United States Patent [19]

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[54] METHOD AND APPARATUS FOR GENERATING COMPUTER-CONTROLLED INTERACTIVE VOICE SERVICES

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[51] **Int. Cl.**⁴ **G10L 5/00**; G06F 15/20 [52] **U.S. Cl.** 364/513.5; 364/300

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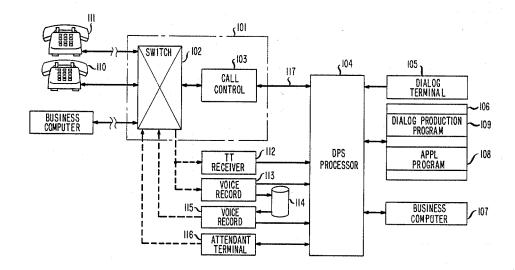
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Primary Examiner—Emanuel S. Kemeny Attorney, Agent, or Firm—John A. Caccuro

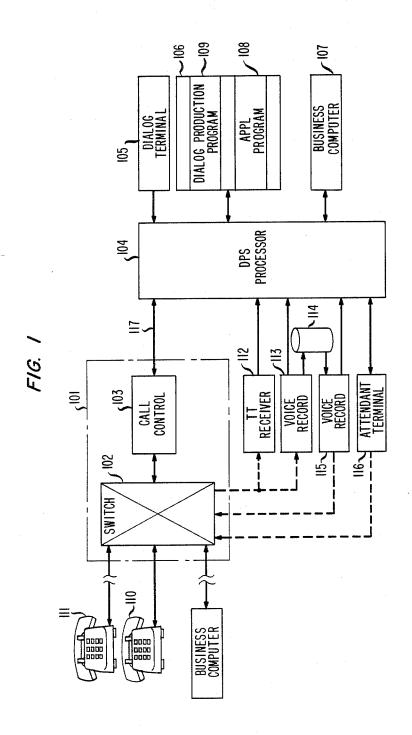
[57] ABSTRACT

A user-application program for computerized telephone ordering is generated by a system designer who selects and interconnects pre-defined program modules and subroutines using a graphics terminal. The application program allows TOUCH-TONE input data and voice response. The present invention describes a Dialog Production System (DPS) for generating application programs for instructing a computer-controlled voice response system to provide computer-controlled voice services. The DPS includes interaction modules, each defining a basic end-user transaction which can be performed by the system, and methods for specifying module interconnection. Each interaction module controls the intercommunications with other modules and controls the devices which interface to the system. To design a dialog program to implement the desired voice service the system designer uses a graphic terminal to select and interconnect the modules to define the sequence of transactions needed to implement the desired voice service.

9 Claims, 24 Drawing Sheets



U.S. Patent



4,785,408

FIG. 2

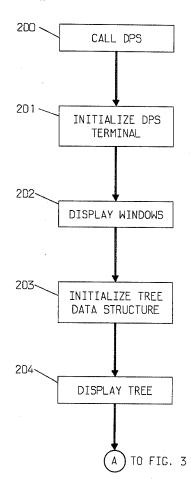


FIG. 3 A)FROM FIG. 2 300 WAIT FOR TERMINAL INPUT 302 301 MODE PROCESS INPUT YES WINDOW FROM MODE WINDOW INPUT FIG. 13 NO 304 303 GLOBAL PROCESS INPUT TO YES WINDOW GLOBAL WINDOW INPUT FIG. 11 NO ,306 305 INSERTION PROCESS INPUT TO YES MINDOM INSERTION WINDOW INPUT FIG. 5 NO ⁄308 307. EDIT-PROCESS INPUT TO YES COMMAND EDIT COMMAND WINDOW MINDOW INPUT FIG. 6 NO FROM FIG. 4 (C)TD FIG. 4 TO FIG. 4 (B)

FIG. 4 D)TO FIG. 3 (C)FROM FIG. 3 FROM FIG. 3(B) 401 400 PROCESS INPUT TO NAVIGATION NAVIGATION WINDOW 1 WINDOW 1 INPUT FIG. 8 NO 403 PROCESS INPUT TO NAVIGATION YES NAVIGATION WINDOW 2 WINDOW 2 INPUT FIG. 10 NO 405 404 FORM PROCESS INPUT TO YES WINDOW FORM WINDOW INPUT FIG. 9 NΟ 407 406 FILE PROCESS INPUT TO YES WINDOW FILE WINDOW INPUT FIG. 12 NO 408 NO END YES EXIT

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