United States Patent [19]

Seth-Smith et al.

[11] **Patent Number: 4,866,770**

[45] **Date of Patent: Sep. 12, 1989**

[54] **METHOD AND APPARATUS FOR COMMUNICATION OF VIDEO, AUDIO, TELETEXT, AND DATA TO GROUPS OF DECODERS IN A COMMUNICATION SYSTEM**

[75] Inventors: **Nigel Seth-Smith,** Scarborough; **Cameron Bates; Samson Lim,** both of Toronto; **William van Rassel,** Willodale; **Robert Yoneda,** Toronto; **Keith Lucas,** Richmond Hill, all of Canada

[73] Assignee: **Scientific Atlanta, Inc.,** Atlanta, Ga.

[21] Appl. No.: **896,261**

[22] Filed: **Aug. 14, 1986**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 883,310, Jul. 8, 1986, abandoned.

[51] **Int. Cl.**[4] **H04L 9/00**

[52] **U.S. Cl.** **380/20;** 380/14; 380/21

[58] **Field of Search** 358/145, 147, 349; 380/10, 14, 20, 21

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,639,686	2/1972	Walker et al.	380/20
3,777,053	12/1973	Wittig et al.	380/20

(List continued on next page.)

OTHER PUBLICATIONS

Comm. Tech. Jul. 1984, pp. 28–32 and 36, Weschselberger (II) Encyprtion applications in Cable TV arena.

S.M.P.T.E. Journal 93 (1984) Oct., No. 10, "NTSC and MAC Television Signals in Noise and Interference Environments" by Chouinard et al.–pp. 30–942.

CCIR Study Groups, "Satellite Transmission of Multiplexed Analogue Component (MAC) Television Signals", Sep. 23, 1983, Documents 10–11S/33, 39,62, Temp./10–11S–9.

SMPTE Journal, Nov. 1984, "B–MAC: An Optimum Format for Satellite Television Transmission" by John D. Lowry, pp. 1034–1043.

Zenith Radio Corporation, "The Phonevision System of Subscription Television" of Jul. 25, 1966, FCC Docket No. 11279.

