JOURNAL OF FORMALIZED MATHEMATICS
Volume 4, Released 1992, Published 2003
Inst. of Computer Science, Univ. of Białystok

Definitions of Petri Net. Part III

Waldemar Korczyński
Pedagogical University
Kielce

Summary. The paper is dual counterpart of the paper [2].

MML Identifier: S_SIEC.

WWW: http://mizar.org/JFM/Vol4/s_siec.html

The articles [3], [1], [4], and [2] provide the notation and terminology for this paper.

Let N be an E-net. We introduce transitions$_s(N)$ as a synonym of Places$_e(N)$. We introduce places$_s(N)$ as a synonym of Transitions$_e(N)$. We introduce carrier$_s(N)$ as a synonym of shore$_e(N)$. We introduce enter$_s(N)$ as a synonym of entrance$_e(N)$. We introduce exit$_s(N)$ as a synonym of escape$_e(N)$. We introduce prox$_s(N)$ as a synonym of adjac$_e(N)$.

In the sequel N is an E-net.

Next we state the proposition

(41)[1] $((\text{The entrance of } N) \setminus \triangle_{\text{the carrier of } N})^{\smile} \subseteq [:\text{Places}_e(N), \text{Transitions}_e(N):]$ and $((\text{the escape of } N) \setminus \triangle_{\text{the carrier of } N})^{\smile} \subseteq [:\text{Places}_e(N), \text{Transitions}_e(N):]$.

Let N be a G-net structure. The functor pre$_s(N)$ yields a binary relation and is defined by:

(Def. 28)[2] $\text{pre}_s(N) = ((\text{the escape of } N) \setminus \triangle_{\text{the carrier of } N})^{\smile}$.

The functor post$_s(N)$ yielding a binary relation is defined by:

(Def. 29) $\text{post}_s(N) = ((\text{the entrance of } N) \setminus \triangle_{\text{the carrier of } N})^{\smile}$.

One can prove the following proposition

(43)[3] $\text{post}_s(N) \subseteq [:\text{transitions}_s(N), \text{places}_s(N):]$ and $\text{pre}_s(N) \subseteq [:\text{transitions}_s(N), \text{places}_s(N):]$.

REFERENCES

[1] Czesław Byliński. Some basic properties of sets. *Journal of Formalized Mathematics*, 1, 1989. http://mizar.org/JFM/Vol1/zfmisc_1.html.

[2] Waldemar Korczyński. Definitions of Petri net. Part II. *Journal of Formalized Mathematics*, 4, 1992. http://mizar.org/JFM/Vol4/e_siec.html.

[3] Andrzej Trybulec. Tarski Grothendieck set theory. *Journal of Formalized Mathematics*, Axiomatics, 1989. http://mizar.org/JFM/Axiomatics/tarski.html.

[1] The propositions (1)–(40) have been removed.
[2] The definitions (Def. 1)–(Def. 27) have been removed.
[3] The proposition (42) has been removed.

[4] Edmund Woronowicz. Relations and their basic properties. *Journal of Formalized Mathematics*, 1, 1989. http://mizar.org/JFM/Vol1/relat_1.html.

Received January 31, 1992

Published October 7, 2003