

Project Note

# Model-Driven Requirements Specification

Generating requirements directly from UML diagrams saves time for the team. To enable operational cost-reduction as quickly as possible, the architecture is defined iteratively, with increasing level of detail.

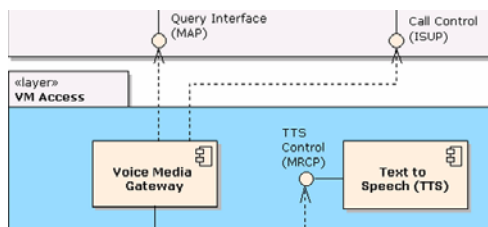
**Task**

Voicemail is one of the key services in call completion. It helps mobile phone users to manage their communication when they are busy. As the existing Voicemail platforms reach the end of their economic lifetime, a number of drivers combine in favour of replacement. Commercially, modern platforms can save 50% of operating costs. Technically, new standards have to be supported for E-Mail and MMS integration. From a Marketing perspective, new messaging products are rolled out in favour of the customers.

To meet the resulting requirements, Zühlke coordinates the design of an integrated messaging architecture for Voicemail as well as other messaging services. One focus of this activity is to support procurement processes within Vodafone.

**Implementation**

An international project team is set up with Voicemail experts from key operating companies and Vodafone Global. The functional requirements are documented through use cases for subscribers and operational staff. Then, architectural layers are defined as a common reference. Components and interfaces are specified in detail within the layers. The use case and component diagrams from the UML model are used to drive two documents: The architecture documentation and a requirements specification in the form of a RFQ attachment. Both Word documents are partially generated from the model via a dedicated tool. This also creates requirements text from graphical elements like components and interfaces via templates. Overall, 60% of the documented requirements are generated from the model. Importing the requirements into an e-procurement solution completes the process.



**Technical Data**

UML-Modelling:  
Enterprise Architect

Document generation:  
EA Automation, OLE,  
VBA, Word, Excel

**Customer benefits**

- **Strategic alignment:** Ongoing activities across the Vodafone group are aligned. The common architecture provides a focal point for discussion and documents the agreements reached.
- **Consistency:** The model-driven generation of requirements ensures that specification and architecture documentation are always in line.
- **Vendor assessment:** The structured requirements derived from the UML model help to assess and compare solution architectures proposed by vendors as part of the RFQ process.
- **Fast realisation:** To enable operational cost reduction as quickly as possible, the architecture is defined iteratively, with increasing level of detail. Version 1.0 is delivered on time, meeting a challenging schedule for supporting the ongoing RFQ processes.

Zühlke Engineering AG  
Wiesenstrasse 10a  
8952 Schlieren (Zurich)  
Switzerland  
Phone +41 44 733 6611  
Fax +41 44 733 6612  
info@zuehlke.com  
www.zuehlke.com