UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

SOUNDCLEAR TECHNOLOGIES LLC,
Patent Owner.

Case No. IPR2025-01123
U.S. Patent No. 11,069,337

Title: Voice-Content Control Device, Voice-Content Control Method, and Non-Transitory Storage Medium

---

PETITION FOR *INTER PARTES* REVIEW

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Statutes

Regulations

LIST OF EXHIBITS

Exhibit	Description
Ex. 1001	U.S. Patent No. 11,069,337 to Naganuma ("the '337 patent")
Ex. 1002	File History of the '337 Patent
Ex. 1003	Declaration of Stuart Lipoff ("Lipoff")
Ex. 1004	Curriculum Vitae of Stuart Lipoff
Ex. 1005	U.S. Patent Application Publication No. US 2018/0122361 A1 to Silveira Ocampo ("Ocampo")
Ex. 1006	U.S. Patent Application Publication No. US 2014/0303971 A1 to Yi et al. ("Yi")
Ex. 1007	U.S. Patent Application Publication No. US 2014/0025383 A1 to Dai et al. ("Dai")
Ex. 1008	*SoundClear Technologies LLC v. Google LLC*, Case No. 1:24-cv-01281, Complaint for Patent Infringement (E.D. Va. July 25, 2024)
Ex. 1009	*SoundClear Technologies LLC v. Google LLC*, Case No. 3:24-cv-00540, Order Granting Motion to Stay (E.D. Va. Apr. 18, 2025)
Ex. 1010	U.S. Patent No. 8,468,244 B2 to Redlich et al.
Ex. 1011	U.S. Patent No. 10,089,287 B2 to Rebstock et al.
Ex. 1012	U.S. Patent No. 10,552,617 B2 to Han et al.
Ex. 1013	U.S. Patent No. 10,853,570 B2 to Matichuk et al.
Ex. 1014	U.S. Patent Application Publication No. 2017/0358301 A1 to Raitio et al.

I. Introduction

Petitioner Google LLC requests review and cancellation of claims 1-5 of U.S. Patent No. 11,069,337 ("the '337 patent") (Ex. 1001). The '337 patent relates to a voice-content control device that generates responses to spoken user commands based on an analysis of the user's voice. Ex. 1001, Abstract, 1:48-64. In particular, the voice-content control device will adjust the content and volume of its responses based on whether the user whispered (or did not) based on the user's distance from the device. Ex. 1001, 1:29-42, claim 1.

These features were known before the '337 patent's earliest claimed priority date. Primary reference Ocampo, for example, discloses a device for dynamic text-to-speech (TTS) provisioning that automatically controls voice output and volume in response to user commands based on user proximity and voice features like whispering. *See infra* Section VI.A. And secondary reference Yi similarly discloses a mobile terminal that restricts the output and volume of its vocalized responses to user commands "when the voice includes an attribute of whispering" or "the degree of proximity is smaller than a preset range," to account for user privacy. Yi, 1:48-64; *see also infra* Section VI.B. Together, Ocampo and Yi teach the same techniques as claimed in the '337 patent for suppressing "influence of the output voice to people other than the user" when responding to user commands.

Ex. 1001, 1:39-42. The Board should therefore cancel claims 1-5 over Ocampo and Yi.

II. Statement of Precise Relief Requested

Petitioner Google LLC requests *inter partes* review of claims 1-5 of the '337 patent, assigned to Patent Owner SoundClear Technologies LLC, and cancellation of the same based on the following grounds:

Grounds	Claims	Basis	Prior Art
1	1-5	§ 103	Ocampo and Yi

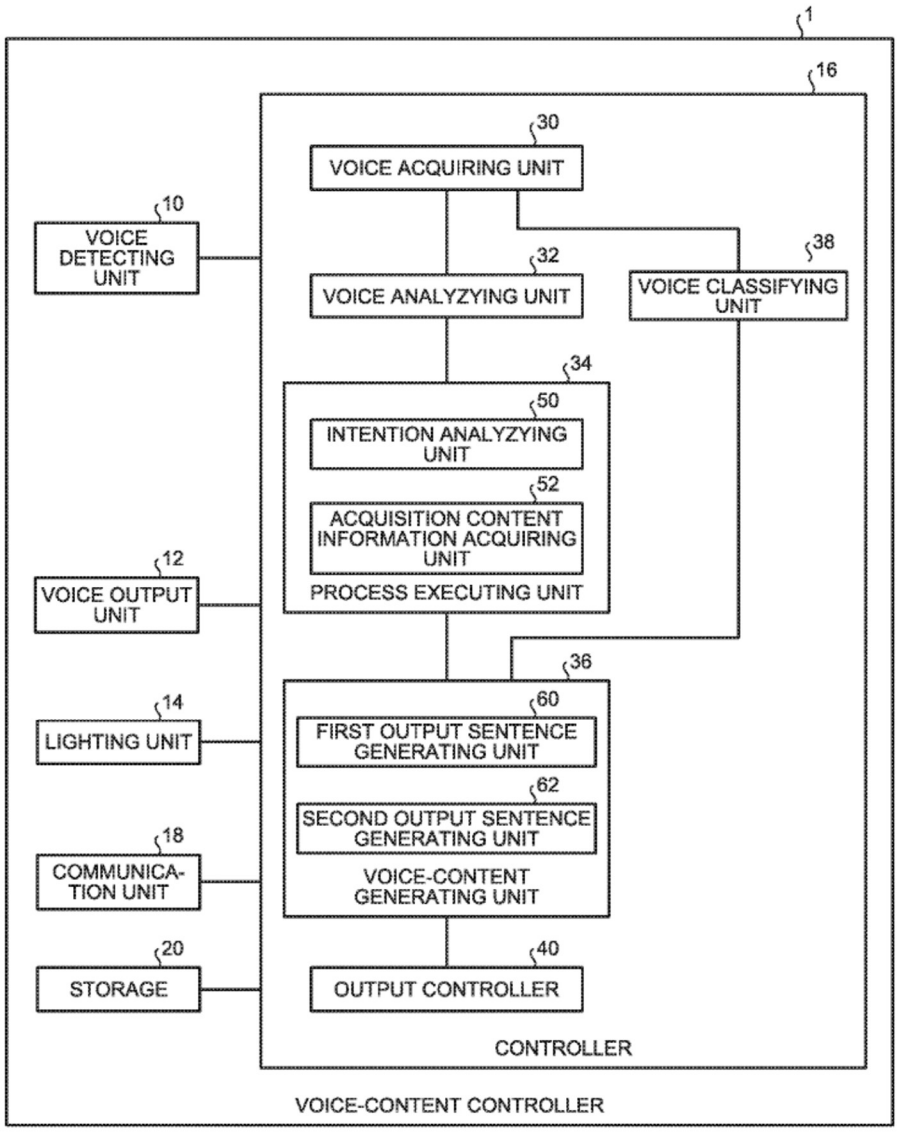
III. The '337 Patent (Ex. 1001)

