



## **Christian-Doppler-Labor *Embedded Software Systems* emb. Software & Systems Research Center (SRC)**

### **Support for Certification of Safety-Critical Embedded Systems - the DECOS Generic Test Bench**

**Dr. Egbert Althammer, Austrian Research Centers GmbH (ARC), Vienna**

Modern safety regulations in industries such as in the automotive, railway and aerospace domain requires safety arguments, known as safety cases to be developed and maintained as a primary means of communicating the safety requirements and the supporting evidence for the safety claims about a safety-critical system. In these industries part of the product certification process is the assessment of a system through an inspection agency. To convince inspectors that a system is acceptably safe, a safety case is constructed. In the integrated EU-project DECOS (Dependable Embedded Components and Systems), which aimed at developing an integrated architecture for embedded systems of different criticality levels, the DECOS Generic Test Bench has been developed to support certification of DECOS-based applications. The final output of the certification process is a safety case.

The DECOS Generic Test Bench has been designed as an application framework that provides the workflow for the validation and certification process such as requirement capturing, processing of validation and verification activities and the establishment of safety cases, and integrates with external tools and systems such as V&V tools, document repositories and safety standards.

In my talk I will present the conceptual background, functionality and benefits of the DECOS Generic Test Bench, and demonstrate its features and usability by hands of a small example.

Dr. Egbert Althammer is a research scientist in the business unit Software Systems, smart systems division at Austrian Research Centers GmbH - ARC in Vienna.

He studied Technical Mathematics at the Technical University of Graz and holds a PhD in computer science from the University of Konstanz, Germany ("Reflection Patterns in the Context of Object and Component Technology", Prof. Dr. W. Pree). Dr. Althammer's major research interests are object oriented software systems, embedded software engineering and verification & validation.

**Wo** Jakob-Haringer-Straße 2, T06  
**Wann** Montag, 23. Juni 2008, 14:00 h Host: Prof. Wolfgang Pree