



Release Notes

Vocalocity OpenVXI

Version 3.4

August 3, 2005



Vocalocity OpenVXI Release Notes, Version 3.4

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Revision History

| Rev. | Date | Author | Description |
|------|--------|--------|---------------------|
| A | 8/3/05 | EGW | OpenVXI 3.4 – Final |
| B | | | |
| C | | | |

1 Introduction

This document contains the Release Notes for **OpenVXI, Version 3.4** (referred to in this release note as “OpenVXI 3.4”). The Release Notes discuss the changes contained in this release, hardware and software requirements, and includes installation instructions.

This release note contains the following topics:

- ▶ Contents of This Release
- ▶ Hardware and Software Requirements
- ▶ Installation Instructions

1.1 About OpenVXI

OpenVXI is a VoiceXML interpreter that executes commands within VoiceXML documents to facilitate interaction between a user and an application. Commands can include playing prompts, listening for responses and retrieving content from a Web site to play back to the caller.

OpenVXI follows the W3C VoiceXML 2.0 and 2.1 dialog markup language specifications (www.voicexml.org/TR/voicexml20 and www.voicexml.org/TR/voicexml21/), enabling developers to take advantage of well-known Web technologies and tools when building voice applications. An interpreter like OpenVXI is an important component of a standards-compliant voice software platform.

OpenVXI is not a telephony platform; instead, it provides a VoiceXML interpreter interface.

1.2 OpenVXI Licenses

OpenVXI is available under the GNU General Public License (GPL) at www.gnu.org.

For customers who wish to use OpenVXI for commercial distribution without GPL restrictions, Vocalocity offers a Commercial License that includes both source code and software support and maintenance. Vocalocity representatives are happy to help you determine the appropriate license based on your planned use of the software. Contact Vocalocity at OpenVXI@vocalocity.com for more information.

1.3 Customer Support

- ▶ All OpenVXI users can submit bugs and feature requests via the OpenVXI project on SourceForge. Go to <http://sourceforge.net/projects/openvxi/> and click Tracker.
- ▶ Commercial License holders may contact a Customer Service Representative at openvxi-support@vocalocity.com or 404-287-1200.

2 Contents of This Release

OpenVXI 3.4 is an update to OpenVXI 3.3, which was released in June 2005 by Vocalocity.

This release includes one feature to support VoiceXML 2.1 and fixes for issues found in previous releases (see [Bug Fixes in This Release](#)).

2.1 New Features

This release adds support for the data fetch properties in VoiceXML 2.1 (W3C Candidate Recommendation 13 June 20). For the VoiceXML 2.1 specification, go to <http://www.w3.org/TR/voicexml21/>.

2.2 Bug Fixes in This Release

The following table lists the bugs addressed in OpenVXI 3.4.

| Summary | Description |
|---|--|
| Duplicate <property> elements are now ignored | <p>When more than one <property> element of the same type is specified, the last <property> replaces all previously declared properties.</p> <p>For example:</p> <pre style="border: 1px dashed black; padding: 5px;"><property name="inputmodes" value="voice dtmf" /> <property name="inputmodes" value="dtmf" /></pre> <p>Results in "inputmodes" being equal to "dtmf". Previously, only the first property was used</p> |
| DOCTYPE no longer required | |
| Multipart HTTP messages fixes | <p>For multipart HTTP messages, the filename parameter is:</p> <ul style="list-style-type: none"> ▪ Not included for parts not requiring it ▪ Now quoted when present |
| Document level <data> elements were not being processed | |
| Multiple <data> elements | <p>OpenVXI was not handling multiple <data> elements in the same VXML script correctly. A temporary solution was used, and a future version will likely change the way DOM parsing is handled.</p> |
| <data> variable not always scoped correctly | <p>Per the specification, the data variable now has the same scoping rules as the <var> element.</p> |
| DOM class names are now consistent with the VoiceXML spec | <p>Changed DOM class names to be consistent with the spec.</p> <p>Previously, the class names were prefixed with "DOM". For example "DOMNode" instead of just "Node". With the "DOM" prefix, some of the 2.1 IR tests would fail.</p> |

