v zdielanej sieti", aby ste zistili prečo je to zlý nápad. Nastavenie servera nie je až také tažke ako sa môže zdať a poskytne vám lepšiu spoľahlivosť a taktiež rýchlosť.

More detailed information on the Subversion server options, and how to choose the best architecture for your situation, can be found in the Subversion book under *Server Configuration* [http://svnbook.red-bean.com/en/1.8/svn.serverconfig.html].

In the early days of Subversion, setting up a server required a good understanding of server configuration and in previous versions of this manual we included detailed descriptions of how to set up a server. Since then things have become easier as there are now several pre-packaged server installers available which guide you through the setup and configuration process. These links are for some of the installers we know about:

- *VisualSVN* [https://www.visualsvn.com/server/]
- *CollabNet* [https://www.collab.net/products/subversion]

You can always find the latest links on the *Subversion* [https://subversion.apache.org/packages.html] website.

You can find further How To guides on the *TortoiseSVN* [https://tortoisesvn.net/usefultips.html] website.

Kapitola 4. Sprievodca denného použitia

Tento dokument popisuje denné používanie TortoiseSVN klienta. Toto *nie* je úvod do systému na správu verzii a taktiež *nie* je úvod do Subversion (SVN). Toto je skôr miesto, kde sa môžete obrátit, keď približne viete, čo chcete urobiť, ale nepamätáte si presne ako to spraviť.

Ak potrebujete úvod do správy na kontrolu verzii, potom vám odporúčame prečítať si výbornú knihu *Version Control with Subversion* [http://svnbook.red-bean.com/].

Na tomto dokumente sa stále pracuje a vylepšuje sa, tak ako TortoiseSVN a Subversion. Ak nájdete nejaké chyby, prosím nahláste ich do e-mailových konferencií (mailing list), potom môžeme aktualizovať dokumentáciu. Niektoré obrázky v sprievodcovi denného použitia, nemusia zodpovedať súčasnému stavu softvéru. Prosím prepáčte nám to. Na TortoiseSVN pracujeme vo voľnom čase.

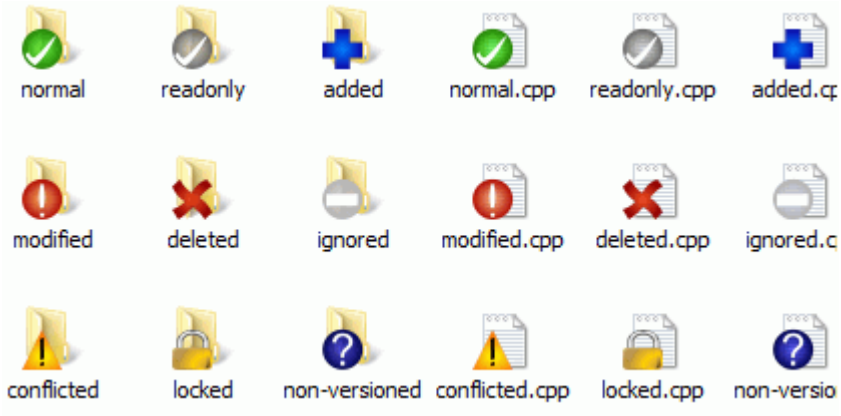
S cieľom získať čo najviac informácii zo sprievodcu denného použitia:

- Už by ste mali maž nainštalovanú TortoiseSVN.
- Mali by ste byť poznať systémy pre správu verzií.
- Mali by ste poznať základy Subversion.
- Mali by ste mať nastavený server a/alebo mať prístup k Subversion úložisku.

4.1. Hlavné vlastnosti

Tento odsek popisuje niektoré vlastnosti TortoiseSVN, ktoré sa týkajú všetkého v tomto návode. Poznamenávame, že veľa týchto vlastností sa ukáže iba v pracovnej kópii Subversion.

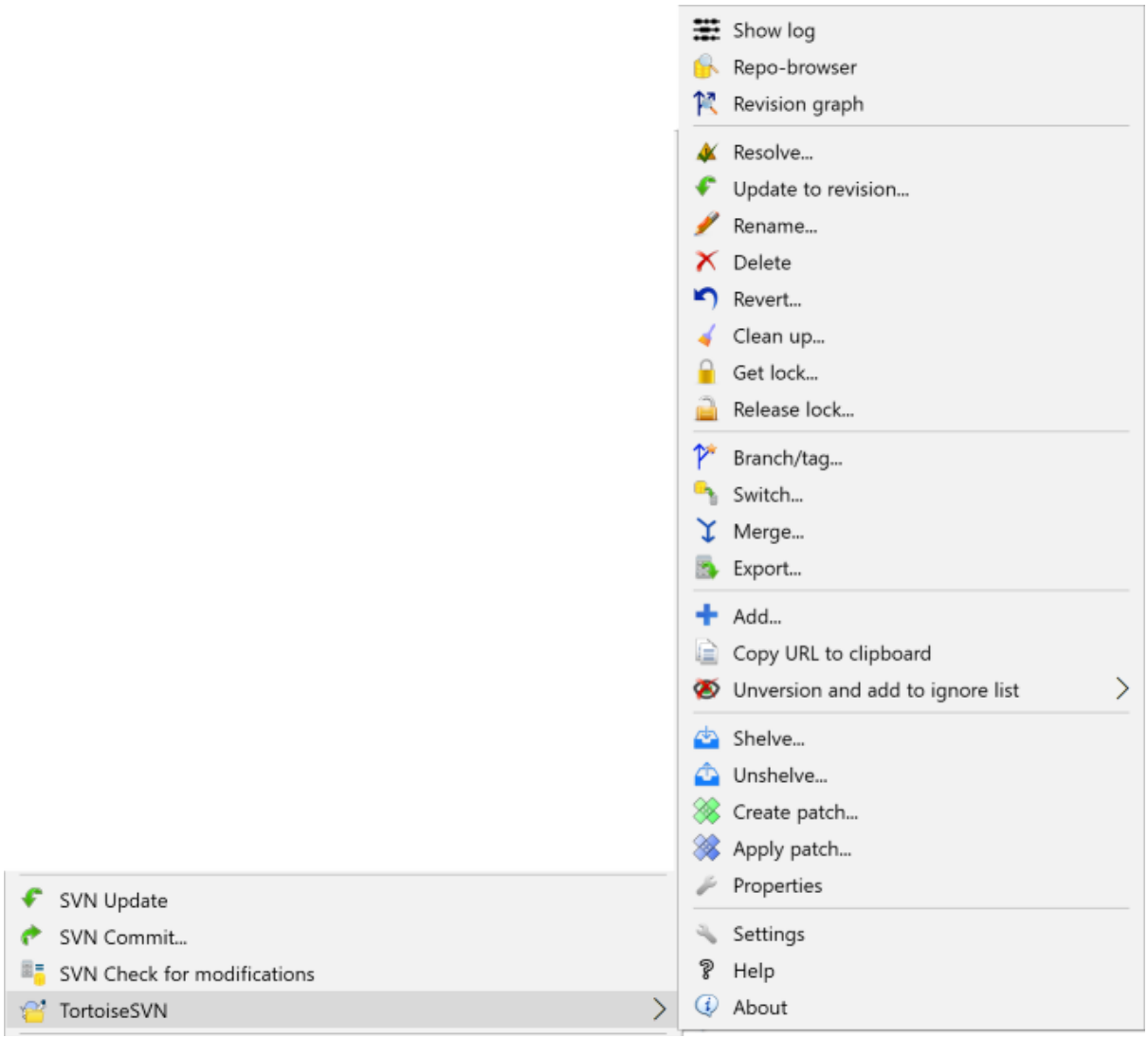
4.1.1. Prekrývané ikony



Obrázok 4.1. Prieskumník (Windows Explorer) zobrazujúci ikonky prekrytia

Jedna z najviditeľnejších vlastností TortoiseSVN sú prekrytia ikon, ktoré sa objavia na súboroch vašej pracovnej kópie. Tieto vám ukazujú, ktoré súbory boli zmenené. Pozrite si Oddiel 4.7.1, “Prekrývané ikony” aby ste mali prehľad čo rôzne prekrytia znamenajú.

4.1.2. Kontextové Menu



Obrázok 4.2. Kontextova ponuka pre adresáre pod správou verzií

All TortoiseSVN commands are invoked from the context menu of the windows explorer. Most are directly visible, when you right click on a file or folder. The commands that are available depend on whether the file or folder or its parent folder is under version control or not. You can also see the TortoiseSVN menu as part of the Explorer file menu.

Tip

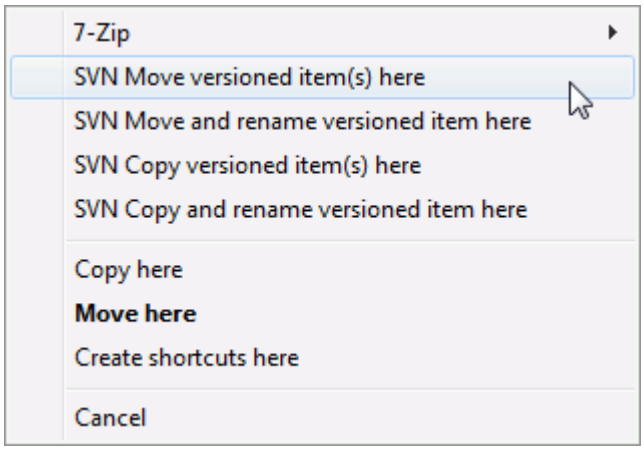
Niektoré príkazy sú používane tak zriedka, že sú dostupné iba v rozšírenom kontextovom menu. Na vyvolanie rozšíreneého kontextového menu, držte klávesu **šift** keď bobíte pravý šťuk myšou.

V nietorých prípadoch sa vám môže zobraziť viacero TortoiseSVN položiek. Toto nie je chyba!

Obrázok 4.3. Ponuka vo Windows Explorer-i pre odkaz v pracovnej kópii

Tento príklad je pre neverziovaný odkaz vo verziovanej kópii a vo Windows Explorer-i sú *tri* položky TortoiseSVN. Jedna pre adresár, jedna pre samotný odkaz a tretia pre objekt na ktorý odkaz ukazuje. Aby ich bolo možné rozoznať ikonky majú dolnom pravom rohu indikátor či ide o ponuku pre súbor, adresár, odkaz, alebo viacero vybraných položiek.

4.1.3. Preťahovanie



Obrázok 4.4. Right drag menu for a directory under version control

Other commands are available as drag handlers, when you right drag files or folders to a new location inside working copies or when you right drag a non-versioned file or folder into a directory which is under version control.

4.1.4. Klávesové skratky

Niektoré bežné operácie majú dobre známe Windows klávesové skratky, ale nie sú uvedené na tlačidlách, či v menu. Ak nemôžete prísť na to ako urobiť niečo jasné - ako obnoviť zobrazenie - pozrite sa sem.

F1
: Samozrejme pomoc.

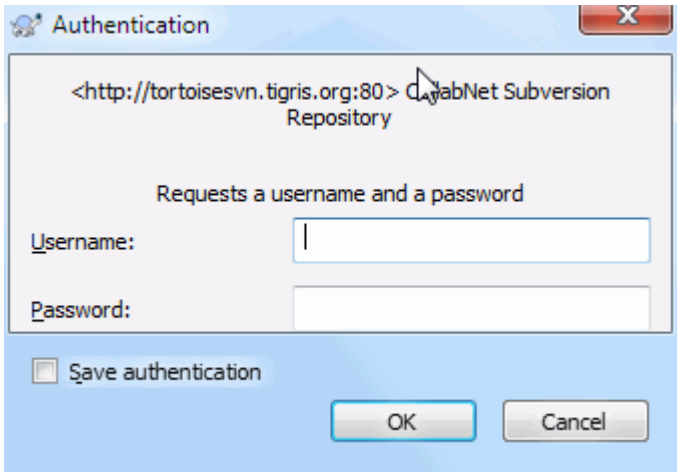
F5
: Refresh the current view. This is perhaps the single most useful one-key command. For example ... In Explorer this will refresh the icon overlays on your working copy. In the commit dialog it will re-scan the working copy to see what may need to be committed. In the Revision Log dialog it will contact the repository again to check for more recent changes.

Ctrl-A
: Vybrať všetko. Toto môže byť použité keď dostanete chybové hlásenie a chcete ho vložiť do email-u. Použite Ctrl-A k vybraniu celého chybového hlásenia a potom ...

Ctrl-C
: Copy the selected text. In case no text is selected but e.g. a list entry or a message box, then the content of that list entry or the message box is copied to the clipboard.

4.1.5. Authentifikácia

If the repository that you are trying to access is password protected, an authentication Dialog will show up.



Obrázok 4.5. Dialógové okno autentifikácie

Enter your username and password. The checkbox will make TortoiseSVN store the credentials in Subversion's default directory: `%APPDATA%\Subversion\auth` in three subdirectories:

- `svn.simple` obsahuje autentifikacne údaje pre jednoduchú autentifikáciu (meno/heslo). Poznamenávame, že tieto údaje sú uložené pomocou WinCrypt API.
- `svn.ssl.server` obsahuje SSL certifikát servera.
- `svn.username` obsahuje autentifikačné údaje pre autentifikaciu iba menom (bez potreby hesla).

If you want to clear the authentication cache, you can do so from the Saved Data page of TortoiseSVN's settings dialog. The button Clear all will clear the cached authentication data for all repositories. The button Clear...

however will show a dialog where you can chose which cached authentication data should be deleted. Refer to Oddiel 4.31.6, “Saved Data Settings”.

Some people like to have the authentication data deleted when they log off Windows, or on shutdown. The way to do that is to use a shutdown script to delete the `%APPDATA%\Subversion\auth` directory, e.g.

```
@echo off
rmdir /s /q "%APPDATA%\Subversion\auth"
```

You can find a description of how to install such scripts at http://www.windows-help-central.com/windows-shutdown-script.html.

Pre viac informácií o tom ako nastaviť autentifikáciu a kontrolu prístupu na vášom servery si pozrite Oddiel 3.5, “Pristupovanie k úložisku”.

4.1.6. Maximalizovanie Okien

Mnoho dialógových okien TortoseSVN obsahuje veľa informácií, ale často je žiaduce maximalizovať iba výšku, alebo širku, miesto celého okna na obrazovku. Pre vaše pohodlie sú na toto dostupné zkratky na tlačidle maximalizovať. Použite stredné tlačidlo myši ak chcete maximalozovať vertikálne (výšku) a pravé tlačidlo myši aby ste maximalizovali okno horizontálne (širku).

4.2. Importovanie dát do úložiska

4.2.1. Importovať

If you are importing into an existing repository which already contains some projects, then the repository structure will already have been decided. If you are importing data into a new repository, then it is worth taking the time to think about how it will be organised. Read Oddiel 3.1.5, “Návrh úložiska” for further advice.

This section describes the Subversion import command, which was designed for importing a directory hierarchy into the repository in one shot. Although it does the job, it has several shortcomings:

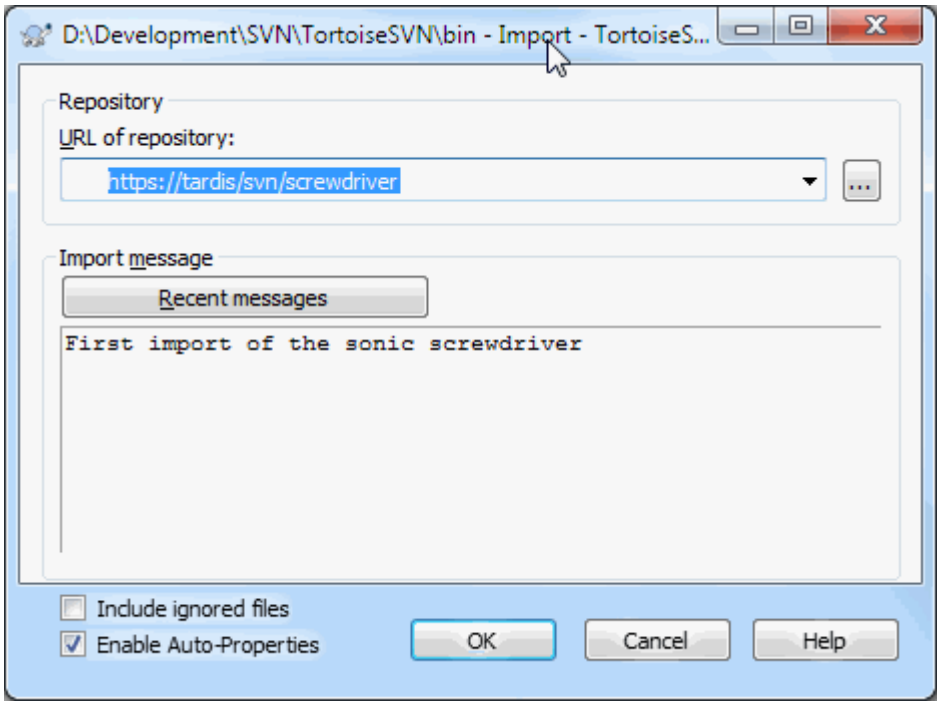
- There is no way to select files and folders to include, aside from using the global ignore settings.
- Importovaný adresár sa nestane pracovonou kópiu. Musíte vykonať získanie, aby ste súbory skopírovali zo servera.
- Je jednoduché importovať zlý adresár do úložiska.

For these reasons we recommend that you do not use the import command at all but rather follow the two-step method described in Oddiel 4.2.2, “Importovanie na mieste”, unless you are performing the simple step of creating an initial `/trunk /tags /branches` structure in your repository. Since you are here, this is how the basic import works ...

Pred importovaním projektu do úložiska by ste mali:

1. Odstrániť všetky súbory nepotrebné k preloženiu projektu (dočasné súbory, subory generované počas prekladu napr. *.obj, binárny výstup prekladu, ...).
2. Zorganizuovať súbory do adresárov a podadresárov. Aj keď je i neskôr možné premenovať/presunúť je veľmi odporúčané dať projektu jeho podobu rovno pri importovaní.

Now select the top-level folder of your project directory structure in the windows explorer and right click to open the context menu. Select the command TortoiseSVN → Import... which brings up a dialog box:



Obrázok 4.6. Dialógové okno importovania

In this dialog you have to enter the URL of the repository location where you want to import your project. It is very important to realise that the local folder you are importing does not itself appear in the repository, only its content. For example if you have a structure:

```
C:\Projects\Widget\source
C:\Projects\Widget\doc
C:\Projects\Widget\images
```

and you import `C:\Projects\Widget` into `http://mydomain.com/svn/trunk` then you may be surprised to find that your subdirectories go straight into `trunk` rather than being in a `Widget` subdirectory. You need to specify the subdirectory as part of the URL, `http://mydomain.com/svn/trunk/Widget-X`. Note that the import command will automatically create subdirectories within the repository if they do not exist.

The import message is used as a log message.

By default, files and folders which match the global-ignore patterns are *not* imported. To override this behaviour you can use the Include ignored files checkbox. Refer to Oddiel 4.31.1, “Hlavné Nastavenia” for more information on setting a global ignore pattern.

As soon as you press OK TortoiseSVN imports the complete directory tree including all files into the repository. The project is now stored in the repository under version control. Please note that the folder you imported is *NOT* under version control! To get a version-controlled *working copy* you need to do a Checkout of the version you just imported. Or read on to find out how to import a folder in place.

4.2.2. Importovanie na mieste

Assuming you already have a repository, and you want to add a new folder structure to it, just follow these steps:

1. Use the repository browser to create a new project folder directly in the repository. If you are using one of the standard layouts you will probably want to create this as a sub-folder of trunk rather than in the repository root. The repository browser shows the repository structure just like Windows explorer, so you can see how things are organised.

2. Checkout the new folder over the top of the folder you want to import. You will get a warning that the local folder is not empty. Ignore the warning. Now you have a versioned top level folder with unversioned content.

3. Use TortoiseSVN → Add... on this versioned folder to add some or all of the content. You can add and remove files, set `svn:ignore` properties on folders and make any other changes you need to.

4. Commit the top level folder, and you have a new versioned tree, and a local working copy, created from your existing folder.

4.2.3. Zvláštne súbory

Sometimes you need to have a file under version control which contains user specific data. That means you have a file which every developer/user needs to modify to suit his/her local setup. But versioning such a file is difficult because every user would commit his/her changes every time to the repository.

In such cases we suggest to use *template* files. You create a file which contains all the data your developers will need, add that file to version control and let the developers check this file out. Then, each developer has to *make a copy* of that file and rename that copy. After that, modifying the copy is not a problem anymore.

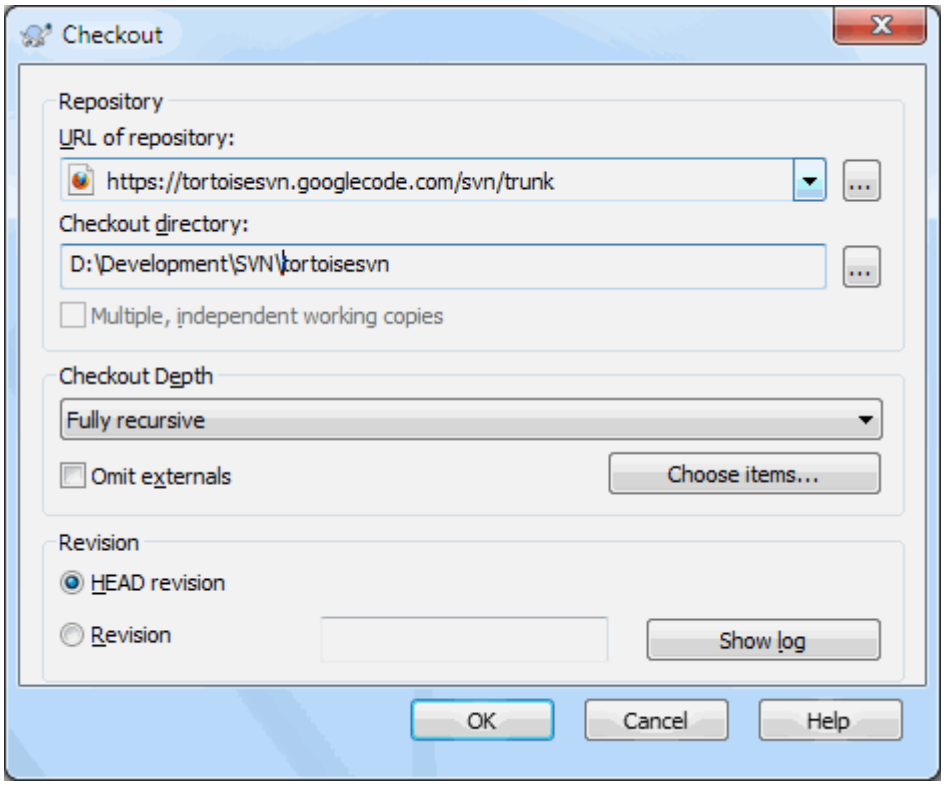
As an example, you can have a look at TortoiseSVN's build script. It calls a file named `default.build.user` which doesn't exist in the repository. Only the file `default.build.user.tmpl`. `default.build.user.tmpl` is the template file which every developer has to create a copy from and rename that file to `default.build.user`. Inside that file, we added comments so that the users will see which lines they have to edit and change according to their local setup to get it working.

So as not to disturb the users, we also added the file `default.build.user` to the ignore list of its parent folder, i.e. we've set the Subversion property `svn:ignore` to include that filename. That way it won't show up as unversioned on every commit.

4.3. Získať pracovnú kópiu

Aby ste získali pracovnú kópiu je nutné použiť *zíkať* z úložiska.

Select a directory in windows explorer where you want to place your working copy. Right click to pop up the context menu and select the command TortoiseSVN → Checkout..., which brings up the following dialog box:



Obrázok 4.7. Dialóg získania

If you enter a folder name that does not yet exist, then a directory with that name is created.

Dôležité

In the default setting, the checkout menu item is not located in the TortoiseSVN submenu but is shown at the top explorer menu. TortoiseSVN commands that are not in the submenu have SVN prepended: SVN Checkout...

4.3.1. Hĺbka získavania

You can choose the *depth* you want to checkout, which allows you to specify the depth of recursion into child folders. If you want just a few sections of a large tree, You can checkout the top level folder only, then update selected folders recursively.

Úplne rekurzívne
: Získa celý strom vrátane všetkých adresárov a podadresárov.

Priame objekty, vrátane adresárov
: Získa udaný adresár vrátane všetkých súborov a podadresárov, ale podadresáre ostanú prázdne.

Iba súbory
: Získa vybraný adresár a jeho súbory, ale žiadne iné adresáre nebudú získané.

Len túto položku
: Získa len adresár bez akýchkoľvek iných súborov či adresárov.

Pracovná kópia
: Ponechať hĺbku uvedenú v pracovnej kópii. Táto možnosť nie je možná pri získavaní, ale je predvolenou možnosťou pre všetky ostatné akcie, ktoré závisia od hĺbky.

Vylúčenie
: Used to reduce working copy depth after a folder has already been populated. This option is only available in the Update to revision dialog.

To easily select only the items you want for the checkout and force the resulting working copy to keep only those items, click the Choose items... button. This opens a new dialog where you can check all items you want in your working copy and uncheck all the items you don't want. The resulting working copy is then known as a `sparse checkout`. An update of such a working copy will not fetch the missing files and folders but only update what you already have in your working copy.

If you check out a sparse working copy (i.e., by choosing something other than `fully recursive` for the checkout depth), you can easily add or remove sub-folders later using one of the following methods.

4.3.1.1. Sparse Update using Update to Revision

Right click on the checked out folder, then use TortoiseSVN → Update to Revision and select Choose items.... This opens the same dialog that was available in the original checkout and allows you to select or deselect items to include in the checkout. This method is very flexible but can be slow as every item in the folder is updated individually.

4.3.1.2. Sparse Update using Repo Browser

Right click on the checked out folder, then use TortoiseSVN → Repo-Browser to bring up the repository browser. Find the sub-folder you would like to add to your working copy, then use Context Menu → Update item to revision....

4.3.1.3. Sparse Update using Check for Modifications

In the check for modifications dialog, first **shift** click on the button Check repository. The dialog will show all the files and folders which are in the repository but which you have not checked out as `remotely added`. Right click on the folder(s) you would like to add to your working copy, then use Context menu → Update.

This feature is very useful when you only want to checkout parts of a large tree, but you want the convenience of updating a single working copy. Suppose you have a large tree which has sub-folders `Project01` to `Project99`, and you only want to checkout `Project03`, `Project25` and `Project76/SubProj`. Use these steps:

1. Checkout the parent folder with depth “Only this item” You now have an empty top level folder.

2. Vyberte nový zložku a použite TortoiseSVN → Odovzdať pre zobrazenie obsahu úložiska.

3. Right click on `Project03` and Context menu → Update item to revision.... Keep the default settings and click on OK. You now have that folder fully populated.

   Opakujte tento postup aj pre `Project25`.

4. Navigate to `Project76/SubProj` and do the same. This time note that the `Project76` folder has no content except for `SubProj`, which itself is fully populated. Subversion has created the intermediate folders for you without populating them.

Zmena hĺbky pracovnej kópie

Once you have checked out a working copy to a particular depth you can change that depth later to get more or less content using Context menu → Update item to revision.... In that dialog, be sure to check the Make depth sticky checkbox.

Používanie staršieho servera

Servery pred verziou 1.5 nerozumia žiadostiam s určenou hĺbkou, takže nemôžu efektívne takéto požiadavky zodpovedať. Príkaz bude pracovať, ale staršie servery môžu poslať viac dát ponechajúc na filtrovanie na klientovi. Toto može zvýšiť výrazne zvýšiť prenesené údaje. Pokiaľ je to požne aktualizujte váš server aspoň na verziu 1.5.

Ak projekt obsahuje odkazy na externé projekty, ktoré *nechcete* získať naraz s projektom, zaškrtnite Vynechať externé.

Dôležité

If Omit externals is checked, or if you wish to increase the depth value, you will have to perform updates to your working copy using TortoiseSVN → Update to Revision... instead of TortoiseSVN → Update. The standard update will include all externals and keep the existing depth.

It is recommended that you check out only the `trunk` part of the directory tree, or lower. If you specify the parent path of the directory tree in the URL then you might end up with a full hard disk since you will get a copy of the entire repository tree including every branch and tag of your project!

Exportovanie

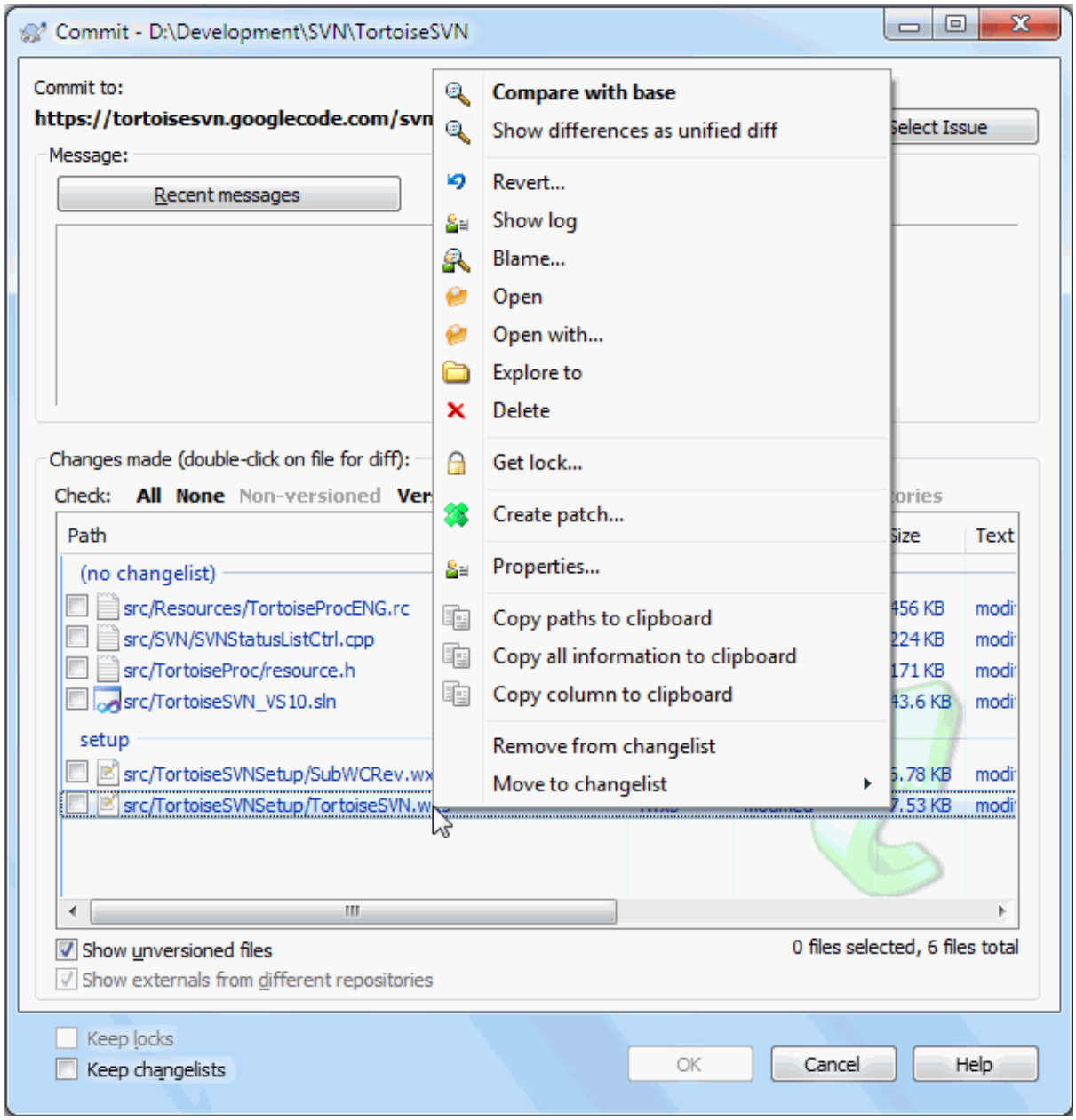
Sometimes you may want to create a local copy without any of those `.svn` directories, e.g. to create a zipped tarball of your source. Read Oddiel 4.27, “Exporting a Subversion Working Copy” to find out how to do that.

4.4. Posielanie vašich zmien do úložiska

Sending the changes you made to your working copy is known as *committing* the changes. But before you commit you have to make sure that your working copy is up to date. You can either use TortoiseSVN → Update directly. Or you can use TortoiseSVN → Check for Modifications first, to see which files have changed locally or on the server.

4.4.1. Dialóg odovzávania

If your working copy is up to date and there are no conflicts, you are ready to commit your changes. Select any file and/or folders you want to commit, then TortoiseSVN → Commit....



Obrázok 4.8. Dialóg odovzávania

The commit dialog will show you every changed file, including added, deleted and unversioned files. If you don't want a changed file to be committed, just uncheck that file. If you want to include an unversioned file, just check that file to add it to the commit.

To quickly check or uncheck types of files like all versioned files or all modified files, click the link items just above the list of shown items.

For information on the coloring and overlays of the items according to their status, please see Oddiel 4.7.3, “Miestny a vzdialeny stav”.

Items which have been switched to a different repository path are also indicated using an `(s)` marker. You may have switched something while working on a branch and forgotten to switch back to trunk. This is your warning sign!

Odovzdanie súbor alebo adresárov?

When you commit files, the commit dialog shows only the files you have selected. When you commit a folder the commit dialog will select the changed files automatically. If you forget about a new file you created, committing the folder will find it anyway. Committing a folder does *not* mean that every file gets marked as changed; It just makes your life easier by doing more work for you.

Many unversioned files in the commit dialog

If you think that the commit dialog shows you too many unversioned (e.g. compiler generated or editor backup) files, there are several ways to handle this. You can:

- add the file (or a wildcard extension) to the list of files to exclude on the settings page. This will affect every working copy you have.
- add the file to the `svn:ignore` list using TortoiseSVN → Add to ignore list This will only affect the directory on which you set the `svn:ignore` property. Using the SVN Property Dialog, you can alter the `svn:ignore` property for a directory.
- add the file to the `svn:global-ignores` list using TortoiseSVN → Add to ignore list (recursively) This will affect the directory on which you set the `svn:global-ignores` property and all subfolders as well.

Read Oddiel 4.14, “Ignorovanie súborov a adresárov” for more information.

Double clicking on any modified file in the commit dialog will launch the external diff tool to show your changes. The context menu will give you more options, as shown in the screenshot. You can also drag files from here into another application such as a text editor or an IDE.

You can select or deselect items by clicking on the checkbox to the left of the item. For directories you can use **Shift**-select to make the action recursive.

The columns displayed in the bottom pane are customizable. If you right click on any column header you will see a context menu allowing you to select which columns are displayed. You can also change column width by using the drag handle which appears when you move the mouse over a column boundary. These customizations are preserved, so you will see the same headings next time.

By default when you commit changes, any locks that you hold on files are released automatically after the commit succeeds. If you want to keep those locks, make sure the Keep locks checkbox is checked. The default state of this checkbox is taken from the `no_unlock` option in the Subversion configuration file. Read Oddiel 4.31.1, “Hlavné Nastavenia” for information on how to edit the Subversion configuration file.

Warning when committing to a tag

Usually, commits are done to the trunk or a branch, but not to tags. After all, a tag is considered fixed and should not change.

If a commit is attempted to a tag URL, TortoiseSVN shows a confirmation dialog first to ensure whether this is really what is intended. Because most of the time such a commit is done by accident.

However, this check only works if the repository layout is one of the recommended ones, meaning it uses the names `trunk`, `branches` and `tags` to mark the three main areas. In case the setup is different, the detection of what is a tag/branch/trunk (also known as `classification patterns`), can be configured in the settings dialog: Oddiel 4.31.2, “Nastavenia grafu revizií”

Pret'ahovanie

You can drag files into the commit dialog from elsewhere, so long as the working copies are checked out from the same repository. For example, you may have a huge working copy with several explorer windows open to look at distant folders of the hierarchy. If you want to avoid committing from the top level folder (with a lengthy folder crawl to check for changes) you can open the commit dialog for one folder and drag in items from the other windows to include within the same atomic commit.

You can drag unversioned files which reside within a working copy into the commit dialog, and they will be SVN added automatically.

Dragging files from the list at the bottom of the commit dialog to the log message edit box will insert the paths as plain text into that edit box. This is useful if you want to write commit log messages that include the paths that are affected by the commit.

Repairing External Renames

Sometimes files get renamed outside of Subversion, and they show up in the file list as a missing file and an unversioned file. To avoid losing the history you need to notify Subversion about the connection. Simply select both the old name (missing) and the new name (unversioned) and use Context Menu → Repair Move to pair the two files as a rename.

Opravovanie externých kópií

If you made a copy of a file but forgot to use the Subversion command to do so, you can repair that copy so the new file doesn't lose its history. Simply select both the old name (normal or modified) and the new name (unversioned) and use Context Menu → Repair Copy to pair the two files as a copy.

4.4.2. Change Lists

The commit dialog supports Subversion's changelist feature to help with grouping related files together. Find out about this feature in Oddiel 4.8, “Change Lists”.

4.4.3. Commit only parts of files

Sometimes you want to only commit parts of the changes you made to a file. Such a situation usually happens when you're working on something but then an urgent fix needs to be committed, and that fix happens to be in the same file you're working on.

right click on the file and use Context Menu → Restore after commit. This will create a copy of the file as it is. Then you can edit the file, e.g. in a text editor and undo all the changes you don't want to commit. After saving those changes you can commit the file.

Používanie TortoiseMerge

If you use TortoiseMerge to edit the file, you can either edit the changes as you're used to, or mark all the changes that you want to include. right click on a modified block and use Context Menu → Mark this change to include that change. Finally right click and use Context Menu → Leave only marked changes which will change the right view to only include the changes you've marked before and undo the changes you have not marked.

After the commit is done, the copy of the file is restored automatically, and you have the file with all your modifications that were not committed back.

4.4.4. Excluding Items from the Commit List

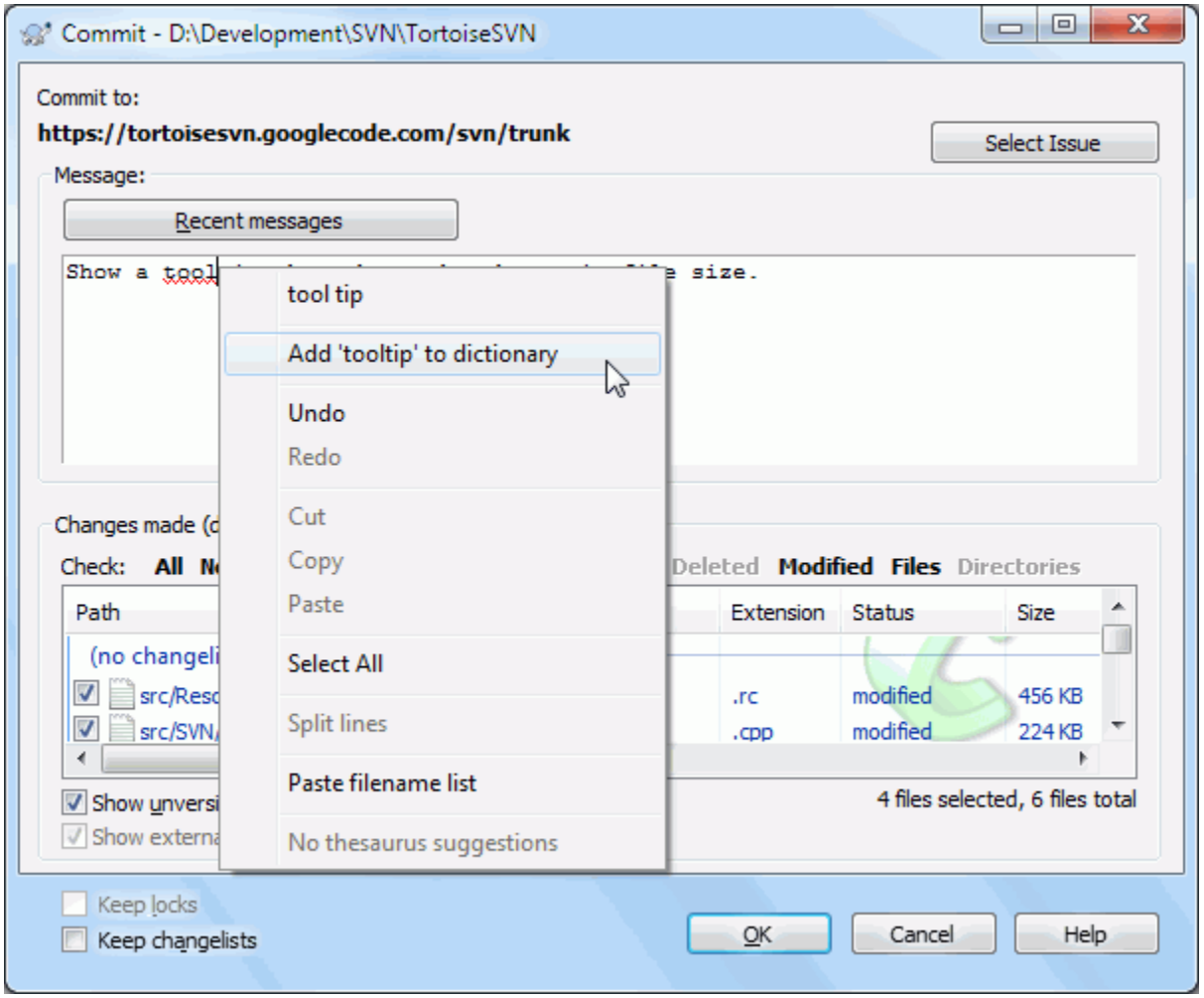
Sometimes you have versioned files that change frequently but that you really don't want to commit. Sometimes this indicates a flaw in your build process - why are those files versioned? should you be using template files? But occasionally it is inevitable. A classic reason is that your IDE changes a timestamp in the project file every time you build. The project file has to be versioned as it includes all the build settings, but it doesn't need to be committed just because the timestamp changed.

To help out in awkward cases like this, we have reserved a changelist called `ignore-on-commit`. Any file added to this changelist will automatically be unchecked in the commit dialog. You can still commit changes, but you have to select it manually in the commit dialog.

4.4.5. Odovzdanie správ denníka

Be sure to enter a log message which describes the changes you are committing. This will help you to see what happened and when, as you browse through the project log messages at a later date. The message can be as long or as brief as you like; many projects have guidelines for what should be included, the language to use, and sometimes even a strict format.

You can apply simple formatting to your log messages using a convention similar to that used within emails. To apply styling to `text`, use `*text*` for bold, `_text_` for underlining, and `^text^` for italics.



Obrázok 4.9. Kontrola pravopisu v onke odovzdávania

TortoiseSVN includes a spellchecker to help you get your log messages right. This will highlight any mis-spelled words. Use the context menu to access the suggested corrections. Of course, it doesn't know *every* technical term

that you do, so correctly spelt words will sometimes show up as errors. But don't worry. You can just add them to your personal dictionary using the context menu.

The log message window also includes a filename and function auto-completion facility. This uses regular expressions to extract class and function names from the (text) files you are committing, as well as the filenames themselves. If a word you are typing matches anything in the list (after you have typed at least 3 characters, or pressed **Ctrl+Space**), a drop-down appears allowing you to select the full name. The regular expressions supplied with TortoiseSVN are held in the TortoiseSVN installation `bin` folder. You can also define your own regexes and store them in `%APPDATA%\TortoiseSVN\autolist.txt`. Of course your private autolist will not be overwritten when you update your installation of TortoiseSVN. If you are unfamiliar with regular expressions, take a look at the introduction at https://en.wikipedia.org/wiki/Regular_expression, and the online documentation and tutorial at http://www.regular-expressions.info/.

Getting the regex just right can be tricky, so to help you sort out a suitable expression there is a test dialog which allows you to enter an expression and then type in filenames to test it against. Start it from the command prompt using the command `TortoiseProc.exe /command:autotexttest`.

The log message window also includes a commit message snippet facility. These snippets are shown in the autocomplete dropdown once you type a snippet shortcut, and selecting the snippet in the autocomplete dropdown then inserts the full text of the snippet. The snippets supplied with TortoiseSVN are held in the TortoiseSVN installation `bin` folder. You can also define your own snippets and store them in `%APPDATA%\TortoiseSVN\snippet.txt`. `#` is the comment character. Newlines can be inserted by escaping them like this: `\n` and `\r`. To insert a backslash, escape it like this: `\\`.

You can re-use previously entered log messages. Just click on Recent messages to view a list of the last few messages you entered for this working copy. The number of stored messages can be customized in the TortoiseSVN settings dialog.

You can clear all stored commit messages from the Saved data page of TortoiseSVN's settings, or you can clear individual messages from within the Recent messages dialog using the **Delete** key.

If you want to include the checked paths in your log message, you can use the command Context Menu → Paste filename list in the edit control.

Another way to insert the paths into the log message is to simply drag the files from the file list onto the edit control.

Special Folder Properties

There are several special folder properties which can be used to help give more control over the formatting of commit log messages and the language used by the spellchecker module. Read Oddiel 4.18, “Nastavenia Projektu” for further information.

Integration with Bug Tracking Tools

If you have activated the bug tracking system, you can set one or more Issues in the Bug-ID / Issue-Nr: text box. Multiple issues should be comma separated. Alternatively, if you are using regex-based bug tracking support, just add your issue references as part of the log message. Learn more in Oddiel 4.29, “Integration with Bug Tracking Systems / Issue Trackers”.

4.4.6. Priebeh odovzdávania

After pressing OK, a dialog appears displaying the progress of the commit.

Obrázok 4.10. The Progress dialog showing a commit in progress

The progress dialog uses colour coding to highlight different commit actions

Modrá
: Odovzdávanie zmien

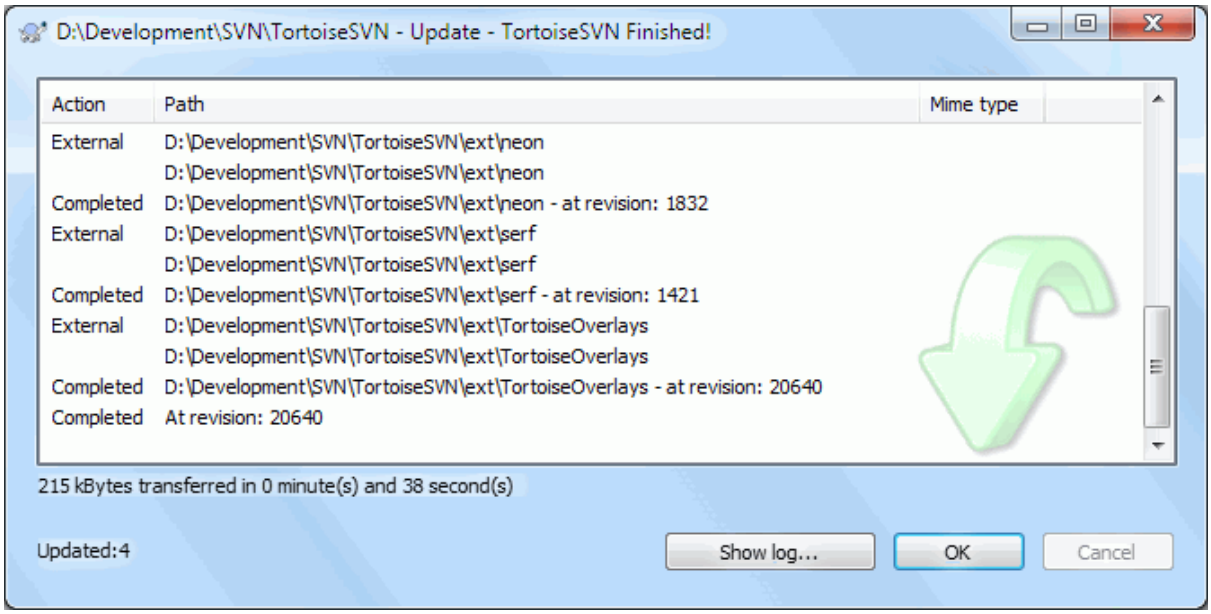
Ružová
: Committing a new addition.

Tvamo červená
: Odovzdanie vymazania a náhrady.

Čierna
: Ostatné objekty.

This is the default colour scheme, but you can customise those colours using the settings dialog. Read Oddiel 4.31.1.5, “Nastavenia farieb TortoiseSVN” for more information.

4.5. Update Your Working Copy With Changes From Others



Obrázok 4.11. Progress dialog showing finished update

Periodically, you should ensure that changes done by others get incorporated in your local working copy. The process of getting changes from the server to your local copy is known as *updating*. Updating may be done on single files, a set of selected files, or recursively on entire directory hierarchies. To update, select the files and/or directories you want, right click and select TortoiseSVN → Update in the explorer context menu. A window will pop up displaying the progress of the update as it runs. Changes done by others will be merged into your files, keeping any changes you may have done to the same files. The repository is *not* affected by an update.

The progress dialog uses colour coding to highlight different update actions

Ružová
: Pridaný nový objekt to vašej pracovnej kópie.

Tvamo červená
: Redundant item deleted from your WC, or missing item replaced in your WC.

Zelené
: Zmeny z úložiska boli úspešne zlúčené s vašimi miestnými zmenami.

Svetlo červené
: Výsledkom zlúčenia zmien z úložiska a vaších zmien je stav konfliktu, ktorý treba vyriešiť.

Čierna
: Nezmenený objekt vo vašej pracovnej kópií s novšoj verziou z úložiska.

This is the default colour scheme, but you can customise those colours using the settings dialog. Read Oddiel 4.31.1.5, “Nastavenia farieb TortoiseSVN” for more information.

If you get any *conflicts* during an update (this can happen if others changed the same lines in the same file as you did and those changes don't match) then the dialog shows those conflicts in red. You can double click on these lines to start the external merge tool to resolve the conflicts.

When the update is complete, the progress dialog shows a summary of the number of items updated, added, removed, conflicted, etc. below the file list. This summary information can be copied to the clipboard using **Ctrl +C**.

The standard Update command has no options and just updates your working copy to the HEAD revision of the repository, which is the most common use case. If you want more control over the update process, you should use TortoiseSVN → Update to Revision... instead. This allows you to update your working copy to a specific

revision, not only to the most recent one. Suppose your working copy is at revision 100, but you want it to reflect the state which it had in revision 50 - then simply update to revision 50.

In the same dialog you can also choose the *depth* at which to update the current folder. The terms used are described in Oddiel 4.3.1, “Hĺbka získavania”. The default depth is Working copy, which preserves the existing depth setting. You can also set the depth `sticky` which means subsequent updates will use that new depth, i.e. that depth is then used as the default depth.

To make it easier to include or exclude specific items from the checkout click the Choose items... button. This opens a new dialog where you can check all items you want in your working copy and uncheck all the items you don't want.

You can also choose whether to ignore any external projects in the update (i.e. projects referenced using `svn:externals`).

Výstraha

If you update a file or folder to a specific revision, you should not make changes to those files. You will get “out of date” error messages when you try to commit them! If you want to undo changes to a file and start afresh from an earlier revision, you can rollback to a previous revision from the revision log dialog. Take a look at Oddiel B.4, “Vrátenie revízií v úložisku” for further instructions, and alternative methods.

Update to Revision can occasionally be useful to see what your project looked like at some earlier point in its history. But in general, updating individual files to an earlier revision is not a good idea as it leaves your working copy in an inconsistent state. If the file you are updating has changed name, you may even find that the file just disappears from your working copy because no file of that name existed in the earlier revision. You should also note that the item will show a normal green overlay, so it is indistinguishable from files which are up-to-date.

If you simply want a local copy of an old version of a file it is better to use the Context Menu → Save revision to... command from the log dialog for that file.

Multiple Files/Folders

If you select multiple files and folders in the explorer and then select Update, all of those files/folders are updated one by one. TortoiseSVN makes sure that all files/folders which are from the same repository are updated to the exact same revision! Even if between those updates another commit occurred.

4.6. Riešiť konflikty

Once in a while, you will get a *conflict* when you update/merge your files from the repository or when you switch your working copy to a different URL. There are two kinds of conflicts:

konflikty súborov
: Súborový konfklik nastane ak dvaja (alebo viacerí) vývojari zmenili niekoľko rovnakých riadkov súboru.

konflikty stromov
: A tree conflict occurs when a developer moved/renamed/deleted a file or folder, which another developer either also has moved/renamed/deleted or just modified.

4.6.1. Konflikty súborov

A file conflict occurs when two or more developers have changed the same few lines of a file. As Subversion knows nothing of your project, it leaves resolving the conflicts to the developers. The conflicting area in a text file is marked like this:

```
<<<<<<< filename
your changes
=======
code merged from repository
>>>>>>> revision
```

Also, for every conflicted file Subversion places three additional files in your directory:

filename.ext.mine
: Toto je súbor ako existoval vo vašej pracovnej kópií predtím ako ste aktualizovali vašu pracovnú kópiu - to znamená bez označovačov konfliktov. Tento súbor obsahuje vaše posledné zmeny, nič viac.

filename.ext.rOLDREV
: Toto je súbor, ktorý bol BASE (základnou) revíziou predtím ako ste aktualizovali vašu pracovnú kópiu. To je ten súbor, ktorý ste získali pred vašimi poslednými zmenami.

filename.ext.rNEWREV
: Toto je súbor, ktorý váš Subversion klient práve získal pri aktualiyovaní vašej pracovnej kópie. Tento súbor odpovedá hlavnej revízií v čase aktualizácie.

You can either launch an external merge tool / conflict editor with TortoiseSVN → Edit Conflicts or you can use any text editor to resolve the conflict manually. You should decide what the code should look like, do the necessary changes and save the file. Using a merge tool such as TortoiseMerge or one of the other popular tools is generally the easier option as they generally present the files involved in a 3-pane view and you don't have to worry about the conflict markers. If you do use a text editor then you should search for lines starting with the string <<<<<<<.

Afterwards execute the command TortoiseSVN → Resolved and commit your modifications to the repository. Please note that the Resolve command does not really resolve the conflict. It just removes the `filename.ext.mine` and `filename.ext.r*` files, to allow you to commit your changes.

If you have conflicts with binary files, Subversion does not attempt to merge the files itself. The local file remains unchanged (exactly as you last changed it) and you have `filename.ext.r*` files. If you want to discard your changes and keep the repository version, just use the Revert command. If you want to keep your version and overwrite the repository version, use the Resolved command, then commit your version.

You can use the Resolved command for multiple files if you right click on the parent folder and select TortoiseSVN → Resolved... This will bring up a dialog listing all conflicted files in that folder, and you can select which ones to mark as resolved.

4.6.2. Property Conflicts

A property conflict occurs when two or more developers have changed the same property. As with file content, resolving the conflict can only be done by the developers.

If one of the changes must override the other then choose the option to Resolve using local property or Resolve using remote property. If the changes must be merged then select Manually edit property, sort out what the property value should be and mark as resolved.

4.6.3. Konfliktov stromov

A tree conflict occurs when a developer moved/renamed/deleted a file or folder, which another developer either also has moved/renamed/deleted or just modified. There are many different situations that can result in a tree conflict, and all of them require different steps to resolve the conflict.

When a file is deleted locally in Subversion, the file is also deleted from the local file system, so even if it is part of a tree conflict it cannot show a conflicted overlay and you cannot right click on it to resolve the conflict. Use the Check for Modifications dialog instead to access the Edit conflicts option.

TortoiseSVN can help find the right place to merge changes, but there may be additional work required to sort out the conflicts. Remember that after an update the working BASE will always contain the revision of each item as

it was in the repository at the time of update. If you revert a change after updating it goes back to the repository state, not to the way it was when you started making your own local changes.

4.6.3.1. Local delete, incoming edit upon update

1. Vývojá A presunie `Foo.c` a odovzdá ho do úložiska.
2. Developer B has simultaneously moved `Foo.c` to `Bar.c` in his working copy, or simply deleted `Foo.c` or its parent folder.

An update of developer B's working copy results in a tree conflict:

- `Foo.c` has been deleted from working copy, but is marked with a tree conflict.
- If the conflict results from a rename rather than a delete then `Bar.c` is marked as added, but does not contain developer A's modifications.

Developer B now has to choose whether to keep Developer A's changes. In the case of a file rename, he can merge the changes to `Foo.c` into the renamed file `Bar.c`. For simple file or directory deletions he can choose to keep the item with Developer A's changes and discard the deletion. Or, by marking the conflict as resolved without doing anything he effectively discards Developer A's changes.

The conflict edit dialog offers to merge changes if it can find the original file of the renamed `Bar.c`. If there are multiple files that are possible move sources, then a button for each of these files is shown which allow you to chose the correct file.

4.6.3.2. Local edit, incoming delete upon update

1. Vývojá A presunie `Foo.c` do `Bar.c` a potvrdí zmeny v úložisku.
2. Developer B modifies `Foo.c` in his working copy.

Or in the case of a folder move ...

1. Developer A moves parent folder `FooFolder` to `BarFolder` and commits it to the repository.
2. Developer B modifies `Foo.c` in his working copy.

An update of developer B's working copy results in a tree conflict. For a simple file conflict:

- `Bar.c` is added to the working copy as a normal file.
- `Foo.c` is marked as added (with history) and has a tree conflict.

For a folder conflict:

- `BarFolder` is added to the working copy as a normal folder.
- `FooFolder` is marked as added (with history) and has a tree conflict.

  `Foo.c` is marked as modified.

Developer B now has to decide whether to go with developer A's reorganisation and merge her changes into the corresponding file in the new structure, or simply revert A's changes and keep the local file.

To merge her local changes with the reshuffle, Developer B must first find out to what filename the conflicted file `Foo.c` was renamed/moved in the repository. This can be done by using the log dialog. Then use the button which shows the correct source file to resolve the conflict.

If Developer B decides that A's changes were wrong then she must choose the Mark as resolved button in the conflict editor dialog. This marks the conflicted file/folder as resolved, but Developer A's changes need to be removed by hand. Again the log dialog helps to track down what was moved.

4.6.3.3. Local delete, incoming delete upon update

1. Vývojá A presunie `Foo.c` do `Bar.c` a potvrdí zmeny v úložisku.

2. Vývojá B presunie `Foo.c` do `Bax.c`.

An update of developer B's working copy results in a tree conflict:

- `Bix.c` is marked as added with history.
- `Bar.c` is added to the working copy with status 'normal'.
- `Foo.c` is marked as deleted and has a tree conflict.

To resolve this conflict, Developer B has to find out to what filename the conflicted file `Foo.c` was renamed/moved in the repository. This can be done by using the log dialog.

Then developer B has to decide which new filename of `Foo.c` to keep - the one done by developer A or the rename done by himself.

After developer B has manually resolved the conflict, the tree conflict has to be marked as resolved with the button in the conflict editor dialog.

4.6.3.4. Local missing, incoming edit upon merge

1. Developer A working on trunk modifies `Foo.c` and commits it to the repository
2. Developer B working on a branch moves `Foo.c` to `Bar.c` and commits it to the repository

A merge of developer A's trunk changes to developer B's branch working copy results in a tree conflict:

- `Bar.c` is already in the working copy with status 'normal'.
- `Foo.c` is marked as missing with a tree conflict.

To resolve this conflict, Developer B has to mark the file as resolved in the conflict editor dialog, which will remove it from the conflict list. She then has to decide whether to copy the missing file `Foo.c` from the repository to the working copy, whether to merge Developer A's changes to `Foo.c` into the renamed `Bar.c` or whether to ignore the changes by marking the conflict as resolved and doing nothing else.

Note that if you copy the missing file from the repository and then mark as resolved, your copy will be removed again. You have to resolve the conflict first.

4.6.3.5. Local edit, incoming delete upon merge

1. Vývojá A v kmeni (trunk) presunie `Foo.c` do `Bar.c` a odovzdá zmeny do úložiska.
2. Developer B working on a branch modifies `Foo.c` and commits it to the repository.

1. Vývojár A pracujúci on kmeni (trunk) presunie rodičovskú zložku `FooFolder` do `BarFolder` a odovzdá zmeny do úložiska.
2. Developer B working on a branch modifies `Foo.c` in her working copy.

A merge of developer A's trunk changes to developer B's branch working copy results in a tree conflict:

- `Bar.c` is marked as added.
- `Foo.c` is marked as modified with a tree conflict.

Developer B now has to decide whether to go with developer A's reorganisation and merge her changes into the corresponding file in the new structure, or simply revert A's changes and keep the local file.

To merge her local changes with the reshuffle, Developer B must first find out to what filename the conflicted file `Foo.c` was renamed/moved in the repository. This can be done by using the log dialog for the merge source. The conflict editor only shows the log for the working copy as it does not know which path was used in the merge, so you will have to find that yourself. The changes must then be merged by hand as there is currently no way to automate or even simplify this process. Once the changes have been ported across, the conflicted path is redundant and can be deleted.

If Developer B decides that A's changes were wrong then she must choose the Mark as resolved button in the conflict editor dialog. This marks the conflicted file/folder as resolved, but Developer A's changes need to be removed by hand. Again the log dialog for the merge source helps to track down what was moved.

4.6.3.6. Local delete, incoming delete upon merge

1. Vývojá A v kmeni (trunk) presunie `Foo.c` do `Bar.c` a odovzdá zmeny do úložiska.
2. Vývojá B pracujúci na vetve (branch) presunie `Foo.c` do `Bix.c` a odovzdá zmeny do úložiska.

A merge of developer A's trunk changes to developer B's branch working copy results in a tree conflict:

- `Bix.c` is marked with normal (unmodified) status.
- `Bar.c` is marked as added with history.
- `Foo.c` is marked as missing and has a tree conflict.

To resolve this conflict, Developer B has to find out to what filename the conflicted file `Foo.c` was renamed/moved in the repository. This can be done by using the log dialog for the merge source.

Then developer B has to decide which new filename of `Foo.c` to keep - the one done by developer A or the rename done by himself.

After developer B has manually resolved the conflict, the tree conflict has to be marked as resolved with the button in the conflict editor dialog.

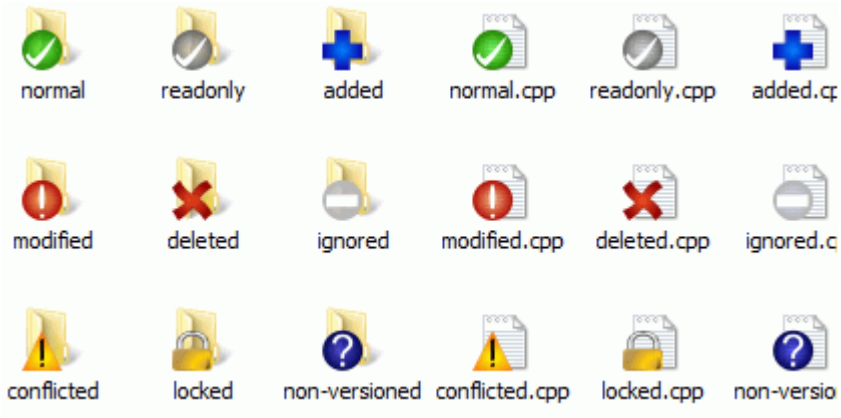
4.6.3.7. Iné konflikty stromov

There are other cases which are labelled as tree conflicts simply because the conflict involves a folder rather than a file. For example if you add a folder with the same name to both trunk and branch and then try to merge you will get a tree conflict. If you want to keep the folder from the merge target, just mark the conflict as resolved. If you want to use the one in the merge source then you need to SVN delete the one in the target first and run the merge again. If you need anything more complicated then you have to resolve manually.

4.7. Získavnie informácií o stave

While you are working on your working copy you often need to know which files you have changed/added/removed or renamed, or even which files got changed and committed by others.

4.7.1. Prekrývané ikony



Obrázok 4.12. Prieskumník (Windows Explorer) zobrazujúci ikonky prekrytia

Teraz keď ste získali pracovnú kópiu z úložiska Subversion môžete si pozrieť zmenené ikonky v explorer-y. Toto je jeden y dôvodov prečo je TortoiseSVN tak obľúbený. TortoiseSVN pridal takzvané prekryvané ikonky na každú ikonku súboru, ktorú prekrýva. Ikonka sa mení v závisloti na stave súboru v Subversion.

Čerstvo získaná pracovná kópia má zelenú značku. To znamená že stav súboru v Subversion je *normalny*.

Keď začnete upravovať súbor, jeho stav sa zmení na *upravené* a prekryvajúca ikonka sa zmení na červený výkričník. Takže ľahko zbadáte, ktoré súbory boli zmenené od poslednej aktualizácie vašej pracovnej kópie a je ich potrebné odovzdať.

Ak pošas aktualizácie nastal *konflikt* ikonka sa zmení na žltú.

Ak ste nastavili na súbor vlastnosť *svn:needs-lock*, Subversion spraví súbor iba na čítanie, kým nezískate zámok pre daný súbor. Súbory iba na čítanie majú toto prekrytie aby ste vedeli, že pred ich úpravou potrebujete získať zámok.

If you hold a lock on a file, and the Subversion status is *normal*, this icon overlay reminds you that you should release the lock if you are not using it to allow others to commit their changes to the file.

Táto ikonka zobrazuje, že súbory, alebo adresáre vrámci aktualného adresára boli naplánované na *vymazané* zo správy verzií, alebo súbor pod správou verzií v adresáry chýba.

Znamieko plus vám hovorí, že súbor bol naplanovaný na *pridané* do správy verzií.

Znamieko otáznika vám hovorí, že súbor alebo adresár je pre správu verzií *ignorovaný*. Toto prekrytie je nepovinné.

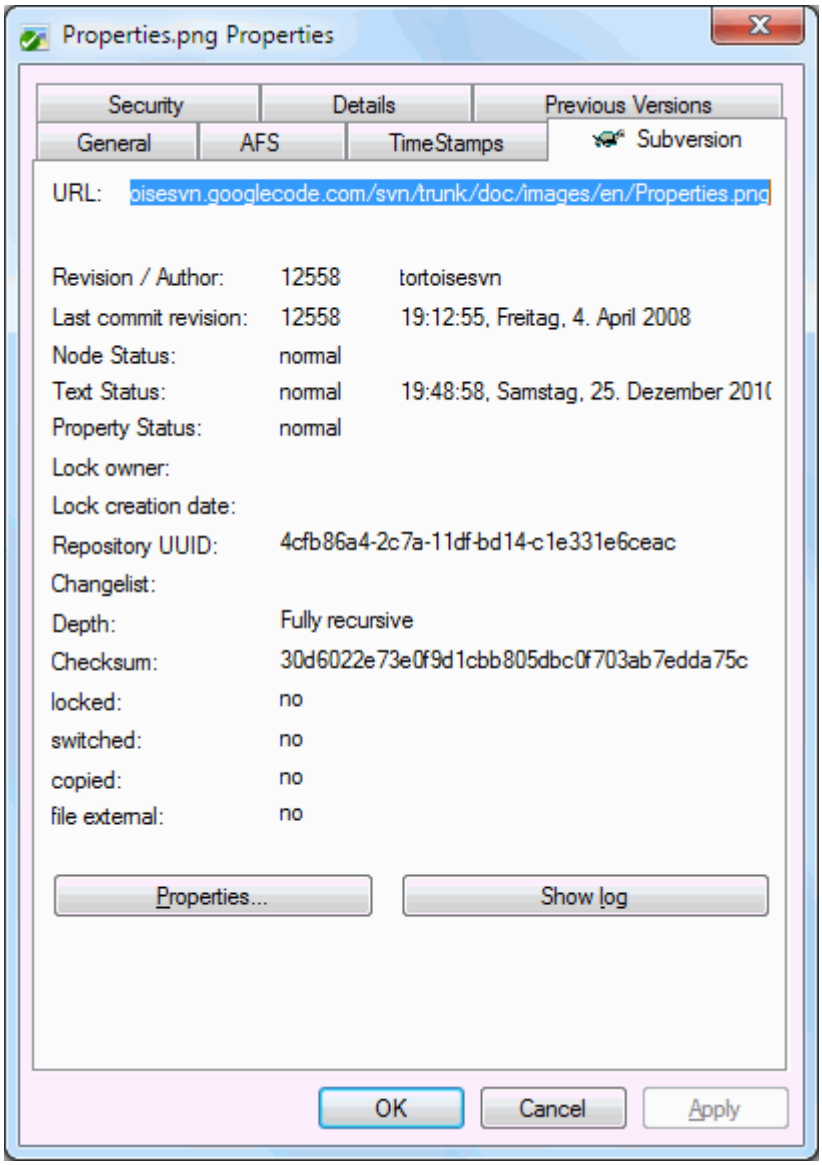
This icon shows files and folders which are not under version control, but have not been ignored. This overlay is optional.

In fact, you may find that not all of these icons are used on your system. This is because the number of overlays allowed by Windows is very limited and if you are also using an old version of TortoiseCVS, then there are not enough overlay slots available. TortoiseSVN tries to be a “Good Citizen (TM)” and limits its use of overlays to give other apps a chance too.

Now that there are more Tortoise clients around (TortoiseCVS, TortoiseHg, ...) the icon limit becomes a real problem. To work around this, the TortoiseSVN project introduced a common shared icon set, loaded as a DLL, which can be used by all Tortoise clients. Check with your client provider to see if this has been integrated yet :-)

For a description of how icon overlays correspond to Subversion status and other technical details, read Oddiel F.1, “Prekrývané ikony”.

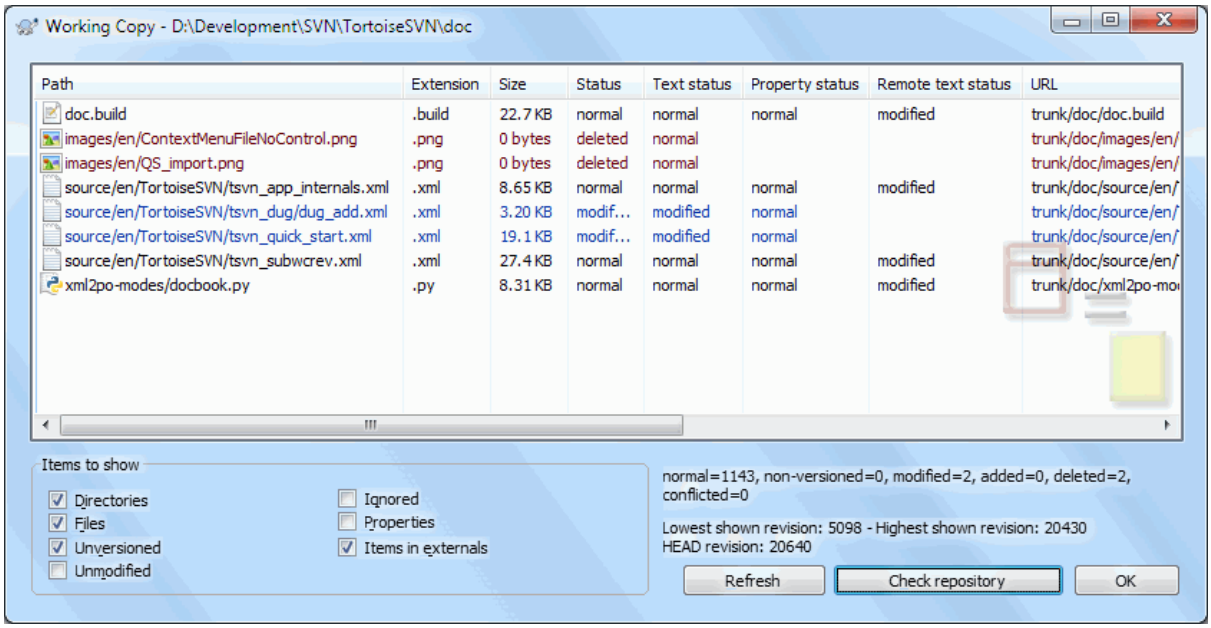
4.7.2. Detailed Status



Obrázok 4.13. Explorer property page, Subversion tab

Sometimes you want to have more detailed information about a file/directory than just the icon overlay. You can get all the information Subversion provides in the explorer properties dialog. Just select the file or directory and select Windows Menu → properties in the context menu (note: this is the normal properties menu entry the explorer provides, not the one in the TortoiseSVN submenu!). In the properties dialog box TortoiseSVN has added a new property page for files/folders under Subversion control, where you can see all relevant information about the selected file/directory.

4.7.3. Miestny a vzdialeny stav



Obrázok 4.14. Skontrolovať zmeny

It's often very useful to know which files you have changed and also which files got changed and committed by others. That's where the command TortoiseSVN → Check For Modifications... comes in handy. This dialog will show you every file that has changed in any way in your working copy, as well as any unversioned files you may have.

If you click on the Check Repository then you can also look for changes in the repository. That way you can check before an update if there's a possible conflict. You can also update selected files from the repository without updating the whole folder. By default, the Check Repository button only fetches the remote status with the checkout depth of the working copy. If you want to see all files and folders in the repository, even those you have not checked out, then you have to hold down the **Shift** key when you click on the Check Repository button.

Dialóg používa farebné kódovanie na zvýraznenie stavu.

Modrá
: Miestne zmené objekty.

Ružová
: Pridané objekty. Objekty, ktoré boli pridaná aj s históriou majú znak + v stĺpci Textový stav. Tooltip zobrazuje odkiaľ boli nakopírované.

Tvamo červená
: Vymazané, alebo chýbajúce objekty.

