Title (en)
SENSOR-BASED WIRELESS COMMUNICATION SYSTEMS USING COMPRESSIVE SAMPLING

Title (de)
SENSORBASIERTE DRAHTLOSE KOMMUNIKATIONSSYSTEME MIT KOMPRESSIONSABTASTUNG

Title (fr)
SYSTÈMES DE COMMUNICATION SANS FIL UTILISANT DES CAPTEURS ET UN ÉCHANTILLONNAGE COMPRESSIF

Publication
EP 2460277 A2 20120606 (EN)

Application
EP 10751729 A 20100729

Priority
• US 63552609 A 20091210
• US 23030909 P 20090731
• US 76089210 A 20100415
• US 2010043747 W 20100729

Abstract (en)
[origin: WO2011014678A2] Methods, devices and systems for sensor-based wireless communication systems using compressive sampling are provided. In one embodiment, the method for sampling signals comprises receiving, over a wireless channel, a user equipment transmission based on an S-sparse combination of a set of vectors; down converting and discretizing the received transmission to create a discretized signal; correlating the discretized signal with a set of sense waveforms to create a set of samples, wherein a total number of samples in the set is equal to a total number of sense waveforms in the set, wherein the set of sense waveforms does not match the set of vectors, and wherein the total number of sense waveforms in the set of sense waveforms is fewer than a total number of vectors in the set of vectors; and transmitting at least one sample of the set of samples to a remote central processor.

IPC 8 full level
H03M 7/30 (2006.01)

CPC (source: EP)
H03M 7/30 (2013.01)

Citation (search report)
See references of WO 2011014678A2

Citation (examination)
• THOMAS CAMERON ET AL: "Analog Front End for 3G Femto Base Stations Brings Wireless Connectivity Home", 1 December 2008 (2008-12-01), pages 1 - 5, XP055133299, Retrieved from the Internet <URL:http://www.analog.com/library/analogdialogue/archives/42-12/femtocell.pdf> [retrieved on 20140805]
• XUE LIU ET AL: "Optimal real-time sampling rate assignment for wireless sensor networks", ACM TRANSACTIONS ON SENSOR NETWORKS, vol. 2, no. 2, 1 May 2006 (2006-05-01), pages 263 - 295, XP055133247, ISSN: 1550-4859, DOI: 10.1145/1149283.1149288

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 SE SI SK SM TR

DOCDB simple family (publication)
WO 2011014678 A2 20110203; **WO 2011014678 A3 20110603**; CA 2769642 A1 20110203; CA 2769642 C 20171107; CN 103858351 A 20140611; CN 103858351 B 20180223; EP 2460277 A2 20120606

DOCDB simple family (application)
US 2010043747 W 20100729; CA 2769642 A 20100729; CN 201080034095 A 20100729; EP 10751729 A 20100729