VoIP based Advanced Messaging Server

The Advanced Messaging Server (AMS) is designed to allow simultaneous delivery of voice and text messages to tens of thousands of people, within minutes, by simply making one phone call. Once triggered, the system instantaneously launches a barrage of voice and text messages to all available devices belonging to a recipient - home phone - cell phone - work phone - pager - email - wireless PDA etc. It can repeat the message until the intended party acknowledges its receipt. This capability can be used by variety of organizations for quick dissemination of emergency and non-emergency related information to thousands of people. Also, the product's built-in emergency dial-out *conferencing capability* allows an organization's response team to get on an audio conference quickly while the mass notification messages are being sent.

This solution is a cost effective compared to T1/E1 based systems as all messaging – voice calls and text messages are sent over the Internet, *thereby avoiding a monthly recurring T1/E1 line charge.*

SAMPLE USES

Homeland Security Alerts: A city manager in conjunction with Dept. of Homeland Security, can notify general public located in a certain geographical area about an act of 'terrorism' or a natural disaster (e.g., mass evacuations due to flooding).

Media Alerts: Governor's office can contact all relevant media outlets (TV stations, Radio stations, etc.) at the same time and provide them with the same briefing.

Late Payment Reminder: A phone company can contact all subscribers who did not pay their last month's bill and find out if the payment is in the mail.

Parent Teacher Meeting: A school principal can send a message to student's homes notifying parents about the upcoming PTA meeting and request confirmation of their attendance.

In its purest sense, the AMS is a flexible, high-speed, multi-mode, messaging system that can be leveraged for mass emergency and non-emergency communications over the Internet.

FEATURES

Scalable capacity: The AMS can interface directly with VoIP based SIP trunk from a VoIP carrier. A single chassis can be equipped to send up to 240 messages simultaneously. Multiple chassis can be daisy chained for higher capacity.

Web Portal: The AMS's secure web based user interface can be accessed from anywhere via the Internet. Multiple system users can set up their own call out groups, pre-record routine messages and schedule various message delivery sessions.

Flexible Database: The AMS provides multiple ways for entering recipient's contact information into its large database. The information can be entered manually or by uploading files in CSV format. Potential recipients can be added in an ad-hoc fashion when setting up a message delivery event.

Easy Message Creation

Stored, Predefined Messages: A user can record a voice message by simply dialing into the system and then responding to a few IVR commands. Links to the recorded messages are then displayed in the user's own account area on the system. The user can listen to and if needed re-record the messages. Through the web interface, the user can also upload audio files.

Instantaneous Message Creation: Since it is not possible to predefine messages for every kind of emergency situation, the system allows instantaneous creation of the alert message, at the time the alert is to be sent. The IVR system will prompt the user to record the notification message as part of the triggering process.

Text to Speech based message creation: The AMS supports Text to Speech conversion capability. This capability is used for message creation in following two ways: a) a user can type the message on the user interface as part of setting up a messaging event or b) a user can send an email to the system with specifics of the message that needs to be delivered. The system will convert the associated text to speech and deliver the resulting voice message to the intended recipients.

Runtime Processing Features

Multiple trigger options: After a user has set up various parameters associated with one or more messaging sessions, he/she can trigger the dial-out process a) via the web based user interface or b) by making a phone call to the system or c) via an external trigger such as a relay closure. The latter case also allows the AMS to interface with external alarm sub-systems that may be already installed on customer premises.

Built in Find-me capability: The AMS provides built-in 'Find-me' capability. Each person to be contacted may have multiple phone numbers defined – The system will hunt through these numbers to find the person to be contacted. For example, it may ring a cell phone number first, and if unavailable, then the work number etc. This assures that the intended party receives a message without clogging the network with unnecessary repetitive phone calls.

Real time status reporting: The AMS provides real time view of the messaging session. Users can see status of each call as it is being made and also see the overall status of the entire messaging session. The system provides a graphical view of the percentage of call completions.

Real time call session management: The AMS provides web-based controls for managing the call session in real time.

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With a few mouse clicks a user can at any point stop and then re-start a messaging session.

Message Delivery Filters: The following filters can be used to control the delivery process:

Number of Ports: The system allows provisioning of the number of ports to be used per messaging session. This allows one to control the speed at which messages will be sent out. A larger number of ports can be assigned to higher priority or larger volume calls.