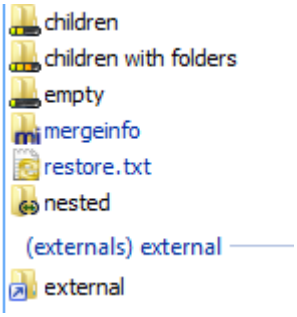
Zelené
: Objekty upravené lokálne aj v úložisku. Zmeny budú zlúčené pri aktualizácií. Toto *môže* pri aktulizácií spôsobiť konflikt.

Svetlo červené
: Objekty lokálne zmené a vymazané v úložisku, alebo upravené v úložisku a miestne zmazané. Toto *vytvorí* konflikt pri aktualizácií.

Čierna
: Nezmenené a neverziované objekty.

This is the default colour scheme, but you can customise those colours using the settings dialog. Read Oddiel 4.31.1.5, “Nastavenia farieb TortoiseSVN” for more information.

Overlay icons are used to indicate other states as well. The screenshot below shows all the possible overlays that are shown if necessary.



Overlays are shown for the following states:

- Checkout depth `empty`, meaning only the item itself.
- Checkout depth `files`, meaning only the item itself and all file children without child folders.
- Checkout depth `immediates`, meaning only the item itself and all file and folder children, but without children of the child folders.
- Nested items, i.e., working copies inside the working copy.
- External items, i.e., all items that are added via an `svn:externals` property.
- Items that are restored after a commit. See Oddiel 4.4.3, “Commit only parts of files” for details.
- Items that have property modifications, but only to the `svn:mergeinfo` property. If any other property is modified, the overlay is not used.

Items which have been switched to a different repository path are also indicated using an `(s)` marker. You may have switched something while working on a branch and forgotten to switch back to trunk. This is your warning sign! The context menu allows you to switch them back to the normal path again.

From the context menu of the dialog you can show a diff of the changes. Check the local changes *you* made using Context Menu → Compare with Base. Check the changes in the repository made by others using Context Menu → Show Differences as Unified Diff.

You can also revert changes in individual files. If you have deleted a file accidentally, it will show up as *Missing* and you can use *Revert* to recover it.

Unversioned and ignored files can be sent to the recycle bin from here using Context Menu → Delete. If you want to delete files permanently (bypassing the recycle bin) hold the **Shift** key while clicking on Delete.

If you want to examine a file in detail, you can drag it from here into another application such as a text editor or IDE, or you can save a copy simply by dragging it into a folder in explorer.

The columns are customizable. If you right click on any column header you will see a context menu allowing you to select which columns are displayed. You can also change column width by using the drag handle which appears when you move the mouse over a column boundary. These customizations are preserved, so you will see the same headings next time.

If you are working on several unrelated tasks at once, you can also group files together into changelists. Read Oddiel 4.4.2, “Change Lists” for more information.

At the bottom of the dialog you can see a summary of the range of repository revisions in use in your working copy. These are the *commit* revisions, not the *update* revisions; they represent the range of revisions where these files were last committed, not the revisions to which they have been updated. Note that the revision range shown

applies only to the items displayed, not to the entire working copy. If you want to see that information for the whole working copy you must check the Show unmodified files checkbox.

Tip

If you want a flat view of your working copy, i.e. showing all files and folders at every level of the folder hierarchy, then the Check for Modifications dialog is the easiest way to achieve that. Just check the Show unmodified files checkbox to show all files in your working copy.

Repairing External Renames

Sometimes files get renamed outside of Subversion, and they show up in the file list as a missing file and an unversioned file. To avoid losing the history you need to notify Subversion about the connection. Simply select both the old name (missing) and the new name (unversioned) and use Context Menu → Repair Move to pair the two files as a rename.

Opravovanie externých kópií

If you made a copy of a file but forgot to use the Subversion command to do so, you can repair that copy so the new file doesn't lose its history. Simply select both the old name (normal or modified) and the new name (unversioned) and use Context Menu → Repair Copy to pair the two files as a copy.

4.7.4. Prezeranie rozdielov

Often you want to look inside your files, to have a look at what you've changed. You can accomplish this by selecting a file which has changed, and selecting Diff from TortoiseSVN's context menu. This starts the external diff-viewer, which will then compare the current file with the pristine copy (`BASE` revision), which was stored after the last checkout or update.

Tip

Even when not inside a working copy or when you have multiple versions of the file lying around, you can still display diffs:

Select the two files you want to compare in explorer (e.g. using **Ctrl** and the mouse) and choose Diff from TortoiseSVN's context menu. The file clicked last (the one with the focus, i.e. the dotted rectangle) will be regarded as the later one.

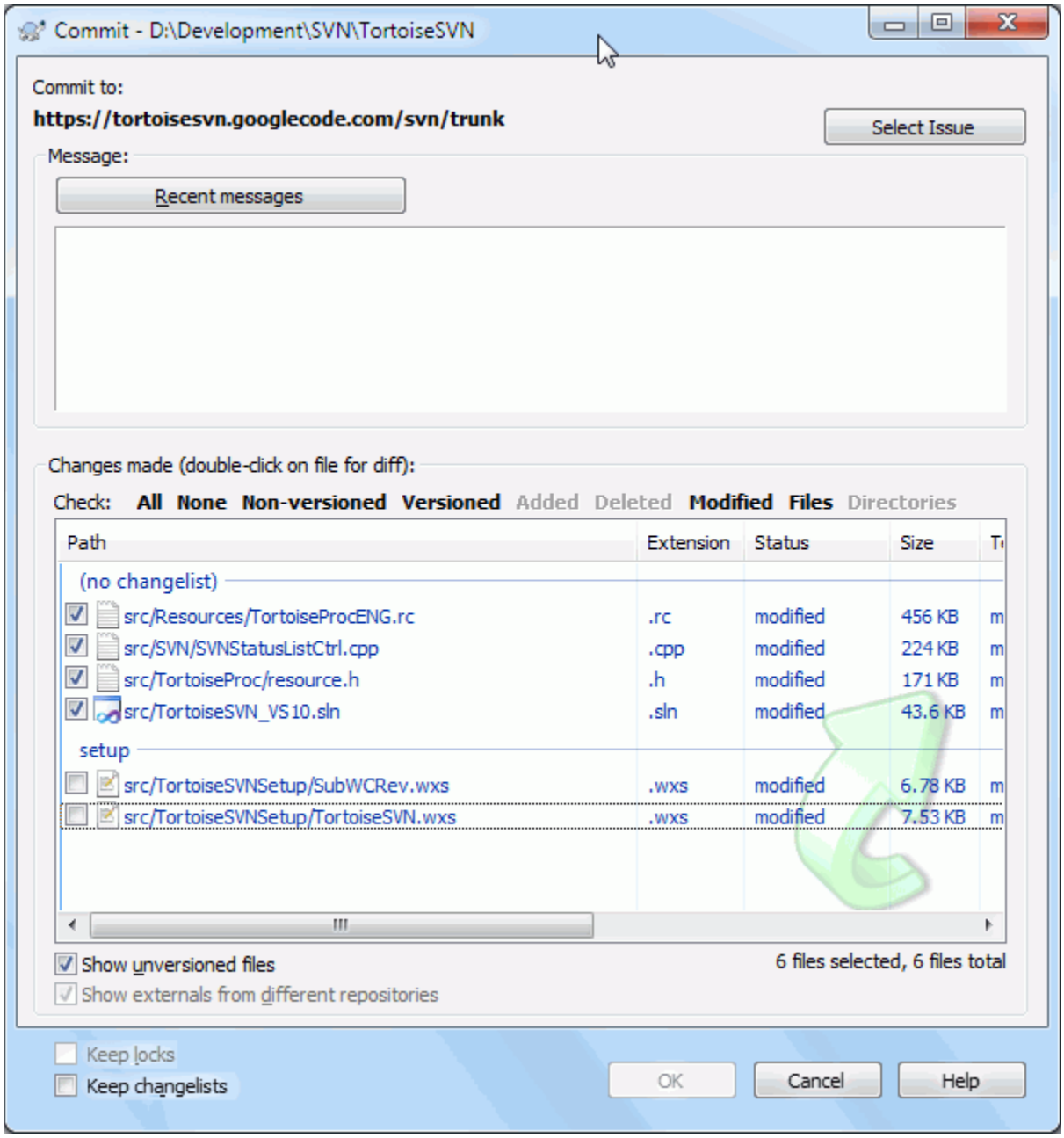
4.8. Change Lists

In an ideal world, you only ever work on one thing at a time, and your working copy contains only one set of logical changes. OK, back to reality. It often happens that you have to work on several unrelated tasks at once, and when you look in the commit dialog, all the changes are mixed in together. The *changelist* feature helps you group files together, making it easier to see what you are doing. Of course this can only work if the changes do not overlap. If two different tasks affect the same file, there is no way to separate the changes.

You can see changelists in several places, but the most important ones are the commit dialog and the check-for-modifications dialog. Let's start in the check-for-modifications dialog after you have worked on several features and many files. When you first open the dialog, all the changed files are listed together. Suppose you now want to organise things and group those files according to feature.

Select one or more files and use Context Menu → Move to changelist to add an item to a changelist. Initially there will be no changelists, so the first time you do this you will create a new changelist. Give it name which describes what you are using it for, and click OK. The dialog will now change to show groups of items.

Once you have created a changelist you can drag and drop items into it, either from another changelist, or from Windows Explorer. Dragging from Explorer can be useful as it allows you to add items to a changelist before the file is modified. You could do that from the check-for-modifications dialog, but only by displaying all unmodified files.



Obrázok 4.15. Dialog odovzdávania so zoznamom zmien

In the commit dialog you can see those same files, grouped by changelist. Apart from giving an immediate visual indication of groupings, you can also use the group headings to select which files to commit.

TortoiseSVN reserves one changelist name for its own use, namely `ignore-on-commit`. This is used to mark versioned files which you almost never want to commit even though they have local changes. This feature is described in Oddiel 4.4.4, “Excluding Items from the Commit List”.

When you commit files belonging to a changelist then normally you would expect that the changelist membership is no longer needed. So by default, files are removed from changelists automatically on commit. If you wish to retain the file in its changelist, use the Keep changelists checkbox at the bottom of the commit dialog.

Tip

Changelists are purely a local client feature. Creating and removing changelists will not affect the repository, nor anyone else's working copy. They are simply a convenient way for you to organise your files.

Varovanie

Note that if you use changelists, externals will no longer show up in their own groups anymore. Once there are changelists, files and folders are grouped by changelist, not by external anymore.

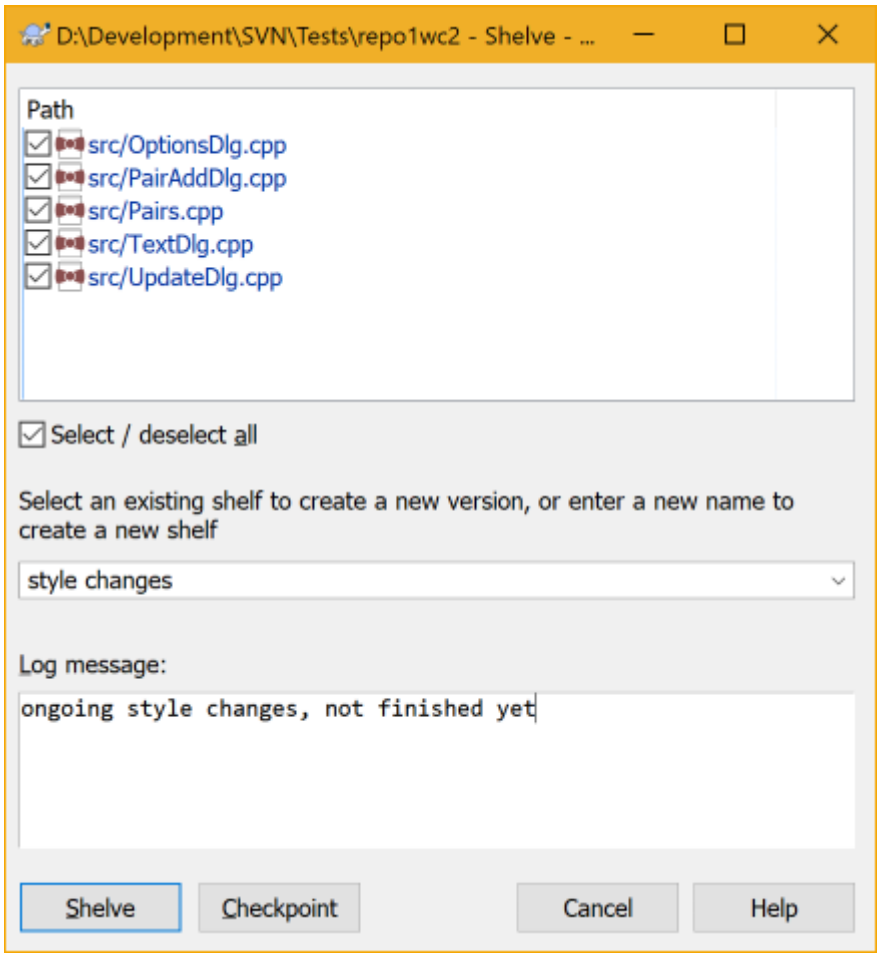
4.9. Shelving

More often than wanted, it's necessary to stop what you were working on and work on something else. For example a serious problem needs immediate dealing with and you have to stop working on the new feature. If possible, you should commit the changes you have done so far and then start working on the urgent issue, but often those changes would break the build or are just not ready for committing yet.

So if you can't commit your local changes yet, you have to put them aside while you're working on the urgent issue. The *shelving* feature helps you do exactly that: you can store your local changes on a shelve, get your working copy in a clean state again and work on the issue. After you're finished with the urgent issue and you've committed those changes, you can *unshelve* your shelved work and continue working on your previous task again.

Two new commands are implemented for this. One for shelving and one for unshelving.

To shelve your local changes, select your working copy and use Context Menu → Shelve The following dialog allows you to select the files you want to shelve and give a name under which you want to store them.

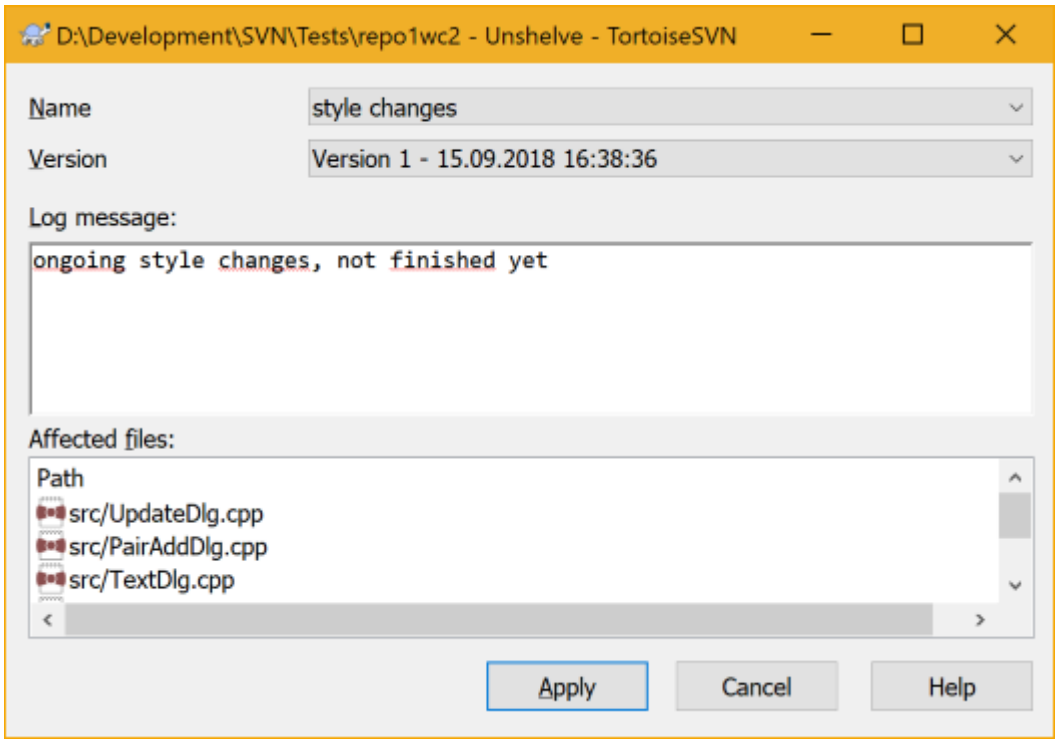


Obrázok 4.16. Shelve dialog

If you select an existing shelf, then a new version is created for that shelf. If you provide a new name, a new shelf is created for the selected files.

If you click the Shelve button, the shelf is created and your working copy files are reset to a clean state. If you click the Checkpoint button, the shelf is created but your local modifications are kept.

To unshelve your changes, use Context Menu → Unshelve to get the unshelve dialog. This dialog shows you a list of all shelved items. Select the shelved item you want and the version to apply back to your working copy and click Apply.



Obrázok 4.17. Unshelve dialog

Tip

Shelves are purely a local client feature. Creating and removing Shelves will not affect the repository, nor anyone else's working copy.

Experimental

The shelving feature is still marked as `experimental`.

That means that while shelving works as advertised, it is still in a stage where it's heavily improved and worked on. That also means that there's no guarantee that the shelves you create are upwards compatible and future versions might not be able to use them. And of course the UI might change as well in future versions to accommodate new features and behaviors.

4.10. Revision Log Dialog

For every change you make and commit, you should provide a log message for that change. That way you can later find out what changes you made and why, and you have a detailed log for your development process.

The Revision Log Dialog retrieves all those log messages and shows them to you. The display is divided into 3 panes.

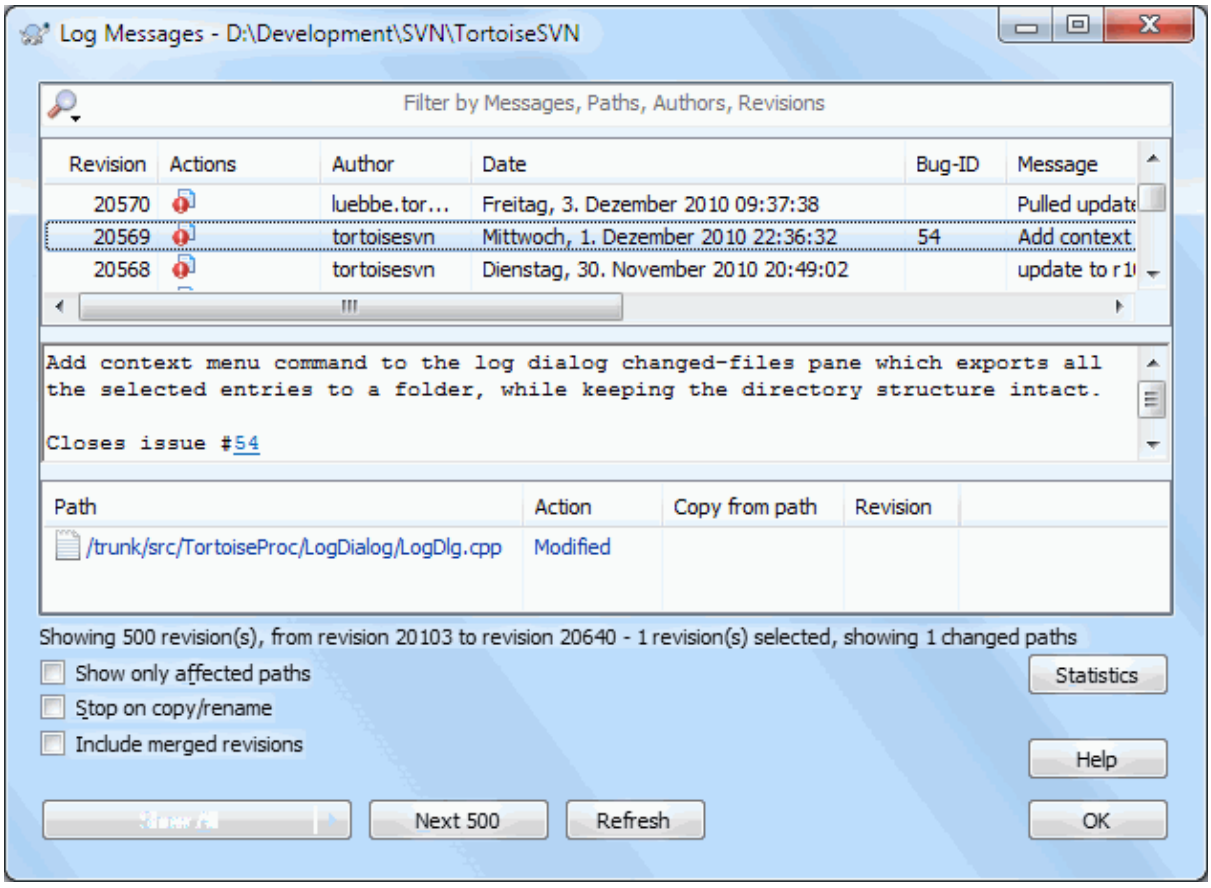
- The top pane shows a list of revisions where changes to the file/folder have been committed. This summary includes the date and time, the person who committed the revision and the start of the log message.

  Lines shown in blue indicate that something has been copied to this development line (perhaps from a branch).

- The middle pane shows the full log message for the selected revision.
- The bottom pane shows a list of all files and folders that were changed as part of the selected revision.

But it does much more than that - it provides context menu commands which you can use to get even more information about the project history.

4.10.1. Invoking the Revision Log Dialog



Obrázok 4.18. The Revision Log Dialog

There are several places from where you can show the Log dialog:

- From the TortoiseSVN context submenu
- From the property page
- From the Progress dialog after an update has finished. Then the Log dialog only shows those revisions which were changed since your last update
- From the repository browser

If the repository is unavailable you will see the Want to go offline? dialog, described in Oddiel 4.10.10, “Offline Mode”.

4.10.2. Akcie denníka revízií

The top pane has an Actions column containing icons that summarize what has been done in that revision. There are four different icons, each shown in its own column.

If a revision modified a file or directory, the *modified* icon is shown in the first column.

Ak revízia pridala súbor, alebo adresár, v druhom stĺpci je zobrazené `pridané`.

Ak revízia vymazala súbor, alebo adresár, v treťom stĺpci je zobrazené `vymazané`.

If a revision replaced a file or directory, the *replaced* icon is shown in the fourth column.

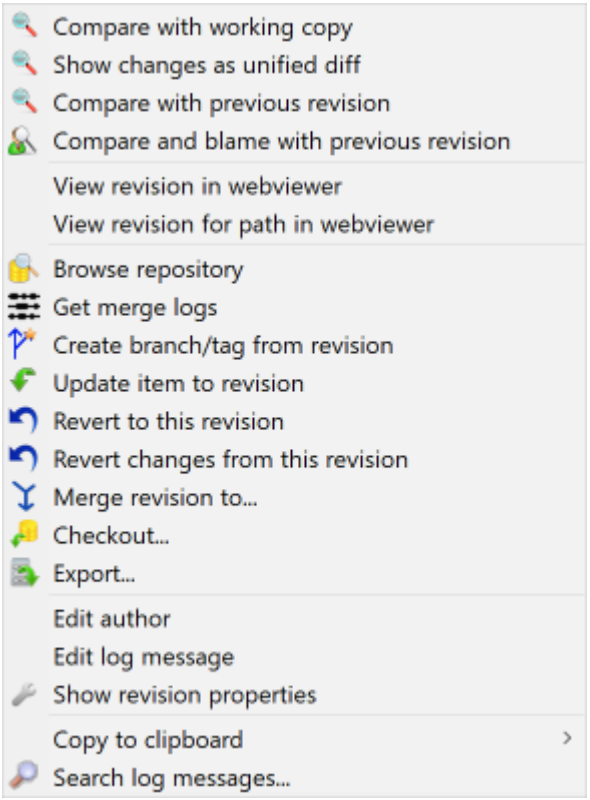
If a revision moved or renamed a file or directory, the *moved* icon is shown in the fourth column.

If a revision replaced a file or directory by moving/renaming it, the *move replaced* icon is shown in the fourth column.

If a revision merged a file or directory, the *merged* icon is shown in the fourth column.

If a revision reverse merged a file or directory, the *reverse merged* icon is shown in the fourth column.

4.10.3. Získanie ďalších informácií



Obrázok 4.19. The Revision Log Dialog Top Pane with Context Menu

The top pane of the Log dialog has a context menu that allows you to access much more information. Some of these menu entries appear only when the log is shown for a file, and some only when the log is shown for a folder.

Porovnať s pracovnou kópiou
: Compare the selected revision with your working copy. The default Diff-Tool is TortoiseMerge which is supplied with TortoiseSVN. If the log dialog is for a folder, this will show you a list of changed files, and allow you to review the changes made to each file individually.

Compare and blame with working BASE
: Blame the selected revision, and the file in your working BASE and compare the blame reports using a visual diff tool. Read Oddiel 4.24.2, “Obviniť rozdiely” for more detail. (files only)

Zobraziť zmeny unifikovaným porovnaním
: View the changes made in the selected revision as a Unified-Diff file (GNU patch format). This shows only the differences with a few lines of context. It is harder to read than a visual file compare, but will show all file changes together in a compact format.

  If you hold down the **Shift** key when clicking on the menu item, a dialog shows up first where you can set options for the unified diff. These options include the ability to ignore changes in line endings and whitespaces.

Porovnanie s predchádzajúcou revíziou
: Compare the selected revision with the previous revision. This works in a similar manner to comparing with your working copy. For folders this option will first show the changed files dialog allowing you to select files to compare.

Porovnanie a obvinenie s predchádzajúcou revíziou
: Show the changed files dialog allowing you to select files. Blame the selected revision, and the previous revision, and compare the results using a visual diff tool. (folders only)

Uložiť revíziu na...
: Save the selected revision to a file so you have an older version of that file. (files only)

Open / Open with...
: Open the selected file, either with the default viewer for that file type, or with a program you choose. (files only)

Obviňovanie...
: Blame the file up to the selected revision. (files only)

Prezeranie úložiska
: Open the repository browser to examine the selected file or folder in the repository as it was at the selected revision.

Vytvoriť vetvu/značku z revízie
: Create a branch or tag from a selected revision. This is useful e.g. if you forgot to create a tag and already committed some changes which weren't supposed to get into that release.

Aktualizovať objekt na revíziu
: Update your working copy to the selected revision. Useful if you want to have your working copy reflect a time in the past, or if there have been further commits to the repository and you want to update your working copy one step at a time. It is best to update a whole directory in your working copy, not just one file, otherwise your working copy could be inconsistent.

  If you want to undo an earlier change permanently, use Revert to this revision instead.

Vrátiť na revíziu
: Revert to an earlier revision. If you have made several changes, and then decide that you really want to go back to how things were in revision N, this is the command you need. The changes are undone in your working copy so this operation does *not* affect the repository until you commit the changes. Note that this will undo *all* changes made after the selected revision, replacing the file/folder with the earlier version.

  If your working copy is in an unmodified state, after you perform this action your working copy will show as modified. If you already have local changes, this command will merge the *undo* changes into your working copy.

  What is happening internally is that Subversion performs a reverse merge of all the changes made after the selected revision, undoing the effect of those previous commits.

If after performing this action you decide that you want to *undo the undo* and get your working copy back to its previous unmodified state, you should use TortoiseSVN → Revert from within Windows Explorer, which will discard the local modifications made by this reverse merge action.

If you simply want to see what a file or folder looked like at an earlier revision, use Update to revision or Save revision as... instead.

Vrátiť zmeny z tejto revízie
: Undo changes from which were made in the selected revision. The changes are undone in your working copy so this operation does *not* affect the repository at all! Note that this will undo the changes made in that revision only; it does not replace your working copy with the entire file at the earlier revision. This is very useful for undoing an earlier change when other unrelated changes have been made since.

  If your working copy is in an unmodified state, after you perform this action your working copy will show as modified. If you already have local changes, this command will merge the *undo* changes into your working copy.

  What is happening internally is that Subversion performs a reverse merge of that one revision, undoing its effect from a previous commit.

  You can *undo the undo* as described above in Revert to this revision.

Zlúčiť revíziu do...
: Merge the selected revision(s) into a different working copy. A folder selection dialog allows you to choose the working copy to merge into, but after that there is no confirmation dialog, nor any opportunity to try a test merge. It is a good idea to merge into an unmodified working copy so that you can revert the changes if it doesn't work out! This is a useful feature if you want to merge selected revisions from one branch to another.

Získavanie...
: Make a fresh checkout of the selected folder at the selected revision. This brings up a dialog for you to confirm the URL and revision, and select a location for the checkout.

Exportovanie...
: Export the selected file/folder at the selected revision. This brings up a dialog for you to confirm the URL and revision, and select a location for the export.

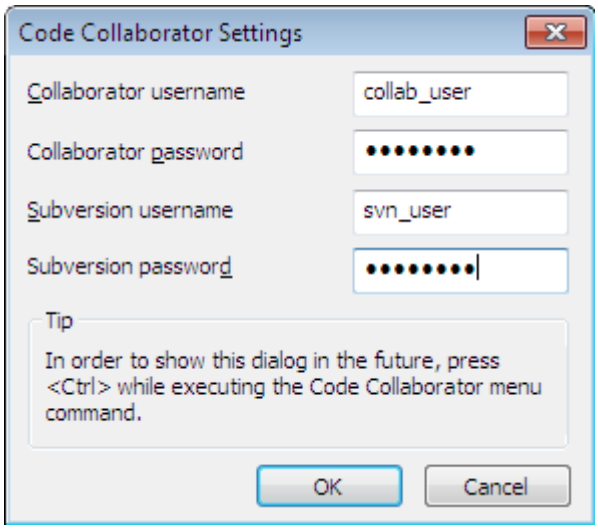
Upraviť autora / správu denníka
: Edit the log message or author attached to a previous commit. Read Oddiel 4.10.7, “Changing the Log Message and Author” to find out how this works.

Zobrazenie vlastností revízie
: View and edit any revision property, not just log message and author. Refer to Oddiel 4.10.7, “Changing the Log Message and Author”.

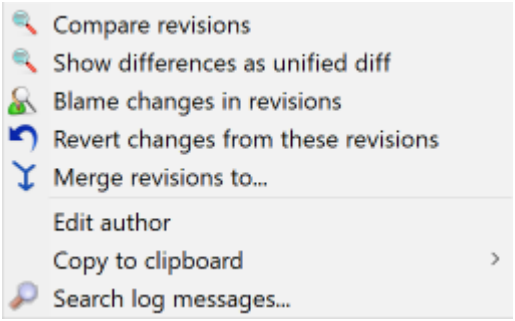
Kopírovať do schránky
: Copy the log details of the selected revisions to the clipboard. This will copy the revision number, author, date, log message and the list of changed items for each revision.

Vyhľadať správy denníka...
: Search log messages for the text you enter. This searches the log messages that you entered and also the action summaries created by Subversion (shown in the bottom pane). The search is not case sensitive.

Create code collaborator review...
: This menu is shown only if the SmartBear code collaborator tool is installed. When invoked for the first time, a dialog is shown prompting the user to enter user credentials for both code collaborator and SVN. Once the settings are stored, the settings dialog is no longer shown when the menu is invoked, unless the user holds **Ctrl** while executing the menu item. The configuration and the chosen revision(s) are used to invoke the code collaborator graphical user interface client, which creates a new review with the selected revisions.



Obrázok 4.20. The Code Collaborator Settings Dialog



Obrázok 4.21. Top Pane Context Menu for 2 Selected Revisions

If you select two revisions at once (using the usual **Ctrl**-modifier), the context menu changes and gives you fewer options:

Porovnať revízie
: Compare the two selected revisions using a visual difference tool. The default Diff-Tool is TortoiseMerge which is supplied with TortoiseSVN.

  If you select this option for a folder, a further dialog pops up listing the changed files and offering you further diff options. Read more about the Compare Revisions dialog in Oddiel 4.11.3, “Porovavanie adresárov”.

Blame revisions
: Blame the two revisions and compare the blame reports using a visual difference tool. Read Oddiel 4.24.2, “Obviniť rozdiely” for more detail.

Show differences as unified diff
: View the differences between the two selected revisions as a Unified-Diff file. This works for files and folders.

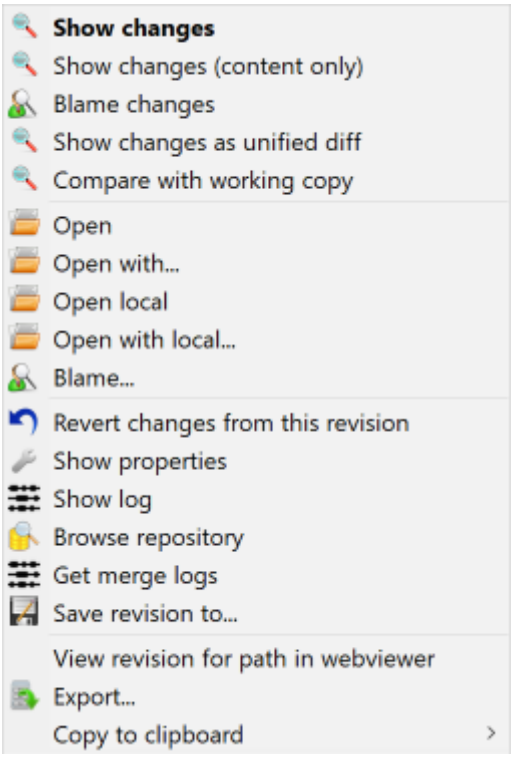
Kopírovať do schránky
: Copy log messages to clipboard as described above.

Vyhľadať správy denníka...
: Search log messages as described above.

If you select two or more revisions (using the usual **Ctrl** or **Shift** modifiers), the context menu will include an entry to Revert all changes which were made in the selected revisions. This is the easiest way to rollback a group of revisions in one go.

You can also choose to merge the selected revisions to another working copy, as described above.

If all selected revisions have the same author, you can edit the author of all those revisions in one go.



Obrázok 4.22. The Log Dialog Bottom Pane with Context Menu

The bottom pane of the Log dialog also has a context menu that allows you to

Zobraziť zmeny
: Show changes made in the selected revision for the selected file.

Obviniť zmeny
: Blame the selected revision and the previous revision for the selected file, and compare the blame reports using a visual diff tool. Read Oddiel 4.24.2, “Obviniť rozdiely” for more detail.

Show as unified diff
: Show file changes in unified diff format. This context menu is only available for files shown as *modified*.

Open / Open with...
: Open the selected file, either with the default viewer for that file type, or with a program you choose.

Obviňovanie...
: Opens the Blame dialog, allowing you to blame up to the selected revision.

Vrátiť zmeny z tejto revízie
: Revert the changes made to the selected file in that revision.

Zobraziť vlastnosti
: View the Subversion properties for the selected item.

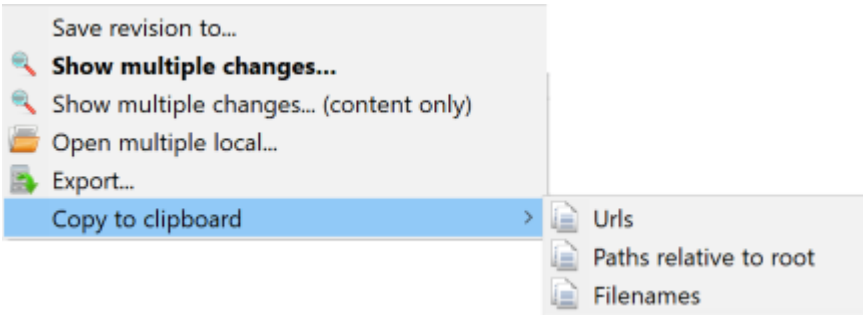
Zobrazenie denníka
: Show the revision log for the selected single file.

Získať denník zlučovania
: Show the revision log for the selected single file, including merged changes. Find out more in Oddiel 4.10.6, “Merge Tracking Features”.

Uložiť revíziu na...
Save the selected revision to a file so you have an older version of that file.

Exportovanie...
Export the selected items in this revision to a folder, preserving the file hierarchy.

When multiple files are selected in the bottom pane of the Log dialog, the context menu changes to the following:



Obrázok 4.23. The Log Dialog Bottom Pane with Context Menu When Multiple Files Selected.

Uložiť revíziu na...
Save the selected revision to a file so you have an older version of that file.

Show multiple changes...
Show changes made in the selected revision for the selected files. Note that the show changes functionality is invoked multiple times, which may bring up multiple copies of your selected diff tool, or just add a new comparison tab in your diff tool. If you have selected more than 15 files, you will be prompted to confirm the action.

Open multiple local...
This will open local working copy files that correspond to your selected files using the application that is registered for the extension. [The behavior is the one you would get double-clicking the working-copy file(s) in Windows explorer]. Depending on how your file extension is associated to an application and the capabilities of the application, this may be a slow operation. In the worst case, new instances of the application may be launched by Windows for each file that was selected.

If you hold **Ctrl** while invoking this command, the working copy files are always loaded into Visual Studio. This only works when the following conditions are met: Visual Studio must be running in the same user context while having the same process integrity level [running as admin or not] as TortoiseProc.exe. It may be desirable to have the solution containing the changed files loaded, although this is not strictly necessary. Only files that exist on disk with extensions [.cpp, .h, .cs, .rc, .resx, .xaml, .js, .html, .htm, .asp, .aspx, .php, .css and .xml] will be loaded. A maximum of 100 files can be loaded into Visual Studio at one time, and the files are always loaded as new tabs into the currently open instance of Visual Studio. The benefit of reviewing code changes in Visual Studio lies in the fact that you can then use the built-in code navigation, reference finding, static code analysis and other tools built into Visual Studio.

Exportovanie...
Export the selected files/folder at the selected revision. This brings up a dialog for you to confirm the URL and revision, and select a location for the export.

Tip

You may notice that sometimes we refer to changes and other times to differences. What's the difference?

Subversion uses revision numbers to mean 2 different things. A revision generally represents the state of the repository at a point in time, but it can also be used to represent the changeset which

created that revision, e.g. “Done in r1234” means that the changes committed in r1234 implement feature X. To make it clearer which sense is being used, we use two different terms.

If you select two revisions N and M, the context menu will offer to show the *difference* between those two revisions. In Subversion terms this is `diff -r M:N`.

If you select a single revision N, the context menu will offer to show the *changes* made in that revision. In Subversion terms this is `diff -r N-1:N` or `diff -c N`.

The bottom pane shows the files changed in all selected revisions, so the context menu always offers to show *changes*.

4.10.4. Získavnie viac správ denníka

The Log dialog does not always show all changes ever made for a number of reasons:

- Vo väčších úložiskách môžu byť stovky či tisice zmien a ich získanie by mohlo trvať dosť dlho. Zvyčajne vás bude zaujímať niekoľko ostatných zmien. Preto je predvolené získanie 100 posledných zmien, ale toto obmedzenie je možné zmeniť v TortoiseSVN → Nastavenia (Oddiel 4.31.1.2, “TortoiseSVN Dialog Settings 1”),
- When the Stop on copy/rename box is checked, Show Log will stop at the point that the selected file or folder was copied from somewhere else within the repository. This can be useful when looking at branches (or tags) as it stops at the root of that branch, and gives a quick indication of changes made in that branch only.

  Normally you will want to leave this option unchecked. TortoiseSVN remembers the state of the checkbox, so it will respect your preference.

  When the Show Log dialog is invoked from within the Merge dialog, the box is always checked by default. This is because merging is most often looking at changes on branches, and going back beyond the root of the branch does not make sense in that instance.

  Note that Subversion currently implements renaming as a copy/delete pair, so renaming a file or folder will also cause the log display to stop if this option is checked.

If you want to see more log messages, click the Next 100 to retrieve the next 100 log messages. You can repeat this as many times as needed.

Next to this button there is a multi-function button which remembers the last option you used it for. Click on the arrow to see the other options offered.

Use Show Range ... if you want to view a specific range of revisions. A dialog will then prompt you to enter the start and end revision.

Use Show All if you want to see *all* log messages from HEAD right back to revision 1.

To refresh the latest revision in case there were other commits while the log dialog was open, hit the **F5** key.

To refresh the log cache, hit the **Ctrl-F5** keys.

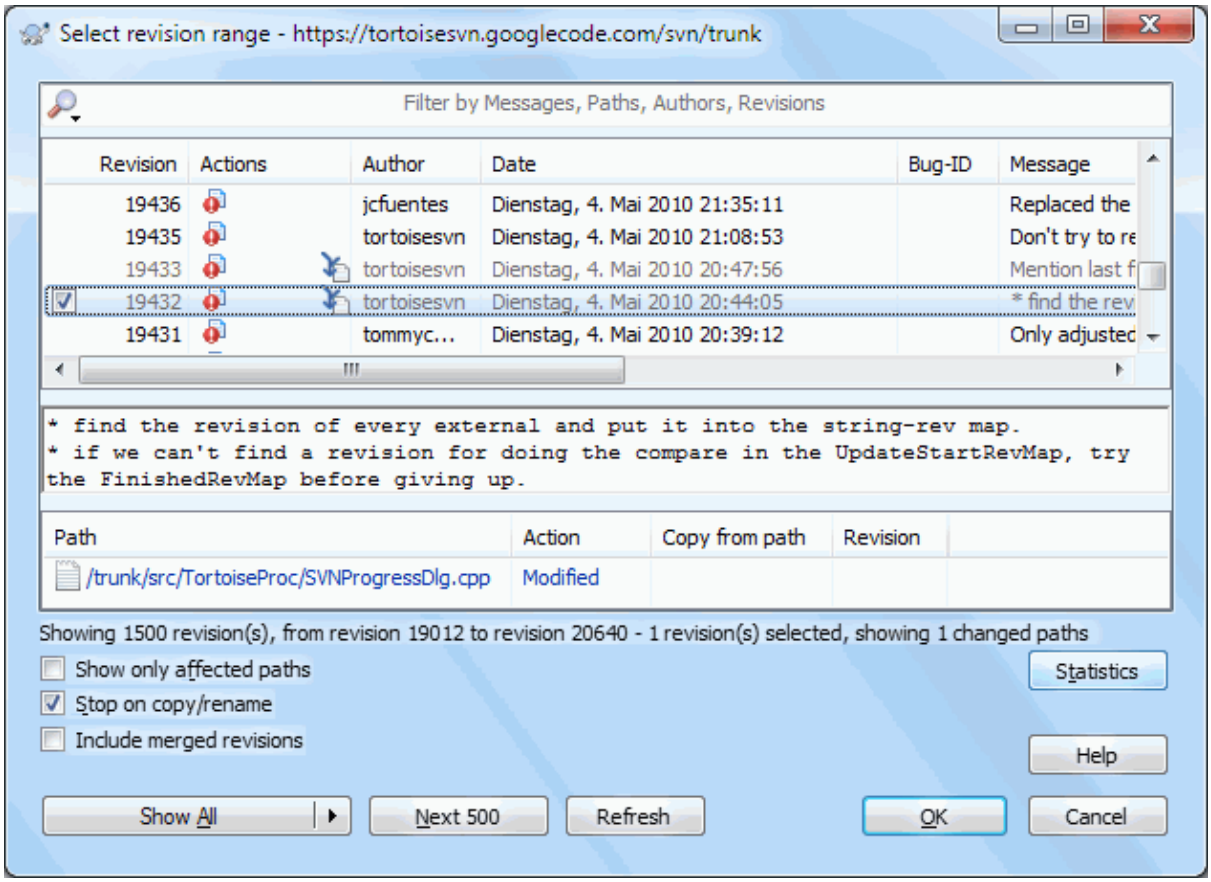
4.10.5. Aktuálna revízia pracovnej kópie

Because the log dialog shows you the log from HEAD, not from the current working copy revision, it often happens that there are log messages shown for content which has not yet been updated in your working copy. To help make this clearer, the commit message which corresponds to the revision you have in your working copy is shown in bold.

When you show the log for a folder the revision highlighted is the highest revision found anywhere within that folder, which requires a crawl of the working copy. The crawl takes place within a separate thread so as not to delay showing the log, but as a result highlighting for folders may not appear immediately.

4.10.6. Merge Tracking Features

Subversion 1.5 and later keeps a record of merges using properties. This allows us to get a more detailed history of merged changes. For example, if you develop a new feature on a branch and then merge that branch back to trunk, the feature development will show up on the trunk log as a single commit for the merge, even though there may have been 1000 commits during branch development.



Obrázok 4.24. The Log Dialog Showing Merge Tracking Revisions

If you want to see the detail of which revisions were merged as part of that commit, use the Include merged revisions checkbox. This will fetch the log messages again, but will also interleave the log messages from revisions which were merged. Merged revisions are shown in grey because they represent changes made on a different part of the tree.

Of course, merging is never simple! During feature development on the branch there will probably be occasional merges back from trunk to keep the branch in sync with the main line code. So the merge history of the branch will also include another layer of merge history. These different layers are shown in the log dialog using indentation levels.

4.10.7. Changing the Log Message and Author

Revision properties are completely different from the Subversion properties of each item. Revprops are descriptive items which are associated with one specific revision number in the repository, such as log message, commit date and committer name (author).

Sometimes you might want to change a log message you once entered, maybe because there's a spelling error in it or you want to improve the message or change it for other reasons. Or you want to change the author of the commit because you forgot to set up authentication or...

Subversion lets you change revision properties any time you want. But since such changes can't be undone (those changes are not versioned) this feature is disabled by default. To make this work, you must set up

a pre-revprop-change hook. Please refer to the chapter on *Hook Scripts* [http://svnbook.red-bean.com/en/1.8/svn.reposadmin.create.html#svn.reposadmin.create.hooks] in the Subversion Book for details about how to do that. Read Oddiel 3.3, “Serverovské pripnuté (hook) skripty” to find some further notes on implementing hooks on a Windows machine.

Once you've set up your server with the required hooks, you can change the author and log message (or any other revprop) of any revision, using the context menu from the top pane of the Log dialog. You can also edit a log message using the context menu for the middle pane.

Varovanie

Because Subversion's revision properties are not versioned, making modifications to such a property (for example, the `svn:log` commit message property) will overwrite the previous value of that property *forever*.

Dôležité

Since TortoiseSVN keeps a cache of all the log information, edits made for author and log messages will only show up on your local installation. Other users using TortoiseSVN will still see the cached (old) authors and log messages until they refresh the log cache. Refer to Oddiel 4.10.11, “Refreshing the View”

4.10.8. Filtrovanie sráv denníka

If you want to restrict the log messages to show only those you are interested in rather than scrolling through a list of hundreds, you can use the filter controls at the top of the Log Dialog. The start and end date controls allow you to restrict the output to a known date range. The search box allows you to show only messages which contain a particular phrase.

Click on the search icon to select which information you want to search in, and to choose *regex* mode. Normally you will only need a simple sub-string search, but if you need to more flexible search terms, you can use regular expressions. If you hover the mouse over the box, a tooltip will give hints on how to use the regex functions, or the sub-string functions. The filter works by checking whether your filter string matches the log entries, and then only those entries which *match* the filter string are shown.

Simple sub-string search works in a manner similar to a search engine. Strings to search for are separated by spaces, and all strings must match. You can use a leading `-` to specify that a particular sub-string is not found (invert matching for that term), and you can use `!` at the start of the expression to invert matching for the entire expression. You can use a leading `+` to specify that a sub-string should be included, even if previously excluded with a `-`. Note that the order of inclusion/exclusion is significant here. You can use quote marks to surround a string which must contain spaces, and if you want to search for a literal quotation mark you can use two quotation marks together as a self-escaping sequence. Note that the backslash character is *not* used as an escape character and has no special significance in simple sub-string searches. Examples will make this easier:

```
Alice Bob -Eve
```

searches for strings containing both Alice and Bob but not Eve

```
Alice -Bob +Eve
```

searches for strings containing both Alice but not Bob, or strings which contain Eve.

```
-Case +SpecialCase
```

searches for strings which do not contain Case, but still include strings which contain SpecialCase.

```
!Alice Bob
```

searches for strings which do not contain both Alice and Bob

```
!-Alice -Bob
```

do you remember De Morgan's theorem? NOT(NOT Alice AND NOT Bob) reduces to (Alice OR Bob).

```
"Alice and Bob"
```

searches for the literal expression “Alice and Bob”

```
""
```

searches for a double-quote anywhere in the text

```
"Alice says ""hi"" to Bob"
```

searches for the literal expression “Alice says "hi" to Bob”.

Describing the use of regular expression searches is beyond the scope of this manual, but you can find online documentation and a tutorial at http://www.regular-expressions.info/.

Note that these filters act on the messages already retrieved. They do not control downloading of messages from the repository.

You can also filter the path names in the bottom pane using the Show only affected paths checkbox. Affected paths are those which contain the path used to display the log. If you fetch the log for a folder, that means anything in that folder or below it. For a file it means just that one file. Normally the path list shows any other paths which are affected by the same commit, but in grey. If the box is checked, those paths are hidden.

Sometimes your working practices will require log messages to follow a particular format, which means that the text describing the changes is not visible in the abbreviated summary shown in the top pane. The property `tsvn:logsummary` can be used to extract a portion of the log message to be shown in the top pane. Read Oddiel 4.18.2, “TortoiseSVN Vlastnosti projektu” to find out how to use this property.

No Log Formatting from Repository Browser

Because the formatting depends upon accessing Subversion properties, you will only see the results when using a checked out working copy. Fetching properties remotely is a slow operation, so you will not see this feature in action from the repo browser.

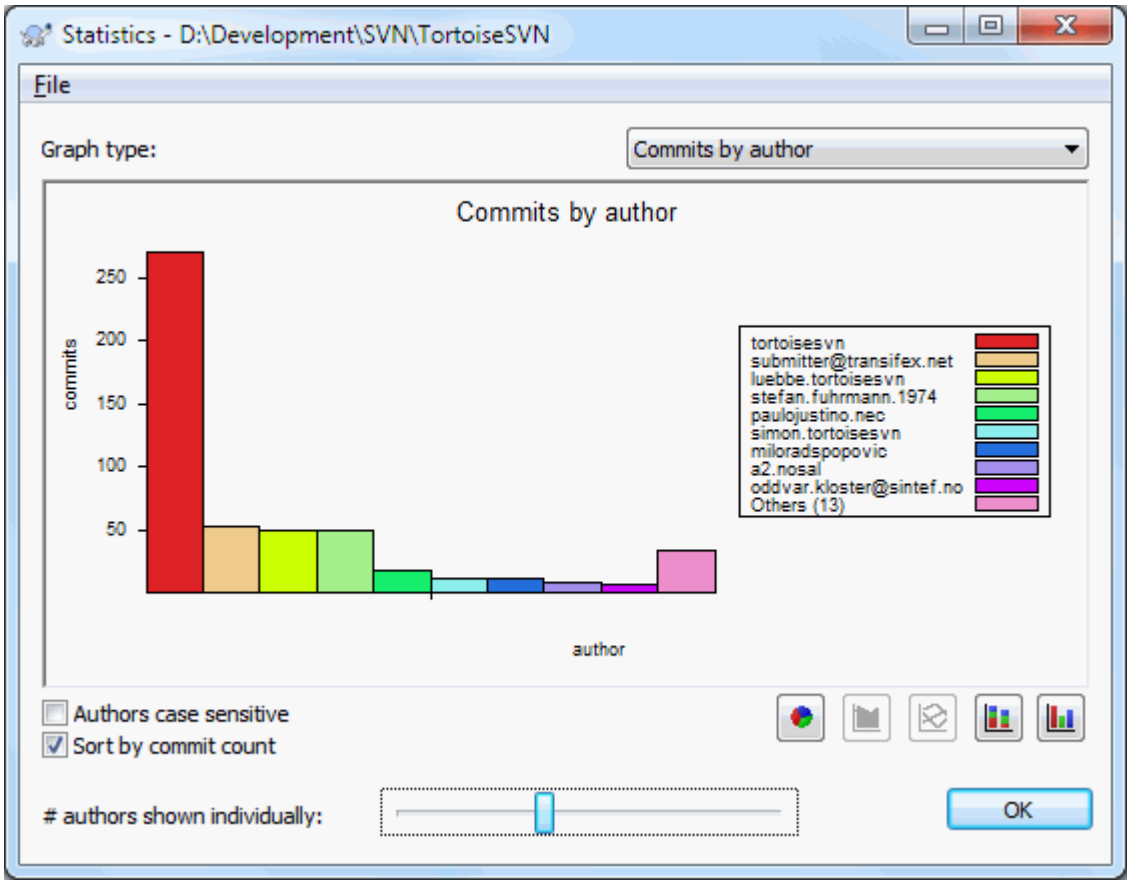
4.10.9. Štatistické informácie

The Statistics button brings up a box showing some interesting information about the revisions shown in the Log dialog. This shows how many authors have been at work, how many commits they have made, progress by week, and much more. Now you can see at a glance who has been working hardest and who is slacking ;-)

4.10.9.1. Stana štatístík

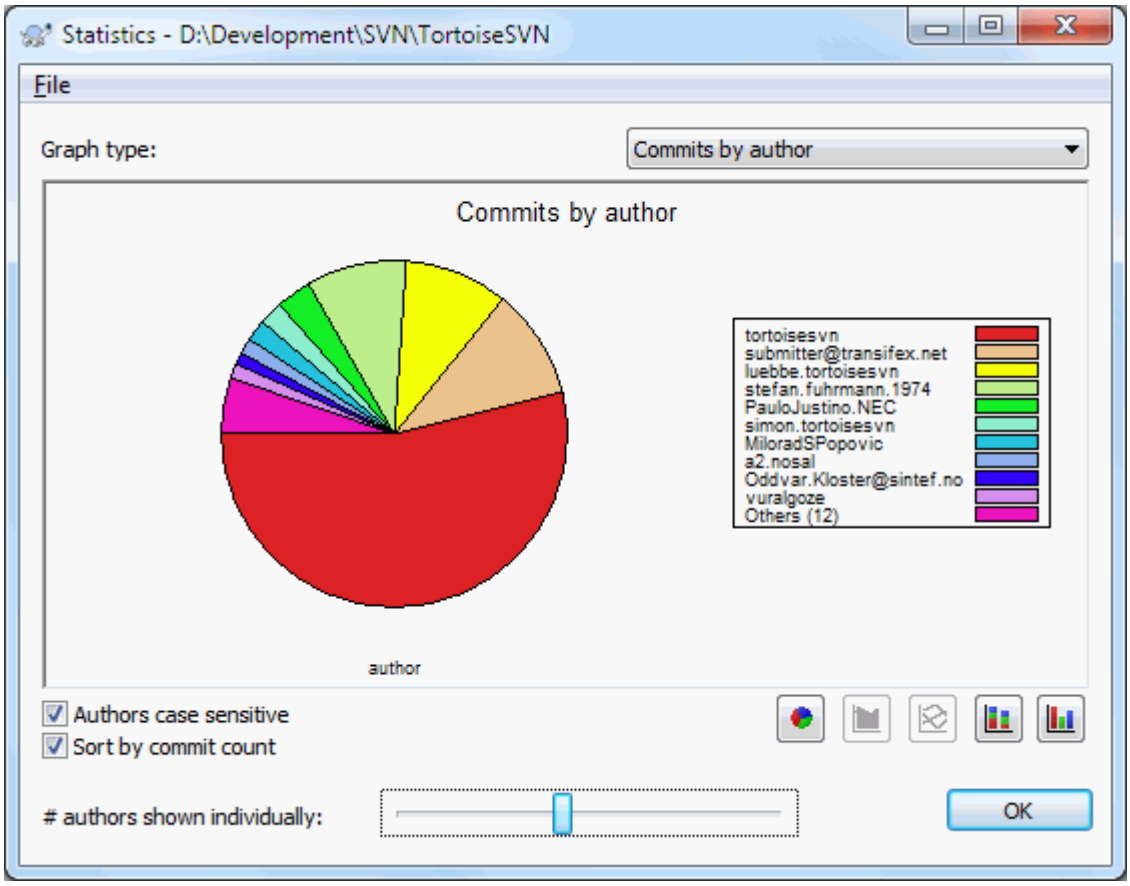
This page gives you all the numbers you can think of, in particular the period and number of revisions covered, and some min/max/average values.

4.10.9.2. Odovzdania podľa autora



Obrázok 4.25. Histogram Odovzdania podľa Autorov

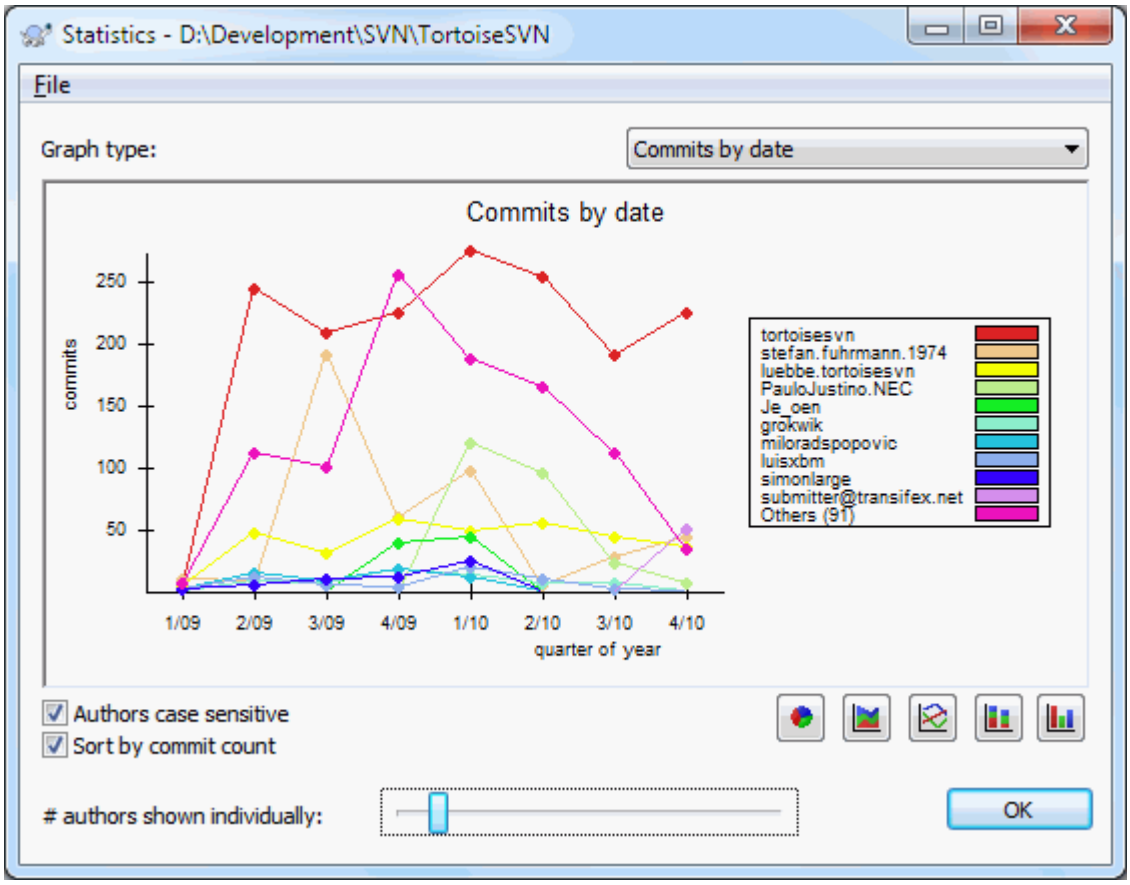
This graph shows you which authors have been active on the project as a simple histogram, stacked histogram or pie chart.



Obrázok 4.26. Koláčový graf odovzdania podľa autorov

Where there are a few major authors and many minor contributors, the number of tiny segments can make the graph more difficult to read. The slider at the bottom allows you to set a threshold (as a percentage of total commits) below which any activity is grouped into an *Others* category.

4.10.9.3. Commits by date Page



Obrázok 4.27. Commits-by-date Graph

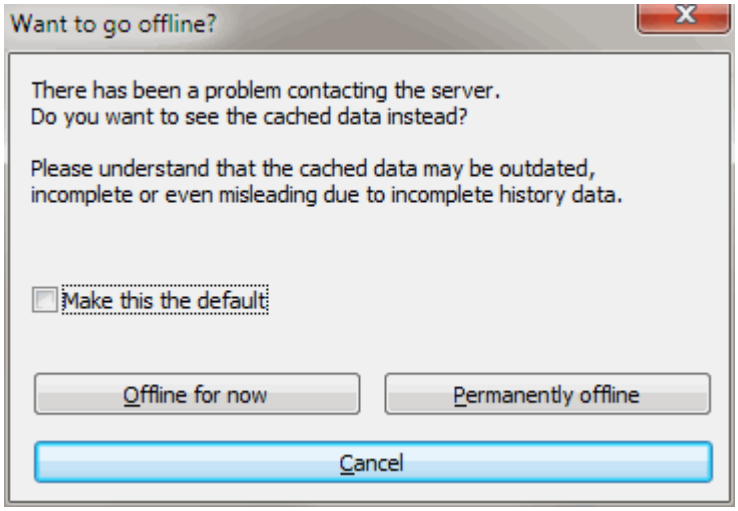
Táto strana vám dáva grafický prehľad o projekte v zmysle počtu odovzdaní *a* autor. Toto vám dá presdtavu kedy sa na projekte pracovalo a kto na nom kedy pracoval.

When there are several authors, you will get many lines on the graph. There are two views available here: *normal*, where each author's activity is relative to the base line, and *stacked*, where each author's activity is relative to the line underneath. The latter option avoids the lines crossing over, which can make the graph easier to read, but less easy to see one author's output.

By default the analysis is case-sensitive, so users `PeterEgan` and `PeteRegan` are treated as different authors. However, in many cases user names are not case-sensitive, and are sometimes entered inconsistently, so you may want `DavidMorgan` and `davidmorgan` to be treated as the same person. Use the Authors case insensitive checkbox to control how this is handled.

Note that the statistics cover the same period as the Log dialog. If that is only displaying one revision then the statistics will not tell you very much.

4.10.10. Offline Mode



Obrázok 4.28. Go Offline Dialog

If the server is not reachable, and you have log caching enabled you can use the log dialog and revision graph in offline mode. This uses data from the cache, which allows you to continue working although the information may not be up-to-date or even complete.

Tu máte tri možnosti:

Offline for now
: Complete the current operation in offline mode, but retry the repository next time log data is requested.

Permanently offline
: Remain in offline mode until a repository check is specifically requested. See Oddiel 4.10.11, “Refreshing the View”.

Zrušiť
: If you don't want to continue the operation with possibly stale data, just cancel.

The Make this the default checkbox prevents this dialog from re-appearing and always picks the option you choose next. You can still change (or remove) the default after doing this from TortoiseSVN → Settings.

4.10.11. Refreshing the View

If you want to check the server again for newer log messages, you can simply refresh the view using **F5**. If you are using the log cache (enabled by default), this will check the repository for newer messages and fetch only the new ones. If the log cache was in offline mode, this will also attempt to go back online.

If you are using the log cache and you think the message content or author may have changed, you can use **Shift-F5** or **Ctrl-F5** to re-fetch the displayed messages from the server and update the log cache. Note that this only affects messages currently shown and does not invalidate the entire cache for that repository.

4.11. Prezeranie rozdielov

One of the commonest requirements in project development is to see what has changed. You might want to look at the differences between two revisions of the same file, or the differences between two separate files. TortoiseSVN provides a built-in tool named TortoiseMerge for viewing differences of text files. For viewing differences of image files, TortoiseSVN also has a tool named TortoiseIDiff. Of course, you can use your own favourite diff program if you like.

4.11.1. Rozdiely v súboroch

Miestne zmeny
: Keď chcete vidieť zmeny, ktoré ste *vy* urobili v pracovnej kópií, jednoducho vyberte kontextové menu v Prieskumníkovi (Windows Explorer) TortoiseSVN → Porovnať.

Porovnanie s inými vetvami/značkami
: If you want to see what has changed on trunk (if you are working on a branch) or on a specific branch (if you are working on trunk), you can use the explorer context menu. Just hold down the **Shift** key while you right click on the file. Then select TortoiseSVN → Diff with URL. In the following dialog, specify the URL in the repository with which you want to compare your local file to.

  You can also use the repository browser and select two trees to diff, perhaps two tags, or a branch/tag and trunk. The context menu there allows you to compare them using Compare revisions. Read more in Oddiel 4.11.3, “Porovavanie adresárov”.

Zmeny od predchádzajúcej verzie
: Keď chcete zobraziť rozdiely medzi konkrétnou revízou a pracovnou kópiou, pozužite dialóg Denníka revízií, vyberte reviziu, ktorá vás zaujíma a z kontextového menu vyberte Porovnať s pracovou kópiu.

  If you want to see the difference between the last committed revision and your working copy, assuming that the working copy hasn't been modified, just right click on the file. Then select TortoiseSVN → Diff with previous version. This will perform a diff between the revision before the last-commit-date (as recorded in your working copy) and the working BASE. This shows you the last change made to that file to bring it to the state you now see in your working copy. It will not show changes newer than your working copy.

Difference between two previous revisions
: If you want to see the difference between two revisions which are already committed, use the Revision Log dialog and select the two revisions you want to compare (using the usual **Ctrl**-modifier). Then select Compare revisions from the context menu.

  If you did this from the revision log for a folder, a Compare Revisions dialog appears, showing a list of changed files in that folder. Read more in Oddiel 4.11.3, “Porovavanie adresárov”.

All changes made in a commit
: If you want to see the changes made to all files in a particular revision in one view, you can use Unified-Diff output (GNU patch format). This shows only the differences with a few lines of context. It is harder to read than a visual file compare, but will show all the changes together. From the Revision Log dialog select the revision of interest, then select Show Differences as Unified-Diff from the context menu.

Rozdiely medzi súbormi
: If you want to see the differences between two different files, you can do that directly in explorer by selecting both files (using the usual **Ctrl**-modifier). Then from the explorer context menu select TortoiseSVN → Diff.

  If the files to compare are not located in the same folder, use the command TortoiseSVN → Diff later to mark the first file for diffing, then browse to the second file and use TortoiseSVN → Diff with "path/of/marked/file". To remove the marked file, use the command TortoiseSVN → Diff later again, but hold down the **Ctrl**-modifier while clicking on it.

Difference between WC file/folder and a URL
: If you want to see the differences between a file in your working copy, and a file in any Subversion repository, you can do that directly in explorer by selecting the file then holding down the **Shift** key whilst right clicking to obtain the context menu. Select TortoiseSVN → Diff with URL. You can do the same thing for a working copy folder. TortoiseMerge shows these differences in the same way as it shows a patch file - a list of changed files which you can view one at a time.

Difference with blame information
: If you want to see not only the differences but also the author, revision and date that changes were made, you can combine the diff and blame reports from within the revision log dialog. Read Oddiel 4.24.2, “Obviniť rozdiely” for more detail.

Rozdiely medzi adresármi
: The built-in tools supplied with TortoiseSVN do not support viewing differences between directory hierarchies. But if you have an external tool which does support that feature, you can use that instead. In Oddiel 4.11.6, “Externé Porovnávacie/Zlučovacie Nástroje” we tell you about some tools which we have used.

If you have configured a third party diff tool, you can use **Shift** when selecting the Diff command to use the alternate tool. Read Oddiel 4.31.5, “Nastavnie externých programov” to find out about configuring other diff tools.

4.11.2. Line-end and Whitespace Options

Sometimes in the life of a project you might change the line endings from `CRLF` to `LF`, or you may change the indentation of a section. Unfortunately this will mark a large number of lines as changed, even though there is no change to the meaning of the code. The options here will help to manage these changes when it comes to comparing and applying differences. You will see these settings in the Merge and Blame dialogs, as well as in the settings for TortoiseMerge.

Ignore line endings excludes changes which are due solely to difference in line-end style.

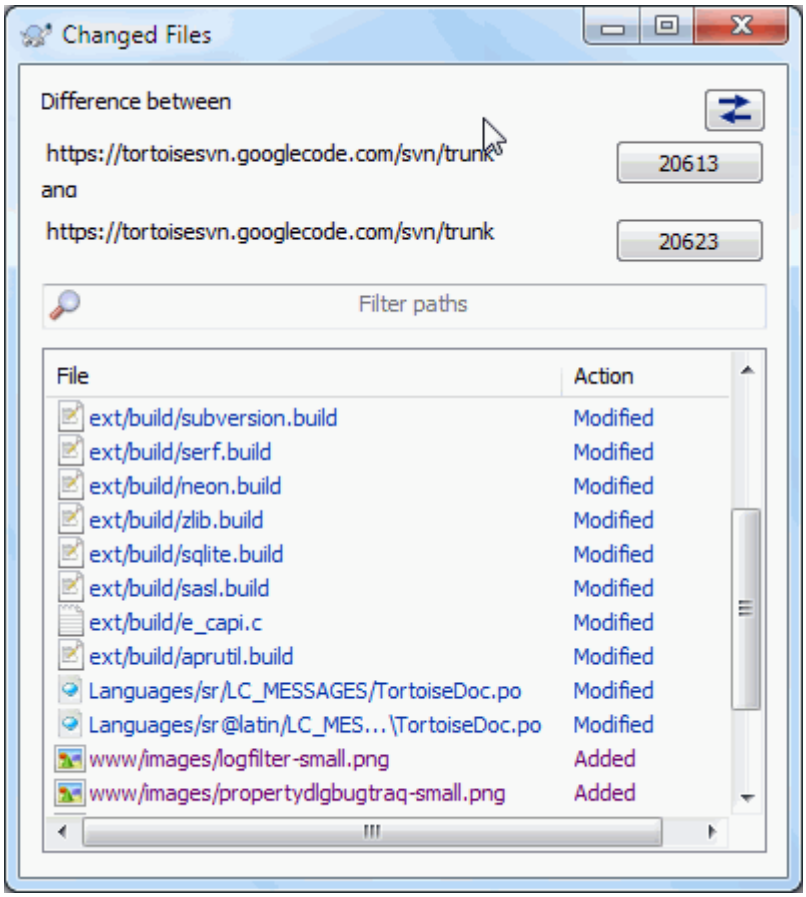
Compare whitespaces includes all changes in indentation and inline whitespace as added/removed lines.

Ignore whitespace changes excludes changes which are due solely to a change in the amount or type of whitespace, e.g. changing the indentation or changing tabs to spaces. Adding whitespace where there was none before, or removing a whitespace completely is still shown as a change.

Ignore all whitespaces excludes all whitespace-only changes.

Naturally, any line with changed content is always included in the diff.

4.11.3. Porovavanie adresárov



Obrázok 4.29. The Compare Revisions Dialog

When you select two trees within the repository browser, or when you select two revisions of a folder in the log dialog, you can Context menu → Compare revisions.

This dialog shows a list of all files which have changed and allows you to compare or blame them individually using context menu.

You can export a *change tree*, which is useful if you need to send someone else your project tree structure, but containing only the files which have changed. This operation works on the selected files only, so you need to select the files of interest - usually that means all of them - and then Context menu → Export selection to.... You will be prompted for a location to save the change tree.

You can also export the *list* of changed files to a text file using Context menu → Save list of selected files to....

If you want to export the list of files *and* the actions (modified, added, deleted) as well, you can do that using Context menu → Copy selection to clipboard.

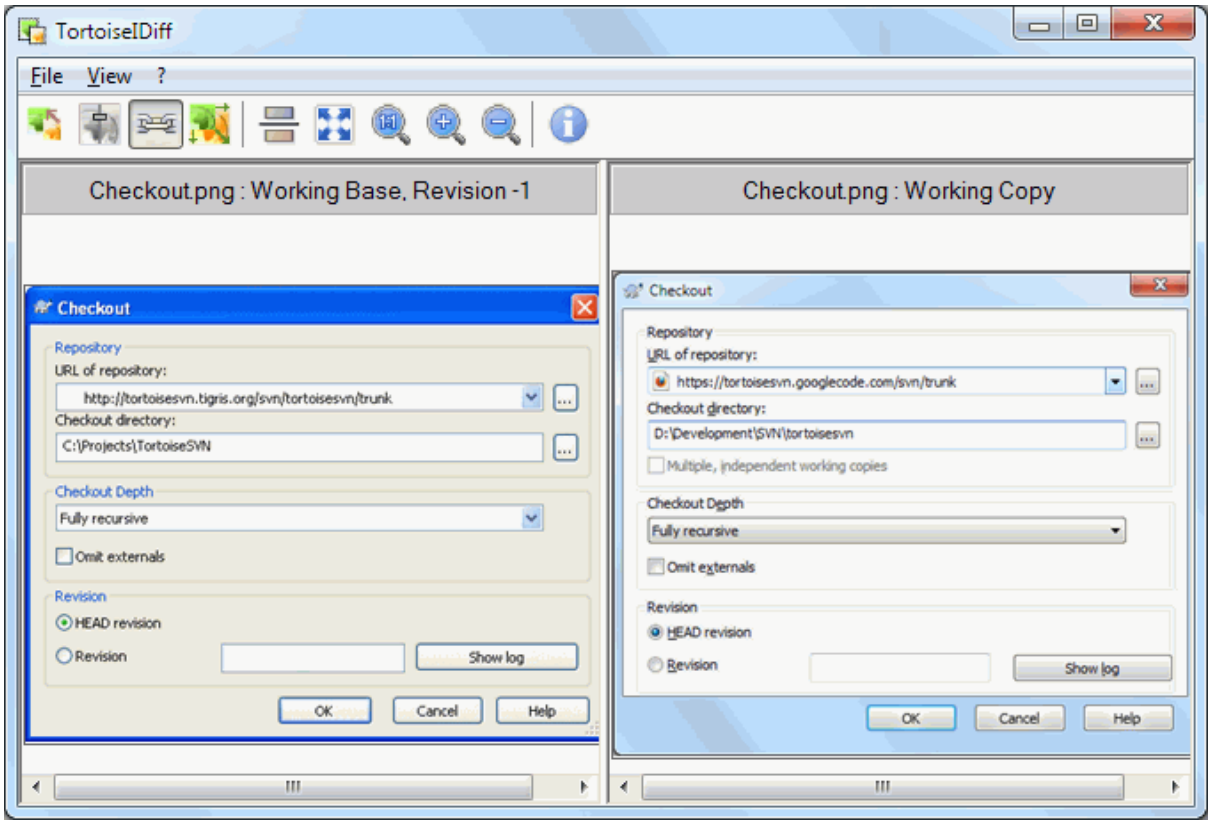
The button at the top allows you to change the direction of comparison. You can show the changes need to get from A to B, or if you prefer, from B to A.

