Improved Service for your Users

Patent Package

available for sale or licensing

(symbolic image)

Conversations, radio, and television should not trigger unwanted responses!

Activation phrase (Example)

“ *Hey Godid*, *< TV sound only >* ”

~~**Smart speaker:** “I’m sorry, I don’t understand the question.”~~

No response if voice command is not relevant!

Recognition error of activation word:
Activation word is “Abbie” (not Abigail)

“ *Abigail, are you leaving now?* ”

~~**Smart speaker:** “ '*Are you leaving now*' is a pop song by Elizabeth Tan from 2016.”~~

No response if activation word is recognized in error!

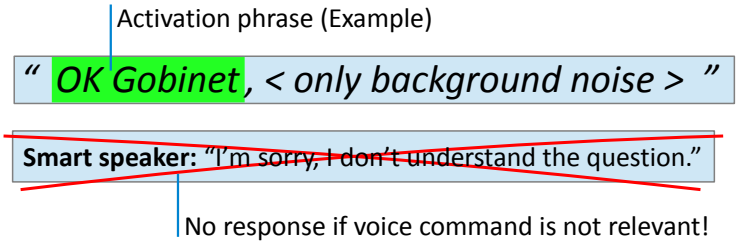
Example 1
The smart speaker detects the activation word or phrase “*Hey Godid*.” The advanced voice processing system in the cloud realizes that only the sound of a TV set is following the activation word, and the smart speaker does not output an unsought voice response. Instead, an optical signal may be output (LED, optional).

Example 2
The smart speaker triggers voice activation because for the local system, the beginning of “*Abigail*” sounds like the activation word “*Abbie*.” However, the advanced voice recognition system in the cloud realizes that the activation word has been recognized in error (**cloud-based wake word verification**), and the smart speaker does not output a voice response.

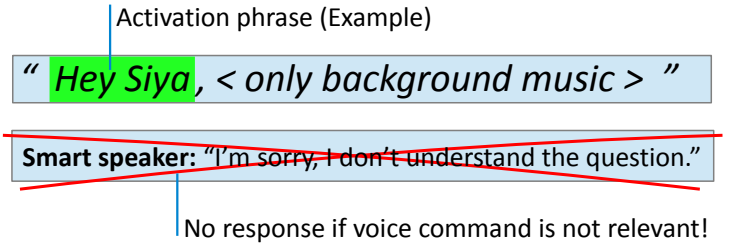
Patent Package

Voice Activation

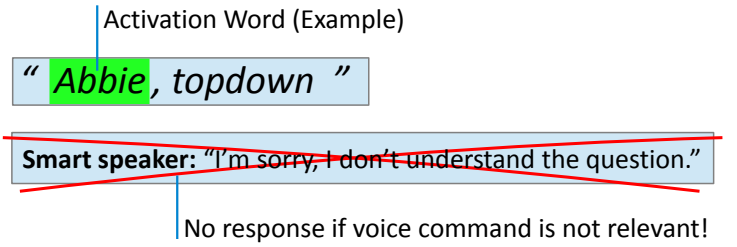
No voice response if voice command is not relevant!



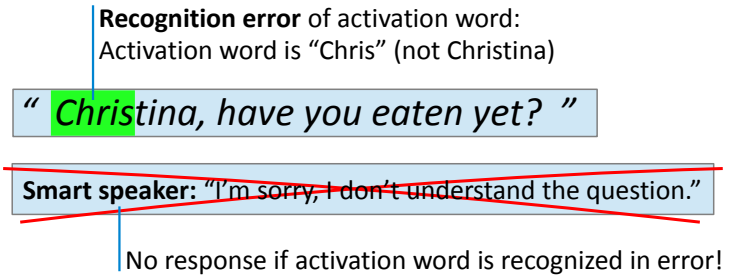
Example 3
The smart speaker detects the activation word or phrase “*OK Gobinet*.” The processing system in the cloud realizes that only background noise is following the activation word and does not output an unnecessary voice response. Instead, an optical or acoustic signal may be output (LED or beep, optional).



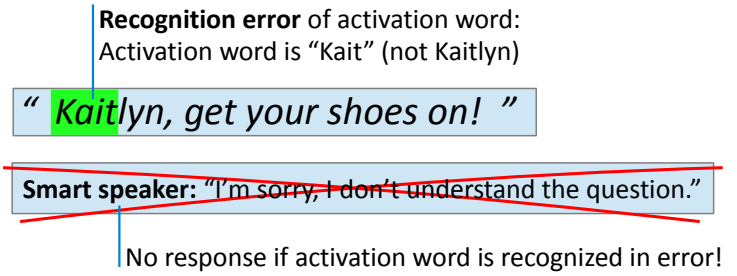
Example 4
The smart speaker detects the activation word or phrase “*Hey Siya*.” The processing system in the cloud realizes that only background music is following the activation word and does not output a disturbing voice response. Instead, an optical signal may be output (LED, optional).



