



Department of Computer Science Universität Salzburg

The Impact of Realtime Garbage Collection on Realtime Java Programming

by **Fridtjof Siebert**

aicas GmbH, Karlsruhe

Extensions like the Real-Time Specification for Java (RTSJ) enable the use of Java in more and more time-critical application domains. The RTSJ enables the development of realtime code in Java even though a classical garbage collector causes unpredictable pauses to non-realtime code.

This presentation gives an overview of how a modern realtime garbage collector operates. It presents the impact the presence of such a realtime garbage collector has on the development of complex applications that need to perform time-critical and non-time-critical tasks. The use of realtime garbage collection technology simplifies the application development even in systems that do not use dynamic memory allocation within realtime code.

In 1998-1999, Dr. Siebert developed Java compilation and optimization technologies at The Open Group research institute in Grenoble, France. In 2000-2001, he developed realtime memory management technology as his PhD thesis at the University of Karlsruhe. This technology is the basis of the JamaicaVM realtime Java implementation. Dr. Siebert is one of the founding partners of aicas GmbH that took over the development and distribution of JamaicaVM in 2001. Today, he is director of development at aicas. Within the European project HIJA, he heads the definition and implementation of tools for safety critical Java systems.

More information can be found at: <http://www.aicas.com>

Where Jakob-Haringer-Straße 2, Raum 0.04

When Tuesday, 23. November 2004, 14:00 h Host: Prof. Wolfgang Pree