The buttons with the revision numbers on can be used to change to a different revision range. When you change the range, the list of items which differ between the two revisions will be updated automatically.

If the list of filenames is very long, you can use the search box to reduce the list to filenames containing specific text. Note that a simple text search is used, so if you want to restrict the list to C source files you should enter `.c` rather than `*.c`.

4.11.4. Diffing Images Using TortoiseIDiff

There are many tools available for diffing text files, including our own TortoiseMerge, but we often find ourselves wanting to see how an image file has changed too. That's why we created TortoiseIDiff.



Obrázok 4.30. Prehliadač zmien obrázkov

TortoiseSVN → Diff for any of the common image file formats will start TortoiseIDiff to show image differences. By default the images are displayed side-by-side but you can use the View menu or toolbar to switch to a top-bottom view instead, or if you prefer, you can overlay the images and pretend you are using a lightbox.

Naturally you can also zoom in and out and pan around the image. You can also pan the image simply by left-dragging it. If you select the Link images together option, then the pan controls (scrollbars, mousewheel) on both images are linked.

An image info box shows details about the image file, such as the size in pixels, resolution and colour depth. If this box gets in the way, use View → Image Info to hide it. You can get the same information in a tooltip if you hover the mouse over the image title bar.

When the images are overlaid, the relative intensity of the images (alpha blend) is controlled by a slider control at the left side. You can click anywhere in the slider to set the blend directly, or you can drag the slider to change the blend interactively. **Ctrl**+**Shift**-Wheel to change the blend.

The button above the slider toggles between 0% and 100% blends, and if you double click the button, the blend toggles automatically every second until you click the button again. This can be useful when looking for multiple small changes.

Sometimes you want to see a difference rather than a blend. You might have the image files for two revisions of a printed circuit board and want to see which tracks have changed. If you disable alpha blend mode, the difference will be shown as an *XOR* of the pixel colour values. Unchanged areas will be plain white and changes will be coloured.

4.11.5. Diffing Office Documents

When you want to diff non-text documents you normally have to use the software used to create the document as it understands the file format. For the commonly used Microsoft Office and Open Office suites there is indeed some support for viewing differences and TortoiseSVN includes scripts to invoke these with the right settings when you diff files with the well-known file extensions. You can check which file extensions are supported and add your own by going to TortoiseSVN → Settings and clicking Advanced in the External Programs section.

Problems with Office 2010

If you installed the *Click-to-Run* version of Office 2010 and you try to diff documents you may get an error message from Windows Script Host something like this: “ActiveX component can't create object: word.Application”. It seems you have to use the MSI-based version of Office to get the diff functionality.

4.11.6. Externé Porovnávacie/Zlučovacie Nástroje

Keď vám nevyhovujú nástroje, ktoré poskytujeme, skúste niektorý z množstva dostupných voľných, či komerčných programov. Každý má svoje obúbené, a tento zoznam nie je v žiadnom zmysle kompletný, ale sú tu niektoré, ktoré by vás mohli zaujať:

WinMerge
: *WinMerge* [https://winmerge.sourceforge.net/] is a great open-source diff tool which can also handle directories.

Perforce Merge
: Perforce is a commercial RCS, but you can download the diff/merge tool for free. Get more information from *Perforce* [https://www.perforce.com/perforce/products/merge.html].

KDiff3
: KDiff3 je porovnávací nástroj, ktorý podporuje aj adresáre. Možete si ho stiahnuť *tu* [http://kdiff3.sf.net/].

SourceGear DiffMerge
: SourceGear Vault is a commercial RCS, but you can download the diff/merge tool for free. Get more information from *SourceGear* [https://www.sourcegear.com/diffmerge/].

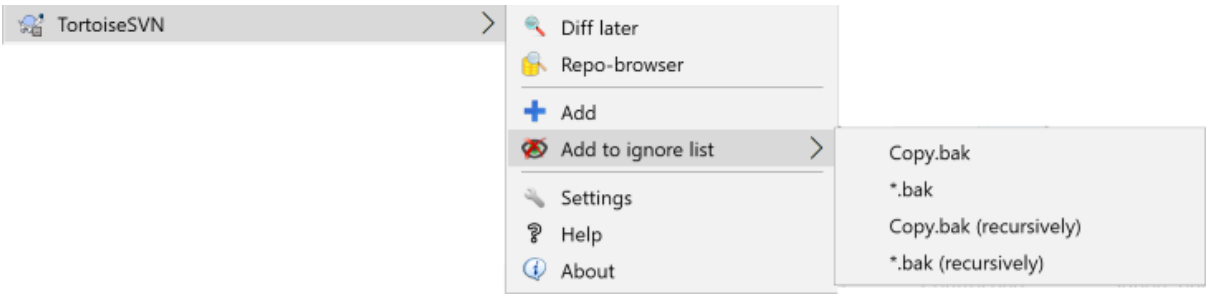
ExamDiff
: ExamDiff Standard je voľný. Podporuje súbory, ale nie adresáre. ExamDiff Pro je shareware a má množtsvo pridaných funkcií vrátane adresárov a možnosti úpravy súborov. Pri oboch od verzie 3.2 je podporovaný unicode. Môžete si ho stiahnuť z *PrestoSoft* [http://www.prestosoft.com/].

Beyond Compare
: Similar to ExamDiff Pro, this is an excellent shareware diff tool which can handle directory diffs and unicode. Download it from *Scooter Software* [https://www.scootersoftware.com/].

Araxis Merge
: Araxis Merge is a useful commercial tool for diff and merging both files and folders. It does three-way comparison in merges and has synchronization links to use if you've changed the order of functions. Download it from *Araxis* [https://www.araxis.com/merge/index.html].

Read Oddiel 4.31.5, “Nastavnie externých programov” for information on how to set up TortoiseSVN to use these tools.

4.12. Adding New Files And Directories



Obrázok 4.31. Explorer context menu for unversioned files

If you created new files and/or directories during your development process then you need to add them to source control too. Select the file(s) and/or directory and use TortoiseSVN → Add.

After you added the files/directories to source control the file appears with a `added` icon overlay which means you first have to commit your working copy to make those files/directories available to other developers. Adding a file/directory does *not* affect the repository!

Many Adds

You can also use the Add command on already versioned folders. In that case, the add dialog will show you all unversioned files inside that versioned folder. This helps if you have many new files and need to add them all at once.

To add files from outside your working copy you can use the drag-and-drop handler:

1. Vyberte súbor, ktorý chcete pridať
2. right drag them to the new location inside the working copy
3. release the right mouse button
4. select Context Menu → SVN Add files to this WC. The files will then be copied to the working copy and added to version control.

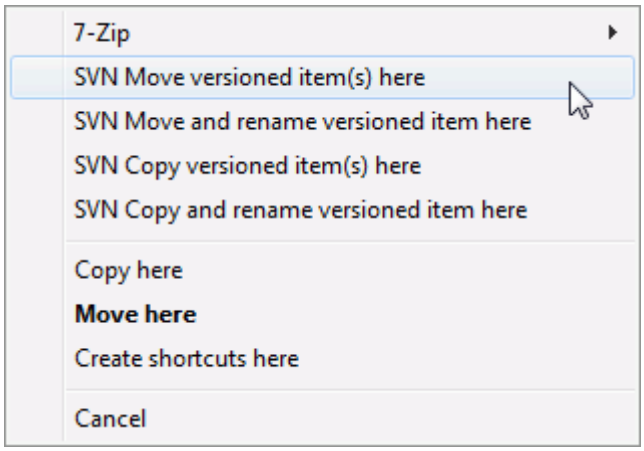
You can also add files within a working copy simply by left-dragging and dropping them onto the commit dialog.

If you add a file or folder by mistake, you can undo the addition before you commit using TortoiseSVN → Undo add....

4.13. Kopírovanie/Presúvanie/Premenovanie súborov a adresárov

It often happens that you already have the files you need in another project in your repository, and you simply want to copy them across. You could simply copy the files and add them, but that would not give you any history. And if you subsequently fix a bug in the original files, you can only merge the fix automatically if the new copy is related to the original in Subversion.

The easiest way to copy files and folders from within a working copy is to use the right drag menu. When you right drag a file or folder from one working copy to another, or even within the same folder, a context menu appears when you release the mouse.



Obrázok 4.32. Right drag menu for a directory under version control

Now you can copy existing versioned content to a new location, possibly renaming it at the same time.

You can also copy or move versioned files within a working copy, or between two working copies, using the familiar cut-and-paste method. Use the standard Windows Copy or Cut to copy one or more versioned items to the clipboard. If the clipboard contains such versioned items, you can then use TortoiseSVN → Paste (note: not the standard Windows Paste) to copy or move those items to the new working copy location.

You can copy files and folders from your working copy to another location in the repository using TortoiseSVN → Branch/Tag. Refer to Oddiel 4.20.1, “Vytvorenie vetvy / značky” to find out more.

You can locate an older version of a file or folder in the log dialog and copy it to a new location in the repository directly from the log dialog using Context menu → Create branch/tag from revision. Refer to Oddiel 4.10.3, “Získanie ďalších informácií” to find out more.

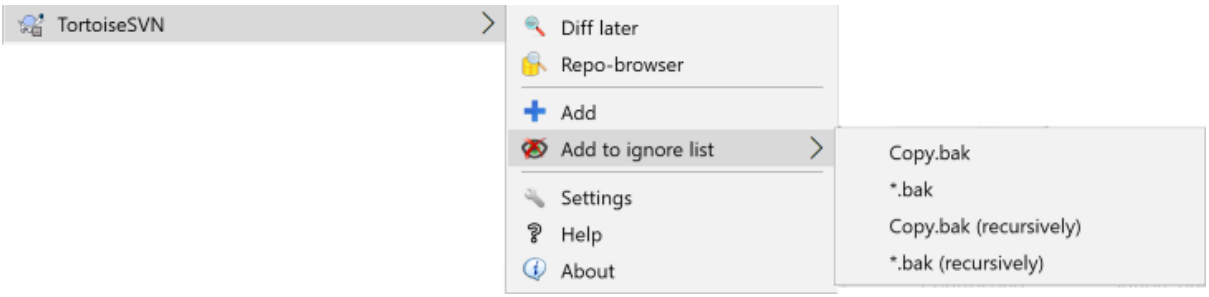
You can also use the repository browser to locate content you want, and copy it into your working copy directly from the repository, or copy between two locations within the repository. Refer to Oddiel 4.25, “Prezeranie úložiska” to find out more.

Medzi úložiskami nie je možné kopírovať

Whilst you can copy or move files and folders *within* a repository, you *cannot* copy or move from one repository to another while preserving history using TortoiseSVN. Not even if the repositories live on the same server. All you can do is copy the content in its current state and add it as new content to the second repository.

If you are uncertain whether two URLs on the same server refer to the same or different repositories, use the repo browser to open one URL and find out where the repository root is. If you can see both locations in one repo browser window then they are in the same repository.

4.14. Ignorovanie súborov a adresárov



Obrázok 4.33. Explorer context menu for unversioned files

Vo väčšine projektov budete mať súbory a adresáre, ktoré nie sú objektami pre správu verzií. Tieto môžu obsahovať súbory vytvorené kompilatorom `*.obj`, `*.lst`, možno výstupný adresár, v ktorom sú výsledky prekladu. Kedykoľvek odovzdávate zmeny, TortoiseSVN zobrazí vaše neverziované súbory v zozname súborov odovzdávacieho dialógu. Samozrejme možete toto zobrazovanie vypnúť, ale potom sa môže stať, že zabudnete pridať zdrojový súbor.

Najlepší spôsob, ako sa tomuto problému vyhnúť je pridať derivované (výtvárane) súbory do zoznamu vylučení pre daný projekt. Takto sa vám nebudú zobrazovať v odovzdávacom dialógu, ale originálne neverziované zdrojové súbory budú stále označené.

If you right click on a single unversioned file, and select the command TortoiseSVN → Add to Ignore List from the context menu, a submenu appears allowing you to select just that file, or all files with the same extension. Both submenus also have a `(recursively)` equivalent. If you select multiple files, there is no submenu and you can only add those specific files/folders.

If you choose the `(recursively)` version of the ignore context menu, the item will be ignored not just for the selected folder but all subfolders as well. However this requires SVN clients version 1.8 or higher.

If you want to remove one or more items from the ignore list, right click on those items and select TortoiseSVN → Remove from Ignore List You can also access a folder's `svn:ignore` property directly. That allows you to specify more general patterns using filename globbing, described in the section below. Read Oddiel 4.18, “Nastavenia Projektu” for more information on setting properties directly. Please be aware that each ignore pattern has to be placed on a separate line. Separating them by spaces does not work.

Globálny zoznam vylúčenia

Another way to ignore files is to add them to the *global ignore list*. The big difference here is that the global ignore list is a client property. It applies to *all* Subversion projects, but on the client PC only. In general it is better to use the `svn:ignore` property where possible, because it can be applied to specific project areas, and it works for everyone who checks out the project. Read Oddiel 4.31.1, “Hlavné Nastavenia” for more information.

Ignoring Versioned Items

Versioned files and folders can never be ignored - that's a feature of Subversion. If you versioned a file by mistake, read Oddiel B.8, “Ignorovať súbory, ktoré sú už verziované” for instructions on how to “unversion” it.

4.14.1. Pattern Matching in Ignore Lists

Subversion's ignore patterns make use of filename globbing, a technique originally used in Unix to specify files using meta-characters as wildcards. The following characters have special meaning:

*
Matches any string of characters, including the empty string (no characters).

?
Matches any single character.

[...]
Matches any one of the characters enclosed in the square brackets. Within the brackets, a pair of characters separated by "-" matches any character lexically between the two. For example `[AGm-p]` matches any one of `A`, `G`, `m`, `n`, `o` or `p`.

Pattern matching is case sensitive, which can cause problems on Windows. You can force case insensitivity the hard way by pairing characters, e.g. to ignore `*.tmp` regardless of case, you could use a pattern like `*.[Tt][Mm][Pp]`.

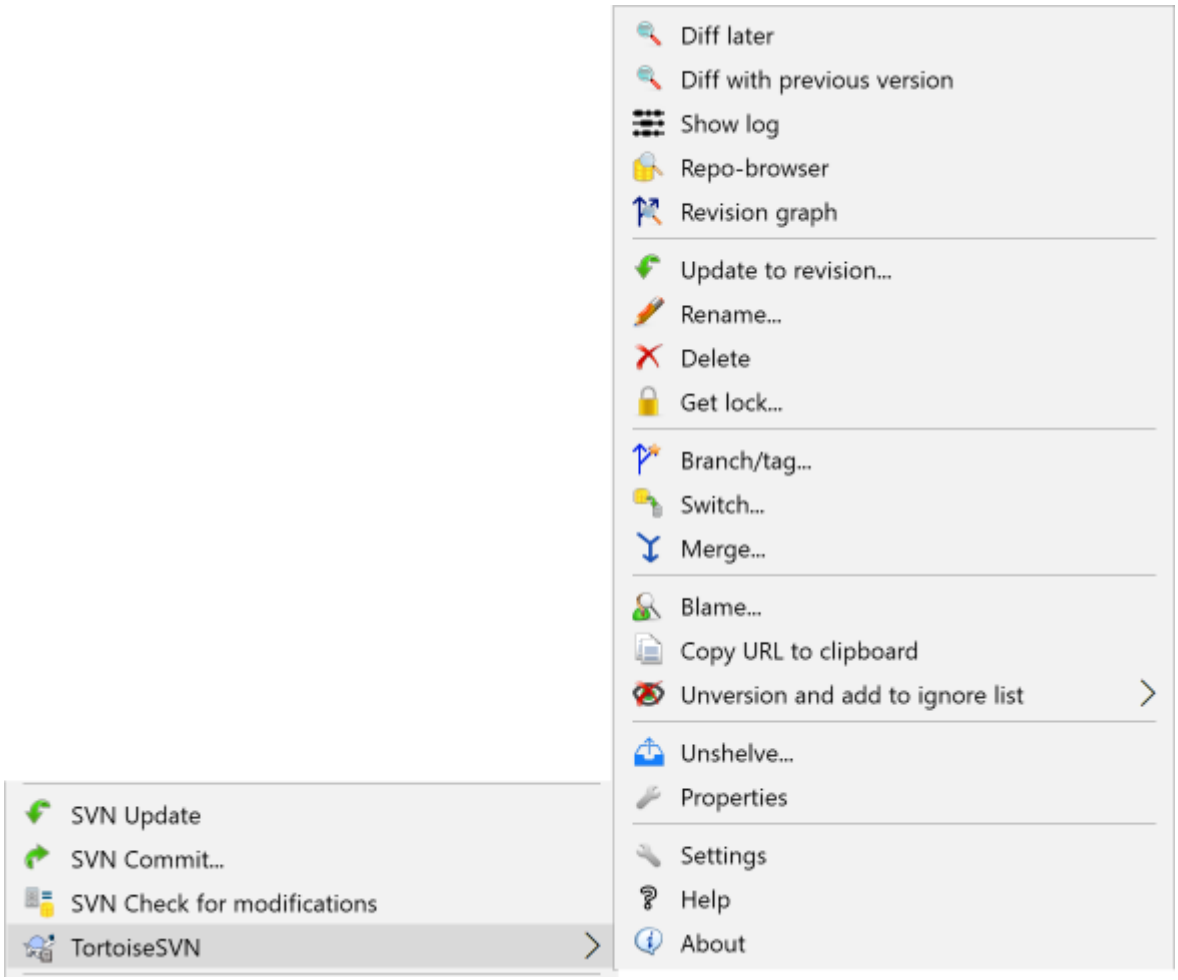
If you want an official definition for globbing, you can find it in the IEEE specifications for the shell command language *Pattern Matching Notation* [http://www.opengroup.org/onlinepubs/009695399/utilities/xcu_chap02.html#tag_02_13].

Žiadne cesty v globálnom zozname vylúčenia

You should not include path information in your pattern. The pattern matching is intended to be used against plain file names and folder names. If you want to ignore all `CVS` folders, just add `CVS` to the ignore list. There is no need to specify `CVS */CVS` as you did in earlier versions. If you want to ignore all `tmp` folders when they exist within a `prog` folder but not within a `doc` folder you should use the `svn:ignore` property instead. There is no reliable way to achieve this using global ignore patterns.

4.15. Vymazávanie, Premenovanie a Presúvanie

Subversion allows renaming and moving of files and folders. So there are menu entries for delete and rename in the TortoiseSVN submenu.



Obrázok 4.34. Explorer context menu for versioned files

4.15.1. Vymazavanie súborov a adresárov

Použite TortoiseSVN → Vymazať k odstráneniu súborov, alebo adresárov zo Subversion.

When you TortoiseSVN → Delete a file or folder, it is removed from your working copy immediately as well as being marked for deletion in the repository on next commit. The item's parent folder shows a “modified” icon overlay. Up until you commit the change, you can get the file back using TortoiseSVN → Revert on the parent folder.

If you want to delete an item from the repository, but keep it locally as an unversioned file/folder, use Extended Context Menu → Delete (keep local). You have to hold the **Shift** key while right clicking on the item in the explorer list pane (right pane) in order to see this in the extended context menu.

If an item is deleted via the explorer instead of using the TortoiseSVN context menu, the commit dialog shows those items as missing and lets you remove them from version control too before the commit. However, if you update your working copy, Subversion will spot the missing item and replace it with the latest version from the repository. If you need to delete a version-controlled file, always use TortoiseSVN → Delete so that Subversion doesn't have to guess what you really want to do.

Getting a deleted file or folder back

If you have deleted a file or a folder and already committed that delete operation to the repository, then a normal TortoiseSVN → Revert can't bring it back anymore. But the file or folder is not lost at

all. If you know the revision the file or folder got deleted (if you don't, use the log dialog to find out) open the repository browser and switch to that revision. Then select the file or folder you deleted, right click and select Context Menu → Copy to... as the target for that copy operation select the path to your working copy.

4.15.2. Presúvanie súborov a adresárov

If you want to do a simple in-place rename of a file or folder, use Context Menu → Rename... Enter the new name for the item and you're done.

If you want to move files around inside your working copy, perhaps to a different sub-folder, use the right mouse drag-and-drop handler:

1. select the files or directories you want to move
2. right drag them to the new location inside the working copy
3. release the right mouse button
4. in the popup menu select Context Menu → SVN Move versioned files here

Commit the parent folder

Since renames and moves are done as a delete followed by an add you must commit the parent folder of the renamed/moved file so that the deleted part of the rename/move will show up in the commit dialog. If you don't commit the removed part of the rename/move, it will stay behind in the repository and when your co-workers update, the old file will not be removed. i.e. they will have *both* the old and the new copies.

You *must* commit a folder rename before changing any of the files inside the folder, otherwise your working copy can get really messed up.

Another way of moving or copying files is to use the Windows copy/cut commands. Select the files you want to copy, right click and choose Context Menu → Copy from the explorer context menu. Then browse to the target folder, right click and choose TortoiseSVN → Paste. For moving files, choose Context Menu → Cut instead of Context Menu → Copy.

You can also use the repository browser to move items around. Read Oddiel 4.25, “Prezeranie úložiska” to find out more.

Do Not SVN Move Externals

You should *not* use the TortoiseSVN Move or Rename commands on a folder which has been created using `svn:externals`. This action would cause the external item to be deleted from its parent repository, probably upsetting many other people. If you need to move an externals folder you should use an ordinary shell move, then adjust the `svn:externals` properties of the source and destination parent folders.

4.15.3. Dealing with filename case conflicts

If the repository already contains two files with the same name but differing only in case (e.g. `TEST.TXT` and `test.txt`), you will not be able to update or checkout the parent directory on a Windows client. Whilst Subversion supports case-sensitive filenames, Windows does not.

This sometimes happens when two people commit, from separate working copies, files which happen to have the same name, but with a case difference. It can also happen when files are committed from a system with a case-sensitive file system, like Linux.

In that case, you have to decide which one of them you want to keep and delete (or rename) the other one from the repository.

Preventing two files with the same name

There is a server hook script available at: https://svn.apache.org/repos/asf/subversion/trunk/contrib/hook-scripts/ that will prevent checkins which result in case conflicts.

4.15.4. Repairing File Renames

Sometimes your friendly IDE will rename files for you as part of a refactoring exercise, and of course it doesn't tell Subversion. If you try to commit your changes, Subversion will see the old filename as missing and the new one as an unversioned file. You could just check the new filename to get it added in, but you would then lose the history tracing, as Subversion does not know the files are related.

A better way is to notify Subversion that this change is actually a rename, and you can do this within the Commit and Check for Modifications dialogs. Simply select both the old name (missing) and the new name (unversioned) and use Context Menu → Repair Move to pair the two files as a rename.

4.15.5. Vymazávanie neverziovaných súborov

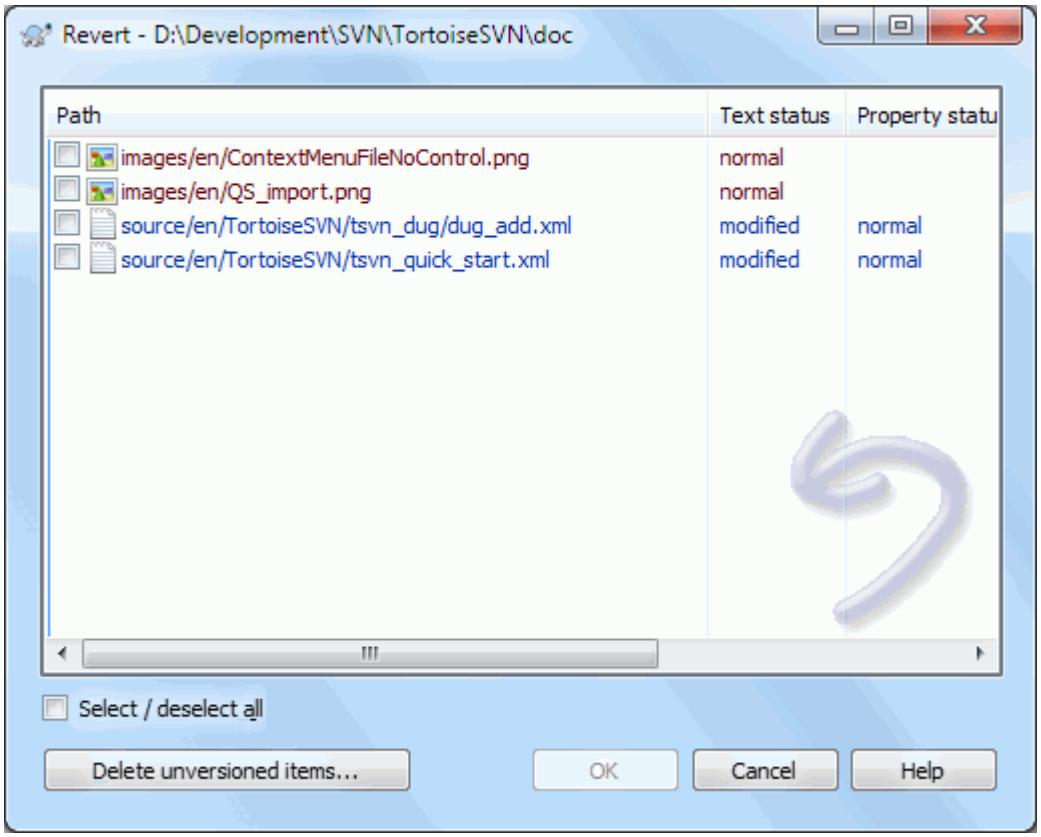
Usually you set your ignore list such that all generated files are ignored in Subversion. But what if you want to clear all those ignored items to produce a clean build? Usually you would set that in your makefile, but if you are debugging the makefile, or changing the build system it is useful to have a way of clearing the decks.

TortoiseSVN provides just such an option using Extended Context Menu → Delete unversioned items.... You have to hold the **Shift** while right clicking on a folder in the explorer list pane (right pane) in order to see this in the extended context menu. This will produce a dialog which lists all unversioned files anywhere in your working copy. You can then select or deselect items to be removed.

When such items are deleted, the recycle bin is used, so if you make a mistake here and delete a file that should have been versioned, you can still recover it.

4.16. Vrátiť zmeny

If you want to undo all changes you made in a file since the last update you need to select the file, right click to pop up the context menu and then select the command TortoiseSVN → Revert A dialog will pop up showing you the files that you've changed and can revert. Select those you want to revert and click on OK.



Obrázok 4.35. Dialóg vrátenia

If you also want to clear all the changelists that are set, check the box at the bottom of the dialog.

If you want to undo a deletion or a rename, you need to use Revert on the parent folder as the deleted item does not exist for you to right click on.

If you want to undo the addition of an item, this appears in the context menu as TortoiseSVN → Undo add.... This is really a revert as well, but the name has been changed to make it more obvious.

The columns in this dialog can be customized in the same way as the columns in the Check for modifications dialog. Read Oddiel 4.7.3, "Miestny a vzdialeny stav" for further details.

Since revert is sometimes used to clean up a working copy, there is an extra button which allows you to delete unversioned items as well. When you click this button another dialog comes up listing all the unversioned items, which you can then select for deletion.

Undoing Changes which have been Committed

Revert will only undo your local changes. It does *not* undo any changes which have already been committed. If you want to undo all the changes which were committed in a particular revision, read Oddiel 4.10, "Revision Log Dialog" for further information.

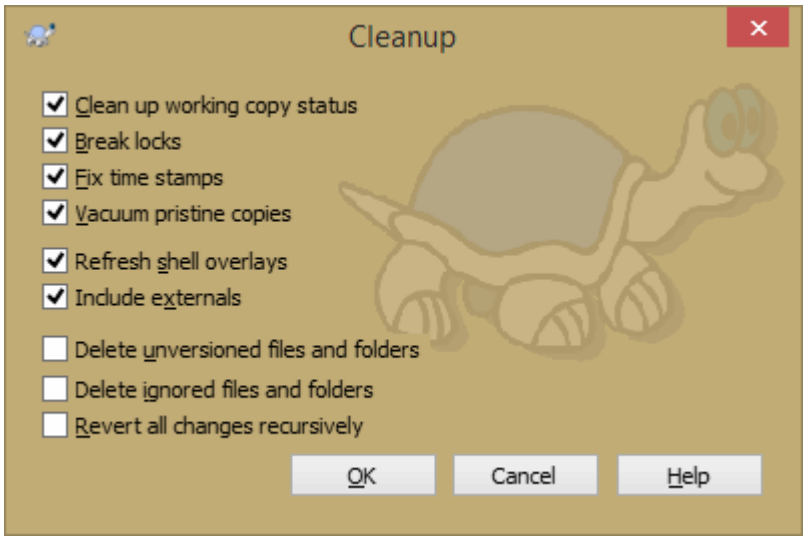
Vrátenie je pomalé

When you revert changes you may find that the operation takes a lot longer than you expect. This is because the modified version of the file is sent to the recycle bin, so you can retrieve your changes if you reverted by mistake. However, if your recycle bin is full, Windows takes a long time to find

> a place to put the file. The solution is simple: either empty the recycle bin or deactivate the Use recycle bin when reverting box in TortoiseSVN's settings.

4.17. Vyčistiť

If a Subversion command cannot complete successfully, perhaps due to server problems, your working copy can be left in an inconsistent state. In that case you need to use TortoiseSVN → Cleanup on the folder. It is a good idea to do this at the top level of the working copy.



Obrázok 4.36. The Cleanup dialog

In the cleanup dialog, there are also other useful options to get the working copy into a `clean` state.

Clean up working copy status
: As stated above, this option tries to get an inconsistent working copy into a workable and usable state. This doesn't affect any data you have but only the internal states of the working copy database. This is the actual `Cleanup` command you know from older TortoiseSVN clients or other SVN clients.

Break write locks
: If checked, all write locks are removed from the working copy database. For most situations, this is required for the cleanup to work!

  Only uncheck this option if the working copy is used by other users/clients at the time. But if the cleanup then fails, you have to check this option for the cleanup to succeed.

Fix time stamps
: Adjusts the recorded time stamps of all files, speeding up future status checks. This can speed up all dialogs that show working copy file lists, for example the Commit dialog.

Vacuum pristine copies
: Removes unused pristine copies and compresses all remaining pristine copies of working copy files.

Refresh shell overlays
: Sometimes the shell overlays, especially on the tree view on the left side of the explorer don't show the current status, or the status cache failed to recognize changes. In this situation, you can use this command to force a refresh.

Include externals
: If this is checked, then all actions are done for all files and folders included with the `svn:externals` property as well.

Delete unversioned files and folders, Delete ignored files and folders
: This is a fast and easy way to remove all generated files in your working copy. All files and folders that are not versioned are moved to the trash bin.

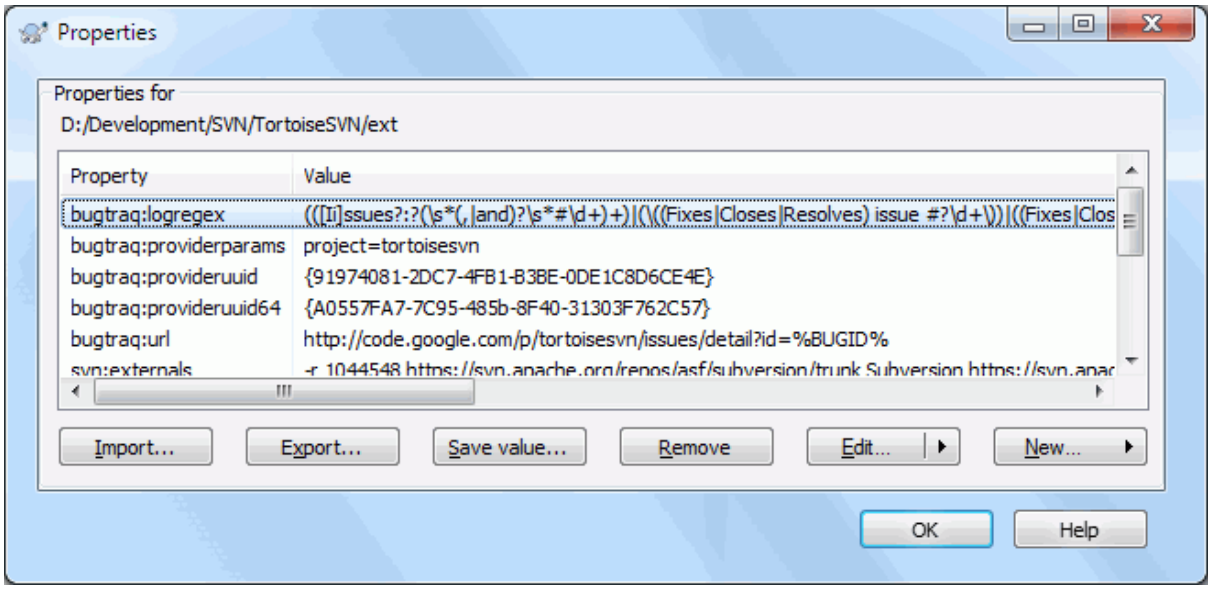
  Note: you can also do the same from the TortoiseSVN → Revert dialog. There you also get a list of all the unversioned files and folders to select for removal.

Revert all changes recursively
: This command reverts all your local modifications which are not committed yet.

  Note: it's better to use the TortoiseSVN → Revert command instead, because there you can first see and select the files which you want to revert.

4.18. Nastavenia Projektu

4.18.1. Vlastnosti Subversion



Obrázok 4.37. Subversion property page

You can read and set the Subversion properties from the Windows properties dialog, but also from TortoiseSVN → properties and within TortoiseSVN's status lists, from Context menu → properties.

You can add your own properties, or some properties with a special meaning in Subversion. These begin with `svn:`. `svn:externals` is such a property; see how to handle externals in Oddiel 4.19, “externé objekty”.

4.18.1.1. svn:keywords

Subversion supports CVS-like keyword expansion which can be used to embed filename and revision information within the file itself. Keywords currently supported are:

$Date$
: Date of last known commit. This is based on information obtained when you update your working copy. It does *not* check the repository to find more recent changes.

$Revision$
: Revízia posledného známeho odovzdania.

$Author$
Autor, ktorý urobil posledné známe odovzdanie.

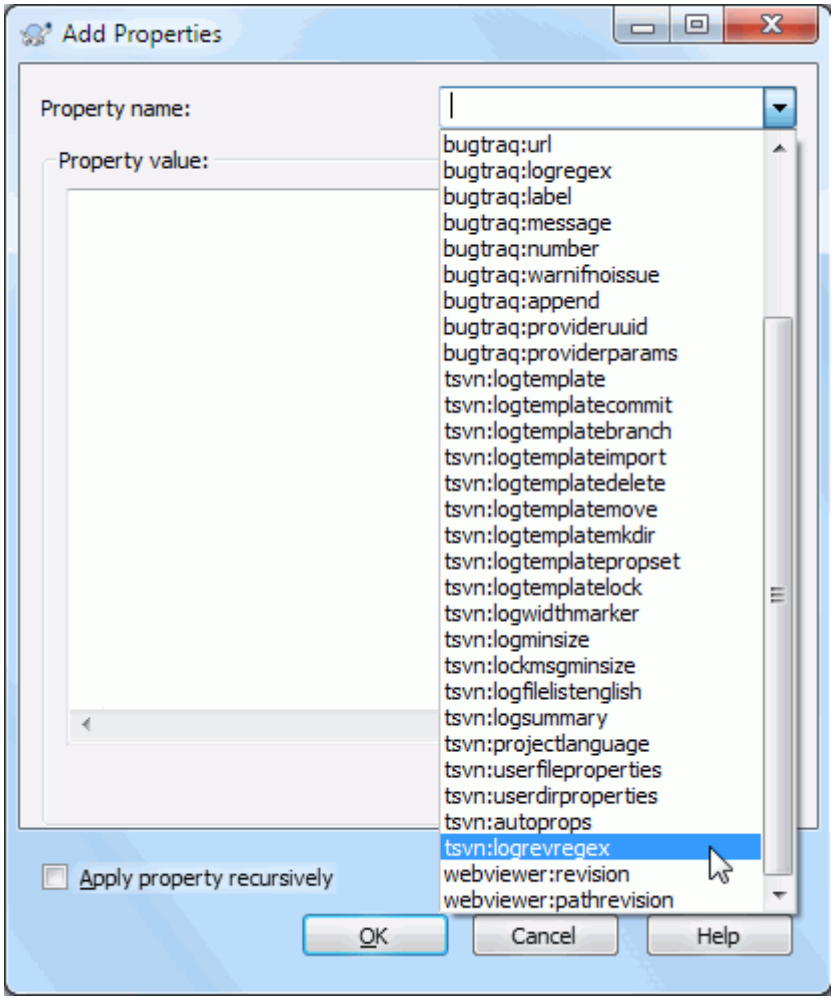
$HeadURL$
Plná URL adresa súboru v úložisku.

Id
Komprimovaná kombinacia predchádyajúcich styroch.

To find out how to use these keywords, look at the *svn:keywords section* [http://svnbook.red-bean.com/en/1.8/svn.advanced.props.special.keywords.html] in the Subversion book, which gives a full description of these keywords and how to enable and use them.

For more information about properties in Subversion see the *Special Properties* [http://svnbook.red-bean.com/en/1.8/svn.advanced.props.html].

4.18.1.2. Pridanie a úprava vlastností



Obrázok 4.38. Pridanie vlastností

To add a new property, first click on New.... Select the required property name from the menu, and then fill in the required information in the specific property dialog. These specific property dialogs are described in more detail in Oddiel 4.18.3, “Property Editors”.

To add a property that doesn't have its own dialog, choose Advanced from the New... menu. Then either select an existing property in the combo box or enter a custom property name.

If you want to apply a property to many items at once, select the files/folders in explorer, then select Context menu → properties.

If you want to apply the property to *every* file and folder in the hierarchy below the current folder, check the Recursive checkbox.

If you wish to edit an existing property, select that property from the list of existing properties, then click on Edit....

If you wish to remove an existing property, select that property from the list of existing properties, then click on Remove.

The `svn:externals` property can be used to pull in other projects from the same repository or a completely different repository. For more information, read Oddiel 4.19, “externé objekty”.

Edit properties at HEAD revision

Because properties are versioned, you cannot edit the properties of previous revisions. If you look at properties from the log dialog, or from a non-HEAD revision in the repository browser, you will see a list of properties and values, but no edit controls.

4.18.1.3. Exporting and Importing Properties

Often you will find yourself applying the same set of properties many times, for example `bugtraq:logregex`. To simplify the process of copying properties from one project to another, you can use the Export/Import feature.

From the file or folder where the properties are already set, use TortoiseSVN → properties, select the properties you wish to export and click on Export.... You will be prompted for a filename where the property names and values will be saved.

From the folder(s) where you wish to apply these properties, use TortoiseSVN → properties and click on Import.... You will be prompted for a filename to import from, so navigate to the place you saved the export file previously and select it. The properties will be added to the folders non-recursively.

If you want to add properties to a tree recursively, follow the steps above, then in the property dialog select each property in turn, click on Edit..., check the Apply property recursively box and click on OK.

The Import file format is binary and proprietary to TortoiseSVN. Its only purpose is to transfer properties using Import and Export, so there is no need to edit these files.

4.18.1.4. Binárne vlastností

TortoiseSVN can handle binary property values using files. To read a binary property value, Save... to a file. To set a binary value, use a hex editor or other appropriate tool to create a file with the content you require, then Load... from that file.

Although binary properties are not often used, they can be useful in some applications. For example if you are storing huge graphics files, or if the application used to load the file is huge, you might want to store a thumbnail as a property so you can obtain a preview quickly.

4.18.1.5. Automatic property setting

You can configure Subversion and TortoiseSVN to set properties automatically on files and folders when they are added to the repository. There are two ways of doing this.

You can edit the Subversion configuration file to enable this feature on your client. The General page of TortoiseSVN's settings dialog has an edit button to take you there directly. The config file is a simple text file which controls some of Subversion's workings. You need to change two things: firstly in the section headed `miscellany` uncomment the line `enable-auto-props = yes`. Secondly you need to edit the section below to define which properties you want added to which file types. This method is a standard Subversion feature

and works with any Subversion client. However it has to be defined on each client individually - there is no way to propagate these settings from the repository.

An alternative method is to set the `tsvn:autoprops` property on folders, as described in the next section. This method only works for TortoiseSVN clients, but it does get propagated to all working copies on update.

As of Subversion 1.8, you can also set the property `svn:auto-props` on the root folder. The property value is automatically inherited by all child items.

Whichever method you choose, you should note that auto-props are only applied to files at the time they are added to the working copy. Auto-props will never change the properties of files which are already versioned.

If you want to be absolutely sure that new files have the correct properties applied, you should set up a repository pre-commit hook to reject commits where the required properties are not set.

Odovzdať vlastnosti

Subversion properties are versioned. After you change or add a property you have to commit your changes.

Konflikty vo vlastnostiach

If there's a conflict on committing the changes, because another user has changed the same property, Subversion generates a `.prej` file. Delete this file after you have resolved the conflict.

4.18.2. TortoiseSVN Vlastnosti projektu

TortoiseSVN has a few special properties of its own, and these begin with `tsvn:`.

- `tsvn:logminsize` sets the minimum length of a log message for a commit. If you enter a shorter message than specified here, the commit is disabled. This feature is very useful for reminding you to supply a proper descriptive message for every commit. If this property is not set, or the value is zero, empty log messages are allowed.

  `tsvn:lockmsgminsize` sets the minimum length of a lock message. If you enter a shorter message than specified here, the lock is disabled. This feature is very useful for reminding you to supply a proper descriptive message for every lock you get. If this property is not set, or the value is zero, empty lock messages are allowed.

- `tsvn:logwidthmarker` is used with projects which require log messages to be formatted with some maximum width (typically 80 characters) before a line break. Setting this property to a non-zero will do 2 things in the log message entry dialog: it places a marker to indicate the maximum width, and it disables word wrap in the display, so that you can see whether the text you entered is too long. Note: this feature will only work correctly if you have a fixed-width font selected for log messages.

- `tsvn:logtemplate` is used with projects which have rules about log message formatting. The property holds a multi-line text string which will be inserted in the commit message box when you start a commit. You can then edit it to include the required information. Note: if you are also using `tsvn:logminsize`, be sure to set the length longer than the template or you will lose the protection mechanism.

  There are also action specific templates which you can use instead of `tsvn:logtemplate`. The action specific templates are used if set, but `tsvn:logtemplate` will be used if no action specific template is set.

  The action specific templates are:

  - `tsvn:logtemplatecommit` is used for all commits from a working copy.

  - `tsvn:logtemplatebranch` is used when you create a branch/tag, or when you copy files or folders directly in the repository browser.

  - `tsvn:logtemplateimport` is used for imports.
  - `tsvn:logtemplatedelete` is used when deleting items directly in the repository browser.
  - `tsvn:logtemplatemove` is used when renaming or moving items in the repository browser.
  - `tsvn:logtemplatemkdir` is used when creating directories in the repository browser.
  - `tsvn:logtemplatepropset` is used when modifying properties in the repository browser.
  - `tsvn:logtemplatelock` is used when getting a lock.

- Subversion allows you to set “autoprops” which will be applied to newly added or imported files, based on the file extension. This depends on every client having set appropriate autoprops in their Subversion configuration file. `tsvn:autoprops` can be set on folders and these will be merged with the user's local autoprops when importing or adding files. The format is the same as for Subversion autoprops, e.g. `*.sh = svn:eol-style=native;svn:executable` sets two properties on files with the `.sh` extension.

  If there is a conflict between the local autoprops and `tsvn:autoprops`, the project settings take precedence because they are specific to that project.

  As of Subversion 1.8, you should use the property `svn:auto-props` instead of `tsvn:autoprops` since this has the very same functionality but works with all svn clients and is not specific to TortoiseSVN.

- In the Commit dialog you have the option to paste in the list of changed files, including the status of each file (added, modified, etc). `tsvn:logfilelistenglish` defines whether the file status is inserted in English or in the localized language. If the property is not set, the default is `true`.

- TortoiseSVN can use a spell checker. On Windows 10, the spell checker of the OS is used. On earlier Windows versions, it can use spell checker modules which are also used by OpenOffice and Mozilla. If you have those installed this property will determine which spell checker to use, i.e. in which language the log messages for your project should be written. `tsvn:projectlanguage` sets the language module the spell checking engine should use when you enter a log message. You can find the values for your language on this page: *MSDN: Language Identifiers* [https://docs.microsoft.com/en-us/windows/desktop/intl/language-identifier-constants-and-strings].

  You can enter this value in decimal, or in hexadecimal if prefixed with `0x`. For example English (US) can be entered as `0x0409` or `1033`.

- The property `tsvn:logsummary` is used to extract a portion of the log message which is then shown in the log dialog as the log message summary.

  The value of the `tsvn:logsummary` property must be set to a one line regex string which contains one regex group. Whatever matches that group is used as the summary.

  An example: `\[SUMMARY\]:\s+(.*)` Will catch everything after “[SUMMARY]” in the log message and use that as the summary.

- The property `tsvn:logrevregex` defines a regular expression which matches references to revisions in a log message. This is used in the log dialog to turn such references into links which when clicked will either scroll to that revision (if the revision is already shown in the log dialog, or if it's available from the log cache) or open a new log dialog showing that revision.

  The regular expression must match the whole reference, not just the revision number. The revision number is extracted from the matched reference string automatically.

  If this property is not set, a default regular expression is used to link revision references.

- There are several properties available to configure client-side hook scripts. Each property is for one specific hook script type.

The available properties/hook-scripts are

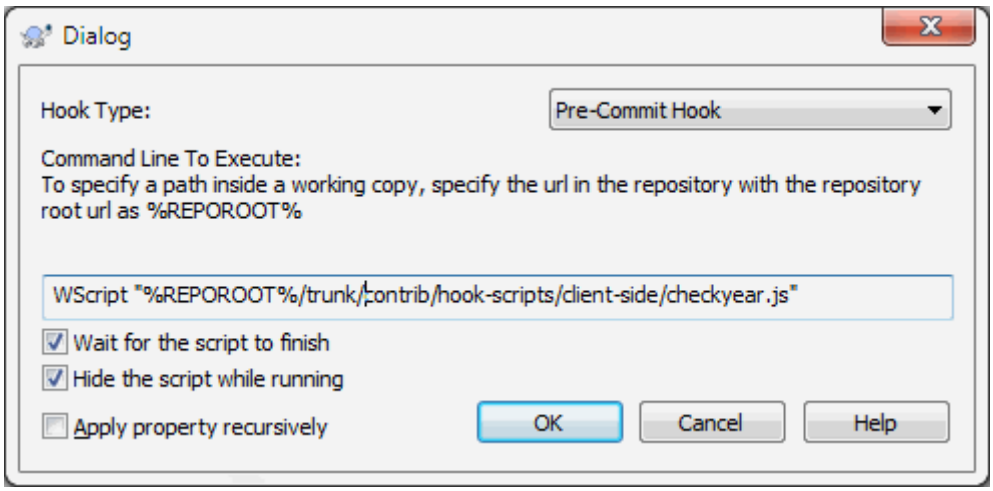
- tsvn:startcommithook
- tsvn:precommithook
- tsvn:postcommithook
- tsvn:startupdatehook
- tsvn:preupdatehook
- tsvn:postupdatehook
- tsvn:prelockhook
- tsvn:postlockhook

The parameters are the same as if you would configure the hook scripts in the settings dialog. See Oddiel 4.31.8, “Klientské (pripnuté) skripty” for the details.

Since not every user has his or her working copy checked out at the same location with the same name, you can configure a script/tool to execute that resides in your working copy by specifying the URL in the repository instead, using `%REPOROOT%` as the part of the URL to the repository root. For example, if your hook script is in your working copy under `contrib/hook-scripts/client-side/checkyear.js`, you would specify the path to the script as `%REPOROOT%/trunk/contrib/hook-scripts/client-side/checkyear.js`. This way even if you move your repository to another server you do not have to adjust the hook script properties.

Instead of `%REPOROOT%` you can also specify `%REPOROOT+%`. The + is used to insert any number of folder paths necessary to find the script. This is useful if you want to specify your script so that if you create a branch the script is still found even though the url of the working copy is now different. Using the example above, you would specify the path to the script as `%REPOROOT+%/contrib/hook-scripts/client-side/checkyear.js`.

The following screenshot shows how the script to check for current copyright years in source file headers is configured for TortoiseSVN.



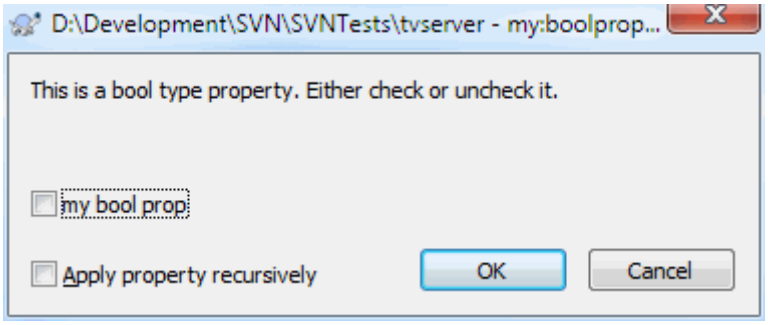
Obrázok 4.39. Property dialog for hook scripts

- When you want to add a new property, you can either pick one from the list in the combo box, or you can enter any property name you like. If your project uses some custom properties, and you want those properties to appear in the list in the combo box (to avoid typos when you enter a property name), you can create a list of

your custom properties using `tsvn:userfileproperties` and `tsvn:userdirproperties`. Apply these properties to a folder. When you go to edit the properties of any child item, your custom properties will appear in the list of pre-defined property names.

You can also specify whether a custom dialog is used to add/edit your property. TortoiseSVN offers four different dialog, depending on the type of your property.

bool
: If your property can only have two states, e.g., true and false, then you can configure your property as a `bool` type.



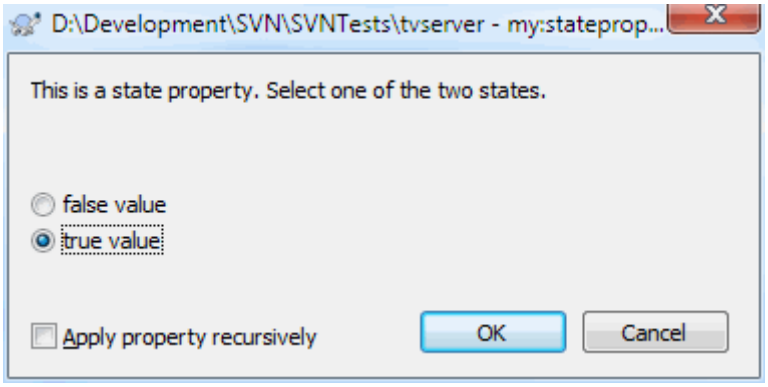
Obrázok 4.40. Property dialog boolean user types

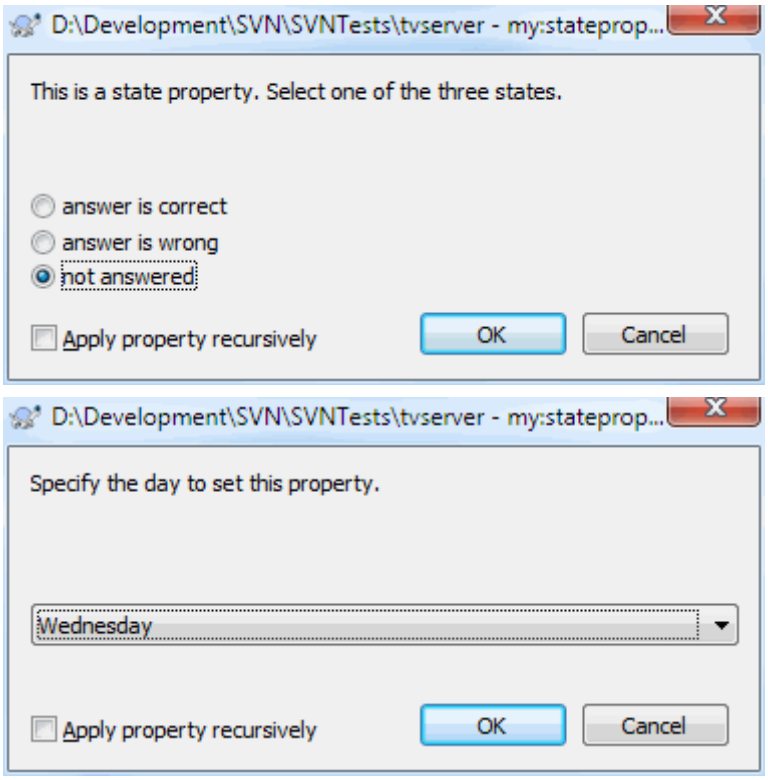
Specify your property like this:

```
propertyname=bool;labeltext(YESVALUE;NOVALUE;Checkboxtext)
```

the `labeltext` is the text shown in the dialog above the checkbox where you can explain the purpose and use of the property. The other parameters should be self explanatory.

state
: If your property represents one of many possible states, e.g., `yes, no, maybe`, then you can configure your property as a `state`





Obrázok 4.41. Property dialog state user types

property like this:

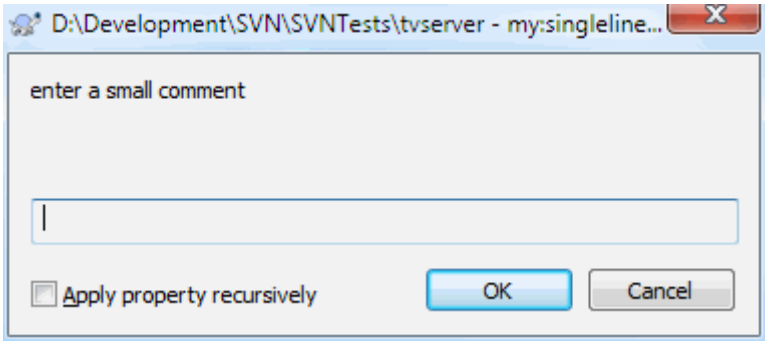
```
propertyname=state;labeltext(DEFVAL;VAL1;TEXT1;VAL2;TEXT2;VAL3;TEXT3;...)
```

The parameters are the same as for the `bool` property, with `DEFVAL` being the default value to be used if the property isn't set yet or has a value that's not configured.

For up to three different values, the dialog shows up to three radio buttons. If there are more values configured, it uses a combo box from where the user can select the required state.

singleline

For properties that consist of one line of text, use the `singleline` property type:

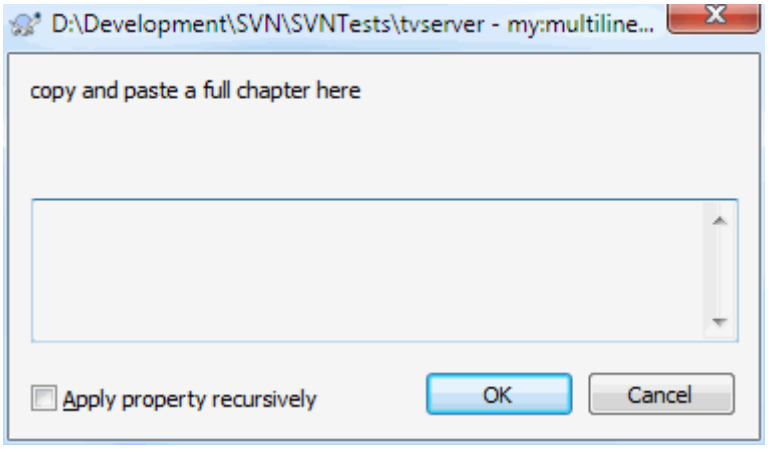


Obrázok 4.42. Property dialog single-line user types

```
propertyname=singleline;labeltext(regex)
```

the `regex` specifies a regular expression which is used to validate (match) the text the user entered. If the text does not match the regex, then the user is shown an error and the property isn't set.

multiline
For properties that consist of multiple lines of text, use the `multiline` property type:



Obrázok 4.43. Property dialog multi-line user types

```
propertyname=multiline;labeltext(regex)
```

the `regex` specifies a regular expression which is used to validate (match) the text the user entered. Don't forget to include the newline (\n) character in the regex!

The screenshots above were made with the following `tsvn:userdirproperties`:

```
my:boolprop=bool;This is a bool type property. Either check or uncheck it.(true;false;
my:stateprop1=state;This is a state property. Select one of the two states.(true;true;
my:stateprop2=state;This is a state property. Select one of the three states.(maybe;tr
my:stateprop3=state;Specify the day to set this property.(1;1;Monday;2;Tuesday;3;Wedne
my:singlelineprop=singleline;enter a small comment(.*)
my:multilineprop=multiline;copy and paste a full chapter here(.*)
```

TortoiseSVN can integrate with some bug tracking tools. This uses project properties that start with `bugtraq:`. Read Oddiel 4.29, “Integration with Bug Tracking Systems / Issue Trackers” for further information.

It can also integrate with some web-based repository browsers, using project properties that start with `webviewer:`. Read Oddiel 4.30, “Integration with Web-based Repository Viewers” for further information.

Nastavenie vlastnosti projektu na adresáre

These special project properties must be set on *folders* for the system to work. When you use a TortoiseSVN command which uses these properties, the properties are read from the folder you clicked on. If the properties are not found there, TortoiseSVN will search upwards through the folder tree to find them until it comes to an unversioned folder, or the tree root (e.g. `C:\`) is found. If you can be sure that each user checks out only from e.g `trunk/` and not some sub-folder, then it is sufficient to set the properties on `trunk/`. If you can't be sure, you should set the properties recursively on each sub-folder. If you set the same property but you use different values at different depths in your project hierarchy then you will get different results depending on where you click in the folder structure.

For project properties *only*, i.e. `tsvn:`, `bugtraq:` and `webviewer:` you can use the Recursive checkbox to set the property to all sub-folders in the hierarchy, without also setting it on all files.

When you add new sub-folders to a working copy using TortoiseSVN, any project properties present in the parent folder will automatically be added to the new child folder too.

Obmedzenia používania prehliadača úložiska

Fetching properties remotely is a slow operation, so some of the features described above will not work in the repository browser as they do in a working copy.

- When you add a property using the repo browser, only the standard `svn:` properties are offered in the pre-defined list. Any other property name must be entered manually.
- Properties cannot be set or deleted recursively using the repo browser.
- Project properties will *not* be propagated automatically when a child folder is added using the repo browser.
- `tsvn:autoprops` will *not* set properties on files which are added using the repo browser.

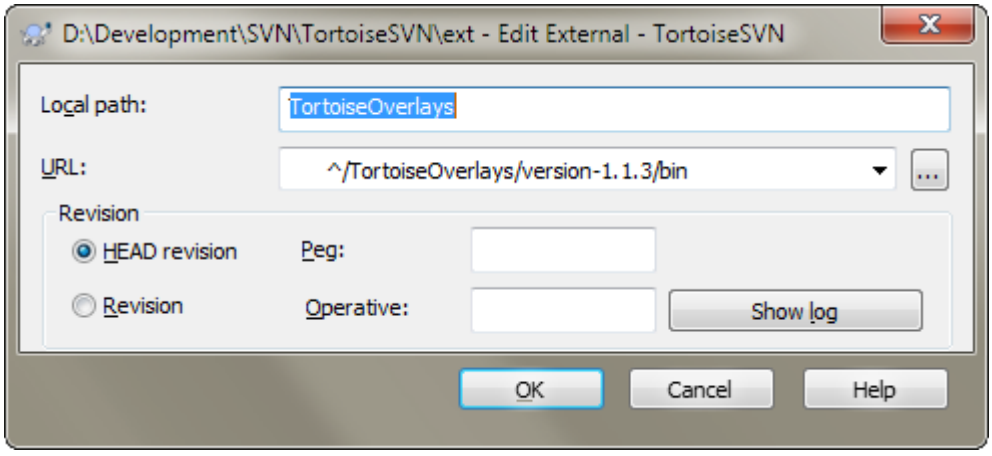
Výstraha

Although TortoiseSVN's project properties are extremely useful, they only work with TortoiseSVN, and some will only work in newer versions of TortoiseSVN. If people working on your project use a variety of Subversion clients, or possibly have old versions of TortoiseSVN, you may want to use repository hooks to enforce project policies. project properties can only help to implement a policy, they cannot enforce it.

4.18.3. Property Editors

Some properties have to use specific values, or be formatted in a specific way in order to be used for automation. To help get the formatting correct, TortoiseSVN presents edit dialogs for some particular properties which show the possible values or break the property into its individual components.

4.18.3.1. External Content



Obrázok 4.44. svn:externals property page

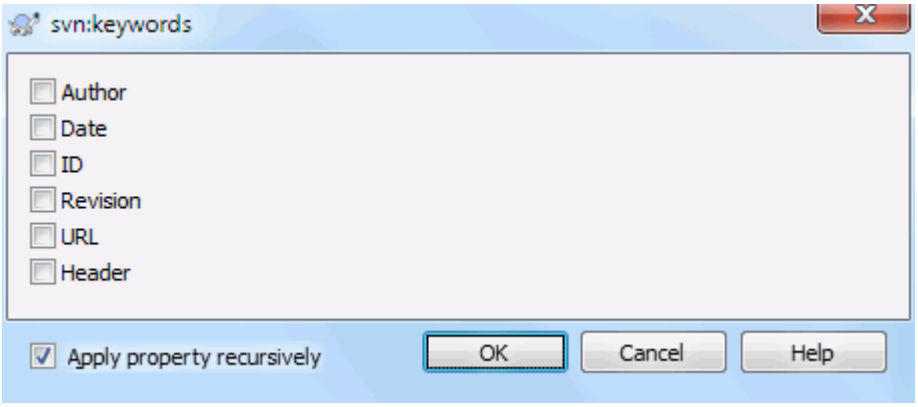
The `svn:externals` property can be used to pull in other projects from the same repository or a completely different repository as described in Oddiel 4.19, “externé objekty”.

You need to define the name of the sub-folder that the external folder is checked out as, and the Subversion URL of the external item. You can check out an external at its HEAD revision, so when the external item changes in the repository, your working copy will receive those changes on update. However, if you want the external to reference a particular stable point then you can specify the specific revision to use. IN this case you may also want to specify

the same revision as a peg revision. If the external item is renamed at some point in the future then Subversion will not be able to update this item in your working copy. By specifying a peg revision you tell Subversion to look for an item that had that name at the peg revision rather than at HEAD.

The button Find HEAD-Revision fetches the HEAD revision of every external URL and shows that HEAD revision in the rightmost column. After the HEAD revision is known, a simple right click on an external gives you the command to peg the selected externals to their explicit HEAD revision. In case the HEAD revision is not known yet, the right click command will fetch the HEAD revision first.

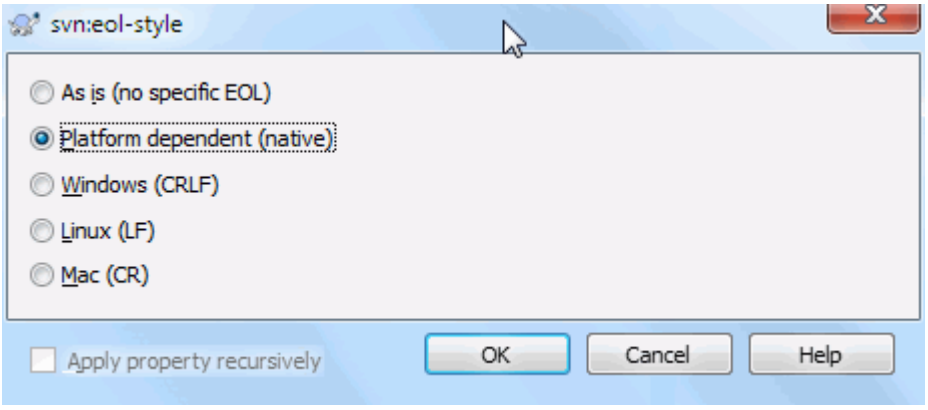
4.18.3.2. SVN Keywords



Obrázok 4.45. svn:keywords property page

Select the keywords that you would like to be expanded in your file.

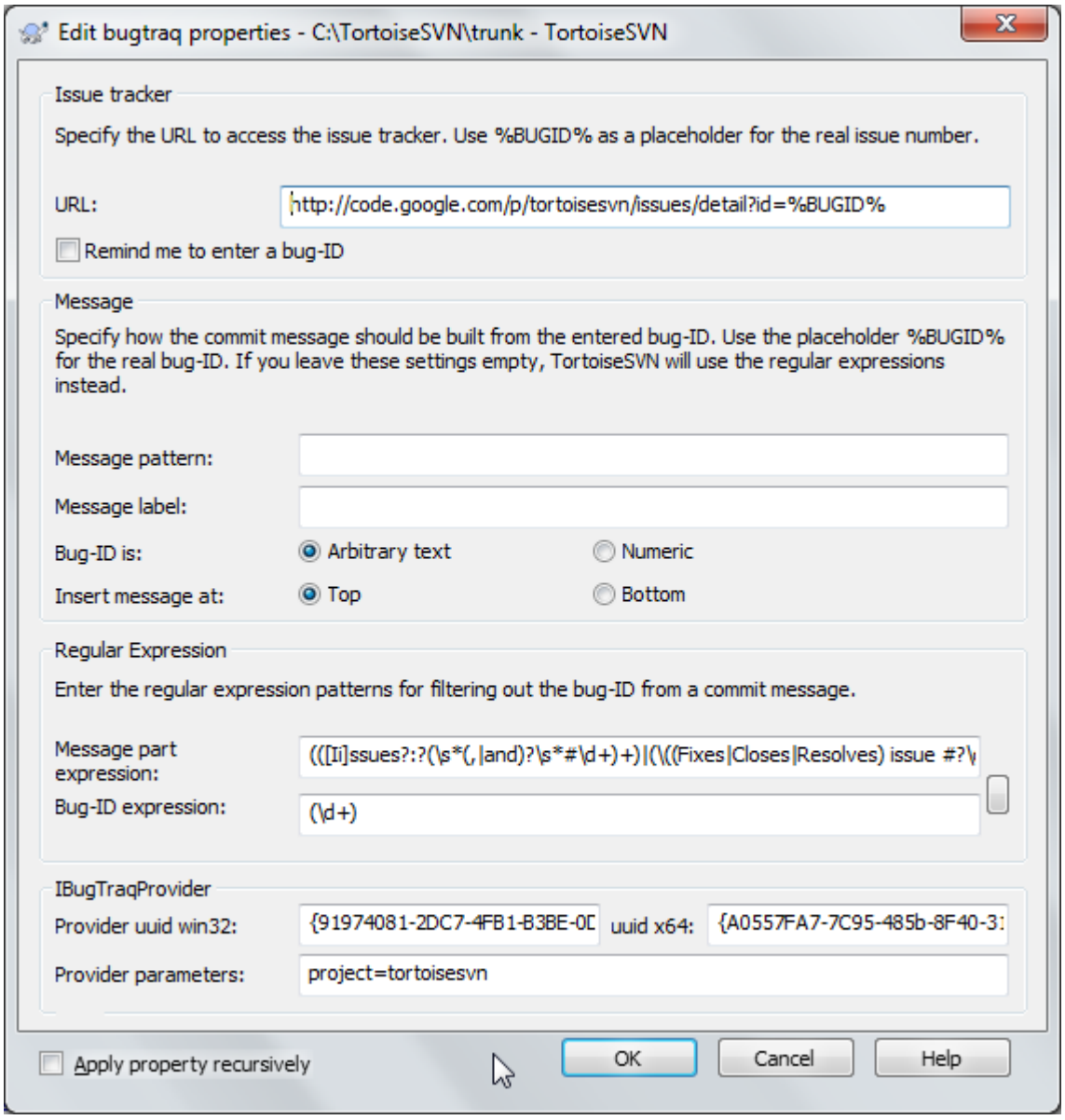
4.18.3.3. EOL Style



Obrázok 4.46. svn:eol-style property page

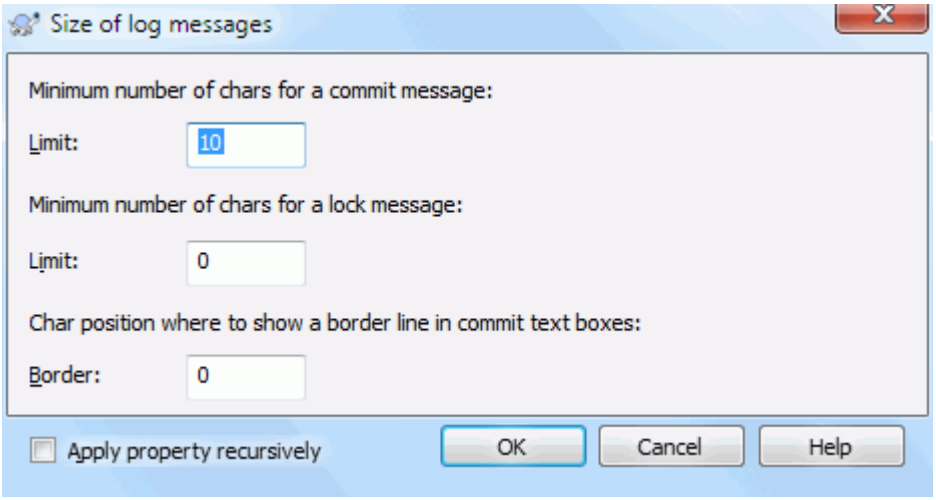
Select the end-of-line style that you wish to use and TortoiseSVN will use the correct property value.

4.18.3.4. Issue Tracker Integration



Obrázok 4.47. tsvn:bugtraq property page

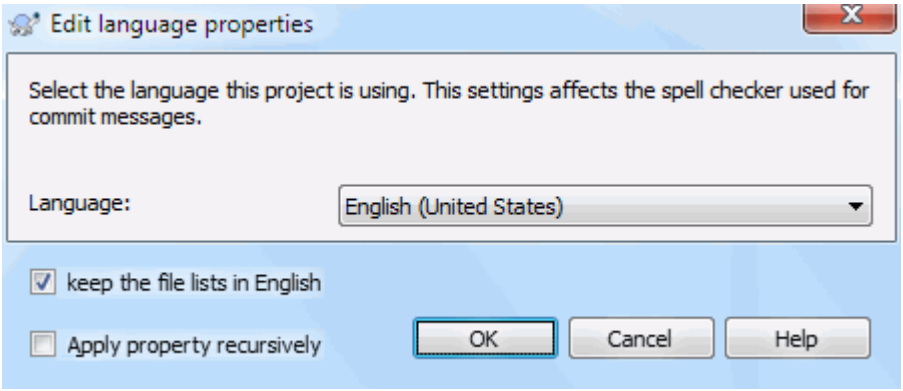
4.18.3.5. Log Message Sizes



Obrázok 4.48. Size of log messages property page

These 3 properties control the formatting of log messages. The first 2 disable the OK in the commit or lock dialogs until the message meets the minimum length. The border position shows a marker at the given column width as a guide for projects which have width limits on their log messages. Setting a value to zero will delete the property.

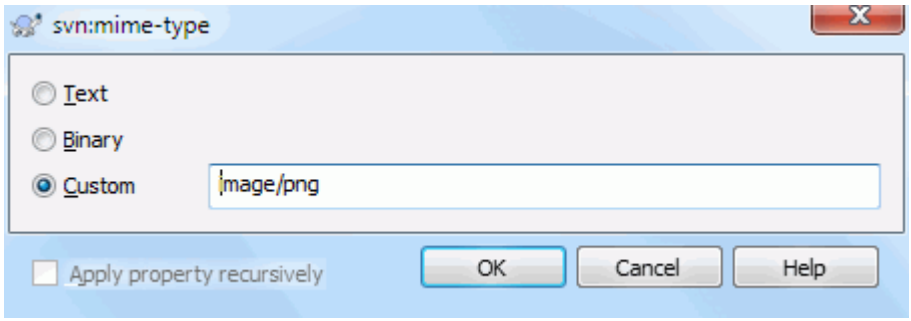
4.18.3.6. Project Language



Obrázok 4.49. Language property page

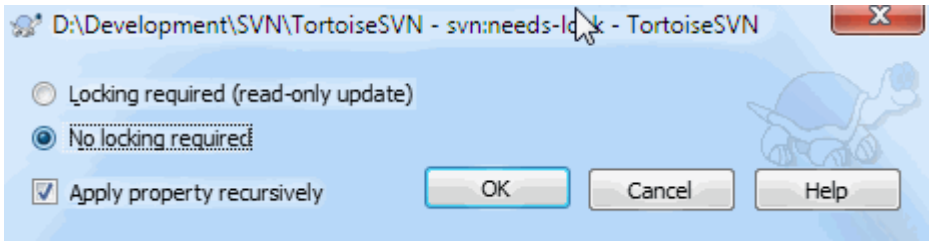
Choose the language to use for spell-checking log messages in the commit dialog. The file lists checkbox comes into effect when you right click in the log message pane and select Paste file list. By default the Subversion status will be shown in your local language. When this box is checked the status is always given in English, for projects which require English-only log messages.

