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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

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Additional inventors are being named on the _____ 1 _____ separately numbered sheets attached hereto		
TITLE OF THE INVENTION (500 characters max):		
Systems and Processes to Manage Multiple Modes of Communication		
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Date 06/10/05

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(if appropriate)

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Systems and Processes to Manage Multiple Modes of Communication

For many years, other than mails from post offices, we typically only received information from afar through telephones. However, in the past few years, ways that others can send us information have increased significantly. Just to list a few different modes of communication, we can be reached from standard desk phones, fax, cell phones, electronic mails, and instant messages. In addition, we can have more than one phone number and multiple electronic mail addresses. There are people we like to communicate with, and there are those we prefer to avoid. Managing information from all such different modes can be quite time consuming.

One embodiment of the invention can automatically remove unwanted communications. Certain communications are relatively easy to determine to be unwanted, such as marketing cold calls and wrong number calls. Other communications may be more difficult. They can depend not just on the sources of the communication, but also the conditions or status of the receiver (a user) of the communication. The status can be related to the user's current activity and/or location. For example, when the user is on a train going to work, the user probably does not mind chatting with his grandchild. However, if the user is having his yearly review meeting with his boss, the user probably would prefer to avoid the call from his grandchild, unless it is an emergency. Based on the embodiment, communications from sources the user wants to postpone receiving can be automatically diverted.

In one embodiment, the user can get appropriate notification on the source of the incoming communication request. The attributes of the notification can depend on the urgency of the communication and/or the status of the user.

The user may receive information from different modes of communication. For example, the user can have mobile phones, fixed lines at home or office, emails, SMS, and faxes, with their different numbers and/or addresses. One embodiment can help the user efficiently manage information from the different modes. The user only has to remember one specific address from one mode of communication. Through that address, the user can receive communications from all modes of communication, independent of where the user is, or the type of hardware the user has. This allows the user to efficiently

maintain his communication from the numerous modes even when he is traveling. For example, the user does not have to change phones (and the phone numbers) when he moves from areas covering 3G to areas that do not.

A number of embodiments depend on the different modes of communication converging onto the internet protocol platform. A communication gateway or a portal is formed allowing the user to receive communications from numerous sources through different modes. This, in turn, could reduce the numerous addresses the user has to remember, to one address. For example, an e-mail address for the user can serve as an access identifier for the different communication addresses from different communication modes. The access identifier can become the user's digital identity. In one embodiment, the user's other types of identification, such as the user's driver licenser number, can be the user's access identifier.

One embodiment of the invention uses an open portal based on the web. Based on the portal, the user can securely determine who can reach him at what conditions. This can be done based on a status indicator. As an example, this indicator is determined according to the status of the user, the access priorities of the person trying to reach the user (or the relationship or the lack of relationship between the user and the person), and/or the urgency of the message from the person. The status of the user can be dynamically determined, based on the current condition(s) of the user. The portal can allow the user and the person to select different options, which can be modified as desired. For example, the relationship can be preset by the user and stored in a database, while the urgency of the message can be set by the person.

Thus, in one embodiment, the portal can be used to control the selection and setting of different intelligent communication modes for the user. These intelligent communication modes allow priorities of various kinds of communication options to be set by the user. The portal allows worldwide access to the user, and can dynamically determine, for example, whether a call initiated at different time by different callers should be accepted by the user in real-time or handled by other mechanisms. From this information, communication requests can be classified, for example, into different degrees of undesirability. Some requests can be automatically blocked from the user. Others can be diverted and handled by other mechanism, such as diverting a phone call to

an email or voice mail.

In one embodiment, the portal or gateway also includes a database to keep track of the user's different contacts or acquaintances, and the access priorities of each contact. The user can modify information in the database, such as assigning and/or changing the priorities of the contacts. Based on the information (or lack of information) in the database of the contact trying to access the user, and based on the status of the user, the gateway can automatically select an intelligent mode of communication for the user. This selection can be done dynamically.

In one embodiment, the portal can dynamically change the access priorities of a caller trying to reach the user. For example, previously the caller is of high priority to the user, and the user has set her access priorities accordingly. Lately, every time the caller trying to reach the user, the request was denied. After a preset number of rejections, the portal can automatically send a message to the user, asking the user if the user would like to lower the access priority of the caller. If the response is affirmative, the caller's priority is automatically reduced.

In another embodiment, the user does not have to set priorities of each contact. The system monitors every call, and provides the contact's identity to the user. Based on the user's reaction to the call (e.g. accepting or rejecting it), the system automatically sets the contact's priorities. In one embodiment, the system can then query the user for approval on the setting, and allow the user to adjust it as necessary. In another embodiment, the system can continue to modify the caller's priorities based on the user's reaction to the caller's subsequent calls.

In one embodiment, the user could keep information he believes to be sensitive local in a different database. Such information can be stored securely under the user's direct control. The portal can retrieve information from the different database when required. In another embodiment, the user can restrict or limit such retrieval process.

Additional confidentiality can be provided. In one embodiment, using phone calls as an example, the user can be aware of the identity of the caller even without being informed of the number of the caller. Similarly, the caller can reach the user without being aware of the number of the phone the user is using to receive the call. The user can keep his location and/or status confidential but still can receive the communication. This

can be useful because there are situations, for example, when the user does not want to disclose his contact information but the user needs to receive services provided by the caller.

One approach to maintain such confidentiality while maintaining real-time communication is based on a system that digitally identifies the identities of the caller and the receiver. Note that the term caller is used in general. It is not just limited to phone calls, but they can be any person or entity requesting to communicate with the user, such as trying to send a message to the user. As a separate note, the caller can also be a user of different embodiments of the invention.

After determining the identities, the system can establish connections between the caller and the user in real time. Though contacts are established, the system only needs to ensure the identities of the caller and the user to each other. However, the system does not have to disclose the phone numbers, electronic addresses, physical locations and/or other attributes of the caller and the user to each other. In one embodiment, real time implies that the time required for the identification is similar to the typical time required to set up, for example, a telephone call. The system can be a portal based on the web.

In one embodiment, a portal also holds the user's electronic calendar. The calendar can be programmable, with entries set by the user. The portal can automatically and securely set appointments for the user since the portal knows the identity of the caller, and the status and schedule of the user. For example, the appointment can be for a conference call.

To illustrate, in one embodiment, a portal provides the following fourteen intelligent communication modes (ICM) for the user to select. There are three columns in the table. If the communication mode selected in the second column does not work, the portal automatically defaults to the corresponding approach in the third column. For example, under ICM 1, if the mobile phone is busy, default to voice mail. Some of the selections do not have any default because it may not be necessary to default. For example, under ICM 8, the incoming message goes directly to voice mail with instant notification to mobile devices of the user. The incoming message can usually go to voice mail. There is no need to default.

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