SmartMsg Text to Speech Module

Version 5.2

SmartMsg

Complete Communications Interoperability

Additional SmartMsg documentation is available through the Codespear website.
http://www.codespear.com/helpcentral.asp

Codespear is committed to providing documentation that provides full understanding of SmartMsg software. We encourage comments on any of the above documentation. This may include pointing out features that require further explanation, ambiguity in any language, inconsistencies in information or misinformation.
Send e-mails regarding any of the above-mentioned problems or any other grievances regarding any documentation to:

SmartMsgdocumentation@Codespear.com

Codespear appreciates all comments regarding any issues in order to ensure the accuracy, consistency and simplicity of all of our documentation.

Please note: This e-mail address is for comments only. If you have technical questions please contact Technical Support by visiting our website.

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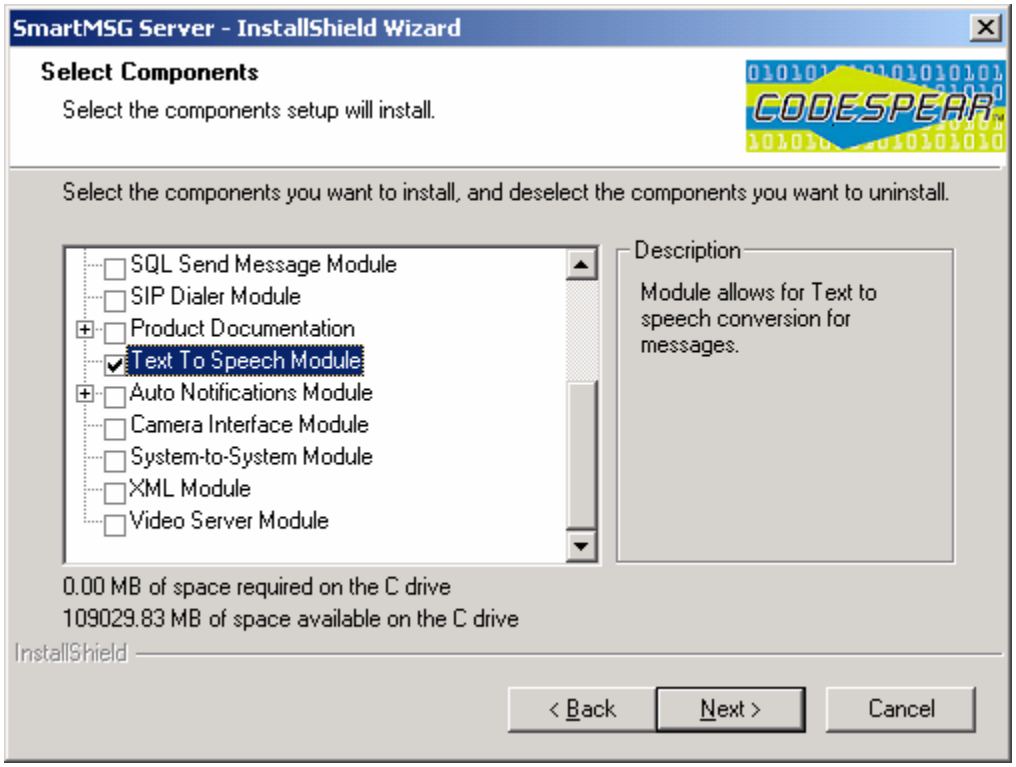
Overview

Text to Speech functionality allows for converting text data (which would normally only be viewed) into audio communication (which can be heard). This allows communication originated as text to reach not only text-based devices such as computer screens, cellular text messages, and PDAs, but also audio capable devices such as 2-way radios, landline phones, and PA systems. In addition, devices capable of both text and audio (like a computer with speakers) can receive the communication in both forms (audio and visual). For example, an incoming SmartMsg alert can appear on the screen in text for the user to see, while simultaneously playing that same message over the computer's speakers.

