

Message Sequence in Audio-Text-Emails

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Getting Started - 1

Telephone or
PC Microphone
Via 800 number or
thru URL linked access



Using portions of the Websphere the user is brought into a CRM style environment and sequence. If you dial 1-877-ibm-name you can see how this simple system works.

We will enhance this by adding the voice to text feature that allows for the dictation of an email address and the main body of the messages via ScanSoft Dragon Technology.

- Support for the latest VoiceXML 2.0 language specification—reinforcing the IBM strategy to promote and drive open standards and support interoperability with other products that adopt the same open standards. The strategy allows you to preserve and extend your current investment in voice server technology so that you can adapt it to WVAA. Not only will this allow you to leverage your capital investment, but it will also allow you to leverage your investments in voice application development, tooling, and knowledge base around what you already have in place.
- A sample "Reminder" portlet is included, based on the HTML Reminder portlet included in WebSphere Portal V5. It is intended to show how Web-based applications can be designed and converted to voice applications.
- The ability for users to select their preferred language, including U.S. English, U.K. English, German, and French.
- Additional language support for WVAA base runtime components, configuration/administration, selected documentation, and one voice portlet. Language support allows system administrators and users to pick a voice portal language. During system setup and install of WVAA V5, a default language is selected by the system administrator; however, each individual user has the option of personalizing this language option by selecting the language they want to use when connecting to their voice portal.

Getting into the system - 1

Developing a well scripted Customer Relationship Management hierarchy of prompts is easy as the composition of an email and the access to email sequences are universal.

After sign-in, the prompt gives you two basic decisions:

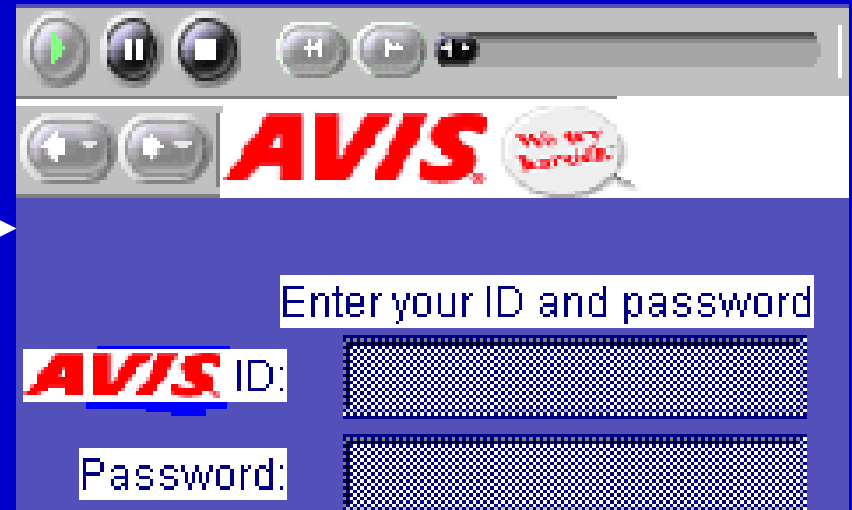
1. Check your email
2. Compose a message



The user simply says “check mail” or “compose mail”. Check mail has the “reply to mail” feature which is essentially “compose”.

