Requirements Engineering with GRAIL/KAOS:
From Goal Analysis to Automatically Derived Requirements Documents

Denis Ballant, Christophe Belpaire, Robert Darimont, Emmanuelle Delor, Denis Genard,
Cédric Nève, Jean-Luc Roussel, Alain Vanbrabant
CEDITI, Avenue Georges Lemaître 21, B-6041 Charleroi, Belgium
E-mail : {requirements@cediti.be}

GRAIL[1] is a tool designed by RE practionners for RE practionners, to help them really engineer requirements. The tool relies on KAOS[2], the goal-driven requirements methodology. It helps industrial projects to succeed by effectively and systematically eliciting the requirements, defining system’s agents and artefacts along with their expected behaviours. These elements are gathered, and linked together in a unique coherent model. GRAIL automates authoring process by deriving the requirements documents directly from the model.

The presentation covers the following aspects:

- it outlines the practical process typically followed to build a requirements document with KAOS.
- it describes in details how the new version of the GRAIL tool supports the new features of the KAOS language (obstacles, domain properties, agent dependency, ...) and its standardization to UML-compliant notations.
- it illustrates how GRAIL can automatically derive from a KAOS model a goal-driven structured requirement document compliant with a corporate standard including navigational traceability links.
- it shows how this approach has been successfully applied in several industrial projects, a.o., a system engineering project at Alcatel.
- it describes how GRAIL (the tool that supports the KAOS methodology) can be integrated in a Unified Development Process.

References

[1] More information on GRAIL at Cediti can be found at URL http://www.cediti.be/EN/Solutions_Services/requirements/