



VoiceGenie VoiceXML Gateway

SpeechGenie Release Document

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Summary

Overview

This release document includes the following information:

- Product Version Identification
- New Features
- Changes
- Bug Fixes
- Release Notes
- Errata
- Change History

This document applies to the SpeechGenie edition of the VoiceGenie VoiceXML Gateway product, release 5.0.

Documents

In addition to this Release Document, you will get two other documents:

VoiceGenie Administration Guide - A manual written for those who will install, configure, and administer the VoiceGenie VoiceXML Gateway Platform.

VoiceXML Support Document - contains detailed information on VoiceXML compliance, usage notes, and previous change history.

VoiceXML Developer Guide - A VoiceXML 2.0 reference manual containing description of each supported tags, attributes, properties, and other VoiceGenie extensions.

Other relevant documents may also be included.

Resources

There are many resources for developers available on VoiceGenie Developer website <http://www.speechgenie.com>. The following lists some of the important items you can find on our website:

Resource	URL
FAQ	http://www.speechgenie.com/faq.php
Tutorials	http://www.speechgenie.com/tutorials.php
VoiceXML 2.0 Reference	http://www.speechgenie.com/vxml2ref.php
Genie IDE (Integrated Development Environment for VoiceXML)	http://www.speechgenie.com/IDE.php

Where To Get Help

The VoiceGenie Developer website contains forums for the developer community to post questions and discuss problems. We have forums that discuss Application Development, the SpeechGenie Platform, the VoiceXML Language, etc.

The URL for the list of forums is: <http://www.speechgenie.com/forums.php>

For questions and problems, you can send email to the VoiceGenie Customer Support Team: sg_support@voicegenie.com

For 24/7 support, please contact VoiceGenie.

Contacting VoiceGenie

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Product Version Identification

Product Name	Speech Genie
Version	5.0
Release Date	October 23, 2001
OpenSpeech Recognizer (OSR)	Version 1.0 GA Patch 2-213
Text-To-Speech (TTS)	Speechify Version 1.1 Build March 15, 2001
Operating System	Red Hat Linux 6.2
OS Kernel Version	2.2.17-14

The following lists other packages installed in addition to packages provided by Red Hat Linux 6.2:

- atsar_linux-1.5-1.i386.rpm
- gcc-2.95.2.tar.gz
- kernel-2.2.17-14.tgz
- LiS-2.11.1.tgz
- modutils-2.3.21-1.i386.rpm
- mysql_install.tar (MySQL version 3.23.38-1)
- rpm-3.0.5-9.6x.tgz
- sr5.01b16.tar.gz (Dialogic)
- squid.tar

New Features

Enhanced Compliance to VoiceXML 2.0:

- Added accept attribute in <choice> and <menu>
- Added mode and weight attributes in <grammar>
- Added maxspeechevent property
- Throws maxspeechevent event
- Support document transitions between root/leaf/subdialog as defined in VoiceXML 2.0

This release also has the following new features:

- Supports new languages (French, German, UK English) for ASR. Please refer to the Multi-Language Support Tutorial:
http://www.speechgenie.com/tutorials.php?tutorial=multi_language
- Encodes and decodes special characters before sending to an ASR engine that takes XML grammar and TTS engine that supports SSML. Please refer to the character encoding tutorial:
http://www.speechgenie.com/tutorials.php?tutorial=char_encoding
- Added parameter SUPPORTED_LANGUAGE in voicexml.cfg
- Supports boolean type for <value> element
- Added property com.voicegenie.xmlencoding to customize encoding for XML grammars and speech markup for TTS
- Added property com.voicegenie.allowcallblending for Call Control Extension

Changes

The following are changes from the previous SpeechGenie Version 4.9.5:

- Default value for property universal is changed from all to none
- Default value for property com.voicegenie.maxrecordtime is changed from 0 to 10m
- Only sends <log> information to maintainer when property loglevel is greater than 2 or when there is any errors or warnings

Bug Fixes

The following are bug fixes since Version 4.9.5:

- <field> shadow variable \$.interpretation will be set
- Fixed transition from leaf to root document by the <submit> element so that root document will be initialized
- Fixed a bug if target is specified on the first page
- Fixed transition from a leaf to root page while root was specified with a target
- Encode ASR return results properly before sending to JavaScript engine
- Fixed decoding special characters in VoiceXML document
- Correct property name from KEEPTMPFILESTILEND to KEEPTMPFILESTILLEND
- Do not strip new line for content inside CDATA
- Disconnect when call transferred and the other side hangs up
- Remove error message for <assign> if variable is not defined
- Clean up temporary files with <subdialog>
- Do not return "error" if # is used for DTMF built-in grammars
- Fixed evaluation of expr attribute of <value> if element is visited more than once in one prompt queue
- Fixed support for hotkey grammar in <initial> element
- Temporary files will be deleted when visiting <menu>
- Fixed speech markup so that <phoneme> tag would not be split into two if more than one attribute are specified.