This functionality further expands the primary focus of SmartMsg – complete communications interoperability. A single message can be created that can be received across all device types simultaneously where some devices may receive the message in a visual format, some in an audio format, and some in both formats simultaneously. The Text To Speech feature of the software also adds to another important principle of the system – the ability to reach anyone, anywhere, on any device as alerts are not limited to devices and situations in which recipients can read a message. Text To Speech functionality also encompasses real-time communication within SmartMsg chat. A user in a chat session at a computer may receive the communication visually (in the chat window) and audibly (over the computer speakers). Text typed into a chat session may be converted to speech for users on speech capable devices.

The standard Text to Speech Module, provided with SmartMsg software, works on top of Microsoft's Speech Application Programming Interface (SAPI). Additional Text to Speech voices are available. For more information on these voices, contact the Codespear Sales Team.

Installing the Text to Speech Module



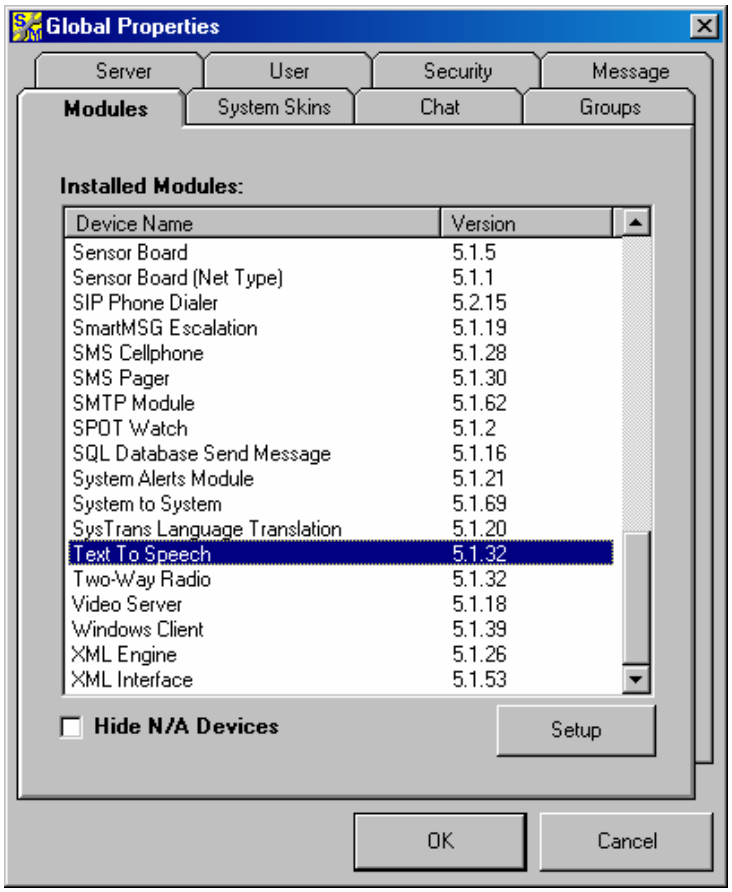
The Text to Speech module can be installed during the initial installation of SmartMsg Server or can be added at a later time. The Text To Speech Module is an optional Module that can be checked/unchecked during server installation.

To add the module after SmartMsg Server has already been installed:

> Click Start→ Settings→ Control Panel → Add/Remove Programs → SmartMsg Server→ Change/Remove → Modify.
> Check the box to select the Text to Speech Module.
> ***Important Note:*** *Do not uncheck other installed options unless you want to uninstall those options.*

During installation of the SmartMsg standard Text To Speech Module, the necessary component Microsoft SAPI 5.1 is also automatically installed. **In order for SAPI to be installed correctly, there must be a sound card installed on the server.**

Text to Speech Module Setup



Once the Text to Speech module has been installed it must be set up using the Administrator Tool.

