

Title (en)  
LIMB COORDINATION SYSTEM FOR INTERACTIVE COMPUTER ANIMATION OF ARTICULATED CHARACTERS WITH BLENDED MOTION DATA

Title (de)  
GLIEDKOORDINATIONSSYSTEM ZUR INTERAKTIVEN RECHNERANIMATION VON GLIEDERKARAKTERN MIT GEMISCHTEN BEWEGUNGSDATEN

Title (fr)  
SYSTEME DE COORDINATION DES MEMBRES POUR ANIMATION INTERACTIVE SUR ORDINATEUR DE PERSONNAGES ARTICULES AVEC DONNEES COMPOSEES DE MOUVEMENT

Publication  
**EP 1012791 A4 20000628 (EN)**

Application  
**EP 97918505 A 19970331**

Priority  
• US 9705513 W 19970331  
• US 1481496 P 19960404

Abstract (en)  
[origin: WO9740471A1] On-line computational methods are used for animating limb movements of articulated characters by solving associated forward and inverse kinematics problems in real time subject to multiple goals and constraints. The methods use fully interactive goal-directed behaviors, such as bipedal walking, through simultaneous satisfaction of position, alignment, posture, balance, obstacle avoidance, and joint limitation constraints. Goal-based motion primitives, called synergies (22, 24, 26, 28, 30), coordinate sets of joint movements which separately attempt to satisfy each of the above constraints (18). Recorded motion data is combined with interactive control techniques to manipulate the animation of articulated figures. Non-interactive motion capture and keyframe data, representing examples of desired character movements, are accommodated in the present animation system.

IPC 1-7  
**G06T 13/00**; **G06T 15/70**

IPC 8 full level  
**G06T 13/00** (2006.01); **G06T 13/40** (2011.01); **G06T 15/70** (2006.01)

CPC (source: EP)  
**G06T 13/40** (2013.01); **G05B 2219/39096** (2013.01); **G06T 2213/12** (2013.01)

Citation (search report)  
• [A] MOON RYUL JUNG ET AL: "SIMULATING HUMAN TASKS USING SIMPLE NATURAL LANGUAGE INSTRUCTIONS", PROCEEDINGS OF THE WINTER SIMULATION CONFERENCE, PHOENIX, DEC. 8 - 11, 1991, no. CONF. 23, 8 December 1991 (1991-12-08), NELSON B L;KELTON W D; CLARK G M, pages 1049 - 1057, XP000347680  
• [A] BLUMBERG B M ET AL: "MULTI-LEVEL DIRECTION OF AUTONOMOUS CREATURES FOR REAL-TIME VIRTUALENVIRONMENTS", COMPUTER GRAPHICS PROCEEDINGS, LOS ANGELES, AUG. 6 - 11, 1995, 6 August 1995 (1995-08-06), COOK R, pages 47 - 54, XP000546215  
• [A] BOULIC R ET AL: "GOAL-ORIENTED DESIGN AND CORRECTION OF ARTICULATED FIGURE MOTION WITH THE TRACK SYSTEM", COMPUTERS AND GRAPHICS, vol. 18, no. 4, 1 July 1994 (1994-07-01), pages 443 - 452, XP000546590  
• See references of WO 9740471A1

Cited by  
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