Restrictions

The following restrictions apply to this release:

1. Application variables defined in the root page cannot be referenced as `doc.variablename` in the root page itself.
2. Property universals will always be forced to "none" for all languages except en-US and en-UK.

Errata

As of the release date, the following known problems exists:

-

Change History

Release 4.9.5

Changes

- Support for *Call Blending*; this is an implementation of one of the call control proposals currently before the W3C, and includes a rich set of new tags supporting overall call control. See the Call Control Tag Table (at the end of this document), and the Call Control Tutorial on the Developer Workshop site.
- Support for 'offsetexpr' and 'lengthexpr' attributes for the <audio> tag;
- Support for playback of a <record> form item variable using the <audio> tag;
- Support for saved utterance when performing a recognition; this is available as a shadow variable (both Nuance and SpeechWorks);
- Support for maxage and maxstale caching parameters (<vxml> version needs to be 2.0);
- Support for a-law audio with SpeechGenie TTS;
- Added support for field shadow variables \$.bargain, \$.audiooffset, \$.utteranceaudio
- Set field shadow variables \$.inputmode, \$.bargain, \$.bargainresult, \$.audiooffset, \$.utteranceaudio even for nomatch if applicable

Bug Fixes

- Support resolution of the relative URI in a <catch> against activated document instead of where it's declared;
- Fix a bug for alternative tts larger than 700 bytes.
- Fix a bug for supporting "connecttimeout" for <transfer>;
- Fix problems with WAVE file audio control;
- Fix a bug for filling more than one field with same slot name;
- Fix a bug for slot confidence for SpeechGenie;
- Fix a bug for <submit> to support URI fragment;
- Fix a bug when submitting regular variables after a recorded variable;
- Fix a bug when submitting binary data using multipart/form-data; we now add "filename" directive;
- Resolve URIs with "./" or "../" properly;
- Support post-processing SpeechWorks ASR results for built in grammars;
- Fix a bug when interrupting a transfer before the extension number is dialed;
- Restructure the way we do business with Watson ASR to avoid a memory leak in the ASR server;

- On call transfer without extension, don't wait for analysis on hangup request;
- Check bargein correctly for adding beep audio;
- Handle queued DTMF properly on entry to an input item;

Release 4.9.0

Changes

This release of the VoiceGenie interpreter includes a number of new features:

- Support for the 'dtmf' attribute of the <link> tag;
- Better platform error logging, better error event support;
- Add support for <enumerate> and speech markup inside <audio>; (without SRC attribute, or as an alternate prompt with SRC attribute);
- Support for nested markup tags; we do not support <audio>/<value> inside speech markup any longer;
- Support empty "event" attribute for <catch>;
- Added properties COM.VOICEGENIE.DUMPAUDIO, COM.VOICEGENIE.DUMPPARAMETER (Watson ASR);

Bug Fixes

- Fixed a bug in ABNF -> Nuance grammar conversion;
- Bug fix for <audio> with multiple alternate prompts;
- Some minor bug fixes and more error logging with speech markup;
- Support queuing a prompt [in executable content] more than once before playing it out;
- Fix a bug in <audio> when a <value> is specified inside <audio>;
- Use CR and LF, instead of just LF, in HTTP requests;
- Fix a bug in <subdialog> when "name" attribute is not specified;
- Bug fix for speech markup (Watson and NaturalVoices);

Release 4.8.2

Changes

This release of the VoiceGenie interpreter includes a number of features that have been requested by customers:

- Support "bargeintype", energy, speech and recognition;
- Support for slot level confidence score (both Nuance and SpeechWorks);
- Full a-law support; complete E1 support;
- Much richer event support and status returns for <transfer>;

- DNIS now NANA if unavailable;
- Added dest and destexpr attributes to <record>;
- Property controlling maximum record time, shadow variables for destination and maximum exceeded;
- Support for AT&T NaturalVoices TTS! (New Watson);
- Improved Speech Markup support for Old Watson TTS;
- Preliminary support for new AT&T Watson ASR;
- Complete N-best support for Nuance and SpeechWorks;
- Recognition based bargein for Nuance and SpeechWorks;
- A number of important bug fixes;
- Partial support for 'dest' per RFC 2806;
- <log> information is now added to the maintainer e-mail;
- Version control interface for VoiceXML 2.0;
- Language support;