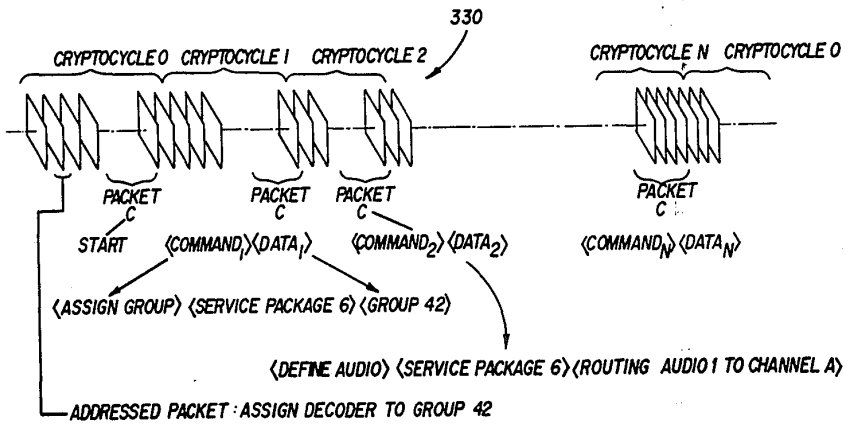
Primary Examiner—Salvatore Cangialsoi

Attorney, Agent, or Firm—Banner, Birch, McKie & Beckett

[57] **ABSTRACT**

A communication system enabling transmission of individual subscriber teletext messages, audio and video to individual subscribers and permitting group communications of audio, video, teletext and data information from a single central subscriber location, such as a corporate head office to a plurality of satellite offices, such as field or sales offices of the corporation, is disclosed. A composite signal including the information to be transmitted as well as system wide, individual decoder and group decoder control signals is transmitted. The system-wide control signals include data germane to operation of each of the decoders of this system, including key information needed to decode the composite signal. The system-wide control data is transmitted at a first relatively high frequency. The group decoder information includes information permitting individual groups of decoders to receive information portion of the composite signal being transmitted at a given time. In this way, for example, an audio and video signal can be transmitted at a convenient time from a central location to a number of satellite locations. The group decoder control signal can also include signals used by the decoder to cause recording of the signals, e.g., by activating a video cassette recorder or the like. The group control signals also include signals defining service packages to which the individual groups may be assigned. The individual decoder messages include information relevant to the operation of each individual decoder, including further key information needed to decode the composite signal, and group assignment codes.

25 Claims, 22 Drawing Sheets



DOCKET ALARM

Find authenticated court documents without watermarks at docketalarm.com.

U.S. PATENT DOCUMENTS

3,789,131	1/1974	Harney	380/20
4,112,464	9/1978	Guif et al.	380/20
4,245,245	1/1981	Matsumoto et al.	380/20
4,292,650	9/1981	Hendrickson	380/20
4,323,921	4/1982	Guillou	358/147
4,323,922	4/1982	den Toonder et al.	380/20
4,337,483	6/1982	Guillou	358/147
4,393,404	7/1983	Cox et al.	358/147
4,484,217	11/1984	Block et al.	358/349
4,531,020	7/1985	Weschselberger et al.	380/21
4,531,021	7/1985	Bluestein et al.	380/21
4,536,791	8/1985	Campbell et al.	380/10
4,600,921	7/1986	Thomas	380/20
4,605,961	8/1986	Frederiksen	380/14
4,613,901	9/1986	Gilhousen et al.	380/20
4,618,888	10/1986	Nohara et al.	380/20
4,623,920	10/1986	Dufresne et al.	380/10
4,636,854	11/1987	Crowther et al.	380/20
4,642,688	2/1987	Lowry et al.	380/20
4,649,419	3/1987	Arragon et al.	380/20
4,651,205	2/1987	Crowther	380/14
4,682,360	7/1987	Frederiksen	380/10
4,694,491	9/1987	Horne et al.	380/20
4,739,510	4/1988	Jeffers et al.	380/20

DOCKET ALARM

Find authenticated court documents without watermarks at docketalarm.com.