Example 5
The smart speaker detects the activation word “*Abbie*.” However, since the utterance “*topdown*” does not make sense without any additional context, the virtual assistant in the cloud decides not to issue a voice response. Instead, an optical or acoustic signal may be output (LED or beep, optional).

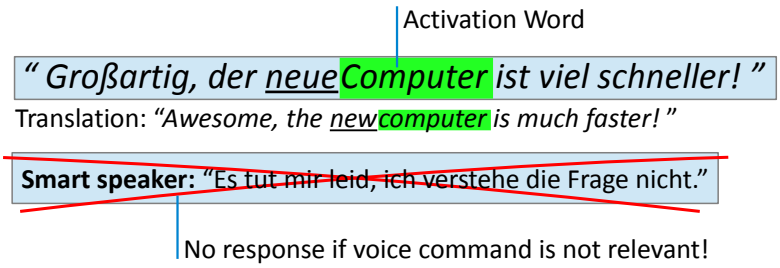


Example 6
The smart speaker triggers voice activation because for the local system the beginning of “*Christina*” sounds like the activation word “*Chris*.” However, the advanced voice recognition system in the cloud realizes that the activation word has been recognized in error (**cloud-based wake word verification**), and the smart speaker does not output a voice response.

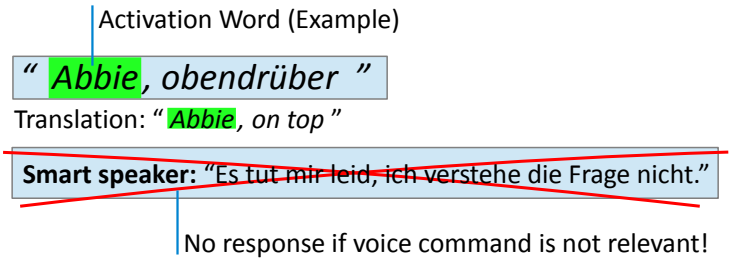


Example 7
The smart speaker triggers voice activation because for the local system the beginning of “*Kaitlyn*” sounds like the activation word “*Kait*.” However, the advanced voice recognition system in the cloud realizes that the activation word has been recognized in error (**cloud-based wake word verification**), and the smart speaker does not output a voice response.

German-language Examples:



Example 8
The smart speaker detects the activation word “*Computer*.” The processing system in the cloud realizes that the utterance is not directed to the smart speaker (e.g., **cloud-based wake word verification**) and does not output an unsought response such as “*I’m sorry, I don’t understand the question*.”



Example 9
The smart speaker detects the activation word “*Abbie*.” However, since the utterance “*obendrüber*” does not make sense without any additional context, the virtual assistant in the cloud decides not to issue a voice response. Instead, an optical or acoustic signal may be output (LED or beep, optional).

Activation word at the beginning, **at the end**, or **within** the utterance

“ Turn on the light, Abbie. ”

Smart speaker: “OK”

Activation Word (Example)

“ Dim the light, Abbie, fifty percent. ”

Smart speaker: “OK”

Activation Word (Example)

“ Play some music, Abbie; songs from the nineties. ”

Smart speaker plays music from the nineties.

Activation Word (Example)

(symbolic image)

Activation word at the beginning, **at the end**, or **within** the utterance

" Give me the weather forecast, Abbie, for the weekend. "

Activation Word (Example)

Smart speaker: "At the weekend it will be mostly dry, with temperatures around 23 degrees."

" What time is it, Abbie? "

Activation Word (Example)

Smart speaker: "It's twelve forty-five"

" Set the alarm clock, Abbie, every Friday at 8:00 a.m. "

Activation Word (Example)

Smart speaker: "OK, I'll wake you up every Friday at 8:00."

" I still have to mow the lawn; Abbie, put it on my to-do list. "

Activation Word (Example)

Smart speaker: "Ok, I put lawn mowing on your to-do list."

" Hey, anyone know a good recipe for chicken? … Abbie? "

Activation Word (Example)

Smart speaker: "Here is a recipe for cajun spiced chicken with quinoa that takes 15 minutes: (...)"

More flexibility for your users! By buffering the incoming audio (from the microphone) on the local system, the virtual assistant has access to the entire utterance or command including the beginning spoken before the activation word. In the first example, "*Give me the weather forecast*" has been spoken before the activation word "*Abbie*," and because of the local buffer (e.g., a ring buffer), the whole utterance can be streamed to the voice recognition system in the cloud for processing including the first part, "*Give me the weather forecast*," the activation word, "*Abbie*," and the second part, "*for the weekend*." The beginning of the utterance or command can be detected by means of a speech pause or silence.

This gives your users more flexibility in articulating a statement but still preserves their privacy because the audio is only buffered locally.

The present patent package can be used for all types of virtual assistants including smart speakers, smart TVs, smartphones, navigation and entertainment systems in cars, and more. For more information, visit www.inodyn.com

" Milk, butter, and a toothbrush; Abbie, add it to my shopping list. "

Activation Word (Example)

Smart speaker: "I have added milk, butter, and toothbrush to your shopping list."

(symbolic image)

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