

CS430 Concurrency Lab Session 1 - Work Sheet

This lab session introduces a tool by means of which FSP specifications can be edited, checked, animated and analysed. The analysis and animation is based on the labelled transition system that is equivalent to the FSP specification. The tool is therefore called labelled transition system analyser or short LTSA.

LTSA is written in Java and in order to execute it you need to instruct the Java runtime system where to find the classes that comprise LTSA. This is done by:

```
setenv CLASSPATH /cs/academic/staff0/violet/ucacwxe/teaching/Concurrency/ltsa/classes:
```

In order to invoke LTSA you need key in:

```
java LTSA
```

An LTSA manual is available from <http://www-dse.doc.ic.ac.uk/~jnm/LTSdocumentation/LTSA.html>. That page also refers to an FSP reference manual.

Exercise 1:

Use LTSA to transform the FSP specification that you developed in Tutorial Exercise 1 into an equivalent labelled transition system. Do not use the sample solution!

Exercise 2:

Animate the resulting labelled transition system. Does it have the properties that you desired? If not, modify your FSP specification and animate the resulting LTS until it exhibits the behaviour you want it to have.

Exercise 3:

Create a labelled transition system for the sample solution of Exercise 4. Display the labelled transition system for the different component processes EAST, WEST, CONTROL and DIRECTOR. Animate the specification and review the process interaction.