A. Overview

The '337 patent, filed on March 4, 2019, and issued on July 20, 2021, claims priority to Japanese Patent Application No. JP2018-039754 filed March 6, 2018. Ex. 1001, cover, (22), (30), (45).[1] The '337 patent relates to a "voice-content control device" that generates responses to spoken user commands based on an analysis of the user's voice. Ex. 1001, Abstract, 1:48-64. Figure 2 below illustrates a voice-content control device for receiving the spoken user command, processing it to determine voice attributes and identify responsive information, and generating an audible response to the command. Ex. 1001, Abstract, FIG. 2.

[1] Petitioner evaluates the claims under AIA standards.

FIG.2



Ex. 1001, FIG. 2.

The device includes a "voice detecting unit 10" configured to receive a user's spoken "wishes" and a "controller 16" comprised of various units that allow the device to: extract "intention information" that "indicates what kind of processing is intended by the user H to be performed"; classify the voice as a "first

voice" or "second voice," e.g., a whisper or non-whisper, based on the user's distance; and generate an output based on the voice's classification and the user's "wish[]." Ex. 1001, 3:13-59, 4:15-5:15, 7:51-8:34, 8:60-10:18, FIGS. 5-6.

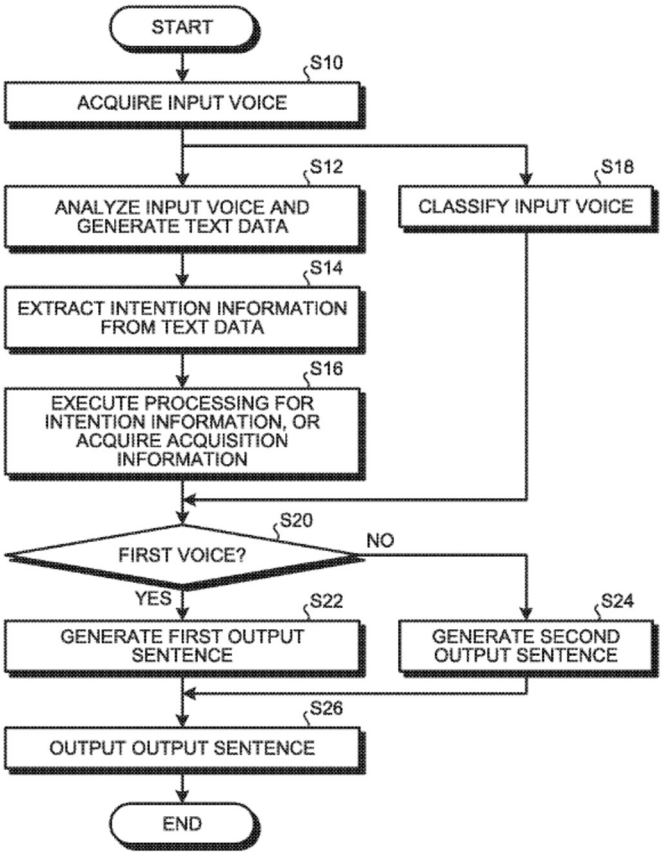
For example, an "intention analyzing unit 50" may "extract[] the intention information" from text data corresponding to the user's voice command using "natural language processing" (Ex. 1001, 4:31-33, FIG 6 (S10, S12, S14)); a "voice classifying unit 38" may classify a user's voice "V1" as a "first voice V1A when the voice V1 is determined not to be a whisper" and "second voice V1B when the voice V1 is determined to be a whisper" (Ex. 1001, 7:51-63); and an "acquisition content information acquiring unit 52" to execute the "processing required by the user" (Ex. 1001, 6:24-57).

The '337 patent also describes a "voice-content generating unit 36" for generating an output sentence that responds to the user command using a "first output sentence" or a "second output sentence," the latter omitting information as compared to the first output sentence depending on whether the user's voice is classified as voice V1A (non-whisper) or V1B (whisper). Ex. 1001, 7:51-63, 9:38-57. To determine whether the user whispered a command, "the distance [between the user and device] can be used as a feature value to perform the classification to the first voice V1A and the second voice V1B." Ex. 1001, 8:20-26.

"By detecting the whispered voice to generate the second output sentence, the voice-content control device 1 can determine whether the voice-content control device 1 is in a state of influencing any person other than the user H adequately, and suppress the influence adequately." Ex. 1001, 17:11-18. Therefore, the "output controller 40" converts output sentences into voice with "different sound volumes" depending on the output sentence. Ex. 1001, 13:50-14:2.

Figure 5 illustrates a process for generating a first or second output sentence based on voice classification and user intent. Ex. 1001, FIG. 5, 14:5-60.

FIG.5



Ex. 1001, FIG. 5.

B. Prosecution History

The ’337 patent began as U.S. Application No. 16/290,983, filed March 4, 2019, with a claim of priority from JP Application No. JP2018-039754 filed March 6, 2018. *See* Ex. 1001, cover, (21)-(22), (30); Ex. 1002, 330-336. The Office initially rejected then-pending claims 1 and 3-6 as anticipated, and claim 2 as obvious, in view of the prior art of record. *See* Ex. 1002, 195-204. In response, the Applicant amended the independent claims to include an output controller that alters the volume between different spoken response sentences, and argued that the prior art lacked the newly claimed subject matter. Ex. 1002, 183, 186-191. The Office thereafter issued a Final Office Action rejecting claims 1-6 as obvious over additional prior art. Ex. 1002, 160-176. The Applicant then amended the claims to include a proximity sensor and to require that voice classification (i.e., as first voice or second voice) occur based on the distance between the user and device. Ex. 1002, 153-159. The Office allowed the claims as amended. Ex. 1002, 96-102.

