

Amazon patent application explores activating Alexa without wake word first

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What is a wake word? By now, many are aware of voice assistance and can easily figure out that this is the word that activates your Alexa-enabling device. Well, now Amazon is suggesting something beyond

that, to accommodate easy activation even if you don't say the word first.

[Corinne Reichert](#) is CNET Senior Reporter: "Amazon has filed to patent a method for Alexa to start recording before anyone uses the wake word." Further translation: Wouldn't it be nice to allow users to more naturally communicate with their devices, saying phrases like "Play some music, Alexa" rather than starting each command with "Alexa," as per [AJ Dellinger](#) in *Engadget*.

Jennings Brown spelled it out clearly in *Gizmodo*. "Amazon has envisioned changes to Alexa that would allow the AI to record what users [say](#) before they use the wake-up word, so users don't have to start every command by waking up their robot."

Amazon's envisioned idea was revealed in the discovery of its [patent application](#), titled Pre-Wakeword Speech Processing. The filing date was January 24. Inventors listed were Kurt Piersol and Gabriel Beddingfield.

The patent application was for "A system for capturing and processing portions of a spoken utterance command that may occur before a wakeword. The system buffers incoming audio and indicates locations in the audio where the utterance changes, for example when a long pause is detected. When the system detects a wakeword within a particular utterance, the system determines the most recent utterance change location prior to the wakeword and sends the audio from that location to the end of the command utterance to a server for further [speech](#) processing."

The application was spotted by *BuzzFeed News* on May 23 in an article by Nicole [Nguyen](#).

"Amazon has filed a patent application with the US Patent and

Trademark Office describing a technology that would allow the Echo and other Alexa-enabled devices to capture what you say before a wake word, like 'Alexa,' is uttered."

Gee, that's great. Right? After all, the patent discussion addresses a problem and offers a correction. The patent discussed the drawback in further detail:

"One drawback to this approach, however, is that a user may not always structure a spoken command in the form of a wakeword followed by a command (e.g., "Alexa, play some music"). Instead, a user may include the command before the wakeword (e.g., "play some music Alexa") or even insert the wakeword in the middle of a command (e.g., "play some music Alexa, the Beatles please").

"While such phrasings may be natural for a user, current speech processing systems are not configured to handle commands that are not preceded by a wakeword. Offered is a system to correct this problem. The present system is configured to capture speech that precedes and/or follows a wakeword, such that the speech associated with the command and wakeword can be included together and considered part of a single utterance that may be processed by a system. To perform speech processing with a variable wakeword location, a system may be configured to buffer input speech. As speech is buffered, the system may insert markers or indications in the buffered speech that are likely to correspond to subject changes..."

Um, not great tidings, according to commentary elsewhere. Alarm bells apparently deafened all talk about correcting a problem, as reaction could be described as, whoa, the voice assistant tech is to start recording audio before users say the wake word?

Amazon Echo devices could one day capture, process, and record audio

spoken before the wake word for commands for Alexa, and life with Alexa would change if this proposed capability in voice recognition technology were ever to materialize.

"Currently," wrote Nguyen, "Alexa devices only record and send audio to Amazon servers if a wake word is detected."

Amazon, by this patent filing suggestion, was looking to capture and process portions of a spoken utterance command that may occur before a wake word.

It may be premature, however, to worry over what a patent by Amazon could mean for privacy. *Buzzfeed News*: "The spokesperson added that Amazon files many patent applications that are not ultimately implemented into consumer-facing products, and that patents do not necessarily reflect 'current or near-future states of products and services.'"

The process could be configured to store between 10 and 30 seconds at a time, said Rob Thubron in *TechSpot*.

Dellinger had a comment about the limit: "If the [patent](#) ever were to make its way to your Alexa, the recording limit still may not be enough for some people." Thubron similarly [commented](#) that "the idea of a smart speaker that is constantly recording conversations" was "unlikely to sit well with owners."

More information: Pre-Wakeword Speech Processing, [United States Patent Application 20190156818](#)

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