Outgoing Messages - 1

Telephone or
PC Microphone
Via 800 number or
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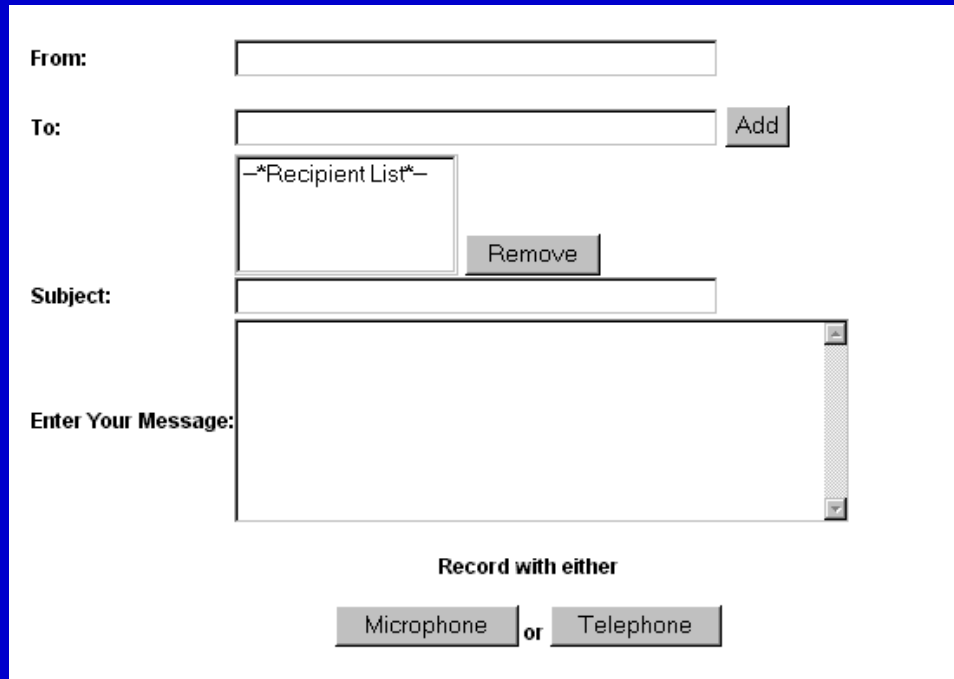


The system must identify you in some way and the norm is by screen name (which we believe should be your normal email address) and a password that is dedicated to this system and the user establishes as an entry link to his own mailbox without divulging except in an encrypted way, his own mailbox password.

You are voice prompted to enter your ID and password.

Outgoing messages – 2a

Byobroadcast's audio email message format looks like this and it can be replicated in a “voice only” atmosphere:



The image shows a web form for sending an outgoing message. It includes the following elements:

- From:** A text input field.
- To:** A text input field with an **Add** button to its right.
- Recipient List:** A box containing the text `-*Recipient List*-` and a **Remove** button.
- Subject:** A text input field.
- Enter Your Message:** A large text area for the message content.
- Recording Options:** A section titled **Record with either** containing **Microphone** and **Telephone** buttons separated by the word **or**.

From: by logging in or identifying yourself in a username/password, line 1 should self fill

Line 2 “TO:” can be selected from a mailbox list (using IBM example) or dictated:

J o h n s m i t h @ (a t) y a h o o . (d o t) c o m
(prompt “add to address book”) then the prompt: “add additional recipients?”

Subject: given in audio and sent to “voice to text” for text rendition

Message: given in audio and sent to “voice to text” for text rendition

Outgoing messages – 2b

This is a sample of a message packet that is outgoing



From: hdh@opusonemedia.com

To: hdhouse@yahoo.com

-*Recipient List*-

Subject: slogan

Enter Your Message:

now is the time for all good men to
come to the aide of their party.

The audio components in the email message are placed into text and bundled along with the “audio packet” file.

This is a critical step as it accomplishes two purposes:

1. It permits a foundation for text to text translation and the basis for text to voice realization, and
2. **Not all recipients are voice enabled or are at a location to receive audio messages.**

Outgoing messages - 3

The start and “send” of the message are linked to the message log and to the billing cycle.



From: hdh@opusonemedia.com

To: hdhouse@yahoo.com

-*Recipient List*-

Subject: slogan

Enter Your Message: now is the time for all good men to come to the aide of their party.

The packet is identified by sequential number created when the log in is established. Billing commences on the \$/minute basis.

Message completion (send) is noted and when the message is opened and read is also noted. The “opened and read” function should be available to the user.

