

United States Patent [19]

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Kugell et al.

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- [54] **MULTI-RING TELEPHONE METHOD AND SYSTEM**
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David Silver, Cambridge, both of Mass.
- [73] Assignee: **Pilgrim Telephone, Inc.**, Cambridge, Mass.

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|-----------|---------|----------------------|---------|
| 5,483,586 | 1/1996 | Sussman | 379/201 |
| 5,483,587 | 1/1996 | Hogan et al. | 379/202 |
| 5,502,762 | 3/1996 | Andrew et al. | 379/202 |
| 5,521,716 | 5/1996 | Itoh | 358/402 |
| 5,546,449 | 8/1996 | Hogan et al. | 379/202 |
| 5,559,876 | 9/1996 | Alperovich | 379/205 |
| 5,568,546 | 10/1996 | Marutiak | 379/355 |
| 5,590,189 | 12/1996 | Turnbull et al. | 379/356 |
| 5,631,904 | 5/1997 | Fitsler et al. | 379/205 |

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[22] Filed: **Jan. 19, 1996**

[51] Int. Cl.⁶ **H04M 3/46; H04M 3/56**

[52] U.S. Cl. **379/211; 379/188; 379/205; 370/261; 370/270**

[58] **Field of Search** 379/201, 202, 379/203, 204, 205, 206, 211, 212, 93, 95, 188, 199, 37, 354, 355, 356; 370/259, 260, 261, 262, 270, 280; 395/2.4; 340/825.44, 825.45, 825.47

OTHER PUBLICATIONS

“Mechanism to Automate Updating Obsolete Telephone Numbers,” pp. 115–116, vol. 37, No. 04A, IBM Technical Disclosure Bulletin, Apr. 1994.

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ABSTRACT

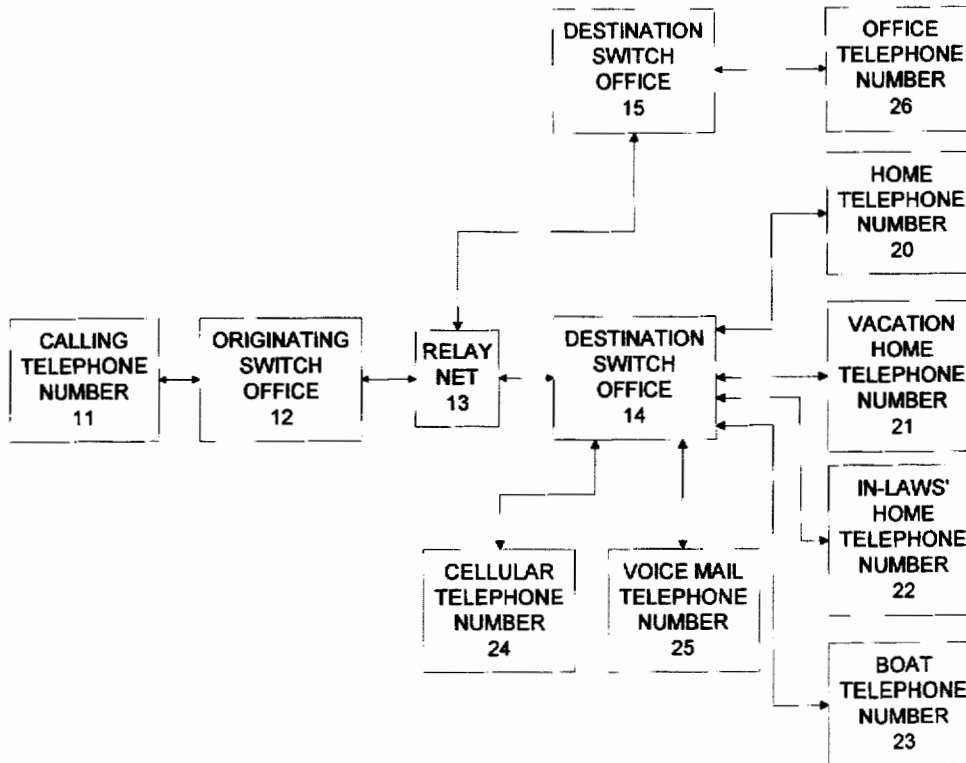
A method and system of providing telephone service comprises associating a list of telephone numbers with a representative telephone number. A call to the representative telephone number is detected and a plurality of telephone numbers on the list are simultaneously signalled. Thereafter, signalling is terminated at at least one of the plurality of telephone numbers thereby allowing a connection to be established with one or more parties at telephone numbers among the plurality of telephone numbers. Each telephone number on the list may be a representative number which is associated with another list of telephone numbers.