Recurring Calls: For messages that need to be sent out periodically, the system provides the flexibility of setting up message delivery sessions on, hourly, daily, weekly or monthly basis.

Number of message repetitions: The system allows the flexibility of repeating the message a number of times with in the same call.

Restrict delivery based on NPA, NXX and XXXX. The system allows the capability to restrict delivery of messages based on Area Codes, Central Office Switch Codes or the 4 digit Station Codes. This can be used to send messages only to certain geographical areas. This capability can be further augmented by interfacing with an external Geographical Information Systems (GIS) database that can provide NPA, NXX, XXXX information for fine-tuning the message delivery to a certain area.

Message delivery with feedback (voting): The system allows provisioning of feedback based on DTMF digits. A message recipient can indicate his/her preference by pressing DTMF digits. For example, after hearing the announcement, the recipient may be asked to press '1' if he/she will attend a meeting, or '2' if not. The system automatically tallies all the digits and summarizes the results and posts them in the user's account.

Caller ID Insertion: The AMS allows a user specific caller ID to be sent along with the outgoing voice message. This helps recipients in distinguishing emergency calls from the non-emergency calls

Answering Machine Support: The AMS uses sophisticated algorithms to detect answering machines. The system will wait for the answering machine to stop, and then deposit the message. For voting type alerts, the system will wait for votes from human contacts (and will not be incorrectly delayed by answering machines).

Group Notification Session Report: The AMS provides a detailed report to the user. The report contains information about each individual recipient's message delivery attempt. It indicates the number at which a recipient received the message. If the message could not be delivered, then the reason is shown. If feedback codes were used, then each recipient and response code is shown.

Call Activity Report: The AMS automatically creates a call activity report that captures all the call processing events associated with the messaging session as the calls are dialed out. This report is then posted in the user's account for future reference.

Voice Quality: The AMSs use state-of-the-art hardware with extensive Digital Signal Processing based algorithms that result in crystal clear audio quality.

Back up and restore: A system administrator can create back ups of the critical files and the Database either on demand or on a scheduled basis. The system administrator can restore the system to factory default state if needed. The backup files are kept on the system's hard drives and can also be exported/imported to an administrator's PC's hard drive.

High availability architecture: The AMS supports a high availability architecture thereby guaranteeing 99.9% uptime. For even higher availability, redundant AMSs can be deployed in hot and standby configurations. In case of redundant servers, the database from the master is automatically replicated to the slave server.

Remote Management Access: A separate management interface is available that can be accessed over the Internet for routine performance checks on the system.

Automatic Health and Usage reports: The system, if enabled, will send automatic reports to the system administrator on periodic basis. The reports provide valuable data about the overall health of the system and system usage in the period specified.

Security Features: Following features are provided to keep AMS secure.

Built-in Firewall: Using the built in firewall, the system administrator can restrict remote access to the system only from designated IP addresses. Only ports necessary for the operation of the product are open to the external network.

Secure Login: User names and Password and other important web pages are accessible only through HTTPS port.

OS Patches: Installation of security patches and updates to the operating system are provided as part of the support and maintenance package.

AMS Servers:

Port Configurations:

Servers with VoIP SIP trunk interface: AMS-24, 30, 48, 60, 96, 120, 144, 192, and 240

Voice Transport:

Encoding formats: G.711, G.729, G.723
DTMF Relay: Inband DTMF, RFC 2833 and SIP INFO

100baseT Ethernet
GigE Ethernet

Data transport:

100baseT Ethernet

Industrial grade server:

1U standard 19" rack mountable industrial grade chassis
SATA RAID 1 Mirrored Disks
Optional 110 V and –48 V redundant power supplies

