

Memorandum

To Fred Tarter
Jon Spencer

Fr Harold House

Date December 27, 2004

Re: Pay Phone Email Access

1. We have been examining the potential for presenting audio email solutions to the Military so that members of the armed services can send voice emails back via a local connection ... thus sending "human voice" messages that can be shared and passed, reducing phone costs that preclude a certain number of soldiers from phone conversations, reducing or eliminating message congestion caused by time zone differences, etc.

The investigation has applicability to the opportunity Fred described in our December 13 meeting.

2. The sending issues are fairly straightforward. However, with the increase in "spam guards" and "junk mail filters" particularly set to catch email that originates from a suspect, "bogus" or non-existent domain, the first step is the establishment of a legitimate originating mailbox that rests in a recognizable domain.
3. Fred's company was described as having 78,000+ payphones and numerous ISP components. With a "payphone" environment base, a probably Hispanic pool for new members and with a probably low index for "charge" cards to establish credit accounts, we have long felt that email phone cards were a logical entry method.
 - a. The population is familiar with phone card setups
 - b. The "membership fee" can be cash payment and replenished in bulk
 - c. Cards can be distributed to locally convenient to area codes, local ISPs, etc., to maximize profitability in local access costs. Surcharges can exist for "roaming" so to defray costs of out of ISP bases. (ISPs are often non-integrated but can be set to be a gateway to this pool of users. The domain address is borrowed from the local ISP and is utilized as the source from the "audio-email" membership. Transactional costs and charges are then sourced to the initiating ISP).
4. Signup would establish a listed mailbox suitable for email reception with or without spam filters. Voice initiated sign-ins and passwords or phone typed in

- sign-ins (numeric sequences could be drawn from the email-card and/or a address name and password) so a duel sign-in would be available.
5. There would be, we think, an advantage to a published directory as this system would appeal to a number of persons who may change addresses fairly often. This directory could be updated and available on line to non-members who may wish to initiate contact.
 6. Normal emails come into the mailbox and are computer read to the member. They can be replied to and it would be optional if they were translated into text or just sent as an audio file.
 7. Outgoing emails are simply composed via voice as part of the standard system.
 8. One major advantage of having 78,000 payphones is the ability to put the message out to payphone users. There is a natural and easy form of advertising/marketing that can transpire. Further, without too much of a leap of faith, there would be a number of phones that are located at retail stores where the email card could be obtained.

Implementation:

This is a very easy tool to set up. We consider approximately 12 weeks from beginning to end to provide "black box" software that would be able to handle the entire interface. We cannot estimate ISP integration times or telephony provider integration but we can provide an "off site" set up that would work something like as follows:

Our telephony server will be connected to digital voice T1 lines to handle inbound call traffic over TDM. The circuits would be configured with 24 channels per trunk, E&M wink, with 4 digit DNIS and full ANI. When a call comes in, the telephony server would answer, play a prompt asking the user to identify him/herself, and then expect DTMF digits for validation. Once validated, the system would prompt the user with a menu of options, including listening to email messages and sending an email message. The interface to any email system is done via HTTP GET's to our application server, which would broker connections to a database of accounts (for validation) and control the business logic of the call flow. It is the app server that logs in to the email server, retrieves the messages, and formats them into a finite state machine for the phone server to interpret. In this way, the system is fault-tolerant and able to be load-balanced among several different identical telephony and app servers.

The app server would need access to the email servers of expected users in the same way Outlook would - so if you require SMTP authentication, we would send it. Similarly, if you only allow access from a restricted firewall zone, we would need a VPN or pinhole to that zone on port 25 and 110 if we're talking SMTP and POP3. This component is customizable and will be adjusted to fit your needs upon implementation.