1. Select **Properties** from the **Global** menu.
2. On the **Modules** tab, select **Text To Speech**. The version of Text to Speech that has been installed will appear to the right. *
3. Once the module is highlighted, click the **Setup** button.

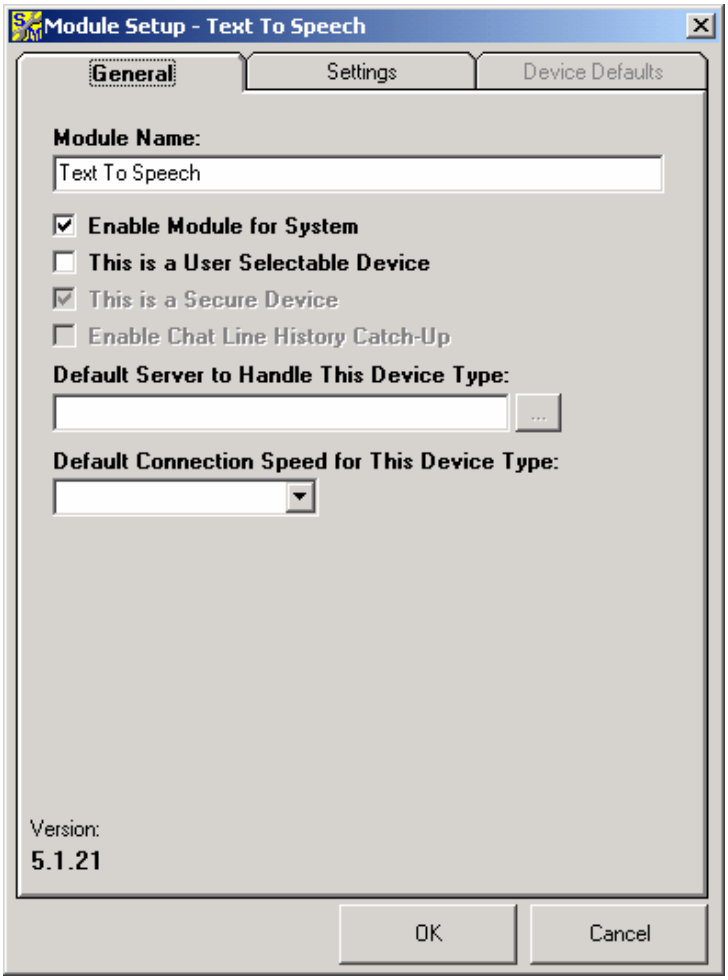
* If N/A appears instead of a version number the module has not yet been installed properly.

Text to Speech Module Setup

General

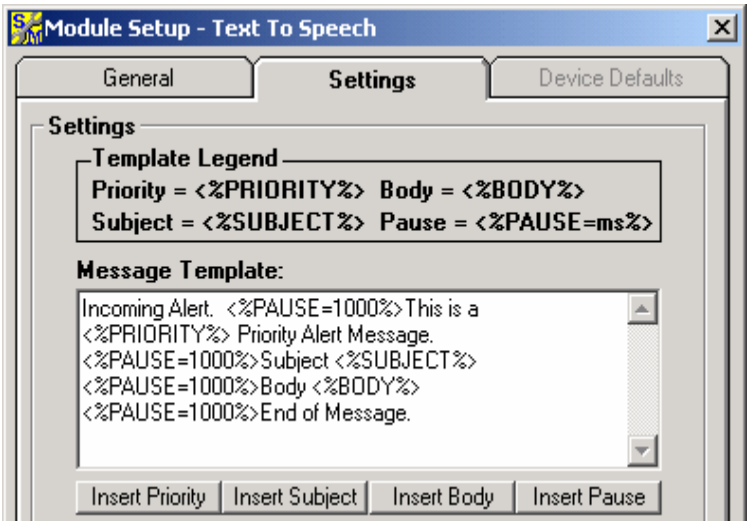
The following is the only setting on this tab that will concern the Text To Speech configuration.

