

Title (en)

POSITION LOCATION USING BROADCAST TELEVISION SIGNALS AND MOBILE TELEPHONE SIGNALS

Title (de)

POSITIONSFINDUNG DURCH RUNDSENDEFERNSEHSIGNALE UND MOBILE FERNSPRECHSIGNALE

Title (fr)

DETERMINATION DE POSITION AU MOYEN DE SIGNAUX DE TELEDIFFUSION ET DE SIGNAUX DE TELEPHONE MOBILE

Publication

**EP 1432999 A2 20040630 (EN)**

Application

**EP 02773262 A 20020829**

Priority

- US 0227780 W 20020829
- US 31598301 P 20010829
- US 32959201 P 20011015
- US 37881902 P 20020507

Abstract (en)

[origin: WO03021286A2] A needle assembly (10) including a cannula (12) having a sharpened distal end (20a), a line of elements (28) in the cannula (12) extending reward from the distal end (20a). A yieldable positioner (32) positions the elements (28) more proximate the distal end (20a). The positioner (32) may be in various forms including a plug (32), a tab (214) in the cannula (12) and a distortion (364). A stylet (22) engages the line of elements (28).

[origin: WO03021286A2] A method, apparatus, and computer-readable media for determining the position of a user terminal comprises receiving (202) at the user terminal a broadcast television signal from a television signal transmitter; determining a first pseudo-range between the user terminal and the television signal transmitter based on a known component of the broadcast television signal; receiving (206) at the user terminal a mobile telephone signal from a mobile telephone base station; determining a second pseudo-range between the user terminal and the mobile telephone base station based on a known component of the mobile telephone signal; and determining a position of the user terminal based on the first and second pseudo-ranges, a location of the television signal transmitter, and a location of the mobile telephone base station.

IPC 1-7

**G01S 3/02**

IPC 8 full level

**G01S 5/14** (2006.01); **G01S 19/09** (2010.01); **G01S 19/46** (2010.01); **H04W 64/00** (2009.01)

CPC (source: EP KR US)

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Citation (search report)

See references of WO 03021286A2

Designated contracting state (EPC)

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DOCDB simple family (publication)

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