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Sharipbaev, Altynbek, International Computer Systems and Information Technologies Institute under IAB, Kazakhstan

A verification of the Refal-programs

The problem of verification of the Refal-programs is decided by two logic languages: first for the description of the semantics of the language Refal, second for the proof of the conditions of verification of the refal-programs. Exists algorithm, which for final number of steps finds out comparability of given input to the left parts of refal-rules. For any input X the formula $\pi_0(X, P(X))$ is true if and only if the formula $[P, \pi_0](X)$ is executable. The program P is partially correct if and only if the formula $\forall X(\varphi(X) \supset [P, \Psi](Y))$. The program P is totally correct if and only if the formula $\exists X(\varphi(X) \& (P, \neg\Psi](X))$ is not executable.

Reference: V. F. Turchin, Refal-5, Programming Guide and Reference Manual, New England Publishing: Holyoke, Massachusetts, 1989.