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Personal assistant accessible via a telephone call

ABSTRACT

Techniques of the present disclosure provide a virtual personal assistant to users via a telephone call. The techniques are especially beneficial for users of feature phones, landline phones, shared phones such as pay phones, etc. A user can dial a telephone number for the virtual personal assistant and is recognized by the number they're calling from. The user optionally provides a personal identification number (PIN). Once connected, the user can query the personal assistant for information and receive answers. Initially, when the user asks a question, the virtual personal assistant begins the interaction without having user context. With subsequent interactions, the virtual personal assistant learns the context, when user permits. The personal assistant can provide any type of information and interaction, e.g., language learning, music, banking, etc. The personal assistant can also interact with users via short message service (SMS).

KEYWORDS

interactive assistant; voice assistant; feature phone; telephone call; SMS

BACKGROUND

A virtual assistant is a software agent that can perform tasks or services, and provide information to individual users. Virtual assistants are accessible via messaging applications and voice or text queries. Currently, virtual personal assistants can assist users of devices that have substantial processing power and are connected to the internet, e.g., smartphones, tablets, wearables, PCs, etc.

A substantial number of users that use feature phones, landline phones, and other devices

are unable to utilize virtual personal assistants. Due to this limitation, only a limited population worldwide has access to virtual assistant technology enabled applications. Instead, such users depend on print media, friends, neighbors, etc. to access information.

DESCRIPTION

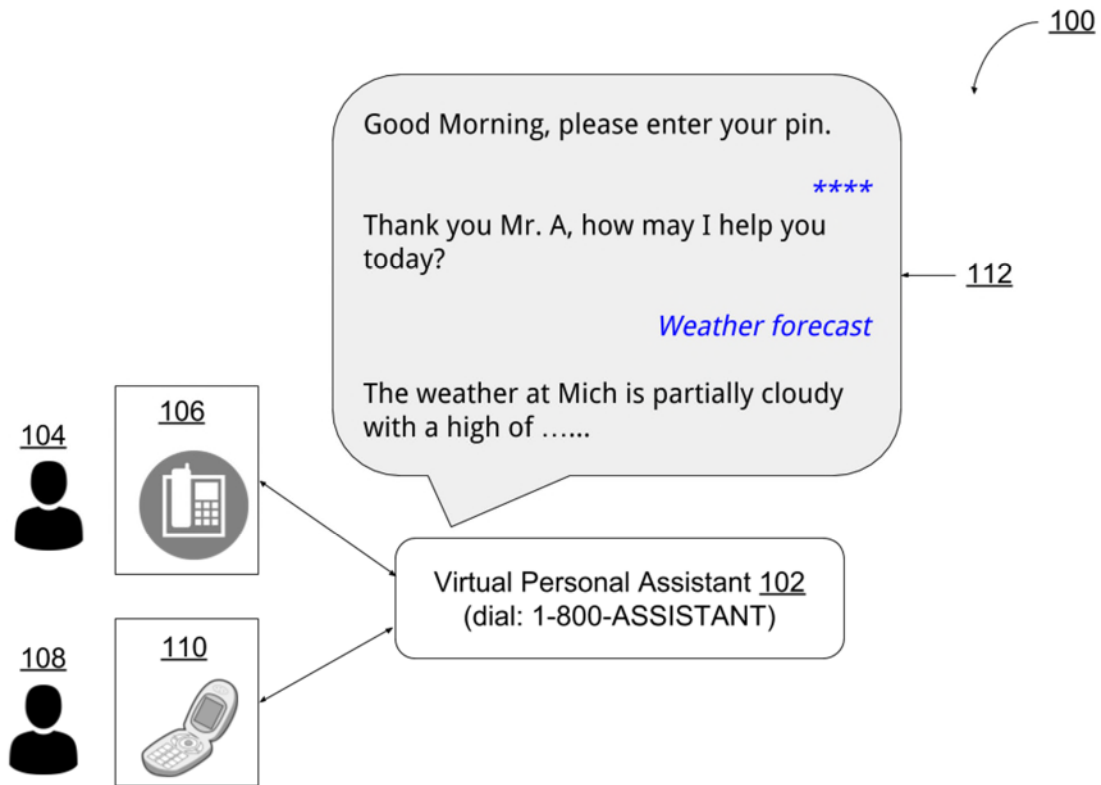


Fig. 1: Accessing a virtual personal assistant through a phone call

Fig. 1 illustrates an example environment 100 in which a virtual personal assistant (102) is accessed via a telephone call and/or SMS. A user (104, 108) can place a telephone call via a landline telephone (106) or a feature phone (110) to a telephone number for the virtual personal assistant, e.g., “1-800-ASSISTANT.” The telephone number can be a toll-free number or a regular phone number.

If the user has called the virtual personal assistant for the first time, the user is asked to set

up an account with the virtual personal assistant. For example, the user is asked to confirm that the calling number is their number, and to set up a Personal Identification Number (PIN). Upon subsequent interactions, as illustrated in the example conversation (112), the virtual personal assistant uses the calling number and the PIN to identify the user that is seeking assistance. In the example shown, the user requests a weather forecast, and the virtual personal assistant provides it via audio on the telephone call. The virtual personal assistant can assist callers with a variety of tasks, similar to assistant applications on smartphones. For example, users can query about the weather of a particular location, place orders, conduct financial transactions, schedule reminders, etc.

At a first interaction with a user, the virtual personal assistant has little or no context of the user. If the user permits the virtual personal assistant to use context data, such data can be utilized to provide assistance. For example, if the user asks about weather, the virtual personal assistant can enquire the user about their location to provide weather information. If the user permits, the virtual personal assistant may store the location for the user. In subsequent interactions, the may not need to provide his location for queries that are associated with location, unless the user needs information about a different location. If the user permits storing and use of context data, the virtual personal assistant can be personalized based on such data.

The virtual personal assistant can provide any type of information and/or assistance, e.g., language learning, music playback, etc. The information and/or assistance can include features built into the virtual personal assistant, or provided by third parties. Further, the virtual personal assistant can also enable users to carry out tasks such as placing orders, conducting financial transactions, scheduling reminders, etc. To provide assistance with financial transactions, the virtual personal assistant can enable users to link identification information, bank accounts, etc.

While the foregoing description refers to providing assistance via a telephone call, the assistance can also be provided via SMS.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein may enable collection of user information (e.g., information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

The present disclosure provides a virtual personal assistant to users via a telephone call and/or SMS. A user dials a toll-free number for the personal assistant and is recognized by the telephone number. The user optionally provides a personal identification number (PIN). Once connected, the user can query the personal assistant for information and receive answers. Initially, when the user asks a question, the virtual personal assistant begins the interaction without having user context. With subsequent interactions, the virtual personal assistant learns the context when the user permits. The personal assistant can provide any type of information and interaction, similar to assistant applications on smartphones, e.g., language learning, music, banking, etc.