

Title (en)

COMPUTER SIMULATION OF ELECTROMAGNETIC FIELDS

Title (de)

COMPUTERSIMULATION VON ELEKTROMAGNETISCHEN FELDERN

Title (fr)

SIMULATION INFORMATIQUE DE CHAMPS ÉLECTROMAGNÉTIQUES

Publication

EP 3008619 A4 20160803 (EN)

Application

EP 14810283 A 20140610

Priority

- US 201313914507 A 20130610
- US 201313923305 A 20130620
- US 201414261415 A 20140424
- US 2014041805 W 20140610

Abstract (en)

[origin: WO2014201060A2] A method and system is provided for solving for electromagnetic fields by approximating an electromagnetic function as a sum of basis functions multiplied by coefficients to be determined. The set of equations used to determine the coefficients results from taking derivatives of the action integral with respect to the coefficients (and/or other parameters) and setting the derivative equal to zero, thereby extremizing the action integral.

IPC 8 full level

G06F 17/13 (2006.01); **G01R 31/28** (2006.01); **G06F 17/50** (2006.01)

CPC (source: EP)

G01R 33/0064 (2013.01); **G06F 17/13** (2013.01); **G06F 30/36** (2020.01); **G01R 29/08** (2013.01); **G06F 2111/10** (2020.01)

Citation (search report)

- [A] US 2005071097 A1 20050331 - NACHAMKIN JACK [US]
- [A] US 6353801 B1 20020305 - SERCU JEANNICK [BE], et al
- [A] EP 2393025 A1 20111207 - IBBT VZW [BE], et al
- [A] US 2008097730 A1 20080424 - CANNING FRANCIS X [US]
- [I] "The Method of Moments in Electromagnetics", 2008, CHAPMAN & HALL/CRC, TAYLOR & FRANCIS GROUP, ISBN: 978-1-4200-6145-1, article WALTON C. GIBSON: "The Method of Moments in Electromagnetics", pages: 1 - 289, XP055282884
- [I] HARRINGTON R: "Origin and development of the method of moments for field computation", IEEE ANTENNAS AND PROPAGATION MAGAZINE, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 32, no. 3, June 1990 (1990-06-01), pages 31 - 35, XP011419785, ISSN: 1045-9243, DOI: 10.1109/74.80522
- [I] MOLINET F ET AL: "State of the art in computational methods for the prediction of radar cross-sections and antenna-platform interactions", COMPTES RENDUS - PHYSIQUE, ELSEVIER, PARIS, FR, vol. 6, no. 6, July 2005 (2005-07-01), pages 626 - 639, XP027838061, ISSN: 1631-0705, [retrieved on 20050701]
- [XP] TERJE G. VOLD: "Computing Electromagnetic Fields by the Method of Least Action", ADVANCES IN APPLIED CLIFFORD ALGEBRAS, vol. 24, no. 2, 27 September 2013 (2013-09-27), Basel, pages 275 - 292, XP055282840, ISSN: 0188-7009, DOI: 10.1007/s00006-013-0417-1
- See references of WO 2014201060A2

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

DOCDB simple family (publication)

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DOCDB simple family (application)

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