IV. Level of Ordinary Skill

A person of ordinary skill in the art (“POSITA”) in the field of the ’337 patent would have had at least a bachelor’s degree in electrical engineering or related discipline, and at least two years of experience in voice or audio processing. Lipoff, ¶56. Relevant work experience can substitute for formal education and additional education could substitute for work experience. Lipoff, ¶56.

V. Claim Construction

The Board construes claims using the standards set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Claims should be construed only to the extent necessary to resolve a controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). Here, no terms require express construction because the prior art's disclosures are commensurate with the '337 patent's disclosures, and thus, the prior-art mappings cover the claims under any construction consistent with *Phillips*.[2] Petitioner analyzes the claim terms under their plain and ordinary meaning in light of the specification and prosecution history. Lipoff, ¶57.

VI. Overview of the Prior Art

A. Overview of Ocampo (Ex. 1005)

Ocampo, filed on November 1, 2016, and published on May 3, 2018, qualifies as prior art to the '337 patent under 35 U.S.C. § 102(a)(1). Ocampo, cover, (22), (43). Ocampo discloses a user device having dynamic text-to-speech (TTS) provisioning that automatically controls voice output in response to user commands. Ocampo, Abstract. Ocampo classifies the voice according to user

[2] Petitioner may raise indefiniteness and/or claim constructions in other forums. Such challenges do not preclude the Board's ability to resolve patentability.

attributes, including the voice characteristics indicating temperament (e.g., whispering) and proximity to the microphone, and selects audio output based on the classification (e.g., whispering classification) to adjust the volume of voiced output responding to the user. Ocampo, [0003], [0060]-[0065], [0087], [0088], FIG. 5.

User attributes include various voice features, such as pitch, tone, frequency, and amplitude, which are extracted from the user's voice signals. Ocampo, [0005]-[0006]. Ocampo's user device also accounts for the user's proximity to the device, determined through audio signals received by multiple microphones and sensor data. Ocampo, [0061]-[0063]. The device classifies the user's likely mood based on these user attributes, allowing it to tailor the audio output accordingly. Ocampo, [0065]. For example, Ocampo's device identifies that the user has whispered close to the device by detecting low volume and pitch in the user's voice to adjust the responsive audio output accordingly. Ocampo, [0035], FIGS. 2A, 4.

For example, the user device dynamically adjusts the volume and tone for the audio output responding to a user command based on the user's proximity. Ocampo, [0009]-[0011], [0023]-[0024], [0028]. When the user is close to the device and in a quiet environment, for example, the system outputs the audio responding at a lower volume. Ocampo, [0027], [0038], [0075], FIG. 2A.

Conversely, if the user is farther away or in a noisy environment, the volume is increased. Ocampo, FIGS. 1B, 2B.

Ocampo is analogous art to the '337 patent because it is in the same field of endeavor as the '337 patent: speech processing. *Compare* Ocampo, Abstract, *with* Ex. 1001, Abstract; Lipoff, ¶¶64, 70. Furthermore, Ocampo is directed to the same problem as the '337 patent: analyzing voice input commands to generate responses. *Compare* Ocampo, Abstract, *with* Ex. 1001, Abstract; Lipoff, ¶¶64, 70.

B. Overview of Yi (Ex. 1006)

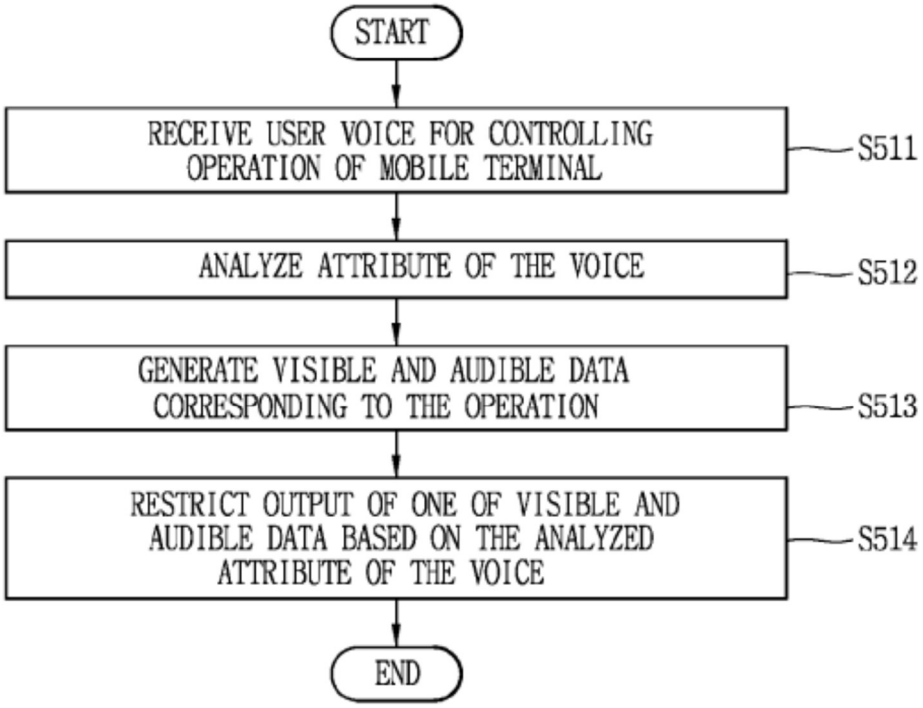
Yi, filed on January 15, 2014, and published on October 9, 2014, also qualifies as prior art to the '337 patent under 35 U.S.C. § 102(a)(1). Yi, cover, (22), (43). Yi discloses a mobile terminal that restricts the output and volume of its vocalized responses to user commands when "the voice is sorted as . . . whispering" and "the degree of proximity is smaller than a preset range," to account for user privacy. Yi, Abstract, [0187]-[0188].

