

Algorithm for updating concurrent model from  $\text{diff}(\text{Env}, \text{Env}')$

//Brief description of each variables s (ConcurrentStates()): Set of states in concurrent model

e,m,fs,ss:State which has transitions to connected other states

t:Transition which has 'To state' and 'From state' which is connected by this

subTransition:  $\text{diff}(\text{Env}, \text{Env}')$  as Transition

```

s=new ConcurrentStates()
//make initial concurrent model
initialize(Env, Moni_req)
  e=Env.getInitState ()
  m=Moni_req.getInitState ()
  s.add(makeConcurrentState(e,m))
  transition(e, m, s)
}
transition(e, m, s){
  while( e.hasNextTransition() ){
    t=e.getNextTransition()
    compose(e.getNextStateBy(t), t, m, s)
  }
}
compose(e, t, m, s){
  if(m.existsTransition(t)){
    m=m.getNextStateBy(t)
    if(!s.alreadyExists(e,m)){
      s.add(makeConcurrentState(e,m))
      transition(e, m, s)
    }
  }else{
    if(!s.alreadyExists(e,m)){
      s.add(makeConcurrentState(e,m))
      transition(e, m, s)
    }
  }
}

//Updating concurrent model

concurrentModelUpdate (Env, Env', Moni_req){
  subTransition=getDiff(Env,Env')
  fs= subTransition.getFromState()
  list=s.getStateIncluding(fs)
  while(list.hasNextState()){
    ss=list.getNextState()
    compose(fs, subTransition, ss.getMoni_reqState(), s)
  }
}

```