Enable Module for System will allow this device to be used in the system. De-selecting this device will make it unavailable to the system (while preserving the module settings for later use).



Text to Speech Module Setup

Settings



Message Template

The Template defines the format in which a SmartMsg Text to Speech alert will be spoken. The template determines which components will be converted to speech, the order in which those components will be spoken, pauses, and literal phrases to be inserted in the message.

Variables are used to define which parts of the message should be read at which point in the audible alert. The available variables are as follows:

<%PRIORITY%> - The message priority (High, Medium, Low).

<%SUBJECT%> - The subject line of the message.

<%PAUSE=ms%> - A pause of defined milliseconds, ms=milliseconds (must be an integer 1-15000)

<%BODY%> - The (text of) body of the message.

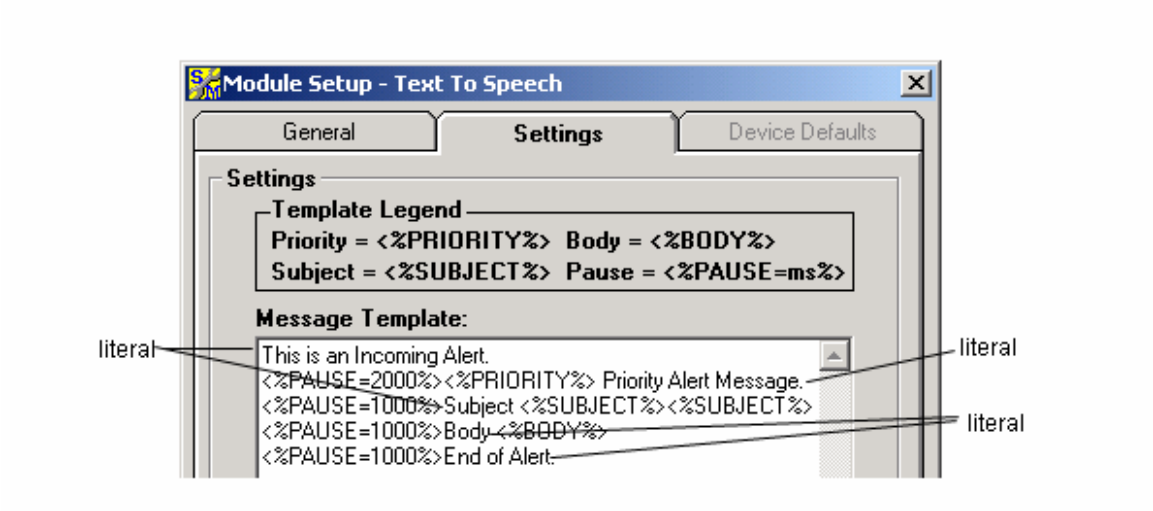
Click the cursor anywhere within the Template window to modify the template.

Note: *Variables must be typed exactly as listed in order to work correctly. The Insert buttons below the window can also be used to automatically add variables.*

The Template on the Text To Speech Settings form determines the default template used by this module and hence will define the Text To Speech format of a message delivered to devices such as SmartMsg Windows Clients, Pocket PC Clients and Web-based clients. The template is completely flexible, allowing the administrator to customize the flow of the message by determining such things as:

- Inclusion or submission of any of the three available message components - Priority, Subject and Body
- Repetition of any of the above listed elements
- Pauses (as well as pause length) throughout the message
- Literal (hard-coded) words or phrases throughout the message
- The order of all included elements

