Ansgar Scherp, University of Oldenburg, Germany

A Component Framework for Personalized Multimedia Applications

The manual creation of personalized multimedia content for all the different users' needs is not feasible not to mention economical. Rather a dynamic authoring process of selecting and assembling such *content seems reasonable. This book presents a software-engineering support that is generic enough to be applied in a multitude of domains and is practicable at the same time.*

A practical support for a dynamic authoring of personalized multimedia presentations is neither provided by industrial solutions nor research projects today. With the software engineering approach, the MM4U framework ("MultiMedia For You"), we present for the first time a general and at the same time practical support for the dynamic authoring process. The aim of the MM4U component framework is to provide application developers with an extensive and domain independent support for the authoring of personalized multimedia content and by this providing a significant improvement to the development process of such applications. To reach the goal of a software framework providing generic support for developing personalized multimedia applications raises the question of a proper software engineering support to develop such a framework. Since the introduction of object-oriented frameworks, the development of software frameworks is still costly and difficult to handle. To reduce development risk, process models and development methodologies have been developed. With component technology also so-called component frameworks appeared. In contrast to object-oriented frameworks, a proper process model for component frameworks is still missing. To improve the development process of component frameworks, the ProMoCF approach ("Process Model for Component Frameworks") has been developed, a lightweight process model and development method for component frameworks. This process model has been developed in mutual benefit with the development of the MM4U component framework.

The MM4U component framework does not reinvent multimedia content adaptation but is targeted at incorporating and embedding existing research approaches and solutions in the field. With such a framework at hand, application developers can—for the first time—efficiently and easily realize on-the-fly multi-channel generation of personalized multimedia content.

OlWIR Oldenburger Verlag für Wirtschaft, Informatik und Recht