Bug Fixes

- Support "s", "ms" and "m" units for "COM.VOICEGENIE.MAXRECORDTIME" property (PR 136);
- Fix a problem with the <transfer> attribute "connecttimeout";
- Fix a problem regarding nested <if> elements (PR 151);
- Attribute src now takes precedence over expr in <audio>;
- Ignore <audio> element if "expr" attribute evaluates to null;
- Support new return value "maxtime_disconnect" for <transfer> if bridge transfer;
- Support per-slot confidence for Nuance and SpeechWorks (PR #127);
- Support bargeintype (speech, energy, recognition) for Nuance ASR;
- Add more information in lastresult\$;
- Some internal/shadow variables are initialized as "undefined" instead of empty string;
- Throw "error.grammar.dtmf" event if parsing a dtmf grammar returns an error;
- Add support for xml:lang in <prompt>, <vxml>, <grammar>;
- Throw error.unsupported.language event if "xml:lang" is not "en-US";
- Correct problem with retrieval of xml:lang value for <grammar>;
- Use default version "1.0" for inline xml grammar when version is not specified;
- Add VoiceXML version control interface (1.0, 2.0, etc.);
- Support SSML tags if version="2.0" is specified in <vxml> tag;
- Remove '.' from generated hostnames (PR 138);
- Break long HTTP header for "Accept" over multiple lines (PR 114);
- Fix a problem with a leading "|" in ABNF grammar parsing (PR #129);
- Fix a problem with built-in Nuance digit grammar (PR #149);

- Fix a problem in HTTP header regarding port number. If port number is specified, then it will be added in the header. If it's not specified, 80 is no longer used as the default;
- Encode space properly in HTTP requests. (PR #118);
- Correct MIME type for record file submit;
- Fix problem with double '/' in request URL; breaks certain JSP;

Make sure ASRINTIMEOUT >= TIMEOUT, to avoid problems in certain cases;

Release 4.7

Changes

- Support for Nuance Call Logging; using the following properties:
VGASRCALLOG: true or false, to control ASR engine logging on the platform.
VGASRRECORDUTTERANCE: true or false, to control ASR utterance recording, with or without VGASRCALLOG=true.
VGASRCONFIDENTIALUTTERANCE: false or true, to indicate if utterance should be logged or not;
- Full a-law audio format support;
- Extended maximum record time – a historical Dialogic limitation for recording has been removed, so we now support longer record times. The limit is now set by the property com.voicegenie.maxrecordtime. This is only allowed in the defaults.vxml on the platform (to avoid Denial of Service attacks).
- If both <param> and 'expr' are specified, the <param> reference is used to set the variable in a subdialog;
- You can now assign to a variable without declaring it first;
- <script> can now be a child of <form>;
- New property 'fetchaudiominimum' specifies the minimum length of time that an audio file will play during a <submit> or <goto> (this is the same as the old 'fetchaudiotime');
- Support <throw> with attributes 'eventexpr', 'message' and 'messageexpr', per VoiceXML 2.0;
- Support anonymous variables '_event' and '_message' with <catch>, per VoiceXML 2.0;
- Support attribute 'label' for <log>;
- Support shadow object for ASR: application.lastresult\$

Bug Fixes

- Nested ECMAScript objects now correctly submitted as o.f1, o.f2, etc;
- We now advertise acceptance of content type 'text/plain';
- The Content-length: header now has only a single space between the header and the value (two spaces broke some web servers);

- `<subdialog>` `fetchaudio` now terminates correctly when the page is available (rather than playing to completion);

Release 4.6

Changes

- Only add "#" to URL when target is specified;
- Changes to support queued prompts for executable content, including barge-in;
- More support for GenieTracer (if you haven't tried it, you should!);
- N-best support for Nuance;
- Better support for 'file:' scheme in `<dtmf>`, `<grammar>`, `<audio>`
- Support for SSML with `<value mode=tts class=...>`
- Support `<say-as>` (and) `<sayas>` for SSML support;
- For `class=date` or `time` in `<value mode=tts...>`, use `type=date:ymd` or `type=time:hm` with `<say-as>` tag in SSML;
- Added attribute `UIDATA` to `<transfer>`

Bug Fixes

- Fixed a problem with playing certain types of WAVE files;
- Fixed some bugs related to EXPR support in `<goto>` and `<submit>`;
- Fixed a problem where the last prompt timeout was used for input collection;
- Fix for `<goto nextitem>`; we now always select and queue the prompt even if the nextitem has been visited already;

