Laboratory for Theoretical Computer Science T-79.179 Parallel and Distributed Digital Systems

1.1 Represent in the net below the two conditions

- a) "not winter and not spring",
- b) "spring or autumn".



1.2 Rearrange the net below so that in each case either none or more than one process is reading.



Tutorial 1

20.1.2005

- 2.1 A shepherd intends to cross a river together with a goat, a wolf and a head of cabbage. With the shepherd, only one additional object fits into the boat. The situation must be avoided where a) the wolf and the goat, or b) the goat and the head of cabbage remain alone (for obvious reasons). Represent a suitable organisation for crossing.
- 2.2 Interpret the conditions s_1, s_2 and s_3 in Fig. 25.
- 2.3 Are the following C/E-systems equivalent?



2.4 For the following C/E-system construct an equivalent one with a minimum number of conditions:



- 2.6 Are the C/E-systems of the following figures contact free: Fig. 1, Fig. 2, Fig. 21, Fig. 22, Fig. 24, Fig. 25?
- 2.7 Construct the complementation of the following C/E-system:



2.8 Construct the case graph of the C/E-system in Exercise 7.