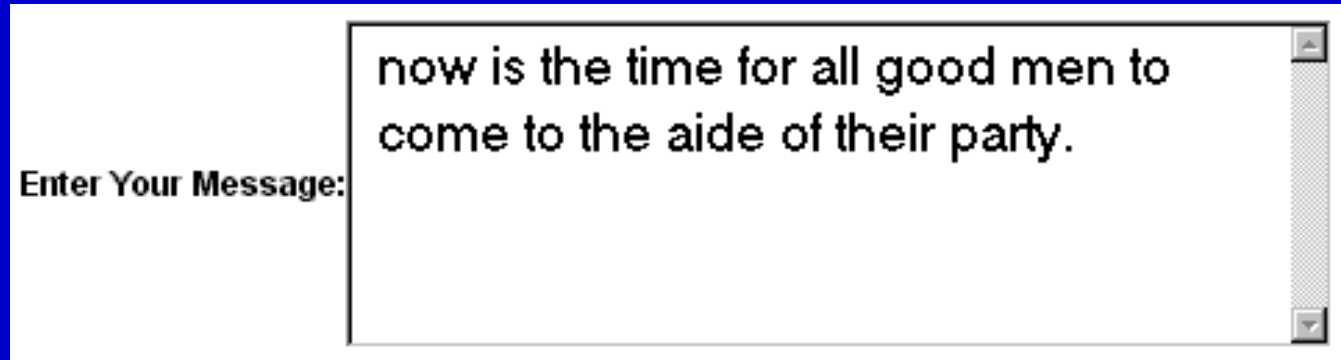
A feature would be auto-contact/confirm when the message is hear or read.

Outgoing messages - 4

The voice-to-text text box runs in background as well. It is washed through the translation service. 23 languages are available

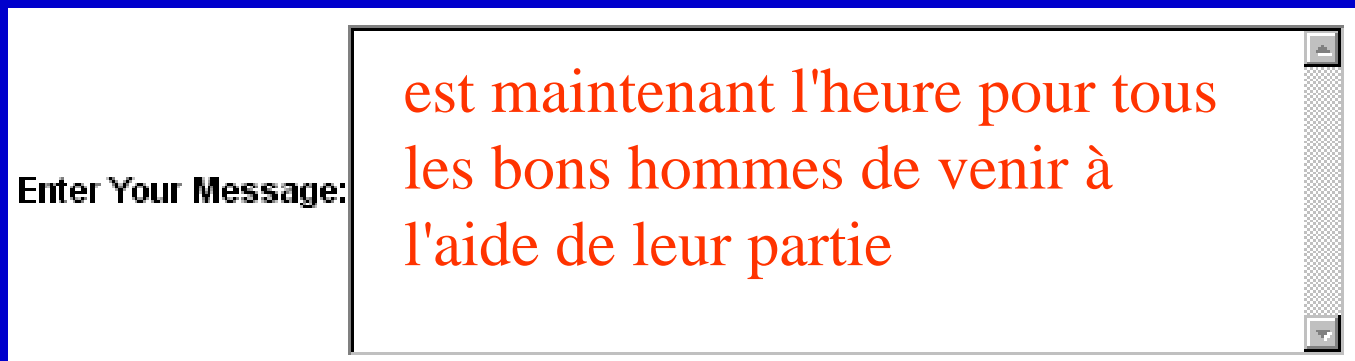
Enter Your Message:

now is the time for all good men to
come to the aide of their party.

A screenshot of a text input field with a white background and a black border. On the left side, the text "Enter Your Message:" is displayed in a bold, black, sans-serif font. The main area of the field contains the English text "now is the time for all good men to come to the aide of their party." in a black, sans-serif font. On the right side of the field, there is a vertical scrollbar with a grey track and a white slider.

Enter Your Message:

est maintenant l'heure pour tous
les bons hommes de venir à
l'aide de leur partie

A screenshot of a text input field with a white background and a black border. On the left side, the text "Enter Your Message:" is displayed in a bold, black, sans-serif font. The main area of the field contains the French text "est maintenant l'heure pour tous les bons hommes de venir à l'aide de leur partie" in a red, sans-serif font. On the right side of the field, there is a vertical scrollbar with a grey track and a white slider.