Hardware Warranty: One Year included

Software Maintenance: Basic and Advanced packages

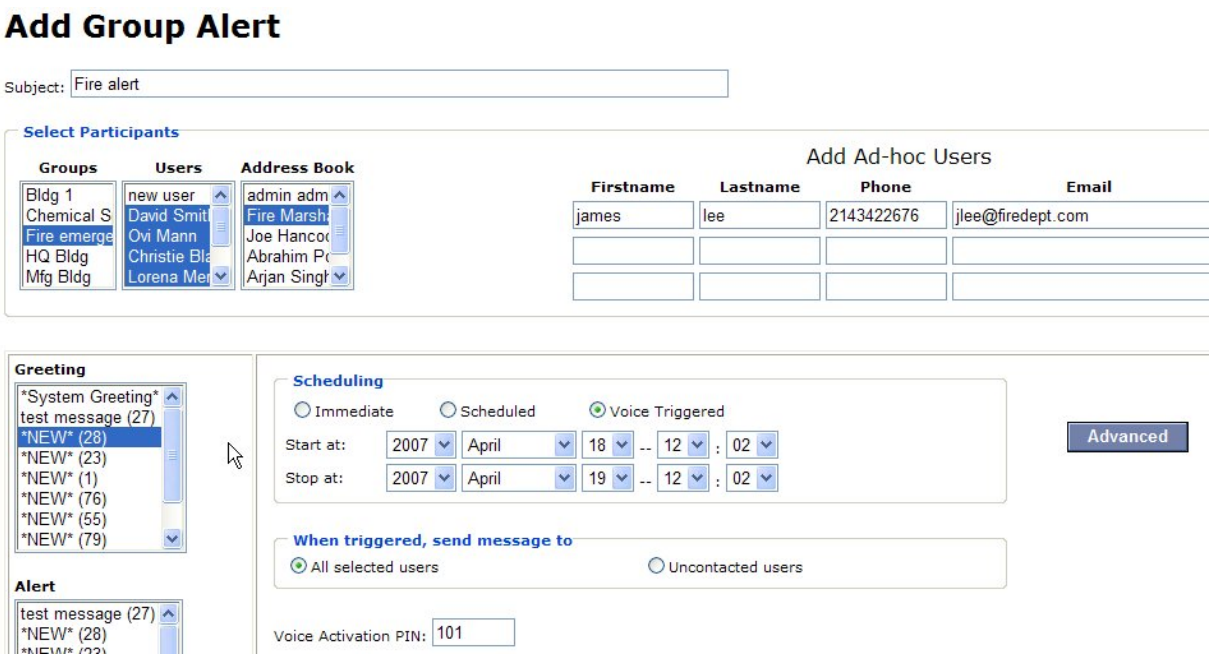

Figure 1: The Group Set-up Page

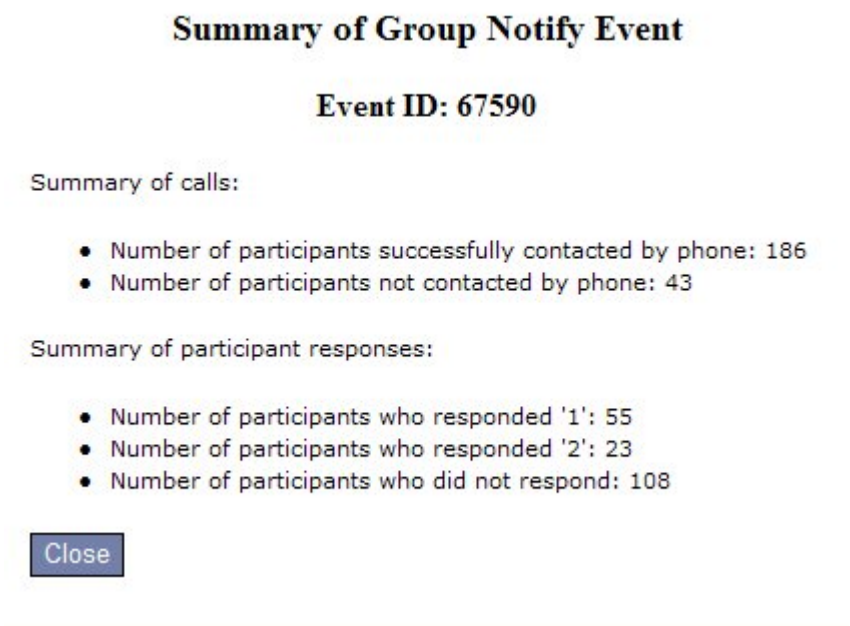

Figure 2: Group Notification Event Summary

Please visit our web site for additional product literature

www.conference-bridge.net

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