4.18.3.7. MIME-type



Obrázok 4.50. svn:mime-type property page

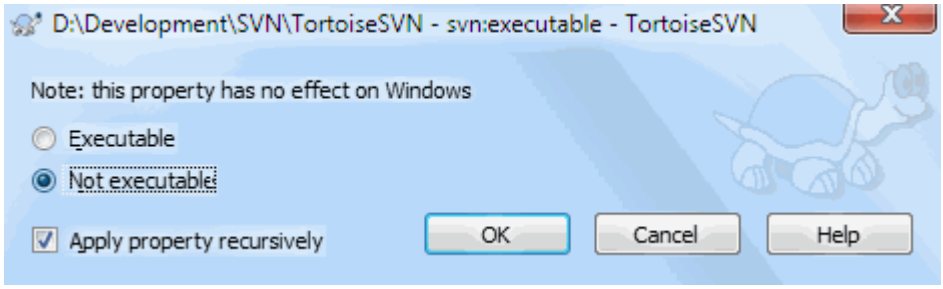
4.18.3.8. svn:needs-lock



Obrázok 4.51. svn:needs-lock property page

This property simply controls whether a file will be checked out as read-only if there is no lock held for it in the working copy.

4.18.3.9. svn:executable



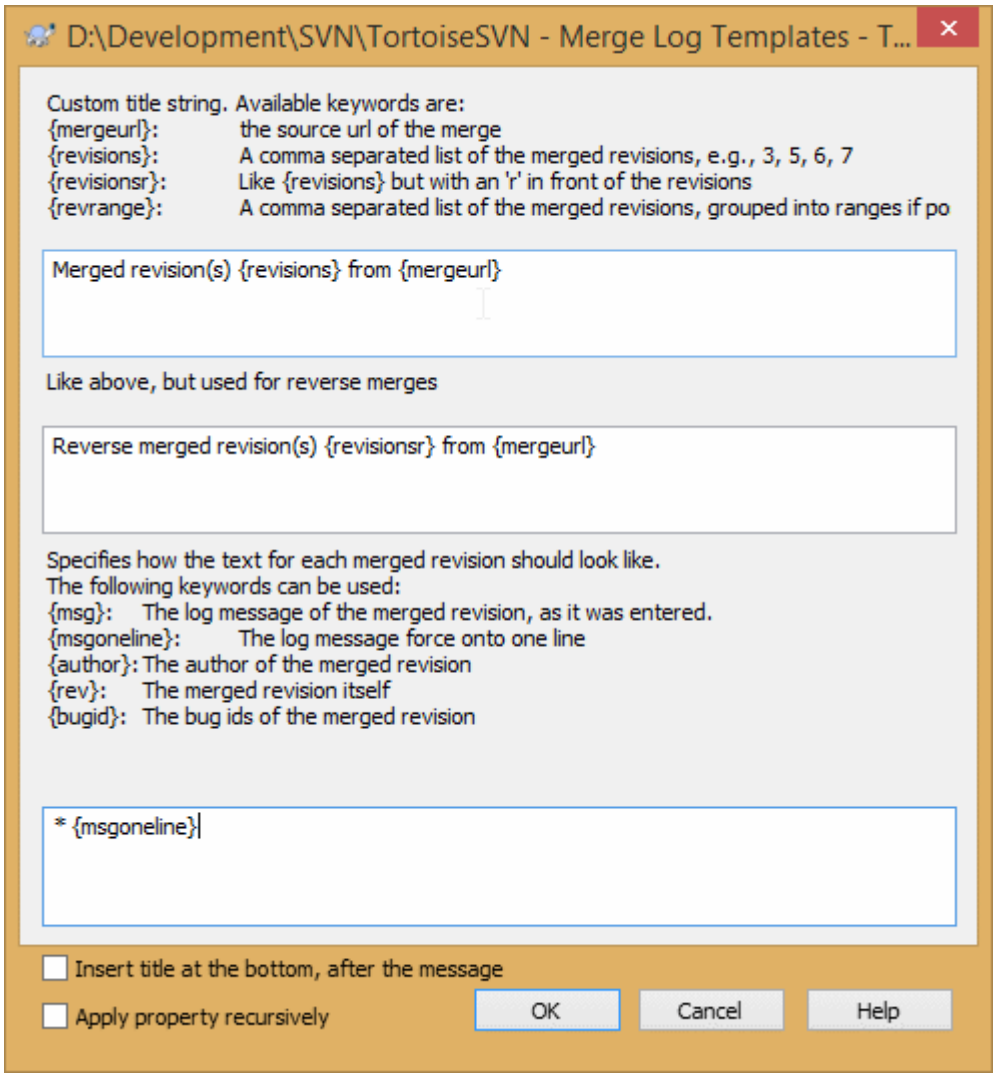
Obrázok 4.52. svn:executable property page

This property controls whether a file will be given executable status when checked out on a Unix/Linux system. It has no effect on a Windows checkout.

4.18.3.10. Merge log message templates

Whenever revisions are merged into a working copy, TortoiseSVN generates a log message from all the merged revisions. Those are then available from the Recent Messages button in the commit dialog.

You can customize that generated message with the following properties:



Obrázok 4.53. Property dialog merge log message templates

tsvn:mergelogtemplatetitle, tsvn:mergelogtemplatereversetitle
: This property specifies the first part of the generated log message. The following keywords can be used:

  {revisions}
  : A comma separated list of the merged revisions, e.g., `3, 5, 6, 7`

  {revisionsr}
  : Like `{revisions}`, but with each revision preceded with an `r`, e.g., `r3, r5, r6, r7`

  {revrange}
  : A comma separated list of the merged revisions, grouped into ranges if possible, e.g., `3, 5-7`

  {mergeurl}
  : The source URL of the merge, i.e., where the revisions are merged from.

  The default value for this string is `Merged revision(s) {revrange} from {mergeurl}:` with a newline at the end.

tsvn:mergelogtemplatemsg
: This property specifies how the text for each merged revision should look like. The following keywords can be used:

  {msg}
  : The log message of the merged revision, as it was entered.

{msgoneline}
Like `{msg}`, but all newlines are replaced with a space, so that the whole log message appears on one single line.

{author}
The author of the merged revision.

{rev}
The merged revision itself.

{bugids}
The bug IDs of the merged revision, if there are any.

tsvn:mergelogtemplatemsgtitlebottom
This property specifies the position of the title string specified with the `tsvn:mergelogtemplatetitle` or `tsvn:mergelogtemplatereversetitle`. If the property is set to `yes` or `true`, then the title string is appended at the bottom instead of the top.

Dôležité

This only works if the merged revisions are already in the log cache. If you have disabled the log cache or not shown the log first before the merge, the generated message won't contain any information about the merged revisions.

4.19. externé objekty

Sometimes it is useful to construct a working copy that is made out of a number of different checkouts. For example, you may want different files or subdirectories to come from different locations in a repository, or perhaps from different repositories altogether. If you want every user to have the same layout, you can define the `svn:externals` properties to pull in the specified resource at the locations where they are needed.

4.19.1. externé adresáre

Let's say you check out a working copy of `/project1` to `D:\dev\project1`. Select the folder `D:\dev\project1`, right click and choose Windows Menu → Properties from the context menu. The Properties Dialog comes up. Then go to the Subversion tab. There, you can set properties. Click Properties.... In the properties dialog, either double click on the `svn:externals` if it already exists, or click on the New... button and select `externals` from the menu. To add a new external, click the New... and then fill in the required information in the shown dialog.

Výstraha

URLs must be properly escaped or they will not work, e.g. you must replace each space with `%20`.

If you want the local path to include spaces or other special characters, you can enclose it in double quotes, or you can use the \ (backslash) character as a Unix shell style escape character preceding any special character. Of course this also means that you must use / (forward slash) as a path delimiter. Note that this behaviour is new in Subversion 1.6 and will not work with older clients.

Použiť explicitné číslo revízie

You should strongly consider using explicit revision numbers in all of your externals definitions, as described above. Doing so means that you get to decide when to pull down a different snapshot of external information, and exactly which snapshot to pull. Besides the common sense aspect of not being surprised by changes to third-party repositories that you might not have any control over, using explicit revision numbers also means that as you backdate your working copy to a previous revision,

> your externals definitions will also revert to the way they looked in that previous revision, which in turn means that the external working copies will be updated to match the way *they* looked back when your repository was at that previous revision. For software projects, this could be the difference between a successful and a failed build of an older snapshot of your complex code base.
>
> The edit dialog for `svn:externals` properties allows you to select the externals and automatically set them explicitly to the HEAD revision.

If the external project is in the same repository, any changes you make there will be included in the commit list when you commit your main project.

If the external project is in a different repository, any changes you make to the external project will be shown or indicated when you commit the main project, but you have to commit those external changes separately.

If you use absolute URLs in `svn:externals` definitions and you have to relocate your working copy (i.e., if the URL of your repository changes), then your externals won't change and might not work anymore.

To avoid such problems, Subversion clients version 1.5 and higher support relative external URLs. Four different methods of specifying a relative URL are supported. In the following examples, assume we have two repositories: one at `http://example.com/svn/repos-1` and another at `http://example.com/svn/repos-2`. We have a checkout of `http://example.com/svn/repos-1/project/trunk` into `C:\Working` and the `svn:externals` property is set on trunk.

Relatívne k rodičovskému adresáru
: These URLs always begin with the string `../` for example:

  ```
  ../../widgets/foo  common/foo-widget
  ```

  This will extract `http://example.com/svn/repos-1/widgets/foo` into `C:\Working\common\foo-widget`.

  Note that the URL is relative to the URL of the directory with the `svn:externals` property, not to the directory where the external is written to disk.

Relatívne k úložisku
: These URLs always begin with the string `^/` for example:

  ```
  ^/widgets/foo  common/foo-widget
  ```

  This will extract `http://example.com/svn/repos-1/widgets/foo` into `C:\Working\common\foo-widget`.

  You can easily refer to other repositories with the same `SVNParentPath` (a common directory holding several repositories). For example:

  ```
  ^/../repos-2/hammers/claw  common/claw-hammer
  ```

  This will extract `http://example.com/svn/repos-2/hammers/claw` into `C:\Working\common\claw-hammer`.

Relative to scheme
: URLs beginning with the string `//` copy only the scheme part of the URL. This is useful when the same hostname must the accessed with different schemes depending upon network location; e.g. clients in the intranet use `http://` while external clients use `svn+ssh://`. For example:

```
//example.com/svn/repos-1/widgets/foo  common/foo-widget
```

This will extract `http://example.com/svn/repos-1/widgets/foo` or `svn+ssh://example.com/svn/repos-1/widgets/foo` depending on which method was used to checkout `C:\Working`.

Relatívne k menu servera
: URLs beginning with the string `/` copy the scheme and the hostname part of the URL, for example:

```
/svn/repos-1/widgets/foo  common/foo-widget
```

This will extract `http://example.com/svn/repos-1/widgets/foo` into `C:\Working\common\foo-widget`. But if you checkout your working copy from another server at `svn+ssh://another.mirror.net/svn/repos-1/project1/trunk` then the external reference will extract `svn+ssh://another.mirror.net/svn/repos-1/widgets/foo`.

You can also specify a peg and operative revision for the URL if required. To learn more about peg and operative revisions, please read the *corresponding chapter* [http://svnbook.red-bean.com/en/1.8/svn.advanced.pegrevs.html] in the Subversion book.

Dôležité

If you specify the target folder for the external as a subfolder like in the examples above, make sure that *all* folders in between are versioned as well. So for the examples above, the folder `common` should be versioned!

While the external will work in most situations properly if folders in between are not versioned, there are some operations that won't work as you expect. And the status overlay icons in explorer will also not show the correct status.

Keď potrebuje viac informácií ako TortoiseSVN vlastnosti prečítajte si Oddiel 4.18, “Nastavenia Projektu”.

To find out about different methods of accessing common sub-projects read Oddiel B.6, “Zahrnutie spoločného kódu”.

4.19.2. Externé súbory

As of Subversion 1.6 you can add single file externals to your working copy using the same syntax as for folders. However, there are some restrictions.

- The path to the file external must be a direct child of the folder where you set the `svn:externals` property.
- The URL for a file external must be in the same repository as the URL that the file external will be inserted into; inter-repository file externals are not supported.

A file external behaves just like any other versioned file in many respects, but they cannot be moved or deleted using the normal commands; the `svn:externals` property must be modified instead.

4.19.3. Creating externals via drag and drop

If you already have a working copy of the files or folders you want to include as externals in another working copy, you can simply add those via drag and drop from the windows explorer.

Simply right drag the file or folder from one working copy to where you want those to be included as externals. A context menu appears when you release the mouse button: SVN Add as externals here if you click on that context menu entry, the `svn:externals` property is automatically added. All you have to do after that is commit the property changes and update to get those externals properly included in your working copy.

4.20. Branching / Tagging

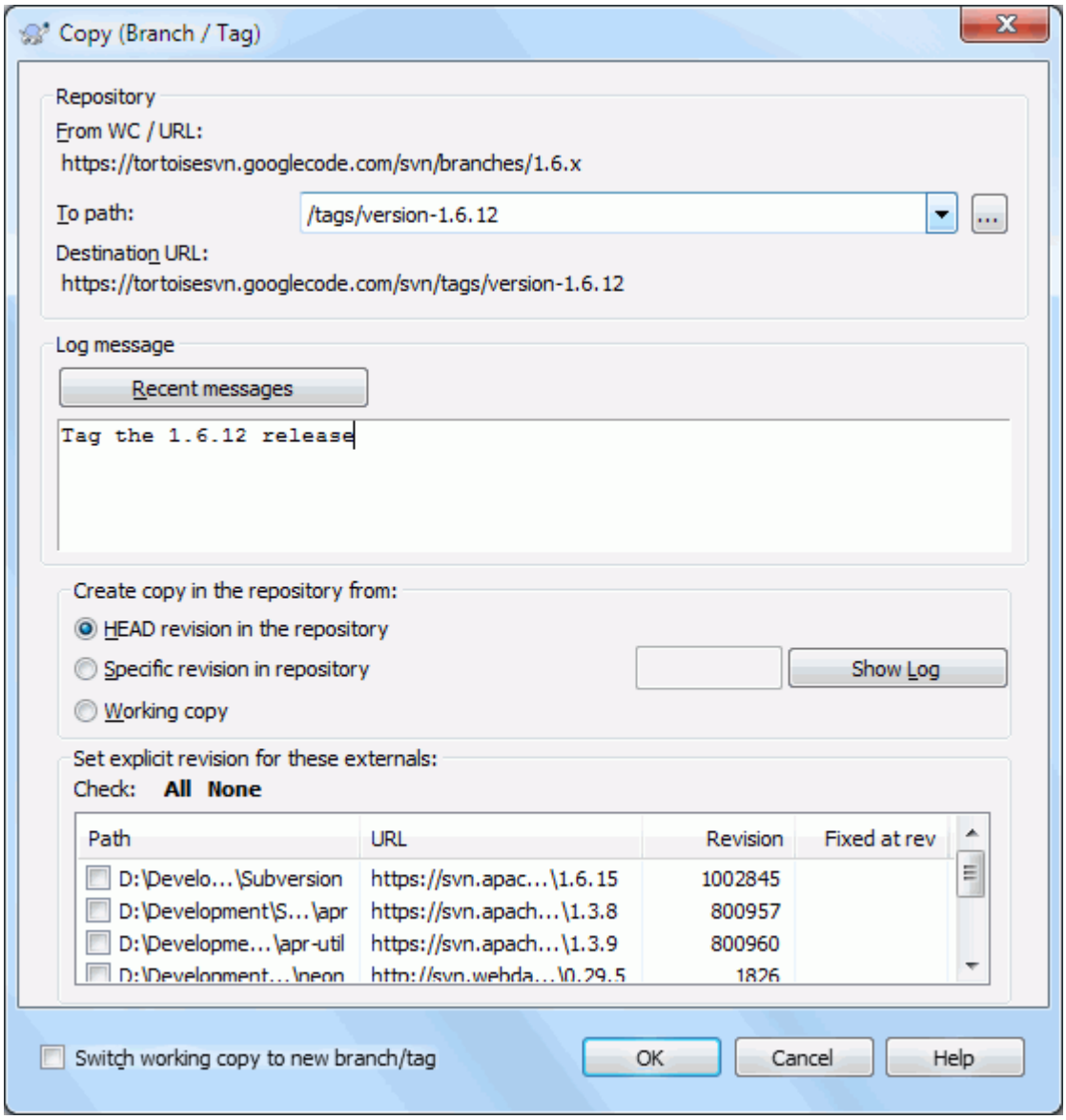
One of the features of version control systems is the ability to isolate changes onto a separate line of development. This line is known as a *branch*. Branches are often used to try out new features without disturbing the main line of development with compiler errors and bugs. As soon as the new feature is stable enough then the development branch is *merged* back into the main branch (trunk).

Another feature of version control systems is the ability to mark particular revisions (e.g. a release version), so you can at any time recreate a certain build or environment. This process is known as *tagging*.

Subversion does not have special commands for branching or tagging, but uses so-called “cheap copies” instead. Cheap copies are similar to hard links in Unix, which means that instead of making a complete copy in the repository, an internal link is created, pointing to a specific tree/revision. As a result branches and tags are very quick to create, and take up almost no extra space in the repository.

4.20.1. Vytvorenie vetvy / značky

If you have imported your project with the recommended directory structure, creating a branch or tag version is very simple:



Obrázok 4.54. Dialóg vetvy / značky

Select the folder in your working copy which you want to copy to a branch or tag, then select the command TortoiseSVN → Branch/Tag....

The default destination URL for the new branch will be the source URL on which your working copy is based. You will need to edit that URL to the new path for your branch/tag. So instead of

```
http://svn.collab.net/repos/ProjectName/trunk
```

you might now use something like

```
http://svn.collab.net/repos/ProjectName/tags/Release_1.10
```

If you can't remember the naming convention you used last time, click the button on the right to open the repository browser so you can view the existing repository structure.

medziadresáre

When you specify the target URL, all the folders up to the last one must already exist or you will get an error message. In the above example, the URL `http://svn.collab.net/repos/ProjectName/tags/` must exist to create the `Release_1.10` tag.

However if you want to create a branch/tag to an URL that has intermediate folders that don't exist yet you can check the option `Create intermediate folders` at the bottom of the dialog. If that option is activated, all intermediate folders are automatically created.

Note that this option is disabled by default to avoid typos. For example, if you typed the target URL as `http://svn.collab.net/repos/ProjectName/Tags/Release_1.10` instead of `http://svn.collab.net/repos/ProjectName/tags/Release_1.10`, you would get an error with the option disabled, but with the option enabled a folder `Tags` would be automatically created, and you would end up with a folder `Tags` and a folder `tags`.

Now you have to select the source of the copy. Here you have three options:

HEAD revision in the repository
: The new branch is copied directly in the repository from the HEAD revision. No data needs to be transferred from your working copy, and the branch is created very quickly.

Špecifická revízia v úložisku
: The new branch is copied directly in the repository but you can choose an older revision. This is useful if you forgot to make a tag when you released your project last week. If you can't remember the revision number, click the button on the right to show the revision log, and select the revision number from there. Again no data is transferred from your working copy, and the branch is created very quickly.

Pracovná kópia
: The new branch is an identical copy of your local working copy. If you have updated some files to an older revision in your WC, or if you have made local changes, that is exactly what goes into the copy. Naturally this sort of complex tag may involve transferring data from your WC back to the repository if it does not exist there already.

If you want your working copy to be switched to the newly created branch automatically, use the Switch working copy to new branch/tag checkbox. But if you do that, first make sure that your working copy does not contain modifications. If it does, those changes will be merged into the branch WC when you switch.

If your working copy has other projects included with `svn:externals` properties, those externals will be listed at the bottom of the branch/tag dialog. For each external, the target path and the source URL is shown.

If you want to make sure that the new tag always is in a consistent state, check all the externals to have their revisions pinned. If you don't check the externals and those externals point to a HEAD revision which might change in the future, checking out the new tag will check out that HEAD revision of the external and your tag might not compile anymore. So it's always a good idea to set the externals to an explicit revision when creating a tag.

The externals are automatically pinned to either the current HEAD revision or the working copy BASE revision, depending on the source of the branch/tag:

Copy Source	Pinned Revision
HEAD revision in the repository	external's repos HEAD revision
Špecifická revízia v úložisku	external's repos HEAD revision
Pracovná kópia	external's WC BASE revision

Tabuľka 4.1. Pinned Revision

externals within externals

If a project that is included as an external has itself included externals, then those will not be tagged! Only externals that are direct children can be tagged.

Press OK to commit the new copy to the repository. Don't forget to supply a log message. Note that the copy is created *inside the repository*.

Note that unless you opted to switch your working copy to the newly created branch, creating a Branch or Tag does *not* affect your working copy. Even if you create the branch from your WC, those changes are committed to the new branch, not to the trunk, so your WC may still be marked as modified with respect to the trunk.

4.20.2. Iné spôsoby na vytvorenie vetvy / značky

You can also create a branch or tag without having a working copy. To do that, open the repository browser. You can there drag folders to a new location. You have to hold down the **Ctrl** key while you drag to create a copy, otherwise the folder gets moved, not copied.

You can also drag a folder with the right mouse button. Once you release the mouse button you can choose from the context menu whether you want the folder to be moved or copied. Of course to create a branch or tag you must copy the folder, not move it.

Yet another way is from the log dialog. You can show the log dialog for e.g. trunk, select a revision (either the HEAD revision at the very top or an earlier revision), right click and choose create branch/tag from revision....

4.20.3. To Checkout or to Switch...

...that is (not really) the question. While a checkout downloads everything from the desired branch in the repository to your working directory, TortoiseSVN → Switch... only transfers the changed data to your working copy. Good for the network load, good for your patience. :-)

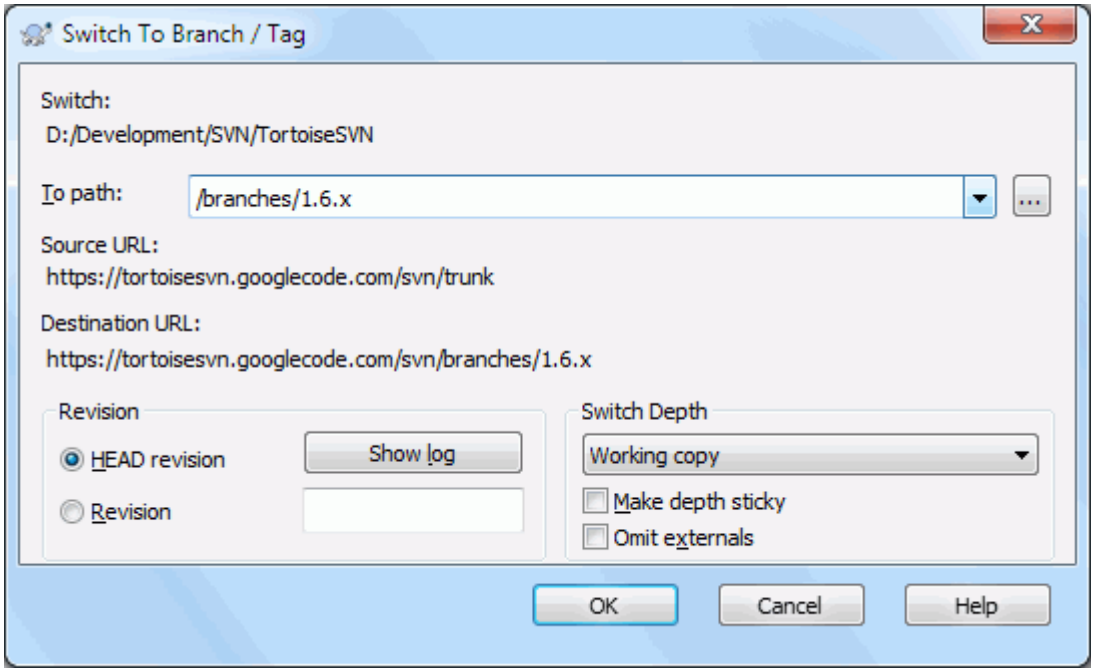
To be able to work with your freshly generated branch or tag you have several ways to handle it. You can:

- TortoiseSVN → Checkout to make a fresh checkout in an empty folder. You can check out to any location on your local disk and you can create as many working copies from your repository as you like.
- Switch your current working copy to the newly created copy in the repository. Again select the top level folder of your project and use TortoiseSVN → Switch... from the context menu.

In the next dialog enter the URL of the branch you just created. Select the Head Revision radio button and click on OK. Your working copy is switched to the new branch/tag.

Switch works just like Update in that it never discards your local changes. Any changes you have made to your working copy which have not yet been committed will be merged when you do the Switch. If you do not want this to happen then you must either commit the changes before switching, or revert your working copy to an already-committed revision (typically HEAD).

- If you want to work on trunk and branch, but don't want the expense of a fresh checkout, you can use Windows Explorer to make a copy of your trunk checkout in another folder, then TortoiseSVN → Switch... that copy to your new branch.



Obrázok 4.55. The Switch Dialog

Although Subversion itself makes no distinction between tags and branches, the way they are typically used differs a bit.

- Tags are typically used to create a static snapshot of the project at a particular stage. As such they are not normally used for development - that's what branches are for, which is the reason we recommended the `/trunk /branches /tags` repository structure in the first place. Working on a tag revision is *not a good idea*, but because your local files are not write protected there is nothing to stop you doing this by mistake. However, if you try to commit to a path in the repository which contains `/tags/`, TortoiseSVN will warn you.
- It may be that you need to make further changes to a release which you have already tagged. The correct way to handle this is to create a new branch from the tag first and commit the branch. Do your Changes on this branch and then create a new tag from this new branch, e.g. `Version_1.0.1`.
- If you modify a working copy created from a branch and commit, then all changes go to the new branch and *not* the trunk. Only the modifications are stored. The rest remains a cheap copy.

4.21. Zlučovanie

Where branches are used to maintain separate lines of development, at some stage you will want to merge the changes made on one branch back into the trunk, or vice versa.

It is important to understand how branching and merging works in Subversion before you start using it, as it can become quite complex. It is highly recommended that you read the chapter *Branching and Merging* [http://

svnbook.red-bean.com/en/1.8/svn.branchmerge.html] in the Subversion book, which gives a full description and many examples of how it is used.

The next point to note is that merging *always* takes place within a working copy. If you want to merge changes *into* a branch, you have to have a working copy for that branch checked out, and invoke the merge wizard from that working copy using TortoiseSVN → Merge....

In general it is a good idea to perform a merge into an unmodified working copy. If you have made other changes in your WC, commit those first. If the merge does not go as you expect, you may want to revert the changes, and the Revert command will discard *all* changes including any you made before the merge.

There are three common use cases for merging which are handled in slightly different ways, as described below. The first page of the merge wizard asks you to select the method you need.

Zlúčenie rozsahu revízií
: Táto metóda pokrýva prípad keď ste spravili jednu, alebo viac revízií do vetvy (alebo kmeňa) a chcete tieto zmeny aplikovať na niektorú inú vetvu.

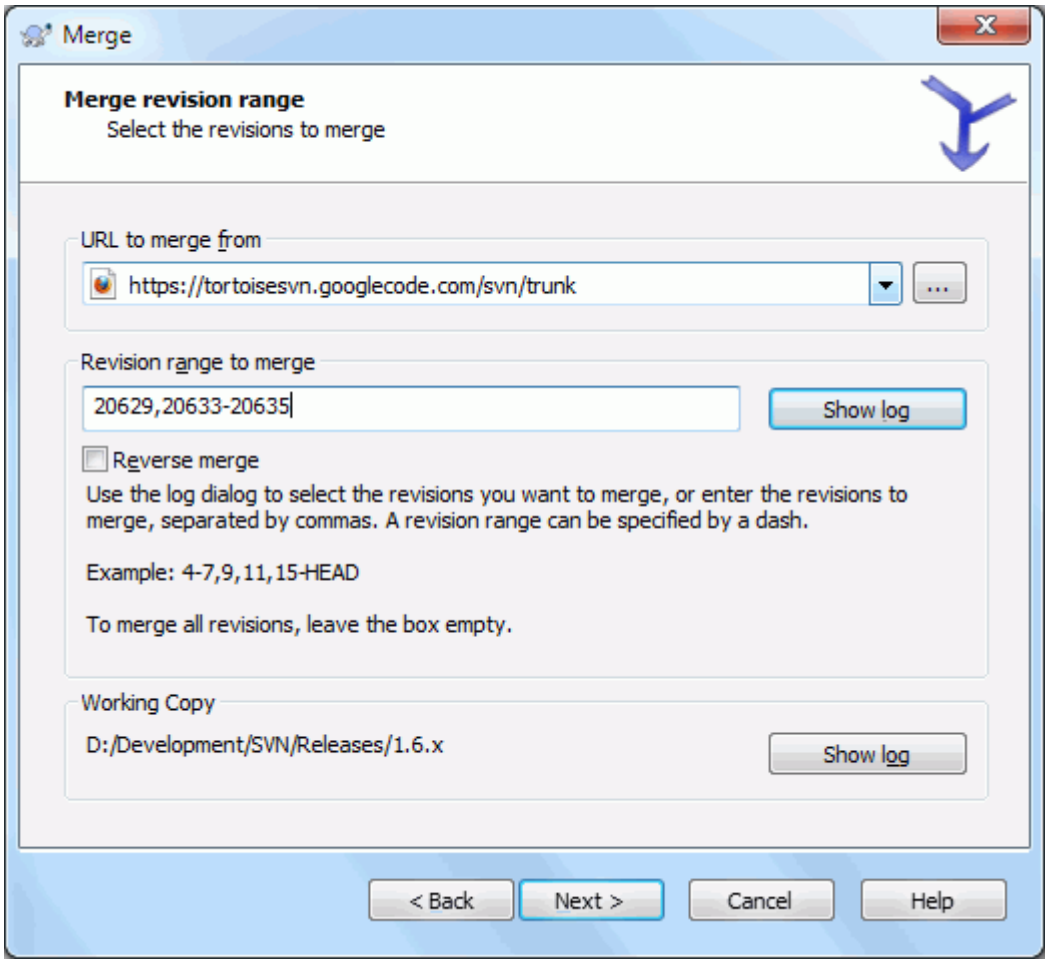
  What you are asking Subversion to do is this: “ Calculate the changes necessary to get [FROM] revision 1 of branch A [TO] revision 7 of branch A, and apply those changes to my working copy (of trunk or branch B). ”

  If you leave the revision range empty, Subversion uses the merge-tracking features to calculate the correct revision range to use. This is known as a reintegrate or automatic merge.

Merge two different trees
: This is a more general case of the reintegrate method. What you are asking Subversion to do is: “ Calculate the changes necessary to get [FROM] the head revision of the trunk [TO] the head revision of the branch, and apply those changes to my working copy (of the trunk). ” The net result is that trunk now looks exactly like the branch.

  If your server/repository does not support merge-tracking then this is the only way to merge a branch back to trunk. Another use case occurs when you are using vendor branches and you need to merge the changes following a new vendor drop into your trunk code. For more information read the chapter on *vendor branches* [http://svnbook.red-bean.com/en/1.8/svn.advanced.vendorbr.html] in the Subversion Book.

4.21.1. Zlučenie rozshahu revízií



Obrázok 4.56. The Merge Wizard - Select Revision Range

In the From: field enter the full folder URL of the branch or tag containing the changes you want to port into your working copy. You may also click ... to browse the repository and find the desired branch. If you have merged from this branch before, then just use the drop down list which shows a history of previously used URLs.

If you are merging from a renamed or deleted branch then you will have to go back to a revision where that branch still existed. In this case you will also need to specify that revision as a peg revision in the range of revisions being merged (see below), otherwise the merge will fail when it can't find that path at HEAD.

In the Revision range to merge field enter the list of revisions you want to merge. This can be a single revision, a list of specific revisions separated by commas, or a range of revisions separated by a dash, or any combination of these.

If you need to specify a peg revision for the merge, add the peg revision at the end of the revisions, e.g. `5-7,10@3`. In the above example, the revisions 5,6,7 and 10 would be merged, with 3 being the peg revision.

Dôležité

There is an important difference in the way a revision range is specified with TortoiseSVN compared to the command line client. The easiest way to visualise it is to think of a fence with posts and fence panels.

With the command line client you specify the changes to merge using two “fence post” revisions which specify the *before* and *after* points.

> With TortoiseSVN you specify the changeset to merge using “fence panels”. The reason for this becomes clear when you use the log dialog to specify revisions to merge, where each revision appears as a changeset.
>
> Ak zlučujete zmeny v blokoch, metodou ukázanou v knihe Subversion budete zlučovať 100-200 teraz a 200-300 neskôr. S TortoiseSVN by ste zlúčili 100-200 teraz a 201-300 potom.
>
> This difference has generated a lot of heat on the mailing lists. We acknowledge that there is a difference from the command line client, but we believe that for the majority of GUI users it is easier to understand the method we have implemented.

The easiest way to select the range of revisions you need is to click on Show Log, as this will list recent changes with their log comments. If you want to merge the changes from a single revision, just select that revision. If you want to merge changes from several revisions, then select that range (using the usual **Shift**-modifier). Click on OK and the list of revision numbers to merge will be filled in for you.

If you want to merge changes back *out* of your working copy, to revert a change which has already been committed, select the revisions to revert and make sure the Reverse merge box is checked.

If you have already merged some changes from this branch, hopefully you will have made a note of the last revision merged in the log message when you committed the change. In that case, you can use Show Log for the Working Copy to trace that log message. Remembering that we are thinking of revisions as changesets, you should Use the revision after the end point of the last merge as the start point for this merge. For example, if you have merged revisions 37 to 39 last time, then the start point for this merge should be revision 40.

If you are using the merge tracking features of Subversion, you do not need to remember which revisions have already been merged - Subversion will record that for you. If you leave the revision range blank, all revisions which have not yet been merged will be included. Read Oddiel 4.21.5, “Sledovanie zlučovania” to find out more.

When merge tracking is used, the log dialog will show previously merged revisions, and revisions pre-dating the common ancestor point, i.e. before the branch was copied, as greyed out. The Hide non-mergeable revisions checkbox allows you to filter out these revisions completely so you see only the revisions which *can* be merged.

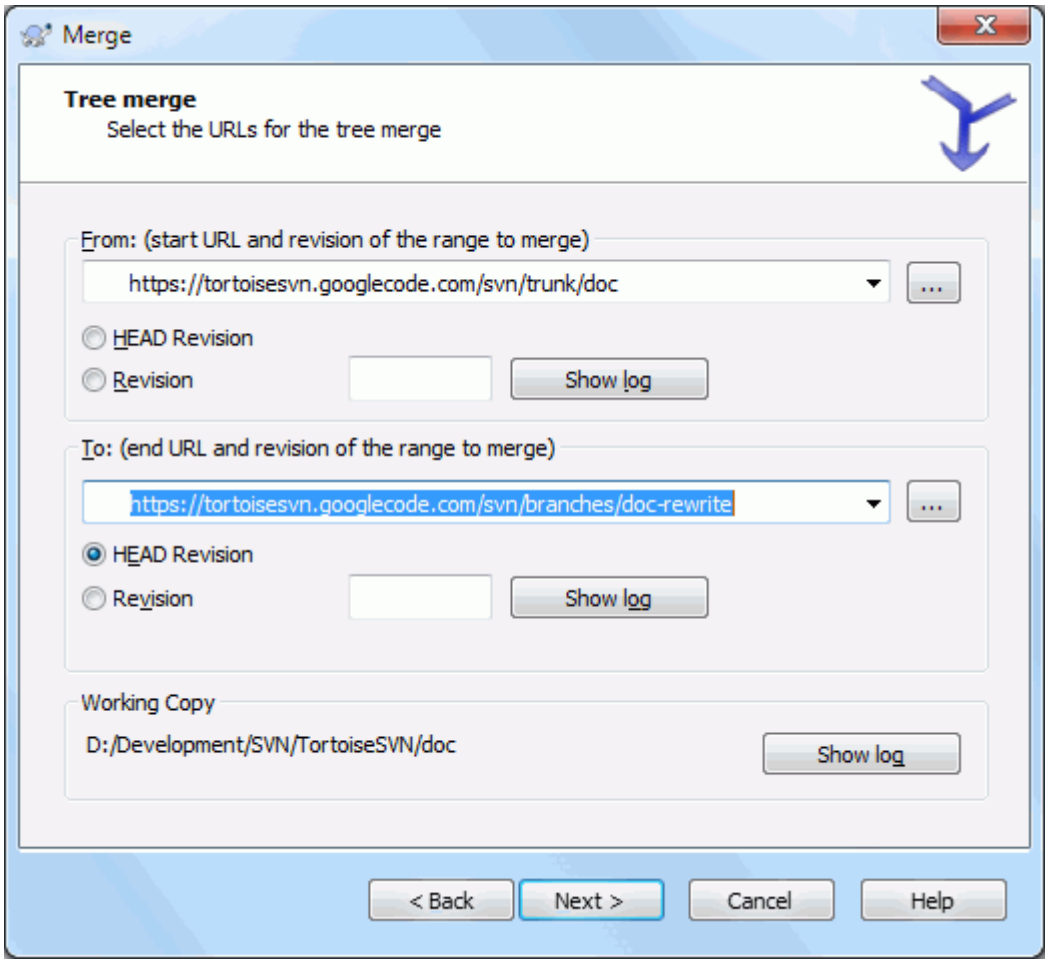
If other people may be committing changes then be careful about using the HEAD revision. It may not refer to the revision you think it does if someone else made a commit after your last update.

If you leave the range of revisions empty or have the radio button all revisions checked, then Subversion merges all not-yet merged revisions. This is known as a reintegrate or automatic merge.

There are some conditions which apply to a reintegrate merge. Firstly, the server must support merge tracking. The working copy must be of depth infinite (no sparse checkouts), and it must not have any local modifications, switched items or items that have been updated to revisions other than HEAD. All changes to trunk made during branch development must have been merged across to the branch (or marked as having been merged). The range of revisions to merge will be calculated automatically.

Kliknite Ďalej a choďte na Oddiel 4.21.3, “Nastavenia zlučovania”.

4.21.2. Merging Two Different Trees



Obrázok 4.57. The Merge Wizard - Tree Merge

If you are using this method to merge a feature branch back to trunk, you need to start the merge wizard from within a working copy of trunk.

In the From: field enter the full folder URL of the *trunk*. This may sound wrong, but remember that the trunk is the start point to which you want to add the branch changes. You may also click ... to browse the repository.

In the To: field enter the full folder URL of the feature branch.

In both the From Revision field and the To Revision field, enter the last revision number at which the two trees were synchronized. If you are sure no-one else is making commits you can use the HEAD revision in both cases. If there is a chance that someone else may have made a commit since that synchronization, use the specific revision number to avoid losing more recent commits.

You can also use Show Log to select the revision.

4.21.3. Nastavenia zlučovania

This page of the wizard lets you specify advanced options, before starting the merge process. Most of the time you can just use the default settings.

You can specify the depth to use for the merge, i.e. how far down into your working copy the merge should go. The depth terms used are described in Oddiel 4.3.1, “Hĺbka získavania”. The default depth is Working copy, which uses the existing depth setting, and is almost always what you want.

Most of the time you want merge to take account of the file's history, so that changes relative to a common ancestor are merged. Sometimes you may need to merge files which are perhaps related, but not in your repository. For

example you may have imported versions 1 and 2 of a third party library into two separate directories. Although they are logically related, Subversion has no knowledge of this because it only sees the tarballs you imported. If you attempt to merge the difference between these two trees you would see a complete removal followed by a complete add. To make Subversion use only path-based differences rather than history-based differences, check the Ignore ancestry box. Read more about this topic in the Subversion book, *Noticing or Ignoring Ancestry* [http://svnbook.red-bean.com/en/1.8/svn.branchmerge.advanced.html#svn.branchmerge.advanced.ancestry].

You can specify the way that line ending and whitespace changes are handled. These options are described in Oddiel 4.11.2, “Line-end and Whitespace Options”. The default behaviour is to treat all whitespace and line-end differences as real changes to be merged.

The checkbox marked Force the merge is used to avoid a tree conflict where an incoming delete affects a file that is either modified locally or not versioned at all. If the file is deleted then there is no way to recover it, which is why that option is not checked by default.

If you are using merge tracking and you want to mark a revision as having been merged, without actually doing the merge here, check the Only record the merge checkbox. There are two possible reasons you might want to do this. It may be that the merge is too complicated for the merge algorithms, so you code the changes by hand, then mark the change as merged so that the merge tracking algorithm is aware of it. Or you might want to prevent a particular revision from being merged. Marking it as already merged will prevent the merge occurring with merge-tracking-aware clients.

Now everything is set up, all you have to do is click on the Merge button. If you want to preview the results Test Merge simulates the merge operation, but does *not* modify the working copy at all. It shows you a list of the files that will be changed by a real merge, and notes files where conflicts *may* occur. Because merge tracking makes the merge process a lot more complicated, there is no guaranteed way to find out in advance whether the merge will complete without conflicts, so files marked as conflicted in a test merge may in fact merge without any problem.

The merge progress dialog shows each stage of the merge, with the revision ranges involved. This may indicate one more revision than you were expecting. For example if you asked to merge revision 123 the progress dialog will report “ Merging revisions 122 through 123 ”. To understand this you need to remember that Merge is closely related to Diff. The merge process works by generating a list of differences between two points in the repository, and applying those differences to your working copy. The progress dialog is simply showing the start and end points for the diff.

4.21.4. Prezeranie výsledov zlúčovania

The merge is now complete. It's a good idea to have a look at the merge and see if it's as expected. Merging is usually quite complicated. Conflicts often arise if the branch has drifted far from the trunk.

Tip

Whenever revisions are merged into a working copy, TortoiseSVN generates a log message from all the merged revisions. Those are then available from the Recent Messages button in the commit dialog.

To customize that generated message, set the corresponding project properties on your working copy. See Oddiel 4.18.3.10, “Merge log message templates”

For Subversion clients and servers prior to 1.5, no merge information is stored and merged revisions have to be tracked manually. When you have tested the changes and come to commit this revision, your commit log message should *always* include the revision numbers which have been ported in the merge. If you want to apply another merge at a later time you will need to know what you have already merged, as you do not want to port a change more than once. For more information about this, refer to *Best Practices for Merging* [http://svnbook.red-bean.com/en/1.4/svn.branchmerge.copychanges.html#svn.branchmerge.copychanges.bestprac] in the Subversion book.

If your server and all clients are running Subversion 1.5 or higher, the merge tracking facility will record the revisions merged and avoid a revision being merged more than once. This makes your life much simpler as you can simply merge the entire revision range each time and know that only new revisions will actually be merged.

Branch management is important. If you want to keep this branch up to date with the trunk, you should be sure to merge often so that the branch and trunk do not drift too far apart. Of course, you should still avoid repeated merging of changes, as explained above.

Tip

If you have just merged a feature branch back into the trunk, the trunk now contains all the new feature code, and the branch is obsolete. You can now delete it from the repository if required.

Dôležité

Subversion can't merge a file with a folder and vice versa - only folders to folders and files to files. If you click on a file and open up the merge dialog, then you have to give a path to a file in that dialog. If you select a folder and bring up the dialog, then you must specify a folder URL for the merge.

4.21.5. Sledovanie zlučovania

Subversion 1.5 introduced facilities for merge tracking. When you merge changes from one tree into another, the revision numbers merged are stored and this information can be used for several different purposes.

- You can avoid the danger of merging the same revision twice (repeated merge problem). Once a revision is marked as having been merged, future merges which include that revision in the range will skip over it.
- When you merge a branch back into trunk, the log dialog can show you the branch commits as part of the trunk log, giving better traceability of changes.
- When you show the log dialog from within the merge dialog, revisions already merged are shown in grey.
- When showing blame information for a file, you can choose to show the original author of merged revisions, rather than the person who did the merge.
- You can mark revisions as *do not merge* by including them in the list of merged revisions without actually doing the merge.

Merge tracking information is stored in the `svn:mergeinfo` property by the client when it performs a merge. When the merge is committed the server stores that information in a database, and when you request merge, log or blame information, the server can respond appropriately. For the system to work properly you must ensure that the server, the repository and all clients are upgraded. Earlier clients will not store the `svn:mergeinfo` property and earlier servers will not provide the information requested by new clients.

Find out more about merge tracking from Subversion's *Merge tracking documentation* [http://svn.apache.org/repos/asf/Subversion/trunk/notes/merge-tracking/index.html].

4.21.6. Handling Conflicts after Merge

Dôležité

The text in the conflict resolver dialogs are provided by the SVN library and might therefore not (yet) be translated as the TortoiseSVN dialogs are. Sorry for that.

Merging does not always go smoothly. Sometimes there is a conflict. TortoiseSVN helps you through this process by showing the *merge conflict* dialog.

Obrázok 4.58. The Merge Conflict Dialog

It is likely that some of the changes will have merged smoothly, while other local changes conflict with changes already committed to the repository. All changes which can be merged are merged. The Merge Conflict dialog gives you different ways of handling the lines which are in conflict.

For normal conflicts that happen due to changes in the file content or its properties, the dialog shows buttons which allow you to chose which of the conflicting parts to keep or reject.

Postpone
: Don't deal with the conflict now. Let the merge continue and resolve the conflicts after the merge is done.

Accept base
: This leaves the file as it was, without neither the changes coming from the merge nor the changes you've made in your working copy.

Accept incoming
: This discards all your local changes and uses the file as it arrives from the merge source.

Reject incoming
: This discards all the changes from the merge source and leaves the file with your local edits.

Accept incoming for conflicts
: This discards your local changes where they conflict with the changes from the merge source. But it leaves all your local changes which don't conflict.

Reject conflicts
: This discards changes from the merge source which conflict with your local changes. But it keeps all changes that don't conflict with your local changes.

Mark as resolved
: Marks the conflicts as resolved. This button is disabled until you use the button Edit to edit the conflict manually and save those changes back to the file. Once the changes are saved, the button becomes enabled.

Upraviť
: Starts the merge editor so you can resolve the conflicts manually. Don't forget to save the file so the button Mark as resolved becomes enabled.

If there's a tree conflict, please first see Oddiel 4.6.3, “Konfliktov stromov” about the various types of tree conflicts and how and why they can happen.

To resolve tree conflicts after a merge, a dialog is shown with various options on how to resolve the conflict:

Obrázok 4.59. The Merge Tree Conflict Dialog

Since there are various possible tree conflict situations, the dialog will show buttons to resolve those depending on the specific conflict. The button texts and labels explain what the option to resolve the conflict does. If you're not sure, either cancel the dialog or use the Postpone button to resolve the conflict later.

4.21.7. Feature Branch Maintenance

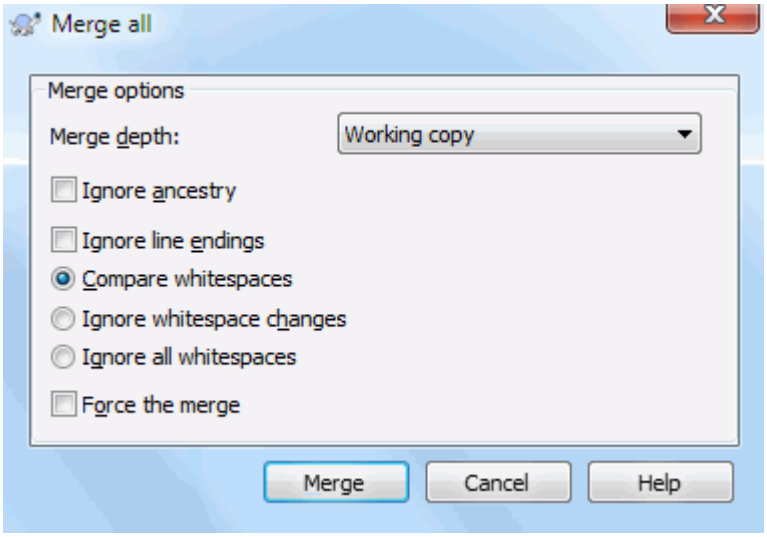
When you develop a new feature on a separate branch it is a good idea to work out a policy for re-integration when the feature is complete. If other work is going on in `trunk` at the same time you may find that the differences become significant over time, and merging back becomes a nightmare.

If the feature is relatively simple and development will not take long then you can adopt a simple approach, which is to keep the branch entirely separate until the feature is complete, then merge the branch changes back into

trunk. In the merge wizard this would be a simple Merge a range of revisions, with the revision range being the revision span of the branch.

If the feature is going to take longer and you need to account for changes in `trunk`, then you need to keep the branch synchronised. This simply means that periodically you merge trunk changes into the branch, so that the branch contains all the trunk changes *plus* the new feature. The synchronisation process uses Merge a range of revisions. When the feature is complete then you can merge it back to `trunk` using either Reintegrate a branch or Merge two different trees.

Another (fast) way to merge all changes from trunk to the feature branch is to use the TortoiseSVN → Merge all... from the extended context menu (hold down the **Shift** key while you right click on the file).



Obrázok 4.60. The Merge-All Dialog

This dialog is very easy. All you have to do is set the options for the merge, as described in Oddiel 4.21.3, “Nastavenia zlučovania”. The rest is done by TortoiseSVN automatically using merge tracking.

4.22. Locking

Subversion generally works best without locking, using the “Copy-Modify-Merge” methods described earlier in Oddiel 2.2.3, “Riešenie Kopírovať-Upraviť-Zlúčiť”. However there are a few instances when you may need to implement some form of locking policy.

- You are using “unmergeable” files, for example, graphics files. If two people change the same file, merging is not possible, so one of you will lose their changes.
- Your company has always used a locking revision control system in the past and there has been a management decision that “locking is best”.

Firstly you need to ensure that your Subversion server is upgraded to at least version 1.2. Earlier versions do not support locking at all. If you are using `file://` access, then of course only your client needs to be updated.

Tri významy pre “Zámok”

V tomto oddiely, podobne ako v celej knihe, slovo “zámok” popisuje mechanizmus na dosiahnutie exkluzívneho prístupu medzi užívateľmi aby nedošlo k stretovým odozdaniam. Žiaľ, ešte existujú dva iné významy pre “zámok” s ktorými Subversion, a teda aj táto kniha, sa musí zaoberať.

Druhým je `zámok pracovnej kópie`. Tento Subversion vnútorne používa aby pri prístupe viacerých klientov k tej istej pracovnej kópií nedošlo k zmätku. Zvyčajne tento typ zámku sa dostane

k slovu pri operáciach ako je aktualizovať, odovzdať a pod. Pokial takáto oprerácia zlyhá, alebo je prerušená možete tento zámok odsrániť spustením príkazu vyčistiť na dotknutej pracovnej kópií, tak ako je popísané v Oddiel 4.17, “Vyčistiť”.

A za tretie, súbory a adresáre môžu byť uzamknuté inými procesmi, napríklad keď je dokument otvorený vo Word-e, súbor je zamknutý a TortoiseSVN k nemu nemôže prístupiť.

Vo všeobecnosti môžete na iné druhy zámkov zabudnúť až do chvíle kým niečo neprestane isť, čo vás donúti ich vziať do úvahy. V tejto knihe “zámok” znamená prvý druh pokiaľ z kontextu nie je jasné inak, alebo je to priamo spomenuté.

4.22.1. How Locking Works in Subversion

By default, nothing is locked and anyone who has commit access can commit changes to any file at any time. Others will update their working copies periodically and changes in the repository will be merged with local changes.

If you *Get a Lock* on a file, then only you can commit that file. Commits by all other users will be blocked until you release the lock. A locked file cannot be modified in any way in the repository, so it cannot be deleted or renamed either, except by the lock owner.

Dôležité

A lock is not assigned to a specific user, but to a specific user and a working copy. Having a lock in one working copy also prevents the same user from committing the locked file from another working copy.

As an example, imagine that user Jon has a working copy on his office PC. There he starts working on an image, and therefore acquires a lock on that file. When he leaves his office he's not finished yet with that file, so he doesn't release that lock. Back at home Jon also has a working copy and decides to work a little more on the project. But he can't modify or commit that same image file, because the lock for that file resides in his working copy in the office.

However, other users will not necessarily know that you have taken out a lock. Unless they check the lock status regularly, the first they will know about it is when their commit fails, which in most cases is not very useful. To make it easier to manage locks, there is a new Subversion property `svn:needs-lock`. When this property is set (to any value) on a file, whenever the file is checked out or updated, the local copy is made read-only *unless* that working copy holds a lock for the file. This acts as a warning that you should not edit that file unless you have first acquired a lock. Files which are versioned and read-only are marked with a special overlay in TortoiseSVN to indicate that you need to acquire a lock before editing.

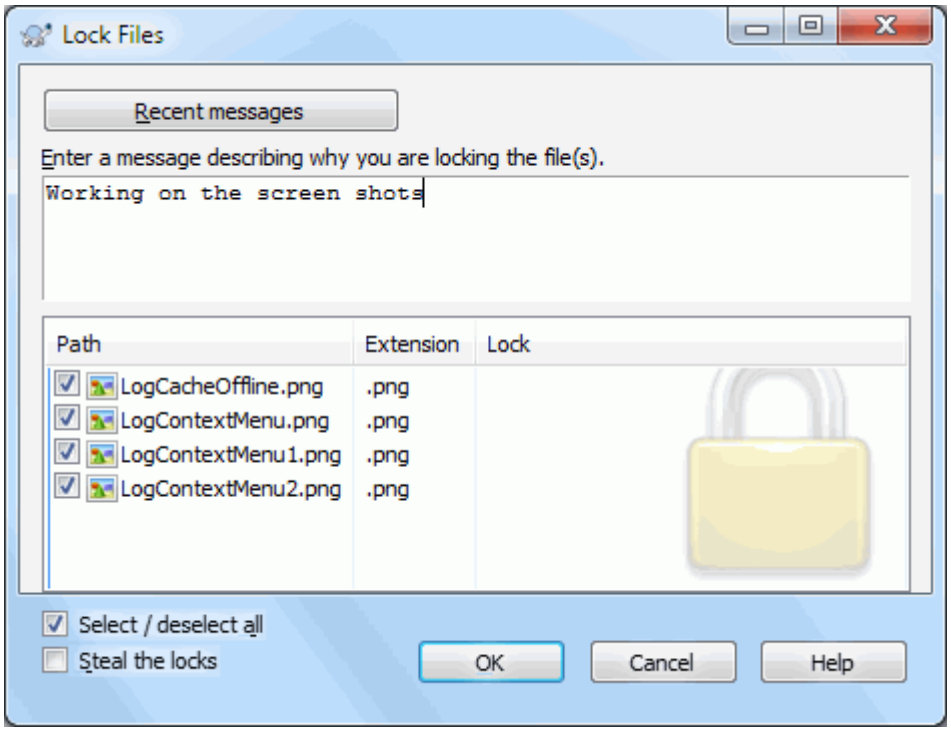
Locks are recorded by working copy location as well as by owner. If you have several working copies (at home, at work) then you can only hold a lock in *one* of those working copies.

If one of your co-workers acquires a lock and then goes on holiday without releasing it, what do you do? Subversion provides a means to force locks. Releasing a lock held by someone else is referred to as *Breaking* the lock, and forcibly acquiring a lock which someone else already holds is referred to as *Stealing* the lock. Naturally these are not things you should do lightly if you want to remain friends with your co-workers.

Locks are recorded in the repository, and a lock token is created in your local working copy. If there is a discrepancy, for example if someone else has broken the lock, the local lock token becomes invalid. The repository is always the definitive reference.

4.22.2. Získanie zámku

Select the file(s) in your working copy for which you want to acquire a lock, then select the command TortoiseSVN → Get Lock....



Obrázok 4.61. Dialóg zamykania

A dialog appears, allowing you to enter a comment, so others can see why you have locked the file. The comment is optional and currently only used with Svnserve based repositories. If (and *only* if) you need to steal the lock from someone else, check the Steal lock box, then click on OK.

You can set the project property `tsvn:logtemplatelock` to provide a message template for users to fill in as the lock message. Refer to Oddiel 4.18, “Nastavenia Projektu” for instructions on how to set properties.

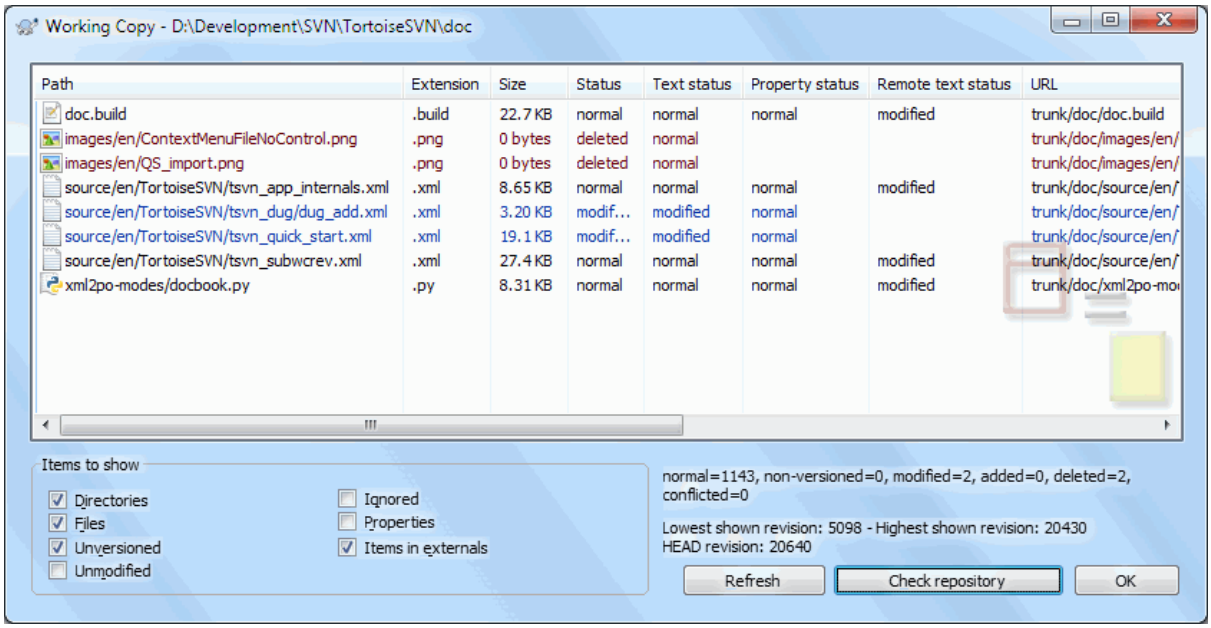
If you select a folder and then use TortoiseSVN → Get Lock... the lock dialog will open with *every* file in *every* sub-folder selected for locking. If you really want to lock an entire hierarchy, that is the way to do it, but you could become very unpopular with your co-workers if you lock them out of the whole project. Use with care ...

4.22.3. Uvolnenie zámku

To make sure you don't forget to release a lock you don't need any more, locked files are shown in the commit dialog and selected by default. If you continue with the commit, locks you hold on the selected files are removed, even if the files haven't been modified. If you don't want to release a lock on certain files, you can uncheck them (if they're not modified). If you want to keep a lock on a file you've modified, you have to enable the Keep locks checkbox before you commit your changes.

To release a lock manually, select the file(s) in your working copy for which you want to release the lock, then select the command TortoiseSVN → Release Lock There is nothing further to enter so TortoiseSVN will contact the repository and release the locks. You can also use this command on a folder to release all locks recursively.

4.22.4. Kontrola stavu zamknutia



Obrázok 4.62. Dialóg kontroly zmien

To see what locks you and others hold, you can use TortoiseSVN → Check for Modifications.... Locally held lock tokens show up immediately. To check for locks held by others (and to see if any of your locks are broken or stolen) you need to click on Check Repository.

From the context menu here, you can also get and release locks, as well as breaking and stealing locks held by others.

Avoid Breaking and Stealing Locks

If you break or steal someone else's lock without telling them, you could potentially cause loss of work. If you are working with unmergeable file types and you steal someone else's lock, once you release the lock they are free to check in their changes and overwrite yours. Subversion doesn't lose data, but you have lost the team-working protection that locking gave you.

4.22.5. Making Non-locked Files Read-Only

As mentioned above, the most effective way to use locking is to set the `svn:needs-lock` property on files. Refer to Oddiel 4.18, “Nastavenia Projektu” for instructions on how to set properties. Files with this property set will always be checked out and updated with the read-only flag set unless your working copy holds a lock.

As a reminder, TortoiseSVN uses a special overlay to indicate this.

If you operate a policy where every file has to be locked then you may find it easier to use Subversion's auto-props feature to set the property automatically every time you add new files. Read Oddiel 4.18.1.5, “Automatic property setting” for further information.

4.22.6. The Locking Hook Scripts

When you create a new repository with Subversion 1.2 or higher, four hook templates are created in the repository `hooks` directory. These are called before and after getting a lock, and before and after releasing a lock.

It is a good idea to install a `post-lock` and `post-unlock` hook script on the server which sends out an email indicating the file which has been locked. With such a script in place, all your users can be notified if someone locks/unlocks a file. You can find an example hook script `hooks/post-lock.tmpl` in your repository folder.

You might also use hooks to disallow breaking or stealing of locks, or perhaps limit it to a named administrator. Or maybe you want to email the owner when one of their locks is broken or stolen.

Read Oddiel 3.3, “Serverovské pripnuté (hook) skripty” to find out more.

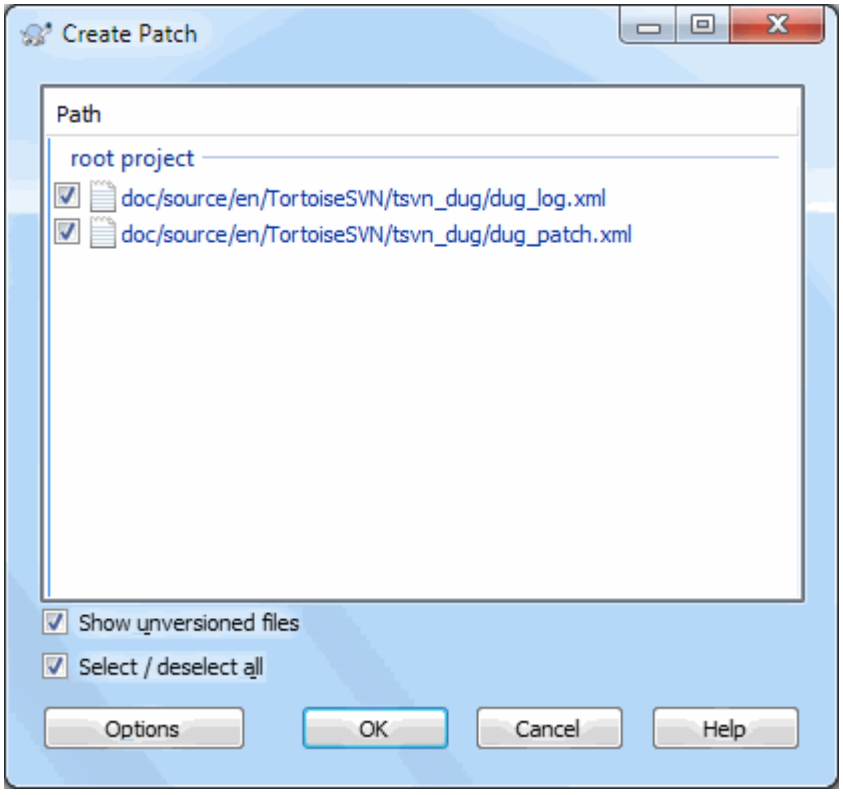
4.23. Creating and Applying Patches

For open source projects (like this one) everyone has read access to the repository, and anyone can make a contribution to the project. So how are those contributions controlled? If just anyone could commit changes, the project would be permanently unstable and probably permanently broken. In this situation the change is managed by submitting a *patch* file to the development team, who do have write access. They can review the patch first, and then either submit it to the repository or reject it back to the author.

Patch files are simply Unified-Diff files showing the differences between your working copy and the base revision.

4.23.1. Tvorba súboru záplaty

First you need to make *and test* your changes. Then instead of using TortoiseSVN → Commit... on the parent folder, you select TortoiseSVN → Create Patch...



Obrázok 4.63. Dialóg Tvroby záplaty

you can now select the files you want included in the patch, just as you would with a full commit. This will produce a single file containing a summary of all the changes you have made to the selected files since the last update from the repository.

The columns in this dialog can be customized in the same way as the columns in the Check for modifications dialog. Read Oddiel 4.7.3, “Miestny a vzdialeny stav” for further details.

By clicking on the Options button you can specify how the patch is created. For example you can specify that changes in line endings or whitespaces are not included in the final patch file.

You can produce separate patches containing changes to different sets of files. Of course, if you create a patch file, make some more changes to the *same* files and then create another patch, the second patch file will include *both* sets of changes.

Just save the file using a filename of your choice. Patch files can have any extension you like, but by convention they should use the `.patch` or `.diff` extension. You are now ready to submit your patch file.

Tip

Do not save the patch file with a `.txt` extension if you intend to send it via email to someone else. Plain text files are often mangled with by the email software and it often happens that whitespaces and newline chars are automatically converted and compressed. If that happens, the patch won't apply smoothly. So use `.patch` or `.diff` as the extension when you save the patch file.

You can also save the patch to the clipboard instead of to a file. You might want to do this so that you can paste it into an email for review by others. Or if you have two working copies on one machine and you want to transfer changes from one to the other, a patch on the clipboard is a convenient way of doing this.

If you prefer, you can create a patch file from within the Commit or Check for Modifications dialogs. Just select the files and use the context menu item to create a patch from those files. If you want to see the Options dialog you have to hold **shift** when you right click.

4.23.2. Použitie záplaty

Patch files are applied to your working copy. This should be done from the same folder level as was used to create the patch. If you are not sure what this is, just look at the first line of the patch file. For example, if the first file being worked on was `doc/source/english/chapter1.xml` and the first line in the patch file is `Index: english/chapter1.xml` then you need to apply the patch to the `doc/source/` folder. However, provided you are in the correct working copy, if you pick the wrong folder level, TortoiseSVN will notice and suggest the correct level.

In order to apply a patch file to your working copy, you need to have at least read access to the repository. The reason for this is that the merge program must reference the changes back to the revision against which they were made by the remote developer.

From the context menu for that folder, click on TortoiseSVN → Apply Patch... This will bring up a file open dialog allowing you to select the patch file to apply. By default only `.patch` or `.diff` files are shown, but you can opt for “All files”. If you previously saved a patch to the clipboard, you can use Open from clipboard... in the file open dialog. Note that this option only appears if you saved the patch to the clipboard using TortoiseSVN → Create Patch.... Copying a patch to the clipboard from another app will not make the button appear.

Alternatively, if the patch file has a `.patch` or `.diff` extension, you can right click on it directly and select TortoiseSVN → Apply Patch.... In this case you will be prompted to enter a working copy location.

These two methods just offer different ways of doing the same thing. With the first method you select the WC and browse to the patch file. With the second you select the patch file and browse to the WC.

Once you have selected the patch file and working copy location, TortoiseMerge runs to merge the changes from the patch file with your working copy. A small window lists the files which have been changed. Double click on each one in turn, review the changes and save the merged files.

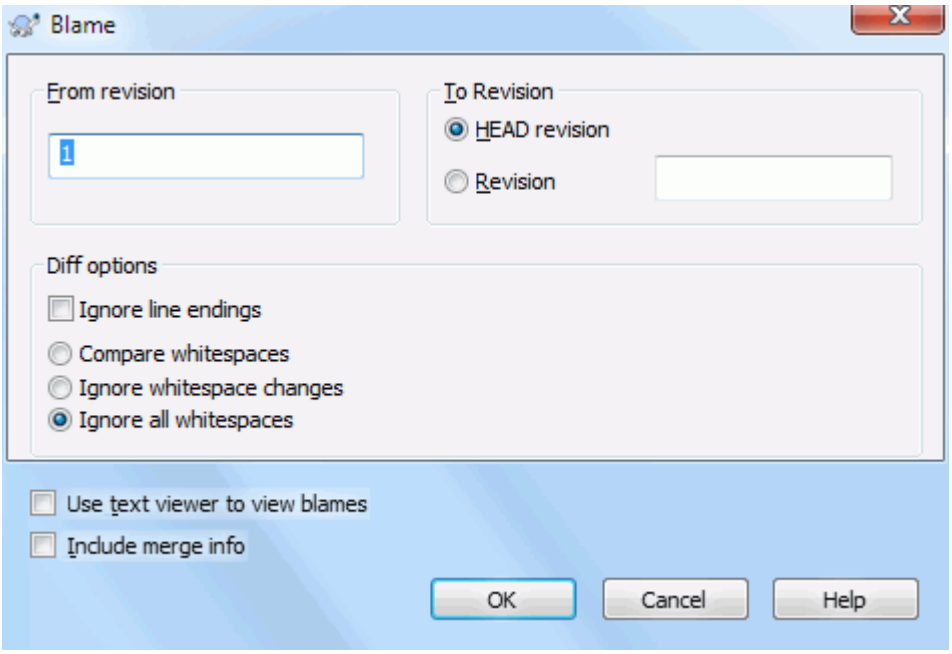
The remote developer's patch has now been applied to your working copy, so you need to commit to allow everyone else to access the changes from the repository.

4.24. Who Changed Which Line?

Sometimes you need to know not only what lines have changed, but also who exactly changed specific lines in a file. That's when the TortoiseSVN → Blame... command, sometimes also referred to as *annotate* command comes in handy.

This command lists, for every line in a file, the author and the revision the line was changed.

4.24.1. Blame for Files



Obrázok 4.64. The Annotate / Blame Dialog

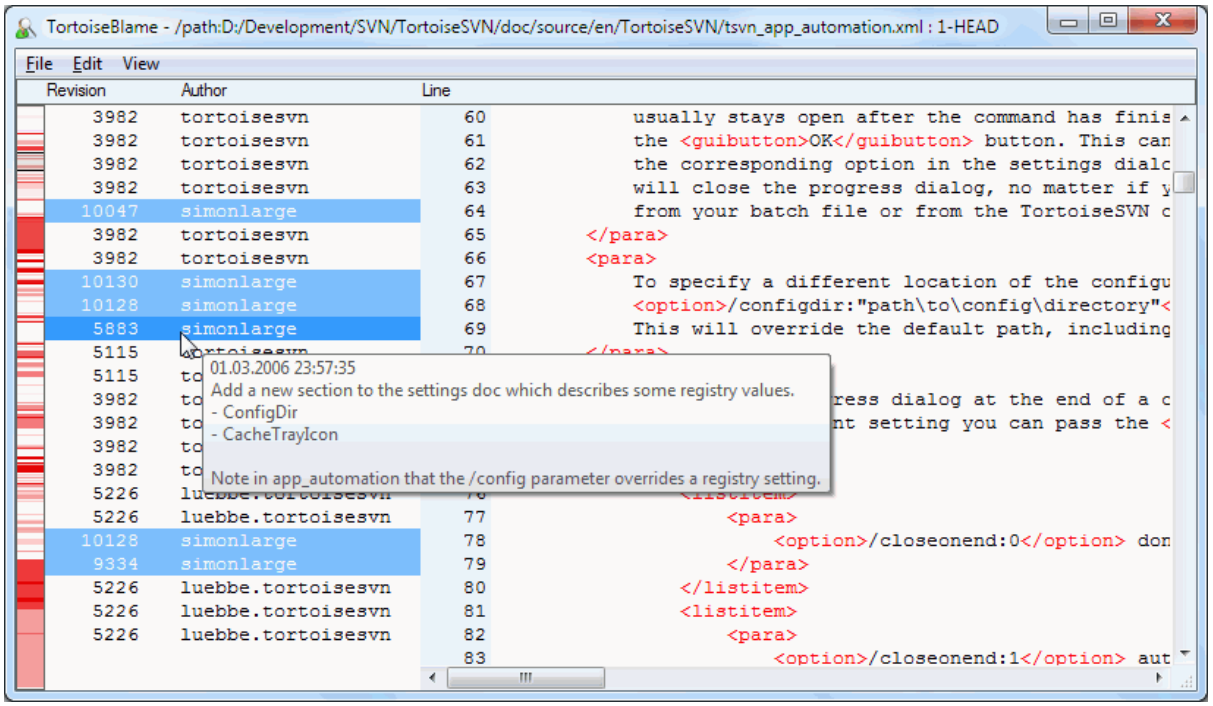
If you're not interested in changes from earlier revisions you can set the revision from which the blame should start. Set this to `1`, if you want the blame for *every* revision.

By default the blame file is viewed using *TortoiseBlame*, which highlights the different revisions to make it easier to read. If you wish to print or edit the blame file, select Use Text viewer to view blames.

You can specify the way that line ending and whitespace changes are handled. These options are described in Oddiel 4.11.2, “Line-end and Whitespace Options”. The default behaviour is to treat all whitespace and line-end differences as real changes, but if you want to ignore an indentation change and find the original author, you can choose an appropriate option here.

You can include merge information as well if you wish, although this option can take considerably longer to retrieve from the server. When lines are merged from another source, the blame information shows the revision the change was made in the original source as well as the revision when it was merged into this file.

Once you press OK TortoiseSVN starts retrieving the data to create the blame file. Once the blame process has finished the result is written into a temporary file and you can view the results.



Obrázok 4.65. TortoiseBlame

TortoiseBlame, which is included with TortoiseSVN, makes the blame file easier to read. When you hover the mouse over a line in the blame info column, all lines with the same revision are shown with a darker background. Lines from other revisions which were changed by the same author are shown with a light background. The colouring may not work as clearly if you have your display set to 256 colour mode.

