



Extracting Facts with Columbus from C++ Code

Rudolf Ferenc, Árpád Beszédes and Tibor Gyimóthy
Department of Software Engineering
University of Szeged, Hungary

Fact Extraction with Columbus

- C++ source code analysis
- Extracted facts conform to well defined Schemas
 - Preprocessor and C++ language related
- Filter
 - Visual
- Outputs
 - PPML/ CPPML (XML), GXL, UML XMI, Famix XMI, Rigi RSF, HTML, Metrics, Design Pattern Recognition, Code Auditing

Columbus Framework

- Fact Extraction Process
- Project handling
 - Compiler wrapping
 - IDE integration
 - Project file import
 - Project Setup Wizard
 - Manual
- Tools
 - Visual: REE + plug ins, Filter
 - Command line: Preprocessor, Extractor, Linker, Processors (10 different formats)

Code Auditing

- Columbus fact extraction technology
- Source code checking
- Rule packages
 - Coding style
 - Dangerous code constructs
 - Company-specific rules (e.g. Nokia, SDS)
 - (Metrics-based)
- Extendibility
 - API
- Availability
 - IDE integration (Visual Studio, C++ Builder)
 - Command line