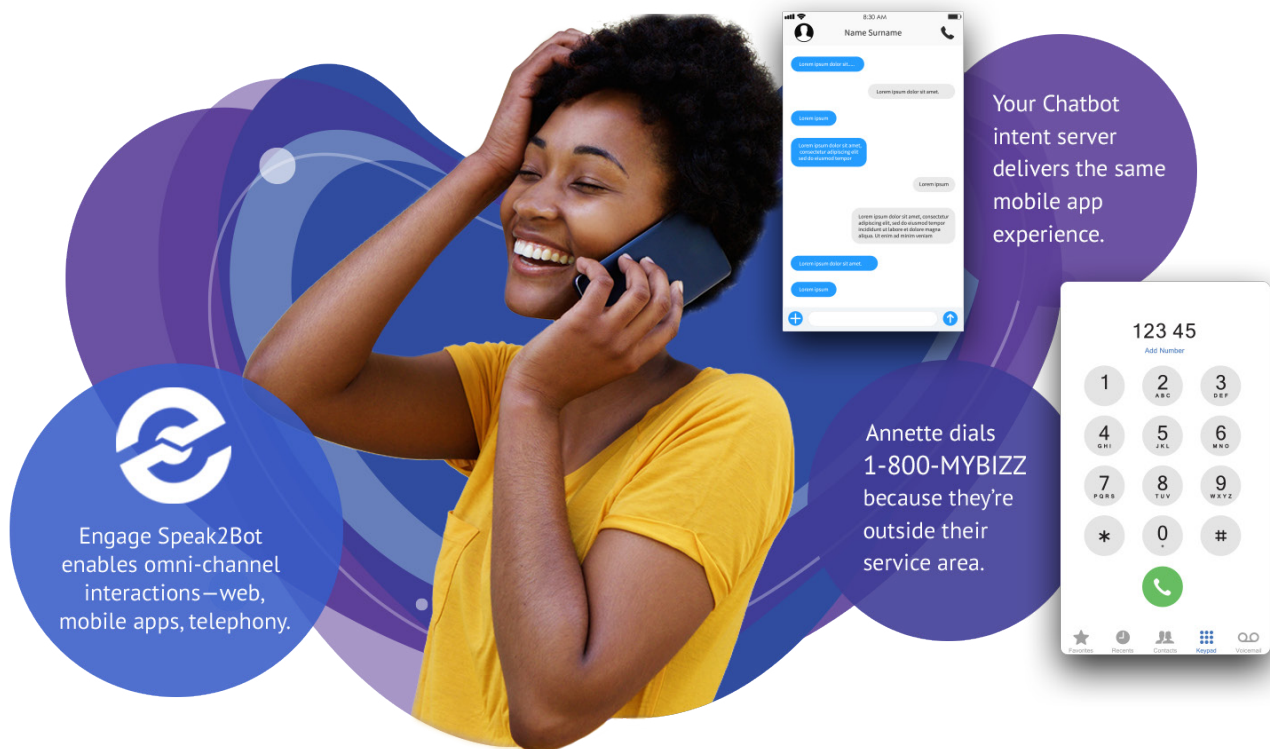



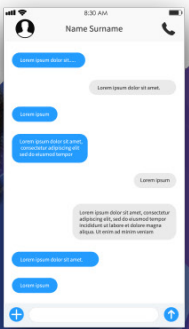
Voice and Video-Enable Your Chatbots

Today's chatbot applications are helping businesses improve the customer engagement experience for tech-savvy customers. But those not choosing to use text-based interactions are often left in long call queues waiting for an agent to take their call. The new-age customer experience centers demand a conversational voice-powered virtual assistant application that can scale to handle the rising demand for digital customer interactions—cost-effectively.

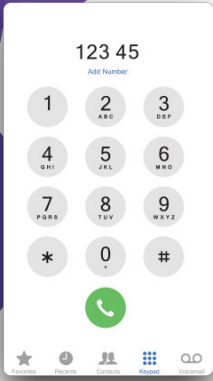
The Engage Speak2Bot solution provides the complete set of programmable capabilities to cost-effectively empower your text-based bots with conversational voice and video intelligence. It provides a turn-key cloud-based solution that understands a comprehensive set of languages and augments chatbots with phone-based services to extend its reach beyond website and mobile apps.




Engage Speak2Bot enables omni-channel interactions—web, mobile apps, telephony.


Your Chatbot intent server delivers the same mobile app experience.

Annette dials 1-800-MYBIZZ because they're outside their service area.



The global conversational AI market is projected to grow from \$4.2 billion in 2019 to \$15.69 billion by 2024, growing at a rate of 30.2%.