Yi explains that the mobile terminal includes "an analyzing unit which analyzes an attribute of a voice input through the microphone 122." Yi, [0167]. Yi's mobile terminal analyzes the voice input based on various criteria to identify attributes of the voice, including whisper status and proximity to the microphone. Yi, [0164], [0169], [0167], [0170]-[0171], [0182], [0184], [0253], FIGS. 4 (S512, S513), 5B (S512c). Yi also explains that "a proximity sensor 141 may be arranged

at an inner region of the mobile terminal" using various technologies to sense the presence, absence, or approach of the user with respect to the mobile terminal. Yi, [0085]-[0091].

Yi also discloses "analyz[ing] the meaning of the user's voice 610, and control[ling] the mobile terminal to execute an operation according to the voice 610." Yi, [0164]. This includes "generat[ing] visible and audible data based on the voice 610." Yi, [0164].

FIG. 4



Yi, FIG. 4.

For example, where a user asks, "What's the weather like today?" Yi's controller 180 "may execute a function for providing information related to today's weather" and "generate data to be provided to the user among the [responsive] information." Yi, [0164], FIG. 5A. Moreover, the mobile device "may control the output unit to restrict (limit) an output" of visible and audible data based on the user's voice. Yi, [0167], FIG. 4 (S514). This includes omitting information from the voiced response to the user's command and controlling its volume. Yi, [0186]-[0188], [0221], FIG. 5A.

Yi is analogous art to the '337 patent because it is in the same field of endeavor as the '337 patent: speech processing. *Compare* Yi, Abstract, *with* Ex. 1001, Abstract; Lipoff, ¶¶69, 70. Furthermore, Yi is directed to the same problem as the '337 patent: analyzing voice input commands to generate responses. *Compare* Yi, Abstract, *with* Ex. 1001, Abstract; Lipoff, ¶¶69, 70.

C. Motivation to Combine

In addition to the rationale to combine specific features of the references (*see infra* Section VII.A.1.g.ii [1f.ii]), Petitioner supplies the following rationale for combining the prior art. A POSITA would have been motivated to combine Ocampo and Yi and would have had a reasonable expectation of success in doing so. Lipoff, ¶71. Both Ocampo and Yi relate to user devices for audibly responding to user voice commands. *See* Lipoff, ¶71; Ocampo, Abstract, [0001]-[0003]; Yi,

Abstract, [0010]. Ocampo describes using text-to-speech (TTS) functionality and controlling the audio output of information responsive to a user's voice command (Ocampo, Abstract, [0002]- [0003]), which a POSITA would have understood to be functionally equivalent to revising "audible data" generated in response to the user's voiced command in Yi. Yi, [0008]. Both references also account for user privacy when generating audible responses to the user. Lipoff, ¶71. Indeed, Ocampo describes converting responsive text information into an audio signal at a volume dependent on the user's distance from the device (Ocampo, [0011], [0023]-[0024], [0071]), and Yi similarly describes adjusting the volume level of sound signals converted from responsive text based on the user's proximity to the microphone (Yi, [0166], [0180], [0188]). Lipoff, ¶71.

Given these similarities, a POSITA in possession of Ocampo would have been motivated to find references like Yi to investigate other techniques for discreetly voicing a response to a user command. Lipoff, ¶72. For example, Ocampo explains that privacy policies may be implemented "to maintain user privacy and not output information to third parties" (e.g., Ocampo, [0071]), and a POSITA would have understood that privacy considerations other than volume—such as omitting extraneous information from the response—can further facilitate the discreet voicing of audible responses to user commands. Lipoff, ¶72. Indeed, Yi notes that restricting the output of audible data "prevent[s] data from being

transferred even to another user" in quiet settings where the user has whispered a command, recognizing that "a user transfers a voice in [the] form of whispering when the user talks to a person close to him/her." Yi, [0170], [0180].

A POSITA would thus have been motivated to incorporate Yi's teachings into Ocampo to provide additional privacy and extend Ocampo's functionality in discreetly responding to a user command. Lipoff, ¶¶73-74. For example, a POSITA would have appreciated the benefit of omitting optional information from a response into Ocampo to extend its privacy options. Lipoff, ¶74. A POSITA would have found it obvious and straightforward to restrict the text-based responses voiced to users to accommodate these privacy techniques. Lipoff, ¶74.

A POSITA would have had a reasonable expectation of success in combining Ocampo and Yi. Lipoff, ¶75. Both references use ubiquitous speech synthesis techniques (e.g., text-to-speech (TTS)) to achieve predictable results (e.g., voicing the text as modified for response). *See, e.g.*, Ocampo, Abstract, [0001]-[0003]; Yi, [0166], [0235]; Lipoff, ¶75. Both references also adjust the volume of responses based on distance to assist with privacy concerns. Lipoff, ¶75. A POSITA would thus have found it obvious to combine Ocampo and Yi, as doing so would merely combine existing elements (e.g., lowering volume and restricting the response based on user proximity) with known methods (e.g., proximity

sensing, TTS, etc.) to yield predictable results (e.g., maintaining user privacy by limiting information exposed to third parties). Lipoff, ¶75.

VII. The '374 Patent Claims Are Unpatentable

A. Ground 1: Ocampo-Yi Renders Claims 1-5 Obvious

1. Independent Claim 1

a. [1pre] A voice-content control device, comprising:

If the preamble is limiting, Ocampo discloses it by describing a user device that automatically controls responses voiced to the user. Ocampo, [0003], [0024], [0028]; Lipoff, ¶76. In particular, Ocampo discloses a "*voice-content control device*" that automatically controls and modifies audio responding to user commands based on multiple factors, including the user's proximity and other voice attributes (i.e., whispered tone). Ocampo, Abstract, [0003]. For example, "[i]n response to receiving a command to provide information to a user, a device retrieves information and determines user and environment attributes including: (i) a distance between the device and the user when the user uttered the query; and (ii) voice features of the user." Ocampo, Abstract. Indeed, Ocampo explains that "TTS operation executed on a user device may automatically control and modify an audio output based on multiple factors[,] including the user's voice . . . ." Ocampo, [0003].

b. [1a] a proximity sensor configured to calculate a distance between a user and the voice-content control device;

Ocampo and Yi disclose [1a]. Ocampo discloses [1a] using classifiers to calculate the distance between a user and user device. Ocampo, [0011], [0060]-[0063]; Lipoff, ¶¶77-80. For example, Ocampo's proximity classifier 514 discloses a "*proximity sensor*" that provides a "proximity indicator" indicating the user's distance from the device based on an analysis of audio signal data from microphones 506 and sensor data from sensors 504. Ocampo, [0003], [0011], [0023], [0028], [0058]-[0059], [0063]-[0064], FIG. 5.

