

# Errata to “Descriptive Typing Rules for Xcerpt”

October 16, 2007

## Abstract

This is errata to the paper

- [1] S. Berger, E. Coquery, W. Drabent, and A. Wilk. “Descriptive typing rules for Xcerpt.” In *International Workshop, PPSWR 2005, Dagstuhl Castle, Germany, September 2005, Proceedings*, number 3703 in LNCS, pages 85–100. Springer Verlag, 2005. <http://www.springerlink.com/link.asp?id=8rej jqbwxbydlwr>

and to its extended version

- [2] S. Berger, E. Coquery, W. Drabent, and A. Wilk. “Descriptive typing rules for Xcerpt and their soundness.” Technical Report REWERSE-TR-2005-01, REWERSE, 2005. <http://rewerse.net/publications/#REWERSE-TR-2005-01>.

- Definition 8 (p. 91 in [1]), in the fourth case (for  $l\{q_1, \dots, q_n\}$ ) it should be  $j = 1, \dots, n$  instead of  $j = 1, \dots, m$ .
- The head of second query rule of Ex. 15 (p. 93 l. –4 in [1]) is

$results[\mathbf{all\ result}[cds[\mathbf{all\ name}[TITLE]],\ year[YEAR]]]$  ←

Should be

$results[\mathbf{all\ result}[year[YEAR],\ cds[\mathbf{all\ name}[TITLE]]]]$  ←

- Relation  $\sqsubseteq$  in Section 4.2 (p. 95 of [1], the last paragraph of 4.2) is not a partial order but a pre-order. In the same paragraph, a condition “provided that  $\llbracket \Gamma(X) \rrbracket \neq \emptyset$  for each  $X \in V$ ” should be added to the statement “ $\Gamma \sqsubseteq \Gamma'$  is equivalent to  $substitutions(\Gamma) \subseteq substitutions(\Gamma')$ .”

- Section 4.3 of [1], paragraph 1, l. –1 (p. 95) states: “In the Appendix we prove correctness of the typing system.” Actually the proof is presented in [2].
- Definitions 17, 1.2 and 18, 1.5 ([1] p.97) should be augmented with a requirement that  $substitutions(\Gamma) \neq \emptyset$ .

To the last sentence of the paragraph following Def. 17 (“For correctness of the rules it is required. . .”) a phrase “and that  $substitutions(\Gamma) \neq \emptyset$  for any  $\Gamma \in \Psi$ ” should be added.

- In rule (PATTERN) for construct terms ([1] p.97), when  $\alpha\beta = \{\}$ , the regular expression  $S_1 \cdots S_n$  may be not a multiplicity list. In such a case  $S_1 \cdots S_n$  should be replaced by some multiplicity list  $r$  such that  $L(S_1 \cdots S_n) \subseteq perm(L(r))$ , where  $perm(L(r))$  stands for the language of permutations of the strings from the language  $L(r)$ .
- Theorem 20 ([1] p. 98, in [2] additionally Lemma 27), a missing requirement on  $D$ :

For any type names  $T_1, \dots, T_n$  in  $D$  there exists a type definition  $D'$  such that  $\llbracket T_1 \rrbracket_D \cap \dots \cap \llbracket T_n \rrbracket_D = \llbracket T \rrbracket_{D'}$  for some type name  $T$ . (1)

A sufficient condition for this requirement is that  $D$  is *proper*, in the sense of references [4] or [13] of [1].

An alternative to requirement (1) is a modification of rule (VAR) for construct terms ([1] p.97), by changing each  $\llbracket T_i \rrbracket = \llbracket \Gamma_i(X) \rrbracket$  into  $\llbracket T_i \rrbracket \supseteq \llbracket \Gamma_i(X) \rrbracket$ .

- The URL to [2] given in [1] (p.99 reference [2]) is obsolete. It should be <http://rewerse.net/publications/#REWERSE-TR-2005-01>.
- It is not made explicit that our definition of a query (Def. 10, [1] p. 92) is simplified. We consider applying a query to a single data term, while in full Xcerpt it is applied to a set of data terms. Thus, for instance, a query  $and(Q_1, Q_2)$  may succeed due to  $Q_1$  matching one data term and  $Q_2$  matching another.