

Title (en)
ENHANCED TIME OF ARRIVAL METHOD

Title (de)
ANKUNFTSZEIT-VERFAHREN

Title (fr)
PROCEDE DE TYPE INSTANT D'ARRIVEE AMELIORE

Publication
EP 0917655 A1 19990526 (EN)

Application
EP 96941929 A 19960810

Priority
US 9612836 W 19960810

Abstract (en)
[origin: WO9807045A1] A method for improving a radio location system based on time-of-arrival. Time-of-arrival radio location systems are limited in ultimate accuracy by signal-to-noise ratio and by the time varying multipath environment in which they must operate. The present invention teaches techniques which maintain a high signal-to-noise ratio while identifying a feature of the received signal which is least affected by multipath. The technique uses correlation peak/envelope information to estimate the leading edge of the correlation function (402), then enhances discrete samples at the leading edge of the correlation function to yield high signal-to-noise ratio readings (405-408). The present invention can reduce required transmitted bandwidth, increase system resolution and accuracy by twenty to one, and maintain high message traffic throughput.

IPC 1-7
G01S 1/16; G01S 1/18; G01S 13/08; H04B 15/00

IPC 8 full level
G01S 1/04 (2006.01)

CPC (source: EP)
G01S 1/045 (2013.01)

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9807045 A1 19980219; AU 1114497 A 19980306; EP 0917655 A1 19990526; EP 0917655 A4 20010404

DOCDB simple family (application)
US 9612836 W 19960810; AU 1114497 A 19960810; EP 96941929 A 19960810