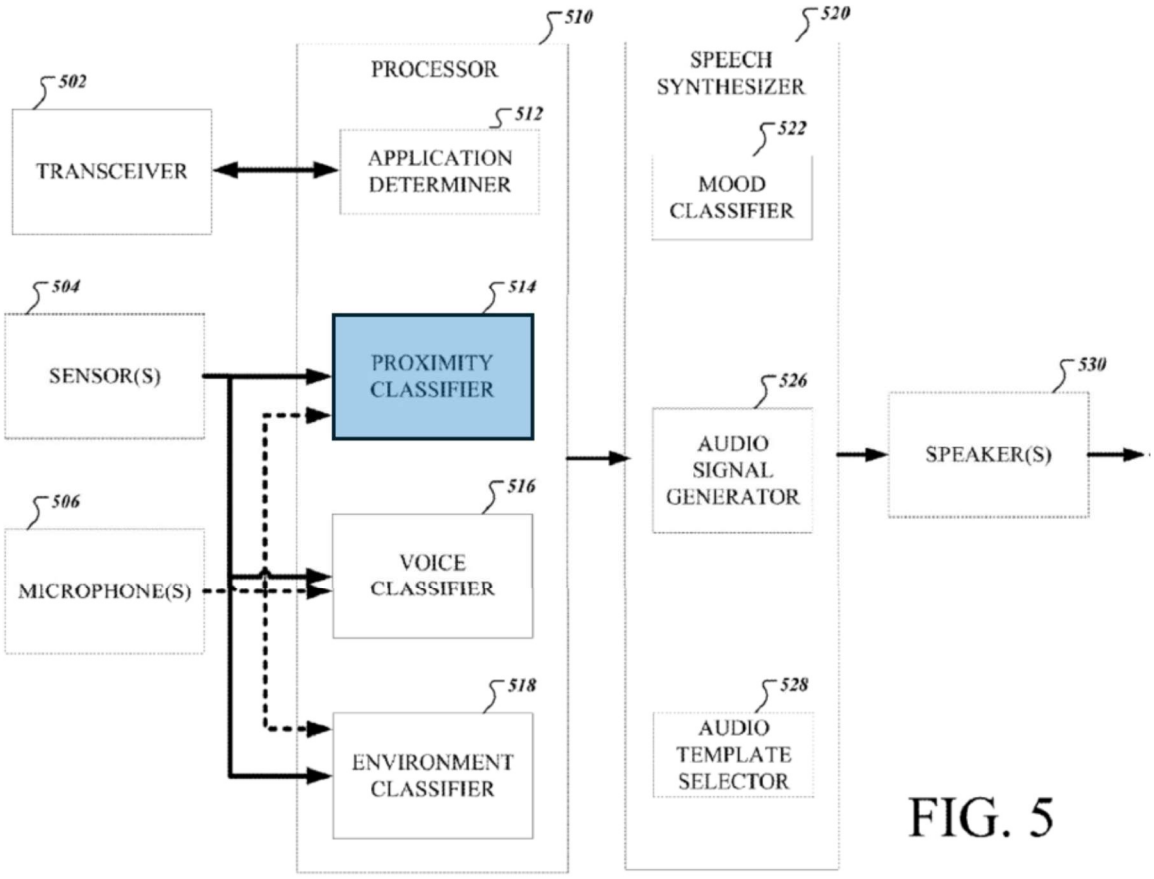


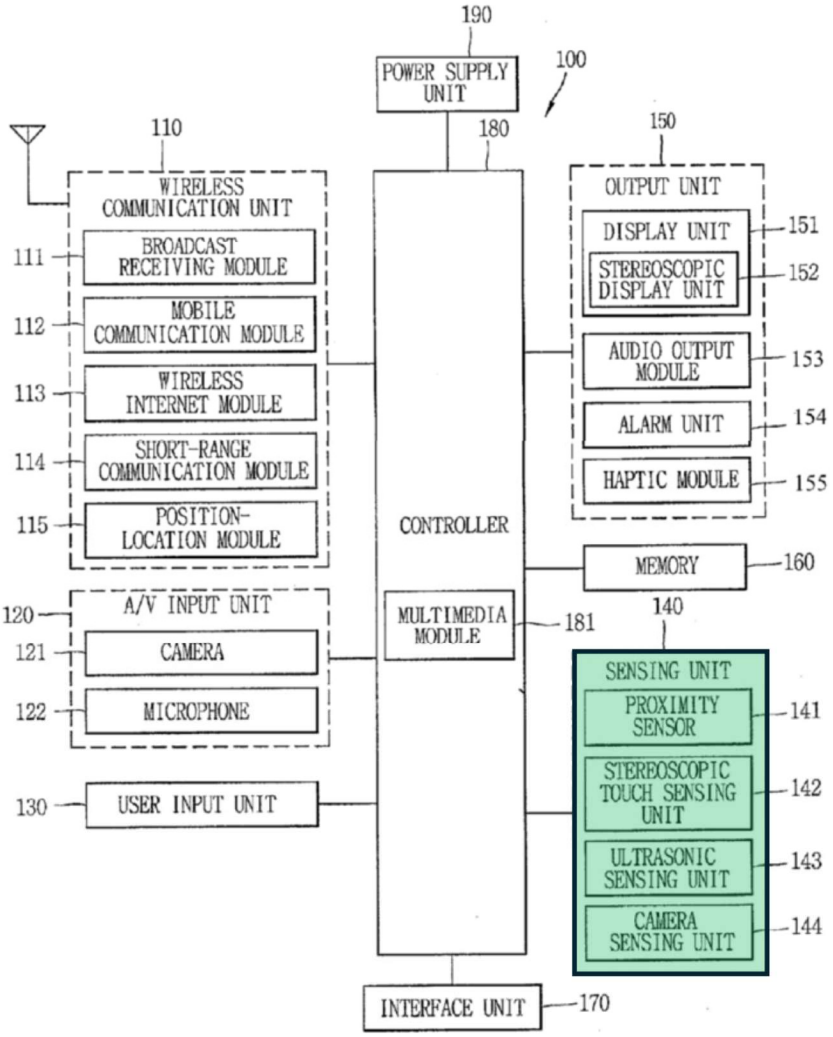
FIG. 5

Ocampo, FIG. 5 (annotated).