Outgoing messages - 5

A “real life” demonstration of this translation technology is viewable at:

<http://dictionary.reference.com/translate/text.html>. Please note that Scansoft products offer degrees of this technology as part of their main product offering.

In English:

now is the time for all good men to come to the aide of their party

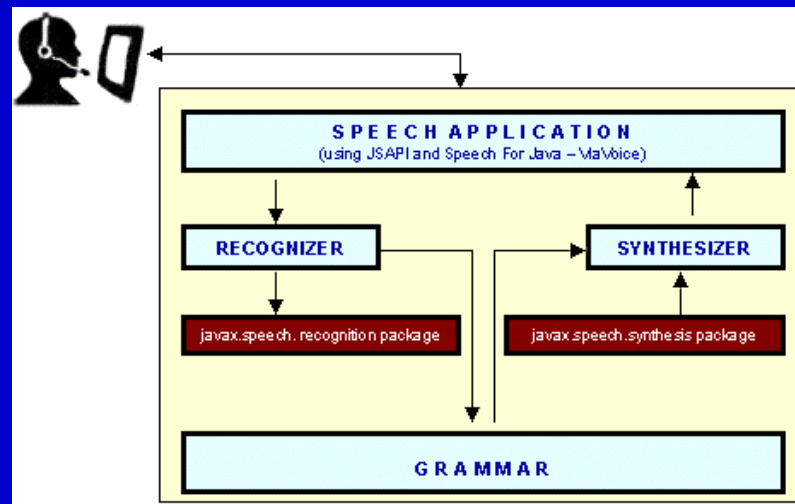
In German:

ist jetzt die Zeit für alle guten Männer, zum Adjutanten ihres Beteiligten zu kommen

Outgoing messages - 6

If the translation is completed in “text” it is then a simple issue to have the “text” read to the recipient as the “text to voice” computer voice is superb. <http://www-106.ibm.com/developerworks/ibm/library/i-voice/>

Figure 1. Workings of a speech application



Another very important aspect of speech application is *grammar*. A grammar is an object in the JSAPI that controls the recognition process by telling the speaker what words they're expected to say and the patterns in which these words may occur. The biggest advantage of a grammar file is that it makes the recognition faster and more accurate. A sample grammar file is below.

Sample grammar file
grammar javax.speech.demo; public <sentence> = Welcome | Hello | IBM | ViaVoice | Java | Good Job | Thank you very much | GoodBye;

You can add more words or sentences to the grammar file. Note that each word or sentence is separated by the "|" character.

Outgoing messages - 7

Outgoing summary:

Byobroadcast – audio to internet technology utilized in their audioemail application is the skeleton on which various components of the Websphere CRM tools and the IBM Java Speech API are hung.

Using purely voice commands and logical question – response structures including adherence to a well tested and refined set of logical interactions, our goal is to permit the addressing and composing of a 150 word email that can arrive in a number of languages and texts with a single message elapsed time (without correction and assuming normal speech rates) of 1 minute.

Incoming Messages - 2

By selecting the “check mail” function, the user is started in the sequence to connect to his “inbox”. If he has signed in previously, he will be asked again for his password (security)



Incoming Messages - 3

This prompt opens your mailbox. The “title areas”

Sender and Subject are easily read through the technology.


The user is then prompted to say:

Next message, read message, reply to message, end

<input type="checkbox"/>	 Herbert Strauss	Re: can you give me a fax to send you our current summary or do you prefer email...	Fri 07/09	6k
<input type="checkbox"/>	 michael.caron@cendant.com	Harold House (OpusOne) will be calling in	Fri 07/09	2k
<input type="checkbox"/>	 Diane.Matthews@cendant.com	RE: Please see revised notes to the low end spreadsheet (attached)	Thu 07/08	9k
<input type="checkbox"/>	 IBM PartnerWorld for Developers	Notice - IBM Evaluation Software Center is now available	Thu 07/08	5k
<input type="checkbox"/>	IBM developerWorks Live	Confirmation: IBM dW Live Technical Briefing in New York City on July 13, 2004	Thu 07/08	4k
<input type="checkbox"/>	audioemail@byobroadcast.com	New audio email message	Wed 07/07	6k