If you left click on a line, all lines with the same revision are highlighted, and lines from other revisions by the same author are highlighted in a lighter colour. This highlighting is sticky, allowing you to move the mouse without losing the highlights. Click on that revision again to turn off highlighting.

The revision comments (log message) are shown in a hint box whenever the mouse hovers over the blame info column. If you want to copy the log message for that revision, use the context menu which appears when you right click on the blame info column.

You can search within the Blame report using Edit → Find.... This allows you to search for revision numbers, authors and the content of the file itself. Log messages are not included in the search - you should use the Log Dialog to search those.

You can also jump to a specific line number using Edit → Go To Line....

When the mouse is over the blame info columns, a context menu is available which helps with comparing revisions and examining history, using the revision number of the line under the mouse as a reference. Context menu → Blame previous revision generates a blame report for the same file, but using the previous revision as the upper limit. This gives you the blame report for the state of the file just before the line you are looking at was last changed. Context menu → Show changes starts your diff viewer, showing you what changed in the referenced revision. Context menu → Show log displays the revision log dialog starting with the referenced revision.

If you need a better visual indicator of where the oldest and newest changes are, select View → Color age of lines. This will use a colour gradient to show newer lines in red and older lines in blue. The default colouring is quite light, but you can change it using the TortoiseBlame settings.

If you are using Merge Tracking and you requested merge info when starting the blame, merged lines are shown slightly differently. Where a line has changed as a result of merging from another path, TortoiseBlame will show

the revision and author of the last change in the original file rather than the revision where the merge took place. These lines are indicated by showing the revision and author in italics. The revision where the merge took place is shown separately in the tooltip when you hover the mouse over the blame info columns. If you do not want merged lines shown in this way, uncheck the Include merge info checkbox when starting the blame.

If you want to see the paths involved in the merge, select View → Merge paths. This shows the path where the line was last changed, excluding changes resulting from a merge.

The revision shown in the blame information represents the last revision where the content of that line changed. If the file was created by copying another file, then until you change a line, its blame revision will show the last change in the original source file, not the revision where the copy was made. This also applies to the paths shown with merge info. The path shows the repository location where the last change was made to that line.

The settings for TortoiseBlame can be accessed using TortoiseSVN → Settings... on the TortoiseBlame tab. Refer to Oddiel 4.31.9, “Nastavenia TortoiseBlame”.

4.24.2. Obviniť rozdiely

One of the limitations of the Blame report is that it only shows the file as it was in a particular revision, and the last person to change each line. Sometimes you want to know what change was made, as well as who made it. If you right click on a line in TortoiseBlame you have a context menu item to show the changes made in that revision. But if you want to see the changes *and* the blame information simultaneously then you need a combination of the diff and blame reports.

The revision log dialog includes several options which allow you to do this.

Obviniť revízie

In the top pane, select 2 revisions, then select Context menu → Blame revisions. This will fetch the blame data for the 2 revisions, then use the diff viewer to compare the two blame files.

Obviniť zmeny

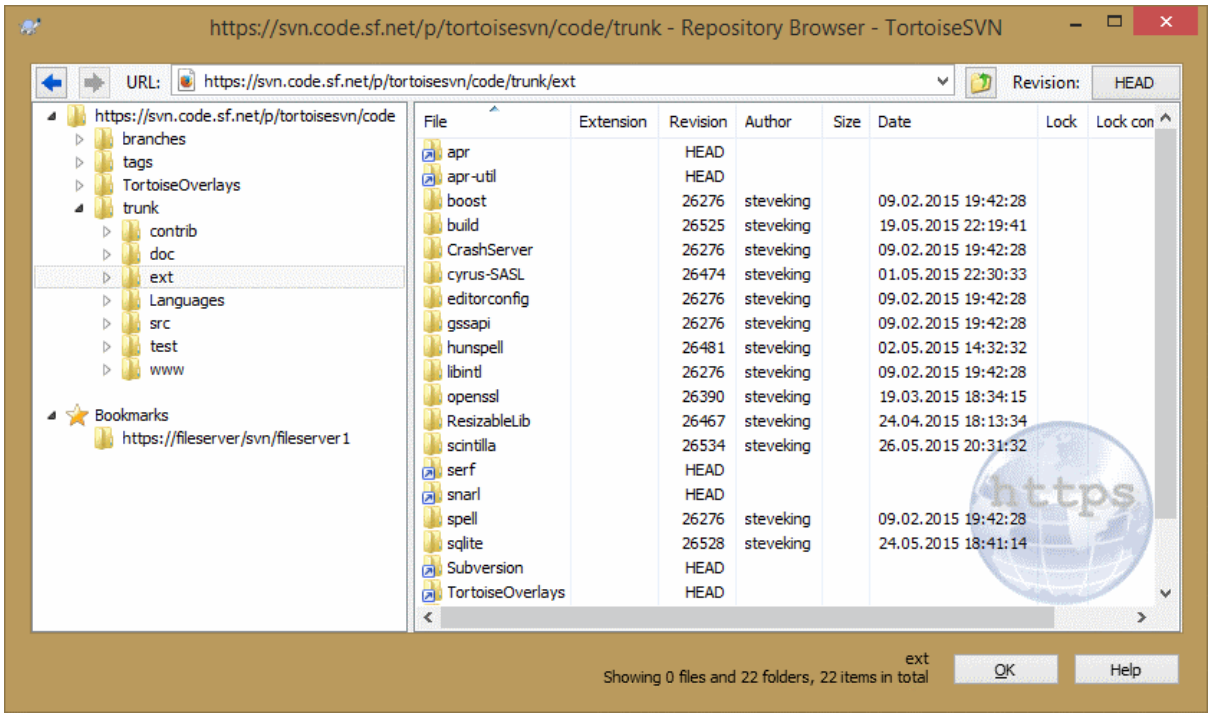
Select one revision in the top pane, then pick one file in the bottom pane and select Context menu → Blame changes. This will fetch the blame data for the selected revision and the previous revision, then use the diff viewer to compare the two blame files.

Compare and Blame with Working BASE

Show the log for a single file, and in the top pane, select a single revision, then select Context menu → Compare and Blame with Working BASE. This will fetch the blame data for the selected revision, and for the file in the working BASE, then use the diff viewer to compare the two blame files.

4.25. Prezeranie úložiska

Sometimes you need to work directly on the repository, without having a working copy. That's what the *Repository Browser* is for. Just as the explorer and the icon overlays allow you to view your working copy, so the Repository Browser allows you to view the structure and status of the repository.



Obrázok 4.66. Prezeranie úložiska

With the Repository Browser you can execute commands like copy, move, rename, ... directly on the repository.

The repository browser looks very similar to the Windows explorer, except that it is showing the content of the repository at a particular revision rather than files on your computer. In the left pane you can see a directory tree, and in the right pane are the contents of the selected directory. At the top of the Repository Browser Window you can enter the URL of the repository and the revision you want to browse.

Folders included with the `svn:externals` property are also shown in the repository browser. Those folders are shown with a small arrow on them to indicate that they are not part of the repository structure, just links.

Just like Windows explorer, you can click on the column headings in the right pane if you want to set the sort order. And as in explorer there are context menus available in both panes.

The context menu for a file allows you to:

- Open the selected file, either with the default viewer for that file type, or with a program you choose.
- Edit the selected file. This will checkout a temporary working copy and start the default editor for that file type. When you close the editor program, if changes were saved then a commit dialog appears, allowing you to enter a comment and commit the change.
- Show the revision log for that file, or show a graph of all revisions so you can see where the file came from.
- Blame the file, to see who changed which line and when.
- Checkout a single file. This creates a “sparse” working copy which contains just this one file.
- Delete or rename the file.
- Save an unversioned copy of the file to your hard drive.
- Copy the URL shown in the address bar to the clipboard.
- Make a copy of the file, either to a different part of the repository, or to a working copy rooted in the same repository.

- View/Edit the file's properties.
- Create a shortcut so that you can quickly start repo browser again, opened directly at this location.

The context menu for a folder allows you to:

- Show the revision log for that folder, or show a graph of all revisions so you can see where the folder came from.
- Export the folder to a local unversioned copy on your hard drive.
- Checkout the folder to produce a local working copy on your hard drive.
- Vytvorí nový adresár v úložisku.
- Add unversioned files or folders directly to the repository. This is effectively the Subversion Import operation.
- Delete or rename the folder.
- Make a copy of the folder, either to a different part of the repository, or to a working copy rooted in the same repository. This can also be used to create a branch/tag without the need to have a working copy checked out.
- View/Edit the folder's properties.
- Mark the folder for comparison. A marked folder is shown in bold.
- Compare the folder with a previously marked folder, either as a unified diff, or as a list of changed files which can then be visually diffed using the default diff tool. This can be particularly useful for comparing two tags, or trunk and branch to see what changed.

If you select two folders in the right pane, you can view the differences either as a unified-diff, or as a list of files which can be visually diffed using the default diff tool.

If you select multiple folders in the right pane, you can checkout all of them at once into a common parent folder.

If you select 2 tags which are copied from the same root (typically `/trunk/`), you can use Context Menu → Show Log... to view the list of revisions between the two tag points.

External items (referenced using `svn:externals` are also shown in the repository browser, and you can even drill down into the folder contents. External items are marked with a red arrow over the item.

You can use **F5** to refresh the view as usual. This will refresh everything which is currently displayed. If you want to pre-fetch or refresh the information for nodes which have not been opened yet, use **Ctrl-F5**. After that, expanding any node will happen instantly without a network delay while the information is fetched.

You can also use the repository browser for drag-and-drop operations. If you drag a folder from explorer into the repo-browser, it will be imported into the repository. Note that if you drag multiple items, they will be imported in separate commits.

If you want to move an item within the repository, just left drag it to the new location. If you want to create a copy rather than moving the item, **Ctrl**-left drag instead. When copying, the cursor has a “plus” symbol on it, just as it does in Explorer.

If you want to copy/move a file or folder to another location and also give it a new name at the same time, you can right drag or **Ctrl**-right drag the item instead of using left drag. In that case, a rename dialog is shown where you can enter a new name for the file or folder.

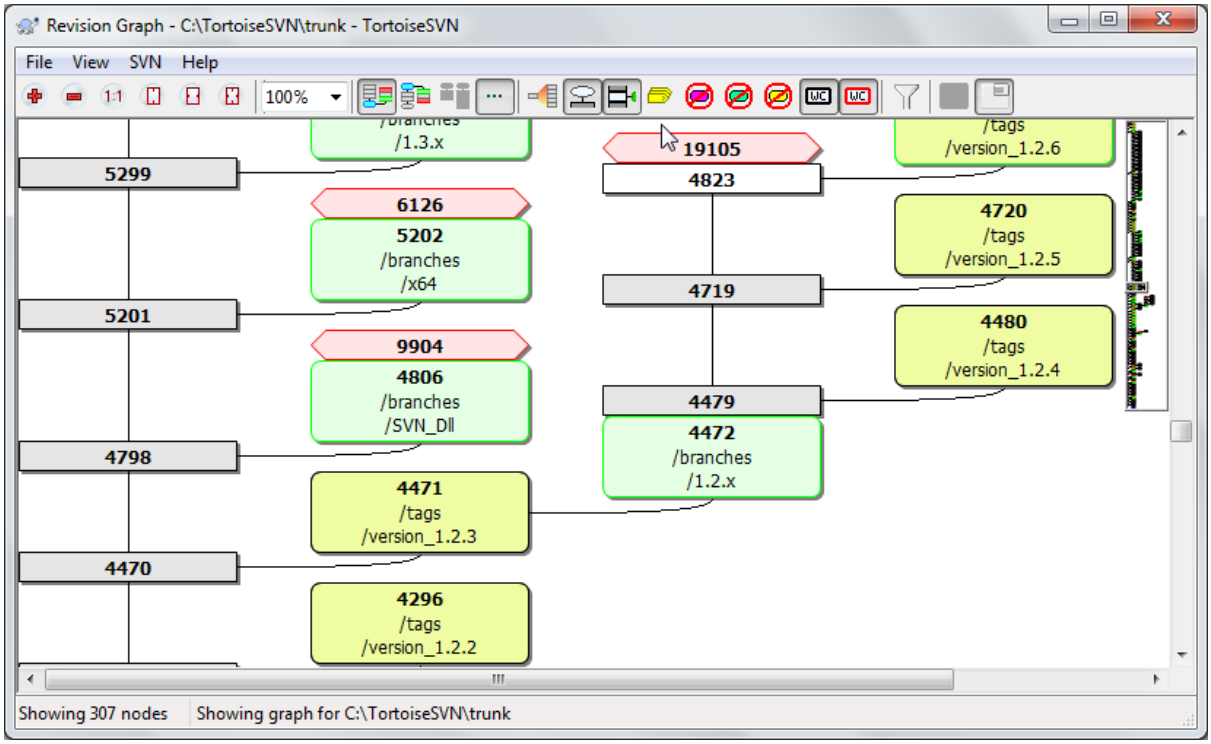
Whenever you make changes in the repository using one of these methods, you will be presented with a log message entry dialog. If you dragged something by mistake, this is also your chance to cancel the action.

Sometimes when you try to open a path you will get an error message in place of the item details. This might happen if you specified an invalid URL, or if you don't have access permission, or if there is some other server

problem. If you need to copy this message to include it in an email, just right click on it and use Context Menu → Copy error message to clipboard, or simply use **Ctrl+C**.

Bookmarked urls/repositories are shown below the current repository folders in the left tree view. You can add entries there by right clicking on any file or folder and select Context Menu → Add to Bookmarks. Clicking on a bookmark will browse to that repository and file/folder.

4.26. Graf revízií



Obrázok 4.67. Graf revízií

Sometimes you need to know where branches and tags were taken from the trunk, and the ideal way to view this sort of information is as a graph or tree structure. That's when you need to use TortoiseSVN → Revision Graph...

This command analyses the revision history and attempts to create a tree showing the points at which copies were taken, and when branches/tags were deleted.

Dôležité

In order to generate the graph, TortoiseSVN must fetch all log messages from the repository root. Needless to say this can take several minutes even with a repository of a few thousand revisions, depending on server speed, network bandwidth, etc. If you try this with something like the *Apache* project which currently has over 500,000 revisions you could be waiting for some time.

The good news is that if you are using log caching, you only have to suffer this delay once. After that, log data is held locally. Log caching is enabled in TortoiseSVN's settings.

4.26.1. Uzly grafu revizií

Each revision graph node represents a revision in the repository where something changed in the tree you are looking at. Different types of node can be distinguished by shape and colour. The shapes are fixed, but colours can be set using TortoiseSVN → Settings

Added or copied items
: Items which have been added, or created by copying another file/folder are shown using a rounded rectangle. The default colour is green. Tags and trunks are treated as a special case and use a different shade, depending on the TortoiseSVN → Settings.

Vymazané objekty
: Deleted items e.g. a branch which is no longer required, are shown using an octagon (rectangle with corners cut off). The default colour is red.

Premenované objekty
: Renamed items are also shown using an octagon, but the default colour is blue.

Branch tip revision
: The graph is normally restricted to showing branch points, but it is often useful to be able to see the respective HEAD revision for each branch too. If you select Show HEAD revisions, each HEAD revision nodes will be shown as an ellipse. Note that HEAD here refers to the last revision committed on that path, not to the HEAD revision of the repository.

Revízia pracovnej kópie
: If you invoked the revision graph from a working copy, you can opt to show the BASE revision on the graph using Show WC revision, which marks the BASE node with a bold outline.

Zmenená pracovná kópia
: If you invoked the revision graph from a working copy, you can opt to show an additional node representing your modified working copy using Show WC modifications. This is an elliptical node with a bold outline in red by default.

Normálny objekt
: All other items are shown using a plain rectangle.

Note that by default the graph only shows the points at which items were added, copied or deleted. Showing every revision of a project will generate a very large graph for non-trivial cases. If you really want to see *all* revisions where changes were made, there is an option to do this in the View menu and on the toolbar.

The default view (grouping off) places the nodes such that their vertical position is in strict revision order, so you have a visual cue for the order in which things were done. Where two nodes are in the same column the order is very obvious. When two nodes are in adjacent columns the offset is much smaller because there is no need to prevent the nodes from overlapping, and as a result the order is a little less obvious. Such optimisations are necessary to keep complex graphs to a reasonable size. Please note that this ordering uses the *edge* of the node on the *older* side as a reference, i.e. the bottom edge of the node when the graph is shown with oldest node at the bottom. The reference edge is significant because the node shapes are not all the same height.

4.26.2. Changing the View

Because a revision graph is often quite complex, there are a number of features which can be used to tailor the view the way you want it. These are available in the View menu and from the toolbar.

Skupina vetiev
: The default behavior (grouping off) has all rows sorted strictly by revision. As a result, long-living branches with sparse commits occupy a whole column for only a few changes and the graph becomes very broad.

  This mode groups changes by branch, so that there is no global revision ordering: Consecutive revisions on a branch will be shown in (often) consecutive lines. Sub-branches, however, are arranged in such a way that later branches will be shown in the same column above earlier branches to keep the graph slim. As a result, a given row may contain changes from different revisions.

Najstaršie hore
: Normally the graph shows the oldest revision at the bottom, and the tree grows upwards. Use this option to grow down from the top instead.

Zarovnať stromy na vrch
: When a graph is broken into several smaller trees, the trees may appear either in natural revision order, or aligned at the bottom of the window, depending on whether you are using the Group Branches option. Use this option to grow all trees down from the top instead.

Reduce cross lines
: This option is normally enabled and avoids showing the graph with a lot of confused crossing lines. However this may also make the layout columns appear in less logical places, for example in a diagonal line rather than a column, and the graph may require a larger area to draw. If this is a problem you can disable the option from the View menu.

Differential path names
: Long path names can take a lot of space and make the node boxes very large. Use this option to show only the changed part of a path, replacing the common part with dots. E.g. if you create a branch `/branches/1.2.x/doc/html` from `/trunk/doc/html` the branch could be shown in compact form as `/branches/1.2.x/..` because the last two levels, `doc` and `html`, did not change.

Zobraziť všetky revízie
: This does just what you expect and shows every revision where something (in the tree that you are graphing) has changed. For long histories this can produce a truly huge graph.

Zobraziť HEAD(Hlavné) revízie
: This ensures that the latest revision on every branch is always shown on the graph.

Exact copy sources
: When a branch/tag is made, the default behaviour is to show the branch as taken from the last node where a change was made. Strictly speaking this is inaccurate since the branches are often made from the current HEAD rather than a specific revision. So it is possible to show the more correct (but less useful) revision that was used to create the copy. Note that this revision may be younger than the HEAD revision of the source branch.

Fold tags
: When a project has many tags, showing every tag as a separate node on the graph takes a lot of space and obscures the more interesting development branch structure. At the same time you may need to be able to access the tag content easily so that you can compare revisions. This option hides the nodes for tags and shows them instead in the tooltip for the node that they were copied from. A tag icon on the right side of the source node indicates that tags were made. This greatly simplifies the view.

  Note that if a tag is itself used as the source for a copy, perhaps a new branch based on a tag, then that tag will be shown as a separate node rather than folded.

Hide deleted paths
: Hides paths which are no longer present at the HEAD revision of the repository, e.g. deleted branches.

  If you have selected the Fold tags option then a deleted branch from which tags were taken will still be shown, otherwise the tags would disappear too. The last revision that was tagged will be shown in the colour used for deleted nodes instead of showing a separate deletion revision.

  If you select the Hide tags option then these branches will disappear again as they are not needed to show the tags.

Hide unused branches
: Hides branches where no changes were committed to the respective file or sub-folder. This does not necessarily indicate that the branch was not used, just that no changes were made to *this* part of it.

Zobraziť revíziu WC(pracovná kópia)
: Marks the revision on the graph which corresponds to the update revision of the item you fetched the graph for. If you have just updated, this will be HEAD, but if others have committed changes since your last update your WC may be a few revisions lower down. The node is marked by giving it a bold outline.

Zobraziť zmeny WC(pracovná kópia)
: If your WC contains local changes, this option draws it as a separate elliptical node, linked back to the node that your WC was last updated to. The default outline colour is red. You may need to refresh the graph using **F5** to capture recent changes.

Filter
: Sometimes the revision graph contains more revisions than you want to see. This option opens a dialog which allows you to restrict the range of revisions displayed, and to hide particular paths by name.

  If you hide a particular path and that node has child nodes, the children will be shown as a separate tree. If you want to hide all children as well, use the Remove the whole subtree(s) checkbox.

Tree stripes
: Where the graph contains several trees, it is sometimes useful to use alternating colours on the background to help distinguish between trees.

Show overview
: Shows a small picture of the entire graph, with the current view window as a rectangle which you can drag. This allows you to navigate the graph more easily. Note that for very large graphs the overview may become useless due to the extreme zoom factor and will therefore not be shown in such cases.

4.26.3. Použitie grafu

To make it easier to navigate a large graph, use the overview window. This shows the entire graph in a small window, with the currently displayed portion highlighted. You can drag the highlighted area to change the displayed region.

The revision date, author and comments are shown in a hint box whenever the mouse hovers over a revision box.

If you select two revisions (Use **Ctrl**-left click), you can use the context menu to show the differences between these revisions. You can choose to show differences as at the branch creation points, but usually you will want to show the differences at the branch end points, i.e. at the HEAD revision.

You can view the differences as a Unified-Diff file, which shows all differences in a single file with minimal context. If you opt to Context Menu → Compare Revisions you will be presented with a list of changed files. Double click on a file name to fetch both revisions of the file and compare them using the visual difference tool.

If you right click on a revision you can use Context Menu → Show Log to view the history.

You can also merge changes in the selected revision(s) into a different working copy. A folder selection dialog allows you to choose the working copy to merge into, but after that there is no confirmation dialog, nor any opportunity to try a test merge. It is a good idea to merge into an unmodified working copy so that you can revert the changes if it doesn't work out! This is a useful feature if you want to merge selected revisions from one branch to another.

Learn to Read the Revision Graph

First-time users may be surprised by the fact that the revision graph shows something that does not match the user's mental model. If a revision changes multiple copies or branches of a file or folder, for instance, then there will be multiple nodes for that single revision. It is a good practice to start with the leftmost options in the toolbar and customize the graph step-by-step until it comes close to your mental model.

All filter options try lose as little information as possible. That may cause some nodes to change their color, for instance. Whenever the result is unexpected, undo the last filter operation and try to understand what is special about that particular revision or branch. In most cases, the initially expected outcome of the filter operation would either be inaccurate or misleading.

4.26.4. Refreshing the View

If you want to check the server again for newer information, you can simply refresh the view using **F5**. If you are using the log cache (enabled by default), this will check the repository for newer commits and fetch only the new ones. If the log cache was in offline mode, this will also attempt to go back online.

If you are using the log cache and you think the message content or author may have changed, you should use the log dialog to refresh the messages you need. Since the revision graph works from the repository root, we would have to invalidate the entire log cache, and refilling it could take a *very* long time.

4.26.5. Pruning Trees

A large tree can be difficult to navigate and sometimes you will want to hide parts of it, or break it down into a forest of smaller trees. If you hover the mouse over the point where a node link enters or leaves the node you will see one or more popup buttons which allow you to do this.

Click on the minus button to collapse the attached sub-tree.

Click on the plus button to expand a collapsed tree. When a tree has been collapsed, this button remains visible to indicate the hidden sub-tree.

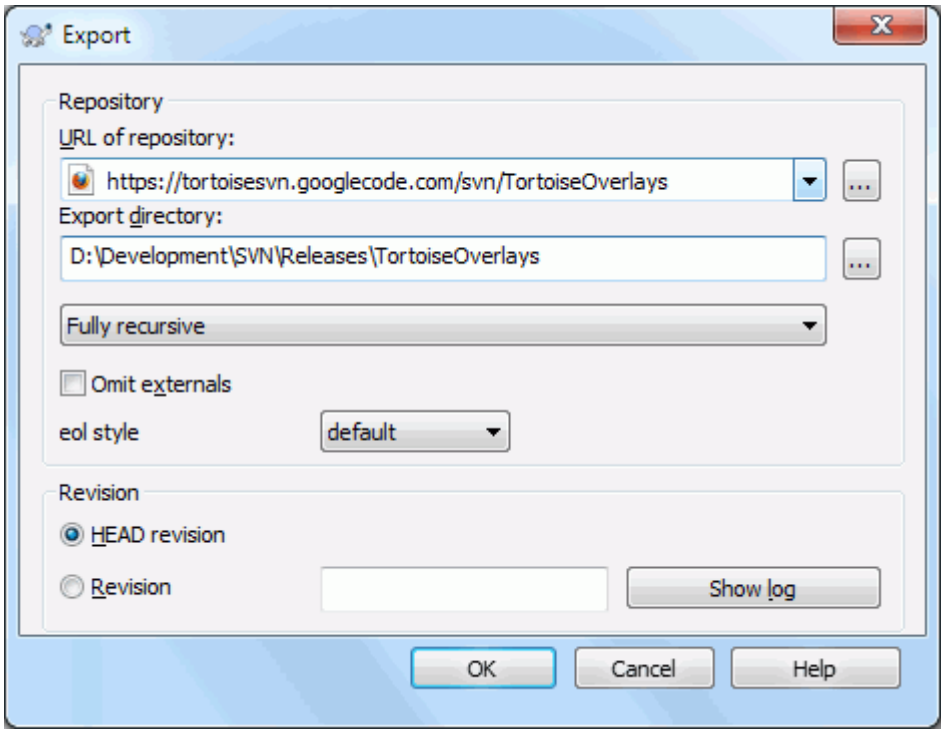
Click on the cross button to split the attached sub-tree and show it as a separate tree on the graph.

Click on the circle button to reattach a split tree. When a tree has been split away, this button remains visible to indicate that there is a separate sub-tree.

Click on the graph background for the main context menu, which offers options to Expand all and Join all. If no branch has been collapsed or split, the context menu will not be shown.

4.27. Exporting a Subversion Working Copy

Sometimes you may want a clean copy of your working tree without the `.svn` directory, e.g. to create a zipped tarball of your source, or to export to a web server. Instead of making a copy and then deleting the `.svn` directory manually, TortoiseSVN offers the command TortoiseSVN → Export.... Exporting from a URL and exporting from a working copy are treated slightly differently.



Obrázok 4.68. The Export-from-URL Dialog

If you execute this command on an unversioned folder, TortoiseSVN will assume that the selected folder is the target, and open a dialog for you to enter the URL and revision to export from. This dialog has options to export only the top level folder, to omit external references, and to override the line end style for files which have the `svn:eol-style` property set.

Of course you can export directly from the repository too. Use the Repository Browser to navigate to the relevant subtree in your repository, then use Context Menu → Export. You will get the Export from URL dialog described above.

If you execute this command on your working copy you'll be asked for a place to save the *clean* working copy without the `.svn` folder. By default, only the versioned files are exported, but you can use the Export unversioned files too checkbox to include any other unversioned files which exist in your WC and not in the repository. External references using `svn:externals` can be omitted if required.

Another way to export from a working copy is to right drag the working copy folder to another location and choose Context Menu → SVN Export versioned items here or Context Menu → SVN Export all items here or Context Menu → SVN Export changed items here. The second option includes the unversioned files as well. The third option exports only modified items, but maintains the folder structure.

When exporting from a working copy, if the target folder already contains a folder of the same name as the one you are exporting, you will be given the option to overwrite the existing content, or to create a new folder with an automatically generated name, e.g. `Target (1)`.

Exportovanie jednotlivých súborov

The export dialog does not allow exporting single files, even though Subversion can.

To export single files with TortoiseSVN, you have to use the repository browser (Oddiel 4.25, “Prezeranie úložiska”). Simply drag the file(s) you want to export from the repository browser to where you want them in the explorer, or use the context menu in the repository browser to export the files.

Exporting a Change Tree

If you want to export a copy of your project tree structure but containing only the files which have changed in a particular revision, or between any two revisions, use the compare revisions feature described in Oddiel 4.11.3, “Porovavanie adresárov”.

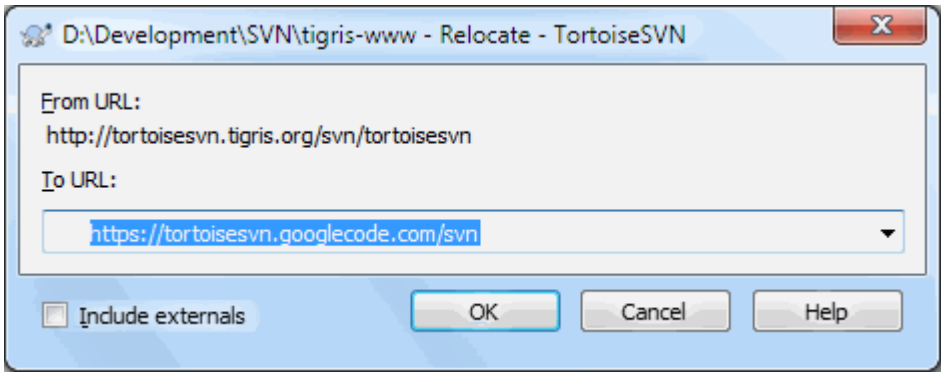
If you want to export your working copy tree structure but containing only the files which are locally modified, refer to SVN Export changed items here above.

4.27.1. Removing a working copy from version control

Sometimes you have a working copy which you want to convert back to a normal folder without the `.svn` directory. All you need to do is delete the `.svn` directory from the working copy root.

Alternatively you can export the folder to itself. In Windows Explorer right drag the working copy root folder from the file pane onto itself in the folder pane. TortoiseSVN detects this special case and asks if you want to make the working copy unversioned. If you answer *yes* the control directory will be removed and you will have a plain, unversioned directory tree.

4.28. Premiestnenie pracovnej kópie



Obrázok 4.69. Dialógové okno premiesnenia

If your repository has for some reason changed it's location (IP/URL). Maybe you're even stuck and can't commit and you don't want to checkout your working copy again from the new location and to move all your changed data back into the new working copy, TortoiseSVN → Relocate is the command you are looking for. It basically does very little: it rewrites all URLs that are associated with each file and folder with the new URL.

Poznámka

This operation only works on working copy *roots*. So the context menu entry is only shown for working copy roots.

You may be surprised to find that TortoiseSVN contacts the repository as part of this operation. All it is doing is performing some simple checks to make sure that the new URL really does refer to the same repository as the existing working copy.

Varovanie

This is a very infrequently used operation. The relocate command is *only* used if the URL of the repository root has changed. Possible reasons are:

- The IP address of the server has changed.
- The protocol has changed (e.g. http:// to https://).
- The repository root path in the server setup has changed.

Put another way, you need to relocate when your working copy is referring to the same location in the same repository, but the repository itself has moved.

It does not apply if:

- You want to move to a different Subversion repository. In that case you should perform a clean checkout from the new repository location.
- You want to switch to a different branch or directory within the same repository. To do that you should use TortoiseSVN → Switch.... Read Oddiel 4.20.3, “To Checkout or to Switch...” for more information.

If you use relocate in either of the cases above, it *will corrupt your working copy* and you will get many unexplainable error messages while updating, committing, etc. Once that has happened, the only fix is a fresh checkout.

4.29. Integration with Bug Tracking Systems / Issue Trackers

It is very common in Software Development for changes to be related to a specific bug or issue ID. Users of bug tracking systems (issue trackers) would like to associate the changes they make in Subversion with a specific ID in their issue tracker. Most issue trackers therefore provide a pre-commit hook script which parses the log message to find the bug ID with which the commit is associated. This is somewhat error prone since it relies on the user to write the log message properly so that the pre-commit hook script can parse it correctly.

TortoiseSVN can help the user in two ways:

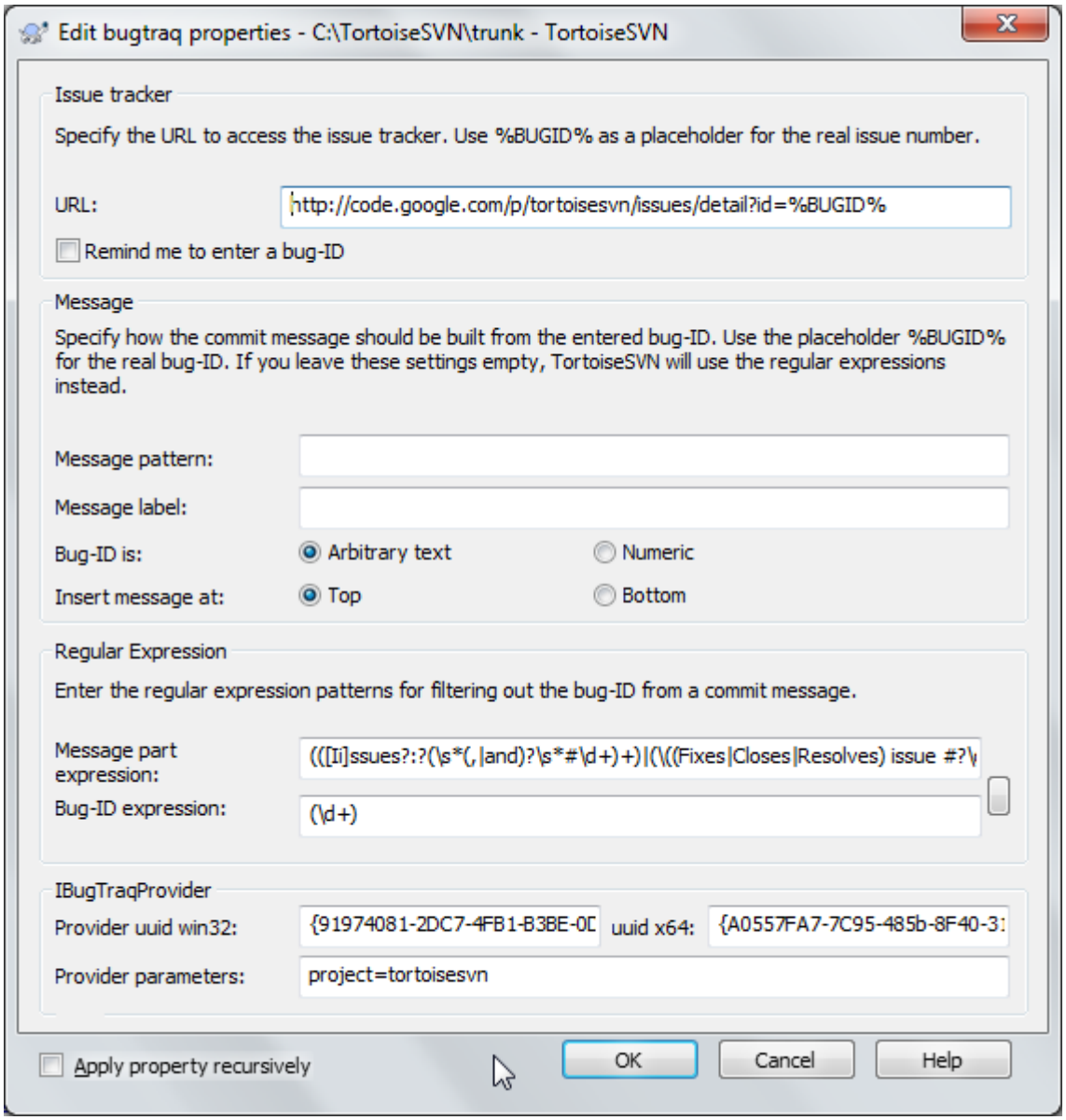
1. When the user enters a log message, a well defined line including the issue number associated with the commit can be added automatically. This reduces the risk that the user enters the issue number in a way the bug tracking tools can't parse correctly.

   Or TortoiseSVN can highlight the part of the entered log message which is recognized by the issue tracker. That way the user knows that the log message can be parsed correctly.

2. When the user browses the log messages, TortoiseSVN creates a link out of each bug ID in the log message which fires up the browser to the issue mentioned.

4.29.1. Adding Issue Numbers to Log Messages

You can integrate a bug tracking tool of your choice in TortoiseSVN. To do this, you have to define some properties, which start with `bugtraq:`. They must be set on Folders: (Oddiel 4.18, “Nastavenia Projektu”)



Obrázok 4.70. The Bugtraq Properties Dialog

When you edit any of the bugtraq properties a special property editor is used to make it easier to set appropriate values.

There are two ways to integrate TortoiseSVN with issue trackers. One is based on simple strings, the other is based on *regular expressions*. The properties used by both approaches are:

bugtraq:url
: Set this property to the URL of your bug tracking tool. It must be properly URI encoded and it has to contain `%BUGID%`. `%BUGID%` is replaced with the Issue number you entered. This allows TortoiseSVN to display a link in the log dialog, so when you are looking at the revision log you can jump directly to your bug tracking tool. You do not have to provide this property, but then TortoiseSVN shows only the issue number and not the link to it. e.g the TortoiseSVN project is using `http://issues.tortoisesvn.net/?do=details&id=%BUGID%`.

  You can also use relative URLs instead of absolute ones. This is useful when your issue tracker is on the same domain/server as your source repository. In case the domain name ever changes, you don't have to adjust the `bugtraq:url` property. There are two ways to specify a relative URL:

If it begins with the string `^/` it is assumed to be relative to the repository root. For example, `^/../?do=details&id=%BUGID%` will resolve to `https://tortoisesvn.net/?do=details&id=%BUGID%` if your repository is located on `https://tortoisesvn.net/svn/trunk/`.

A URL beginning with the string `/` is assumed to be relative to the server's hostname. For example `/?do=details&id=%BUGID%` will resolve to `https://tortoisesvn.net/?do=details&id=%BUGID%` if your repository is located anywhere on `https://tortoisesvn.net`.

bugtraq:warnifnoissue
: Set this to `true`, if you want TortoiseSVN to warn you because of an empty issue-number text field. Valid values are `true/false`. *If not defined, `false` is assumed.*

4.29.1.1. Issue Number in Text Box

In the simple approach, TortoiseSVN shows the user a separate input field where a bug ID can be entered. Then a separate line is appended/prepended to the log message the user entered.

bugtraq:message
: This property activates the bug tracking system in *Input field* mode. If this property is set, then TortoiseSVN will prompt you to enter an issue number when you commit your changes. It's used to add a line at the end of the log message. It must contain `%BUGID%`, which is replaced with the issue number on commit. This ensures that your commit log contains a reference to the issue number which is always in a consistent format and can be parsed by your bug tracking tool to associate the issue number with a particular commit. As an example you might use `Issue : %BUGID%`, but this depends on your Tool.

bugtraq:label
: This text is shown by TortoiseSVN on the commit dialog to label the edit box where you enter the issue number. If it's not set, `Bug-ID / Issue-Nr:` will be displayed. Keep in mind though that the window will not be resized to fit this label, so keep the size of the label below 20-25 characters.

bugtraq:number
: If set to `true` only numbers are allowed in the issue-number text field. An exception is the comma, so you can comma separate several numbers. Valid values are `true/false`. *If not defined, `true` is assumed.*

bugtraq:append
: This property defines if the bug-ID is appended (true) to the end of the log message or inserted (false) at the start of the log message. Valid values are `true/false`. *If not defined, `true` is assumed, so that existing projects don't break.*

4.29.1.2. Issue Numbers Using Regular Expressions

In the approach with *regular expressions*, TortoiseSVN doesn't show a separate input field but marks the part of the log message the user enters which is recognized by the issue tracker. This is done while the user writes the log message. This also means that the bug ID can be anywhere inside a log message! This method is much more flexible, and is the one used by the TortoiseSVN project itself.

bugtraq:logregex
: This property activates the bug tracking system in *Regex* mode. It contains either a single regular expressions, or two regular expressions separated by a newline.

  If two expressions are set, then the first expression is used as a pre-filter to find expressions which contain bug IDs. The second expression then extracts the bare bug IDs from the result of the first regex. This allows you to use a list of bug IDs and natural language expressions if you wish. e.g. you might fix several bugs and include a string something like this: “This change resolves issues #23, #24 and #25”.

  If you want to catch bug IDs as used in the expression above inside a log message, you could use the following regex strings, which are the ones used by the TortoiseSVN project: `[Ii]ssues?:?(\s*(,|and)?\s*#\d+)+` and `(\d+)`.

The first expression picks out “issues #23, #24 and #25” from the surrounding log message. The second regex extracts plain decimal numbers from the output of the first regex, so it will return “23”, “24” and “25” to use as bug IDs.

Breaking the first regex down a little, it must start with the word “issue”, possibly capitalised. This is optionally followed by an “s” (more than one issue) and optionally a colon. This is followed by one or more groups each having zero or more leading whitespace, an optional comma or “and” and more optional space. Finally there is a mandatory “#” and a mandatory decimal number.

If only one expression is set, then the bare bug IDs must be matched in the groups of the regex string. Example: `[Ii]ssue(?:s)? #?(\d+)` This method is required by a few issue trackers, e.g. trac, but it is harder to construct the regex. We recommend that you only use this method if your issue tracker documentation tells you to.

If you are unfamiliar with regular expressions, take a look at the introduction at https://en.wikipedia.org/wiki/Regular_expression, and the online documentation and tutorial at http://www.regular-expressions.info/.

It's not always easy to get the regex right so to help out there is a test dialog built into the bugtraq properties dialog. Click on the button to the right of the edit boxes to bring it up. Here you can enter some test text, and change each regex to see the results. If the regex is invalid the edit box background changes to red.

If both the `bugtraq:message` and `bugtraq:logregex` properties are set, `logregex` takes precedence.

Tip

Even if you don't have an issue tracker with a pre-commit hook parsing your log messages, you still can use this to turn the issues mentioned in your log messages into links!

And even if you don't need the links, the issue numbers show up as a separate column in the log dialog, making it easier to find the changes which relate to a particular issue.

Some `tsvn:` properties require a `true/false` value. TortoiseSVN also understands `yes` as a synonym for `true` and `no` as a synonym for `false`.

Set the Properties on Folders

These properties must be set on folders for the system to work. When you commit a file or folder the properties are read from that folder. If the properties are not found there, TortoiseSVN will search upwards through the folder tree to find them until it comes to an unversioned folder, or the tree root (e.g. `C:\`) is found. If you can be sure that each user checks out only from e.g `trunk/` and not some sub-folder, then it's enough if you set the properties on `trunk/`. If you can't be sure, you should set the properties recursively on each sub-folder. A property setting deeper in the project hierarchy overrides settings on higher levels (closer to `trunk/`).

As of version 1.8, TortoiseSVN and Subversion use so called `inherited properties`, which means a property that is set on a folder is automatically also implicitly set on all subfolders. So there's no need to set the properties on all folders anymore but only on the root folder.

For project properties *only*, i.e. `tsvn:`, `bugtraq:` and `webviewer:` you can use the Recursive checkbox to set the property to all sub-folders in the hierarchy, without also setting it on all files.

When you add new sub-folders to a working copy using TortoiseSVN, any project properties present in the parent folder will automatically be added to the new child folder too.

No Issue Tracker Information from Repository Browser

Because the issue tracker integration depends upon accessing Subversion properties, you will only see the results when using a checked out working copy. Fetching properties remotely is a slow

> operation, so you will not see this feature in action from the repo browser unless you started the repo browser from your working copy. If you started the repo browser by entering the URL of the repository you won't see this feature.
>
> For the same reason, project properties will not be propagated automatically when a child folder is added using the repo browser.

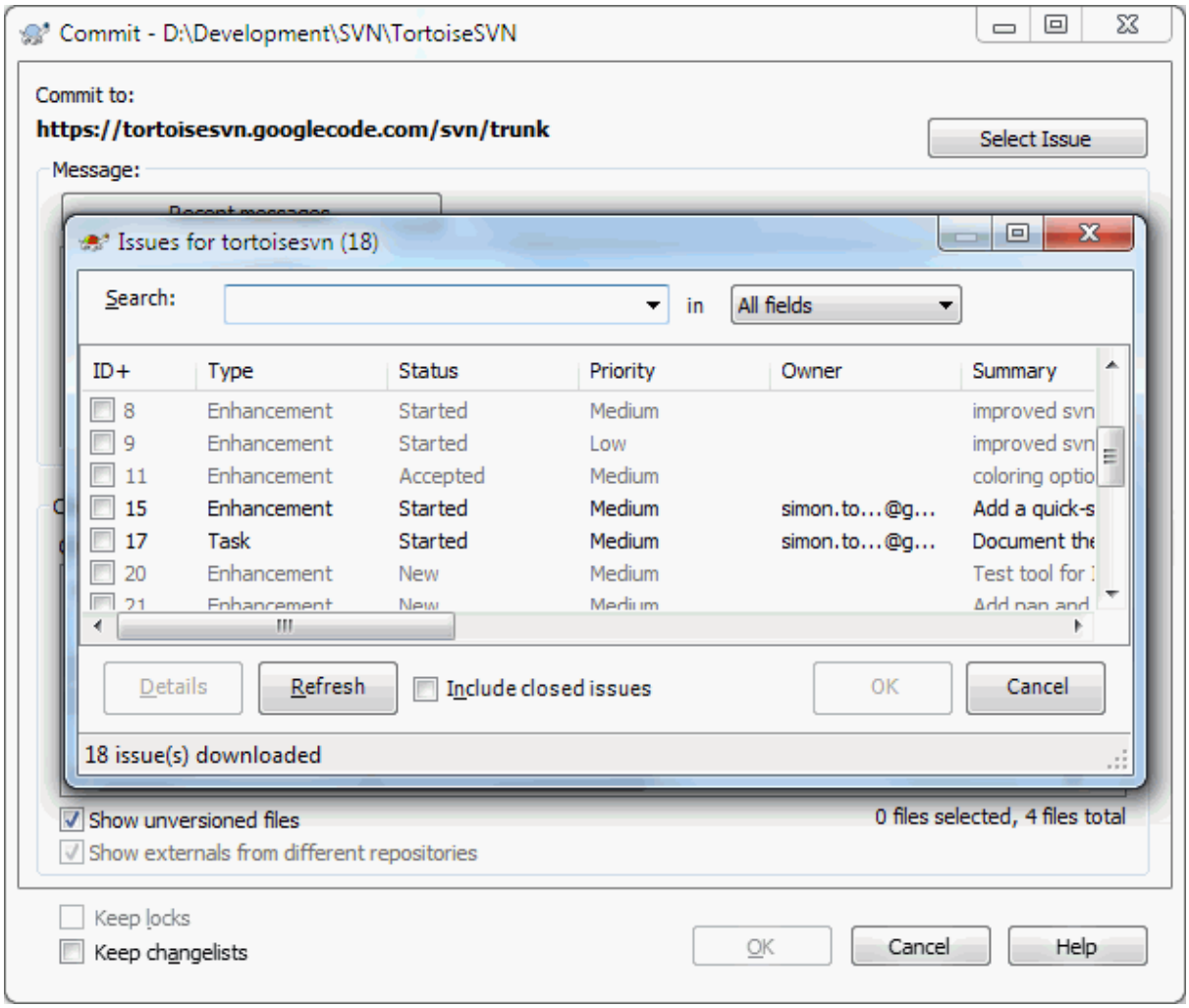
This issue tracker integration is not restricted to TortoiseSVN; it can be used with any Subversion client. For more information, read the full *Issue Tracker Integration Specification* [https://svn.code.sf.net/p/tortoisesvn/code/trunk/doc/notes/issuetrackers.txt] in the TortoiseSVN source repository. (Oddiel 3, “Licencia” explains how to access the repository.)

4.29.2. Getting Information from the Issue Tracker

The previous section deals with adding issue information to the log messages. But what if you need to get information from the issue tracker? The commit dialog has a COM interface which allows integration an external program that can talk to your tracker. Typically you might want to query the tracker to get a list of open issues assigned to you, so that you can pick the issues that are being addressed in this commit.

Any such interface is of course highly specific to your issue tracker system, so we cannot provide this part, and describing how to create such a program is beyond the scope of this manual. The interface definition and sample plugins in C# and C++/ATL can be obtained from the `contrib` folder in the *TortoiseSVN repository* [https://svn.code.sf.net/p/tortoisesvn/code/trunk/contrib/issue-tracker-plugins]. (Oddiel 3, “Licencia” explains how to access the repository.) A summary of the API is also given in Kapitola 7, *rozhranie IBugtraqProvider*. Another (working) example plugin in C# is *Gurtle* [http://code.google.com/p/gurtle/] which implements the required COM interface to interact with the *Google Code* [http://code.google.com/hosting/] issue tracker.

For illustration purposes, let's suppose that your system administrator has provided you with an issue tracker plugin which you have installed, and that you have set up some of your working copies to use the plugin in TortoiseSVN's settings dialog. When you open the commit dialog from a working copy to which the plugin has been assigned, you will see a new button at the top of the dialog.



Obrázok 4.71. Example issue tracker query dialog

In this example you can select one or more open issues. The plugin can then generate specially formatted text which it adds to your log message.

4.30. Integration with Web-based Repository Viewers

There are several web-based repository viewers available for use with Subversion such as *ViewVC* [http://www.viewvc.org/] and *WebSVN* [http://websvn.tigris.org/]. TortoiseSVN provides a means to link with these viewers.

You can integrate a repo viewer of your choice in TortoiseSVN. To do this, you have to define some properties which define the linkage. They must be set on Folders: (Oddiel 4.18, “Nastavenia Projektu”)

webviewer:revision
: Set this property to the URL of your repo viewer to view all changes in a specific revision. It must be properly URI encoded and it has to contain `%REVISION%`. `%REVISION%` is replaced with the revision number in question. This allows TortoiseSVN to display a context menu entry in the log dialog Context Menu → View revision in webviewer.

webviewer:pathrevision
: Set this property to the URL of your repo viewer to view changes to a specific file in a specific revision. It must be properly URI encoded and it has to contain `%REVISION%` and `%PATH%`. `%PATH%` is replaced with the path relative to the repository root. This allows TortoiseSVN to display a context menu entry in the log

dialog Context Menu → View revision for path in webviewer For example, if you right click in the log dialog bottom pane on a file entry `/trunk/src/file` then the `%PATH%` in the URL will be replaced with `/trunk/src/file`.

You can also use relative URLs instead of absolute ones. This is useful in case your web viewer is on the same domain/server as your source repository. In case the domain name ever changes, you don't have to adjust the `webviewer:revision` and `webviewer:pathrevision` property. The format is the same as for the `bugtraq:url` property. See Oddiel 4.29, “Integration with Bug Tracking Systems / Issue Trackers”.

Set the Properties on Folders

These properties must be set on folders for the system to work. When you commit a file or folder the properties are read from that folder. If the properties are not found there, TortoiseSVN will search upwards through the folder tree to find them until it comes to an unversioned folder, or the tree root (e.g. `C:\`) is found. If you can be sure that each user checks out only from e.g `trunk/` and not some sub-folder, then it's enough if you set the properties on `trunk/`. If you can't be sure, you should set the properties recursively on each sub-folder. A property setting deeper in the project hierarchy overrides settings on higher levels (closer to `trunk/`).

For project properties *only*, i.e. `tsvn:`, `bugtraq:` and `webviewer:` you can use the Recursive checkbox to set the property to all sub-folders in the hierarchy, without also setting it on all files.

When you add new sub-folders to a working copy using TortoiseSVN, any project properties present in the parent folder will automatically be added to the new child folder too.

Obmedzenia používania prehliadača úložiska

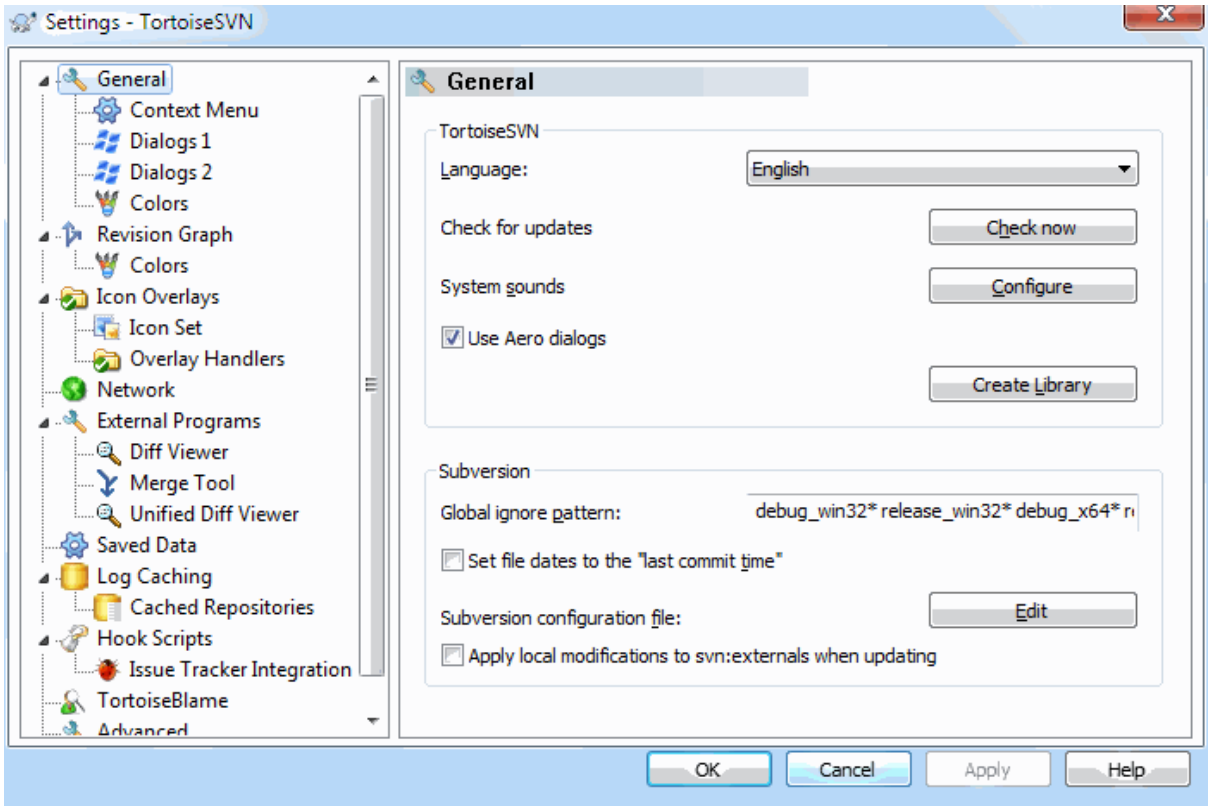
Because the repo viewer integration depends upon accessing Subversion properties, you will only see the results when using a checked out working copy. Fetching properties remotely is a slow operation, so you will not see this feature in action from the repo browser unless you started the repo browser from your working copy. If you started the repo browser by entering the URL of the repository you won't see this feature.

For the same reason, project properties will not be propagated automatically when a child folder is added using the repo browser.

4.31. TortoiseSVN Nastavenia

Aby ste zistili na čo sú rôzne nastavenie, jednoducho ponechajte ukazovateľ myši na editovacom, alebo zaškrtávacom políčku a behom sekundy sa vám zobrazí užitočná nápoveda.

4.31.1. Hlavné Nastavenia



Obrázok 4.72. Dialóg nastavenie, všeobecné

Tento dialóg vám umožňuje určiť jazyk a nastavnia pre Subversion.

Jazyk
: Selects your user interface language. Of course, you have to install the corresponding language pack first to get another UI language than the default English one.

Skontrolovať akutalizácie
: TortoiseSVN bude pravidenlne kontaktovať stránku, aby zistil, či sa tam nachádza novšia verzia programu. Ak je zobrazí upozornenie v odovzdácom dialógu. Použite Skontrolovať teraz pokiaľ chcete odpoveď okamžite. Nová verzia nebude stiahnutá; jednoducho len dostanete informáciu hovoriacu, že je dostupná nová verzia.

Systémové zvuky
: TortoiseSVN has three custom sounds which are installed by default.

  - Chyba
  - Poznámka
  - Varovanie

  You can select different sounds (or turn these sounds off completely) using the Windows Control Panel. Configure is a shortcut to the Control Panel.

Use Aero Dialogs
: On Windows Vista and later systems this controls whether dialogs use the Aero styling.

Create Library
: On Windows 7 you can create a Library in which to group working copies which are scattered in various places on your system.

Globálna šablóna vylúčenia

Global ignore patterns are used to prevent unversioned files from showing up e.g. in the commit dialog. Files matching the patterns are also ignored by an import. Ignore files or directories by typing in the names or extensions. Patterns are separated by spaces e.g. `bin obj *.bak *.~?? *.jar *.[Tt]mp`. These patterns should not include any path separators. Note also that there is no way to differentiate between files and directories. Read Oddiel 4.14.1, “Pattern Matching in Ignore Lists” for more information on the pattern-matching syntax.

Note that the ignore patterns you specify here will also affect other Subversion clients running on your PC, including the command line client.

Výstraha

If you use the Subversion configuration file to set a `global-ignores` pattern, it will override the settings you make here. The Subversion configuration file is accessed using the Edit as described below.

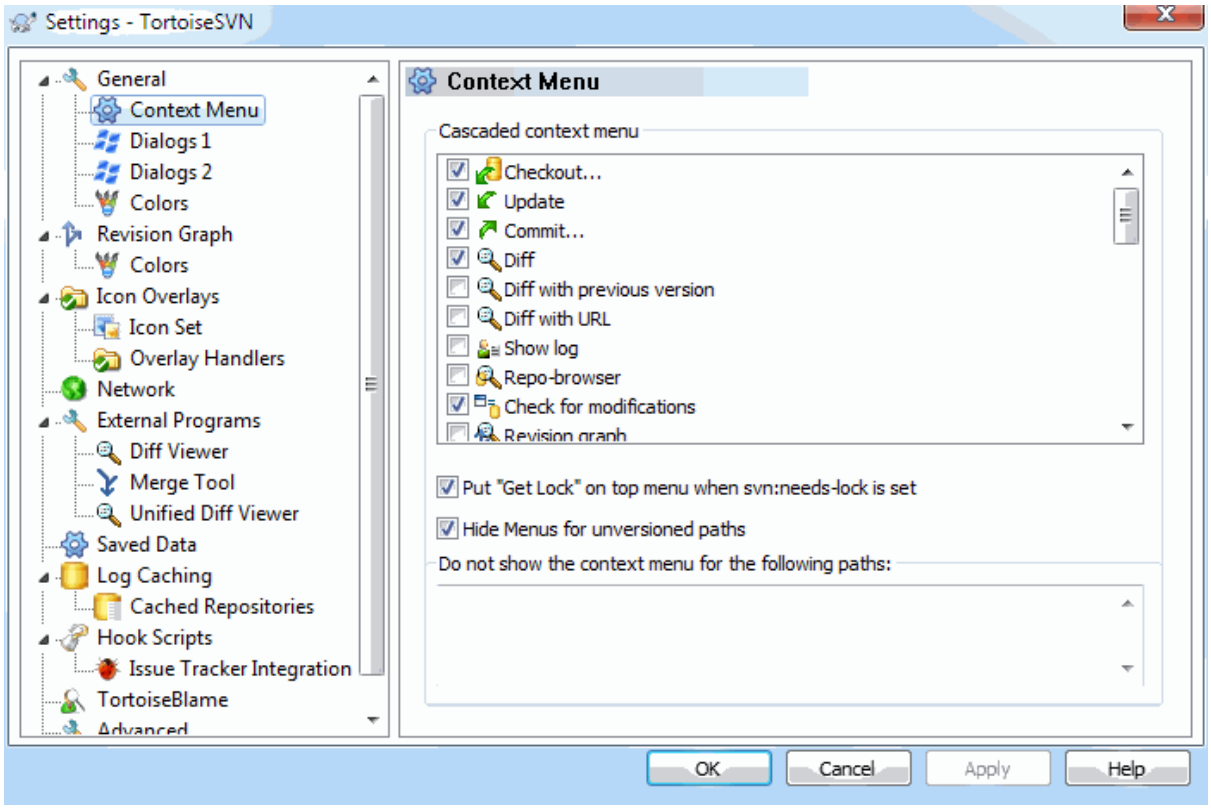
This ignore pattern will affect all your projects. It is not versioned, so it will not affect other users. By contrast you can also use the versioned `svn:ignore` or `svn:global-ignores` property to exclude files or directories from version control. Read Oddiel 4.14, “Ignorovanie súborov a adresárov” for more information.

Nastaviť čas súborov na “čas posledného odovzdania”
: This option tells TortoiseSVN to set the file dates to the last commit time when doing a checkout or an update. Otherwise TortoiseSVN will use the current date. If you are developing software it is generally best to use the current date because build systems normally look at the date stamps to decide which files need compiling. If you use “last commit time” and revert to an older file revision, your project may not compile as you expect it to.

Konfiguračný súbor Subversion
: Use Edit to edit the Subversion configuration file directly. Some settings cannot be modified directly by TortoiseSVN, and need to be set here instead. For more information about the Subversion `config` file see the *Runtime Configuration Area* [http://svnbook.red-bean.com/en/1.8/svn.advanced.confarea.html]. The section on *Automatic Property Setting* [http://svnbook.red-bean.com/en/1.8/svn.advanced.props.html#svn.advanced.props.auto] is of particular interest, and that is configured here. Note that Subversion can read configuration information from several places, and you need to know which one takes priority. Refer to *Configuration and the Windows Registry* [http://svnbook.red-bean.com/en/1.8/svn.advanced.confarea.html#svn.advanced.confarea.windows-registry] to find out more.

Apply local modifications to svn:externals when updating
: This option tells TortoiseSVN to always apply local modifications to the `svn:externals` property when updating the working copy.

4.31.1.1. Nastavenia kontextového menu



Obrázok 4.73. The Settings Dialog, Context Menu Page

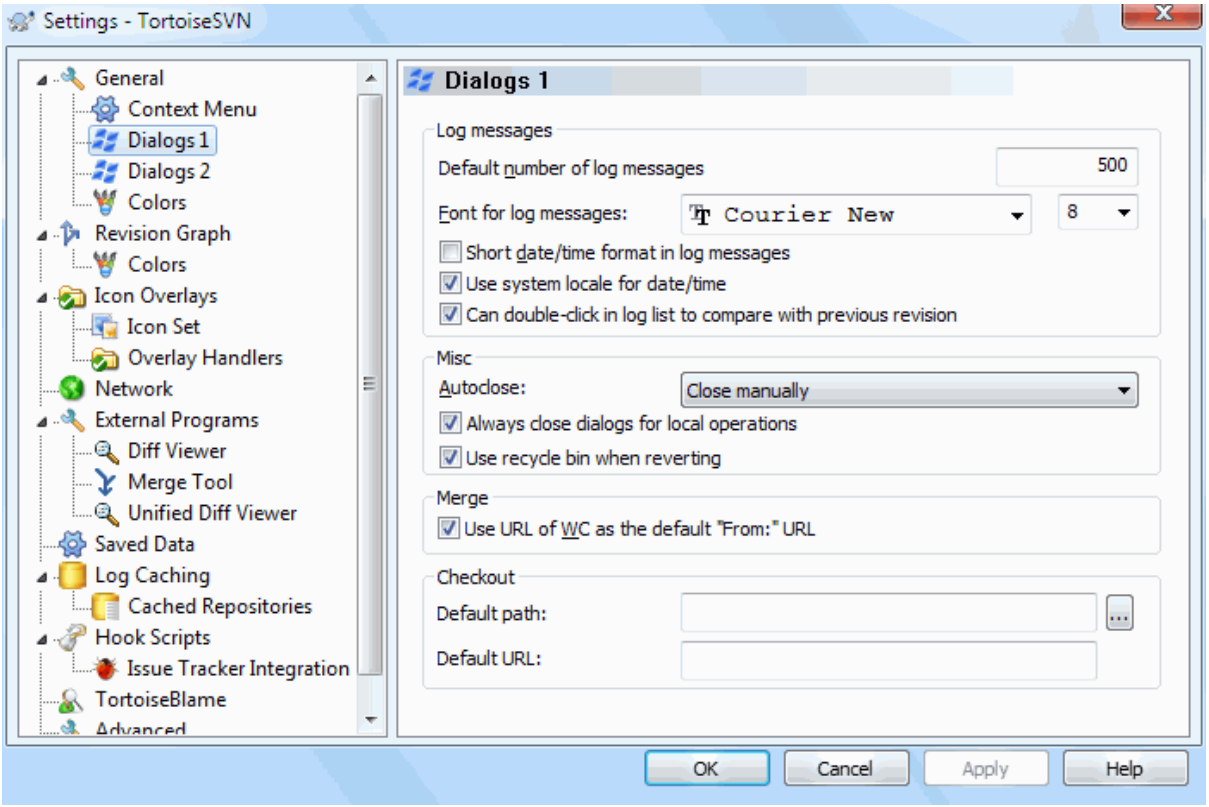
This page allows you to specify which of the TortoiseSVN context menu entries will show up in the main context menu, and which will appear in the TortoiseSVN submenu. By default most items are unchecked and appear in the submenu.

There is a special case for Get Lock. You can of course promote it to the top level using the list above, but as most files don't need locking this just adds clutter. However, a file with the `svn:needs-lock` property needs this action every time it is edited, so in that case it is very useful to have at the top level. Checking the box here means that when a file is selected which has the `svn:needs-lock` property set, Get Lock will always appear at the top level.

Most of the time, you won't need the TortoiseSVN context menu, apart for folders that are under version control by Subversion. For non- versioned folders, you only really need the context menu when you want to do a checkout. If you check the option `Hide menus for unversioned paths` , TortoiseSVN will not add its entries to the context menu for unversioned folders. But the entries are added for all items and paths in a versioned folder. And you can get the entries back for unversioned folders by holding the **Shift** key down while showing the context menu.

If there are some paths on your computer where you just don't want TortoiseSVN's context menu to appear at all, you can list them in the box at the bottom.

4.31.1.2. TortoiseSVN Dialog Settings 1



Obrázok 4.74. The Settings Dialog, Dialogs 1 Page

This dialog allows you to configure some of TortoiseSVN's dialogs the way you like them.

Prednastavený počet správ denníka
: Limits the number of log messages that TortoiseSVN fetches when you first select TortoiseSVN → Show Log Useful for slow server connections. You can always use Show All or Next 100 to get more messages.

Písmo správ denníka
: Selects the font face and size used to display the log message itself in the middle pane of the Revision Log dialog, and when composing log messages in the Commit dialog.

Krátky formát dátumu/času v správach denníka
: If the standard long messages use up too much space on your screen use the short format.

Možete použiť dvojklik v zozname denníka k porovnaniu s predchádzajúcou revíziou
: If you frequently find yourself comparing revisions in the top pane of the log dialog, you can use this option to allow that action on double click. It is not enabled by default because fetching the diff is often a long process, and many people prefer to avoid the wait after an accidental double click, which is why this option is not enabled by default.

Auto-close
: TortoiseSVN can automatically close all progress dialogs when the action is finished without error. This setting allows you to select the conditions for closing the dialogs. The default (recommended) setting is Close manually which allows you to review all messages and check what has happened. However, you may decide that you want to ignore some types of message and have the dialog close automatically if there are no critical changes.

  Auto-close if no merges, adds or deletes means that the progress dialog will close if there were simple updates, but if changes from the repository were merged with yours, or if any files were added or deleted, the dialog will remain open. It will also stay open if there were any conflicts or errors during the operation.

Auto-close if no conflicts relaxes the criteria further and will close the dialog even if there were merges, adds or deletes. However, if there were any conflicts or errors, the dialog remains open.

Auto-close if no errors always closes the dialog even if there were conflicts. The only condition that keeps the dialog open is an error condition, which occurs when Subversion is unable to complete the task. For example, an update fails because the server is inaccessible, or a commit fails because the working copy is out-of-date.

Vždy zavrieť po miestnych úkonoch
: Local operations like adding files or reverting changes do not need to contact the repository and complete quickly, so the progress dialog is often of little interest. Select this option if you want the progress dialog to close automatically after these operations, unless there are errors.

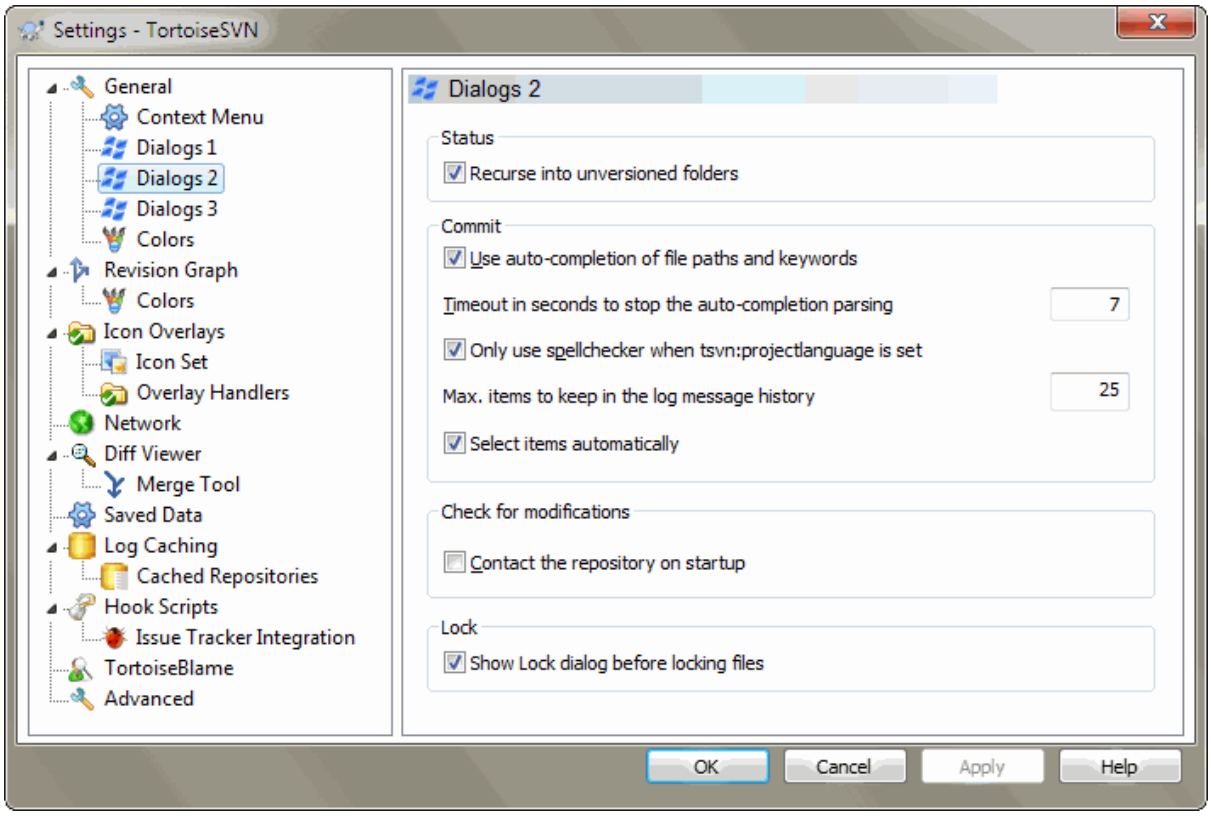
Pri vracaní použiť odpadkový kôš
: When you revert local modifications, your changes are discarded. TortoiseSVN gives you an extra safety net by sending the modified file to the recycle bin before bringing back the pristine copy. If you prefer to skip the recycle bin, uncheck this option.

Use URL of WC as the default “From:” URL
: In the merge dialog, the default behaviour is for the From: URL to be remembered between merges. However, some people like to perform merges from many different points in their hierarchy, and find it easier to start out with the URL of the current working copy. This can then be edited to refer to a parallel path on another branch.

Default checkout path
: You can specify the default path for checkouts. If you keep all your checkouts in one place, it is useful to have the drive and folder pre-filled so you only have to add the new folder name to the end.

Default checkout URL
: You can also specify the default URL for checkouts. If you often checkout sub-projects of some very large project, it can be useful to have the URL pre-filled so you only have to add the sub-project name to the end.

4.31.1.3. TortoiseSVN Dialog Settings 2



Obrázok 4.75. The Settings Dialog, Dialogs 2 Page

Vnoriť sa do neverziovaných adresárov
: If this box is checked (default state), then whenever the status of an unversioned folder is shown in the Add, Commit or Check for Modifications dialog, every child file and folder is also shown. If you uncheck this box, only the unversioned parent is shown. Unchecking reduces clutter in these dialogs. In that case if you select an unversioned folder for Add, it is added recursively.

  In the Check for Modifications dialog you can opt to see ignored items. If this box is checked then whenever an ignored folder is found, all child items will be shown as well.

Použiť automatické doplňovanie ciest súborov a kľúčových slov
: The commit dialog includes a facility to parse the list of filenames being committed. When you type the first 3 letters of an item in the list, the auto-completion box pops up, and you can press Enter to complete the filename. Check the box to enable this feature.

Časový limit v sekudách po zastavenie analýzy automatického doplňovania
: The auto-completion parser can be quite slow if there are a lot of large files to check. This timeout stops the commit dialog being held up for too long. If you are missing important auto-completion information, you can extend the timeout.

Použiť kontrolu pravopisu iba keď je nastavený parameter `tsvn:projectlanguage`
: If you don't wish to use the spellchecker for all commits, check this box. The spellchecker will still be enabled where the project properties require it.

Maximálny počet záznamov, ktoré majú byť uchované v pamäti správ
: When you type in a log message in the commit dialog, TortoiseSVN stores it for possible re-use later. By default it will keep the last 25 log messages for each repository, but you can customize that number here. If you have many different repositories, you may wish to reduce this to avoid filling your registry.

  Note that this setting applies only to messages that you type in on this computer. It has nothing to do with the log cache.

Automaticky označiť objekty
: The normal behaviour in the commit dialog is for all modified (versioned) items to be selected for commit automatically. If you prefer to start with nothing selected and pick the items for commit manually, uncheck this box.

