

## Requirements Engineering for COTS Based Systems

**Colette Rolland**

*Université Paris I Panthéon Sorbonne,  
90 rue de Tolbiac,  
75634 Paris Cedex 13  
France*

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### Abstract

In the hope of reducing risks and costs associated with software development, organisations that rely on software systems are increasingly shifting from bespoke development to purchasing commercial off-the-shelf products. Off-the-shelf components procurement and reuse offer significant improvements in software productivity : reduced development effort and cost, shorter development time, increased system stability, higher number of alternative solutions, and increased level of system interoperability. Components can be off-the-shelf (COTS) software or complex one (CCOTS) such as ERP systems.

Requirements engineering in the context of off-the-shelf components based system development is a difficult issue. Most actual approaches to select components are not requirements-driven, which does not allow to gain a great customer acceptance. Otherwise, they have difficulties getting a natural matching between customer requirements and component features, which does not facilitate the user involvement. Besides the individual selection of components make difficult to evaluate how components fit together and fit globally the full system requirements.

The paper is about requirements engineering for COTS component based systems. The outline is in four parts :

- defining the notions of COTS component and ERP system,
- understanding requirements engineering in the context of off-the-shelf system development,
- state of the art and,
- presentation of a goal driven approach based on the *map* representation system to support the matching process between customer requirements and components features both represented as maps.