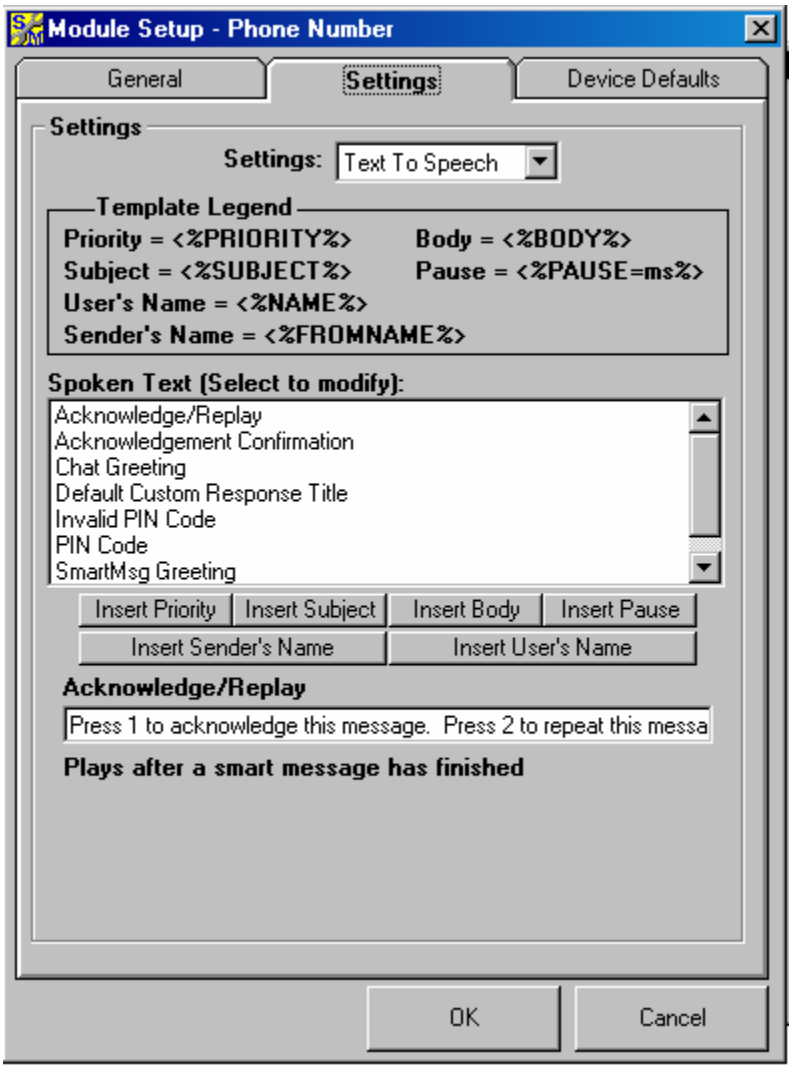
A Custom Text to Speech Template - Example



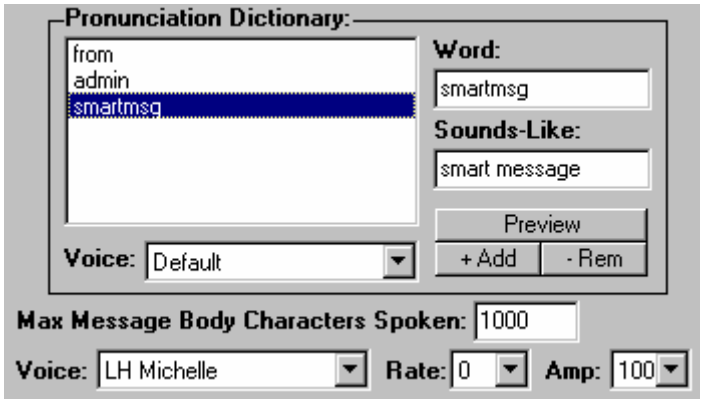
The figure above shows a customized template.
It would define the following for Text to Speech alerts delivered in audio:

- First, the words “This is an Incoming Alert”.
- Then, there will be a pause of 2000 milliseconds (2 seconds).
- The priority of the message will be announced. (For example, for a Medium Priority Message, it will read “medium priority alert message”.)
- Then, a pause of 1000 milliseconds (1 second).
- The word “Subject” is read followed by the actual subject of the message.
- The actual subject of the message is then repeated.
- Then another pause – this time for 1000 milliseconds.
- The word “Body” followed by any actual text from the body of the message.
- Another pause of 1000 milliseconds.
- The words “End of Alert” are read to let the recipient know it’s complete.

