



Verifikation nebenläufiger Programme

Sommersemester 2000

Serie 11

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Aufgabe 1

(3 Punkte)

Suggest an implementation of Q as an generator of pairs off odd numbers, provided input z is even, within the synchronous communication model. Then determine an A-G specification of Q . Finally check that the guarantee-part of P 's specification implies the assumption-part of Q 's specification, and, vice-versa, that the guarantee-part of Q 's specification implies the assumption-part of P 's specification (cf. Rule 7.17)

These two properties guarantee that when Q and P are put together as in Fig. 6.2, in the resulting network Q operates as a generator of pairs of odd numbers along channel A and B , and P operates as a generator of even numbers along channel D .

Aufgabe 2

(3 Punkte)

Proof that the parallel composition operator of the reactive sequence semantics is prefix closed. i.e, if for two basic programs P_1, P_2 with $\mathcal{R}[[P_1]]$ and $\mathcal{R}[[P_2]]$ prefix closed then $\mathcal{R}[[P]]$ with $P = P_1 || P_2$ is also prefix closed.

Ausgabe: 5. Juli 2000

Abgabe: 12. Juli 2000