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(54) METHODS AND APPARATUS FOR NOTIFYING SUBSCRIBER'S OF FORWARDED CALLS

(75) Inventors: Barry Paul Pershan, Olney, MD (US);
Phil Biedronski, Baltimore, MD (US);
Michael W. McKeehan, Silver Spring,
MD (US); Joseph Mittel West,

Fredericksburg, VA (US)

(73) Assignee: Verizon Network Services Inc.,

Arlington, VA (US)

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(56) References Cited

U.S. PATENT DOCUMENTS

4,646,347 A	*	2/1987	Liu	379/375.01
4,686,701 A	*	8/1987	Ahmad et al	379/221.03
4,768,224 A	*	8/1988	Waldman	379/207.16
4,782,518 A	*	11/1988	Mattley et al	379/207.16

5,583,564 A	*	12/1996	Rao et al 348/14.01
5 701 412 A	*	12/1997	Takeda et al 379/221 09

^{*} cited by examiner

Primary Examiner—Bing Q. Bui (74) Attorney, Agent, or Firm—Leonard C. Suchtya, Esq.; Joel Wall, Esq.; Straub & Pokotylo

(57) ABSTRACT

Methods and apparatus for implementing call forwarding services using AIN techniques and next event list messages are described. Methods of notifying a subscriber of a call forwarded using AIN techniques are also described. In accordance with one feature of the present invention, a subscriber is allowed to set the number of rings which are allowed to occur prior to a call being forwarded. The number of rings, e.g., the ring count, is stored as part of a customer's call processing record (CPR) which is used by a service control point (SCP) to implement the call forwarding service. The ring count information may be updated via the Internet or via a dial-up telephone connection. Call forwarding customers are provided with a distinctive ring, e.g., a ring shorter than an ordinary telephone ring, to notify them when a call is being forwarded. Distinctive rings may be used to distinguish between different forwarding services. For example a different ring may be used for forwarding to voice mail than for selective call forwarding or follow-me call forwarding. The distinctive ring may be implemented by using an SCP to instruct a telephone switch to provide any one of a plurality of different rings which are supported by the telephone switch or by simply causing the subscribers phone to ring for different periods of time which are shorter than a normal ring.

18 Claims, 17 Drawing Sheets

