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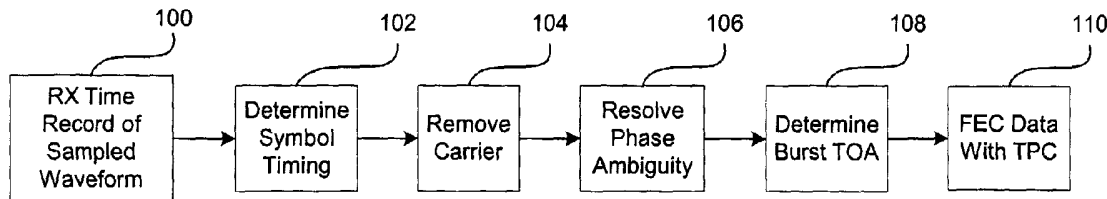
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(54) Title: FREQUENCY-HOPPING RECEIVER WITH CLOCK AND CARRIER RECOVERY



(57) **Abstract:** Architecture for processing a record of burst information in a transmission link. A waveform sampler (100) samples a received waveform containing a record of symbols imposed on a carrier signal. A feedforward sample estimator (102) is utilized for obtaining symbol timing by using an Oerder & Meyr algorithm. The carrier error is blindly estimated in both phase and frequency in a carrier block (104), corrected, and the corresponding carrier signal is removed. Phase ambiguity (106), and time-of-arrival of the burst information (108) associated with a maximum positive correlation with a unique word are then determined. The output can then be decoded using an FEC decoder (110).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04L7/02 H04B1/713 H04L27/233		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 H04L H04B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 272 446 A (SHENOY AJIT ET AL) 21 December 1993 (1993-12-21) abstract column 8, line 3 -column 10, line 25 figures 2,3 ---	1-93
X	U. MENGALI AND A. N. D'ANDREA: "SYNCHRONIZATION TECHNIQUES FOR DIGITAL RECEIVERS" 1997, PLENUM PRESS, NEW YORK, NY, USA XP002204589 234820 page 108, line 11 -page 115, line 20 page 277, line 26 -page 284, line 12 page 402, line 10 -page 405, last line figures 3.24,5.55,7.28 --- -/--	1-93
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed		*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *Z* document member of the same patent family
Date of the actual completion of the international search 4 July 2002		Date of mailing of the international search report 18/07/2002
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Marselli, M

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	figure 1 --- COWLEY W G ET AL: "ESTIMATION OF FREQUENCY OFFSET IN MOBILE SATELLITE MODEMS" PROCEEDINGS OF THE INTERNATIONAL MOBILE SATELLITE CONFERENCE, 16 - 18 June 1993, pages 417-422, XP000978015 PASADENA, CA, USA abstract page 417, left-hand column, line 15 -page 420, right-hand column, line 16 figure 1 -----	1,6-10, 16-19, 24-28, 34-37, 39-42, 45-48, 51-53, 57-59, 64-68, 74-77, 82-86, 91-93

INTERNATIONAL SEARCH REPORT

Information on patent family members

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