Reopen dialog after commit if items were left uncommitted
: This reopens the commit dialog automatically at the same directory after a successful commit. The dialog is reopened only if there still are items left to commit.

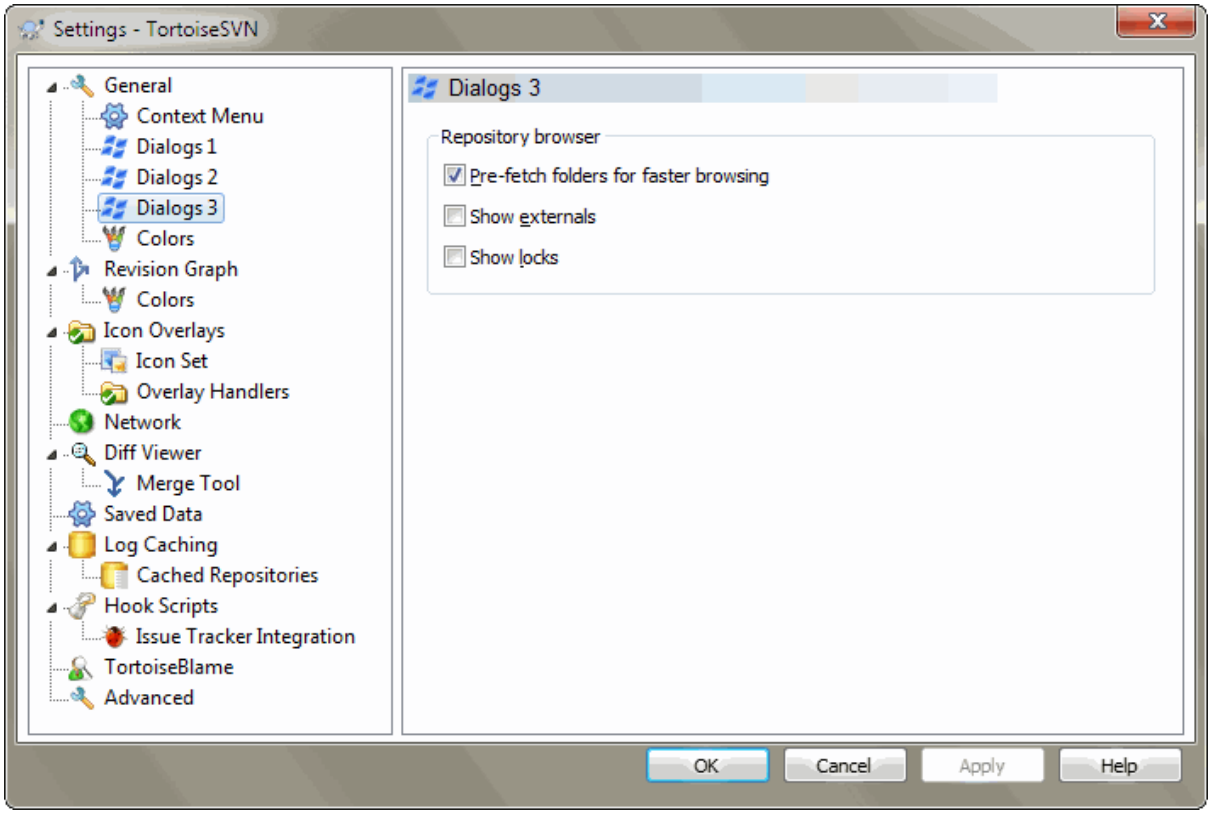
Pripojiť uložisko pri spustení
: The Check for Modifications dialog checks the working copy by default, and only contacts the repository when you click Check repository. If you always want to check the repository, you can use this setting to make that action happen automatically.

Zobraziť Dialógové okno zamykanie pred zamknutím súborov
: When you select one or more files and then use TortoiseSVN → Lock to take out a lock on those files, on some projects it is customary to write a lock message explaining why you have locked the files. If you do not use lock messages, you can uncheck this box to skip that dialog and lock the files immediately.

  If you use the lock command on a folder, you are always presented with the lock dialog as that also gives you the option to select files for locking.

  If your project is using the `tsvn:lockmsgminsize` property, you will see the lock dialog regardless of this setting because the project *requires* lock messages.

4.31.1.4. TortoiseSVN Dialog Settings 3



Obrázok 4.76. The Settings Dialog, Dialogs 3 Page

Settings for the repository browser:

Prednačítať adresáre pre rýchlejšie prehliadanie
: If this box is checked (default state), then the repository browser fetches information about shown folders in the background. That way as soon as you browse into one of those folders, the information is already available.

  Some servers however can't handle the multiple requests this causes or when not configured correctly treat so many requests as something bad and start blocking them. In this case you can disable the pre-fetching here.

Zobraziť externé
: If this box is checked (default state), then the repository browser shows files and folders that are included with the `svn:externals` property as normal files and folders, but with an overlay icon to mark them as from an external source.

  As with the pre-fetch feature explained above, this too can put too much stress on weak servers. In this case you can disable this feature here.

There are two versions of shelfing implemented in SVN. Here you can select which version you want to use. Note that changing this setting might require an OS restart to take effect.

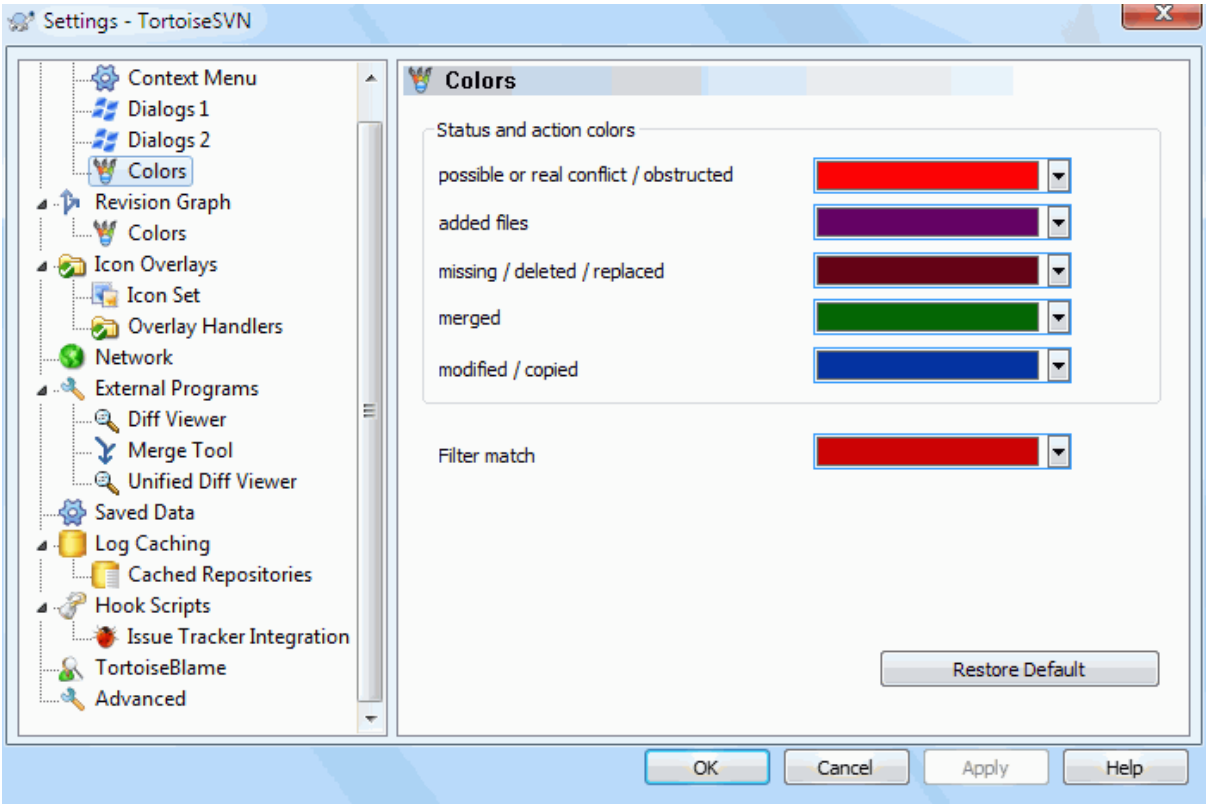
V2
: this version is much faster than `V3` and is the recommended version to use.

  However, the speed comes at a prize: `V2` does not handle directory changes, and can't handle copies and moves of files.

V3
: this is the latest version of the shelfing feature. It can handle changes to directories as well as file moves/copies.

However, `V3` is much slower than `V2` and can be unusably slow for big repositories or if you have a slow connection to the repository.

4.31.1.5. Nastavenia farieb TortoiseSVN



Obrázok 4.77. The Settings Dialog, Colours Page

This dialog allows you to configure the text colours used in TortoiseSVN's dialogs the way you like them.

Možné alebo skutočné konflikty / prekážky
: A conflict has occurred during update, or may occur during merge. Update is obstructed by an existing unversioned file/folder of the same name as a versioned one.

  This colour is also used for error messages in the progress dialogs.

Pridané súbory
: Pridané objekty do úložiska

chýbajúce / zmazené / nahradené
: Items deleted from the repository, missing from the working copy, or deleted from the working copy and replaced with another file of the same name.

Zlúčené
: Changes from the repository successfully merged into the WC without creating any conflicts.

zmenené / skopírované
: Add with history, or paths copied in the repository. Also used in the log dialog for entries which include copied items.

Vymazaný uzol
: An item which has been deleted from the repository.

Pridaný uzlol
: An item which has been added to the repository, by an add, copy or move operation.

Premenovaný uzol
: An item which has been renamed within the repository.

Nahradený uzol
: The original item has been deleted and a new item with the same name replaces it.

Zhoda filtra
: When using filtering in the log dialog, search terms are highlighted in the results using this colour.

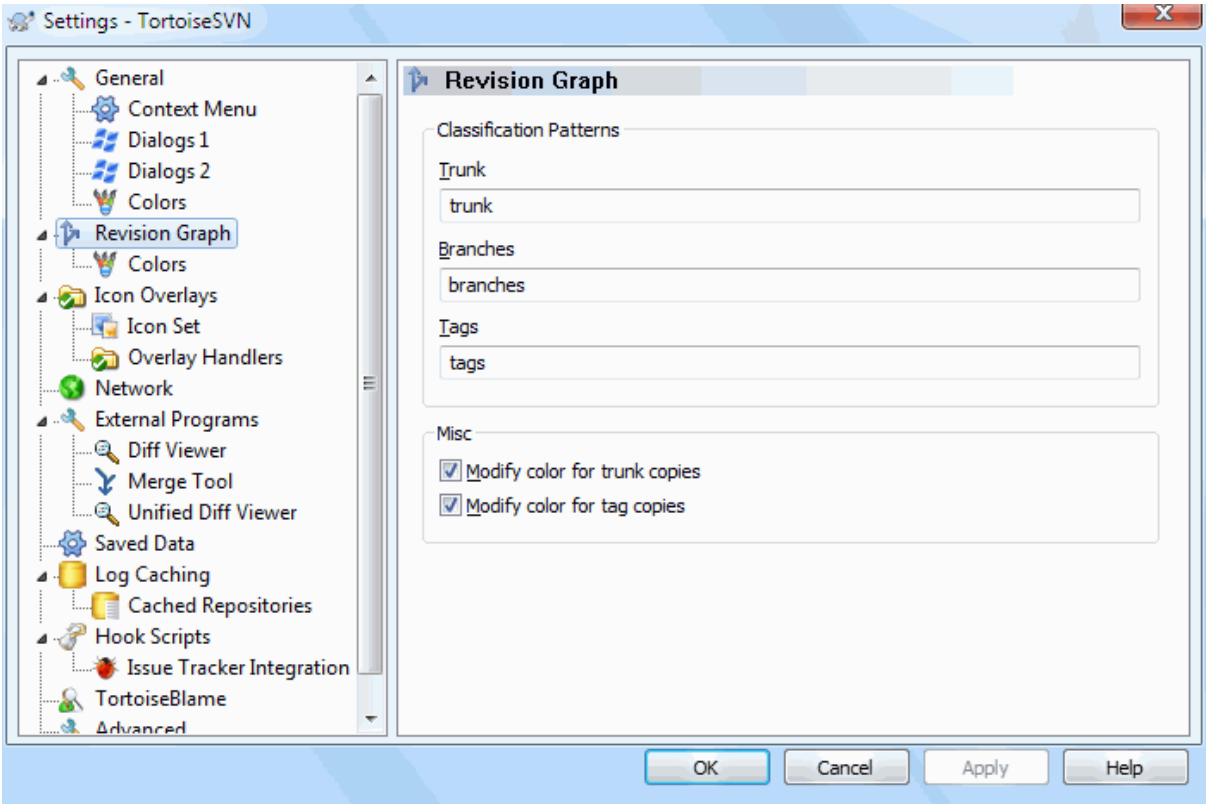
other settings:

Dark theme
: The dialogs in TortoiseSVN can be shown in a dark mode on Windows 10 1809 and later. This feature also requires that dark mode for applications is enabled in the Windows 10 settings.

Dôležité

Note that not all controls in all dialogs are shown in a dark theme.

4.31.2. Nastavenia grafu revizií



Obrázok 4.78. The Settings Dialog, Revision Graph Page

Klasifikačné šablóny
: The revision graph attempts to show a clearer picture of your repository structure by distinguishing between trunk, branches and tags. As there is no such classification built into Subversion, this information is extracted from the path names. The default settings assume that you use the conventional English names as suggested in the Subversion documentation, but of course your usage may vary.

  Specify the patterns used to recognise these paths in the three boxes provided. The patterns will be matched case-insensitively, but you must specify them in lower case. Wild cards `*` and `?` will work as usual, and you

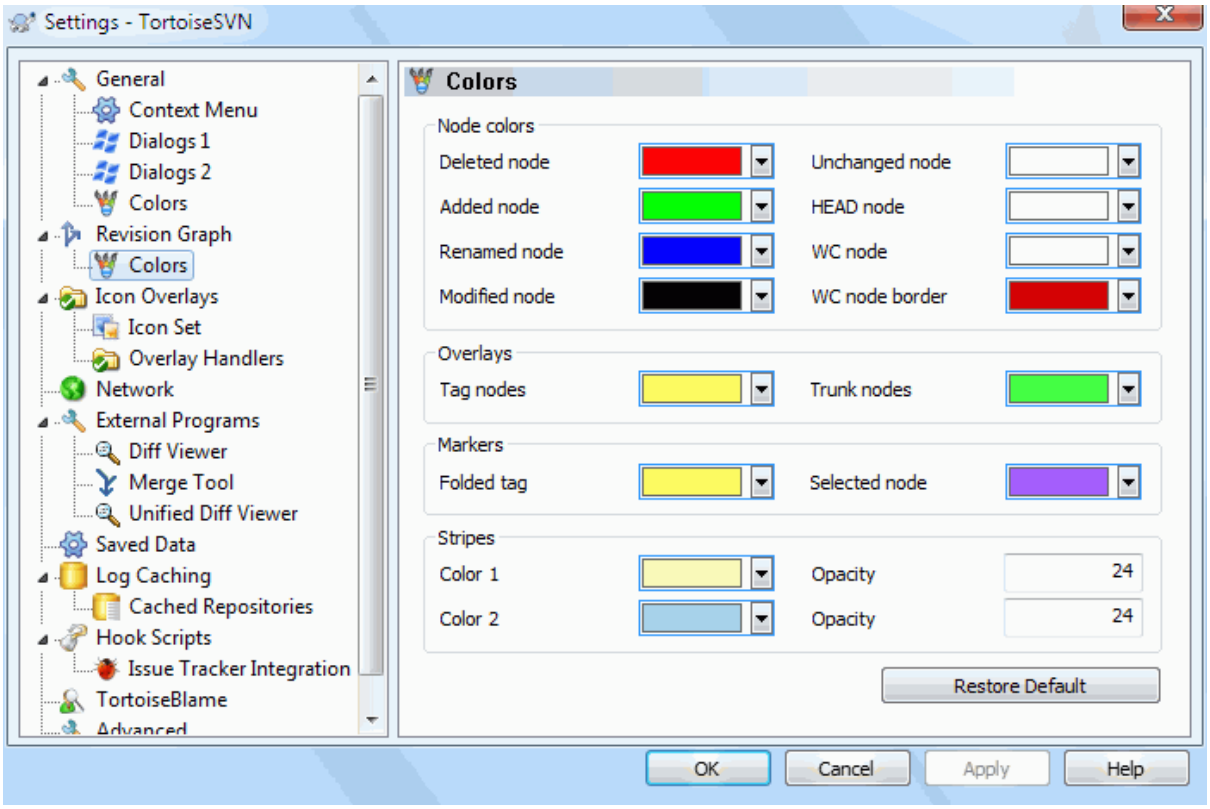
can use `;` to separate multiple patterns. Do not include any extra white space as it will be included in the matching specification.

Commit tag detection

Please note that these patterns are also used to detect commits to a tag, not just for the revision graph.

Zmeniť Farby
: Colors are used in the revision graph to indicate the node type, i.e. whether a node is added, deleted, renamed. In order to help pick out node classifications, you can allow the revision graph to blend colors to give an indication of both node type and classification. If the box is checked, blending is used. If the box is unchecked, color is used to indicate node type only. Use the color selection dialog to allocate the specific colors used.

4.31.2.1. Farby grafu revízií



Obrázok 4.79. The Settings Dialog, Revision Graph Colors Page

This page allows you to configure the colors used. Note that the color specified here is the solid color. Most nodes are colored using a blend of the node type color, the background color and optionally the classification color.

Vymazaný uzol
: Items which have been deleted and not copied anywhere else in the same revision.

Pridaný uzlol
: Items newly added, or copied (add with history).

Premenovaný uzol
: Items deleted from one location and added in another in the same revision.

Zmenený Uzol
: Simple modifications without any add or delete.

Nezmenený Uzol
: May be used to show the revision used as the source of a copy, even when no change (to the item being graphed) took place in that revision.

Hlavný (HEAD) uzlol
: Aktuálna hlavná (HEAD) revízia v úložisku.

WC Node
: If you opt to show an extra node for your modified working copy, attached to its last-commit revision on the graph, use this color.

WC Node Border
: If you opt to show whether the working copy is modified, use this color border on the WC node when modifications are found.

Uzly typu značka
: Uzly klasifikované ako značky môžu byť zmiešané s touto farbou.

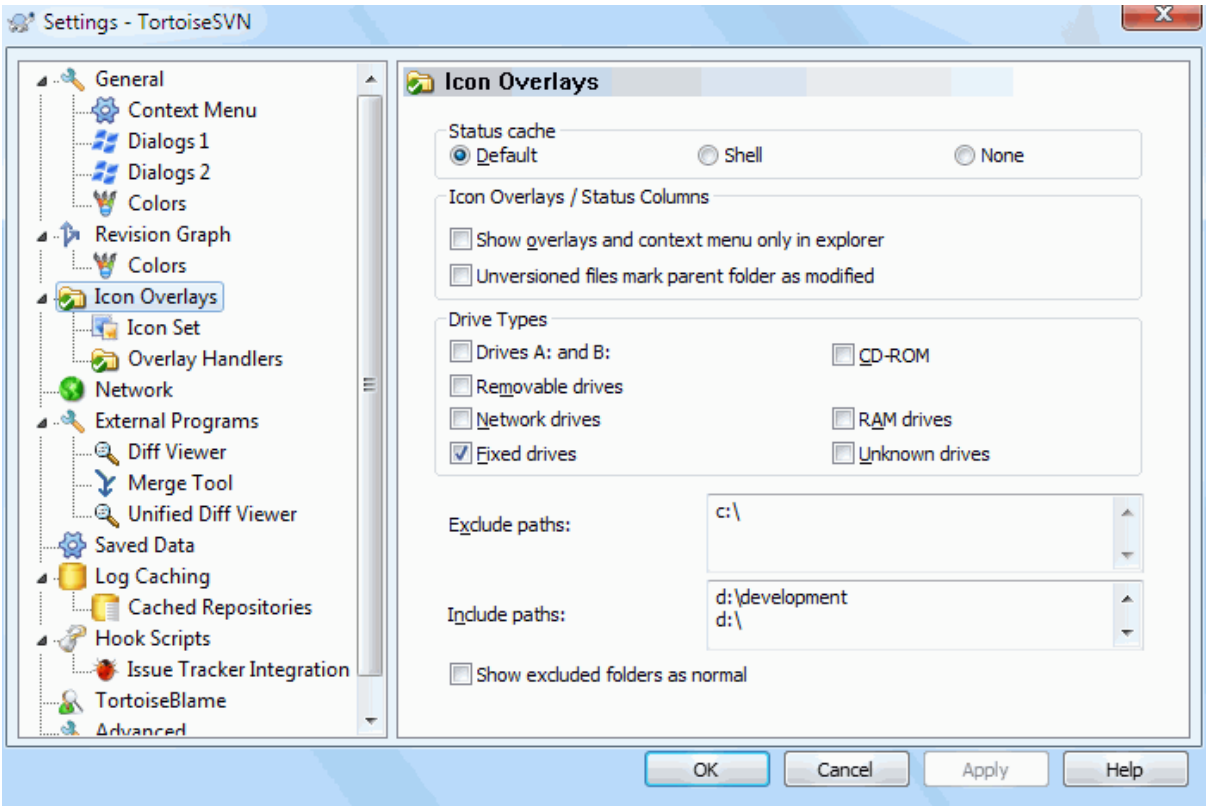
Uzly kmeňa
: Uzly klasifikované ako kmeň môžu mať primiešanú túto farbu.

Folded Tag Markers
: If you use tag folding to save space, tags are marked on the copy source using a block in this color.

Vybraná značka uzlu
: When you left click on a node to select it, the marker used to indicate selection is a block in this color.

Prúžky
: These colors are used when the graph is split into sub-trees and the background is colored in alternating stripes to help pick out the separate trees.

4.31.3. Nastavenia prekrývania ikon



Obrázok 4.80. The Settings Dialog, Icon Overlays Page

This page allows you to choose the items for which TortoiseSVN will display icon overlays.

Since it takes quite a while to fetch the status of a working copy, TortoiseSVN uses a cache to store the status so the explorer doesn't get hogged too much when showing the overlays. You can choose which type of cache TortoiseSVN should use according to your system and working copy size here:

Predvolené
: Caches all status information in a separate process (`TSVNCache.exe`). That process watches all drives for changes and fetches the status again if files inside a working copy get modified. The process runs with the least possible priority so other programs don't get hogged because of it. That also means that the status information is not *real time* but it can take a few seconds for the overlays to change.

  Advantage: the overlays show the status recursively, i.e. if a file deep inside a working copy is modified, all folders up to the working copy root will also show the modified overlay. And since the process can send notifications to the shell, the overlays on the left tree view usually change too.

  Disadvantage: the process runs constantly, even if you're not working on your projects. It also uses around 10-50 MB of RAM depending on number and size of your working copies.

Šel
: Caching is done directly inside the shell extension dll, but only for the currently visible folder. Each time you navigate to another folder, the status information is fetched again.

  Advantage: needs only very little memory (around 1 MB of RAM) and can show the status in *real time*.

  Disadvantage: Since only one folder is cached, the overlays don't show the status recursively. For big working copies, it can take more time to show a folder in explorer than with the default cache. Also the mime-type column is not available.

Žiadne
: With this setting, the TortoiseSVN does not fetch the status at all in Explorer. Because of that, files don't get an overlay and folders only get a 'normal' overlay if they're versioned. No other overlays are shown, and no extra columns are available either.

  Advantage: uses absolutely no additional memory and does not slow down the Explorer at all while browsing.

  Disadvantage: Status information of files and folders is not shown in Explorer. To see if your working copies are modified, you have to use the “Check for modifications” dialog.

By default, overlay icons and context menus will appear in all open/save dialogs as well as in Windows Explorer. If you want them to appear *only* in Windows Explorer, check the Show overlays and context menu only in explorer box.

You can force the status cache to *None* for elevated processes by checking the Disable status cache for elevated processes box. This is useful if you want to prevent another `TSVNCache.exe` process getting created with elevated privileges.

You can also choose to mark folders as modified if they contain unversioned items. This could be useful for reminding you that you have created new files which are not yet versioned. This option is only available when you use the *default* status cache option (see below).

If you have files in the `ignore-on-commit` changelist, you can chose to make those files not propagate their status to the parent folder. That way if only files in that changelist are modified, the parent folder still shows the unmodified overlay icon.

The next group allows you to select which classes of storage should show overlays. By default, only hard drives are selected. You can even disable all icon overlays, but where's the fun in that?

Network drives can be very slow, so by default icons are not shown for working copies located on network shares.

USB Flash drives appear to be a special case in that the drive type is identified by the device itself. Some appear as fixed drives, and some as removable drives.

The Exclude Paths are used to tell TortoiseSVN those paths for which it should *not* show icon overlays and status columns. This is useful if you have some very big working copies containing only libraries which you won't change at all and therefore don't need the overlays, or if you only want TortoiseSVN to look in specific folders.

Any path you specify here is assumed to apply recursively, so none of the child folders will show overlays either. If you want to exclude *only* the named folder, append `?` after the path.

The same applies to the Include Paths. Except that for those paths the overlays are shown even if the overlays are disabled for that specific drive type, or by an exclude path specified above.

Users sometimes ask how these three settings interact. For any given path check the include and exclude lists, seeking upwards through the directory structure until a match is found. When the first match is found, obey that include or exclude rule. If there is a conflict, a single directory spec takes precedence over a recursive spec, then inclusion takes precedence over exclusion.

An example will help here:

```
Exclude:
C:
C:\develop\?
C:\develop\tsvn\obj
C:\develop\tsvn\bin

Include:
C:\develop
```

These settings disable icon overlays for the C: drive, except for `c:\develop`. All projects below that directory will show overlays, except the `c:\develop` folder itself, which is specifically ignored. The high-churn binary folders are also excluded.

TSVNCache.exe also uses these paths to restrict its scanning. If you want it to look only in particular folders, disable all drive types and include only the folders you specifically want to be scanned.

Exclude `SUBST` Drives

It is often convenient to use a `SUBST` drive to access your working copies, e.g. using the command

```
subst T: C:\TortoiseSVN\trunk\doc
```

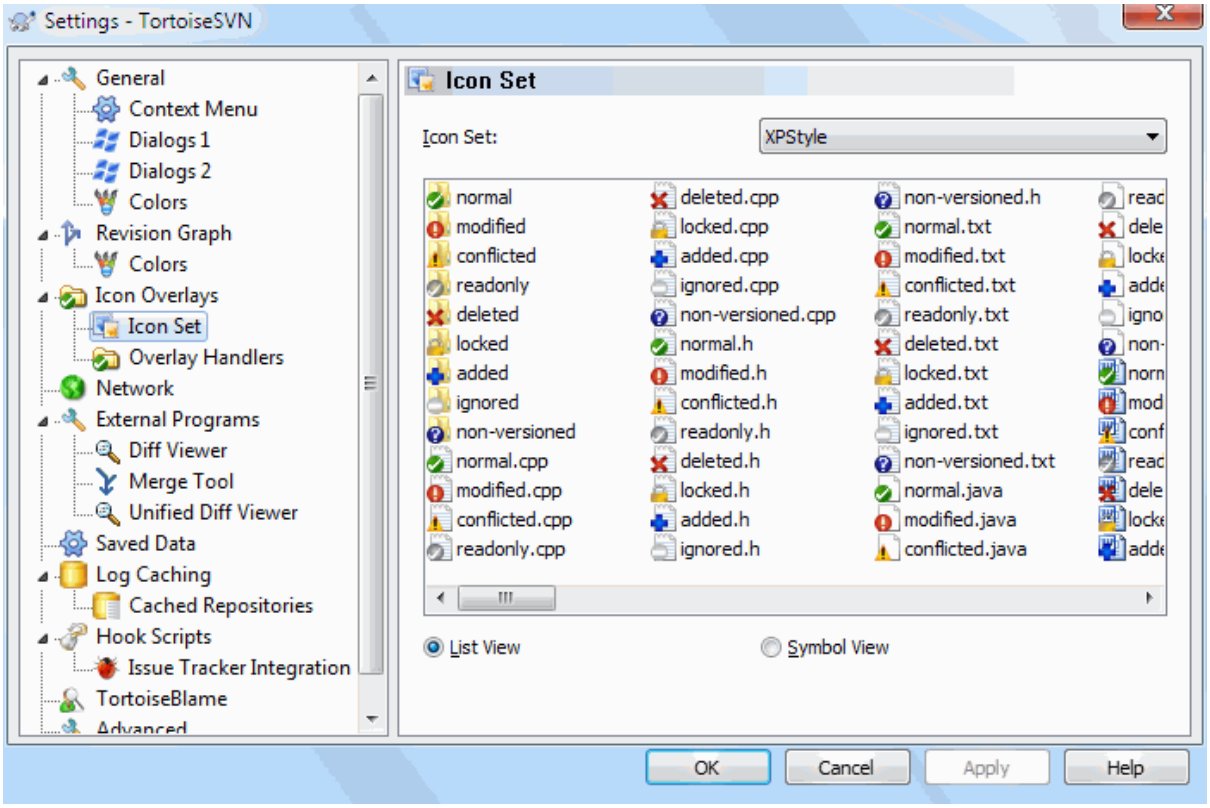
However this can cause the overlays not to update, as `TSVNCache` will only receive one notification when a file changes, and that is normally for the original path. This means that your overlays on the `subst` path may never be updated.

An easy way to work around this is to exclude the original path from showing overlays, so that the overlays show up on the `subst` path instead.

Sometimes you will exclude areas that contain working copies, which saves TSVNCache from scanning and monitoring for changes, but you still want a visual indication that a folder contains a working copy. The Show excluded root folders as 'normal' checkbox allows you to do this. With this option, working copy root folders in any excluded area (drive type not checked, or specifically excluded) will show up as normal and up-to-date, with a green check mark. This reminds you that you are looking at a working copy, even though the folder overlays may not be correct. Files do not get an overlay at all. Note that the context menus still work, even though the overlays are not shown.

As a special exception to this, drives `A:` and `B:` are never considered for the Show excluded folders as 'normal' option. This is because Windows is forced to look on the drive, which can result in a delay of several seconds when starting Explorer, even if your PC does have a floppy drive.

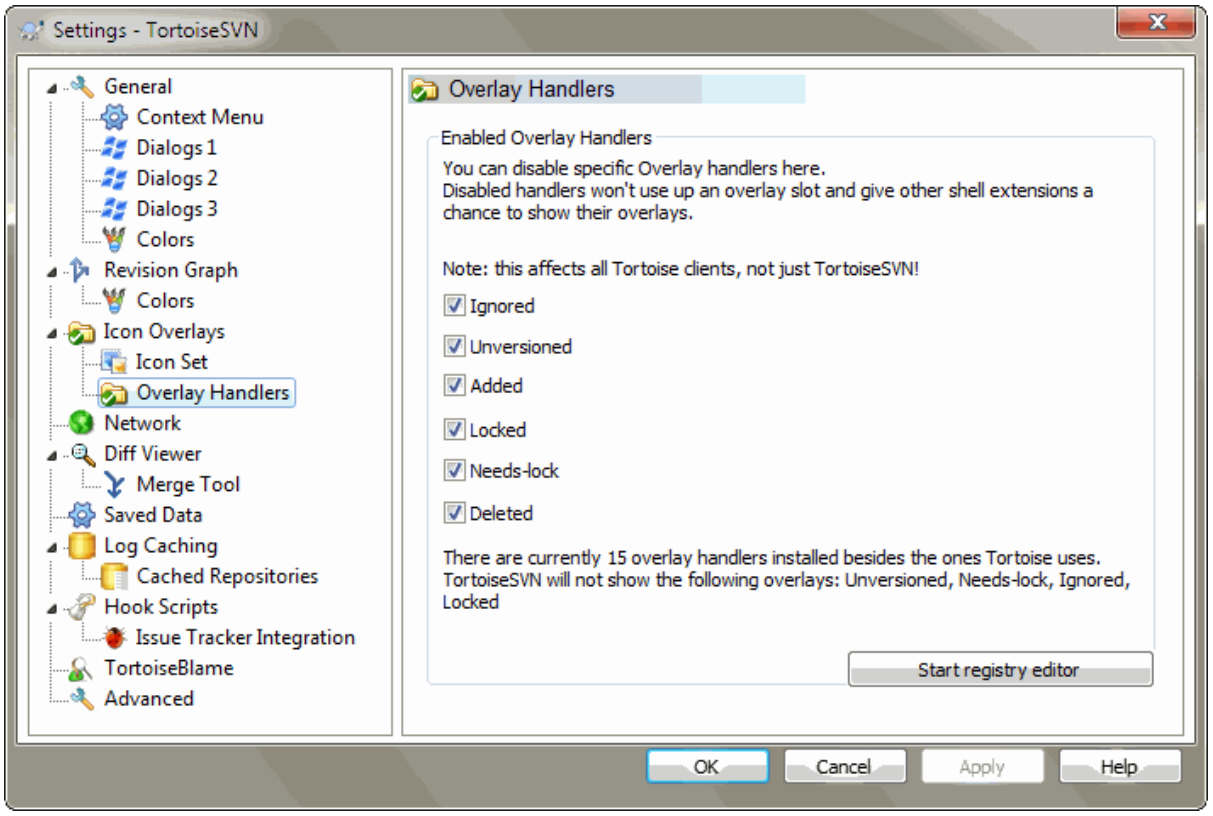
4.31.3.1. Nastavenie sady ikon



Obrázok 4.81. The Settings Dialog, Icon Set Page

You can change the overlay icon set to the one you like best. Note that if you change overlay set, you may have to restart your computer for the changes to take effect.

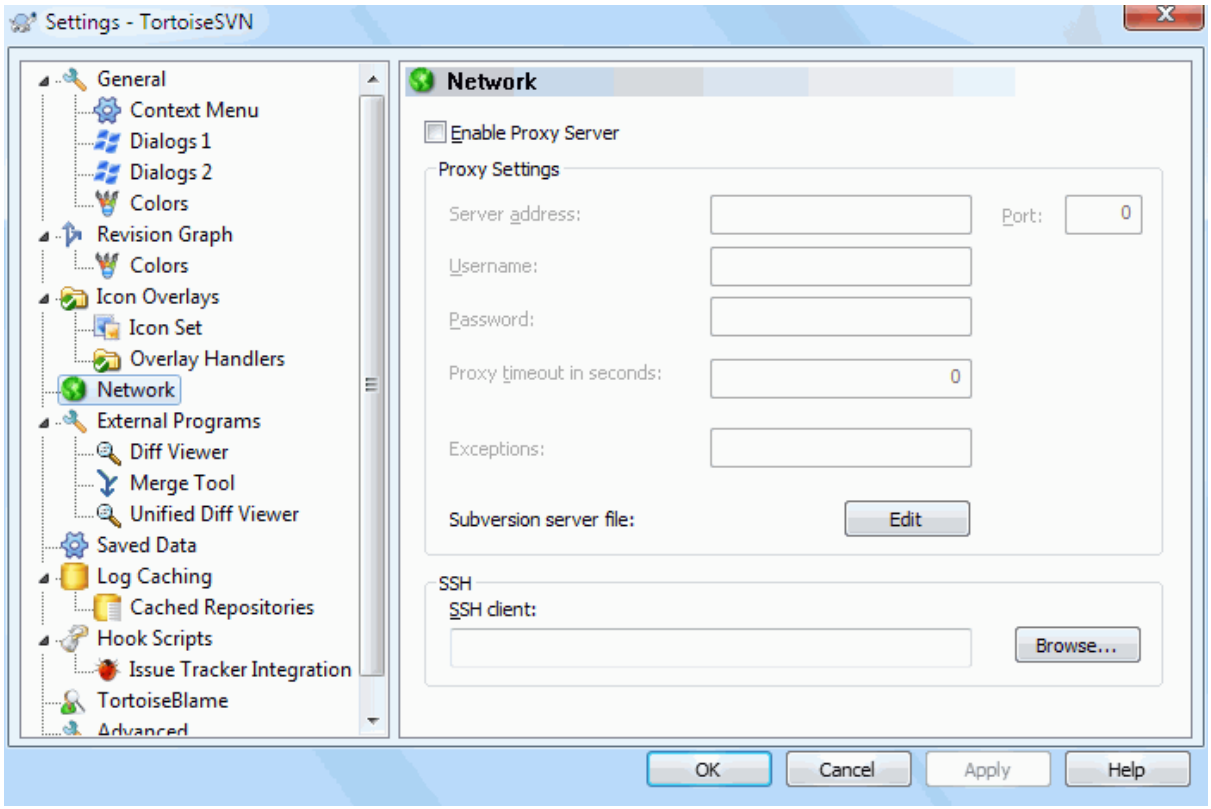
4.31.3.2. Povolené prekrývajúce popisovače



Obrázok 4.82. The Settings Dialog, Icon Handlers Page

Because the number of overlays available is severely restricted, you can choose to disable some handlers to ensure that the ones you want will be loaded. Because TortoiseSVN uses the common TortoiseOverlays component which is shared with other Tortoise clients (e.g. TortoiseCVS, TortoiseHg) this setting will affect those clients too.

4.31.4. Sieťové nastavnia



Obrázok 4.83. The Settings Dialog, Network Page

Here you can configure your proxy server, if you need one to get through your company's firewall.

If you need to set up per-repository proxy settings, you will need to use the Subversion `servers` file to configure this. Use Edit to get there directly. Consult the *Runtime Configuration Area* [http://svnbook.red-bean.com/en/1.8/svn.advanced.confarea.html] for details on how to use this file.

You can also specify which program TortoiseSVN should use to establish a secure connection to a svn+ssh repository. We recommend that you use TortoisePlink.exe. This is a version of the popular Plink program, and is included with TortoiseSVN, but it is compiled as a Windowless app, so you don't get a DOS box popping up every time you authenticate.

You must specify the full path to the executable. For TortoisePlink.exe this is the standard TortoiseSVN bin directory. Use the Browse button to help locate it. Note that if the path contains spaces, you must enclose it in quotes, e.g.

```
"C:\Program Files\TortoiseSVN\bin\TortoisePlink.exe"
```

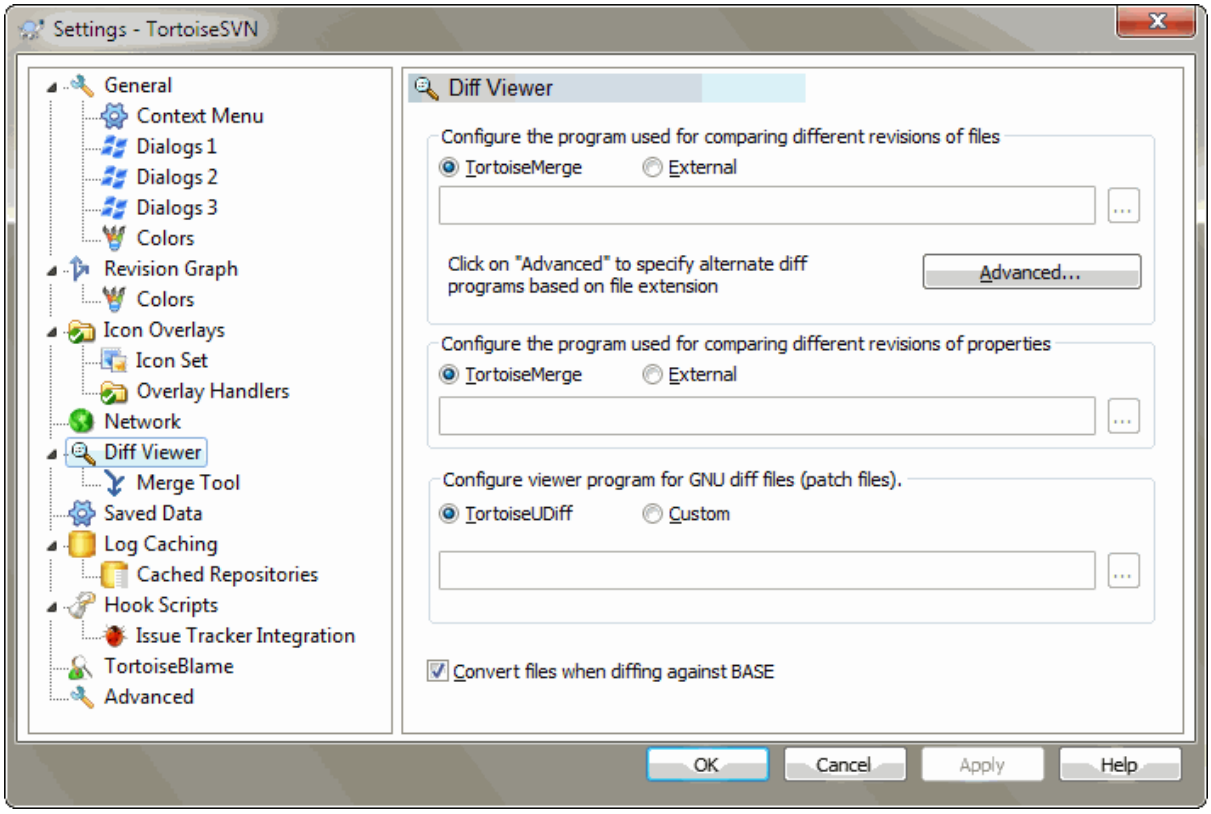
One side-effect of not having a window is that there is nowhere for any error messages to go, so if authentication fails you will simply get a message saying something like “Unable to write to standard output”. For this reason we recommend that you first set up using standard Plink. When everything is working, you can use TortoisePlink with exactly the same parameters.

TortoisePlink does not have any documentation of its own because it is just a minor variant of Plink. Find out about command line parameters from the *PuTTY website* [https://www.chiark.greenend.org.uk/~sgtatham/putty/].

To avoid being prompted for a password repeatedly, you might also consider using a password caching tool such as Pageant. This is also available for download from the PuTTY website.

Finally, setting up SSH on server and clients is a non-trivial process which is beyond the scope of this help file. However, you can find a guide in the TortoiseSVN FAQ listed under *Subversion/TortoiseSVN SSH How-To* [https://tortoisesvn.net/ssh_howto.html].

4.31.5. Nastavnie externých programov



Obrázok 4.84. The Settings Dialog, Diff Viewer Page

Here you can define your own diff/merge programs that TortoiseSVN should use. The default setting is to use TortoiseMerge which is installed alongside TortoiseSVN.

Read Oddiel 4.11.6, “Externé Porovnávacie/Zlučovacie Nástroje” for a list of some of the external diff/merge programs that people are using with TortoiseSVN.

4.31.5.1. Prezerač rozdielov

An external diff program may be used for comparing different revisions of files. The external program will need to obtain the filenames from the command line, along with any other command line options. TortoiseSVN uses substitution parameters prefixed with %. When it encounters one of these it will substitute the appropriate value. The order of the parameters will depend on the Diff program you use.

%base
: The original file without your changes

%bname
: The window title for the base file

%nqbname
: The window title for the base file, without quotes

%mine
: Your own file, with your changes

%yname
The window title for your file

%nqyname
The window title for your file, without quotes

%burl
The URL of the original file, if available

%nqburl
The URL of the original file, if available, without quotes

%yurl
The URL of the second file, if available

%nqyurl
The URL of the second file, if available, without quotes

%brev
The revision of the original file, if available

%nqbrev
The revision of the original file, if available, without quotes

%yrev
The revision of the second file, if available

%nqyrev
The revision of the second file, if available, without quotes

%peg
The peg revision, if available

%nqpeg
The peg revision, if available, without quotes

%fname
The name of the file. This is an empty string if two different files are diffed instead of two states of the same file.

%nqfname
The name of the file, without quotes

The window titles are not pure filenames. TortoiseSVN treats that as a name to display and creates the names accordingly. So e.g. if you're doing a diff from a file in revision 123 with a file in your working copy, the names will be `filename : revision 123` and `filename : working copy`.

For example, with ExamDiff Pro:

```
C:\Path-To\ExamDiff.exe %base %mine --left_display_name:%bname
                                    --right_display_name:%yname
```

or with KDiff3:

```
C:\Path-To\kdiff3.exe %base %mine --L1 %bname --L2 %yname
```

or with WinMerge:

```
C:\Path-To\WinMerge.exe -e -ub -dl %bname -dr %yname %base %mine
```

or with Araxis:

```
C:\Path-To\compare.exe /max /wait /title1:%bname /title2:%yname
                       %base %mine
```

or with UltraCompare:

```
C:\Path-To\uc.exe %base %mine -title1 %bname -title2 %yname
```

or with DiffMerge:

```
C:\Path-To\DiffMerge.exe -nosplash -t1=%bname -t2=%yname %base %mine
```

If you use the `svn:keywords` property to expand keywords, and in particular the *revision* of a file, then there may be a difference between files which is purely due to the current value of the keyword. Also if you use `svn:eol-style = native` the BASE file will have pure `LF` line endings whereas your file will have `CR-LF` line endings. TortoiseSVN will normally hide these differences automatically by first parsing the BASE file to expand keywords and line endings before doing the diff operation. However, this can take a long time with large files. If Convert files when diffing against BASE is unchecked then TortoiseSVN will skip pre-processing the files.

You can also specify a different diff tool to use on Subversion properties. Since these tend to be short simple text strings, you may want to use a simpler more compact viewer.

If you have configured an alternate diff tool, you can access TortoiseMerge *and* the third party tool from the context menus. Context menu → Diff uses the primary diff tool, and **Shift**+ Context menu → Diff uses the secondary diff tool.

At the bottom of the dialog you can configure a viewer program for unified-diff files (patch files). No parameters are required. The Default setting is to use TortoiseUDiff which is installed alongside TortoiseSVN, and colour-codes the added and removed lines.

Since Unified Diff is just a text format, you can use your favourite text editor if you prefer.

4.31.5.2. Spájací nástroj

An external merge program used to resolve conflicted files. Parameter substitution is used in the same way as with the Diff Program.

%base
: the original file without your or the others changes

%bname
: The window title for the base file

%nqbname
: The window title for the base file, without quotes

%mine
: your own file, with your changes

%yname
: The window title for your file

%nqyname
: The window title for your file, without quotes

%theirs
: the file as it is in the repository

%tname
: The window title for the file in the repository

%nqtname
: The window title for the file in the repository, without quotes

%merged
: the conflicted file, the result of the merge operation

%mname
: The window title for the merged file

%nqmname
: The window title for the merged file, without quotes

%fname
: The name of the conflicted file

%nqfname
: The name of the conflicted file, without quotes

For example, with Perforce Merge:

```
C:\Path-To\P4Merge.exe %base %theirs %mine %merged
```

or with KDiff3:

```
C:\Path-To\kdiff3.exe %base %mine %theirs -o %merged
                      --L1 %bname --L2 %yname --L3 %tname
```

or with Araxis:

```
C:\Path-To\compare.exe /max /wait /3 /title1:%tname /title2:%bname
                       /title3:%yname %theirs %base %mine %merged /a2
```

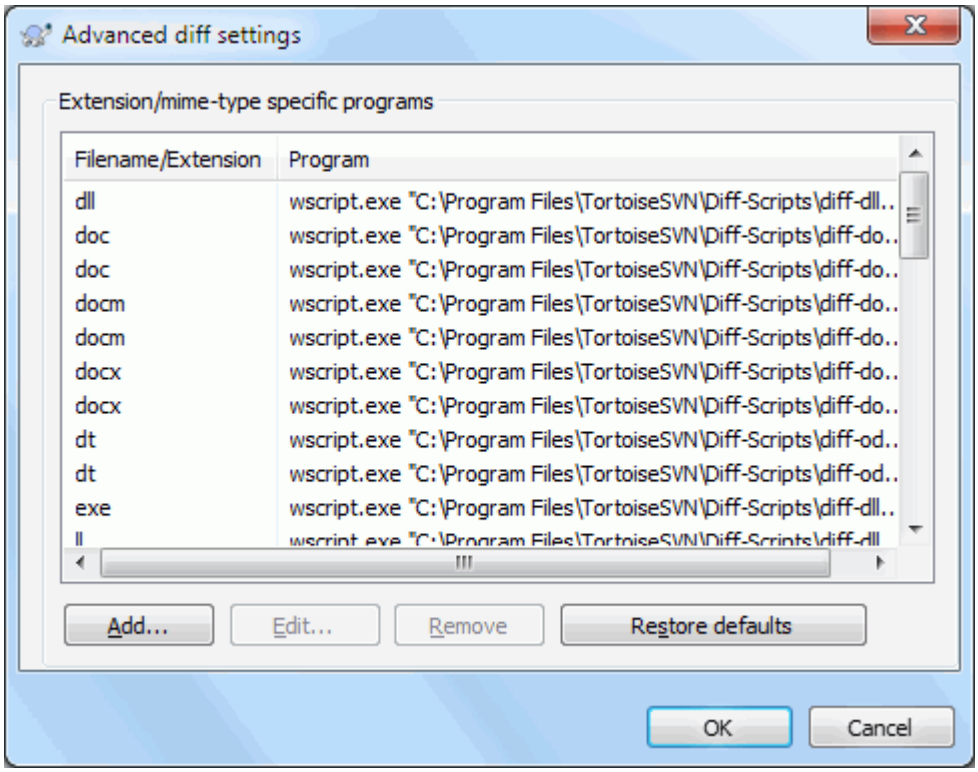
or with WinMerge (2.8 or later):

```
C:\Path-To\WinMerge.exe %merged
```

or with DiffMerge:

```
C:\Path-To\DiffMerge.exe -caption=%mname -result=%merged -merge
      -nosplash -t1=%yname -t2=%bname -t3=%tname %mine %base %theirs
```

4.31.5.3. Rozšírené nastavenia rozdiely/zlúčenie

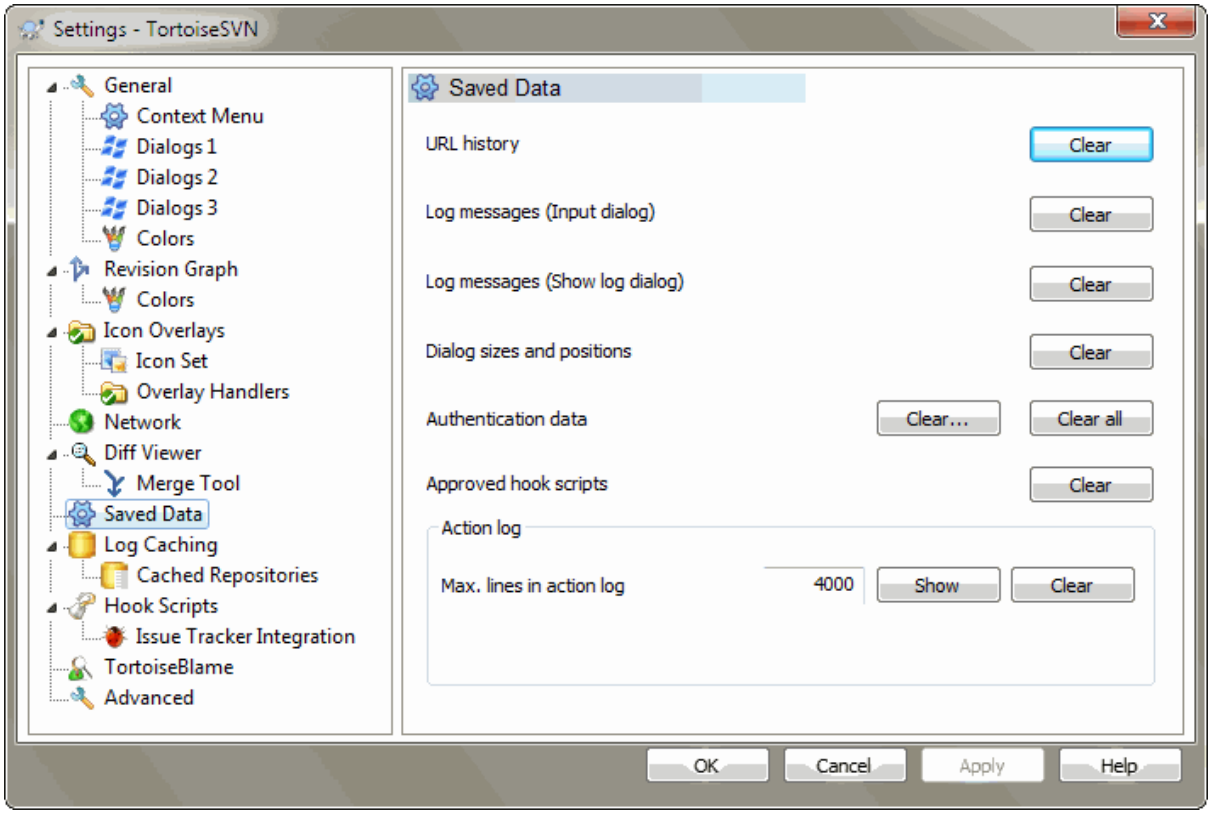


Obrázok 4.85. The Settings Dialog, Diff/Merge Advanced Dialog

In the advanced settings, you can define a different diff and merge program for every file extension. For instance you could associate Photoshop as the “Diff” Program for `.jpg` files :-) You can also associate the `svn:mime-type` property with a diff or merge program.

To associate using a file extension, you need to specify the extension. Use `.bmp` to describe Windows bitmap files. To associate using the `svn:mime-type` property, specify the mime type, including a slash, for example `text/xml`.

4.31.6. Saved Data Settings



Obrázok 4.86. The Settings Dialog, Saved Data Page

For your convenience, TortoiseSVN saves many of the settings you use, and remembers where you have been lately. If you want to clear out that cache of data, you can do it here.

História URL
: Whenever you checkout a working copy, merge changes or use the repository browser, TortoiseSVN keeps a record of recently used URLs and offers them in a combo box. Sometimes that list gets cluttered with outdated URLs so it is useful to flush it out periodically.

  If you want to remove a single item from one of the combo boxes you can do that in-place. Just click on the arrow to drop the combo box down, move the mouse over the item you want to remove and type **Shift+Del**.

Správy denníka (vstupný dialóg)
: TortoiseSVN stores recent commit log messages that you enter. These are stored per repository, so if you access many repositories this list can grow quite large.

Správy denníka (Zobrazenie denníka)
: TortoiseSVN caches log messages fetched by the Show Log dialog to save time when you next show the log. If someone else edits a log message and you already have that message cached, you will not see the change until you clear the cache. Log message caching is enabled on the Log Cache tab.

Veľkosť a poloha dialogových okien
: Many dialogs remember the size and screen position that you last used.

Auhentifikáčné data
: When you authenticate with a Subversion server, the username and password are cached locally so you don't have to keep entering them. You may want to clear this for security reasons, or because you want to access the repository under a different username ... does John know you are using his PC?

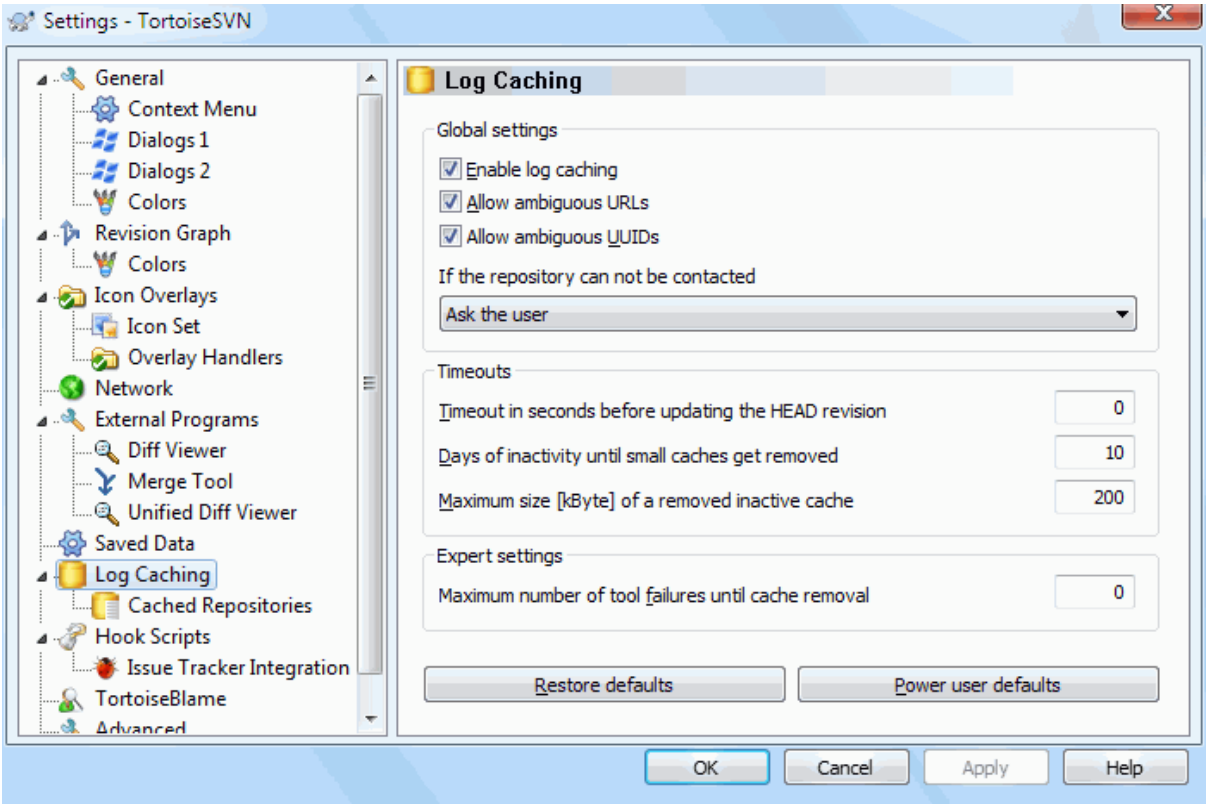
If you want to clear authentication data for one particular server only, use the Clear... instead of the Clear all button.

Denník úkonov
TortoiseSVN keeps a log of everything written to its progress dialogs. This can be useful when, for example, you want to check what happened in a recent update command.

The log file is limited in length and when it grows too big the oldest content is discarded. By default 4000 lines are kept, but you can customize that number.

From here you can view the log file content, and also clear it.

4.31.7. Zásobník denníka



Obrázok 4.87. The Settings Dialog, Log Cache Page

This dialog allows you to configure the log caching feature of TortoiseSVN, which retains a local copy of log messages and changed paths to avoid time-consuming downloads from the server. Using the log cache can dramatically speed up the log dialog and the revision graph. Another useful feature is that the log messages can still be accessed when offline.

Enable log caching
Enables log caching whenever log data is requested. If checked, data will be retrieved from the cache when available, and any messages not in the cache will be retrieved from the server and added to the cache.

If caching is disabled, data will always be retrieved directly from the server and not stored locally.

Allow ambiguous URLs
Occasionally you may have to connect to a server which uses the same URL for all repositories. Older versions of `svnbridge` would do this. If you need to access such repositories you will have to check this option. If you don't, leave it unchecked to improve performance.

Allow ambiguous UUIDs
: Some hosting services give all their repositories the same UUID. You may even have done this yourself by copying a repository folder to create a new one. For all sorts of reasons this is a bad idea - a UUID should be *unique*. However, the log cache will still work in this situation if you check this box. If you don't need it, leave it unchecked to improve performance.

Ak s úložiskom nemôže byť nadviazané spojenie
: If you are working offline, or if the repository server is down, the log cache can still be used to supply log messages already held in the cache. Of course the cache may not be up-to-date, so there are options to allow you to select whether this feature should be used.

  When log data is being taken from the cache without contacting the server, the dialog using those message will show the offline state in its title bar.

Timeout before updating the HEAD revision
: When you invoke the log dialog you will normally want to contact the server to check for any newer log messages. If the timeout set here is non-zero then the server will only be contacted when the timeout has elapsed since the last time contact. This can reduce server round-trips if you open the log dialog frequently and the server is slow, but the data shown may not be completely up-to-date. If you want to use this feature we suggest using a value of 300 (5 minutes) as a compromise.

Days of inactivity until small caches get removed
: If you browse around a lot of repositories you will accumulate a lot of log caches. If you're not actively using them, the cache will not grow very big, so TortoiseSVN purges them after a set time by default. Use this item to control cache purging.

Maximum size of removed inactive caches
: Larger caches are more expensive to reacquire, so TortoiseSVN only purges small caches. Fine tune the threshold with this value.

Maximum number of tool failures before cache removal
: Occasionally something goes wrong with the caching and causes a crash. If this happens the cache is normally deleted automatically to prevent a recurrence of the problem. If you use the less stable nightly build you may opt to keep the cache anyway.

4.31.7.1. Úložisko v zásobníku

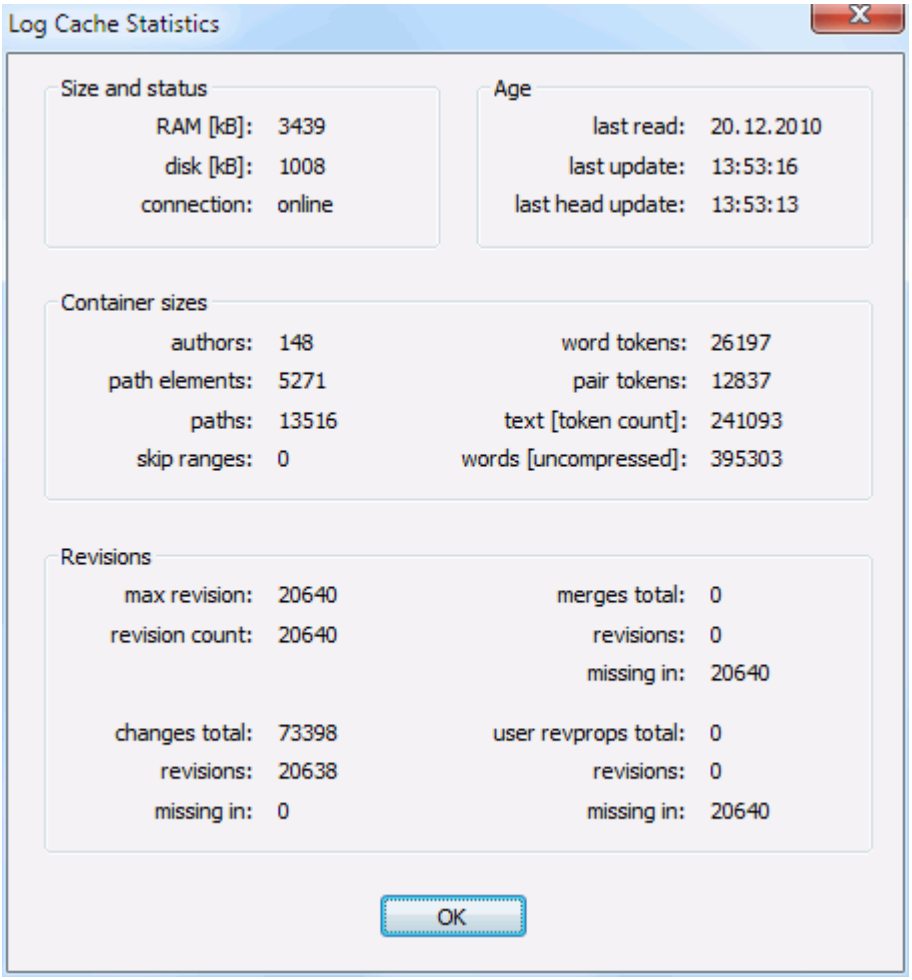
On this page you can see a list of the repositories that are cached locally, and the space used for the cache. If you select one of the repositories you can then use the buttons underneath.

Click on the Update to completely refresh the cache and fill in any holes. For a large repository this could be very time consuming, but useful if you are about to go offline and want the best available cache.

Click on the Export button to export the entire cache as a set of CSV files. This could be useful if you want to process the log data using an external program, although it is mainly useful to the developers.

Click on Delete to remove all cached data for the selected repositories. This does not disable caching for the repository so the next time you request log data, a new cache will be created.

4.31.7.2. Štatistiky zásobnika denníka



Obrázok 4.88. The Settings Dialog, Log Cache Statistics

Click on the Details button to see detailed statistics for a particular cache. Many of the fields shown here are mainly of interest to the developers of TortoiseSVN, so they are not all described in detail.

RAM
: The amount of memory required to service this cache.

Disk
: The amount of disk space used for the cache. Data is compressed, so disk usage is generally fairly modest.

Pripojenie
: Shows whether the repository was available last time the cache was used.

Posledná aktualizácia
: The last time the cache content was changed.

Last head update
: The last time we requested the HEAD revision from the server.

Authori
: The number of different authors with messages recorded in the cache.

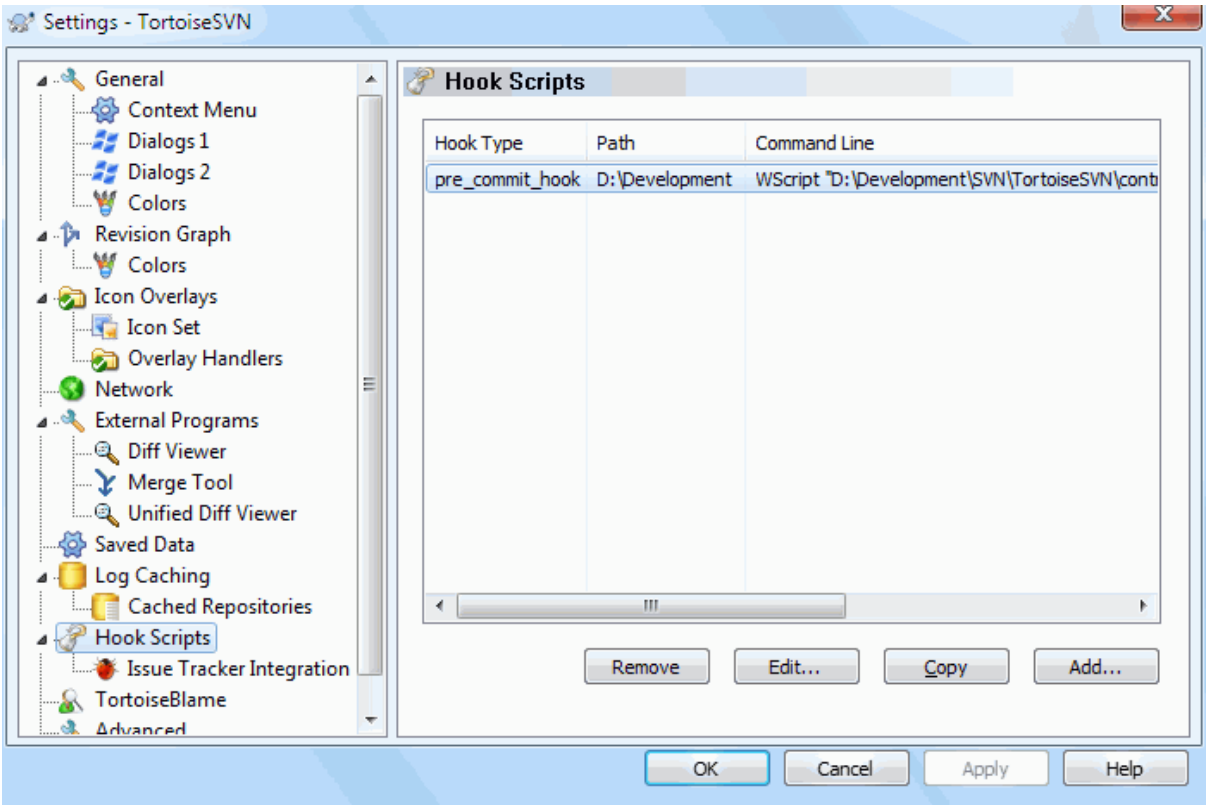
Cesty
: The number of paths listed, as you would see using `svn log -v`.

Skip ranges
: The number of revision ranges which we have not fetched, simply because they haven't been requested. This is a measure of the number of holes in the cache.

Max revízia
: The highest revision number stored in the cache.

Počet revízií
: The number of revisions stored in the cache. This is another measure of cache completeness.

4.31.8. Klientské (pripnuté) skripty

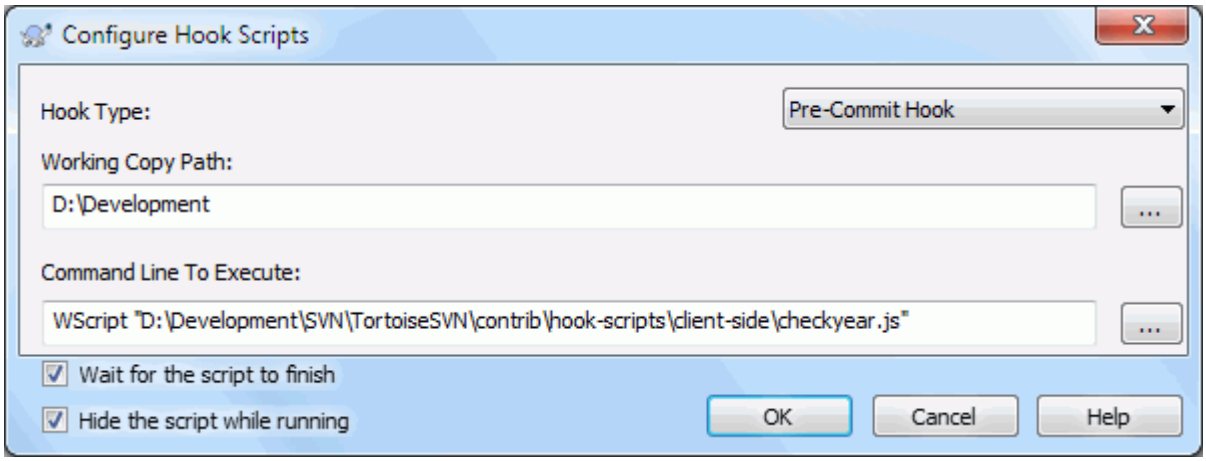


Obrázok 4.89. The Settings Dialog, Hook Scripts Page

This dialog allows you to set up hook scripts which will be executed automatically when certain Subversion actions are performed. As opposed to the hook scripts explained in Oddiel 3.3, “Serverovské pripnuté (hook) skripty”, these scripts are executed locally on the client.

One application for such hooks might be to call a program like `SubWCRev.exe` to update version numbers after a commit, and perhaps to trigger a rebuild.

Note that you can also specify such hook scripts using special properties on your working copy. See the section Oddiel 4.18.2, “TortoiseSVN Vlastnosti projektu” for details.



Obrázok 4.90. The Settings Dialog, Configure Hook Scripts

To add a new hook script, simply click Add and fill in the details.

There are currently these types of hook script available

Start-commit
: Je zavolaný pred zobrazením odovzdávacieho dialógu. Môžete ho chcieť použiť ako skript meniaci verziované súbory a ovplyvňúci zoznam súborov na odovzdanie, či správu denníka. Avšak mali by ste mať na pamäti, že kedže je skript volaný v rannej fáze odovydania, plný zoznam objektov na odovzdanie nie je ešte dostupný.

Manual Pre-commit
: If this is specified, the commit dialog shows a button Run Hook which when clicked runs the specified hook script. The hook script receives a list of all checked files and folders and the commit message if there was one entered.

Check-commit
: Called after the user clicks OK in the commit dialog, and before the commit dialog closes. This hook gets a list of all the checked files. If the hook returns an error, the commit dialog stays open.

  If the returned error message contains paths on newline separated lines, those paths will get selected in the commit dialog after the error message is shown.

Pred odovzdaním
: Volaný potom ako uživateľ v odovzdávom dialógu stlačí OK, ale pred samotným odovzdávaním. Toto pripnutie má presný zoznam toho, čo bude odovzdané.

Po odovzdaní
: Called after the commit finishes successfully.

Start-update
: Tento skript je volaný predtím ako je zobranený dialóg uaktualozovania na revíziu.

Pre-update
: Volaný predtím ako Subversion začne aktualizácu alebo prepnutie.

Post-update
: Zavolaný po dokončení aktualizácie, prepnutia alebo získania (či už bolo úspešná, alebo nie).

Pred pripojením
: Called before an attempt to contact the repository. Called at most once in five minutes.

Pre-lock
: Called before an attempt to lock a file.

Post-lock
: Called after a file has been locked.

A hook is defined for a particular working copy path. You only need to specify the top level path; if you perform an operation in a sub-folder, TortoiseSVN will automatically search upwards for a matching path.

Next you must specify the command line to execute, starting with the path to the hook script or executable. This could be a batch file, an executable file or any other file which has a valid windows file association, e.g. a perl script. Note that the script must not be specified using a UNC path as Windows shell execute will not allow such scripts to run due to security restrictions.

Príkazový riadok môže obsahovať viacero prametrov, ktoré TortoiseSVN vyplnenil . Prístupnosť paramtereov závisí od typu skriptu, ktorý je volaný.

Start-commit
: `PATHMESSAGEFILECWD`

Manual Pre-commit
: `PATHMESSAGEFILECWD`

Check-commit
: `PATHMESSAGEFILECWD`

Pred odovzdaním
: `PATHDEPTHMESSAGEFILECWD`

Po odovzdaní
: `PATHDEPTHMESSAGEFILEREVISIONERRORCWD`

Start-update
: `PATHCWD`

Pre-update
: `PATHDEPTHREVISIONCWD`

Post-update
: `PATHDEPTHREVISIONERRORCWDRESULTPATH`

Pred pripojením
: no parameters are passed to this script. You can pass a custom parameter by appending it to the script path.

Pre-lock
: `PATHLOCKFORCEMESSAGEFILEERRORCWD`

Post-lock
: `PATHLOCKFORCEMESSAGEFILEERRORCWD`

The meaning of each of these parameters is described here:

PATH
: A path to a temporary file which contains all the paths for which the operation was started in UTF-8 encoding. Each path is on a separate line in the temp file.

