Seminar

HAEC

“Hekaton: SQL Server’s Main-Memory OLTP Engine”

Paul Larson

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Monday, 11 March 2013
1:00pm – 2:00pm
Room NOE 3105
(building of the Faculty of Computer Science , Noethnitzer Str. 46)

Abstract: Hekaton is a new database engine optimized for memory resident data and OLTP workloads. Hekaton is fully integrated into SQL Server; it is not a separate product. To take advantage of Hekaton, a user simply declares a table memory optimized. Hekaton tables are fully transactional and durable and accessed using T-SQL in the same way as regular SQL Server tables. T-SQL stored procedures that reference only Hekaton tables can be compiled into machine code for further performance improvements. The engine is designed for high concurrency and uses only latch-free data structures and a new optimistic, multi-version concurrency control technique. The talk will give an overview of the design and capabilities of the Hekaton engine including some performance results.

Bio: Paul (Per-Ake) Larson has conducted research in the database field for over 30 years. He served as a Professor in the Department of Computer Science at the University of Waterloo for 15 years and joined Microsoft Research in 1996 where he is a Principal Researcher. Paul has worked in a variety of areas: file structures, materialized views, query processing, and query optimization among others. During the last few years he has collaborated closely with the SQL Server team on how to evolve the architecture of the core database system.