

Title (en)

STATISTICAL DYNAMIC COLLISIONS METHOD AND APPARATUS

Title (de)

VERFAHREN UND VORRICHTUNG FÜR STATISTISCHE DYNAMISCHE KOLLISIONEN

Title (fr)

PROCEDE ET APPAREIL DE COLLISIONS DYNAMIQUES STATISTIQUES

Publication

EP 1636759 A4 20101110 (EN)

Application

EP 03751882 A 20030822

Priority

- US 0326371 W 20030822
- US 43873203 A 20030514
- US 43874803 A 20030514

Abstract (en)

[origin: WO2004104934A1] A method for animating soft body characters (Fig. 15) has a preparation phase (305) followed by an animation phase (310). The preparation phase determines the skin deformation of a character model at skin contact points in response to impulse collisions. The skin deformation from impulse collisions are compactly represented in terms of the set of basis poses. In the animation phase, the skin impulse responses are used to create a final posed character. Regardless of the type of collision or the shape of the colliding object, the collision animation phase uses the same set of skin impulse responses. A subset of a set of skin points is selected as a set of skin collision points. A final collision response is determined from the skin collision points. The final collision response to the complete set of skin points.

IPC 8 full level

G06T 13/40 (2011.01); **G06T 17/00** (2006.01)

CPC (source: EP)

G06T 13/40 (2013.01); **G06T 17/00** (2013.01); **G06T 2210/21** (2013.01)

Citation (search report)

- [XI] KOUADIO C ET AL: "Real-time facial animation based upon a bank of 3D facial expressions", COMPUTER ANIMATION 98. PROCEEDINGS PHILADELPHIA, PA, USA 8-10 JUNE 1998, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US LNKD- DOI:10.1109/CA.1998.681917, 8 June 1998 (1998-06-08), pages 128 - 136, XP010285090, ISBN: 978-0-8186-8541-5
- [XPI] ZHANG Q ET AL: "geometry-driven photorealistic facial expression synthesis", ACM SIGGRAPH/EUROGRAPHICS SYMPOSIUM ON COMPUTER ANIMATION; [ACM SIGGRAPH SYMPOSIUM ON COMPUTER ANIMATION], ASSOCIATION FOR COMPUTING MACHINERY, NEW YORK, NY, US, vol. 1, 26 July 2003 (2003-07-26), pages 1 - 12, XP002560591, ISBN: 978-1-58113-659-3
- [XI] BLOOMENTHAL J ED - SPENCER S N (ED): "MEDIAL-BASED VERTEX DEFORMATION", ACM SIGGRAPH SYMPOSIUM ON COMPUTER ANIMATION. SAN ANTONIO, TX, JULY 21 20020721 NEW YORK, NY : ACM, US LNKD- DOI:10.1145/545261.545285, 21 July 2002 (2002-07-21), pages 147 - 151, XP001232446, ISBN: 978-1-58113-573-2
- [XI] BLANZ V ET AL: "A MORPHABLE MODEL FOR THE SYNTHESIS OF 3D FACES", COMPUTER GRAPHICS PROCEEDINGS. SIGGRAPH 99; [COMPUTER GRAPHICS PROCEEDINGS. SIGGRAPH], ACM - NEW YORK, NY, USA LNKD- DOI:10.1145/311535.311556, 8 August 1999 (1999-08-08), pages 187 - 194, XP001032901, ISBN: 978-0-201-48560-8
- [XI] BASCLE B ET AL: "SEPARABILITY OF POSE AND EXPRESSION IN FACIAL TRACKING AND ANIMATION", 6TH INTERNATIONAL CONFERENCE ON COMPUTER VISION. ICCV '98. BOMBAY, JAN. 4 - 7, 1998; [IEEE INTERNATIONAL CONFERENCE ON COMPUTER VISION], NEW YORK, NY : IEEE, US, 1 January 1998 (1998-01-01), pages 323 - 326, XP002947368, ISBN: 978-0-7803-5098-4
- See references of WO 2004104934A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 2004104934 A1 20041202; AU 2003260051 A1 20041213; AU 2003269986 A1 20041213; EP 1636759 A1 20060322;
EP 1636759 A4 20101110; EP 1639552 A1 20060329; EP 1639552 A4 20100825; JP 2006514379 A 20060427; JP 2006514380 A 20060427;
JP 4358752 B2 20091104; JP 4361878 B2 20091111; WO 2004104935 A1 20041202

DOCDB simple family (application)

US 0326371 W 20030822; AU 2003260051 A 20030822; AU 2003269986 A 20030822; EP 03751882 A 20030822; EP 03817037 A 20030822;
JP 2004572200 A 20030822; JP 2004572201 A 20030822; US 0326546 W 20030822