  Note that for operations done remotely, e.g. in the repository browser, those paths are not local paths but the urls of the affected items.

DEPTH
: The depth with which the commit/update is done.

  Možné hodnoty sú:

-2
`svn_depth_unknown`

-1
`svn_depth_exclude`

0
`svn_depth_empty`

1
`svn_depth_files`

2
`svn_depth_immediates`

3
`svn_depth_infinity`

MESSAGEFILE
Path to a file containing the log message for the commit. The file contains the text in UTF-8 encoding. After successful execution of the start-commit hook, the log message is read back, giving the hook a chance to modify it.

REVISION
Číslo revízie úložiska, na ktoré sa má uskutočniť aktualizácia, alebo po dokončení odovzdania.

LOCK
Either `true` when locking, or `false` when unlocking.

FORCE
Either `true` or `false`, depending on whether the operation was forced or not.

ERROR
Path to a file containing the error message. If there was no error, the file will be empty.

CWD
The current working directory with which the script is run. This is set to the common root directory of all affected paths.

RESULTPATH
A path to a temporary file which contains all the paths in UTF-8 encoding which were somehow touched by the operation. Each path is on a separate line in the temp file.

Note that although we have given these parameters names for convenience, you do not have to refer to those names in the hook settings. All parameters listed for a particular hook are always passed, whether you want them or not ;-)

If you want the Subversion operation to hold off until the hook has completed, check Wait for the script to finish.

Normally you will want to hide ugly DOS boxes when the script runs, so Hide the script while running is checked by default. Also you need to check this if your hook script might return an error that should stop the operation. The `force` flag can be set if the user must not proceed with the operation without running the script, i.e. the script must always run. If the `force` flag is not checked, then the user is shown a button Retry without hooks to retry the operation without running the hook script.

Sample client hook scripts can be found in the `contrib` folder in the *TortoiseSVN repository* [https://svn.code.sf.net/p/tortoisesvn/code/trunk/contrib/hook-scripts]. (Oddiel 3, “Licencia” explains how to access the repository.)

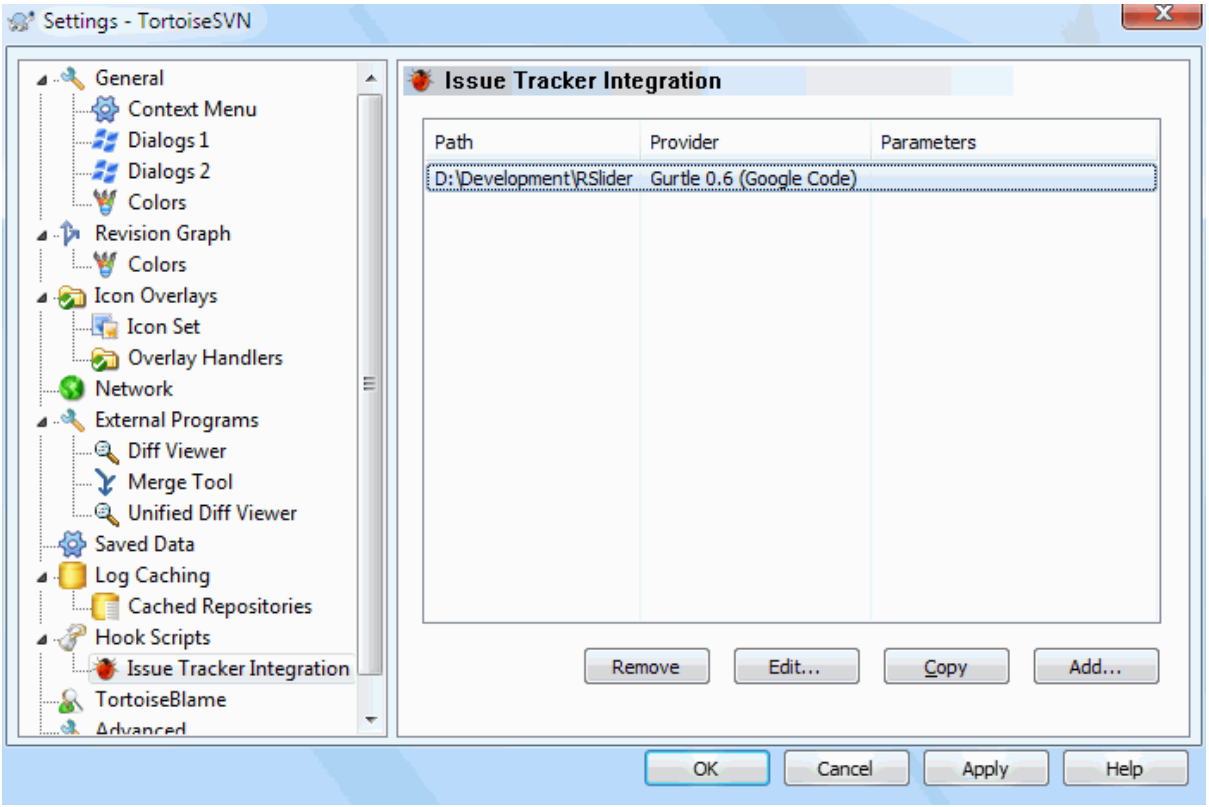
When debugging hook scripts you may want to echo progress lines to the DOS console, or insert a pause to stop the console window disappearing when the script completes. Because I/O is redirected this will not normally work. However you can redirect input and output explicitly to CON to overcome this. e.g.

```
echo Checking Status > con
pause < con > con
```

A small tool is included in the TortoiseSVN installation folder named `ConnectVPN.exe`. You can use this tool configured as a pre-connect hook to connect automatically to your VPN before TortoiseSVN tries to connect to a repository. Just pass the name of the VPN connection as the first parameter to the tool.

4.31.8.1. Issue Tracker Integration

TortoiseSVN can use a COM plugin to query issue trackers when in the commit dialog. The use of such plugins is described in Oddiel 4.29.2, “Getting Information from the Issue Tracker”. If your system administrator has provided you with a plugin, which you have already installed and registered, this is the place to specify how it integrates with your working copy.



Obrázok 4.91. The Settings Dialog, Issue Tracker Integration Page

Click on Add... to use the plugin with a particular working copy. Here you can specify the working copy path, choose which plugin to use from a drop down list of all registered issue tracker plugins, and any parameters to pass. The parameters will be specific to the plugin, but might include your user name on the issue tracker so that the plugin can query for issues which are assigned to you.

If you want all users to use the same COM plugin for your project, you can specify the plugin also with the properties `bugtraq:provideruuid`, `bugtraq:provideruuid64` and `bugtraq:providerparams`.

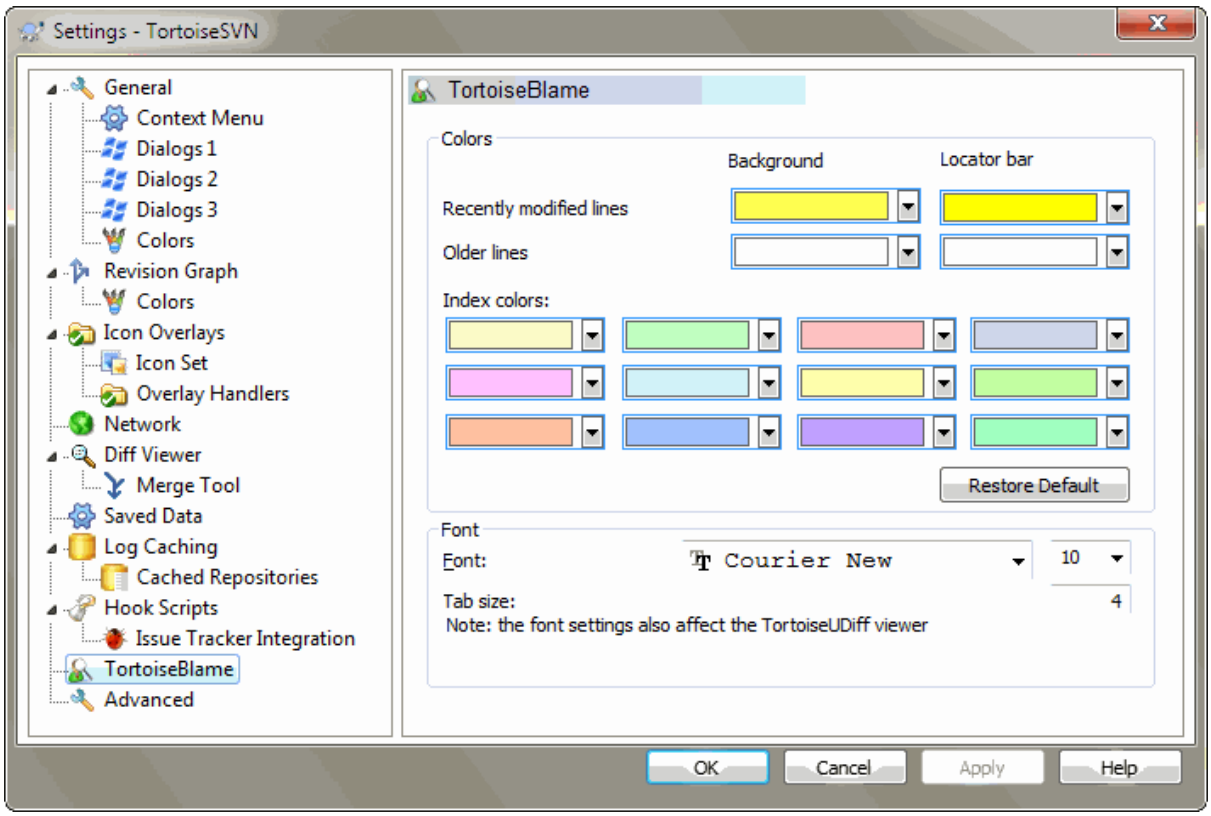
bugtraq:provideruuid
: This property specifies the COM UUID of the IBugtraqProvider, for example `{91974081-2DC7-4FB1-B3BE-0DE1C8D6CE4E}`. (This example is the UUID of the *Gurtle bugtraq provider* [http://code.google.com/p/gurtle/], which is a provider for the *Google Code* [http://code.google.com/hosting/] issue tracker.)

bugtraq:provideruuid64
: This is the same as `bugtraq:provideruuid`, but for the 64-bit version of the IBugtraqProvider.

bugtraq:providerparams
: This property specifies the parameters passed to the IBugtraqProvider.

Please check the documentation of your IBugtraqProvider plugin to find out what to specify in these two properties.

4.31.9. Nastavenia TortoiseBlame



Obrázok 4.92. The Settings Dialog, TortoiseBlame Page

The settings used by TortoiseBlame are controlled from the main context menu, not directly with TortoiseBlame itself.

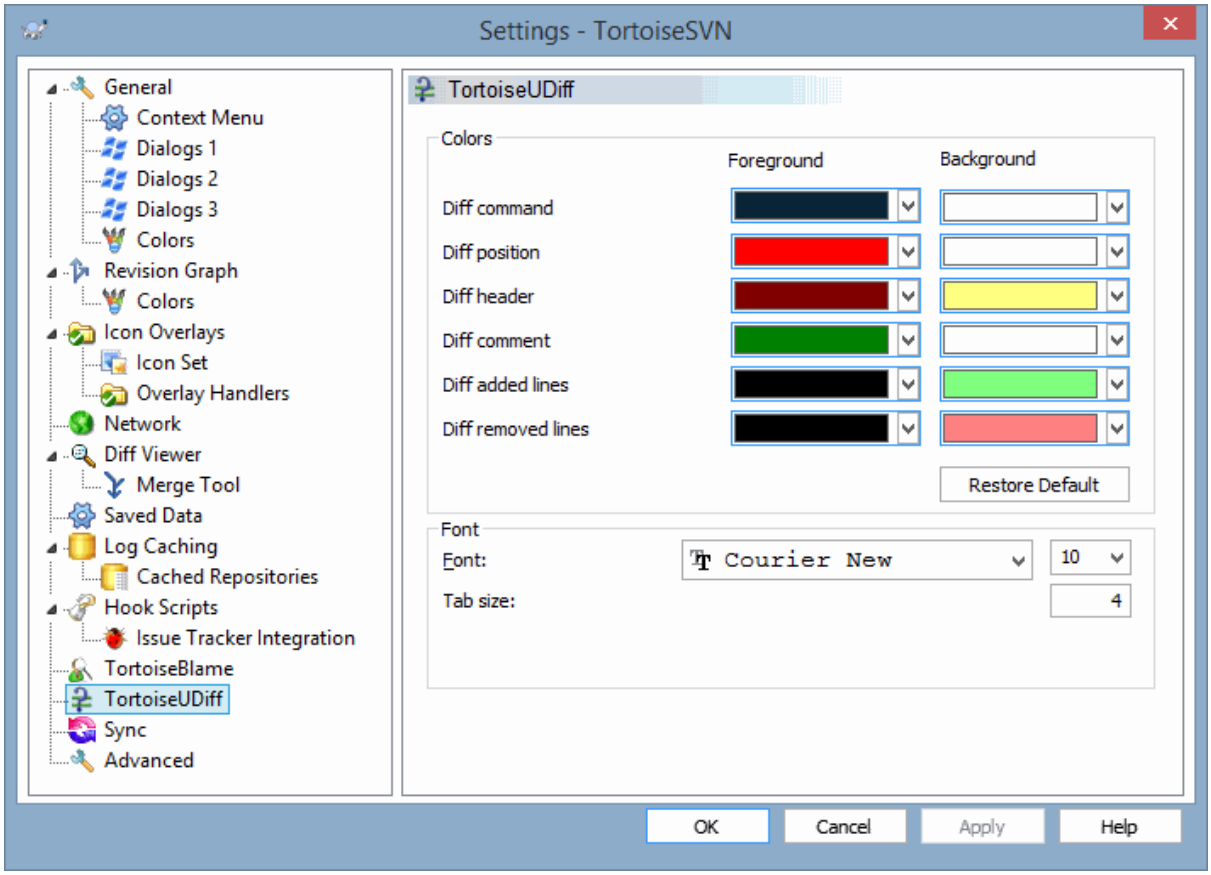
Farby
: TortoiseBlame môže použiť farbu pozadia na odlíšenie veku riadkov súboru. Môžete nastaviť farby pre koncové body, ktoré reprezentujú najnovšiu a najstaršiu revíziu. TortoiseBlame použije lineárnu interpoláciu medzi týmito farbami podľa revízie daného riadka..

  You can specify different colours to use for the locator bar. The default is to use strong contrast on the locator bar while keeping the main window background light so that you can still read the text.

Písmo
: You can select the font used to display the text, and the point size to use. This applies both to the file content, and to the author and revision information shown in the left pane.

Tabulátory
: Určuje koľko medzier je použitých na mieste tabulátora.

4.31.10. TortoiseUDiff Settings



Obrázok 4.93. The Settings Dialog, TortoiseUDiff Page

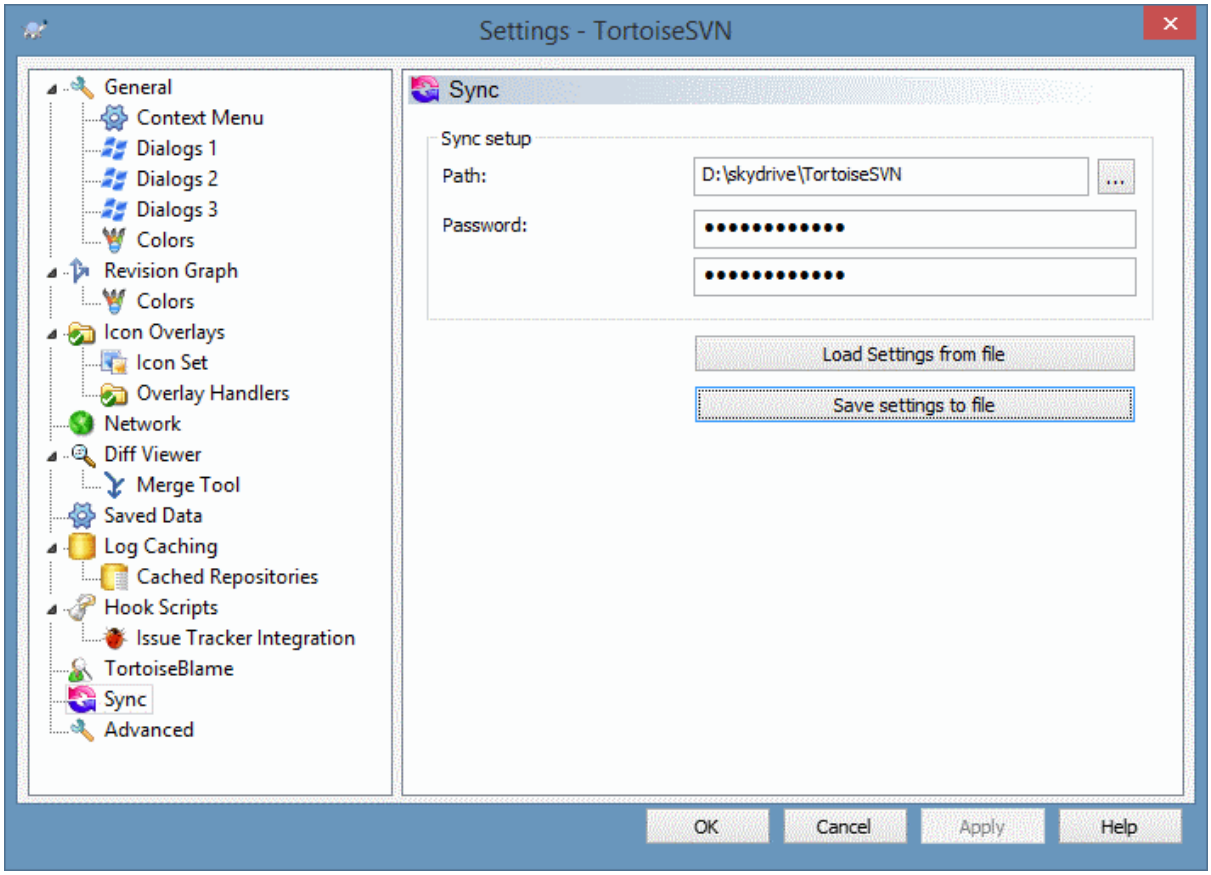
The settings used by TortoiseUDiff are controlled from the main context menu, not directly with TortoiseUDiff itself.

Farby
: The default colors used by TortoiseUDiff are usually ok, but you can configure them here.

Písmo
: You can select the font used to display the text, and the point size to use.

Tabulátory
: Defines how many spaces to use for expansion when a tab character is found in the file diff.

4.31.11. Exportovanie nastavenia TSVN



Obrázok 4.94. The Settings Dialog, Sync Page

You can sync all TortoiseSVN settings to and from an encrypted file. The file is encrypted with the password you enter so you don't have to worry if you store that file on a cloud folder like OneDrive, GDrive, DropBox, ...

When a path and password is specified, TortoiseSVN will sync all settings automatically and keep them in sync.

You can also export/import an encrypted files with all the settings manually. When you do that, you're asked for the path of the file and the password to encrypt/decrypt the settings file.

When exporting the settings manually, you can also optionally include all local settings which are not included in a normal export or in a sync. Local settings are settings which include local paths which usually vary between computers. These local settings include the configured diff and merge tools and hook scripts.

4.31.12. Rozšírené nastavenia

A few infrequently used settings are available only in the advanced page of the settings dialog. These settings modify the registry directly and you have to know what each of these settings is used for and what it does. Do not modify these settings unless you are sure you need to change them.

AllowAuthSave
: Sometimes multiple users use the same account on the same computer. In such situations it's not really wanted to save the authentication data. Setting this value to `false` disables the `save authentication` button in the authentication dialog.

AllowUnversionedObstruction
: If an update adds a new file from the repository which already exists in the local working copy as an unversioned file, the default action is to keep the local file, showing it as a (possibly) modified version of the new file from the repository. If you would prefer TortoiseSVN to create a conflict in such situations, set this value to `false`.

AlwaysExtendedMenu
: As with the explorer, TortoiseSVN shows additional commands if the **Shift** key is pressed while the context menu is opened. To force TortoiseSVN to always show those extended commands, set this value to `true`.

AutoCompleteMinChars
: The minimum amount of chars from which the editor shows an auto-completion popup. The default value is `3`.

AutocompleteRemovesExtensions
: The auto-completion list shown in the commit message editor displays the names of files listed for commit. To also include these names with extensions removed, set this value to `true`.

BlockPeggedExternals
: File externals that are pegged to a specific revision are blocked by default from being selected for a commit. This is because a subsequent update would revert those changes again unless the pegged revision of the external is adjusted.

  Set this value to `false` in case you still want to commit changes to such external files.

BlockStatus
: If you don't want the explorer to update the status overlays while another TortoiseSVN command is running (e.g. Update, Commit, ...) then set this value to `true`.

CacheTrayIcon
: To add a cache tray icon for the TSVNCache program, set this value to `true`. This is really only useful for developers as it allows you to terminate the program gracefully.

ColumnsEveryWhere
: The extra columns the TortoiseSVN adds to the details view in Windows Explorer are normally only active in a working copy. If you want those to be accessible everywhere, not just in working copies, set this value to `true`. Note that the extra columns are only available in XP. Vista and later doesn't support that feature any more. However some third-party explorer replacements do support those even on Windows versions later than XP.

ConfigDir
: Tu môžete určiť umiestnenie konfiguračného súboru Subversion. Toto ovplyvní všetky operacie TortoiseSVN.

CtrlEnter
: In most dialogs in TortoiseSVN, you can use **Ctrl+Enter** to dismiss the dialog as if you clicked on the OK button. If you don't want this, set this value to `false`.

Debug
: Set this to `true` if you want a dialog to pop up for every command showing the command line used to start TortoiseProc.exe.

DebugOutputString
: Set this to `true` if you want TortoiseSVN to print out debug messages during execution. The messages can be captured with special debugging tools only.

DialogTitles
: The default format (value of 0) of dialog titles is `url/path - name of dialog - TortoiseSVN`. If you set this value to 1, the format changes to `name of dialog - url/path - TortoiseSVN`.

DiffBlamesWithTortoiseMerge
: TortoiseSVN allows you to assign an external diff viewer. Most such viewers, however, are not suited for change blaming (Oddiel 4.24.2, “Obviniť rozdiely”), so you might wish to fall back to TortoiseMerge in this case. To do so, set this value to `true`.

DlgStickySize
: This value specifies the number of pixels a dialog has to be near a border before the dialog sticks to it. The default value is 3. To disable this value set the value to zero.

FixCaseRenames
: Some apps change the case of filenames without notice but those changes aren't really necessary nor wanted. For example a change from `file.txt` to `FILE.TXT` wouldn't bother normal Windows applications, but Subversion is case sensitive in these situations. So TortoiseSVN automatically fixes such case changes.

  If you don't want TortoiseSVN to automatically fix such case changes for you, you can set this value to `false`.

FullRowSelect
: The status list control which is used in various dialogs (e.g., commit, check-for-modifications, add, revert, ...) uses full row selection (i.e., if you select an entry, the full row is selected, not just the first column). This is fine, but the selected row then also covers the background image on the bottom right, which can look ugly. To disable full row select, set this value to `false`.

GroupTaskbarIconsPerRepo
: This option determines how the Win7 taskbar icons of the various TortoiseSVN dialogs and windows are grouped together. This option has no effect on Vista!

1. The default value is 0. With this setting, the icons are grouped together by application type. All dialogs from TortoiseSVN are grouped together, all windows from TortoiseMerge are grouped together, ...

Obrázok 4.95. Taskbar with default grouping

2. If set to 1, then instead of all dialogs in one single group per application, they're grouped together by repository. For example, if you have a log dialog and a commit dialog open for repository `A`, and a check-for-modifications dialog and a log dialog for repository `B`, then there are two application icon groups shown in the Win7 taskbar, one group for each repository. But TortoiseMerge windows are not grouped together with TortoiseSVN dialogs.

Obrázok 4.96. Taskbar with repository grouping

3. If set to 2, then the grouping works as with the setting set to 1, except that TortoiseSVN, TortoiseMerge, TortoiseBlame, TortoiseIDiff and TortoiseUDiff windows are all grouped together. For example, if you have the commit dialog open and then double click on a modified file, the opened TortoiseMerge diff window will be put in the same icon group on the taskbar as the commit dialog icon.

Obrázok 4.97. Taskbar with repository grouping

4. If set to 3, then the grouping works as with the setting set to 1, but the grouping isn't done according to the repository but according to the working copy. This is useful if you have all your projects in the same repository but different working copies for each project.

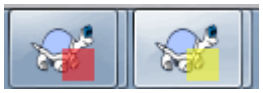
5. If set to 4, then the grouping works as with the setting set to 2, but the grouping isn't done according to the repository but according to the working copy.

HideExternalInfo
: If this is set to `false`, then every `svn:externals` is shown during an update separately.

  If it is set to `true` (the default), then update information for externals is only shown if the externals are affected by the update, i.e. changed in some way. Otherwise nothing is shown as with normal files and folders.

GroupTaskbarIconsPerRepoOverlay
: This has no effect if the option `GroupTaskbarIconsPerRepo` is set to 0 (see above).

  If this option is set to `true`, then every icon on the Win7 taskbar shows a small colored rectangle overlay, indicating the repository the dialogs/windows are used for.



Obrázok 4.98. Taskbar grouping with repository color overlays

IncludeExternals
: By default, TortoiseSVN always runs an update with externals included. This avoids problems with inconsistent working copies. If you have however a lot of externals set, an update can take quite a while. Set this value to `false` to run the default update with externals excluded. To update with externals included, either run the `Update to revision...` dialog or set this value to `true` again.

LogFindCopyFrom
: When the log dialog is started from the merge wizard, already merged revisions are shown in gray, but revisions beyond the point where the branch was created are also shown. These revisions are shown in black because those can't be merged.

  If this option is set to `true` then TortoiseSVN tries to find the revision where the branch was created from and hide all the revisions that are beyond that revision. Since this can take quite a while, this option is disabled by default. Also this option doesn't work with some SVN servers (e.g., Google Code Hosting, see *issue #5471* [http://code.google.com/p/support/issues/detail?id=5471]).

LogMultiRevFormat
: A format string for the log messages when multiple revisions are selected in the log dialog.

  You can use the following placeholders in your format string:

  %1!ld!
  : gets replaced with the revision number text

  %2!s!
  : gets replaced with the short log message of the revision

LogStatusCheck
: The log dialog shows the revision the working copy path is at in bold. But this requires that the log dialog fetches the status of that path. Since for very big working copies this can take a while, you can set this value to `false` to deactivate this feature.

MaxHistoryComboItems
: Comboboxes for URLs and paths show a history of previously used URLs/paths if possible. This settings controls how many previous items are saved and shown. The default is 25 items.

MergeLogSeparator
: When you merge revisions from another branch, and merge tracking information is available, the log messages from the revisions you merge will be collected to make up a commit log message. A pre-defined string is used to separate the individual log messages of the merged revisions. If you prefer, you can set this to a value containing a separator string of your choice.

NumDiffWarning
: If you want to show the diff at once for more items than specified with this settings, a warning dialog is shown first. The default is 10.

OldVersionCheck
: TortoiseSVN asi raz týždeň overí, či je k dispozícii nová verzia. Ak je nájdená aktualizovaná verzia, dialógové okno odovzdania zobrazí odkaz s touto informáciou. Ak dávate prednosť starému správaniu, keď sa objavilo dialógové okno oznamujúce o aktualizácii, nastavte túto hodnotu na `true`.

RepoBrowserTrySVNParentPath
: The repository browser tries to fetch the web page that's generated by an SVN server configured with the SVNParentPath directive to get a list of all repositories. To disable that behavior, set this value to `false`.

ScintillaBidirectional
: This option enables the bidirectional mode for the commit message edit box. If enabled, right-to-left language text editing is done properly. Since this feature is expensive, it is disabled by default. You can enable this by setting this value to `true`.

ScintillaDirect2D
: This option enables the use of Direct2D accelerated drawing in the Scintilla control which is used as the edit box in e.g. the commit dialog, and also for the unified diff viewer. With some graphic cards however this sometimes doesn't work properly so that the cursor to enter text isn't always visible. If that happens, you can turn this feature off by setting this value to `false`.

OutOfDateRetry
: This parameter specifies how TortoiseSVN behaves if a commit fails due to an out-of-date error:

  0
  : The user is asked whether to update the working copy or not, and the commit dialog is not reopened after the update.

  1
  : This is the default. The user is asked whether to update the working copy or not, and the commit dialog is reopened after the update so the user can proceed with the commit right away.

  2
  : Similar to `1`, but instead of updating only the paths selected for a commit, the update is done on the working copy root. This helps to avoid inconsistent working copies.

  3
  : The user is not asked to update the working copy. The commit simply fails with the out-of-date error message.

PlaySound
: If set to `true`, TortoiseSVN will play a system sound when an error or warning occurs, or another situation which is important and requires your attention. Set this to `false` if you want to keep TortoiseSVN quiet. Note that the project monitor has its own setting for playing sounds, which you can configure in its settings dialog.

ShellMenuAccelerators
: TortoiseSVN uses accelerators for its explorer context menu entries. Since this can lead to doubled accelerators (e.g. the `SVN Commit` has the **Alt-C** accelerator, but so does the `Copy` entry of explorer). If you don't want or need the accelerators of the TortoiseSVN entries, set this value to `false`.

ShowContextMenuIcons
: This can be useful if you use something other than the windows explorer or if you get problems with the context menu displaying incorrectly. Set this value to `false` if you don't want TortoiseSVN to show icons for the shell context menu items. Set this value to `true` to show the icons again.

ShowAppContextMenuIcons
: If you don't want TortoiseSVN to show icons for the context menus in its own dialogs, set this value to `false`.

ShowNotifications
: Set this value to `false` if you don't want the project monitor to show notification popups when new commits are detected.

StyleCommitMessages
: The commit and log dialog use styling (e.g. bold, italic) in commit messages (see Oddiel 4.4.5, “Odovzdanie správ denníka” for details). If you don't want to do this, set the value to `false`.

UpdateCheckURL
: This value contains the URL from which TortoiseSVN tries to download a text file to find out if there are updates available. This might be useful for company admins who don't want their users to update TortoiseSVN until they approve it.

UseCustomWordBreak
: The standard edit controls do not stop on forward slashes like they're found in paths and urls. TortoiseSVN uses a custom word break procedure for the edit controls. If you don't want that and use the default instead, set this value to 0. If you only want the default for edit controls in combo boxes, set this value to 1.

VersionCheck
: TortoiseSVN asi raz týždeň overí, či je k dispozícii nová verzia. Ak nechcete aby to TortoiseSVN kontroloval, nastavte túto hodnotu na `false`.

4.32. Záverečný krok

Dotovanie!

Even though TortoiseSVN and TortoiseMerge are free, you can support the developers by sending in patches and playing an active role in the development. You can also help to cheer us up during the endless hours we spend in front of our computers.

While working on TortoiseSVN we love to listen to music. And since we spend many hours on the project we need a *lot* of music. Therefore we have set up some wish-lists with our favourite music CDs and DVDs: https://tortoisesvn.net/donate.html Please also have a look at the list of people who contributed to the project by sending in patches or translations.

Kapitola 5. Project Monitor

The project monitor is a helpful tool that monitors repositories and notifies you in case there are new commits.

The projects can be monitored via a working copy path or directly via their repository URLs.

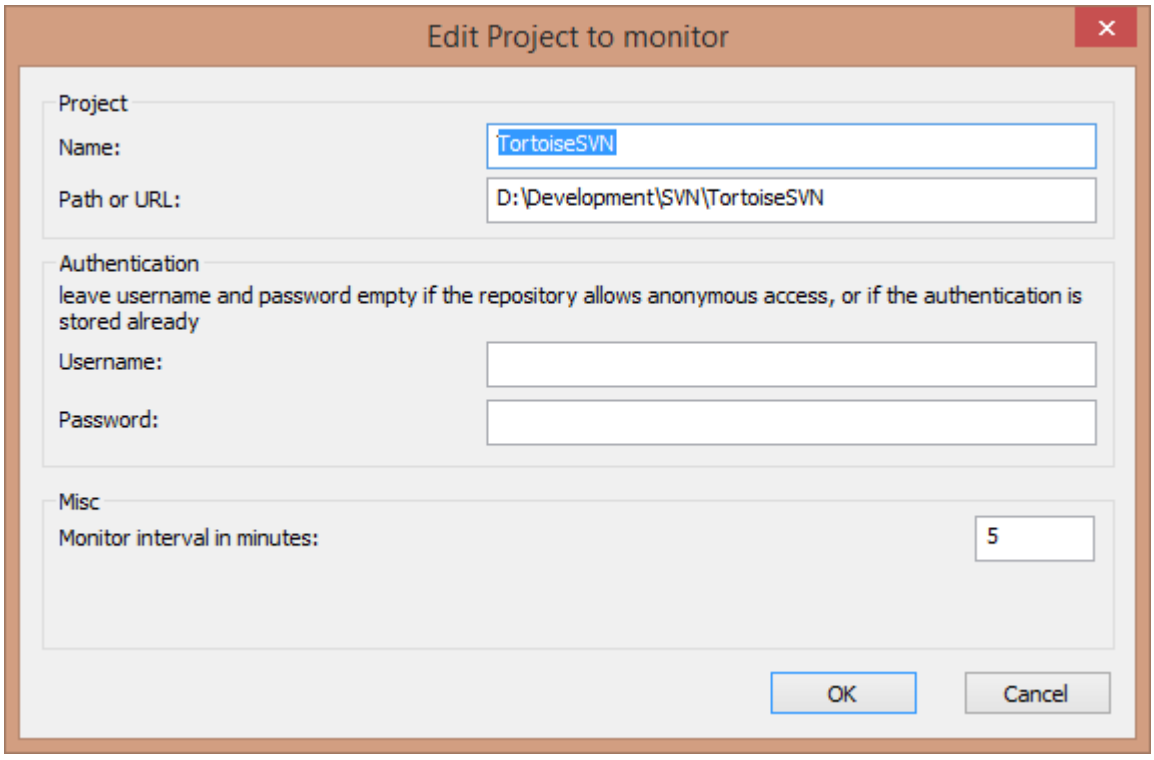
The project monitor scans each project in a configurable interval, and every time new commits are detected a notification popup is shown. Also the icon that is added to the system tray changes to indicate that there are new commits.

Snarl

If *Snarl* [https://snarl.fullphat.net/] is installed and active, then the project monitor automatically uses Snarl to show the notifications about newly detected commits.

5.1. Adding projects to monitor

If you first start the project monitor, the tree view on the left side is empty. To add projects, click on the button at the top of the dialog named Add Project.



Obrázok 5.1. The edit project dialog of the project monitor

To add a project for monitoring, fill in the required information. The name of the project is not optional and must be filled in, all other information is optional.

If the box for `Path or Url` is left empty, then a folder is added. This is useful to group monitored projects.

If you want to monitor all repositories served via the *SVNParentPath* [http://svnbook.red-bean.com/en/1.8/svn.serverconfig.httpd.html#svn.serverconfig.httpd.basic] directive, enter the root Url for your repositories and check the box `Url points to SVNParentPath list`.

The fields `Username` and `Password` should only be filled in if the repository does not provide anonymous read access, and only if the authentication is not stored by Subversion itself. If you're accessing the monitored

repository with TortoiseSVN or other svn clients and you've stored the authentication already, you should leave this empty: you won't have to edit those projects manually if the password changes.

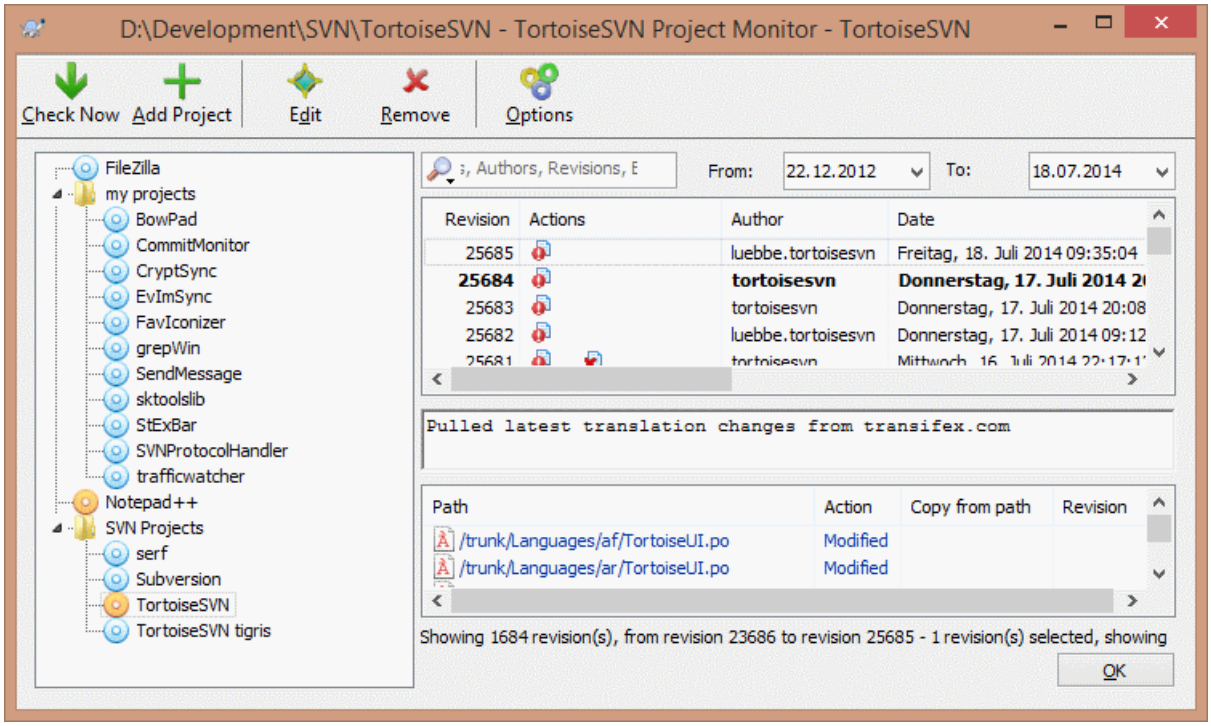
The `Monitor interval in minutes` specifies the minutes to wait in between checks. The smallest interval is one minute.

check interval

If there are a lot of users monitoring the same repository and the bandwidth on the server is limited, a repository admin can set the minimum for check intervals using an `svnrobots.txt` file. A detailed explanation on how this works can be found on the project monitor website:

https://tools.stefankueng.com/svnrobots.html [https://tools.stefankueng.com/svnrobots.html]

5.2. Monitor dialog



Obrázok 5.2. The main dialog of the project monitor

The project monitor shows all monitored projects on the left in a tree view. The projects can be moved around, for example one project can be moved below another project, making it a child/subproject.

A click on a project shows all the log messages of that project on the right.

Projects that have updates are shown in bold, with the number of new commits in brackets at the right. A click on a project marks it automatically as read.

5.2.1. Main operations

The toolbar at the top of the dialog allows to configure and operate the project monitor.

Check Now
: While each monitored project is checked according to the interval that's set up, clicking this button will force a check of all projects immediately. Note that if there are updates, the notification won't show up until all projects have been checked.

Add Project
: Opens a new dialog to set up a new project for monitoring.

Upraviť
: Opens the configuration dialog for the selected project.

Odstrániť
: Removes the selected project after a confirmation dialog is shown.

Mark all as read
: Marks all revisions in all projects as read. Note that if you select a project with unread revisions, those revisions are automatically marked as read when you select another project.

  If you hold down the **Shift** key when clicking the button, all error states are also cleared if there are any.

Update all
: Runs an **Update** on all monitored working copies. Projects that are monitored via an url are not updated, only those that are set up with a working copy path.

Voľby
: Shows a dialog to configure the behavior of the project monitor.

Kapitola 6. Program SubWCRev

SubWCRev je konzolový program pre Windows, ktorý môže byť použitý na čítanie stavu pracovnej verzie Subversion. Tak isto môže nahradzovať kľúčové slová v súbore šablóny. Je často súčastou procesu prekladu ako prostriedok na vkladanie informácii o pracovnej kópií. Typicky môže byť použitá na zahrnutie čísla pracovnej kópie do dialógu “O...”.

6.1. Parametre príkazového riadka SubWCRev

SubWCRev reads the Subversion status of all files in a working copy, excluding externals by default. It records the highest commit revision number found, and the commit timestamp of that revision, it also records whether there are local modifications in the working copy, or mixed update revisions. The revision number, update revision range and modification status are displayed on stdout.

SubWCRev.exe is called from the command line or a script, and is controlled using the command line parameters.

```
SubWCRev WorkingCopyPath [SrcVersionFile DstVersionFile] [-nmdfe]
```

`WorkingCopyPath` je cesta pracovnej kópie na kontrolu. SubWCRev môžete použiť len na pracovné kópie a nie na úložiská. Cesta môže byť absolútna, alebo relatívna k aktuálnemu pracovnému adresáru.

Keď chcete aby SubWCRev vykonal náhradu kľúčových slov, tak aby polia ko úložisko, revízia a URL boli uložené ako textový súbor, musíte dodať šablonový súbor `SrcVersionFile` a výstupný súbor `DstVersionFile`, ktorý bude obsahovať nahradú verziu šablóny.

You can specify ignore patterns for SubWCRev to prevent specific files and paths from being considered. The patterns are read from a file named `.subwcrevignore`. The file is read from the specified path, and also from the working copy root. If the file does not exist, no files or paths are ignored. The `.subwcrevignore` file can contain multiple patterns, separated by newlines. The patterns are matched against the paths relative to the repository root and paths relative to the path of the `.subwcrevignore` file. For example, to ignore all files in the `doc` folder of the TortoiseSVN working copy, the `.subwcrevignore` would contain the following lines:

```
/trunk/doc
/trunk/doc/*
```

Or, assuming the `.subwcrevignore` file is in the working copy root which is checked out from trunk, using the patterns

```
doc
doc/*
```

is the same as the example above.

To ignore all images, the ignore patterns could be set like this:

```
*.png
*.jpg
*.ico
*.bmp
```

Dôležité

The ignore patterns are case-sensitive, just like Subversion is.

Tip

To create a file with a starting dot in the Windows explorer, enter `.subwcrevignore.`. Note the trailing dot.

Je viacero nepovinných prepínačov, ktoré ovplivňujú spôsob ako SubWCRev pracuje. Ak chcete použiť viac ako jeden, musia byť zadané v jednej skupine napríklad: `-nm`, (a nie samostatne ako `-n -m`).

Prepnúť	Popis
-n	Ak je daný tento prepínač, SubWCRev sa ukončí s návratovou hodnotou `ERRORLEVEL 7`, ak miestna pracovná kópia obsahuje zmeny. Toto môže byť použité, aby sa vyhlo kompilovaniu neodovzdaných zmien.
-N	If this switch is given, SubWCRev will exit with `ERRORLEVEL 11` if the working copy contains unversioned items that are not ignored.
-m	Ak je daný tento prepínač, SubWCRev sa ukončí s návratovou hodnotou `ERRORLEVEL 8`, ak miestna pracovná kópia obsahuje rôzne revízie. Toto môže byť použité, aby sa vyhlo kompilovaniu čiastočne aktualizovanej pracovnej kópií.
-d	Ak je daný tento prepínač, SubWCRev sa ukončí s návratovou hodnotou `ERRORLEVEL 9`, ak cieľový súbor už existuje.
-f	Ak je daný tento prepínač, SubWCRev zaráta i revíziu naposledy zmeneného adresára. Predvolené spravanie je používať iba súbory na získanie čísiel revízií.
-e	Ak je daný tento prepínač, SubWCRev bude prehliadať aj `svn:externals` pokiaľ patria rovnakému úložisku. Predvolené správanie je ignorovať externals.
-E	If this switch is given, same as `-e`, but it ignores the externals with explicit revisions, when the revision range inside of them is only the given explicit revision in the properties. So it doesn't lead to mixed revisions.
-x	Ak je daný tento prepínač, SubWCRev vráti čislo revizie v HEX sústave.
-X	Ak je daný tento prepínač, SubWCRev vráti číslo revízie v HEX sústave s 0X pred číslom.
-F	If this switch is given, SubWCRev will ignore any `.subwcrevignore` files and include all files.
-q	If this switch is given, SubWCRev will perform the keyword substitution without showing working copy status on stdout.

Tabuľka 6.1. Zoznam parametrov príkazového riadka

If there is no error, SubWCRev returns zero. But in case an error occurs, the error message is written to stderr and shown in the console. And the returned error codes are:

Error Code	Popis
1	Syntax error. One or more command line parameters are invalid.
2	The file or folder specified on the command line was not found.
3	The input file could not be opened, or the target file could not be created.
4	Could not allocate memory. This could happen if e.g. the source file is too big.
5	The source file can not be scanned properly.
6	SVN error: Subversion returned with an error when SubWCRev tried to find the information from the working copy.
7	The working copy has local modifications. This requires the `-n` switch.
8	The working copy has mixed revisions. This requires the `-m` switch.
9	The output file already exists. This requires the `-d` switch.

Error Code	Popis
10	The specified path is not a working copy or part or one.
11	The working copy has unversioned files or folders in it. This requires the `-N` switch.

Tabuľka 6.2. List of SubWCRev error codes

6.2. Nahradzovanie kľúčových slov

Ak sú zadané zdrojové i cielové súbory, SubWCRev skopíruje zdroj do cieľa s aplikovaním náhrady kľúčových slov nasledovne:

Kľúčové slovo	Popis
$WCREV$	Nahradené najvyššiou revíziou v pracovnej kópií.
$WCREV&$	Nahradené najvyššiou revíziou v pracovnej kópií a maskované s hodnotou za znakom &. Napríklad: `$WCREV&0xFFFF$`
$WCREV-$, $WCREV+$	Nahradené najvyššiou revíziou v pracovnej kópií s hodnotou upravenou o čislo za + alebo -. Napríklad: `$WCREV-1000$`
$WCDATE$, $WCDATEUTC$	Replaced with the commit date/time of the highest commit revision. By default, international format is used: `yyyy-mm-dd hh:mm:ss`. Alternatively, you can specify a custom format which will be used with `strftime()`, for example: `$WCDATE=%a %b %d %I:%M:%S %p$`. For a list of available formatting characters, look at the *on-line referenčný manuál* [http://msdn.microsoft.com/en-us/library/fe06s4ak.aspx].
$WCNOW$, $WCNOWUTC$	Nahradené aktualným systemovým dátumom/časom. Toto môže byť použité na zobrazenie času prekladu. Formát času je popísaný v `$WCDATE$`.
$WCRANGE$	Replaced with the update revision range in the working copy. If the working copy is in a consistent state, this will be a single revision. If the working copy contains mixed revisions, either due to being out of date, or due to a deliberate update-to-revision, then the range will be shown in the form 100:200.
$WCMIXED$	`$WCMIXED?TText:FText$` je nahradené s `TText` ak je mix revízií, alebo s `FText` keď nie je.
$WCMODS$	`$WCMODS?TText:FText$` je nahradené s `TText` ak sú miestne zmeny, alebo s `FText` ak nie sú.
$WCUNVER$	`$WCUNVER?TText:FText$` is replaced with `TText` if there are unversioned items in the working copy, or `FText` if not.
$WCEXTALLFIXED$	`$WCEXTALLFIXED?TText:FText$` is replaced with `TText` if all externals are fixed to an explicit revision, or `FText` if not.
$WCISTAGGED$	`$WCISTAGGED?TText:FText$` is replaced with `TText` if the repository URL contains the tags classification pattern, or `FText` if not.
$WCURL$	Nahradené URL úložska pracovnej kópie zadanej do SubWCRev.
$WCINSVN$	`$WCINSVN?TText:FText$` je nahradené s `TText` ak je položka verziovaná, alebo `FText` ak nie je.
$WCNEEDSLOCK$	`$WCNEEDSLOCK?TText:FText$` je nahradené s `TText` ak sú miestne zmeny, alebo s `svn:needs-lock` ak nie sú.
$WCISLOCKED$	`$WCISLOCKED?TText:FText$` je nahradené s `TText` ak je položka zamknutá, alebo s `FText` ak nie je.
$WCLOCKDATE$, $WCLOCKDATEUTC$	Nahradené dátumom zamknutia. Formát času je popísaný pre `$WCDATE$`.
$WCLOCKOWNER$	Nahradené menom vlastníka zámku.

Kľúčové slovo	Popis
$WCLOCKCOMMENT$	Nahradené správou zamykania.
$WCUNVER$	`$WCUNVER?TText:FText$` is replaced with `TText` if there are unversioned files or folders in the working copy, or `FText` if not.

Tabuľka 6.3. List of available keywords

SubWCRev does not directly support nesting of expressions, so for example you cannot use an expression like:

```
#define SVN_REVISION    "$WCMIXED?$WCRANGE$:$WCREV$$"
```

But you can usually work around it by other means, for example:

```
#define SVN_RANGE       $WCRANGE$
#define SVN_REV         $WCREV$
#define SVN_REVISION    "$WCMIXED?SVN_RANGE:SVN_REV$"
```

Tip

Niektoré z týchto kľúčových slov sú skôr použité na súbory než na celú pracovnú kópiu, takže je zmyslupné ich používať keď je SubWCRev volané pre súbor. Toto sa týka `$WCINSVN$`, `$WCNEEDSLOCK$`, `$WCISLOCKED$`, `$WCLOCKDATE$`, `$WCLOCKOWNER$` a `$WCLOCKCOMMENT$`.

6.3. Príklad kľúčových slov

Nasledovný príklad ukazuje ako sú kľúčové slová nahradené vo výstupnom súbore.

```
// Test file for SubWCRev

char *Revision      = "$WCREV$";
char *Revision16    = "$WCREV&0xFF$";
char *Revisionp100  = "$WCREV+100$";
char *Revisionm100  = "$WCREV-100$";
char *Modified      = "$WCMODS?Modified:Not modified$";
char *Unversioned   = "$WCUNVER?Unversioned items found:no unversioned items$";
char *Date          = "$WCDATE$";
char *CustDate      = "$WCDATE=%a, %d %B %Y$";
char *DateUTC       = "$WCDATEUTC$";
char *CustDateUTC   = "$WCDATEUTC=%a, %d %B %Y$";
char *TimeNow       = "$WCNOW$";
char *TimeNowUTC    = "$WCNOWUTC$";
char *RevRange      = "$WCRANGE$";
char *Mixed         = "$WCMIXED?Mixed revision WC:Not mixed$";
char *ExtAllFixed   = "$WCEXTALLFIXED?All externals fixed:Not all externals fixed$";
char *IsTagged      = "$WCISTAGGED?Tagged:Not tagged$";
char *URL           = "$WCURL$";
char *isInSVN       = "$WCINSVN?versioned:not versioned$";
char *needslck      = "$WCNEEDSLOCK?TRUE:FALSE$";
char *islocked      = "$WCISLOCKED?locked:not locked$";
char *lockdateutc   = "$WCLOCKDATEUTC$";
char *lockdate      = "$WCLOCKDATE$";
```

```
char *lockcustutc   = "$WCLOCKDATEUTC=%a, %d %B %Y$";
char *lockcust      = "$WCLOCKDATE=%a, %d %B %Y$";
char *lockown       = "$WCLOCKOWNER$";
char *lockcmt       = "$WCLOCKCOMMENT$";

#if $WCMODS?1:0$
#error Source is modified
#endif

// End of file
```

Po spustení `SubWCRev.exe cesta\ku\pracovnejkopii testfile.tmpl testfile.txt`, bude výstupný súbor `testfile.txt` vyzerať nasledovne:

```
// Test file for SubWCRev

char *Revision      = "22837";
char *Revision16    = "53";
char *Revisionp100  = "22937";
char *Revisionm100  = "22737";
char *Modified      = "Modified";
char *Unversioned   = "no unversioned items";
char *Date          = "2012/04/26 18:47:57";
char *CustDate      = "Thu, 26 April 2012";
char *DateUTC       = "2012/04/26 16:47:57";
char *CustDateUTC   = "Thu, 26 April 2012";
char *TimeNow       = "2012/04/26 20:51:17";
char *TimeNowUTC    = "2012/04/26 18:51:17";
char *RevRange      = "22836:22837";
char *Mixed         = "Mixed revision WC";
char *ExtAllFixed   = "All externals fixed";
char *IsTagged      = "Not tagged";
char *URL           = "https://svn.code.sf.net/p/tortoisesvn/code/trunk";
char *isInSVN       = "versioned";
char *needslck      = "FALSE";
char *islocked      = "not locked";
char *lockdateutc   = "1970/01/01 00:00:00";
char *lockdate      = "1970/01/01 01:00:00";
char *lockcustutc   = "Thu, 01 January 1970";
char *lockcust      = "Thu, 01 January 1970";
char *lockown       = "";
char *lockcmt       = "";

#if 1
#error Source is modified
#endif

// End of file
```

Tip

Súbor ako tento bude zahrnutý v procese prekladu, takže očakávate že by mal byť verziovaný. Uistite sa že verziujete súbor šablony a nie výstupný vytvorený súbor, inak pokaždé keď vygenerujete súbor s verziou, by ste mali odovzdať zmeny, čo by znamenalo, že treba aktualizovať súbor s verziou.

6.4. COM rozhranie

Ak potrebujete prístup k infomáciam o revízií Subversion z iných programov, môžete použiť COM rozhranie SubWCRev. Treba vytvoriť objekt `SubWCRev.object`, ktorý podporuje nasledovné metódy:

Metóda	Popis
.GetWCInfo	Táto metóda prechádza pracovnú kópiu a zbiera informacie o revizií. Prirodzene musí byť volaná pred použitím ostatných metód. Prvý parameter je cesta. Druhý by mal byť true pokiaľ chcete zahrnúť revízie adresárov.Tak ako prepínač príkazového riadku `-f`. Tretí parameter nastavte na true keď chcete zahrnúť svn:externals. Rovnako ako prepínač `-e` v príkazovom riadku.
.GetWCInfo2	The same as `GetWCInfo()` but with a fourth parameter that sets the equivalent to the `-E` command line switch.
.Revision	Najvyššia odovzdaná revízia v pracovnej kópii. Zhodná s `$WCREV$`.
.Date	Dátum a čas odovzdania najvyššej revízie. Zhodná s `$WCDATE$`.
.Author	Autor najvyššej odovzdanej revízie, to je osoba, ktorá posledná odovzdala zmeny do pracovnej kópie.
.MinRev	Najnižšia revízia aktualizácie, ako je v `$WCRANGE$`.
.MaxRev	Najvyššia revízia aktualizácie, ako je v `$WCRANGE$`.
.HasModifications	True ak sú miestne zmeny.
.HasUnversioned	True if there are unversioned items
.Url	Nahradené s URL úložiska cesty pracovnej kópie použitej v `GetWCInfo`. Ekvivalent `$WCURL$`.
.IsSvnItem	True ak je objekt verziovaný.
.NeedsLocking	True ak má objekt nastavenú vlastnosť `svn:needs-lock`.
.IsLocked	True ak je objekt zamknutý.
.LockCreationDate	Reťazec reprezentujúci dátum vytvorenia zámku, alebo prázdny reťazec ak objekt nie je zamknutý.
.LockOwner	Reťazec reprezentujúci vlastníka zámku, alebo prázdny reťazec ak objekt nie je zamknutý.
.LockComment	Správa zadaná pri vytváraní zámku.

Tabuľka 6.4. podporvané automatizačné metódy COM

Nasledujú príklady zobrazujúce ako môže byť rozhranie použité.

```
// testCOM.js - javascript file
// test script for the SubWCRev COM/Automation-object

filesystem = new ActiveXObject("Scripting.FileSystemObject");

revObject1 = new ActiveXObject("SubWCRev.object");
revObject2 = new ActiveXObject("SubWCRev.object");
revObject3 = new ActiveXObject("SubWCRev.object");
revObject4 = new ActiveXObject("SubWCRev.object");

revObject1.GetWCInfo(
    filesystem.GetAbsolutePathName("."), 1, 1);
revObject2.GetWCInfo(
    filesystem.GetAbsolutePathName(".."), 1, 1);
revObject3.GetWCInfo(
    filesystem.GetAbsolutePathName("SubWCRev.cpp"), 1, 1);
revObject4.GetWCInfo2(
```

```
    filesystem.GetAbsolutePathName("..\\.."), 1, 1, 1);

wcInfoString1 = "Revision = " + revObject1.Revision +
                "\nMin Revision = " + revObject1.MinRev +
                "\nMax Revision = " + revObject1.MaxRev +
                "\nDate = " + revObject1.Date +
                "\nURL = " + revObject1.Url + "\nAuthor = " +
                revObject1.Author + "\nHasMods = " +
                revObject1.HasModifications + "\nIsSvnItem = " +
                revObject1.IsSvnItem + "\nNeedsLocking = " +
                revObject1.NeedsLocking + "\nIsLocked = " +
                revObject1.IsLocked + "\nLockCreationDate = " +
                revObject1.LockCreationDate + "\nLockOwner = " +
                revObject1.LockOwner + "\nLockComment = " +
                revObject1.LockComment;
wcInfoString2 = "Revision = " + revObject2.Revision +
                "\nMin Revision = " + revObject2.MinRev +
                "\nMax Revision = " + revObject2.MaxRev +
                "\nDate = " + revObject2.Date +
                "\nURL = " + revObject2.Url + "\nAuthor = " +
                revObject2.Author + "\nHasMods = " +
                revObject2.HasModifications + "\nIsSvnItem = " +
                revObject2.IsSvnItem + "\nNeedsLocking = " +
                revObject2.NeedsLocking + "\nIsLocked = " +
                revObject2.IsLocked + "\nLockCreationDate = " +
                revObject2.LockCreationDate + "\nLockOwner = " +
                revObject2.LockOwner + "\nLockComment = " +
                revObject2.LockComment;
wcInfoString3 = "Revision = " + revObject3.Revision +
                "\nMin Revision = " + revObject3.MinRev +
                "\nMax Revision = " + revObject3.MaxRev +
                "\nDate = " + revObject3.Date +
                "\nURL = " + revObject3.Url + "\nAuthor = " +
                revObject3.Author + "\nHasMods = " +
                revObject3.HasModifications + "\nIsSvnItem = " +
                revObject3.IsSvnItem + "\nNeedsLocking = " +
                revObject3.NeedsLocking + "\nIsLocked = " +
                revObject3.IsLocked + "\nLockCreationDate = " +
                revObject3.LockCreationDate + "\nLockOwner = " +
                revObject3.LockOwner + "\nLockComment = " +
                revObject3.LockComment;
wcInfoString4 = "Revision = " + revObject4.Revision +
                "\nMin Revision = " + revObject4.MinRev +
                "\nMax Revision = " + revObject4.MaxRev +
                "\nDate = " + revObject4.Date +
                "\nURL = " + revObject4.Url + "\nAuthor = " +
                revObject4.Author + "\nHasMods = " +
                revObject4.HasModifications + "\nIsSvnItem = " +
                revObject4.IsSvnItem + "\nNeedsLocking = " +
                revObject4.NeedsLocking + "\nIsLocked = " +
                revObject4.IsLocked + "\nLockCreationDate = " +
                revObject4.LockCreationDate + "\nLockOwner = " +
                revObject4.LockOwner + "\nLockComment = " +
                revObject4.LockComment;

WScript.Echo(wcInfoString1);
WScript.Echo(wcInfoString2);
WScript.Echo(wcInfoString3);
```

```
WScript.Echo(wcInfoString4);
```

The following listing is an example on how to use the SubWCRev COM object from C#:

```
using LibSubWCRev;
SubWCRev sub = new SubWCRev();
sub.GetWCInfo("C:\\PathToMyFile\\MyFile.cc", true, true);
if (sub.IsSvnItem == true)
{
    MessageBox.Show("versioned");
}
else
{
    MessageBox.Show("not versioned");
}
```

Kapitola 7. rozhranie IBugtraqProvider

Na tesnejšie spojenie so sledovačom prípadov ako len vlastnosť `bugtraq:`, TortoiseSVN môže použiť zásuvné moduly COM. S takýmito zásuvnými modulmi je možne získať informácie priamo zo sledovača prípadov, spolupracovať s užívateľom poskytnúť informácie späť do TortoiseSVN o otvorených prípadoch, kontrolovať správy denníka, alebo dokonca spúšťať akcie po úspešnom odovzdaní, príklad zatvoriť prípad.

We can't provide information and tutorials on how you have to implement a COM object in your preferred programming language, but we have example plugins in C++/ATL and C# in our repository in the `contrib/issue-tracker-plugins` folder. In that folder you can also find the required include files you need to build your plugin. (Oddiel 3, “Licencia” explains how to access the repository.)

Dôležité

Mali by ste poskytnúť 32-bitovú aj 64-bitovú verziu vášho zásuvného modulu. Pretože x64 verzia TortoiseSVN nemôže použiť 32-bitový zásuvný modul a opačne.

7.1. Pomenovanie

Pokiaľ vyvýjate zásuvný modul pre TortoiseSVN, prosím *nenazvite* ho *Tortoise<niečo>*. Radi by sme rezervovali predponu *Tortoise* pre klientov verziovanie integrovaných to Windows šelu. Napríklad TortoiseCVS, TortoiseSVN, TortoiseHg, TortoiseGit a TortoiseBzr sú všetko klienti správy verzií.

Please name your plugin for a Tortoise client *Turtle<Something>*, where *<Something>* refers to the issue tracker that you are connecting to. Alternatively choose a name that sounds like *Turtle* but has a different first letter. Nice examples are:

- Gurtle - Zásuvný modul sledovania prípadov pre Google code
- TurtleMine - Zásuvný modul sledovania prípadov pre Redmine
- VurtleOne - Zásuvný modul sledovania prípadov pre VersionOne

7.2. Rozhranie IBugtraqProvider

TortoiseSVN 1.5 a novšie môžu použiť zásuvné moduly, ktoré implementujú rozhranie IBugtraqProvider. Toto rozhranie poskytuje niekoľko metód, ktoré zásuvné moduly môžu použiť na spoluprácu so sledovačom prípadov.

```
HRESULT ValidateParameters (
  // Parent window for any UI that needs to be
  // displayed during validation.
  [in] HWND hParentWnd,

  // The parameter string that needs to be validated.
  [in] BSTR parameters,

  // Is the string valid?
  [out, retval] VARIANT_BOOL *valid
);
```

Táto metóda je volaná z okna nastavenia kde užívateľ môže pridať a nastaviť zásuvný modul. Reťazec `parameters` môže byť použitý zásuvným modulom k získaniu ďalších potrebných informácií, napr. URL skedovača prípadov, prihlasovacie dáta, atď. Zásuvný modul by mal overiť reťazec `parameters` a zobraziť chybové okno ak je reťazec neplatný. Parameter `hParentWnd` by mal byť použitý ako rodičovké okno pre akýkoľvek dialóg, ktorý zásuvný modul zobrazí. Modul musí vrátiť TRUE pokiaľ overenie reťazca `parameters`

prešlo v poriadku. Keď modul vráti FALSE, okno nastavenia nedovolí užívateľovi pridať zásuvný modul do cesty pracovnej kópie.

```
HRESULT GetLinkText (
  // Parent window for any (error) UI that needs to be displayed.
  [in] HWND hParentWnd,

  // The parameter string, just in case you need to talk to your
  // web service (e.g.) to find out what the correct text is.
  [in] BSTR parameters,

  // What text do you want to display?
  // Use the current thread locale.
  [out, retval] BSTR *linkText
);
```

The plugin can provide a string here which is used in the TortoiseSVN commit dialog for the button which invokes the plugin, e.g., "Choose issue" or "Select ticket". Make sure the string is not too long, otherwise it might not fit into the button. Ak metóda vráti chybu (napr. `E_NOTIMPL`), bude použitý predvolený popis tlačítka.

```
HRESULT GetCommitMessage (
  // Parent window for your provider's UI.
  [in] HWND hParentWnd,

  // Parameters for your provider.
  [in] BSTR parameters,
  [in] BSTR commonRoot,
  [in] SAFEARRAY(BSTR) pathList,

  // The text already present in the commit message.
  // Your provider should include this text in the new message,
  // where appropriate.
  [in] BSTR originalMessage,

  // The new text for the commit message.
  // This replaces the original message.
  [out, retval] BSTR *newMessage
);
```

Toto je hlavná metóda zásuvného modulu. Táto metóda je volaná z odovzdávacieho dialógu TortoiseSVN, keď užívateľ klikne na tlačítko zásuvného modulu.

Reťazec `parameters` je reťazec, ktorý užívateľ zadal v nastavení pri konfigurácií zásuvného modulu. Zvičajne to modul využije na nájdenie URL sledovača prípadov a/alebo ako prihlasovacie údaje, alebo i iné

Reťazec `commonRoot` obsahuje rodičovskú cestu všetkých objektov vybraných na vyvolanie odovzdávacieho dialógu. Poznamenávame, že to *nie* je koreňová cesta pre všetky objekty, ktoré užívateľ vybral v odovzdávacom okne. Pre vetvu/značku j etoto cesta, ktorá sa bude kopírovať.

Parameter `pathList` obsahuje pole ciest (ako reťazec), ktoré užívateľ vybral k odovzdaniu.

Parameter `originalMessage` obsahuje text zadaný ako správu denníka v odovzdávacom okne. Pokiaľ užívateľ ešte nezadal žiadny text, tento reťazec bude prázdny..

Vrátený reťazec `newMessage` je nakopírovaný do editovacieho políčka správy denníka v odovzdávacom okne, nahradiac jeho aktuálny obsah. Pokiaľ zásuvný modul neupravý reťazec `originalMessage`, musí vrátiť ten istý reťazec naspäť, inak text, ktorý užívateľ zadal bude stratený.

7.3. Rozhranie IBugtraqProvider2

V TortoiseSVN 1.6 bolo pridané nové rozhranie, ktoré pridáva viac funkcií pre zásuvné moduly. Toto rozhranie IBugtraqProvider2 je zdedené z IBugtraqProvider.

```
HRESULT GetCommitMessage2 (
  // Parent window for your provider's UI.
  [in] HWND hParentWnd,

  // Parameters for your provider.
  [in] BSTR parameters,
  // The common URL of the commit
  [in] BSTR commonURL,
  [in] BSTR commonRoot,
  [in] SAFEARRAY(BSTR) pathList,

  // The text already present in the commit message.
  // Your provider should include this text in the new message,
  // where appropriate.
  [in] BSTR originalMessage,

  // You can assign custom revision properties to a commit
  // by setting the next two params.
  // note: Both safearrays must be of the same length.
  //       For every property name there must be a property value!

  // The content of the bugID field (if shown)
  [in] BSTR bugID,

  // Modified content of the bugID field
  [out] BSTR * bugIDOut,

  // The list of revision property names.
  [out] SAFEARRAY(BSTR) * revPropNames,

  // The list of revision property values.
  [out] SAFEARRAY(BSTR) * revPropValues,

  // The new text for the commit message.
  // This replaces the original message
  [out, retval] BSTR * newMessage
);
```

Táto metóda je volaná z odovzdávacieho onka TortoiseSVN, keď užívateľ klikne na tlačítko zásuvného modulu. Táto metóda je volána miesto `GetCommitMessage()`. Prosím pozrite si dokumentáciu k `GetCommitMessage` pre popis k rovnakým parametrom.

Parameter `commonURL` je rodičovská URL všetkých objektov vybraných pri vyvolaní odovzdávacieho dialógu. Jednoducho je to URL cesty `commonRoot`.

Parameter `bugID` obsahuje obsah poľa bug-ID (ak je zobrazený, nastavené vlastnosťou `bugtraq:message`).

Návratový parameter `bugIDOut` je použitý k vyplneniu poľ a čísla chyby pri návrate metódy.

Návratové parametre `revPropNames` a `revPropValues` môžu obsahovať páry meno/hodnota pre vlastnoti revízie, ktoré má odovzdanie nastaviť. Zásuvný modul sa musí pri návrate uistiť že obe polia majú rovnakú veľkosť! Každé meno vlastnosti v `revPropNames` musí mať zodpovedajúcu hodnotu v `revPropValues`. Ak nemá byť nastavená žiadna vlastnosť revízie zásuvný modul musí vrátiť prázdne polia.

```
HRESULT CheckCommit (
  [in] HWND hParentWnd,
  [in] BSTR parameters,
  [in] BSTR commonURL,
  [in] BSTR commonRoot,
  [in] SAFEARRAY(BSTR) pathList,
  [in] BSTR commitMessage,
  [out, retval] BSTR * errorMessage
);
```

Táto metóda je volá tesne predtým ako je odovzdávacie okno zatvorené a začne odovzdávanie. Zásuvný modul môže použiť túto metódu na výber súborov/adresárov na odovzdanie a/alebo správy denníka zadanej užívateľom. Parametere sú rovnaké ako pre `GetCommitMessage2()`, s rozdielom, že `commonURL` je teraz spoločná URL všetkých *vybraných* objektov, a `commonRoot` je koreňová cesta všetkých vybraných objektov.

Pre okno vetva/značka, `commonURL` je zdrojová URL kópie, a `commonRoot` je nastavená na cieľovú URL kópie.

Návratový parameter `errorMessage` musí obsahovať chzbovú správu, ktorú TortoiseSVN zobrazí užívateľovi, alebo musí byť prázdna aby začalo odovzdanie. Keď je vrátená chybová správa, TortoiseSVN zobrazí text správy v okne a ponechá okno otvorené, takže užívateľ môže opraviť čo je zlé. Takže modul by mal vrátiť text chybu, ktorý povie užívateľovi *čo* je zlé a ako to opraviť.

```
HRESULT  OnCommitFinished (
  // Parent window for any (error) UI that needs to be displayed.
  [in] HWND hParentWnd,

  // The common root of all paths that got committed.
  [in] BSTR commonRoot,

  // All the paths that got committed.
  [in] SAFEARRAY(BSTR) pathList,


  // The text already present in the commit message.
  [in] BSTR logMessage,

  // The revision of the commit.
  [in] ULONG revision,


  // An error to show to the user if this function
  // returns something else than S_OK
  [out, retval] BSTR * error
);
```

Táto metóda je volaná po úspešnom odovzdaní. Zásuvný modul môže použiť túto metódu napríklad k zatvoreniu vybraného prípadu, alebo k pridaniu informácie o odovzdaní. Parametere sú rovnaké ako pre `GetCommitMessage2`.

```
HRESULT HasOptions(
  // Whether the provider provides options
  [out, retval] VARIANT_BOOL *ret
);
```

Táto metóda je volaná z dialógu nastavenia, kde môže užívateľ nastaviť zásuvné moduly. Ak modul poskytuje vlastný dialóg, musí vrátiť TRUE pre `ShowOptionsDialog`, aj nemá musí vrátiť FALSE.

```
HRESULT ShowOptionsDialog(
  // Parent window for the options dialog
  [in] HWND hParentWnd,

  // Parameters for your provider.
  [in] BSTR parameters,

  // The parameters string
  [out, retval] BSTR * newparameters
);
```

Táto metóda je volaná z nastavenia, keď užívateľ klikne na tlačítko "Options", ktoré je zobrazené ak metóda `HasOptions` vráti TRUE. Zásuvný modul môže zobraziť okno nastavení aby uľahčil užívateľovi nastavenie modulu.

Reťazec `parameters` obsahuje reťazec parametrov, ktorý bol nastavený/zadaný.

Návratový parameter `newparameters` musí obsahovať reťazec parametrov z dát získaných z jeho ona nastavení. Tento reťazec `paramameters` je predaný pri každom volaní všetkých ostatných metód IBugtraqProvider a IBugtraqProvider2.

Dodatok A. Často kladené otázky (Frequently Asked Questions - FAQ)

Because TortoiseSVN is being developed all the time it is sometimes hard to keep the documentation completely up to date. We maintain an *online FAQ* [https://tortoisesvn.net/faq.html] which contains a selection of the questions we are asked the most on the TortoiseSVN mailing lists https://groups.google.com/forum/#!forum/tortoisesvn and https://groups.google.com/forum/#!forum/tortoisesvn-dev

Ak máte otázku, ktorá nie je zodpovedané nikde inde, najlepšie miesto na opýtanie sa je na jednej z týchto e-mailových konferenciách:

- https://groups.google.com/forum/#!forum/tortoisesvn is the one to use if you have questions about using TortoiseSVN.
- If you want to help out with the development of TortoiseSVN, then you should take part in discussions on https://groups.google.com/forum/#!forum/tortoisesvn-dev
- Pokial chcete pomôcť s uživateľským rohraním TortoiseSVN, alebo dokumentáciou, pošlie e-mail na adresu `<translators@tortoisesvn.tigris.org>`.

Dodatok B. Ako spravím ...

Táto príloha obsahuje riešenia na problémy a otázky, ktoré môžete mať pri používaní TortoiseSVN.

B.1. Presunúť/kopírovať viacero súborov naraz.

Presúvanie/Kopírovanie jedného suboru môže byť uskutočnené pomocou TortoiseSVN → Premenovať.... Ale keď chcete presunúť/premenovať veľa súborov, je táto cesta pomalá a príliš pracná

Doporučený spôsob je použiť pretiahnutie pravým súborov na nové miesto. Jednoducho použite pravý klik na súbory, ktoré chcete presunúť/kopírovať a bez pustenia tlačitka ich presuňte na ich nové miesto a pustíte tlačiko. Zobrazí sa vám kontextové menu a umožní vám si vybrať Kontextové menu → SVN kopírovať verziované objekty sem, alebo Kontextové menu → SVN pesunúť verziované objekty sem.

