Title (en)

RADIO NAVIGATION SYSTEM USING OUT-OF-BAND PSEUDOLITES

Title (de)

FUNKNAVIGATIONSSYSTEM MIT AUF EIGENER FREQUENZ SENDENDEN PSEUDOLITEN

Title (fr)

SYSTEME DE RADIONAVIGATION UTILISANT DES PSEUDOLITES HORS BANDE

Publication

EP 0877950 A4 20000126 (EN)

Application

EP 97905625 A 19970131

Priority

- US 9701238 W 19970131
- US 59513796 A 19960201

Abstract (en)

[origin: WO9728455A1] A system of stationary pseudolite navigation transmitters for broadcasting a GPS-like signal at a frequency F1, a non-GPS carrier frequency, is provided in the environment of GPS spread spectrum navigation signals at a radio frequency L1. A plurality of pseudolite stations (PL) broadcast a plurality of spread spectrum pseudolite navigation signals at a radio frequency F1 which are at a different frequency than the frequency L1. According to the invention, at least one reference station (REF) is provided for receiving the GPS navigation and the pseudolite navigation signals and deriving navigation correction data (Differential GPS, kinematic observations data) signals. At least one of the pseudolite stations serves as a master station (PL1) in association with each reference station. A communication link provides differential GPS and observation data signals from each reference receiver to its master pseudolite station(s) which modulate(s) the reference station observations and integrity data for broadcasting to a plurality of mobile receivers (NRX) which receive the pseudolite and GPS navigation signals including the navigation correction signals from the master pseudolite stations and produce accurate navigation information therefrom in the presence or absence of useful GPS navigation signals.

IPC 1-7

G01S 5/14; G01S 5/02; H04B 7/185

IPC 8 full level

G01S 5/14 (2006.01); **G01S 19/07** (2010.01); **G01S 19/11** (2010.01); **G01S 19/41** (2010.01); **G01S 19/43** (2010.01); **G01S 19/46** (2010.01)

CPC (source: EP US)

G01S 19/071 (2019.07 - EP US); **G01S 19/11** (2013.01 - EP US); **G01S 19/41** (2013.01 - EP); **G01S 19/43** (2013.01 - EP); **G01S 19/46** (2013.01 - EP)

Citation (search report)

- [Y] WO 9508779 A1 19950330 - UNIV LELAND STANFORD JUNIOR [US]
- [Y] SCHUCHMAN L ET AL: "APPLICABILITY OF AN AUGMENTED GPS FOR NAVIGATION IN THE NATIONAL AIRSPACE SYSTEM", PROCEEDINGS OF THE IEEE,US,IEEE. NEW YORK, vol. 77, no. 11, November 1989 (1989-11-01), pages 1709-1727, XP000101185, ISSN: 0018-9219
- See references of WO 9728455A1

Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI NL PT SE

DOCDB simple family (publication)

WO 9728455 A1 19970807; AU 2246497 A 19970822; CA 2242193 A1 19970807; EP 0877950 A1 19981118; EP 0877950 A4 20000126

DOCDB simple family (application)

US 9701238 W 19970131; AU 2246497 A 19970131; CA 2242193 A 19970131; EP 97905625 A 19970131