Title (en)

DEVICE FOR THE PHOTOREALISTIC REPRESENTATION OF DYNAMIC COMPLEX THREE-DIMENSIONAL SCENES BY MEANS OF RAY TRACING

Title (de)

VORRICHTUNG ZUR PHOTOREALISTISCHEN DARSTELLUNG VON DYNAMISCHEN KOMPLEXEN DREIDIMENSIONALEN SZENEN MITTELS DES RAY-TRACING VERFAHRENS

Title (fr)

DISPOSITIF DE REPRESENTATION PHOTOREALISTE DE SCENES DYNAMIQUES COMPLEXES TRIDIMENSIONNELLES SELON LE PROCEDE DE LANCER DE RAYON

Publication

**EP 1716543 A1 20061102 (DE)**

Application

**EP 05714983 A 20050216**

Priority

- DE 2005000266 W 20050216
- DE 102004007835 A 20040217

Abstract (en)

[origin: WO2005078665A1] The invention relates to a device for the photorealistic representation of dynamic complex three-dimensional scenes by means of ray tracing. Said device comprises at least one programmable ray tracing processor in which are implemented: special traversing commands; and/or vector arithmetic commands; and/or commands for establishing ray tracing acceleration structures; and/or at least one decision unit (mailbox) which prevents objects or triangles that have already been intersected by a beam during launching thereof when performing ray tracing from being intersected several times by said beam. The inventive device is organized such that several threads can be processed in parallel and several threads can automatically be processed in a synchronous manner, the device being provided with an n-level cache hierarchy and/or virtual memory management and/or a direct link to the main memory.

IPC 8 full level

**G06T 15/00** (2011.01); **G06T 15/06** (2011.01); **G06T 15/50** (2011.01)

CPC (source: EP US)

**G06T 15/005** (2013.01 - EP US); **G06T 15/06** (2013.01 - EP US); **G06T 15/50** (2013.01 - EP US)

Citation (search report)

See references of WO 2005078665A1

Citation (examination)

- WALD I ET AL: "A SIMPLE AND PRACTICAL METHOD FOR INTERACTIVE RAY TRACING OF DYNAMIC SCENES", TECHNICAL REPORT SAARLAND UNIVERSITY, 2002, pages 1 - 12, XP001091428
- "A Flexible and Scalable Rendering Engine for Interactive 3D Graphics", 1 January 2002, SAARLAND UNIVERSITY, article INGO WALD ET AL: "A Flexible and Scalable Rendering Engine for Interactive 3D Graphics", pages: 1 - 12, XP055232313

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DOCDB simple family (application)

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