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(54) Title: COOPERATIVE LOCALIZATION FOR WIRELESS NETWORKS

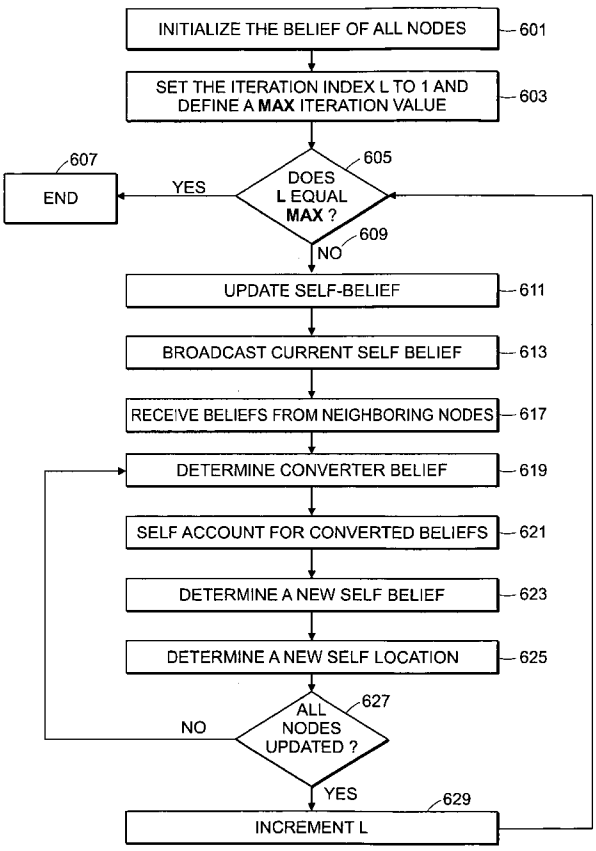

FIG. 6

(57) Abstract: A system and corresponding method using a cooperative localization technique for self identifying a location of a wireless device in a wireless network is presented. The system may estimate an arbitrary signal metric as a function of a signal received by the wireless device from the at least one other wireless device in the wireless network. The system may also convert at least one belief representing a distribution of at least one possible location of the at least one other wireless device to generate at least one converted belief. The system may further determine a self-belief as a function of the at least one converted belief and identify a self location, as a function of the self-belief, within the wireless network.

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B. FIELDS SEARCHED

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G01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	IHLER A T ET AL: "Nonparametric Belief Propagation for SelfCalibration in Sensor Networks" IPSN 2004. 3RD. INTERNATIONAL SYMPOSIUM ON INFORMATION PROCESSING IN SENSOR NETWORKS. BERKELEY, CA, APRIL 26 - 27, 2004; [INTERNATIONAL SYMPOSIUM ON INFORMATION PROCESSING IN SENSOR NETWORKS], NEW YORK, NY : ACM, US, 26 April 2004 (2004-04-26), page 9pp, XP007905899 ISBN: 978-1-58113-846-7 abstract and sections 1, 2, 5-7 ----- -/--	1-23

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ASH J N ET AL: "Locating the nodes" IEEE SIGNAL PROCESSING MAGAZINE, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 22, no. 4, 1 July 2005 (2005-07-01), pages 54-69, XP011135195 ISSN: 1053-5888 the whole document	1-23
A	DIETER FOX ET AL: "A Probabilistic Approach to Collaborative Multi-Robot Localization" AUTONOMOUS ROBOTS, KLUWER ACADEMIC PUBLISHERS, BO, vol. 8, no. 3, 1 June 2000 (2000-06-01), pages 325-344, XP019204957 ISSN: 1573-7527 the whole document	1-23
A	DIMITRII MARINAKIS AND GREGORY DUDEK: "Probabilistic Self-Localization for Sensor Networks" PROCEEDINGS OF THE TWENTY-FIRST AAAI CONFERENCE ON ARTIFICIAL INTELLIGENCE, JULY 16 20, 2006, BOSTON, MASSACHUSETTS, THE AAAI PRESS, MENLO PARK, CALIFORNIA, [Online] 16 July 2006 (2006-07-16), page 6pp, XP007905898 Retrieved from the Internet: URL:http://www.cim.mcgill.ca/{mrl/pubs/dmarinak/aaai06.pdf> [retrieved on 2008-10-08] the whole document	1-23