
step(currentBsState)

```
1: currentContext ← context[currentBsState]
2: for each state in states[currentContext] do
3:   tran ← trOut[state]
4:   while tran ≠ NIL do
5:     if isEventPresent(currentContext, tran) and isBufferFree(currentContext, tran) then
6:       newContext ← createNewContext(currentContext, tran)
7:       newTransition ← createNewTransition(currentContext, tran)
8:       item ← contextSearch(newContext, ctHashMap)
9:       if item ≠ NIL then
10:        destinationBsState ← subValue[item]
11:        dest[newTransition] ← destinationBsState
12:       else
13:        createNewState(newContext, tran)
14:        step(destinationBsState)
15:       end if
16:     end if
17:   end while
18: end for
```

takeEventFromBuffer(*context*, *action*)

```
1: l ← link[action]
2: pos ← index[l]
3: return buffer[context][pos]
```

isEventPresent(*context*, *transition*)

```
1: actionRequest ← actIn[transition]
2: eventBuffer ← takeEventFromBuffer(context, actionRequest)
3: eventRequest ← event[actionRequest]
4: return (actionRequest = NIL or eventBuffer = eventRequest)
```

isBufferFree(context,transition)

```
1: actionProduced  $\leftarrow$  actOut(transition)
2: while actionProduced  $\neq$  NIL do
3:   eventBuffer  $\leftarrow$  takeEventFromBuffer(context,actionProduced)
4:   if eventBuffer  $\neq$  NIL then
5:     return FALSE
6:   end if
7:   actionProduced  $\leftarrow$  next[actionProduced]
8: end while
9: return TRUE
```

createNewContext(context,transition)

```
1: newContext  $\leftarrow$  initializeContext()
2: state  $\leftarrow$  dest[transition]
3: actionRequest  $\leftarrow$  actIn[transition]
4: eventRequest  $\leftarrow$  event[actionRequest]
5: if eventRequest  $\neq$  NIL then
6:   eventBuffer  $\leftarrow$  NIL
7: end if
8: actionProduced  $\leftarrow$  actOut[tran]
9: while actionProduced  $\neq$  NIL do
10:  l2  $\leftarrow$  link[actionProduced]
11:  pos2  $\leftarrow$  index[l2]
12:  buffer[newContext][pos2]  $\leftarrow$  actionProduced
13:  actionProduced  $\leftarrow$  next[actionProduced]
14: end while
15: return newContext
```

createNewTransition(context,transition)

```
1: newTransition  $\leftarrow$  initializeTransition()
2: obs[newTransition]  $\leftarrow$  obs[transition]
3: rel[newTransition]  $\leftarrow$  rel[transition]
4: src[newTransition]  $\leftarrow$  createSource(context)
5: netBs  $\leftarrow$  addTransition(newTransition)
6: return newTransition
```

createNewState(context,transition)

```
1: destinationBsState  $\leftarrow$  initializeState()
2: context[destinationBsState]  $\leftarrow$  context
3: if isFinal(context) then
4:   final[destinationBsState]  $\leftarrow$  TRUE
5: else
6:   finale[destinationBsState]  $\leftarrow$  FALSE
7: end if
8: netBs  $\leftarrow$  addState(destinationBsState)
9: dest[transition]  $\leftarrow$  destinationBsState
10: addContextToHashMap(context)
```
