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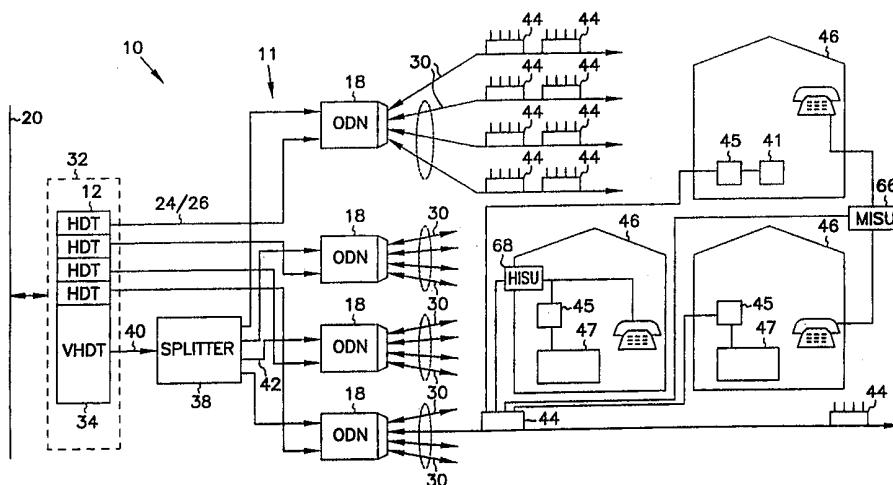
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| (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). | | |
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(54) Title: COMMUNICATION SYSTEM WITH MULTICARRIER TELEPHONY TRANSPORT



(57) Abstract

The communications system includes a hybrid fiber/coax distribution network. A head end provides for downstream transmission of telephony and control data in a first frequency bandwidth over the hybrid fiber/coax distribution network and reception of upstream telephony and control data in a second frequency bandwidth over the hybrid fiber/coax distribution network. The head end includes a head end multicarrier modem for modulating at least downstream telephony information on a plurality of orthogonal carriers in the first frequency bandwidth and demodulating at least upstream telephony information modulated on a plurality of orthogonal carriers in the second frequency bandwidth. The system includes service units operatively connected to the hybrid fiber/coax distribution network for upstream transmission of telephony and control data and for receipt of the downstream control data and telephony. Also provided is a method and apparatus for performing a Fast Fourier Transform (FFT).

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| A. CLASSIFICATION OF SUBJECT MATTER | |
|-------------------------------------|---|
| IPC 6 | G06F17/14 H04L1/00 H04L1/24 H04L5/02 H04L5/14 |
| | H04L12/10 H04L12/12 H04L12/26 H04L12/28 H04L12/44 |
| | H04L27/26 H04L27/34 |

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 6 G06F H04L H04M

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)

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