## United States Patent [19]

#### Campbell et al.

#### ADDRESSABLE CABLE TELEVISION [54] CONTROL SYSTEM WITH VIDEO FORMAT DATA TRANSMISSION

- [75] Inventors: John G. Campbell, Irving; Carl F. Schoeneberger; Allan B. Bundens, both of Carrollton; Richard M. Fogle, Bedford; John R. Lemburg, Richardson, all of Tex.
- [73] Assignee: Tocom, Inc., Dallas, Tex.
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#### **Related U.S. Application Data**

- Continuation of Ser. No. 348,937, Nov. 27, 1981, aban-[63] doned, which is a continuation-in-part of Ser. No. 135,987, Mar. 31, 1980, abandoned.
- Int. Cl.<sup>3</sup> ..... H04N 7/16; H04K 1/04 [51] [52]
- 358/147; 358/259; 358/263
- [58] Field of Search ...... 358/114, 147, 263, 259, 358/122

#### [56] **References Cited**

DOCKE

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#### U.S. PATENT DOCUMENTS

| 2.843.655 | 7/1958  | Gottfried et al. |  |
|-----------|---------|------------------|--|
| 3,472,962 | 10/1969 | Sanford .        |  |
| 3,668,307 | 6/1972  | Face et al       |  |
| 3,899,633 | 8/1975  | Sorenson et al.  |  |
| 3.916.091 | 10/1975 | Kirk, Jr. et al. |  |
| 3,919,462 | 11/1975 | Hartung et al    |  |
| 4.068.264 | 1/1978  | Pires            |  |

#### [11] Patent Number: 4,536,791

#### Date of Patent: Aug. 20, 1985 [45]

| 4,163,254 | 7/1979  | Block et al | 358/122 |
|-----------|---------|-------------|---------|
| 4,225,884 | 9/1980  | Block et al | 358/117 |
| 4,233,628 | 11/1980 | Ciciora     | 358/147 |

#### OTHER PUBLICATIONS

IEEE Transactions on Consumer electronics, vol. CE-25, No. 3, Jul. 1979.

L. Solomon, Pop. Electronics, May 1979, p. 49.

Primary Examiner-S. C. Buczinski

Attorney, Agent, or Firm-Hubbard, Thurman, Turner & Tucker ABSTRACT

#### [57]

An addressable cable television control system controls television program and data signal transmission from a central station to a plurality of user stations. The data signals include both control and text signals in video line format which are inserted on the vertical interval of the television signals, thereby freeing all channels for transmission of both television and data signals. Moreover, full-channel teletext data in video line format may be transmitted on dedicated text channels with the modification of only head end processors. An intelligent converter at each remote user location uses the data signals to control access to the system on the basis of channel, tier of service, special event and program subject matter. The converter uses a graphics display generator to generate display signals for the presentation of the text data on the television receiver and for the generation of predetermined messages for the viewer concerning access, emergencies and other functions. The converter processes vertical interval text data and selected full-channel text data, both transmitted in video line format. The keyboard of the subscriber provides a number of different functional inputs for the subscriber to interface with the system. The converter also includes apparatus for interfacing with two-way interactive data acquisition and control systems.

#### 8 Claims, 19 Drawing Figures



λ **U.S.** Patent Σ Find authenticated court documents without watermarks at docketalarm.com. "2 REMOTE 12 13 20 Aug. 20, 1985 30 21 CONTROL CENTRAL DATA CONTROL SYSTEM HEAD END SIGNAL COMBINER SOURCES TEXT SOURCES 618 732 214 Sheet 1 of 17 TELEVISION PROGRAM PROCESSOR PROGRAM ADDRESSABLE SUBSC<u>RIBER</u> INPUTS SOURCES CONVERTER ·2 22 240 34 382 616 10z 36 USER TV 4,536,791 FIG. I

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