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TOPIC: BBC To Launch AI-Enabled Interactive Radio Show For Amazon Echo And Google Home Chatbots	

What is a chatbot?

A chatbot is a computer program that uses artificial intelligence (AI) and natural language processing (NLP) to understand customer questions and automate responses to them, simulating human conversation.

The value of chatbots

Chatbots can make it easy for users to find the information they need by responding to their questions and requests—through text input, audio input, or both—without the need for human intervention.

Chatbot technology is almost everywhere these days, from the smart speakers at home to messaging applications in the workplace. The latest AI chatbots are often referred to as “virtual assistants” or “virtual agents.” They can use audio input, such as Apple's Siri, Google Assistant and Amazon Alexa, or interact with you via SMS text messaging. Either way, you’re able to ask questions about what you need in a conversational way, and the chatbot can help refine your search through responses and follow-up questions.

How chatbots work

Historically, chatbots were text-based, and programmed to reply to a limited set of simple queries with answers that had been pre-written by the chatbot's developers. They operated like an interactive FAQ, and while they worked well for those specific questions and answers on which they had been trained, they failed when presented with a complex question or one that hadn't been predicted by the developers.

Over time, chatbots have integrated more rules and natural language processing, so end users can experience them in a conversational way. In fact, the latest types of chatbots are contextually aware and able to learn as they're exposed to more and more human language.

Today's AI chatbots use natural language understanding (NLU) to discern the user's need. Then they use advanced AI tools to determine what the user is trying to accomplish. These technologies rely on machine learning and deep learning—elements of AI, with some nuanced differences—to develop an increasingly granular knowledge base of questions and responses that are based on user interactions. This improves their ability to predict user needs accurately and respond correctly over time.

Amazon Echo

Amazon Echo is a product line of hands-free speaker and virtual assistant devices that interact with an end user via the Amazon Alexa cloud-based voice service. Echo devices connect to the Alexa service via the internet. Using artificial intelligence (AI) and deep learning technology, Alexa enables an Echo device to "listen" for user commands to perform a multitude of tasks, including playing music, answering questions, creating and editing to-do lists and setting a timer or alarm.

Amazon released its first-generation Echo in 2015; the 9.3-inch-tall, cylindrical speaker included seven microphones. Amazon's second-generation Echo speaker came in a slightly smaller cylindrical design.The Amazon Echo product line now includes a number of devices, including the Echo Dot, Echo Plus and Echo Tap. Three other Echo devices -- Amazon Echo Show, Amazon Echo Spot and Amazon Echo Look -- add video display capabilities to the baseline Echo features.

Amazon Echo and Alexa

A business or developer can create voice-based applications, called Alexa skills, for an Echo device. The end user interacts with these skills on the device to request information -- such as the weather forecast, in the example above -- or to perform a variety tasks, such as order a product from a specific retailer. Echo supports a variety of skill types, including games and trivia, smart-home services, news, sports and weather.

The Alexa Skills Kit provides the tools and educational material to enable developers to create and hone skills. An end user can also browse skills via the internet or Alexa mobile app, then enable one with a voice request.

Alexa's deep learning capabilities enable an Echo device to grow its knowledge base and learn more about the end user through continued interaction. For example, the product can adapt to speech patterns, vocabularies, accents and personal preferences. Multiple end users can interact with a single Echo device, and Alexa can create an acoustic profile to identify different voices by name.

The launch of "The Inspection Chamber" by the BBC in 2017 was a landmark moment for AI-enabled interactive entertainment. By combining the classic radio drama format with the power of voice-based AI technology, the show provided a unique and immersive experience for listeners of smart home devices.

One of the key features of the show was its interactivity, which allowed listeners to actively engage with the story and influence its outcome through their voice commands. This level of personalization made the experience more engaging and enjoyable for the user, as they felt like they had a direct impact on the narrative.

Another notable aspect of the show was its use of AI technology to understand and respond to the user's voice commands. The chatbots use natural language processing (NLP) and machine learning algorithms to interpret and respond to a wide range of voice commands, making the experience feel more natural and intuitive for the user.

Google Assistant

Google Assistant is Google's voice assistant. When it launched, Google Assistant was an extension of Google Now, designed to be personal while expanding on Google's existing "OK Google" voice controls.Originally, Google Now smartly pulled out relevant information for you. It knew where you worked, your meetings and travel plans, the sports teams you liked, and what interested you so that it could present you with information that mattered to you.

Google Assistant is available on Android phones, with all recent models offering the AI system. Even devices that offer another AI system, like Samsung's Bixby, also offer Google Assistant. Essentially, if your phone has Android with GMS (Google Mobile Services), your phone has Google Assistant - so that doesn't include Huawei devices.

It's possible to have Assistant respond to you even when your Android phone is locked too if you opt-in through your settings and you can also opt-in to see answers to personal queries too.

Google Assistant will:

- Control your devices and your smart home
- Access information from your calendars and other personal information
- Find information online, from restaurant bookings to directions, weather and news
- Control your music
- Play content on your Chromecast or other compatible devices
- Run timers and reminders
- Make appointments and send messages
- Open apps on your phone
- Read your notifications to you
- Real-time spoken translations
- Play games

Continued Conversation means you don't have to say "Hey Google" for follow-up requests. Instead, once you've started talking to Google, it listens for a response without needing a trigger phrase all the time. Google can also recognize voice profiles for different people, so it knows who is talking to it and can tailor the responses accordingly. You can also ask for multiple things at the same time.