[56] **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|-----------|---------|---------------------|------------|
| 4,803,717 | 2/1989 | Marui | 379/67 |
| 5,043,718 | 8/1991 | Shimura | 340/825.44 |
| 5,103,448 | 4/1992 | Barnes et al. | 370/280 |
| 5,166,972 | 11/1992 | Smith | 379/37 |
| 5,206,901 | 4/1993 | Hadlow et al. | 379/201 |
| 5,259,026 | 11/1993 | Johnson | 379/207 |
| 5,329,578 | 7/1994 | Brennan et al. | 379/201 |
| 5,430,791 | 7/1995 | Feit et al. | 379/211 |
| 5,454,032 | 9/1995 | Pinard et al. | 379/167 |

47 Claims, 9 Drawing Sheets



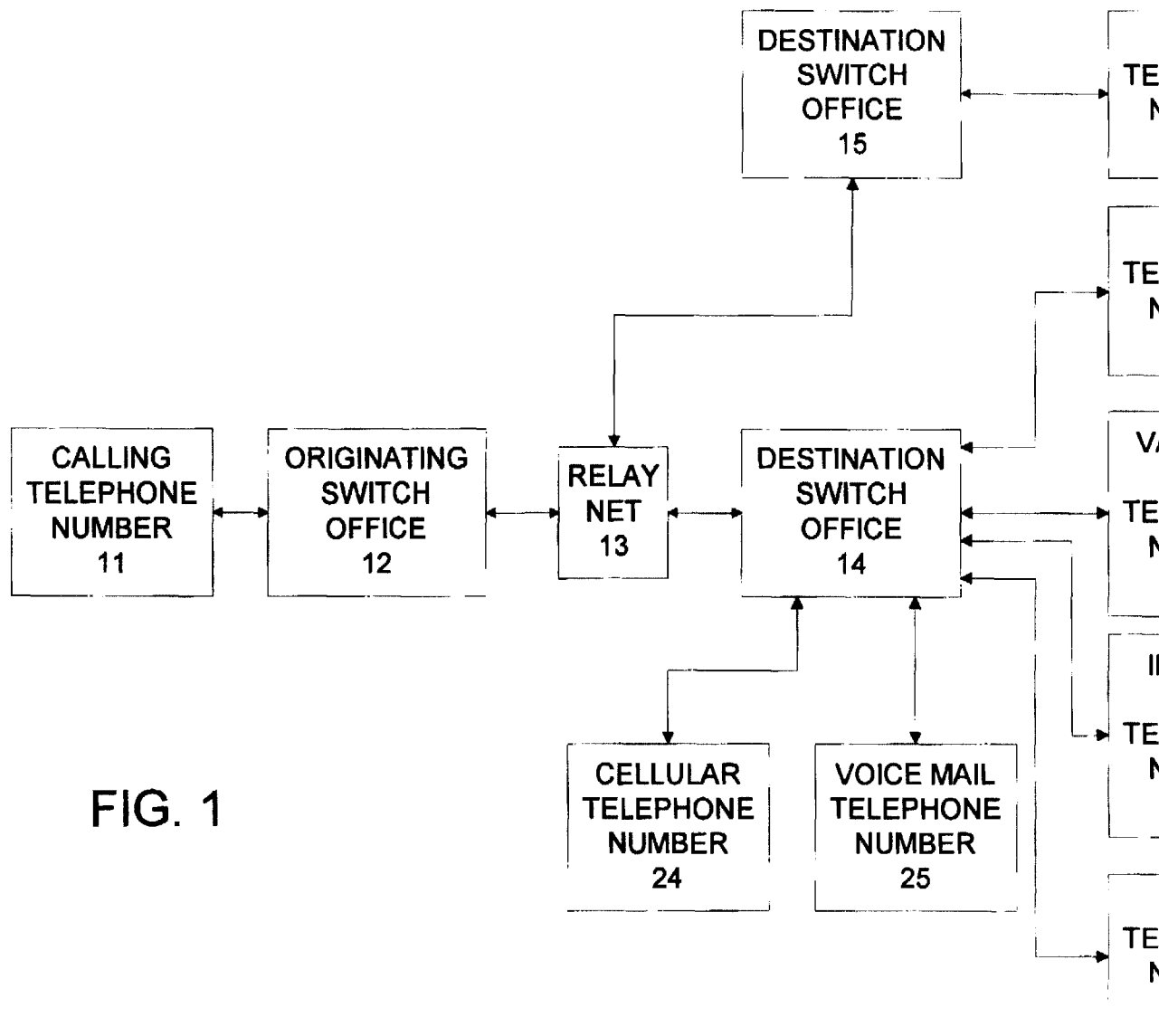


FIG. 1

YMAX CORP

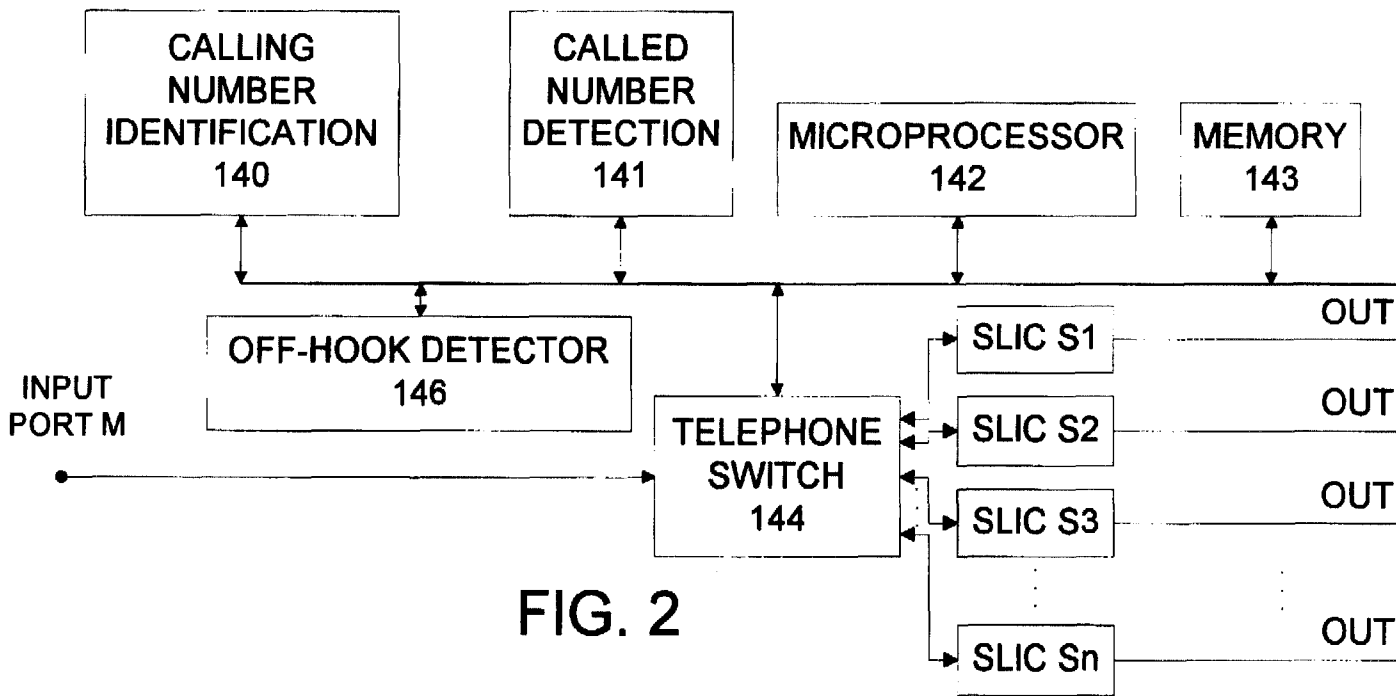


FIG. 2

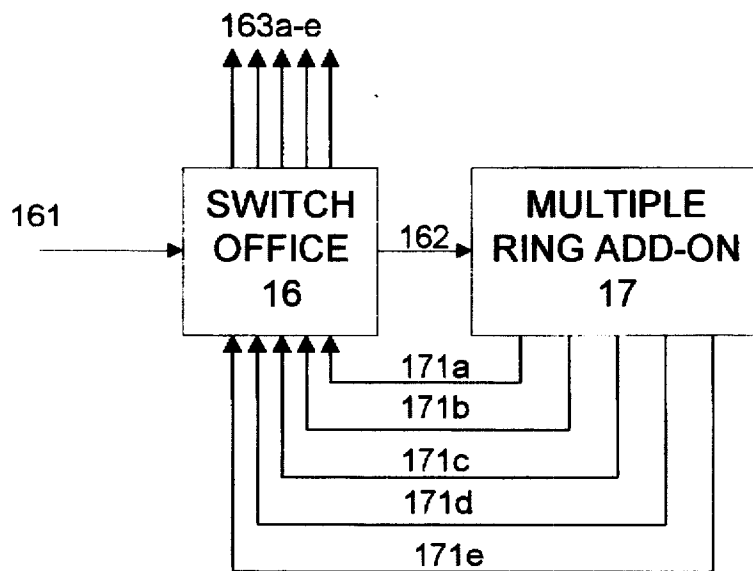


FIG. 2A

| REPRESENTATIVE NUMBER: 800-555-1234 | | SIGNALLING TERMINATION REQUIREMENTS: 1 OFF | | |
|-------------------------------------|-------------------------|--|-----------------------------|-------------------------|
| LIST OF ASSOCIATED NUMBERS | TIME PARAMETERS | ANI PARAMETERS | SIGNALLING DELAY PARAMETERS | VERIFICATION PARAMETERS |
| HOME TEL. NUMBER 20 | 6PM-12AM ONLY | TABLE A (EXCLUDED NOS.) | 5 RINGS ONLY | PIN NO |
| VACATION HOME TEL. NUMBER 21 | 9AM-5PM, M-F ONLY | TABLE A (EXCLUDED NOS.) | 5 RINGS ONLY | PIN NO |
| IN-LAWS' HOME TEL. NUMBER 22 | 6 PM-10 PM, AUGUST ONLY | TABLE B (EXCLUDED NOS.) | START AFTER 6 RINGS | VOICE C |
| BOAT TEL. NUMBER 23 | SAT. & SUN. ONLY | TABLE C (PERMITTED NOS.) | NONE | PIN NO |
| CELLULAR TEL. NUMBER 24 | ALL TIMES | NO EXCLUSIONS | NONE | NON |
| VOICE MAIL TEL. NUMBER 25 | JULY 15 - JULY 28 ONLY | NO EXCLUSIONS | START AFTER 20 RINGS | NON |

FIG. 3

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