

Title (en)

REAL-TIME, SOFTWARE-BASED HYBRID RAY TRACING FOR BATTERY-POWERED COMPUTING DEVICES

Title (de)

ECHTZEIT-SOFTWAREBASIERTE HYBRIDE STRAHLVERFOLGUNG FÜR BATTERIEBETRIEBENE RECHNERGERÄTE

Title (fr)

LANCER DE RAYON HYBRIDE EN TEMPS RÉEL BASÉ SUR UN LOGICIEL POUR DES DISPOSITIFS INFORMATIQUES ALIMENTÉS PAR BATTERIE

Publication

**EP 4085428 A2 20221109 (EN)**

Application

**EP 20910800 A 20201207**

Priority

- US 202062957157 P 20200104
- US 202016844681 A 20200409
- US 202016874705 A 20200515
- US 202063067881 P 20200820
- US 202017019272 A 20200913
- IL 2020051262 W 20201207

Abstract (en)

[origin: WO2021137207A2] Hybrid ray tracing or reduced computational complexity. Primary rays are used to build-up the image by rasterization technique. Independently, secondary rays, traced for reflections and other photorealistic features, are generated, and traced in the object space of the scene. A dynamic acceleration structure (DAS) and traversal tools are characterized by high object locality, reduced intersection tests and low-cost updates. Coherence is achieved by handling secondary rays with collective origin and collective destinations. The resulting reduced computational complexity enables a software only implementation, without hardware accelerators.

IPC 8 full level

**G06T 15/83** (2011.01); **G06T 15/06** (2011.01); **G06T 15/40** (2011.01)

CPC (source: EP KR)

**G06T 1/20** (2013.01 - KR); **G06T 15/005** (2013.01 - KR); **G06T 15/06** (2013.01 - EP KR); **G06T 15/30** (2013.01 - EP); **G06T 15/40** (2013.01 - KR); **G06T 15/50** (2013.01 - EP KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**WO 2021137207 A2 20210708**; **WO 2021137207 A3 20210923**; CN 115136201 A 20220930; EP 4085428 A2 20221109; EP 4085428 A4 20240306; KR 20220139880 A 20221017

DOCDB simple family (application)

**IL 2020051262 W 20201207**; CN 202080091828 A 20201207; EP 20910800 A 20201207; KR 20227027051 A 20201207