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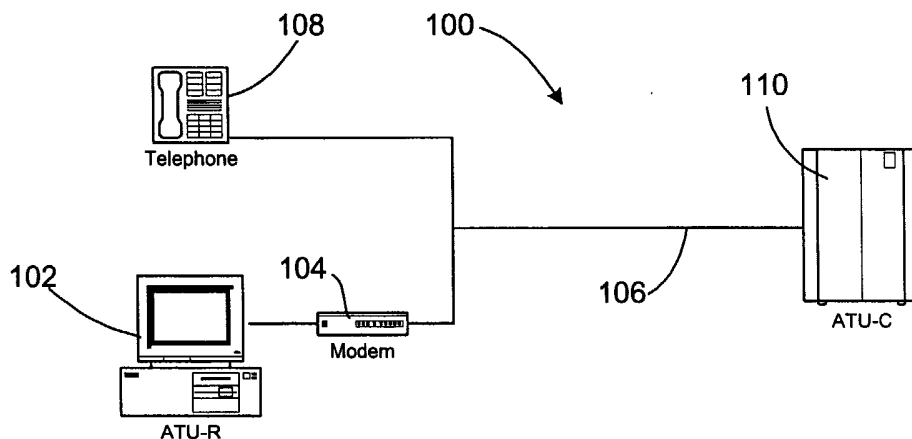
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(54) Title: SYSTEM AND METHOD FOR APPLYING TRANSMIT WINDOWING IN ADSL+ NETWORKS



(57) Abstract: A system and method for formatting and transmitting DMT symbols. For each symbol to be transmitted, the last Lcp samples of the symbol are prepended to the symbol as a cyclic prefix. Next, of the samples contained within the cyclic prefix, the first  $\beta$  samples are appended to the symbol as a cyclic suffix. By providing the above described cyclic prefix and suffix, sharp PSD transitions are provided in the first overlapped RFI band (1.8-2MHz) and out of band PSD. Upon formatting, each symbol is transmitted so that its transmission overlaps the prior symbol by  $\beta$  samples. This results in the output signal being shaped by a raised cosine function for the duration of the  $\beta$  overlap.

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 03/18745

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04L27/26 H04L5/02

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

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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages                                                                       | Relevant to claim No. |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| X          | EP 0 802 649 A (ALCATEL BELL NV)<br>22 October 1997 (1997-10-22)<br>abstract<br>column 1, line 57 -column 2, line 21<br>claims 1-4                       | 1-4, 6-9,<br>11-14    |
| A          |                                                                                                                                                          | 5, 10, 15             |
| X          | US 2002/001355 A1 (TORE ANDRE)<br>3 January 2002 (2002-01-03)<br>abstract<br>paragraph '0002!<br>paragraph '0009! - paragraph '0013!<br>paragraph '0018! | 1-4, 6-9,<br>11-14    |
| A          |                                                                                                                                                          | 5, 10, 15             |
|            | ---                                                                                                                                                      |                       |
|            | ---<br>-/--                                                                                                                                              |                       |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- \*&\* document member of the same patent family

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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          | WO 97 40609 A (AMATI COMMUNICATIONS CORP<br>;BINGHAM JOHN A C (US))<br>30 October 1997 (1997-10-30)<br>abstract<br>page 19, line 17 - line 21<br>claim 1<br>----- | 1-15                  |
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Information on patent family members

International Application No

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