Ocampo explains that its device uses the proximity indicator to, among other things, classify the user's voice for a given command by "user attributes." Ocampo, [0058]-[0065]. Ocampo explains that the proximity classifier may apply a sliding-scale analysis to determine the user's likely distance from the device based on the differences in the audio signals. Ocampo, [0062], [0063]. The proximity classifier also includes rules defining distance thresholds with the sliding scale. Ocampo, [0075], [0088].

Similarly, Yi discloses [1a]'s "*proximity sensor*" because it describes a sensing unit 140 comprising a proximity sensor 141 "configured to sense a degree of proximity between the user's mouth and the microphone while the voice is input." Yi, [0010], [0085], FIG. 1.

FIG. 1



Yi, FIG. 1 (annotated).

Yi explains that "[the] proximity sensor 141 may be arranged at an inner region of the mobile terminal" to sense the presence, absence, or approach of the user with respect to the mobile terminal using various technologies. Yi, [0085]-[0091]. Indeed, sensing unit 140 also includes a stereoscopic touch sensing unit 142, an ultrasonic sensing unit 143, and a camera sensing unit 144 for use in

determining the mobile terminal's proximity and orientation with respect to the user. Yi, [0090], [0092]-[0095], FIG. 1. Yi therefore also discloses element 1[a] by its sensing unit 140 that provides "status measurements of various aspects of the mobile terminal" to "sense a distance between the microphone 122 and the user." Yi, [0010], [0069], [0085], [0182], [0253]-[0255].

c. [1b] a voice classifying unit configured to analyze a voice spoken by a user and acquired by a voice acquiring unit to classify the voice as either one of a first voice or a second voice based on the distance between the user and the voice-content control device;

Ocampo and Yi each disclose [1b]. Ocampo discloses "*a voice classifying unit*" because its voice classifier 516 and proximity classifier 514 process audio signals received at the system's microphone(s) to classify the user's voice "*as one of a first voice or a second voice*" according to "user attributes" reflecting the user's distance from the device and other voice features. Ocampo, [0060]-[0065], [0087], [0088], FIG. 5; Lipoff, ¶81.