B.2. Donútiť uživateľov zadávať správu denníka

Sú dve možnosti ako zabrániť užívateľom odovzdať s prázdnou správou denníka. Jedna je špecifická pre TortoiseSVN, druhá funguje so všetkými klientami Subversion, ale je nutný priamy prístup na server.

B.2.1. Hookskripty na servery

Pokiaľ máte priamy prístup na server, môžete naištalovať skript spúšťaný pre odovzdaním, ktorý odmietne všetky odovzdania s prázdnou, alebo príliš krátkou správou denníka.

Na servery v adresáry úložiska je podadresár `hooks`, ktorý obsahuje nejaké príklady pripnutých skriptov na použitie. Súbor `pre-commit.tmpl` obsahuje príklad skriptu, ktorý odmietne odovydanie ak nebola zadaná správa, alebo ak je príliš krátka. Súbor tiež obsahuje komentáre ako inštaluvať/použiť tento skript. Stačí nasledovať inštrukcie v tomto súbore.

Toto je odporúšaný spôsob, keď vaši užívatelia používajú aj iných klientov okrem TortoiseSVN. Nevýhodov je, že odovzdanie je odmietnuté serverom a teda užívateľ dostane chybovú správu. Klient nemôže pred odovzdaním vedieť, že bude odovzdanie odmietnuté. Pokiaľ chcete aby OK tláčítko TortoiseSVN bolo zakázané kým nie je správa denníka dosť dlhá, prosím použite nižšie popísanú metódu.

B.2.2. Vlastnosť projektu

TortoiseSVN na niektoré svoje vymoženosti používa vlastnosti. Jednou z týchto vlastností je `tsvn:logminsize`.

Ak nastavíte vlastnosť na adresár, potom TortoiseSVN zakáže OK tlačítko vo všetkých odovydávacích dialógoch kým užívateľ nezadá dosť dlhú správu denníka podľa hodnoty, ktorá je udaná vo vlastnoti.

Pre viac informácií o týchto vlatnostiach projektu si pozrite Oddiel 4.18, “Nastavenia Projektu”.

B.3. Aktualizovať vybrané súbory z úložiska

normálne aktualizujete pracovnú kópiu pomocou TortoiseSVN → Aktualizovať. Avšak keď si chcete vybrať niektoré nové súbory, ktoré kolega pridal bez zlučovania iných zmien do ostatných súborov, musíte použiť iný prístup.

Použite TortoiseSVN → Skontrolovať na zmeny a kliknite Skontrolovať úložisko aby ste videli čo sa v úložisku zmenilo. Vyberte súbory, ktoré chcete aktualizovať, a potom použite kontextové menu a aktualizujte len tieto súbory.

B.4. Vrátenie revízií v úložisku

B.4.1. Použitím dialógu denníka revízií

Na vrátenie zmien z jednej alebo viacerých revízií je omnoho jednoduchšie použiť denník.

1. Vyberte súbor, alebo adresár v ktorom chcete vrátiť zmeny. Keď chcete vrátiť všetky zmeny mal by to byť najvyšší adresár.
2. Vyberte TortoiseSVN → Zobraziť denník a zobrazí sa zoznam revízií. Môže bzť nutné použiť Zobraziť všetky, alebo Ďalších 100, aby sa vám zobrazili tie revízie, o ktorémáte záujem.
3. Select the revision you wish to revert. If you want to undo a range of revisions, select the first one and hold the **Shift** key while selecting the last one. If you want to pick out individual revisions and ranges, use the **Ctrl** key while selecting revisions. Right click on the selected revision(s), then select Context Menu → Revert changes from this revision.
4. Alebo keď chcete spraviť niektorú z predchádzajúcich revízií hlavnou (HEAD), pravý klik na vybranú revíziu a potom vyberte Kontextové menu → Vrátiť na revíziu. Toto zahodí *všetky* zmeny po vybranej revízii.

Vrátili ste zmeny vo vašej pracovnej kópií. Overte výsledok a potom odovzdajte zmeny.

B.4.2. Použitie dialógu spájania

If you want to enter revision numbers as a list, you can use the Merge dialog. The previous method uses merging behind the scenes; this method uses it explicitly.

1. Vo vašej pracovnej kópií vyberte TortoiseSVN → Zlúčiť.
2. In the Merge Type dialog select Merge a range of revisions.
3. In the From: field enter the full repository URL of your working copy folder. This should come up as the default URL.
4. In the Revision range to merge field enter the list of revisions to roll back (or use the log dialog to select them as described above).
5. t
6. V dialógovom okne Nastavenia zlučovania ponechajte predvolené.
7. Kliknite na Zlúčiť k dokončeniu zlúčenia.

Vrátili ste zmeny vo vašej pracovnej kópií. Najprv skontroľujte či výsledok zodpovedá očakávaniu a potom zmeny odovzdajte.

B.4.3. Použitie `svndumpfilter`

Keďe TortoiseSVN nikdy dáta nestráca, vaše “navrátené” revízie stále existujú ako medzirevízie v úložisku. Iba hlavná (HEAD) revízia bola zmenená na prechadzajúci stav. Keď chcete aby revízie úplne zmizli z vašeho úložiska vymažúc všetky stopy, ktoré kedy existovali, musíte použiť extrémnejšie opatrenia. Keď nie je skutočne dobrý dôvod, aby ste to urobili, je to *neodporúčané*. Jedným z možných dôvodov môže byť, že niekto odovzdal dôverné dokumenty do verejného úložiska.

The only way to remove data from the repository is to use the Subversion command line tool `svnadmin`. You can find a description of how this works in the *Repository Maintenance* [http://svnbook.red-bean.com/en/1.8/svn.reposadmin.maint.html].

B.5. Porovnať dve revízie súboru, alebo adresára

Keď chcete porovnať dve revízie v histórií objektu, napríklad revíziu 100 a 200 toho istého súboru, jednoducho použite TortoiseSVN → Zobraziť denník na zobrazenie zoznamu histórie revízií daného súboru. Vyberte dve revízie, ktoré chcete porovnať a potom použite Kontextové Menu → Porovnať revízie.

Keď chcete porovnať ten istý objekt v dvoch rôznych stromoch, napríklad v kmeni(trunk) a vetve(branch), môžete použiť prehliadač úložiska k otvoreniu oboch stromov, vybrať súbor na oboch miestach a potom použiť Kontextové menu → Porovnať Revízie.

Keď chcete porovnať dva stromy a vidieť čo sa zmenilo, napríklad kmeň(trunk) a značku(tag) vydania, môžete použiť TortoiseSVN → Graf revízií. Vyberte dva uzly na porovnanie a potom použite Kontextové menu → Porovnať hlavné revízie. Toto zobrazí zoznam zmien súborov a potom si môžete vybrať jednotlivé súbory na pozretie detailov zmien. Tiež môžete exportovať štruktúru stromu obsahujúcu všetky zmeny, alebo jednoducho zoznam všetkých zmenených súborov. Pre viac informácií si prečítajte Oddiel 4.11.3, “Porovavanie adresárov”. Alternatívne použite Kontextové menu → Unifikované porovnanie HEAD revízií aby ste videli prehľad všetkých rozdielov s minimálnym kontextom.

B.6. Zahrnutie spoločného kódu

Sometimes you will want to include another project within your working copy, perhaps some library code. There are at least 4 ways of dealing with this.

B.6.1. Použitie svn:externals

Nastavte vlastnosť `svn:externals` pre adresár vo vašom projekte. Táto vlastnosť obsahuje jeden, alebo viac riadkov; každý riadok má meno podadresára, ktorý chcete použiť na získanie adresára so spoločným zdrojovým kódom a URL úložiska, ktoré tam chcete získať. Pre podrobnejší popis použite Oddiel 4.19, “externé objekty”.

Odovzdajte nový adresár. Teraz keď aktualizujete, Subversion natiahne kópiu toho projektu z úložiska do vašej pracovnej kópie. Podadresáre budú v prípade potreby automaticky vytvorené. Pri každej aktualizácií vašej pracovnej kópie získate aj poslednú verziu pre všetky externé projekty.

If the external project is in the same repository, any changes you make there will be included in the commit list when you commit your main project.

If the external project is in a different repository, any changes you make to the external project will be shown or indicated when you commit the main project, but you have to commit those external changes separately.

Z troch popísaných metód je toto jediná, ktorá nepotrebuje nič nastavovať na strane klienta. Keď sú už nastavené vlastnoti adresára, všetci klienti získajú adresáre pri aktualizácií.

B.6.2. Použitie vnorenej pracovnej kópie

Vytvorte nový adresár vo vašom projekte, ktorý má obsahovať spoločný zdrojový kód, ale nepridajte to do Subversion.

Vyberte TortoiseSVN → Získať pre novovytvorený adresár a získajte do neho spoločný zdrojový kód. Máte oddelenú pracovnú kópiu vnorenú v hlavnej kópií.

Dve pracovné kópie sú nezávislé. Keď odovzdáte hlavnú, zmeny z vnorenej pracovnej kópie sú ignorované. Podobne keď aktualizujete hlavnú pracovnú kópiu, vnorená pracovná kópa nie je aktualizovaná.

B.6.3. Použitie relativnej cesty

If you use the same common core code in several projects, and you do not want to keep multiple working copies of it for every project that uses it, you can just check it out to a separate location which is related to all the other projects which use it. For example:

```
C:\Projects\Proj1
C:\Projects\Proj2
C:\Projects\Proj3
C:\Projects\Common
```

and refer to the common code using a relative path, e.g. `..\..\Common\DSPcore`.

If your projects are scattered in unrelated locations you can use a variant of this, which is to put the common code in one location and use drive letter substitution to map that location to something you can hard code in your projects, e.g. Checkout the common code to `D:\Documents\Framework` or `C:\Documents and Settings\{login}\My Documents\framework` then use

```
SUBST X: "D:\Documents\framework"
```

to create the drive mapping used in your source code. Your code can then use absolute locations.

```
#include "X:\superio\superio.h"
```

Tento postup bude fungovať na všetkých prostrediach PC a budete musieť zdokumentovať požadované mapovanie diskov, takže váš tím bude vedieť kde sa tie záhadné súbory nachádzajú. Táto metóda je pre silno uzavreté vývojové prostredie a nie je odporúčaná pre všeobecné použitie.

B.6.4. Add the project to the repository

The maybe easiest way is to simply add the project in a subfolder to your own project working copy. However this has the disadvantage that you have to update and upgrade this external project manually.

To help with the upgrade, TortoiseSVN provides a command in the explorer right-drag context menu. Simply right-drag the folder where you unzipped the new version of the external library to the folder in your working copy, and then select Context Menu → SVN Vendorbranch here. This will then copy the new files over to the target folder while automatically adding new files and removing files that aren't in the new version anymore.

B.7. Vytvoriť odkaz na úložisko

If you frequently need to open the repository browser at a particular location, you can create a desktop shortcut using the automation interface to TortoiseProc. Just create a new shortcut and set the target to:

```
TortoiseProc.exe /command:repobrowser /path:"url/to/repository"
```

Of course you need to include the real repository URL.

B.8. Ignorovať súbory, ktoré sú už verziované

Ak ste omzlom pridali súbory, ktoré majú byť ignorované, ako ich vezmete zo správy verzií bez toho aby ste ich stratili? Možno máte vaše vlastné nastavenie IDE, ktoré nie je časťou projektu, ale stálo vás veľa času kým ste nastavili tak aby vám vyhovovalo.

Pokiaľ ste ešte neodovzdali pridanie, potom jediné čo musíte urobiť je TortoiseSVN → Vrátiť pridanie... na vrátenie pridania. Potom by ste mali pridať súbor(y) do zoznamu ignorovaných, aby ste ich opäť omylom nepridali.

Pokiaľ ste ho už poslali do úložiska, tak musí byť z neho vymazaný a pridaný na zoznam ignorovaných. Naštastie TortoiseSVN má skratkový príkaz, ktorý robí túto operáciu jednoduchou. TortoiseSVN → Odverziovať a pridať

do zoznamu ignorovaných najprv označí súbor/adresár na vymazanie z úložiska s ponechaním lokálnej kópie. Taktiež pridá tento objekt do zoznamu ignorovaných, takže už nebude opäť omylom pridaný do Subversion. Keď je to dokončené musíte odovzdať rodičovský súbor.

B.9. Odverziovanie pracovnej kópie

If you have a working copy which you want to convert back to a plain folder tree without the `.svn` directory, you can simply export it to itself. Read Oddiel 4.27.1, “Removing a working copy from version control” to find out how.

B.10. Odstránenie pracovnej kópie

Keď máte pracovnú kópiu, ktorú už nepotrebujete, ako ju možete čisto odstrániť? Jednoducho - stačí keď ju v Prieskumníkovi (Windows Explorer) vymažete!, pracovné kópie obsahujú všetky miestne položky, a potrebné údaje. Vymazanie pracovnej kópie v Prieskumníkovi nijakým spôsobom neovplyvní údaje v úložisku.

Dodatok C. Užitočné tipy pre administrátorov

Táto príloha obsahuje riešenia problémov a otázok, ktoré môžete mať keď ste zodpovedný za nasadzovanie TortoiseSVN na viacero uživaľských staníc.

C.1. Nasadzovanie TortoiseSVN pomocou skupinovaj politiky

Inštalator TortoiseSVN vychádza ako MSI súbor, čo znamená, že by nemal byť problém pridať tento MSI súbor do skupinovaj politiky vašeho doménového servra.

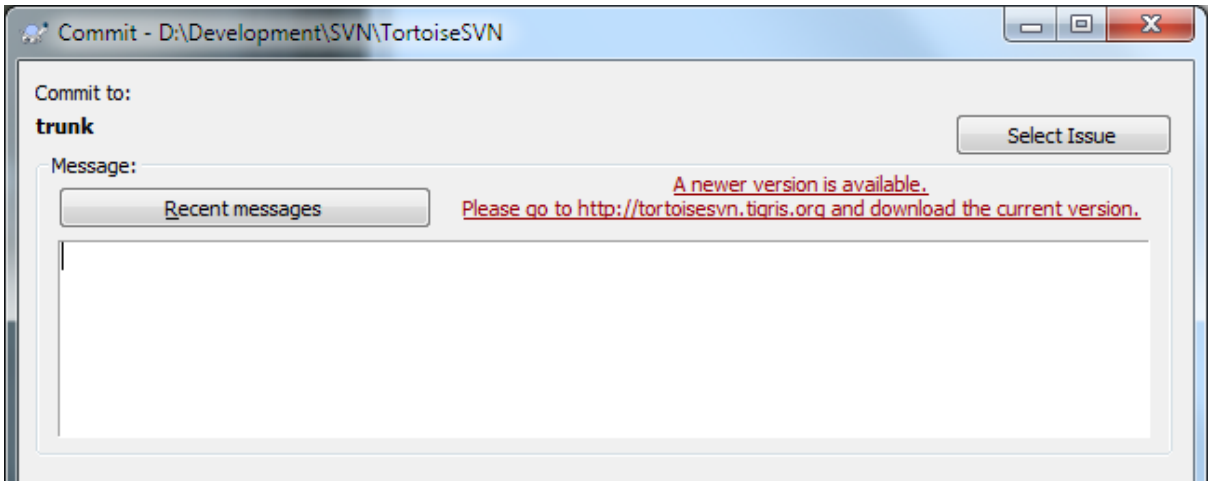
Dobrý návod ako to urobiť môžete nájsť v databáze vedomostí (článok 314934) na stránke Microsoft-u: http://support.microsoft.com/?kbid=314934.

TortoiseSVN must be installed under *Computer Configuration* and not under *User Configuration*. This is because TortoiseSVN needs the CRT and MFC DLLs, which can only be deployed *per computer* and not *per user*. If you really must install TortoiseSVN on a per user basis, then you must first install the MFC and CRT package version 12 from Microsoft on each computer you want to install TortoiseSVN as per user.

Možete si upraviť MSI súbor aby všetci vaši užívatelia mali rovnaké nastavenia. TSVN nastavenia sú uložené vo Windows registroch pod `HKEY_CURRENT_USER\Software\TortoiseSVN` a halvné Subversion nastavenia (ktoré ovplyvňujú všetkých klientov Subversion) sú uložené v konfiguračných súboroch v `%APPDATA%\Subversion`. Keď potrebujete pomôcť s úpravou MSI skúste niektoré z fór ktoré sa zaoberajú transformáciou MSI, alebo hľadať skúste na internete “MSI transform”.

C.2. Presmerovanie kontroly aktualizácie

TortoiseSVN kontroluje existenciu novej verzie každých niekoľko dní. Ak je dostupná novšia verzia, v odovzdácom dialógu sa o tom zobrazí informácia.



Obrázok C.1. Odovzdávacie okno zobrazujúce upozornenie o aktualizácií

Ak ste zodpovedný za množstvo užívateľov na vašej doméne, môžete chcieť, aby vaši užívalia používali iba verzie, ktoré ste odobrili a nedovoliť im inštalovať vždy najnovšiu verziu. Pravdepodobne nechcete aby sa zobrazovalo okno aktualizácie a teda užívatelia nešli okamžite aktualizovať.

Versions 1.4.0 and later of TortoiseSVN allow you to redirect that upgrade check to your intranet server. You can set the registry key `HKCU\Software\TortoiseSVN\UpdateCheckURL` (string value) to an URL pointing to a text file in your intranet. That text file must have the following format:

```
1.9.1.6000
A new version of TortoiseSVN is available for you to download!
http://192.168.2.1/downloads/TortoiseSVN-1.9.1.6000-svn-1.9.1.msi
```

The first line in that file is the version string. You must make sure that it matches the exact version string of the TortoiseSVN installation package. The second line is a custom text, shown in the commit dialog. You can write there whatever you want. Just note that the space in the commit dialog is limited. Too long messages will get truncated! The third line is the URL to the new installation package. This URL is opened when the user clicks on the custom message label in the commit dialog. You can also just point the user to a web page instead of the MSI file directly. The URL is opened with the default web browser, so if you specify a web page, that page is opened and shown to the user. If you specify the MSI package, the browser will ask the user to save the MSI file locally.

C.3. Nastavenie systémovej premennej `SVN_ASP_DOT_NET_HACK`

Od verzie 1.4.0 a neskor3ich inštalátor TorotoiseSVN už neposkytuje užívateľovi možnosť nastaviť sytemovú premennú `SVN_ASP_DOT_NET_HACK`, kedže to spôsobovalo mnoho problémov a zmetenia pre uživateľov, ktorý vždy inšalujú *všetko* bez toho aby vedeli na čo to je.

But the feature is still available in TortoiseSVN and other svn clients. To enable it you have to set the Windows environment variable named `ASPDOTNETHACK` to `1`. Actually, the value of that environment variable doesn't matter: if the variable exists the feature is active.

Dôležité

Upozorňujeme, že táto obchádzka je nevyhnutná len pokiaľ stále používate VS.NET2002. Všetky novšie verzie Visual Studia *nepotrebujú* toto nastavenie. Takže pokiaľ nepoužívate tento zastaralý nástroj TOTO NEPOUŽÍVAJTE!

C.4. Zakázať položky kontextového menu

Od verzie 1.5.0 TortoiseSVN umožňuje zakázať (v skutočnosti skryť) položky kontextového menu. Keďže toto nie je vlastnosť, ktorá by mala byť ľahko dostupná, ale len vo vynimočných prípadoch, nie je pre GUI, ale je to potrebné urobiť priamo vo Windows registroch. Prosím uvedomte si, že toto može vypnúť niektoré príkazy pre užívateľov, ktorý by ich nemali používať. Prosím buďte si však vedomí, že len položky kontextovej ponuky v *Explorer*-i sú skryté a samotné príkazy sú stále dostupné inými spôsobmi ako je príkazový riadok, či v niektorých dialógoch samotného TortoiseSVN!

Kľúče registrov, v ktorých je uložená informácia, ktoré kontextové menu sú zakázané je `HKEY_CURRENT_USER\Software\TortoiseSVN\ContextMenuEntriesMaskLow` a `HKEY_CURRENT_USER\Software\TortoiseSVN\ContextMenuEntriesMaskHigh`.

Každá z týchto položiek je hodnota typu `DWORD` a každý bit zodpovedá jednej položke menu. nastavený bit znamená, že príslušné menu je zakázané.

Hodnota	Položka menu
0x0000000000000001	Získať
0x0000000000000002	Aktualizovať
0x0000000000000004	Odovzdať
0x0000000000000008	Pridať
0x0000000000000010	Vrátiť
0x0000000000000020	Vyčistiť
0x0000000000000040	Vyriešiť

Hodnota	Položka menu
0x0000000000000080	Prepnúť
0x0000000000000100	Importovať
0x0000000000000200	Exportovať
0x0000000000000400	Vytvoriť úložisko tu
0x0000000000000800	Vetva/značka
0x0000000000001000	Zlúčiť
0x0000000000002000	Vymazať
0x0000000000004000	Premenovať
0x0000000000008000	Update to revision
0x0000000000010000	Porovnať
0x0000000000020000	Zobraz denník
0x0000000000040000	Upraviť konflikty
0x0000000000080000	Premiestniť
0x0000000000100000	Check for modifications
0x0000000000200000	Ignorovať
0x0000000000400000	Prehliadač úložiska
0x0000000000800000	Obviniť
0x0000000001000000	Vytvoriť záplatu
0x0000000002000000	Použiť záplatu
0x0000000004000000	Graf revízií
0x0000000008000000	Zamknúť
0x0000000010000000	Odstrániť zámok
0x0000000020000000	Vlastnosti
0x0000000040000000	Porovnať s URL
0x0000000080000000	Vymazávanie neverziovaných objektov
0x0000000100000000	Zlúčiť všetko
0x0000000200000000	Porovnanie s predchádzajúcou revíziou
0x0000000400000000	Vložiť
0x0000000800000000	pracovnú kópiu
0x0000001000000000	Porovnať neskôr
0x0000002000000000	Diff with 'filename'
0x0000004000000000	Unified diff
0x2000000000000000	Nastavenie
0x4000000000000000	Pomoc
0x8000000000000000	O...

Tabuľka C.1. Položky menu a ich hodnoty

Example: to disable the “Relocate” the “Delete unversioned items” and the “Settings” menu entries, add the values assigned to the entries like this:

```
0x0000000000080000
+ 0x0000000080000000
+ 0x2000000000000000
= 0x2000000080080000
```

The lower `DWORD` value (`0x80080000`) must then be stored in `HKEY_CURRENT_USER\Software\TortoiseSVN\ContextMenuEntriesMaskLow`, the higher `DWORD` value (`0x20000000`) in `HKEY_CURRENT_USER\Software\TortoiseSVN\ContextMenuEntriesMaskHigh`.

Na opätovné povolenie všetkých položiek, jednoducho vymažte tieto dva kľúče z registrov.

Dodatok D. Automatizácia TortoiseSVN

Kedže všetky príkazy TortoiseSVN sú ovládané parametrami príkazového riadka, môžete automatizovať skriptami a spúšťať príkazy a dialógy z iných programov (napr: z vašeho obľúbeného textového editora).

Dôležité

Pamatajte, že TortoiseSVN je GUI (graficke rozhranie) a návod na automatizovanie ukazuje ako sú dialógy TortoiseSVN zobrazované, aby zozbierali uživateľské vstupy. Keď chcete napísať skript, ktorý nebude požadovať vstup mali by ste namiesto toho použiť príkazový riadok so Subversion.

D.1. Príkazy TortoiseSVN

Grafické rozhranie TortoiseSVN sa volá `TortoiseProc.exe`. Všetky príkazy sú zadávané ako parametre `/command:abcd`, kde `abcd` je meno požadovaného príkazu. Väčšina tíchto príkazov potrebuje aspoň jednu cestu ako argument, zadaný ako `/path:"daka\cesta"`. V nasledujúcej tabuľke príkaz odpovedá parametru `/command:abcd` a cesta odpovedá parametru `/path:"daka\cesta"`.

There's a special command that does not require the parameter `/command:abcd` but, if nothing is specified on the command line, starts the project monitor instead. If `/tray` is specified, the project monitor starts hidden and only adds its icon to the system tray.

Kedže niektoré príkazy môžu pracovať so zoznamov cieľových ćiest (napr.: odovzdávanie viacerých určených súborov) parameter `/path` môže obsahovať viaceré cesty oddelené znakom `*`.

You can also specify a file which contains a list of paths, separated by newlines. The file must be in UTF-16 format, without a *BOM* [https://en.wikipedia.org/wiki/Byte-order_mark]. If you pass such a file, use `/pathfile` instead of `/path`. To have TortoiseProc delete that file after the command is finished, you can pass the parameter `/deletepathfile`. If you don't pass `/deletepathfile`, you have to delete the file yourself or the file gets left behind.

Okno stavu, ktoré je použité pre odovzdanie, aktualizáciu a mnoho iných príkazov zvyčajne po dokončení príkazy ostane otvorené až kým užívateľ nestlačí OK tlačítko. Toto môže byť zmenené príslušnými nastaveniami v okne nastavení. Ale použie nastavenia zatvorí okno nezávisle odkiaľ bolo volané, či z dávkového súbolu, alebo kontextového menu TortoiseSVN.

To specify a different location of the configuration file, use the parameter `/configdir:"path\to\config\directory"`. This will override the default path, including any registry setting.

To close the progress dialog at the end of a command automatically without using the permanent setting you can pass the `/closeonend` parameter.

- `/closeonend:0` nezatvárať dialógové okno automaticky
- `/closeonend:1` zavrieť dialógové okno automaticky ak nenastali chyby
- `/closeonend:2` zavrieť dialógové okno automaticky ak nenastali chyby, alebo konflikty
- `/closeonend:3` zavrieť dialógové okno automaticky ak nenastali chyby, konflikty, alebo zlúčenia

To close the progress dialog for local operations if there were no errors or conflicts, pass the `/closeforlocal` parameter.

Tabuľka vymenuváva zoznam všetkých príkazov, ktoré sú dostupné použitím príkazového riadka TortoiseProc.exe. Ako je popísané vyššie, mali by yť použité vo forme `/command:abcd`. V tabuľke prefix `/command` je z dôvodu šetrenia miesta.

Príkaz	Popis
:about	Zobrazí okno O... Toto je zobrazené aj keď nie je zadaný žiaden príkaz.

Príkaz	Popis

:log	Opens the log dialog. The `/path` specifies the file or folder for which the log should be shown. Additional options can be set:
	• `/startrev:xxx`,
	• `/endrev:xxx`,
	• `/limit:xxx` limits the amount of fetched messages
	• `/strict` enables the 'stop-on-copy' checkbox,
	• `/merge` enables the 'include merged revisions' checkbox,
	• `/datemin:"{datestring}"` sets the start date of the filter, and
	• `/datemax:"{datestring}"` sets the end date of the filter. The date format is the same as used for svn date revisions.
	• `/findstring:"filterstring"` fills in the filter text,
	• `/findtext` forces the filter to use text, not regex, or
	• `/findregex` forces the filter to use regex, not simple text search, and
	• `/findtype:X` with X being a number between 0 and 511. The numbers are the sum of the following options:
	  • `/findtype:0` filtrované podľa všetkého
	  • `/findtype:1` filtrované podľa správ
	  • `/findtype:2` filtrované podľa cesty
	  • `/findtype:4` filtrované podľa správ
	  • `/findtype:8` filtrované podľa revízií
	  • `/findtype:16` nepoužité
	  • `/findtype:32` filtrované podľa ID-chyby
	  • `/findtype:64` nepoužité
	  • `/findtype:128` filtrované podľa dátumu
	  • `/findtype:256` filtrované podľa rozsahu dátumov
	• If `/outfile:path\to\file` is specified, the selected revisions are written to that file when the log dialog is closed. The revisions are written in the same format as is used to specify revisions in the merge dialog.
	An svn date revision can be in one of the following formats:
	• {2006-02-17}
	• {15:30}
	• {15:30:00.200000}
	• {"2006-02-17 15:30"}

Príkaz	Popis
	• {"2006-02-17 15:30 +0230"} • {2006-02-17T15:30} • {2006-02-17T15:30Z} • {2006-02-17T15:30-04:00} • {20060217T1530} • {20060217T1530Z} • {20060217T1530-0500}
:checkout	Otvorí dialog pre získanie. Parameter `/path` určuje cieľový adresár a `/url` určuje URL, z ktorej prebehne získavanie. Ak zadáte kľúč `/blockpathadjustments`, automatická úprava cesty pre získanie bude vypnutá. Parametr `/revision:XXX` udáva revíziu na získanie.
:import	Opens the import dialog. The `/path` specifies the directory with the data to import. You can also specify the `/logmsg` switch to pass a predefined log message to the import dialog. Or, if you don't want to pass the log message on the command line, use `/logmsgfile:cesta`, where `cesta` points to a file containing the log message.
:update	Updates the working copy in `/path` to HEAD. If the option `/rev` is given then a dialog is shown to ask the user to which revision the update should go. To avoid the dialog specify a revision number `/rev:1234`. Other options are `/nonrecursive`, `/ignoreexternals` and `/includeexternals`. The `/stickydepth` indicates that the specified depth should be sticky, creating a sparse checkout. The `/skipprechecks` can be set to skip all checks that are done before an update. If this is specified, then the Zobrazenie denníka button is disabled, and the context menu to show diffs is also disabled after the update.
:commit	Opens the commit dialog. The `/path` specifies the target directory or the list of files to commit. You can also specify the `/logmsg` switch to pass a predefined log message to the commit dialog. Or, if you don't want to pass the log message on the command line, use `/logmsgfile:cesta`, where `cesta` points to a file containing the log message. To pre-fill the bug ID box (in case you've set up integration with bug trackers properly), you can use the `/bugid:"ID-chyby sem"` to do that.
:add	Pridá súbory v `/path` do správy verzií.
:revert	Vráti miestne zmeny pracovnej kópie. Parameter `/path` hovorí, ktoré objekty sa majú vrátiť do pôvodného stavu.
:cleanup	Cleans up interrupted or aborted operations and unlocks the working copy in `/path`. You also have to pass the `/cleanup` to actually do the cleanup. Use `/noui` to prevent the result dialog from popping up (either telling about the cleanup being finished or showing an error message). `/noprogressui` also disables the progress dialog. `/nodlg` disables showing the cleanup dialog where the user can choose what exactly should be done in the cleanup. The available actions can be specified with the options `/cleanup` for status cleanup, `/breaklocks` to break all locks, `/revert` to revert uncommitted changes, `/delunversioned`, `/delignored`, `/refreshshell`, `/externals`, `/fixtimestamps` and `/vacuum`.
:resolve	Marks a conflicted file specified in `/path` as resolved. If `/noquestion` is given, then resolving is done without asking the user first if it really should be done.
:repocreate	Vytvorí uložisko na `/path`

Príkaz	Popis
:switch	Opens the switch dialog. The `/path` specifies the target directory and `/url` the URL to switch to.
:export	Exports the working copy in `/path` to another directory. If the `/path` points to an unversioned directory, a dialog will ask for an URL to export to the directory in `/path`. If you specify the key `/blockpathadjustments`, the automatic export path adjustments are blocked.
:dropexport	Exports the working copy in `/path` to the directory specified in `/droptarget`. This exporting does not use the export dialog but executes directly. The option `/overwrite` specifies that existing files are overwritten without user confirmation, and the option `/autorename` specifies that if files already exist, the exported files get automatically renamed to avoid overwriting them. The option `/extended` can specify either `miestne zmeny` to only export files that got changed locally, or `neverziované` to also export all unversioned items as well.
:dropvendor	Copies the folder in `/path` recursively to the directory specified in `/droptarget`. New files are added automatically, and missing files get removed in the target working copy, basically ensuring that source and destination are exactly the same. Specify `/noui` to skip the confirmation dialog, and `/noprogressui` to also disable showing the progress dialog.
:merge	Opens the merge dialog. The `/path` specifies the target directory. For merging a revision range, the following options are available: `/fromurl:URL`, `/revrange:retazec`. For merging two repository trees, the following options are available: `/fromurl:URL`, `/tourl:URL`, `/fromrev:xxx` and `/torev:xxx`.
:mergeall	Otvorí dialog pre zlúčiť všetko. Parameter `/path` určuje cieľový adresár.
:copy	Brings up the branch/tag dialog. The `/path` is the working copy to branch/tag from. And the `/url` is the target URL. If the urls starts with a ^ it is assumed to be relative to the repository root. To already check the option `Switch working copy to new branch/tag` you can pass the `/switchaftercopy` switch. To check the option `Vytvoriť medziadresáre` pass the `/makeparents` switch. You can also specify the `/logmsg` switch to pass a predefined log message to the branch/tag dialog. Or, if you don't want to pass the log message on the command line, use `/logmsgfile:cesta`, where `cesta` points to a file containing the log message.
:settings	Otvorí dialógové okno nastavenia.
:remove	Odstráni súbor(y) v `/path` zpod správy verzií.
:rename	Renames the file in `/path`. The new name for the file is asked with a dialog. To avoid the question about renaming similar files in one step, pass `/noquestion`.
:diff	Starts the external diff program specified in the TortoiseSVN settings. The `/path` specifies the first file. If the option `/path2` is set, then the diff program is started with those two files. If `/path2` is omitted, then the diff is done between the file in `/path` and its BASE. If the specified file also has property modifications, the external diff tool is also started for each modified property. To prevent that, pass the option `/ignoreprops`. To explicitly set the revision numbers use `/startrev:xxx` and `/endrev:xxx`, and for the optional peg revision use `/pegrevision:xxx`. If `/blame` is set and `/path2` is not set, then the diff is done by first blaming the files with the given revisions. The parameter `/line:xxx` specifies the line to jump to when the diff is shown.
:shelve	Shelves the specified paths in a new shelf. The option `/shelfname:name` specifies the name of the shelf. An optional log message can be specified with `/logmsg:message`. If option `/checkpoint` is passed, the modifications of the files are kept.

Príkaz	Popis
:unshelve	Applies the shelf with the name `/shelfname:name` to the working copy path. By default the last version of the shelf is applied, but you can specify a version with `/version:X`.
:showcompare	Depending on the URLs and revisions to compare, this either shows a unified diff (if the option `unified` is set), a dialog with a list of files that have changed or if the URLs point to files starts the diff viewer for those two files. The options `url1`, `url2`, `revision1` and `revision2` must be specified. The options `pegrevision`, `ignoreancestry`, `blame` and `unified` are optional. If the specified url also has property modifications, the external diff tool is also started for each modified property. To prevent that, pass the option `/ignoreprops`. If a unified diff is requested, an optional `prettyprint` option can be specified which will show the merge-info properties in a more user readable format.
:conflicteditor	Spustí editor konfliktov zadaný v nastavení TortoiseSVN so správnymi súbormi pre konfliktný súbor v `/path`.
:relocate	Otvorí dialóg premiestnenia. `/path` udáva cestu pracovnej kópie na premiestnenie.
:help	Otvorí súbor pomocníka.
:repostatus	Otvorí dialóg Skontrolovať zmeny. Parameter `/path` adresár pracovnej kópie. Ak je zadaný parameter `/remote` dialóg kontaktuje úložisko okamžite po štarte, ako keby užívateľ klikol na tlačítko Skontrolovať uložisko.
:repobrowser	Starts the repository browser dialog, pointing to the URL of the working copy given in `/path` or `/path` points directly to an URL. An additional option `/rev:xxx` can be used to specify the revision which the repository browser should show. If the `/rev:xxx` is omitted, it defaults to HEAD. If `/path` points to an URL, the `/projectpropertiespath:path/to/wc` specifies the path from where to read and use the project properties. If `/outfile:path\to\file` is specified, the selected URL and revision are written to that file when the repository browser is closed. The first line in that text file contains the URL, the second line the revision in text format.
:ignore	Pridá ciele v `/path` do zoznamu ignorovaných, čiže pridá vlastnosť `svn:ignore` na tieto súbory.
:blame	Otvorí dialóg obvinenia pre súbor zadaný v `/path`. Keď je zadané `/startrev` a `/endrev`, tak sa nezobrazí okno s otázkou na rozsah, ale sú je použitý rozsah podľa zadaných hodnôt. Keď je zadaný paramater`/line:nnn`, TortoiseBlame sa otvorí a zobrazí zadaný riadok. Parametre `/ignoreeol`, `/ignorespaces` a `/ignoreallspaces` sú tiež podporované.
:cat	Uloží súbor z URL, alebo pracovnej kópií danej v `/path` na umiestnenie zadané v `/savepath:cesta`. Revízia je v `/revision:xxx`. Môže byť použité k získaniu súboru špecifickej revízie.
:createpatch	Creates a patch file for the path given in `/path`. To skip the file Save-As dialog you can pass `/savepath:cesta` to specify the path where to save the patch file to

Príkaz	Popis
	directly. To prevent the unified diff viewer from being started showing the patch file, pass `/noview`. If a unified diff is requested, an optional `prettyprint` option can be specified which will show the merge-info properties in a more user readable format.
:revisiongraph	Shows the revision graph for the path given in `/path`. To create an image file of the revision graph for a specific path, but without showing the graph window, pass `/output:path` with the path to the output file. The output file must have an extension that the revision graph can actually export to. These are: `.svg`, `.wmf`, `.png`, `.jpg`, `.bmp` and `.gif`. Since the revision graph has many options that affect how it is shown, you can also set the options to use when creating the output image file. Pass these options with `/options:XXXX`, where `XXXX` is a decimal value. The best way to find the required options is to start the revision graph the usual way, set all user-interface options and close the graph. Then the options you need to pass on the command line can be read from the registry `HKCU\Software\TortoiseSVN\RevisionGraphOptions`.
:lock	Zamkne súbo, alebo súbory v adresáry danom v `/path`. Zobrazí sa dialóg 'zamknúť', aby uživateľ mohol zadať komentár k zámku.
:unlock	Odobkne súbor, alebo všetky súbory v adresáry danom v `/path`
:rebuildiconcache	Znovu vytvorí zásobník ikoniek Windows. Použite to len v prípade, že sú ikonky vo Windows poškodené. Vedľajším (neobíditeľným) efektom je že ikonky na ploche sú premiestnené. Na potlačenie okna so správou, zadajte `/noquestion`.
:properties	Shows the properties dialog for the path given in `/path`. For dealing with versioned properties this command requires a working copy. Revision properties can be viewed/changed if `/path` is an URL and `/rev:XXX` is specified. To open the properties dialog directly for a specific property, pass the property name as `/property:name`.
:sync	Exports/imports settings, either depending on whether the current settings or the exported settings are newer, or as specified. If a path is passed with `/path`, then the path is used to store or read the settings from. The parameter `/askforpath` will show a file open/save dialog for the user to chose the export/import path. If neither `/load` nor `/save` is specified, then TortoiseSVN determines whether to export or import the settings by looking at which ones are more recent. If the export file is more recent than the current settings, then the settings are loaded from the file. If the current settings are more recent, then the settings are exported to the settings file. If `/load` is specified, the settings are imported from the settings file. If `/save` is specified, the current settings are exported to the settings file.

Príkaz	Popis
	The parameter `/local` forces a settings export to include local settings, i.e. settings that refer to local paths.

Tabuľka D.1. Zoznam príkazov a možností

Examples (which should be entered on one line):

```
TortoiseProc.exe /command:commit
                 /path:"c:\svn_wc\file1.txt*c:\svn_wc\file2.txt"
                 /logmsg:"test log message" /closeonend:0

TortoiseProc.exe /command:update /path:"c:\svn_wc\" /closeonend:0

TortoiseProc.exe /command:log /path:"c:\svn_wc\file1.txt"
                 /startrev:50 /endrev:60 /closeonend:0
```

D.2. Tsvncmd URL handler

Použitím zvláštnych URL je možné volať TortoiseProc z webových stránok.

TortoiseSVN registruje nový protokol `tsvncmd:`, ktorý môže byť použitý na vytvorenie hyperliniek, ktoré spúšťajú príkazy TortoiseSVN. Príkazy a parametre sú rovnaké ako pri automatizácií TortoiseSVN z príkazového riadku.

Formát URL pre `tsvncmd:` je:

`tsvncmd:command:prikaz?parameter:paramvalue?parameter:paramvalue`

with `cmd` being one of the allowed commands, `parameter` being the name of a parameter like `path` or `revision`, and `paramvalue` being the value to use for that parameter. The list of parameters allowed depends on the command used.

Nasledovné príkazy sú povolené s `tsvncmd:` URL:

- `:update`
- `:commit`
- `:diff`
- `:repobrowser`
- `:checkout`
- `:export`
- `:blame`
- `:repostatus`
- `:revisiongraph`
- `:showcompare`
- `:log`

A simple example URL might look like this:

```
<a href="tsvncmd:command:update?path:c:\svn_wc?rev:1234">Update</a>
```

or in a more complex case:

```
<a href="tsvncmd:command:showcompare?
url1:https://svn.code.sf.net/p/stefanstools/code/trunk/StExBar/src/setup/Setup.wxs?
url2:https://svn.code.sf.net/p/stefanstools/code/trunk/StExBar/src/setup/Setup.wxs?
revision1:188?revision2:189">compare</a>
```

D.3. Príkazy TortoiseIDiff

Porovnávací nástroj obrázkov má niekoľko parametov príkazového riadka, ktoré môžu byť použité na ovládanie ako sa má nástroj spustiť. Program sa volá `TortoiseIDiff.exe`.

Nasledovná tabulka zobrazuje všetky možnosti, ktoré môžu byť poslané nástroju porovnávania obrázkov v príkazovom riadku.

Voľba	Popis
:left	Cesta k súboru je zobrazená na ľavo.
:lefttitle	Reťazec názvu. Tento reťazec je použitý v názve zobrazenia obrázku miesto plnej cesty obrázku.
:right	Cesta k súboru zobrazenému na pravo.
:righttitle	Reťazec názvu. Tento reťazec je použitý v názve zobrazenia obrázku miesto plnej cesty obrázku.
:overlay	Keď, je zadané porovnávač obrázkov sa prepne na prekrývajúceho módu (alfa mód).
:fit	Keď je zadané, porovnávač obrázkov nastaví lupu tak, aby boli oba obrázky viditeľné celé.
:showinfo	Zobrazí rámček s informáciami o obázku.

Tabuľka D.2. Zoznam prístupných možností

Príklad (mal by zadaný na jednom riadku):

```
TortoiseIDiff.exe /left:"c:\images\img1.jpg" /lefttitle:"obrázok 1"
                  /right:"c:\images\img2.jpg" /righttitle:"obrázok 2"
                  /fit /overlay
```

D.4. TortoiseUDiff Commands

The unified diff viewer has only two command line options:

Voľba	Popis
:patchfile	Path to the unified diff file.
:p	Activates pipe mode. The unified diff is read from the console input.

Tabuľka D.3. Zoznam prístupných možností

Examples (which should be entered on one line):

```
TortoiseUDiff.exe /patchfile:"c:\diff.patch"
```

If you create the diff from another command, you can use TortoiseUDiff to show that diff directly:

```
svn diff | TortoiseUDiff.exe /u
```

this also works if you omit the `/p` parameter:

```
svn diff | TortoiseUDiff.exe
```

Dodatok E. Krížová refencia príkazového riadka (Command Line Interface - CLI)

Niekedy vás tento návod odkazuje na hlavnú dokumentáciu Subversion, ktorá popisuje výrazy Klienta príkazového riadka (CLI). Aby sme vám pomohli pochopiť čo robí TorotiseSVN na pozadí, pripravili sme zoznam zobrazujúci ekvivalenty príkazov v CLI pre každú operáciu TortoiseSVN.

> **Poznámka**
>
> Napriek tomu, že sú tam ekvivalenty v CLI toho čo robí TortoiseSVN, pamätajte, že TortoiseSVN *nevolá* CLI, ale používa Subversion knižnicu priamo.

Ak si myslíte, že ste nasli chybu v TortoiseSVN, môžeme vás požiadať aby ste ju skúsili zreprodukovať použitím CLI, aby sme mohli rozlíšiť medzi TortoiseSVN chybami a tými zo Subversion. Tento zoznam vám povie, ktoré príkazy skúsiť.

E.1. Konvencia a základne pravidlá

In the descriptions which follow, the URL for a repository location is shown simply as `URL`, and an example might be `https://svn.code.sf.net/p/tortoisesvn/code/trunk/`. The working copy path is shown simply as `PATH`, and an example might be `C:\TortoiseSVN\trunk`.

> **Dôležité**
>
> Pretože TortoiseSVN je rozšírenie šelu, nie je schopný použiť pojem aktualného pracovného adresára. Všetky pracovné kópie musia používať absolútne cesty a nie relatívne.

Niektoré položky sú nepovinné, a tie sú často nastaviteľné zaškrtávacími políčkami alebo prepínačmi v TortoiseSVN. Tieto možnosti sú uvedené v [hranatých zátvorkách] v definíciách príkazového riadku.

E.2. Príkazy TortoiseSVN

E.2.1. Získať

```
svn checkout [-depth ARG] [--ignore-externals] [-r rev] URL PATH
```

Kombobox hĺbky odpovedá argumentu `-depth`.

Ak je zaškrtnuté Vynechať externépoužite prepínač `--ignore-externals`.

Ak ste si vybrali získať špecifickú revíziu zadajte ju za URL použitím prepínača `-r`.

E.2.2. Aktualizovať

```
svn info URL_of_WC
svn update [-r rev] PATH
```

Vo Subversion aktulizácia viacerých objektov nie je atomický (nedeliteľný) úkon. Takže TortoiseSVN najprv najde HEAD revíziu úložiska a potom aktualizuje všetky objekty na danú revíziu, aby sa vyhol zmiešnym verziám v pracovnej kopií.

Ak je vybraný iba jeden objekt na aktualizáciu, alebo sú vybrané objekty z toho istého úložiska, TortoiseSVN jednoducho aktualizuje na HEAD.

V tomto prípade nie sú použité žiadne opcie príkazového riadka. Aktualizovať na revíziu tiež obsahuje príkaz aktualizácie, ale obsahuje viac možností.

E.2.3. Aktualizovať na revíziu

```
svn info URL_of_WC
svn update [-r rev] [-depth ARG] [--ignore-externals] PATH
```

Kombobox hĺbky odpovedá argumentu `-depth`.

Ak je zaškrtnuté Vynechať externépoužite prepínač `--ignore-externals`.

E.2.4. Odovzdať

V TortoiseSVN, okno odovydania používa niekoľko príkazov Subversion.V prvej fáze je yistený stav objektov vo vašej pracovnej kopií, ktoré majú byť potencionálne odovzdané. Môžete prezrieť zoznam, porovnať so základnou verziou (BASE) a vybrať objekty, ktoré chcete aby boli zahrnuté do odovzdania.

```
svn status -v PATH
```

Ak je zašktrnuté Zobraziť neverziované súbory, TortoiseSVN tiež zobrazí neverziované súbory a adresáre v štruktúre pracovnej kópie, pri vzatí do úvahy pravidlá ignorovania. Zvlášť táto vlastnosť nema priamy ekvivalent v Subversion, keďže príkaz `svn status` nevchádza do neverziovaných adresárov.

Ak ste zašktli neverziované súbory, alebo adresáre, tieto objekty budú najprv pridané do pracovnej kópie.

```
svn add PATH...
```

Keď kliknete na OK, nastane odovzdávanie Subversion. Keď necháte všetky výberové zaškrtávacie políčka v ich predvolenom stave, TortoiseSVN použije jedeno rekurzívne odovzdanie pracovnej kópie. Ak zrušíte vybranie niektorého súboru potom musí byť použité nerekurzívne odovzdanie (`-N`) a každá cesta musí byť udaná zvlášť v príkazovom riadku odovzdania.

```
svn commit -m "LogMessage" [-depth ARG] [--no-unlock] PATH...
```

`SpravaDennika` v príkaye zodpovedá obsahu správy denníka v editovacom boxe. Môže byť prázdna.

Pokiaľ je zaškrtnuté Ponechať zámky, použite prepínač `--no-unlock`.

E.2.5. Porovnať

```
svn diff PATH
```

Keď použijete Porovnať z hlavného kontextového menu, porovnávate zmenený súbor so základnou(BASE) verziou. Výstup z píkazu v CLI toto robí tiež a vytvára výstup vo formáte unifikovaného porovnania. Avšak toto nie je to čo TortoiseSVN používa. TortoiseSVN pouýíva TortoiseMerge (alebo program, ktorý ste si vybrali) na zobrazenie rozdielov, takže neexistuje priamy CLI ekvivalent.

Aj pokiaľ porovnávate 2 súbory pomocou TortoiseSVN, či už sú pod správou verzií, alebo nie, TortoiseSVN len vyplní tieto dva súbory do zvoleého porovnávacieho pogramu a nechá ho si zmeny nájsť.

E.2.6. Zobraz denník

```
svn log -v -r 0:N --limit 100 [--stop-on-copy] PATH
or
svn log -v -r M:N [--stop-on-copy] PATH
```

Predvolene TortoiseSVN sa pokúsi získať 100 správ denníka použitím metódy --limit. Pokiaľ nastavenie určuje použitie starého API, potom je druhou formou získanie správ denníka pre 100 revízií úložiska.

Keď je zaškrtnuté Zastaviť na kopírovať/premenovať, použite prepínač `--stop-on-copy`.

E.2.7. Skontrolovať zmeny

```
svn status -v PATH
or
svn status -u -v PATH
```

Na začiatku je stav skontrolovaný len pre vašu lokálnu kópiu. Keď kliknete na Skontrolovať úložisko potom je skontrolovaný aj úložisko, či by boli súbory zmenené aktualizáciou, to vyžaduje prepínač `-u`.

Ak je zašktrnuté Zobraziť neverziované súbory, TortoiseSVN tiež zobrazí neverziované súbory a adresáre v štruktúre pracovnej kópie, pri vzatí do úvahy pravidlá ignorovania. Zvlášť táto vlastnosť nema priamy ekvivalent v Subversion, keďže príkaz `svn status` nevchádza do neverziovaných adresárov.

E.2.8. Graf revízií

Graf revízií je len vlastnosť TortoiseSVN. V klientovi príkazového riadku podobný príkaz nie je.

What TortoiseSVN does is an

```
svn info URL_of_WC
svn log -v URL
```

where URL is the repository *root* and then analyzes the data returned.

E.2.9. Prehliadanie úložiska

```
svn info URL_of_WC
svn list [-r rev] -v URL
```

Možete použiť `svn info` na zistenie koreňovej URL úložiska, čo je najvyššia úroveň v prehliadači úložiska. Nie je možné `Up` nad túto úroveň. Tento príkaz tiež vráti všetky informácie o zámkoch, ktoré sú zobrazené v prehliadačí úložiska.

Volanie `svn list` zobrazí zoznam adresára, danú URL a revíziu.

E.2.10. Upraviť konflikty

Tento príkaz nemá ekvivalent v príkazovom riadku. Vyvolá TortoiseMerge, alebo externý trojcestný porovnávací/zlučovací nástroj na zobrazenie súborov zapojených do konfliktu a vyriešiť konflikty a určiť, ktoré riadky použiť.

E.2.11. Vyriešené

```
svn resolved PATH
```

E.2.12. Premenovať

```
svn rename CURR_PATH NEW_PATH
```

E.2.13. Vymazať

```
svn delete PATH
```

E.2.14. Vrátiť

```
svn status -v PATH
```

Prvou fázou je kontrola stavu s určením objektov vo vašej pracovnej kópií, ktoré môžu byť vrátené. Možete si zoznam prezrieť, porovnať súbory voči základu a vybrať objekty, ktoré chcete zahrnúť do vrátenia.

Keď kliknete na OK, nastane vrátenie vo Subversion. Keď necháte všetky výberové zaškrtávacie políčka v ich predvolenom stave, TortoiseSVN použije jedeno rekurzívne vrátenie pracovnej kópie. Ak zrušíte vybranie niektorého súboru potom musí byť použité nerekurzívne odovzdanie (`-N`) a každá cesta musí byť udaná zvlášť v príkazovom riadku odovzdania.

```
svn revert [-R] PATH...
```

E.2.15. Vyčistiť

```
svn cleanup PATH
```

E.2.16. Získať zámok

```
svn status -v PATH
```

Prvou fázou je kontorla stavu, ktorá zistí, ktoré súbory v vašej pracovnej kópií môžu byť zamknuté. Môžete si vybrať objekty, ktoré chcete zamknúť.

```
svn lock -m "LockMessage" [--force] PATH...
```

`UkradnúťZámok` tu odpovedá obsahu zamykacieho políčka . Môže byť prázdne.

Ak je zaškrtnuté Ukradnúť zámok, použite prepínač`--force`.

E.2.17. Uvolniť zámok

```
svn unlock PATH
```

E.2.18. Vetva/značka

```
svn copy -m "LogMessage" URL URL
or
svn copy -m "LogMessage" URL@rev URL@rev
or
svn copy -m "LogMessage" PATH URL
```

Dialóg pre Vetva/Značka vytvorí kópiu do úložiska. Sú tam tieto tri možnosti:

- HEAD revision in the repository
- Špecifická revízia v úložisku
- Pracovná kópia

, ktoré zodpovedajú trom predošlím príkazom.

`SpravaDennika` v príkaye zodpovedá obsahu správy denníka v editovacom boxe. Môže byť prázdna.

E.2.19. Prepnúť

```
svn info URL_of_WC
svn switch [-r rev] URL PATH
```

E.2.20. Zlúčiť

```
svn merge [--dry-run] --force From_URL@revN To_URL@revM PATH
```

Testovacie zlučovanie vykoná také isté zlučovanie s prepínačom `--dry-run`.

```
svn diff From_URL@revN To_URL@revM
```

Unifikované porovnanie zobrazí porovnanie, ktoré bude použité na zlučovanie.

E.2.21. Exportovať

```
svn export [-r rev] [--ignore-externals] URL Export_PATH
```

Tento formulár je použitý na prístup z neverziovaného adresára, adresár je použitý ako cieľ.

Exportovanie pracovnej kópie na iné miesto je uskutošnené bez knižničných funkcií Subversion, teda neexistuje zodpovedájúci príkaz v príkazovom riadku.

To čo TortoiseSVN robí je skopírovanie všetkých súborov so zobrazením priebehu. Neverziované súbory a adresáre môžu byť tiež navolené na exportovanie.

V oboch prípadoch, keď je zaškrtknuté Vynechat externé, použite prepínač `--ignore-externals`.

E.2.22. Premiestniť

```
svn switch --relocate From_URL To_URL
```

E.2.23. Vytvoriť úložisko tu

```
svnadmin create --fs-type fsfs PATH
```

E.2.24. Pridať

```
svn add PATH...
```

Keď vyberiete adresár, TortoiseSVN ho najprv oskenuje na objekty, ktoré môže pridať.

E.2.25. Importovať

```
svn import -m LogMessage PATH URL
```

`SpravaDennika` v príkaye zodpovedá obsahu správy denníka v editovacom boxe. Môže byť prázdna.

E.2.26. Obviniť

```
svn blame -r N:M -v PATH
svn log -r N:M PATH
```

Ak používate TortoiseBlame k zobrazeniu informácií obvinenia, je potrebný aj denník súboru k zobrazeniu správ denníka v rade. Ak na prezeranie používate textový súbor, táto informácie nie je potrebná.

E.2.27. Pridať do zoznamu ignorovaných

```
svn propget svn:ignore PATH > tempfile
{edit new ignore item into tempfile}
svn propset svn:ignore -F tempfile PATH
```

Keďže vlastnosť `svn:ignore` má zvyčajne viacriadkovú hodnotu, je to tu skôr zobrazené ako sa mení cez textový súbor než cez príkazový riadok.

E.2.28. Vytvoriť záplatu

```
svn diff PATH > patch-file
```

TortoiseSVN vytvára súbory záplat vo formáte unifikovaného porovnania porovnaním pracovnej kópie a Základnej verzie.

E.2.29. Použiť záplatu

Pokiaľ nepoužívate záplatu na rovnakej revízií stáva sa zaplátavanie ošemetnou vecou. Našťastie pre vás môžete použiť TortoiseMerge, ktorý v Subversion nemá ekvivalent.

Dodatok F. Niektoré detaily implementácie

Táto príloha obsahuje riešenia na problémy a otázky, ktoré môžete mať pri používaní TortoiseSVN.

F.1. Prekrývané ikony

Všetky súbory a adresáre majú svoj Subversion stav, ktorý knižnica Subversion oznamuje. V klientovy založenom na príkazovom riadku je použitý jednoznakový kód. TortoiseSVN však používa grafické zobrazenie pomocou prekrývajúcich ikon. Kedže počet prekryvajúcich ikoniek je veľmi obmedzený, každá ikonka môže zodpovedať viacerým stavom.

Ikonka *Konfliktné* je použitá pre stav `konfliktné`, po tom ako aktualizácia, ale prepnutie vyústilo do konfliktu medzi miestnymi zmenami a tími z úložiska. Tiež je použitá na stav `poškodené`, čo nastane keď nebolo možné dokončiť úkon.

Ikonka *Zmenené* označuje: stav `zmenené`, object na ktorom boli vykonané miestne zmrny; stav `zlúčené`, keď zmeny z úložiska boli zlúčené s miestnymi zmenami; a stav `nahradené`, keď bol súbor vymayaný a nahradený iným súborom s rovankým menom.

Ikonka *Vymazané* reprezentuje stav `vymazané`, keď je objekt pripravený na vymazanie, alebo stav `chýbajúce`, keď objekt chýba. Prirodzene objekt, ktorý chýba nemôže mať ikonku na sebe, ale rodičovský adresár môže byť označený, že jeden detský objekt chýba.

Ikonka *pridaný* je použitá na zobrazenie stavu, keď bol objekt `pridaný` do správy verzií.

Ikonka *Pod Subversion* je použitá na objekte, ktorý je v stave `normálne`, alebo objekt, ktorého stav nie je ešte známy. Keďže TortoiseSVN používa proces vytvárania zásobníka stavov na pozadí, môže trvať niekoľko sekúnd kým dôjde k aktualizácií ikonky.

Ikonka *Potrebuje Zámok* je použitá súbor má nastavenú vlastnosť `svn:needs-lock`.

Ikonka *Zamknuté* je použitá keď pracovná kópia drží zámok na danom súbore.

Táto ikonka *Ignorované* sa používa na objekty k reprezentovaniu stavu `ignorované`, buďto z dôvodu globálneho vzoru ignorovania, alebo vlastnosti`svn:ignore` na adresáry. Toto prekrytie je voliteľné.

Neverziované táto ikonka je použitá na reprezentovanie objektov, ktoré sú stave `neverziované`. Toto je objekt vo verziovanom adresáry, ale samotnz nie je pod správou verzií. Toto prekrytie je voliteľné.

Pokiaľ Subversion stav je `žiadne` (objekt nieje súčasťou pracovnej kópie) nie je zobrazené žiadne prekrytie. Ak ste zakázali *Ignorované* a *Neverziované* prekrytia potom ani tieto nebudú zobrazené.

Objekt môže mať iba jednu hodnotu stavu v Subversion. Napríklad súbor môže byť miestne zmenený a označený na vymazanie v tom istom čase. Subversion vráti jednu hodnotu stavu - v tomto prípade `vymazané`. Tieto priority sú definované priamo v Subversion.

When TortoiseSVN displays the status recursively (the default setting), each folder displays an overlay reflecting its own status and the status of all its children. In order to display a single *summary* overlay, we use the priority order shown above to determine which overlay to use, with the *Conflicted* overlay taking highest priority.

In fact, you may find that not all of these icons are used on your system. This is because the number of overlays allowed by Windows is limited to 15. Windows uses 4 of those, and the remaining 11 can be used by other applications. If there are not enough overlay slots available, TortoiseSVN tries to be a *Good Citizen (TM)* and limits its use of overlays to give other apps a chance.

Since there are Tortoise clients available for other version control systems, we've created a shared component which is responsible for showing the overlay icons. The technical details are not important here, all you need to know is that this shared component allows all Tortoise clients to use the same overlays and therefore the limit of 11 available slots isn't used up by installing more than one Tortoise client. Of course there's one small drawback: all Tortoise clients use the same overlay icons, so you can't figure out by the overlay icons what version control system a working copy is using.

- *Normálne*, *Zmenené* a *Konflikné* sú vždy načítané a viditeľné.
- *Vymazané* je načitané ak je to možné, ale mení sa na `Zmenené` ak nie je dosť slotov.
- *Iba na čítanie* je načitané ak je to možné, inak sa použije *Normálne*.
- *Zamknuté* je načitané ak je to možné, inak sa použije *Normálne*.
- *Pridané* je načitané ak je to možné, ale mení sa na `Zmenené` ak nie je dosť slotov.

Dodatok G. Jazykové balíčky a Kontrola pravopisu

Štandardný inštalátor podporuje iba Angličtinu, ale po inštalácií si môžete stiahnuť aj jazykové balíčky a slovníky kontroly pravopisu.

G.1. Jazykové balíčky

The TortoiseSVN user interface has been translated into many different languages, so you may be able to download a language pack to suit your needs. You can find the language packs on our *translation status page* [https://tortoisesvn.net/translation_status_dev.html]. And if there is no language pack available, why not join the team and submit your own translation ;-)

Každý jazykový balíček je zabalený ako `.msi` inštalátor. Stačí spustiť inštalačný program a postupovať podľa pokynov. Po dokončení inštalácie bude preklad dostupný.

The documentation has also been translated into several different languages. You can download translated manuals from the *support page* [https://tortoisesvn.net/support.html] on our website.

G.2. Kontrola pravopisu

TortoiseSVN uses the Windows spell checker if it's available (Windows 8 or later). Which means that if you want the spell checker to work in a different language than the default OS language, you have to install the spell checker module in the Windows settings (`Settings > Time & Language > Region & Language`).

TortoiseSVN will use that spell checker if properly configured with the `tsvn:projectlanguage` project property.

In case the Windows spell checker is not available, TortoiseSVN can also use spell checker dictionaries from *OpenOffice* [https://openoffice.org] and *Mozilla* [https://mozilla.org].

Inštalátor automaticky pridá slovník americkej a britskej angličtiny. Ak chcete iné jazyky, najjednoduchšou možnosťou je jednoducho nainštalovať jeden z jazykových balíčkov TortoiseSVN. To naištaluje zodpovedajúce súbory slovníka aj s užívateľským rozhraním TortoiseSVN. Po dokončení inštalácie bude dostupný aj slovník.

Alebo si môžete nainštalovať slovníky sami. Ak máte nainštalovaný OpenOffice.org alebo Mozilla-u, môžete tieto slovníky skopírovať z inštalačného priečinka pre tieto aplikácie. V opačnom prípade je potrebné stiahnuť požadované súbory slovníka z http://wiki.services.openoffice.org/wiki/Dictionaries.

Once you have got the dictionary files, you probably need to rename them so that the filenames only have the locale chars in it. Example:

- `en_US.aff`
- `en_US.dic`

Then just copy them into the `%APPDATA%\TortoiseSVN\dic` folder. If that folder isn't there, you have to create it first. TortoiseSVN will also search the `Languages` sub-folder of the TortoiseSVN installation folder (normally this will be `C:\Program Files\TortoiseSVN\Languages`); this is the place where the language packs put their files. However, the %APPDATA%-folder doesn't require administrator privileges and, thus, has higher priority. The next time you start TortoiseSVN, the spell checker will be available.

Ak nainštalujete viac slovníkov, TortoiseSVN použije nasledovné pravidlá na výber, ktorý z nich použiť.

1. Skontrolujte nastavenia `tsvn: projectlanguage`. Pozrite Oddiel 4.18, “Nastavenia Projektu” pre viac informácií o nastavení vlastností projektu.

2. Aj nie je nastavený jazyk pre projekt, alebo daný jazyk nie je nainštalovaný, skúsi sa jazyk zodpovedajúci miestnemu nastaveniu vo Windows.

3. Ak presné miestne nastavenie Windows nefunguje, skúsi sa "základný" jazyk, napr. miesto `de_CH` (švajčiarska nemečina) sa skúsi `de_DE` (nemčina).

4. Ak nič z vyššie uvedeného nefunguje, potom je východiskovým jazykom je angličtina, ktorá je súčasťou štandardnej inštalácie.

Register

Aktualizovať	Tento príkaz Subversion stiahne posledné zmeny z úložiska do vašej pracovnej kópie, zlučovaním zmien od ostatných so zmenami vo vašej pracovnej kópií.
Exportovať	Príkaz vytvorí kópiu verziovaného adresára, zhodnú s pracovnou kópiou, ale bez lokálneho `.svn` adresára.
FSFS	Súborový systém FS. Vlastný súborový systém Subversion pre úložiská. Môže byť použitý i na zdielom disku. Predvolený vo verzii 1.2 a novších.
GPO	"Group policy object" Objekt skupinovej politiky.
Historia	Zobrazí históriu revízií súboru, alebo adresára. Tiež známa ako "Denník".
Hlavná revízia	Posledná revízia súboru, alebo adresára v *úložisku*.
Importovať	Príkaz Subversion k načítaniu celej adresárovej štruktúry do úložiska v jednej revízií.
Konflikt	Keď sú zmeny z úložiska žlučované s miestnymi zmenami, niekedy tieto zmeny nastanú na tom istom riadku. V takom prípade Subversion nemôže automaticky royhodnúť, ktorú verziu ponechať a označí taký súbor za v stave konkliktu. Potom musíte ručne súbor upraviť a vyriešiť konflikty pred tým ako budete môcť odovzdať vaše zmeny.
Kopírovať	V úložisku Subversion môžete vytvoriť kópiu jedného súboru, alebo celej adresárovej vetvy. Tieto sú implementované ako "lacné kópie", ktoré sa správajú trochu ako odkaz na pôvodný súbor, takže nezaberajú veľa miesta. Vytváranie kópií zachováva históriu jednotlivých kopírovaných objetov, takže môžete sledovať zmeny, ktoré boli vykonané pred vytvorením kópie.
Obviniť	Tento príkaz je len pre textové súbory. Každý riadok opatrí poznámkami - zobrazí revíziu, v ktorej bol posledný krát zmenený a autora, ktorý zmenu vykonal. Naše Uživateľské grafické rozhranie (GUI) nazývane TortoiseBlame tiež zobrazí čas odovzdanie a správu denníka pre prechode myšou ponad číslo revízie.
Odovzdať	Príkaz Subversion, ktorý posunie zmeny vašej miestnej pracovnej kópie späť do úložiska, vytvoriac novú revíziu.
Porovnať	Skratka pre "Zobraziť rozdiely". Veľmi užitočné keď chcete vidieť aké zmeny boli vykonané.
Pracovná kópia	Toto je vaše "pieskovisko", miesto kde môžete pracovať na verziovaných súboroch, ktoré sa sa typicky nachádza na pevnom disku. Pracovnú kópiu vytvárate príkazom "Získať" z úložiska, a zmeny môžete poslať do úložiska príkazom "Odovzdať".
Premiestniť	Keď sa premiestnilo vaše úložisko, pretože ste ho premiestnili na iné miesto na servery, alebo sa zmenilo doménové meno servera, potrebujete "premiestniť" vašu pracovnú kópiu, aby URL úložiska ukazovala na nové umiestnenie. Poznámka: tento príkaz by ste mali použiť iba keď sa odkazujete na to isté miesto úložiska, ale úložisko samotné bolo presunuté. Pre všetky ostatné prípady pravdepodobne potrebujete namiesto toho použiť "Prepnúť".
Prepnúť	Práve ako "Aktualizovať-na-revíziu" mení časové okno pracovnej kópie na vzhľad pracovnej kópie v histórií, tak "Prepnúť" mení priestorové okno

	pracovnej kópie, takže ukazuje na iné miesto v úložisku. Toto je zvlášť užitočné keď rozdiel medzi kmeňom a vetvami je len v niekoľkých súboroch. Môžete prepnúť pracovnú kópiu medzi nimi dvomi a budú prenesené iba zmenené súbory.
Pridať	Príkaz Subversion, ktorý sa používa na pridanie súboru, alebo adresára do pracovnej kópie. Nové objekty budú pridané do úložiska pri odovzdaní.
Revízia	Pri každom oovzdaní zmien, vytvárate v úložisku novú "revíziu". Každá revízia zodpovedá stavu stromu úložiska v danom čase v jeho histórií. Keď sa chcete vrátit v čase môžete si prezrieť úložisko ako bolo vo revízií N. V inom zmysle revízia môže odkazovať-poukazovať na zmeny, ktoré boli spravené pri tvorbe danej revízie.
SVN	Často používaná skratka pre Subversion Meno protokolu pre Subversion použitého v servery úložiska "svnserve".
Úložisko	Úložisko je centrálne miesto, kde sú uložené a spravované dáta. Úložisko môže byť miesto kde sú viaceré databázy, alebo súbory pre prenos cez sieť, alebo úložisko može byť umiestnené na mieste dostupnom užívateľovi bez prechádzania sieťou.
Vetva	Výraz často používaný v sýsteme riadenia revízií na popísanie čo stane keď je vývoj rozdelený v určitom bode na 2 samostatné cesty. Vetvu môžete vytvoriť hlavnej vývojovej línie, takže vývoj novej vlastnoti neovplivný stabilitu hlavnej línie. Alebo môžete vetviť stabilné vydania, na ktorých budete robiť iba opravu chýb, kým nový vývoj bude v nestabilnom kmeni. Vetvenie je vo Subversion implementované ako "lacná kópia".
Vlastnosť	Okrem verziovania, Subversion umožňuje pridať aj verziované metadata - označované ako "vlastnosti" - ku každému verziovanému súboru a adresáru. Každá vlastnosť má meno a hodnotu, podobne ako kľúče windows registry. Subversion ma niekoľko špeciálnych vlastností pre vnútorné použite, ako je `svn:eol-style`. TortoiseSVN má tiež nietoré, ako je `tsvn:logminsize`. Možete pridávať vlastné vlastnosti s menom a hodnotou podľa vašej vôle.
Vlastnosť revízie (revprop)	Tak ako súbory môžu mať vlastnosti, tak môže mať aj každá revízia v úložisku. Niektoré 'revpops' sú pridané automaticky pri vytvorení revízie. Menovite `svn:date svn:author svn:log`, ktoré reprezentujú dátum, čas, autora a záznam. Tieto vlastnosti môžu byť menené, ale nie sú verziované, teda tieto zmeny sú trvalé a nemôžu byť vrátené.
Vrátiť	Subversion udržuje kópiu "pôvodnej" verzie každého súboru, tak ako bol pri poslednej aktualizácií pracovnej kópie. Ak ste urobili zmeny a rozhodli ste sa ich vrátiť, môžete použiť príkaz "vrátiť" na vrátenie sa k pôvodnej verzií.
Vyčistiť	Aby sme citovali z knihy Subversion: " Rekurzívne čistenie pracovnej kópie, odstráni zamknutie z obnoví nedokončené operácie. Ak sa vám objaví chyba *Pracovná kópia je zamknutá*, spustite tento príkaz, aby ste odstránili zámky a dostali ste opäť stabilnú pracovnú kópiu. " Poznámka: V tomto kontexte sa pod slovom *zámok* myslí zámok miestneho súborového systému, nie zámok úložiska.
Vymazať	Po vymazaní verziovaného súboru (a odovzdaní zmien) objekt už viacej nexistuje v úložisku v nasledovných revíziách. Samozrejme však existuje v predchádzajúcich revíziach úložiska, takže k nemu môžete stále pristúpiť. Keď je nutné, môžete vytvoriť kópiu vymazeného objektu a "vzkriesiť" ho aj s jeho históriou.

Vyriešiť

Keď sú súbory v pracovnej kópií po zlučovaní ponechané v stave konfliktu, tieto konflikty musia byť vyriešené človekom použitím editora (snáď TortoiseMerge). Tento proces je zmieňovaný ako “Riešenie konfliktov”. Keď je toto dokončené možete označiť súbory ako vyriešené, čo umožní ich odovzdanie.

Základná revízia

Aktuálna základová revízia súboru, alebo adresára vo vašej *pracovnej kópií*. Toto je revízia súboru, alebo adresára z času spustenia poslednej aktualizácie. Základná revízia nie je zhodná s hlavnou revíziou.

Zamknúť

Keď zamknete verziovaný objekt, je v úložisku označený za neodovzdateľný, okrem z pracovnej kópie z ktorej bol uzamknutý.

Záplata

Keď pracovná kópia obsahuje iba zmeny textových súborov, je možné Subversion-ovým príkazom Diff vytvoríť jeden súbor so sumárom zmien vo formáte unifikovaného porovnania. Súbor tohto typu je často označovaný ako “Záplata”, a môže byť poslaná e-mail-om iným užívateľom, alebo na e-mailovú konferenciu (mailing list) a použitá na inú pracovnú kópiu. Niekto bez práva odovzdávať môže urobiť úpravy a poslať záplatu pre autorizovaného vývojára. Je tiež možne poslať zmeny, o ktroých ste si nie istý na prehliadnutie niekým iným.

Záznam-denník

Zobrazí históriu revízií súboru, alebo adresára. Tiež známa ako “História”.

Získať

Príkaz Suversion, ktorý vytvorí miestnu pracovnú kópiu v prázdnom adresáry stiahnutím verziovaných súborov z úložiska.

Zlúčiť

Proces, ktorým sa zmeny z úložiska pridajú k vašej pracovnej kópií, bez porušenia akýchkoľvek zmien, ktoré ste vykonali. Niekedy tieto zmeny nemôžu byť pridané automaticky a pracovná kópia sa dostane do stavu konfliktu.

Zlučovanie sa deje automaticky pri aktualizovaní vašej pracovnej kópie. Príkazom TortoiseSVN Merge možete zlúčiť aj určené zmeny z iných vetiev.

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