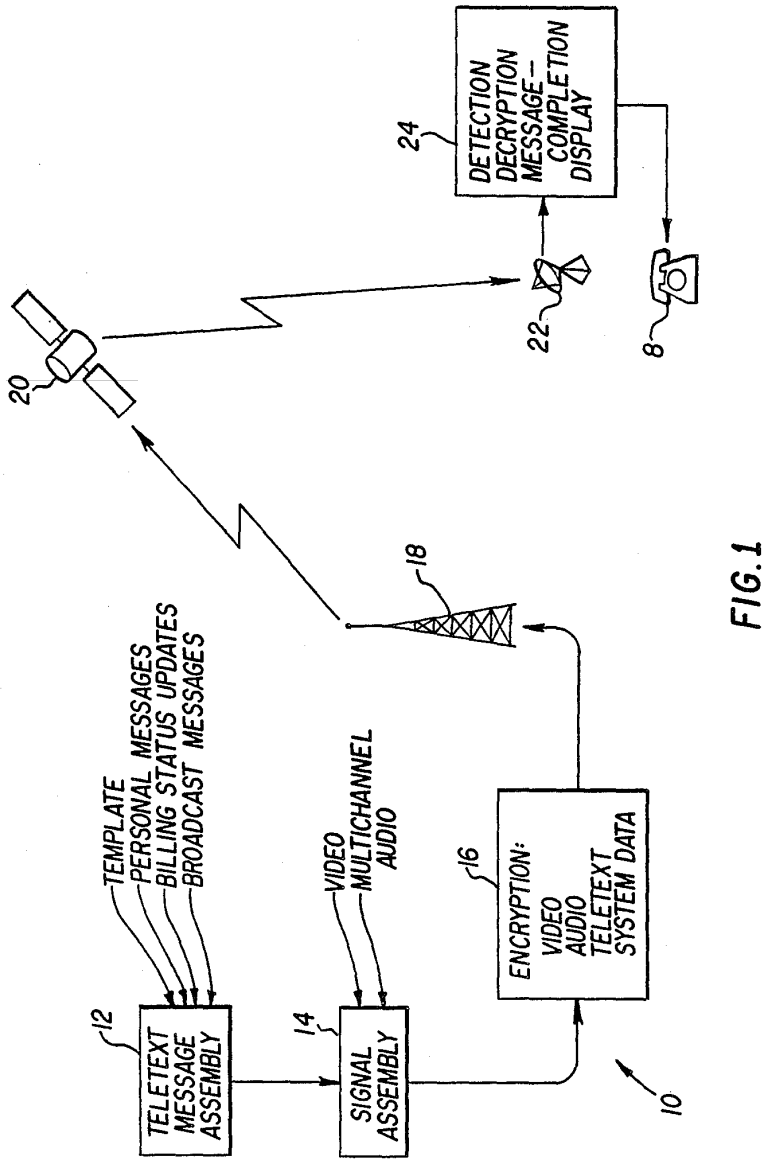


FIG. 1

DOCKET ALARM Find authenticated court documents without watermarks at docketalarm.com.

