

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Samsung Electronics Co., LTD and Samsung Electronics America, Inc.,  
Petitioners

v.

SpeakWare, Inc.,  
Patent Owner

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Case IPR2019-01147

U.S. Patent No. 6,397,186

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**Petition for Inter Partes Review of  
U.S. Patent No. 6,397,186**

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        [21p] “An audio signal activated control system for controlling one or more appliances, said control system comprising:” .....23

        [21a] “a microphone for receiving audio signals and converting said audio signals to electrical signals” .....24

        [21b] “a speech recognition circuit including a processor” .....27

[21c] “and having a plurality of modes of operation including a speech recognition mode . . . wherein in said speech recognition mode said speech recognition circuit converts said electrical signals to electrical representative signals and said processor decodes said electrical representative signals” .....31

[21d] “and a low power sound activation mode, . . . and wherein in said sound activation mode said processor is placed in a low power state;” .....36

[21e] “a sound activation circuit configured for determining if the amplitude of said electrical signals exceeds a predetermined threshold and causing said speech recognition circuit to switch automatically from said sound activation mode to another of said plurality of said modes of operation;” .....37

[21f] “said speech recognition circuit configured for generating first control signals in said speech recognition mode if said electrical signals represent one or more predetermined audible commands,” .....44

[21g] “said speech recognition circuit configured for switching automatically from said speech recognition mode to another of said plurality of said modes of operation under predetermined conditions; and” .....45

[21h] “an appliance control circuit configured for receiving said first control signals from said speech recognition circuit and generating second control signals to cause one or more appliances to perform one or more functions associated with said first control signals.” .....48

**F.** Claim 23 — “The audio signal activated control system as recited in claim 21, wherein said appliance control circuit is configured to wirelessly transmit said second control signals to said one or more appliances.” .....50

**G.** Claim 24 — “The control system as recited in claim 23, wherein said second control signals are RF signals.” .....51

**H.** Claim 25 — “The control system as recited in claim 23, wherein said second control signals are infrared signals.” .....51

- I.** Claim 26 — “The audio signal activated control system as recited in claim 21, wherein said sound activation circuit is configured to cause said speech recognition circuit to switch automatically from said sound activation mode to another of said plurality of said modes of operation, wherein another of said plurality of said modes of operation is said speech recognition mode.” .....51
- J.** Claim 28 — “The audio signal activated control system as recited in claim 21, wherein said low power state of said processor is a sleep state.” .....51
- K.** Claim 29 — “The audio signal activated control system as recited in claim 21, wherein said speech recognition circuit is configured for switching automatically from said speech recognition mode to another of said plurality of said modes of operation under predetermined conditions, wherein another of said plurality of said modes of operation is said sound activation mode.” .....52
- L.** Claim 30 — “The audio signal activated control system as recited in claim 21, wherein said predetermined conditions include a predetermined period of time.” .....52
- M.** Claim 31 — “The audio signal activated control system as recited in claim 21, wherein said predetermined conditions include a period of time that is based upon the results of determining if said electrical signals represent said predetermined audible commands.” .....53
- N.** Claim 32 — “The audio signal activated control system as recited in claim 21, wherein said predetermined conditions are based upon the results of determining if said electrical signals represent said predetermined audible commands.” .....54
- O.** Claim 33 — “The audio signal activated control system as recited in claim 32, wherein said results include one or more predetermined errors detected during said speech recognition mode.” .....54
- P.** Claim 34 — “The audio signal activated control system as recited in claim 21, wherein said control system further comprises a memory for storage of data associated with said second control signals.” .....56
- Q.** Claim 35 — “The audio signal activated control system as recited in claim 21, wherein said control system further comprises a memory for

storage of data associated with a plurality of said second control signals for controlling an appliance.” .....57

**R.** Claim 36 — “The audio signal activated control system as recited in claim 21, wherein said control system further comprises a memory for storage of data associated with a plurality of said second control signals for controlling a plurality of said appliances.” .....57

**S.** Claim 39 — “The audio signal activated control system as recited in claim 21, wherein said control system further comprises a signal circuit for enabling said electrical signals to be in communication with said speech recognition circuit in said speech recognition mode and for enabling said electrical signals to be in communication with said sound activation circuit in said sound activation mode.” .....58

**T.** Claim 40 — “The audio signal activated control system as recited in claim 39, wherein said signal circuit is further configured for detecting when said speech recognition circuit is in said speech recognition mode and disabling said communication between said electrical signals from said microphone and said sound activation circuit.” .....60

**U.** Claim 41 .....61

[41p] “A method for providing hands-free control of appliances, comprising:” .....61

[41a] “providing a speech recognition system having a speech recognition mode wherein a processor recognizes representations of audible signals as corresponding to predetermined audible commands;” .....62

[41b] “configuring said speech recognition system to have a low power sound activation mode wherein said processor is in a low power state;” .....67

[41c] “monitoring said audible signals to detect if the amplitude of said audible signals exceeds a predetermined threshold” .....67

[41d] “enabling said speech recognition system to switch automatically from said sound activation mode to said speech

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