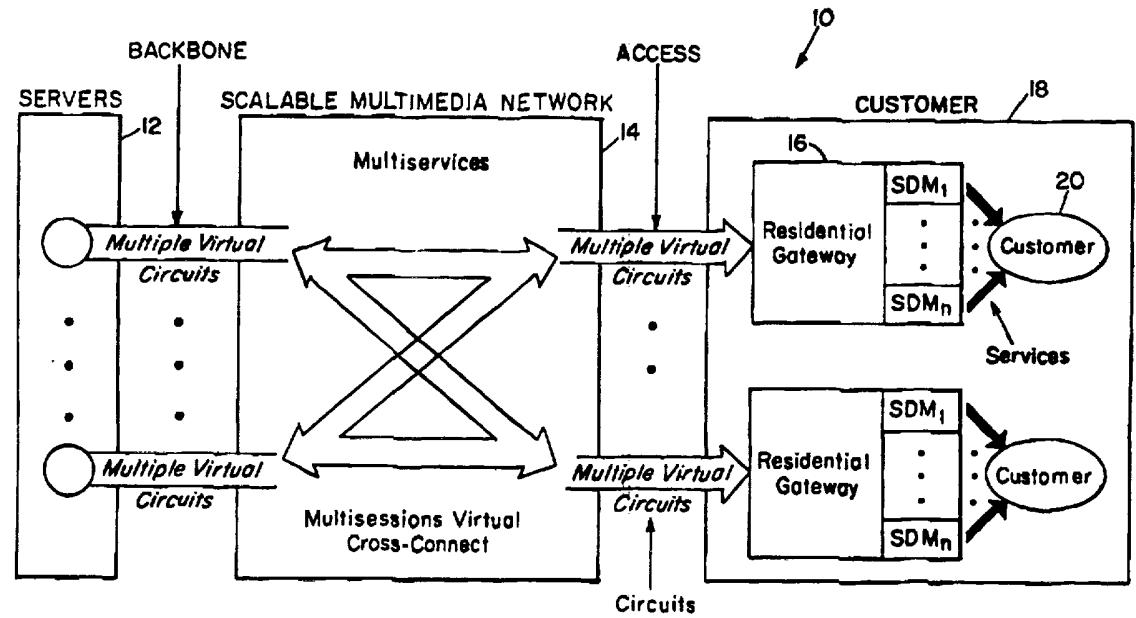




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <p>(51) International Patent Classification ⁶ : H04L 12/64, 12/28</p> | <p>A3</p> | <p>(11) International Publication Number: WO 95/33309 (43) International Publication Date: 7 December 1995 (07.12.95)</p> |
| <p>(21) International Application Number: PCT/US95/05875 (22) International Filing Date: 10 May 1995 (10.05.95) (30) Priority Data: 08/243,059 19 May 1994 (19.05.94) US 08/269,370 30 June 1994 (30.06.94) US (71) Applicant (for all designated States except US): INTEGRATED NETWORK CORPORATION [US/US]; 757 Route 202/206, Bridgewater, NJ 08807 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): GUPTA, Dev, Vrat [US/US]; 10 Shurtes Road, Flemington, NJ 08822 (US). CHEN, Yu-Ren, Brian [US/US]; 202 Tanglewood Drive, Somerville, NJ 08876 (US). SHARPER, Craig, A. [US/US]; 1525 Clay Drive, Los Altos, CA 94024 (US). STONE, Alan, E. [US/US]; 31 Knollwood Drive, Morristown, NJ 07960 (US). (74) Agents: REYNOLDS, Leo, R. et al.; Hamilton, Brook, Smith & Reynolds, Two Militia Drive, Lexington, MA 02173 (US).</p> | <p>(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments. (88) Date of publication of the international search report: 25 January 1996 (25.01.96)</p> | |

(54) Title: SCALABLE MULTIMEDIA NETWORK



(57) Abstract
A Scalable Multimedia Network providing integrated networking of data, voice, video and image services over a variety of access facilities including metallic loops, fiber/coax or digital fiber is disclosed herein. The SMN establishes customer initiated switched virtual circuits for all traffic types and directs them to the appropriate backbone network. The SMN is based on a distributed switching platform that enables carriers to economically provide service to a small number of customers and add capacity incrementally as the customer base increases. The platform has a protocol adaptation capability which permits communications between customer premises equipment and potentially incompatible backbone networks or network servers.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 95/05875

| A. CLASSIFICATION OF SUBJECT MATTER IPC 6 H04L12/64 H04L12/28 | | |
|--|---|--|
| 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 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) | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | |
| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | GLOBECOM '88, vol.3, November 1988, HOLLYWOOD, FL US pages 1229 - 1234 A. ALBANESE ET AL. 'BELLCORE METROCORE NETWORK - A TEST-BED FOR METROPOLITAN AREA NETWORK RESEARCH' see the whole document | 1-4, 8, 9, 16, 19-21, 26-29, 34-37, 42-45 |
| A | --- -/-- | 5-7, 17, 22-24, 30-33, 38-41, 46 |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. | | |
| <input type="checkbox"/> Patent family members are listed in annex. | | |
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| '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. '&' document member of the same patent family | | |
| Date of the actual completion of the international search 6 September 1995 | | Date of mailing of the international search report 22. 12. 95 |
| 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 MIKKELSEN, C |

INTERNATIONAL SEARCH REPORT

Inter national Application No
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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. |
|----------|--|------------------------------------|
| A | ICC'90, vol.3, April 1990, ATLANTA,GA US pages 991 - 996 A. IPPOLITI ET AL. 'PARALLEL MEDIA ACCESS CONTROLLER FOR PACKET COMMUNICATIONS AT Gb/s RATES' see the whole document ---- | 1-9, 16, 17, 19-24, 26-46 |
| A | INTERNATIONAL TELECOMMUNICATIONS SYMPOSIUM, September 1990, RIO DE JANEIRO, BR pages 265 - 270 A. ALBANESE 'A TERMINAL ADAPTOR TO EXPLORE VARIABLE-BIT-RATE SERVICES FOR MULTI-Gb/sec BROADBAND NETWORKS' see the whole document ----- | 1-9, 16, 17, 19-24, 26-46 |

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 95/05875

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

SEE ANNEXED SHEET

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-9, 16, 17, 19-24, 26-46

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INVITATION TO PAY ADDITIONAL FEES

International application No.
PCT/US95/05875

There exist no common technical features which can be considered as special technical features as meant in PCT, Rule 13.2 between the different inventions as stated below.

1. Claims 1-9,16,17,19-24,26-46: A network system of tiered unidirectional buses with a standard intra-network cell format.
2. Claims 10,25: A communication interface device between a communication bus and a user comprising a memory interface, a backplane interface, a user interface and a processor interface.
3. Claims 11-15: A packet cell format (to be interpreted as used in a communication system) comprising 8 bytes of 8 bit length.
4. Claim 18: A method of multi-cast addressing in a communication system.