

## LAB Assignment no. II

### Leader election problem

Consider the network topology in Figure 1. The channels between the processes are all peer-to-peer and bidirectional. Let's assume, that the processes  $P_i$  are symmetric in their behavior, and do not know their position in the network. What we do know though is, that they have unique ID's. The problem now is, that all the processes have to elect an unique leader. There are three properties that we would like to satisfy:

- there will be always a leader
- we do not want two processes to be elected leader,
- and we also do not want a deadlock.

Implement IEEE1394 algorithm in UPPAAL to solve leader election problem.

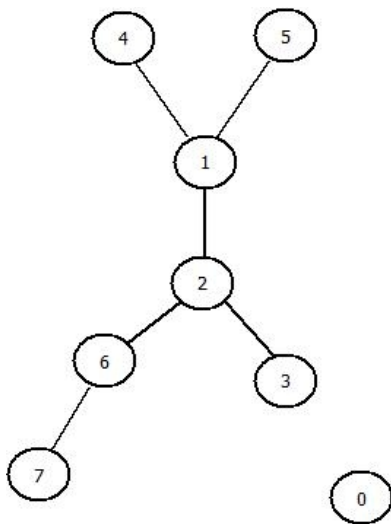


Figure 1: Network topology