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Alberto Pettorossi. *Semantics of Programming Languages*. Second Edition. Aracne. 2011.

'm, $\pm n$' means 'page m and line $\pm n$' from above (+) or below (−)

12, -6. where *should be*: which

61, -10,-11,-12. *Replace*: (*Step*) We assume ... two generic values m and n. *by*:

(*Step*) We have to show that:

$$\forall m \in N,\ (\forall n \in N,\ s(m{+}n){=}m{+}s(n)) \rightarrow (\forall n \in N,\ s(s(m){+}n){=}s(m){+}s(n)).$$

Let us consider a generic value m. We assume that $\forall n \in N, s(m{+}n) = m{+}s(n)$ and we have to show that $\forall n \in N$, $s(s(m){+}n) = s(m){+}s(n)$.

Let us consider a generic value n.

70, +2, +3. *Erase* : $\subseteq 0\, L(A)\, L(B)\, L(B) \subseteq$ {by hypothesis}

70, -17. $0\, b \subseteq L(B)$ *should be*: $0\, b \subseteq L(A)$

286. In the proof of $\mathcal{P}, P_1 \vdash \nu X.(\emptyset \vee \langle a \rangle X)$ the five lines the form $\ldots \vdash \{\ldots\} \vee \ldots$ or $\ldots \vdash (\{\ldots\} \vee \ldots) \ldots$ (that is, the lines where a set occurs immediately to the right of $\vdash$) should be erased.

287. In the proof of $\mathcal{Q}, Q_1 \vdash \nu X.(\emptyset \vee \langle a \rangle X)$ the four lines the form $\ldots \vdash \{\ldots\} \vee \ldots$ (that is, the lines where a set occurs immediately to the right of $\vdash$) should be erased.

288. In the proof of $\mathcal{Q}, Q_1 \vdash \mu X.\langle a \rangle X \ \mapsto^* \mathbf{b}$ the four lines the form $\ldots \vdash \{\ldots\} \vee \ldots$ (that is, the lines where a set occurs immediately to the right of $\vdash$) should be erased.

313, -12. The proof of Proposition 5.4 (ii) should be as follows.

(ii) Take an ω-chain $d_0 \sqsubseteq d_1 \sqsubseteq \ldots$ in D. Assume $\bigsqcup_{m\in\omega} d_m \in \bigcup_{i\in I} D_i$. We have to show that there exists $n \in \omega$ such that $d_n \in \bigcup_{i\in I} D_i$. Indeed, since $\bigsqcup_{m\in\omega} d_m \in \bigcup_{i\in I} D_i$ we have that there exists $k \in I$ such that $\bigsqcup_{m\in\omega} d_m \in D_k$. Since D_k is open, there exists $n \in \omega$ such that $d_n \in D_k$. Thus, there exists $n \in \omega$ such that $d_n \in \bigcup_{i\in I} D_i$.

314, +1. The proof of Proposition 5.6 (ii) should be as follows.

(ii) Take an ω-chain $d_0 \sqsubseteq d_1 \sqsubseteq \ldots$ in D. Assume $\bigsqcup_{m\in\omega} d_m \in \bigcap_{i\in F} D_i$. We have to show that there exists $n \in \omega$ such that $d_n \in \bigcap_{i\in F} D_i$. Indeed, since $\bigsqcup_{m\in\omega} d_m \in \bigcap_{i\in F} D_i$ we have that for all $k \in F$, $\bigsqcup_{m\in\omega} d_m \in D_k$. Now, by definition of an open set, we have that for all $k \in F$, there exists $n_k \in \omega$ such that $d_{n_k} \in D_k$. Let us consider the maximum value, call it n_{max}, in the set $\{n_k \mid k \in F\}$. We have that $d_{n_{max}} \in \bigcap_{i\in F} D_i$, because for all $k \in F$, D_k is an open set (and thus, upward closed). Therefore, Condition (ii) of Definition 5.1 holds and the proof is completed.