| Summary | Description |
|---|---|
| 2.1 IR test 57 now passes | <p>DOM Node.ownerDocument was not returning the same script Document object as the <data> element variable (2.1 IR test 57).</p> <p>For example:</p> <pre data-bbox="740 432 1421 573" style="border: 1px dashed black; background-color: #e0ffff; padding: 5px;"> <data name="dom" src="..." /> var owner = dom.documentElement.firstChild.ownerDocument; if (owner != dom) test_failed;</pre> |
| 2.1 IR test 76 now passes | <p>DOM Attr.ownerElement was not returning the same script Element object as its owning Element (2.1 IR test 76).</p> <p>For example:</p> <pre data-bbox="740 730 1421 898" style="border: 1px dashed black; background-color: #e0ffff; padding: 5px;"> <data name="dom" src="..." /> var root = dom.documentElement; var child = root.lastChild; var someAttr = child.attributes.item(0); if (someAttr.ownerElement != child) test_failed;</pre> |
| Now handling mark variables after a Record with no NLSML result. | |
| Grammars now Deactivated prior to being Free'd | This was not always occurring. |
| For the <grammar> element, both "src" and "srcexpr" attributes were allowed. | Per the 2.1 spec, exactly one of "src", "srcexpr", or an inline grammar must be specified. If more than one is specified, an error.badfetch is now thrown. |
| An undeclared variable in the namelist of an <exit> element was not throwing an error.semantic event. | error.semantic event now thrown |
| Event handlers not being required to include <reprompt> | <p>According to the VoiceXML spec, event handlers are responsible for queuing prompts, and the next iteration does not perform prompt selection unless the event handler includes <reprompt>.</p> <p>In version 3.3, there was a bug where reprompt was effectively being called. This has been fixed.</p> |
| OpenVXI does not support nested <prompt> elements within a <foreach> element. | The previous version was not handling prompt elements nested within a <foreach> element. This has been fixed. |
| Consultation transfers | For Consultation transfers that end with an unknown result, the field item is set to "unknown". Previously, OpenVXI was throwing a disconnect.transfer event. |
| When <transfer> type not defined, type was not defaulting to "blind." | You can specify the type using the "bridge" or "type" attribute. When not specified, it now defaults to "blind" (bridge=false). |
| During a transfer, recordutterance variable not set after recognition | Fixed. |

| Summary | Description |
|---|--|
| Potential memory leak in VXi::object_element | Fixed a potential memory leak in VXi::object_element where the VXiMap "parameters" would not be destroyed in the case of an error. |
| Potential memory leak in VXi::subdialog_element | Fixed a potential memory leak in VXi::subdialog_element where the VXiMap "parameters" would not be destroyed in the case of an error, or unexpected exception. |

2.3 Known Limitations

This section provides additional detail for how OpenVXI implements the VoiceXML specifications.

Nested <foreach> not supported

Due to some optimizations in prompt handling, OpenVXI does not support nested <foreach> elements. This will be corrected in a future release.

Note: Version 3.4 now correctly supports nested <prompt> elements within a <foreach>.

3 Hardware and Software Requirements

This section provides general minimum requirements for OpenVXI that are independent of the telephony platform.

3.1 Hardware Requirements

The OpenVXI Interpreter requires a server class machine with the following minimum requirements:

- ▶ Intel Pentium III 750 MHz or faster processor, per 24 ports of simultaneous execution of static VoiceXML pages

Dynamic VoiceXML pages, or complex VoiceXML with a lot of ECMAScript, will require much more processing power per 24 ports. VoiceXML documents which contain HTTP references will incur network fetch latencies.
- ▶ 256 MB RAM minimum, more as required by the integration and application load demands
- ▶ 15 MB of free disk space for the OpenVXI software and associated data
- ▶ 10 MB of free disk space for the OpenVXI runtime files (1 GB recommended for cache usage)
- ▶ CD-ROM drive (local or accessible over a network)

3.2 Software Requirements

3.2.1 Operating Systems

The OpenVXI team has tested and built with the operating systems listed below, we highly recommend that you use these versions. The OpenVXI source code may need to be modified to work with different versions, problems with different versions may include build errors or robustness issues.

- ▶ Microsoft Windows 2000, XP, and 2003
- ▶ Red Hat Linux 7.3, 7.4, and 8.0

3.2.2 Third-Party Software

The following third-party software products are required. You must download and compile all third-party software **before** building OpenVXI 3.4. Version numbers and links to download sites are included in the Build Instructions available from the SourceForge OpenVXI project page (go to <http://sourceforge.net/projects/openvxi> and click Docs).

- ▶ GNU gcc (Linux only)
- ▶ Xerces – XML parser
- ▶ SpiderMonkey – Mozilla's C implementation of JavaScript

- ▶ OpenSSL – Open Source toolkit implementing the Secure Sockets Layer (SSL) and Transport Layer Security (TLS)
- ▶ Perl programming language
- ▶ Microsoft Visual C++ (Windows only)
- ▶ STLPort – multiplatform ANSI C++ Standard Library implementation (Windows only)