Individual System modules (such as the Phone Number module), which utilize Text To Speech functionality, utilize separate Text To Speech templates for their respective device types. For example, the Phone Number Module defines its own settings for using Text To Speech and therefore will override the default template defined in the Text To Speech Module. Hence, when a SmartMsg alert is received on a phone number device, the alert is received according to the settings defined in the Phone Number Module. This feature is important in order to facilitate the special needs of different device types. The following figure shows the Settings screen for the Phone Number Module. Notice that the settings options for the Phone Number Module are the same as the Text To Speech Module.



The Pronunciation Dictionary



The pronunciation dictionary allows you to define how the selected voice should actually say particular words or phrases. It can be used for special words that are not normally in the dictionary, acronyms and abbreviations and other exception words and phrases. The Dictionary defines words (as they would be typed) along with a "Sounds-Like" equivalent for the Text To Speech module to use in converting the word /phrase to speech.

Example Uses

Brand Names and other Non-Dictionary Terms - The word "SmartMsg" is a brand and not a dictionary word. TTS voices will pronounce the word incorrectly. The word can be added to the pronunciation dictionary with a phonetic spelling of the word so that it will be spoken as desired in messages. (See above screenshot.)

Abbreviations and Acronyms
The acronym - BOL commonly used in law enforcement dispatch stands for "Be on the lookout". A TTS voice would read the word "bowl". A Pronunciation Dictionary entry can be added to define the correct speech conversion for this acronym.

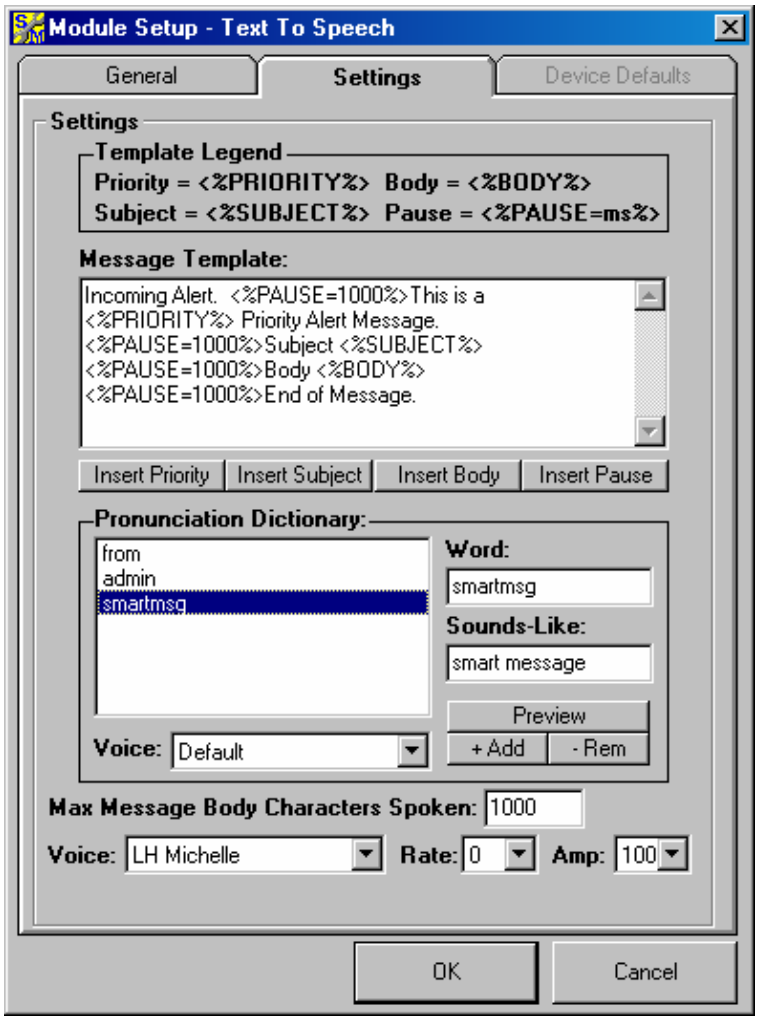
Words that Require Better Enunciation
The word "Acknowledge" is read rather fast by the default Microsoft voice and is sometimes hard to distinguish. We can add the word "acknowledge" to the Pronunciation dictionary with a break between the first and second syllable to provide better enunciation of the word. In the Sounds-Like field we enter: Ack Knowledge. (The space added between the first and second 'k' causes the voice to read the word more clearly.)
NOTE: Third-Party voices, such as those created by AT&T, generally provide better vocalizations than the default voices provided with Microsoft SAPI.