SOURCE:
Conversational AI Global Forecast
by Markets & Markets

The Growth of Conversational Voice-Enabled Customer Engagement

Much like how smartphones and apps are revolutionizing when, how, and where people communicate, businesses are turning to voice-enabled digital applications to interact with their customers. Siri, Cortana, Alexa, and Google's capabilities in smart speakers, automobiles, smartphones, and other intelligent devices are already demonstrating how voice can "control" our digital ecosystems. These platforms listen to our commands and perform everyday tasks like controlling smart home devices, getting answers to questions, finding directions, or ordering food.

The evolution in conversational AI and natural language processing is powering new ways of helping people get to the information they seek. Every vertical market that ranges from retail to banking and financial services to healthcare to utilities is exploring how to add conversational voice intelligence to their business applications, especially with the consumers' growing acceptance of voice-enabled services.

Challenges for Chatbot and Virtual Assistant Vendors

Today's evolving digital communications provide new capabilities that can control and improve the customer experience. Businesses began adopting chatbots as a cost-effective first-tier customer engagement tool that could answer frequently asked questions using a clearly defined decision tree. The programmability of chatbots makes them an excellent tool to scale automated customer engagement. But many consumers are not savvy in using text-based tools to interact with customer support. Or they believe that their problem is "unique," and the only way for them to get answers to their questions is by calling the customer support number.

Chatbots empowered with conversational AI-based voice and video capabilities and telephony integration provide richer personalized interactions and extend the reach of chatbots beyond websites and mobile apps, but the costs of doing so can be high. To voice-empower chatbots, the vendors need to implement a Natural Language Processing (NLP) platform to "listen, interpret, and facilitate" conversations, integrate the NLP with speech to text and text to speech services, and add telephony infrastructure. These systems typically require high Capex and Opex and skills in managing the system.

So how do we cost-effectively deliver conversational voice and video-enabled bots?

Bring the Power of Conversational Voice and Video Bots to Multi-Channel Services with Engage Speak2Bot as a Service

Radisys is an industry leader in advanced media processing for real-time communication and collaboration services (including VoLTE, Unified Communications, Conferencing, Collaboration, and WebRTC). Radisys Engage is a communication and digital engagement platform—a software as a service (SaaS) solution—that supports many programmable conversational AI and speech analytic services to create intelligent voice-enabled virtual assistant applications. The Engage Speak2Bot—a programmable speech-enablement service—creates a multi-language, multi-channel, conversational AI-based voice and video-powered front-end for text-based chatbots.

Current chatbots efficiently and effectively handle text-based customer interactions on the website and in mobile apps. The Engage Speak2Bot enables customers to engage with natural voice communications over any channel: website, mobile apps, and phone calls.

The Speak2Bot removes the complexity of integrating with the telephony network, procuring global phone numbers, and assigning a phone number to a chatbot, effectively extending its reach to millions of users who can simply dial in to interact with the bot. Speak2Bot's cloud-based solution enables a cost-effective transition to voice and video-based interactions across any channel. It interprets speech ranging from a limited vocabulary of keywords and commands to full natural language interaction in voice communications over a variety of languages and converts the words and phrases to text for chatbots to examine and respond.

Building a Powerful Voice-Enabled Virtual Assistant with Engage Speak2Bot Services

The Engage Speak2Bot has a robust set of programmable capabilities that allow chatbot vendors to create customized voice and video-enabled applications for their business customers.

The Speak2Bot service resides in either the chatbot vendor's private data center or public cloud or the Radisys-hosted cloud application environment. The voice and video calls from either a website, mobile app, or cellular phone connect to the programmable system that welcomes the caller and offers assistance to the caller. The Speak2Bot solution uses Natural Language Understanding (NLU) to interpret any length of spoken words and phrases in multiple languages.

The Speak2Bot Service:

- Eliminates the headaches and costs of development, integrating, and supporting infrastructure for speech recognition and telephony services.
- Enables on-demand voice and video enabled conversational interactions in multiple languages.
- Augments chatbot with phone numbers to enable omni-channel interactions—web, mobile apps, telephony.
- Provides programmable flexibility to create voice and video-enabled chatbots customized to business needs.
- Resides on a programmable cloud platform with a flexibility to deploy on a private data center or Radisys hosted public cloud.



In a simple interaction, the Speak2Bot system captures the spoken words, interprets the phrase, and forwards a text version to the designated chatbot, which determines the next level of detail. The chatbot responds as it would for any query—by sending a text to Speak2Bot. The Speak2Bot receives the message and responds to the caller using either a pre-recorded voice or video message, a statement that goes through text-to-speech conversion, or a hybrid response that uses both pre-recorded message and text-to-speech.