Incoming Messages - 4

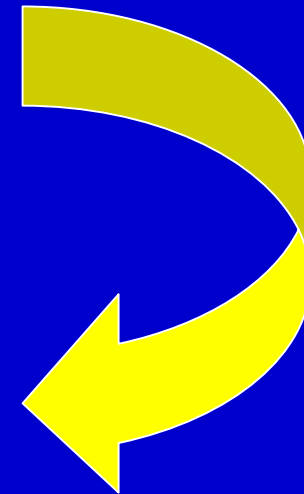
As the first item in the box is announced by sender and subject you may say **NEXT MESSAGE**, which ends that line and moves you to the following message. The system will also accept “**next**” and “**skip**”

<input type="checkbox"/>	 Herbert Strauss	Re: can you give me a fax to send you our current summary or do you prefer email...	Fri 07/09	6k
<input type="checkbox"/>	 michael.caron@cendant.com	Harold House (OpusOne) will be calling in	Fri 07/09	2k
<input type="checkbox"/>	 Diane.Matthews@cendant.com	RE: Please see revised notes to the low end spreadsheet (attached)	Thu 07/08	9k
<input type="checkbox"/>	 IBM PartnerWorld for Developers	Notice - IBM Evaluation Software Center is now available	Thu 07/08	5k
<input type="checkbox"/>	IBM developerWorks Live	Confirmation: IBM dW Live Technical Briefing in New York City on July 13, 2004	Thu 07/08	4k
<input type="checkbox"/>	audioemail@byobroadcast.com	New audio email message	Wed 07/07	6k

Incoming Messages - 3

If you wish to “hear” a message you say “**read message**”.
IBM text to voice technology merely scan reads the content.

<input type="checkbox"/>	 Herbert Strauss	Re: can you give me a fax to send you our current summary or do you prefer email...	Fri 07/09	6k
<input type="checkbox"/>	 michael.caron@cendant.com	Harold House (OpusOne) will be calling in	Fri 07/09	2k
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<input type="checkbox"/>	audioemail@byobroadcast.com	New audio email message	Wed 07/07	6k



From: michael.caron@cendant.com

To: hdh@opusonemedia.com

Subject: Harold House (OpusOne) will be calling in

Date: Fri, 9 Jul 2004 13:26:34 -0400

When: Tuesday, July 13, 2004 9:30 AM Where: Your office 973.496.3442

Incoming Messages - 5

At any time during the reading of the message you may say:

Next message, reply to message, or end.

REPLY TO MESSAGE is a voice over-ride command that simply reverses the “to and from” boxes and you simply compose your “response” in an audio message as if you were sending a new message. The outgoing “reply” is treated then as if it were a newly composed message.

From: hdh@opusonemedia.com

To: michael.caron@cendant.com

Subject: Harold House (OpusOne) will be calling in

Message: your audio message

Incoming Messages - 6

If **end** is selected, then you will be asked if you want to:

1. Close the Inbox
2. Compose an Email
3. End the Session

You have signed out of the Network. Your time of use was 8 minutes. You sent 6 messages and read 5 messages in your mailbox.



Add on's Primary

Much is made of the ability to send text messages (stock reports, weather, breaking news, etc.) to your “hand-held” device or to your cellular phone.

With this technology, it is possible to forward any message directly to your device and if it is “voice originated” change it to text for display. More common, however, if it is text originated, it can be “changed to speech” and read to you “over your phone”.

We believe it is counter-intuitive to utilize a telephone as a text displaying screen. A phone is a phone and its primary tool is voice transmission.

It is possible, therefore, to use a phone to access webpages and have the contents “read” to you.

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