Graphical Animation

LTSA V3.0 supports graphical animation using SceneBeans. Here we describe only the extensions to FSP required to map a model to a graphical animations.

This mapping is defined by the **`animation`** construct that specifies the XML file that contains the description of the animation and two relations that describe the mapping of model actions to animation commands - **`actions`** and model actions to animation controls – **`controls`**. The following example describes the mapping for a channel animation:

```
CHAN = (in ->out->CHAN |in->fail->CHAN ).

animation FAILCHAN = "xml\channel.xml"
   actions { in  /channel.begin,
             fail/explode
           }
   controls { out /channel.end,
              fail/channel.fail,
              in  /send
            }
```

Figure 5 – Animation example.

The actions and controls relations are defined in exactly the same way as relabeling relations. The label on the left of a pair is the model label and the label to the right, the name of an animation command or control.

The animation construct may optionally specify the target composition to which it can be applied as in:

```
animation DINERS = "xml/diners.xml" target DINERS
 compose
  {PHILOS||FORKS
   /{forall [i:0..N-1] {
    {phil[i].left,phil[((i-1)+N)%N].right}/fork[i]}
    }
  }
```

Note that here, the mapping relations are formed by composing two other animations. See the draft paper "*Graphical Animation of Behaviour Models*" for further details.