Trip Report: WRTP'99 & ARTDB-99

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First of all, I would like to thank ARTES for supporting my trip to the joint 24th IFAC/IFIP Workshop on Real Time Programming WRTP'99 and the Third International Workshop on Active and Real-Time Database Systems ARTDB-99 which took place in Schloss Dagstuhl, Germany, May 30th - June 2nd, 1999.

The joint workshop focused on requirement engineering, software engineering, real-time and active database, embedded systems, communication and clock synchronization, formal methods, operating systems, timing analysis and scheduling theory. Two keynote speeches were given in the workshop. One was "Distributed Object-Oriented Active Real-Time Databases: We want it all, do we need them (at) all?" given by professor Alejandro P. Buchmann and the other was "Real-Time Software Architecture - Fundamental Concepts and their Consequences" by professor Janusz Zalewski. A panel discussion on "ARTDB - where are we and where are we going (or not going) to?" was also conducted.

The workshop provided an opportunity to present new results, discuss future development. Some interesting results are: Combining timing constraints with object-oriented design; Using active rules for distributing control systems; Constructing predictable rule set; Case studies on developing flight control system and hard real-time robotic applications; Formal verification for a subset of SDL and functional blocks; Specification language and tools for developing real-time control systems; Methods to achieve clock synchronization accuracy; Using COP techniques to derive tighter WCET for cooperating, cyclic processes; Using Timed-Automata to analyze response time for distributed real-time systems; Achieving better CPU usage by dynamic CPU scheduling with imprecise knowledge of computation-time. More detailed information about the joint workshop can be found in the following URL: http://www.fernuni-hagen.de/IT/wrtp99.

I am also glad to report that researchers from Sweden took very active roles in the joint workshop. Three papers from sweden were presented in the workshop. University of Skövde is one of the organizers and sponsors of the joint workshop.