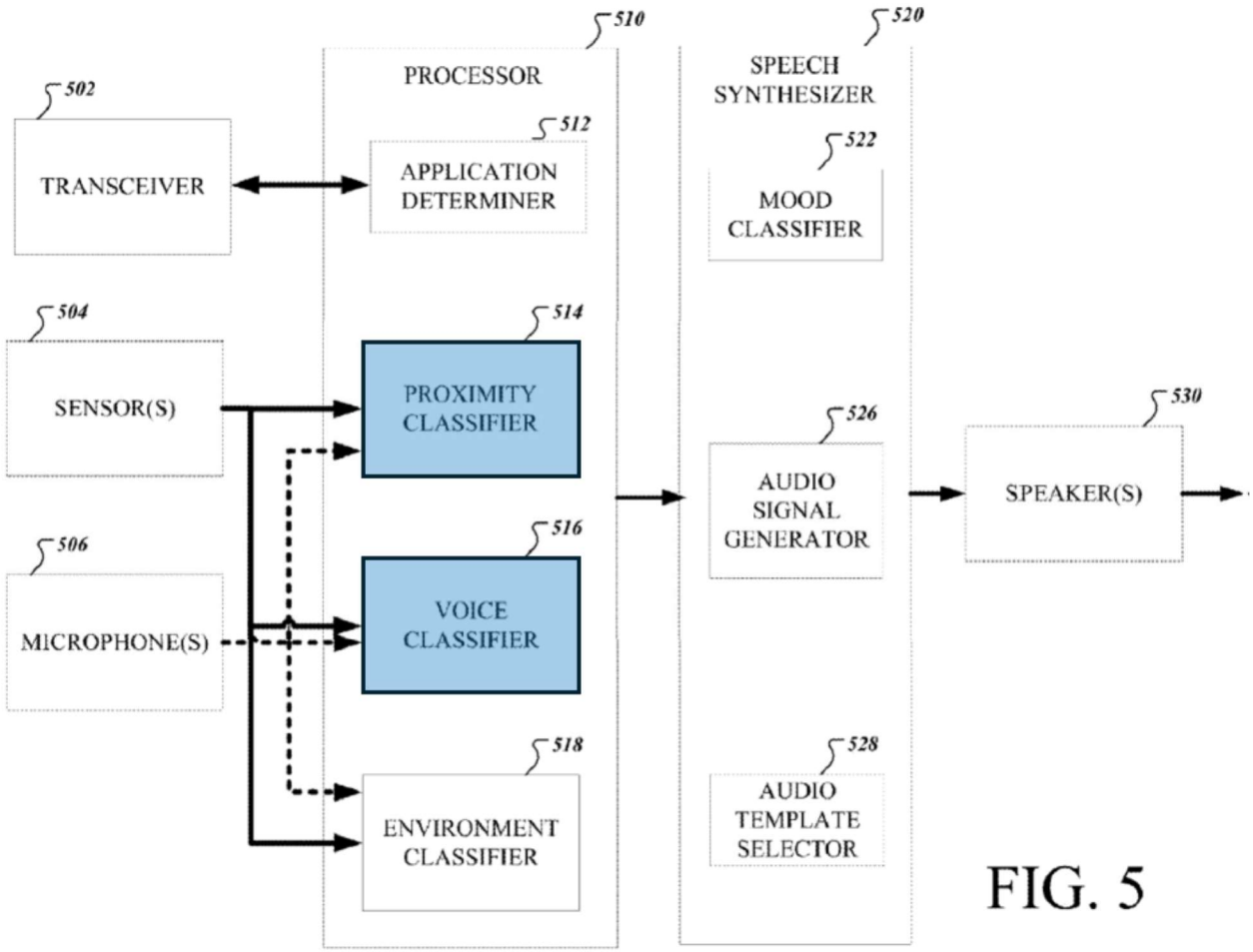


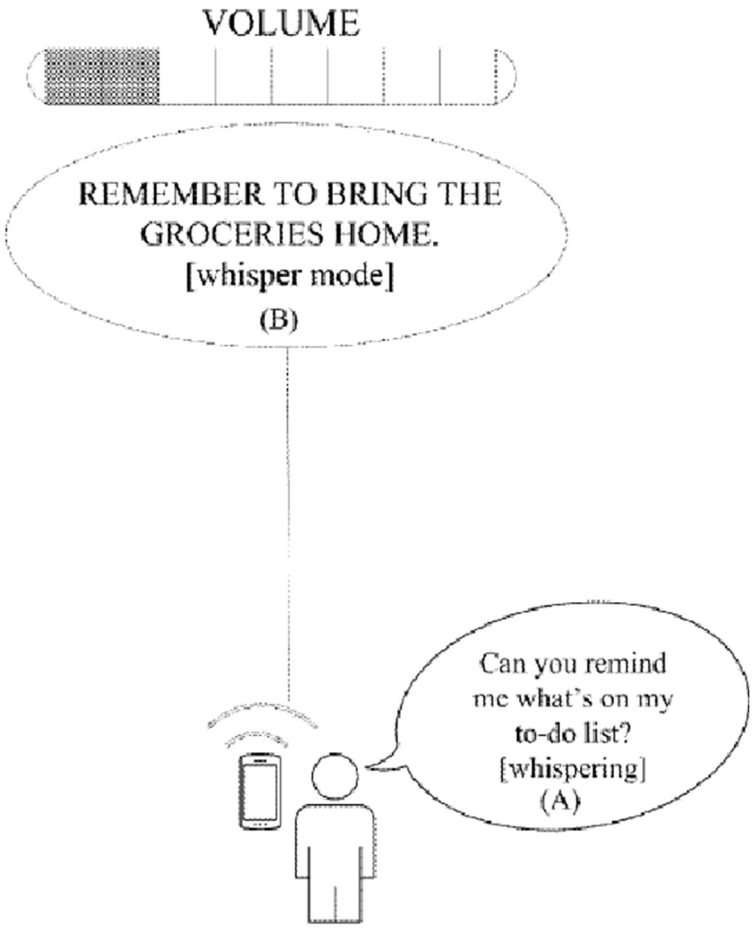
FIG. 5

Ocampo, FIG. 5 (annotated).

For example, Ocampo's voice and proximity classifiers extract voice features from the audio data received for a user command to determine user attributes reflecting the relative location and temperament of the user. Ocampo, [0058], [0062]-[0065], [0075], [0086]; Lipoff, ¶82. Ocampo explains that "if the user attributes indicate that a user is located close to the user device and that the user uttered a command in a whispering tone," i.e., classified as a "*first voice*," it will adjust the user device's output accordingly based on this classification.

Ocampo, [0058], [0075], [0086]. This enables Ocampo's device to provide different outputs in response to the user command based on classification of the user's voice as whispering near the microphone (i.e., a "*first voice*") or shouting from farther away (i.e., a "*second voice*"). Ocampo, [0011], [0032], [0062]-[0065], FIGS. 1A-1B, 2A-2B, 5; Lipoff, ¶82.

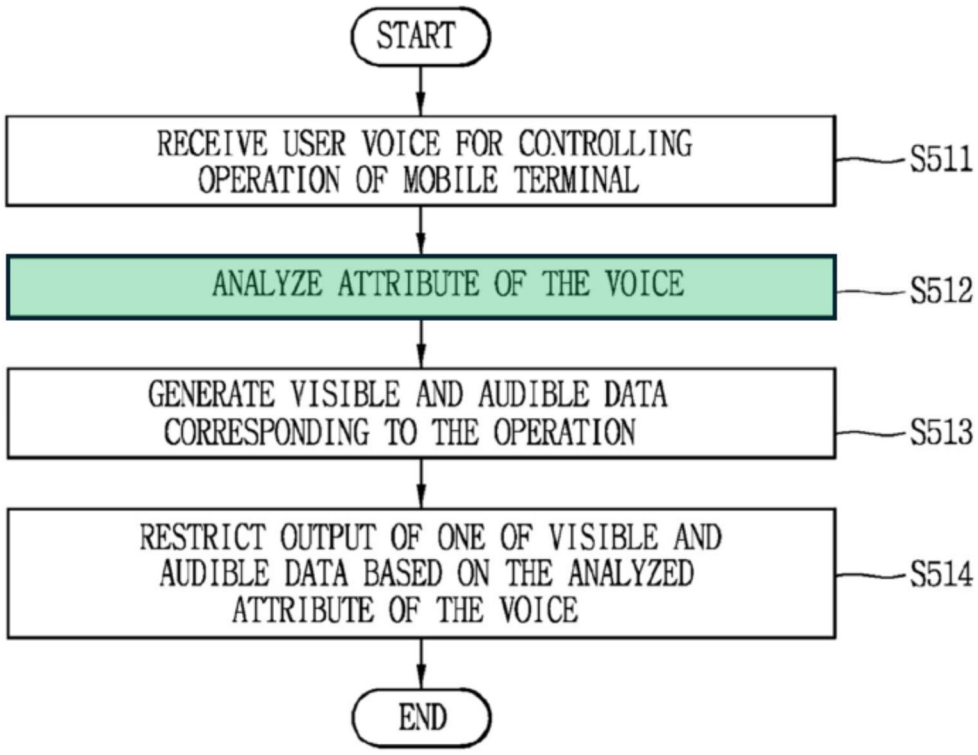
FIG. 2A



Ocampo, FIG. 2A ("first voice" classification response).

