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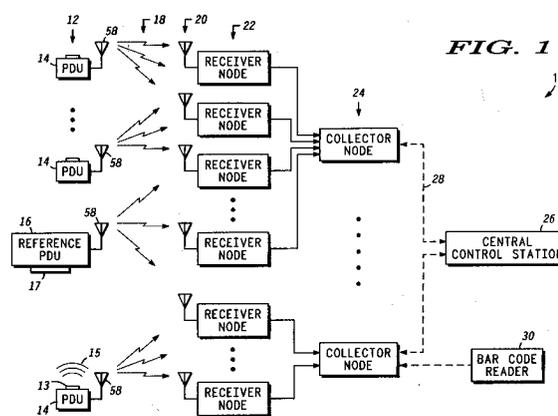
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#### 54 Electronic monitoring system.

57 An electronic monitoring system (10) for monitoring a large number of inmates confined in an institution is described. Each inmate wears a transmitter (14) which broadcasts an RF signal (18) at random times within a predetermined interval. Reference transmitters (16) positioned at known locations provide calibration so that local transmission anomalies and system variations are accounted for. The transmitted signals (18) contain a common code and also codes unique to each individual transmitter (12). Multiple receivers (22) positioned at known locations receive the transmitted signals (18). The relative times of arrival of the inmate and reference transmitter signals (18) at the multiple receivers (22) are used to determine the location of the inmate transmitters (14). The inmate transmitters (14) may also broadcast an intermittent acoustic signal (15) which is sensed by detectors (17) on the reference transmitters (16), which then transmit a tagged RF signal (18) indicating receipt of the acoustic signal (15).

The system (10) provides updated inmate headcount and location about every second.



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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
D,A	US-A-4 598 275 (ROSS ET AL.) 1 July 1986 * column 3, line 9 - column 6, line 54; figures * ---	1,2,10	G07C9/00 G07C1/20
D,A	US-A-4 885 571 (PAULEY ET AL.) 5 December 1989 * column 7, line 46 - column 15, line 67; figures * ---	1,7-10	
A	EP-A-0 312 431 (CMS CENT MULTI SERVICES) 19 April 1989 * page 3, column 3, line 2 - page 5, column 7, line 31; figures * ---	1,3-10	
A	EP-A-0 472 472 (FRANCE TELECOM) 26 February 1992 * page 3, column 3, line 43 - page 4, column 6, line 13; figures * ---	1,10	
A	WO-A-87 03119 (PAL ENTERPRISES) 21 May 1987 * page 4, line 18 - page 5, line 10; figures * -----	1,10	TECHNICAL FIELDS SEARCHED (Int.Cl.5) G07C
The present search report has been drawn up for all claims			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>9 June 1995</b>	Examiner <b>Rakotondrajaona, C</b>
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document			