To enter a word or phrase into the Pronunciation Dictionary:

1. Select the SAPI **Voice** for which you would like to enter an item.
2. In the **Word**: field type the word or phrase as it would be ***typed*** in a message.
3. In the **Sounds-Like**: field, enter the text as it should be ***spoken*** in normal everyday dictionary words that will be recognized by the Microsoft TTS engine or a phonetic representation, if necessary.

***Note**: The entry will only apply to the TTS voice selected in the Voice field (in the Pronunciation Dictionary section).*

Additional Text To Speech Settings



Max Message Body Characters Spoken
This value is used to determine a limit, in characters, (for the message body) that will be spoken on an audio-capable device. If a message is sent in which the body of the message exceeds this defined maximum, the Text To Speech engine will only speak the first part of the message body up to the maximum character count. Our example screenshot shows a maximum setting of 1000 characters. If a message is sent with 1500 characters in the message body, the last 500 characters of text will be truncated from the audio message. Truncation will not occur on text messages.

Voice
The voice field allows you to select any available SAPI voice – both default Microsoft and installed third party SAPI voices. *(Depending upon the operating system of the Server, one to three default voices are available with SAPI: Microsoft Mike, Microsoft Mary, and Microsoft Sam. Additional SAPI voices from various third-party vendors can be licensed and installed. Just install the third-party SAPI voice, and restart your SmartMsg Server. The, the new voice will appear in the list of available voices.)*

Rate
The rate value determines the speed at which the voice will convey the text on an audio device. Rate can be set from –10 through 10 with -10 being the slowest; and 10 the fastest.

Amp
The amplification value of the text-to-speech voice of sent messages. Codespear recommends leaving this value at 100 so radio devices will be able to hear the text-to-speech voice.