BBC To Launch AI-Enabled Interactive Radio Show For Amazon Echo And Google Home Chatbots

Our love affair with Alexa, Siri and all the other speaking devices has innovators in many industries dreaming up ways to deliver similar technology to their clients or create customer experiences that capitalize on this capability. Spoken interfaces seem to be what people crave and the BBC's Research & Development professionals have jumped in full throttle to deliver the capability for a two-way spoken conversation with their listeners.

The BBC's initiative is known as Talking with Machines. This project puts resources to work to "explore the possibilities of these devices and platforms in terms of content, interaction design, and software development patterns." The BBC aims to be able to support the technology that already exists as well as set the foundation for what is to come. Their goals are to develop a device-independent platform to support spoken interfaces and allow them to play well with Siri, Alexa or whomever joins them in the future as well as build the internal expertise within the BBC around spoken-interface technology.

Additionally, the BBC research and development team is brainstorming and experimenting with all the interaction and content platforms that two-way communication on speaking devices would allow.

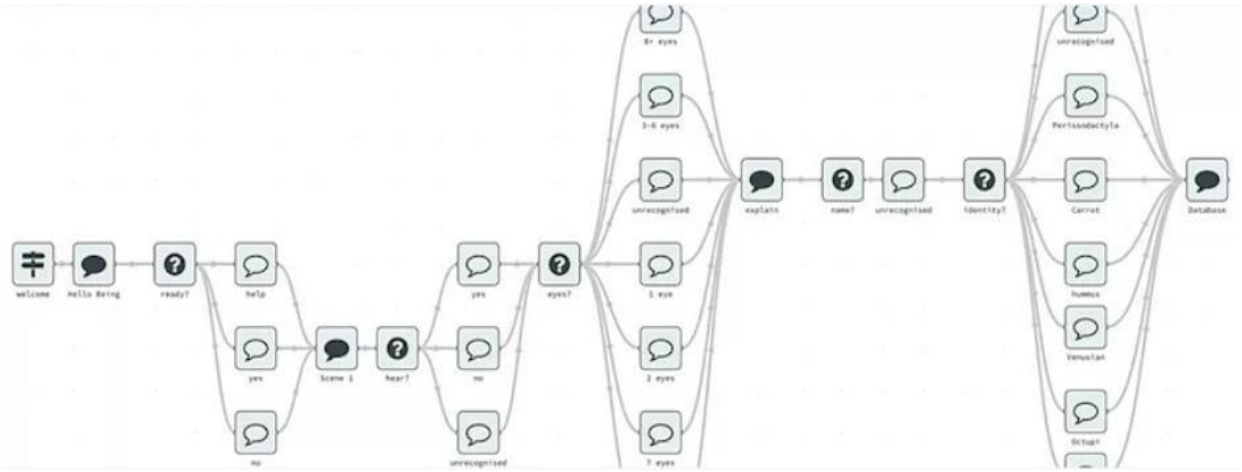
Interactive Radio

What differentiates the Talking with Machines initiative is that the focus is on spoken interfaces, while other projects in the organization are text focused. The team is learning from and leveraging the insights that others had with general conversational UI.

One of the BBC's first publicly presented experiments from this work is the development of an original interactive audio drama pilot that uses the BBC's "story engine" and was created specifically for voice devices. This engine makes it easy to release the same story on multiple platforms.

The BBC's R&D team has collaborated with audio company Rosina Sound to make an interactive comedy/sci-fi drama that will enable listeners with an Amazon Alexa or Google Assistant smart speaker to play an active part in the storyline. For the time being, the BBC is calling it 'conversational radio'.

The concept for the pilot – titled 'The Inspection Chamber' – was inspired by computer games such as The Stanley Parable and Papa Sangre, as well as authors like Franz Kafka and Douglas Adams, and is the first of its kind to offer interaction through a voice-assistant platform.



The BBC has built two tools - a graphical story editor, which lays out the story and interaction points and maps out the connections between them, and a story server, which takes the 'map' from the editor and keeps track of where users are in the story, via Alexa or Home.

The pilot show will be available on Amazon Alexa speakers, including the Amazon Echo, from today, with support for Google Assistant-powered speakers (such as the Google Home) to follow. The smart speaker's category has exploded over recent months - as their dominant presence at IFA 2017 showed - so the fact that BBC has built a "story engine" that allows it to release the same story across various voice platforms means that early adopters of Apple's Home Pod or Microsoft Cortana-enabled speakers could also get in on the action.

However, for now at least, 'conversational radio' is all systems go.

Conclusion:

In conclusion, the launch of an AI-enabled interactive radio show by the BBC for Amazon Echo and Google Home chatbots holds significant potential for transforming the radio listening experience. By leveraging AI technology, the BBC can offer personalized, interactive, and convenient content to its audience, while also gathering valuable insights for content curation and decision-making.

Name & Sign of Subject In-charge:	**Marks:**	