Speak2Bot’s Power is in its Flexible Response System

The intelligent system supports a wide range of responses from the chatbot in any number of languages.

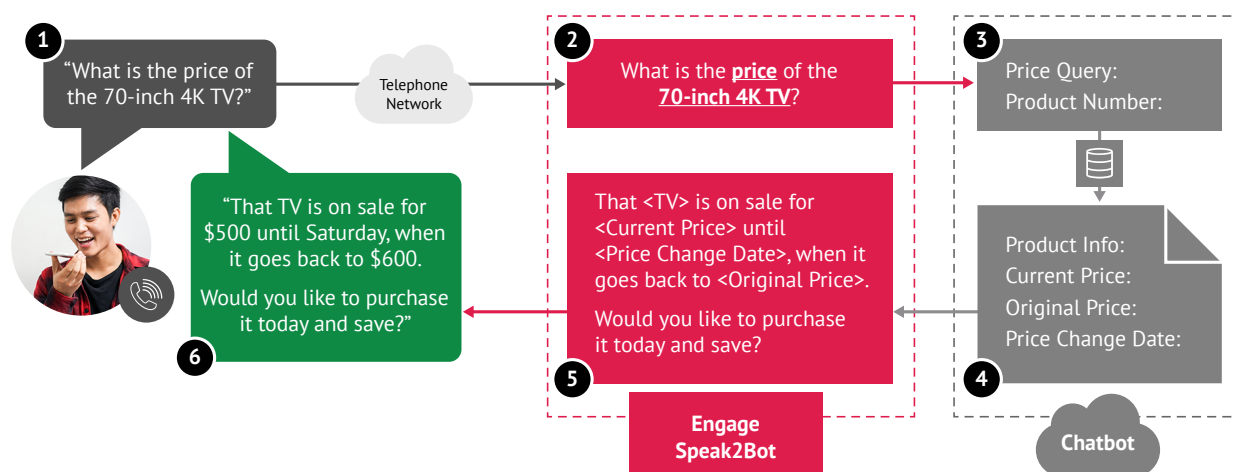
Simple Pre-recorded Messages: Depending on the type of response needed, the Speak2Bot can be programmed to respond with a recorded voice or video message, as might be the response to a simple question, like “what are the business hours today?” or “how can I return a purchase?”

Customizable Text-to-Speech Messages: In situations where a customer is asking for directions to a destination or connecting their new smart TV to Wi-Fi, the chatbot can provide detailed custom messages and instructions through Speak2Bot. Like with turn-by-turn directions, the user hears the specific recommendations from the chatbot at the appropriate time.

Hybrid Pre-recorded and Text-to-Speech Messages: Questions often have a very consistent response but require a unique detail to provide the complete answer. The Speak2Bot can support responses that may have pre-recorded terms but also include dynamic details requiring text-to-speech processing.

The Speak2Bot system receives the detailed response and provides the voice-enabled response using pre-recorded phrases like “That,” “is on sale for,” “until,” “when it goes back to,” converting the unique details needed in the response using Text-to-Speech.

The power and flexibility of Speak2Bot enables voice-enabled conversational chatbots to deliver intuitive customer engagement that entices many people to stay with the business for their service or purchases.



The diagram above illustrates the process of a voice caller interacting with Speak2Bot. The interaction begins when someone sends a request for the price of a particular smart ultra-high-definition television. The bot can indicate the item is on sale for a current sale price that remains effective until the end of the deal when the price returns to a higher value. The bot can also include a prompt about placing an order to entice purchase at a discounted price.

Key Benefits

Realize increased business opportunities of your chatbots by:

- Creating customized, voice-powered solutions that increase the reach of your chatbots by supporting your customers' omnichannel engagement
- Reducing the costs of developing multi-lingual bots by eliminating the cost of expensive and custom platforms for speech recognition
- Accelerate time to market by using a turn-key, high-quality, proven service that does not require significant in-house skills to integrate third-party systems

Summary

Expand your outreach to customers with speech-enabled bot-powered discussions. Businesses are leveraging virtual assistants to engage with their customer base in a more personalized approach, and by voice-enabling your chatbots, you are helping your business customers drive success. The ability to engage customers with intelligent, cost-effective voice-powered systems on any channel ensures consistency and provides the customer with an experience that reinforces confidence and builds loyalty.

Why Radisys

- Transformative cloud based solutions that propel service providers towards becoming digital experience providers with programmable communication platforms and applications
- Reaching 2 billion users through 150+ telecom operators globally
- 30+ years of product and operational excellence
- An experienced team of experts collaborate with you to introduce a full suite of locally relevant digital applications



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