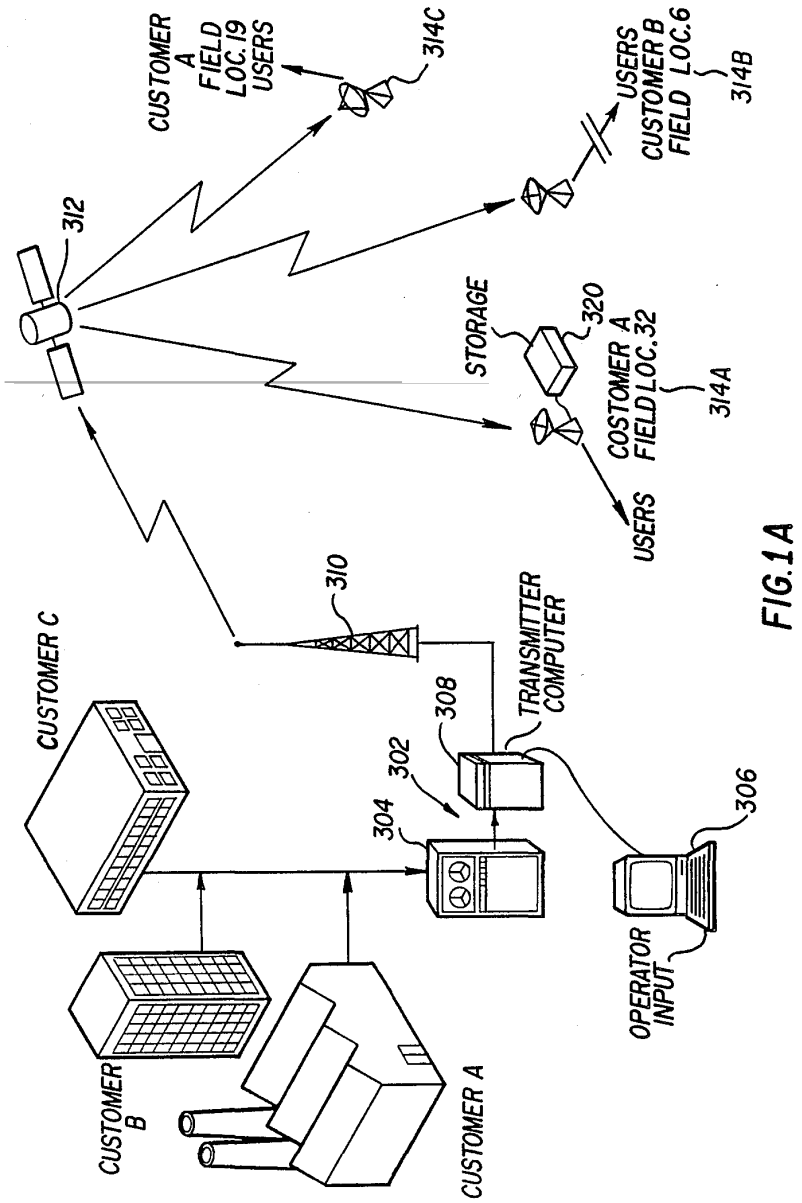


FIG.1A

DOCKET ALARM Find authenticated court documents without watermarks at docketalarm.com.

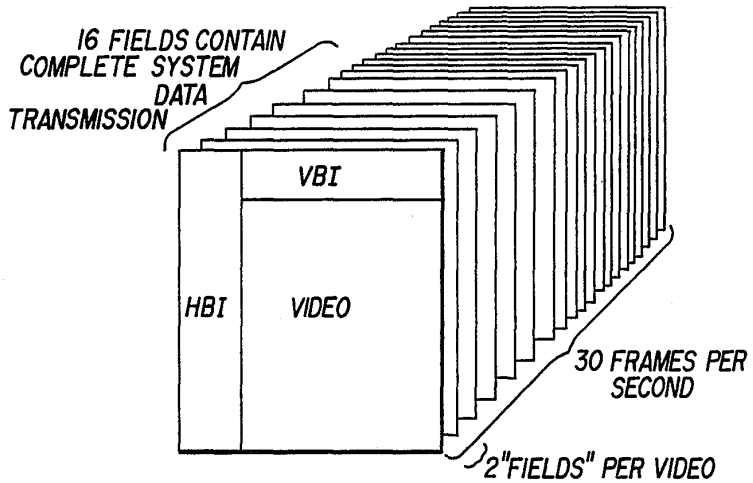


FIG.2

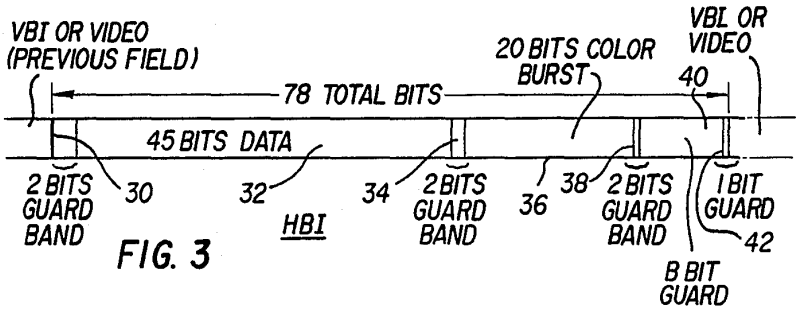


FIG. 3

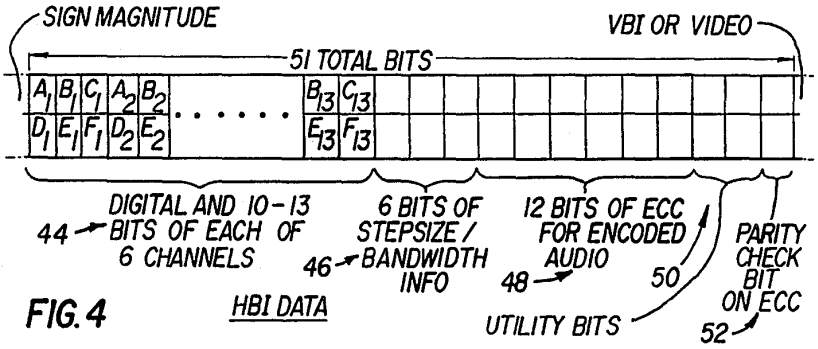


FIG.4

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.