



US004582956B1

REEXAMINATION CERTIFICATE (2393rd)

United States Patent [19]

[11] B1 4,582,956

Doughty

[45] Certificate Issued Sep. 20, 1994

[54] METHOD AND APPARATUS FOR DISPLAYING AT A SELECTED STATION SPECIAL SERVICE INFORMATION DURING A SILENT INTERVAL BETWEEN RINGING

4,242,539 12/1980 Hashimoto .
4,289,931 9/1981 Baker .
4,383,138 5/1983 Castro et al. .

FOREIGN PATENT DOCUMENTS

2538820 3/1977 Fed. Rep. of Germany .
53-24171 6/1978 Japan .

[75] Inventor: Carolyn A. Doughty, Wheaton, Ill.

[73] Assignee: Bell Telephone Laboratories, Incorporated, Murray Hill, N.J.

OTHER PUBLICATIONS

AT&T Practice Standard Publication (Jan. 1979).

Primary Examiner—Wing F. Chan

[57] ABSTRACT

Method and apparatus is disclosed for displaying special service information at a selected station during a silent interval between ringing. The apparatus, a data receiver (100), is connected to the tip and ring leads of any well-known station set and comprises a line interface unit (101), a converter (102), a control circuit (103), and a display unit (126). A frequency shift keyed (FSK) signal which represents the special service information is filtered from the ringing signals by the line interface unit. The converter detects the FSK signal and demodulates the special service information from the FSK signal. Upon detection of the FSK signal, the control circuit receives and stores the special service information. The stored special service information is then periodically sent to the display unit to begin exhibiting the information during the silent interval before the next ringing signal.

Reexamination Requests:

No. 90/002,774, Jul. 9, 1992
No. 90/003,164, Aug. 16, 1993

Reexamination Certificate for:

Patent No.: 4,582,956
Issued: Apr. 15, 1986
Appl. No.: 513,080
Filed: Jul. 12, 1983

[51] Int. Cl.⁵ H04M 11/00; H04M 15/06

[52] U.S. Cl. 379/94; 379/96;
379/142

[58] Field of Search 379/93, 94, 96-98,
379/142, 201, 207, 372, 373, 376, 90, 110

[56] References Cited

U.S. PATENT DOCUMENTS

3,591,722 7/1971 Palsa .
3,868,640 2/1975 Binnie et al. 340/151

