ARAL: a Language for Information Exchange between Program Analysis Tools

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The analysis results annotation language (ARAL) is designed to be a general format that allows the exchange of analysis information between program analysis tools either in a separate file or through program annotations. It is suitable for representing flow-sensitive and context-sensitive information and aims at supporting a wide range of analyses with focus on data-flow analysis and abstract interpretation in general. For example, the language is general enough to represent any analysis information that is computed by AbsInt's Program Analyzer Generator (PAG). Beside exchange of analysis information, the purpose of the language also is the support of testing analyzers and allowing to manually add annotations, as is important for worst-case execution time analysis. The development of ARAL is motivated by the need of making analysis results persistent for enabling whole-program analysis of very-large software, and the goal of information exchange between program analysis tools in the ALL-TIMES project.