

Title (en)

METHOD AND DEVICE FOR THE INTERACTIVE SIMULATION OF CONTACT BETWEEN OBJECTS

Title (de)

VERFAHREN UND EINRICHTUNG ZUR INTERAKTIVEN SIMULATION DES KONTAKTS ZWISCHEN OBJEKTEN

Title (fr)

PROCEDE ET DISPOSITIF DE SIMULATION INTERACTIVE DU CONTACT ENTRE OBJETS

Publication

EP 1728182 A2 20061206 (FR)

Application

EP 05741914 A 20050323

Priority

- FR 2005000699 W 20050323
- FR 0403037 A 20040324

Abstract (en)

[origin: WO2005093610A2] The invention relates to a method for the interactive simulation of contact between objects. The inventive method comprises the following steps, namely: the parameters describing the physical characteristics of each of the objects are calculated; at the beginning of each simulated model sampling time period, each object is subjected to a real-time analysis of the specific behaviour thereof according to a free movement that does not take account of possible subsequent contacts, and, subsequently, at a global scene level, pairs of detected intersecting objects are subjected to a real-time analysis; a list of collision groups is established; for each collision group, parameters representing the physical characteristics of the objects and the description of the collisions are returned in real time, such as to characterise the contact between two objects in the case of a pure relative sliding movement; and, for each object, the specific behaviour of the object following the collision is displayed in real time and the set of real-time processes is performed with a shorter calculation time than the sampling time.

IPC 8 full level

G06F 17/50 (2006.01); **G06K 11/00** (2006.01); **G06T 17/20** (2006.01); **A61B 19/00** (2006.01)

CPC (source: EP US)

G06F 30/23 (2020.01 - EP US); **G06T 13/20** (2013.01 - EP US); **G06T 19/00** (2013.01 - EP US); **G06T 2210/21** (2013.01 - EP US)

Citation (search report)

See references of WO 2005093610A2

Citation (examination)

CHRISTAN DURIEZ ET AL: "Interactive haptics for virtual prototyping of deformable objects: snap-in tasks case", PROCEEDINGS OF EUROHAPTICS'03, 9 July 2003 (2003-07-09), pages 159 - 175, XP055254647, Retrieved from the Internet <URL:http://www.eurohaptics.vision.ee.ethz.ch/2003/08.pdf> [retrieved on 20160302]

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR LV MK YU

DOCDB simple family (publication)

WO 2005093610 A2 20051006; **WO 2005093610 A3 20060921**; CA 2566276 A1 20051006; EP 1728182 A2 20061206; FR 2868180 A1 20050930; FR 2868180 B1 20060616; US 2007268288 A1 20071122

DOCDB simple family (application)

FR 2005000699 W 20050323; CA 2566276 A 20050323; EP 05741914 A 20050323; FR 0403037 A 20040324; US 59383405 A 20050323