Introduction

Over the past two decades, many customers have invested in TDM-based interactive voice response (IVR) applications to automate simple customer transactions such as checking account or 401K account inquires. In addition, many TDM-based IVR platforms were based on proprietary development environments and hardware platforms, which typically meant restricting the customer’s integration options with automatic speech recognition (ASR) and text-to-speech (TTS) solutions.

Over the past few years there has been a dramatic shift in using VoiceXML technology to support the next generation of IVR applications. The major goal of VoiceXML is to provide a standards-based way of incorporating the advantages of web-based development and content delivery into voice-enabled business applications such as ASR and TTS.

What is the Cisco Customer Voice Portal?

The Cisco Customer Voice Portal (CVP) is a web-based platform that provides carrier-class interactive voice response (IVR) and IP switching services on Voice over IP (VoIP) networks. The CVP feature set includes:

- IP-based call switching: CVP can transfer calls over an IP network while maintaining call control for call treatment or subsequent transfers over the IP network.
- IP-based takeback and transfer (TNT): CVP can take back a transferred call for further IVR treatment or transfer it back to the PSTN.
- IP-based IVR services: CVP can perform the classic prompt-and-collect functions such as, "Press 1 for sales, 2 for service," and so forth.
- IP-based queuing: Calls can be "parked" on CVP for prompting, music on hold, and so forth, while waiting for a call center agent to become available.
- Compatibility with other Cisco call routing and VoIP products: Specifically, Hosted IPCC or Intelligent Contact Manager (ICM), Cisco Gatekeeper, Cisco gateways, and Cisco IP Contact Center (IPCC).
- Compatibility with the public switched telephone network (PSTN): Calls can be moved onto an IP-based network for CVP treatment and then moved back out to a PSTN for further call routing to a call center.
- Carrier-class platform: CVP’s reliability, redundancy, and scalability enable it to work with service-provider and large enterprise networks.
- IP-based voice-enabled IVR services: CVP provides for sophisticated self-service applications (including speech-enabled applications), such as banking, brokerage, and airline reservations.
What is VoiceXML?

Voice eXtensible Markup Language, or VoiceXML, is a language similar to HTML that brings the full power of web development and content delivery to interactive voice response (IVR) applications. VoiceXML is designed for creating audio dialogs that feature synthesized speech, digitized audio, recognition of speech or dual tone multifrequency (DTMF) key input, and recording of spoken input. It is a common language for content providers, tool providers, and platform providers, and it promotes service portability across implementation platforms. VoiceXML separates service logic from user interaction and presentation logic in VoiceXML voice web pages. It also shields application authors from low-level, platform-specific IVR and call control details. VoiceXML is easy to use for simple interactions, yet it provides language features to support complex IVR dialogs.