United States Patent [19]

Chao et al.

- [54] METHOD AND APPARATUS FOR MULTIPLEXING CIRCUIT AND PACKET TRAFFIC
- [75] Inventors: Hung-Hsiang J. Chao, Madison; Sang H. Lee, Bridgewater; Liang T. Wu, Gladstone, all of N.J.
- [73] Assignee: Bell Communications Research, Inc., Livingston, N.J.
- [21] Appl. No.: 118,977
- [22] Filed: Nov. 10, 1987
- [51] Int. Cl.⁴ H04J 3/16; H04J 3/26

[56] References Cited

U.S. PATENT DOCUMENTS

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OTHER PUBLICATIONS

R. W. Muise, et al., "Experiments in Wideband Packet

[11]	Patent Number:	4,893,306
[45]	Date of Patent:	Jan. 9. 1990

Technology", Proc. 1986, International Zurich Seminar on Digital Communications, pp. 136–138.

W. W. Chu, "A Study of Asynchronous Time Division Multiplexing for Time Sharing Computer Systems", Proc. AFIPS, vol. 35, pp. 669-678, 1969.

A. Thomas, et al., "Asynchronous Time Division Techniques: An Experimental Packet Network Integrating Video Communication", Proc. International Switching Symposium, May 1984.

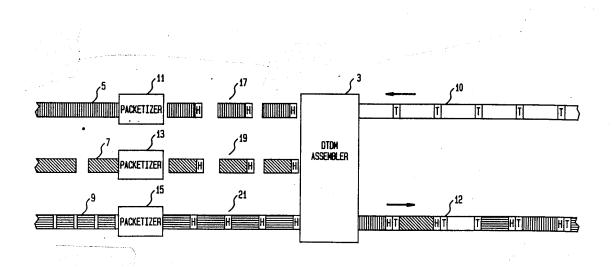
Primary Examiner—Douglas W. Olms Assistant Examiner—Min Jung Attorney, Agent, or Firm—James W. Falk

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ABSTRACT

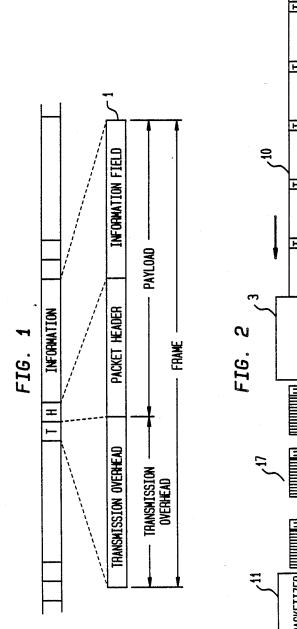
A data transmission technique referred to herein as Dynamic Time Division Multiplexing (DTDM) is disclosed along with a set of multiplexers and demultiplexers required to apply DTDM in an actual telecommunications network. The DTDM technique uses a transmission format which is compatible with the existing digital circuit transmission format and the packet transmission format so that DTDM is able to handle the transmission of circuit and packet traffic. Thus, DTDM provides a flexible migration strategy between present circuit networks and future broadband packet networks.

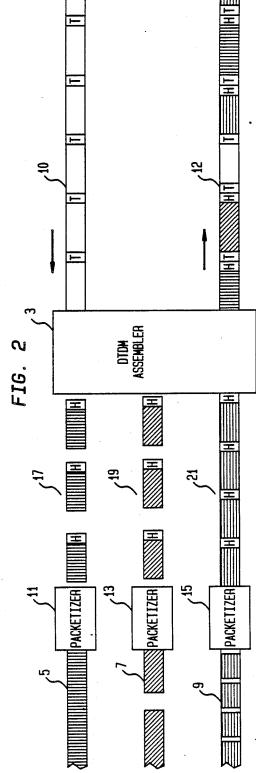
7 Claims, 10 Drawing Sheets



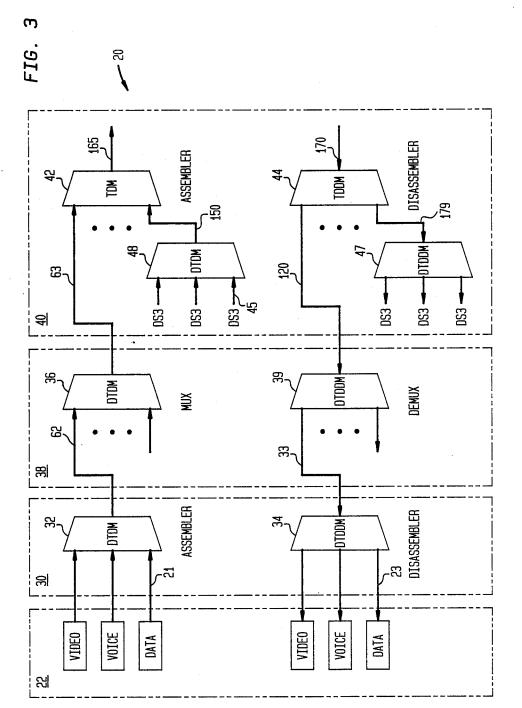


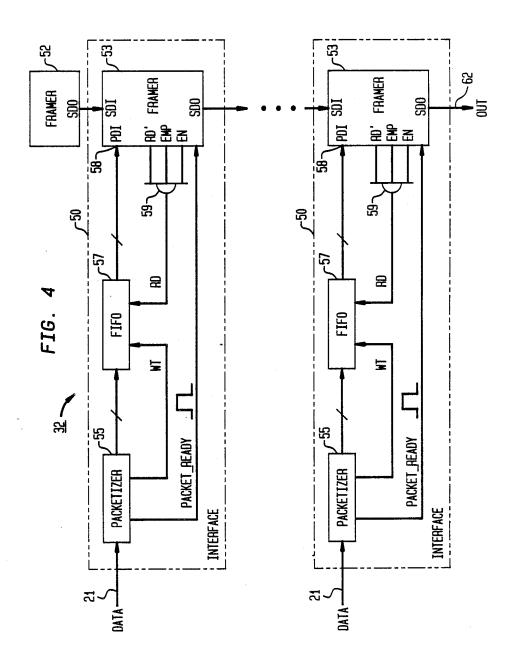
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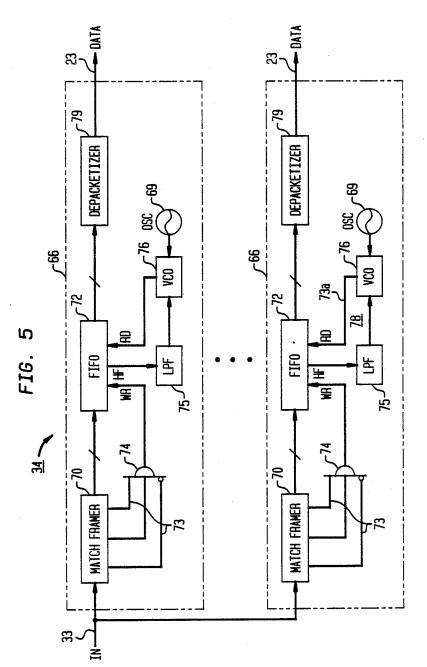


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