Release 4.5

Changes

- Support for cookies;
- Added `<log>` tag;
- Added support for EXPR attribute in `<grammar>`, `<dtmf>` and `<audio>`;
- Added support for `fetchaudio` with `<subdialog>`;
- Added attributes `ANALYSIS` and `CONNECTWHEN` to `<transfer>`;
- Throw `error.unsupported.format` event for unknown ASR/DTMF grammar types;
- Remove fragment following '#' from URL during Web fetch;
- Handle grammar rule name specified after '#';
- With `<field type=...>`, support post processing of ASR or DTMF result with a predefined ECMAScript if it exists, for VoiceXML conformance etc.;

DTMF output is processed for conformance even without the ECMAScript file;

- Added support for more literals in `<value mode=recorded...>`, and handle '?' in date string for `class=date`;
- Throw `error.asr` instead of `error.application` on ASR error;
- Added support for ASRENGINE MSSR, incorporated changes done for NT port;
- Added support for ASRENGINE SPEECHWORKS and LSS;
- Added support for inline XML grammar for SPEECHWORKS;
- Added support for n-best with property MAXNBEST, and field shadow variables `<name>$.nbestresult` and `<name>$.nbestconfidence`. This is currently supported only for SpeechWorks and Nuance ASR;
- Subject line in Maintainer e-mail is now 'VoiceGenie VoiceXML Log'; still from PW_TRAP_IP;

Bug Fixes

- Corrected a few issues with outbound calling;
- Tested with more complete range of Dialogic cards;
- Fixes related to answering machine detection;
- Better behavior if a TTS server fails;
- Fixed a bug related to DTMF input processing with `TERMTIMEOUT > 0`;
- Fixed some caching related bugs and changed behavior so safe caching is strictly observed even on same page;
- With `<field type=...>`, allow DTMF or ASR built in grammar to be active if `<grammar>` or `<dtmf>` is inside `<field>`, respectively;
- Fixed bug in form submit: if no fetchaudio to play, do not start audio;
- Fixed bugs related to fetchaudiotime (builtin, submit) and fetchaudiodelay;
- Fix a bug with `<enumerate>` when `inputmodes=dtmf.`;
- Fixed a bug where `<return>` in a subdialog did not have `namelist` or `event`.

Release 2.4

Changes

- Support for Speechify TTS and SpeechWorks ASR (internal release only);

Release 2.3

Changes

- A number of logging enhancements are now in place;

- Some issues regarding ASR control and performance have been addressed;
- DTMF bargein behavior has been normalized;
- We have added audio control support (see “Usage Notes”);
- There have been some improvements and extensions to our release of VoiceXML;
- There have been some improvements to the platform implementation;
- A number of enhancements supporting future releases have been added;

Bug Fixes

- Handle errors during <value> tag processing;
- Handle null URI properly;
- Handle HTTP error for VoiceXML pages properly;
- Fixed bug in reading HTTP header from a fetched ECMAScript file;
- Fixed problem related to subdialog - if same audio used in root document and the page that uses the root, it would kill vxmli;
- Fixed event in <link> - use context from where link is invoked instead of where it is defined;
- Check and throw error if grammar type is unsupported;
- Fixed bug with MSECs attribute value in <break>, and RANGE attribute in <pros>;
- Use TTSENGINE to add speech markup reset tags as necessary.

Release 2.2

Changes

- Support for Speech markup;
- Default event handlers improved;
- Improved grammar support for <choice> and <menu>;

Bug Fixes

- The parser now supports the entity 'apos';
- Handle small input timeout better;
- If first element is not a <vxml>, throw “error.semantic”, instead of simply hanging up;
- ABNF grammar problem with <dtmf>; when there is an ambiguous match (e.g., 1 | 11) it will recognize only the shorter one - the workaround is to set TERMTIMEOUT property to 2s: this has been fixed;
- <choice> entries with no event/expr/next attribute are now handled properly;

- Handle null URI properly;
- Fixed <reprompt> with <menu>;
- Handle illegal/infinite loop in <form>;
- Bugfix related to subdialog - if same audio used in root doc and the page that uses the root, it would kill vxmli;
- Fixed event in <link> - use context from where link is invoked instead of where it is defined;
- Fixed bug in reading http header from a fetched ECMAScript file;
- Fixed bug in <record>: set field item variable on hangup so it could still be submitted in `telephone.disconnect.hangup` event;
- Fixed bug with MSECs attribute value in <break>.