



## History of Collaboration between Saarland University and Intel

### Timeline of joint Saarland University and Intel activities:

#### ***2001: Saarland University and Intel - First contact***

Independent research groups at Saarland University and Intel's Advanced Graphics Lab start working on real-time Ray Tracing in 2000. Intel approaches Saarland University to establish an informal joint collaboration agreement in 2001.

#### ***2002: Co-operation begins***

Intel's Microprocessor Research Lab and the Computer Graphics department at Saarland University headed by Prof. Dr.-Ing. Slusallek start first research projects on real-time Ray Tracing, which lead to long-term collaboration. Intel provides the university with a compute cluster based on 64 Intel Xeon™ processors and able to handle the workload of real-time Ray Tracing.

#### ***2003: Saarland University's first results***

The research team at the Saarland University demonstrates fast Ray Tracing and lighting simulation algorithms, novel data structures and methods for large data visualization. These early results go on to become very influential in the field of real-time Ray Tracing.

#### ***2004: First Intel employee at Saarland University***

Maintaining a part-time employment at Intel, Prof. Dr.-Ing. Thorsten Herfet joins the computer science faculty of the university. In the same year, at Intel Developer Forum Spring 2004 the Saarland University demonstrates a real-time Ray Tracing solution based on the university's Ray Tracing library called "OpenRT".

### ***2005: Collaborative research agreement***

Saarland University and Intel sign a collaborative research contract that builds a legal foundation for specifying the future joint research agenda. The Intel Multi-Level Ray Tracing Algorithm as well as Saarland University's Dynamic Ray Processing Unit hardware architecture are accepted at the Siggraph'05 conference prompting renewed interest in the topic of Ray Tracing as a viable alternative to traditional 3D graphics. Saarland University and Intel start a project on Quality of Service for wireless video transmission to be used in wireless network based home entertainment solutions. The software resulting from this mutual work enables users to dynamically configure the network bandwidth needs.

### ***2007: Representation of Intel in European Commission***

Intel employee Thorsten Herfet represents Intel in the EU's Network Electronic Media (NEM) Technology Platform. Intel teams and Saarland University work on ideas of structuring a more intimate joint collaboration. A total of four ex-PhD students from Saarland University join Intel until 2009 and form the core of the Ray Tracing research team within the company's Microprocessor Research Lab.

### ***2008: Intel Chief Technology Officer supports collaboration***

Thorsten Herfet and Philipp Slusallek work on a proposal that allows for the creation of the Intel Visual Computing Institute within the Saarland University and a model for joint funding between Intel, the university's institutes and others.

Intel Vice President and Chief Technology Officer Justin Rattner is really impressed by the people, the work and the collaboration results and supports the establishment of the Intel Visual Computing Institute.

### ***2009: Memorandum of Understanding***

In January 2009 Intel and the Saarland University sign a Memorandum of Understanding outlining the formation of an Intel Visual Computing Institute. The first Intel organizational unit on the Saarbrücken campus opens with three research employees in February 2009. Also, the 40<sup>th</sup> paper resulting from joint research is published in 2009.

### ***TODAY: Intel Visual Computing Institute Opening***

Located at the campus of the Saarland University in Saarbrücken, Germany the Intel Visual Computing Institute will be a joint research center constituting the Saarland University, Intel, the Max Planck Institute for Informatics, the Max Planck Institute for Software Systems and the German Research Center for Artificial Intelligence.

The Intel Visual Computing Institute will deliver innovation in realistic, interactive computer graphics and natural user interfaces that will make future entertainment, productivity, and Internet experiences more intuitive and immersive. As a new member of Intel Labs Europe the Intel Visual Computing Institute's research will be closely aligned to Intel's Tera-scale research program, aimed at taking multi-core computing to the next level. The Intel Visual Computing Institute represents Intel's first European joint industry and university collaboration in visual computing. It is also Intel's largest European university collaboration to date.