Receiving a Text to Speech Message - Example

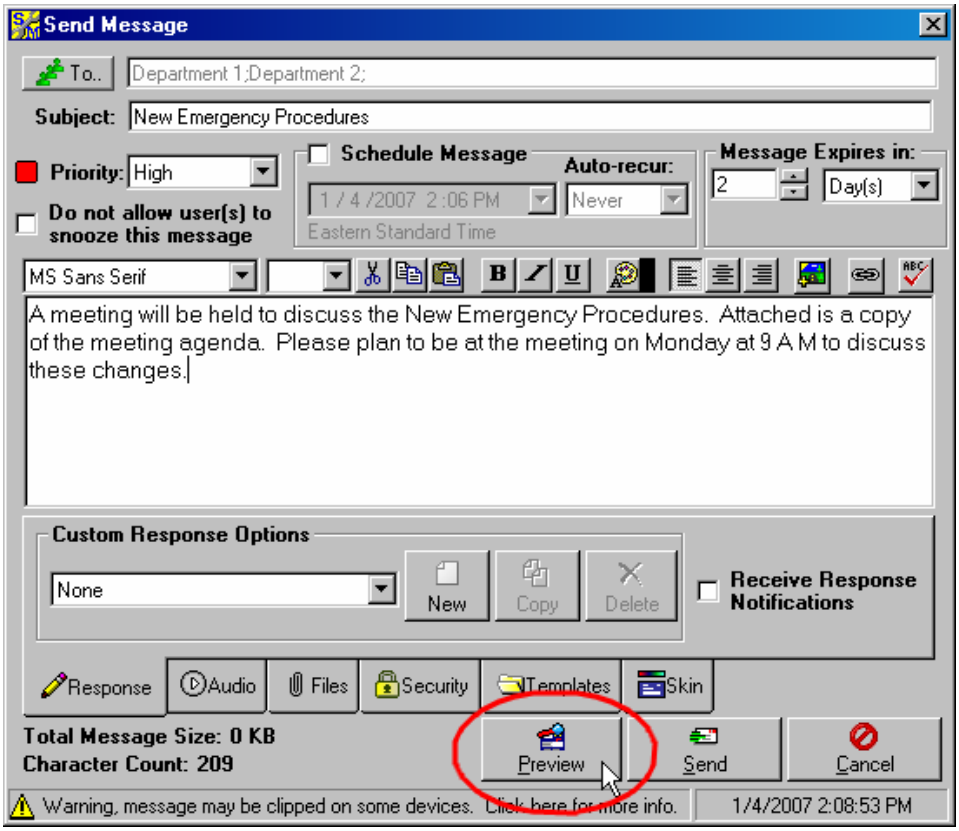
If the Text to Speech settings are left at the default, this message will read as, “Incoming alert. This is a medium priority alert message. Subject, Thursday’s Meeting. Body, Thursday’s meeting has been changed from two o’clock pm to three fifteen pm. End of message.”

If the Loop Until Acknowledge option is not selected the audio will play once and stop. A user can replay the message as many times as he/she desires by selecting the Play Audio button at the bottom right.

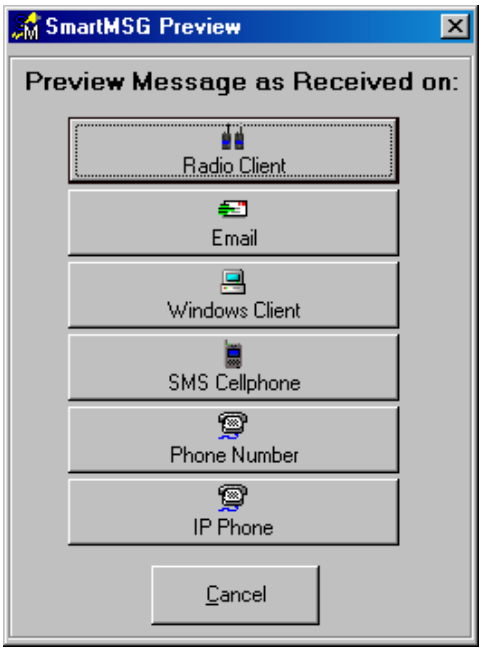
If the Loop Until Acknowledge option is selected for this message the audio will repeat for the recipient until the OK button is selected.

Using Message Preview

To preview how a message converted to Text-to-Speech will or sound on various audio devices, click the Preview button before sending the alert.



Then, from the window that appears, select which type of device to preview the message with. Alerts will appear or sound differently based upon which type of device it is sent to.



Note: If sending an alert to audio devices (Radio Client, SMS Cell phone, Phone Number or IP Phone), it might be a good idea to preview the message on these devices first to make sure that the Text-to-Speech version of the alert conveys the alert information clearly. Adjustments may need to be made to the way the message is typed in order for the correct meaning of words; abbreviations, acronyms, etc. are spoken by the Text-to-Speech Engine.