Yi also discloses "*a voice classifying unit*" as recited in element [1b]. For example, Yi explains that its "mobile terminal may further include an analyzing unit which analyzes an attribute of a voice input through the microphone 122." Yi, [0167]. The analyzing unit analyzes attributes of the user's voice "based on various criteria," including distance, to "*classify the voice as either one of a first voice or a second voice*." Yi, [0167], [0182]-[0184], FIGS. 4, 5B (S512a-S512c).

FIG. 4



Yi, FIG. 4 (annotated).

As Yi explains, "when the user is not sensed adjacent to the microphone 122" (first voice), the controller will "control the output unit to output the audible data and the visible data." Yi, [0184]. But "[w]hen the microphone 122 is sensed to be located close to the user" (second voice), the controller will "control the audio output module 153 to restrict the output of the audible data." Yi, [0184]. Yi thus discloses [1b] because its mobile terminal classifies the user's voice based on distance from the user. Lipoff, ¶84.

d. [1c] a process executing unit configured to analyze the voice acquired by the voice acquiring unit to execute processing required by the user;

Ocampo discloses [1c] because it describes a processor to process the user's voice to receive a user command, determine the appropriate application to handle the received command, and retrieve the necessary data to provide a tailored audio output responding to the command. *See, e.g.*, Ocampo, [0023]-[0025], [0047], [0051]-[0053]; Lipoff, ¶¶85-86. Ocampo explains that its user device includes a processor 510 ("*process executing unit*") with various components and classifiers to execute required processing. Ocampo, [0047], [0066], FIG. 5.

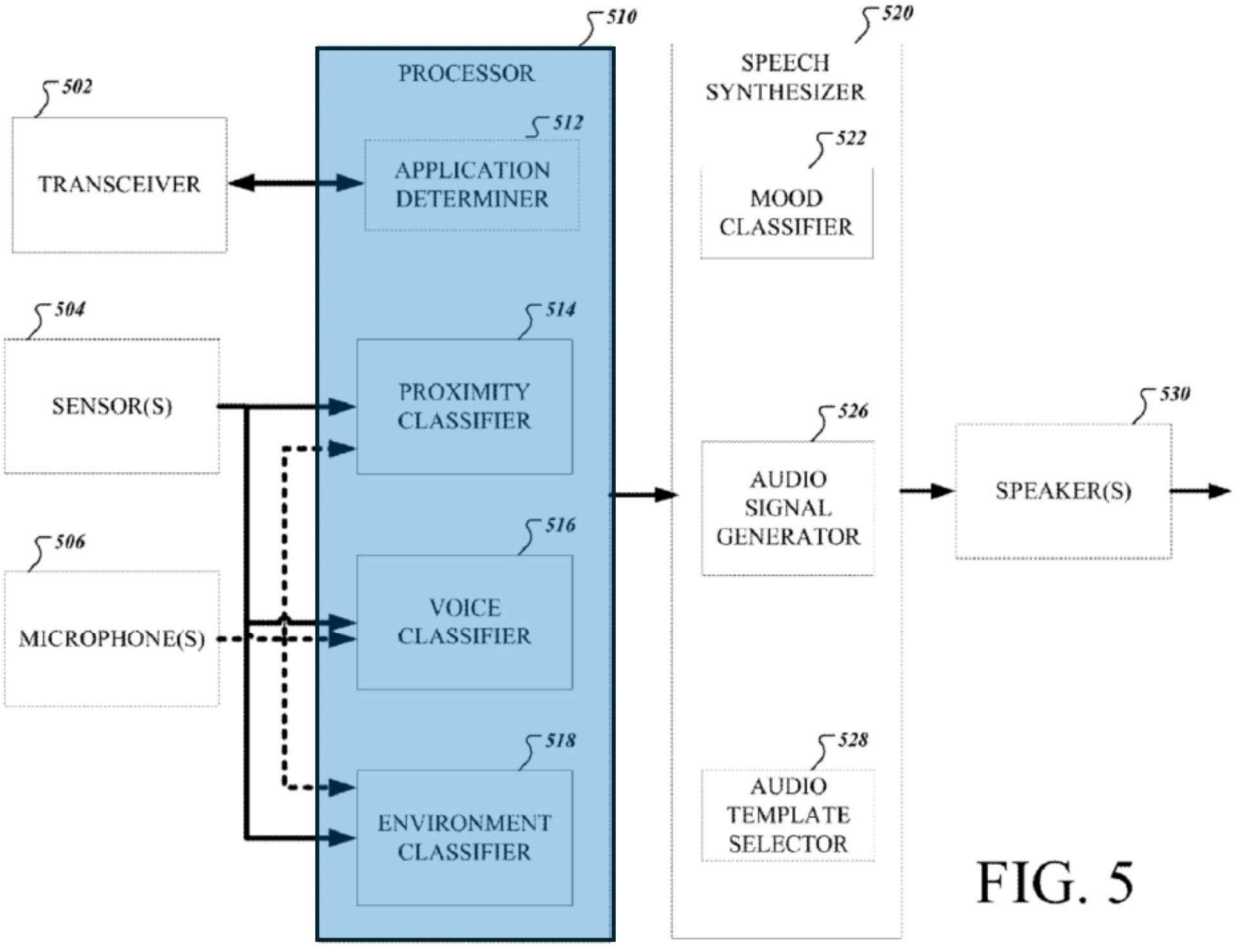


FIG. 5

Ocampo, FIG. 5 (annotated).

Processor 510 is responsible for executing Ocampo's disclosed methods, including analyzing the voice acquired by microphones 506 and determining the processing necessary to respond with an answer. Ocampo, [0047], FIGS. 4, 5. Upon receiving a command, the application determiner 512 identifies which application should process or respond to the command. Ocampo, [0051]. It makes that identification by categorizing the command as belonging to a classification mapped to specific applications, such as multimedia, text messaging, or browser

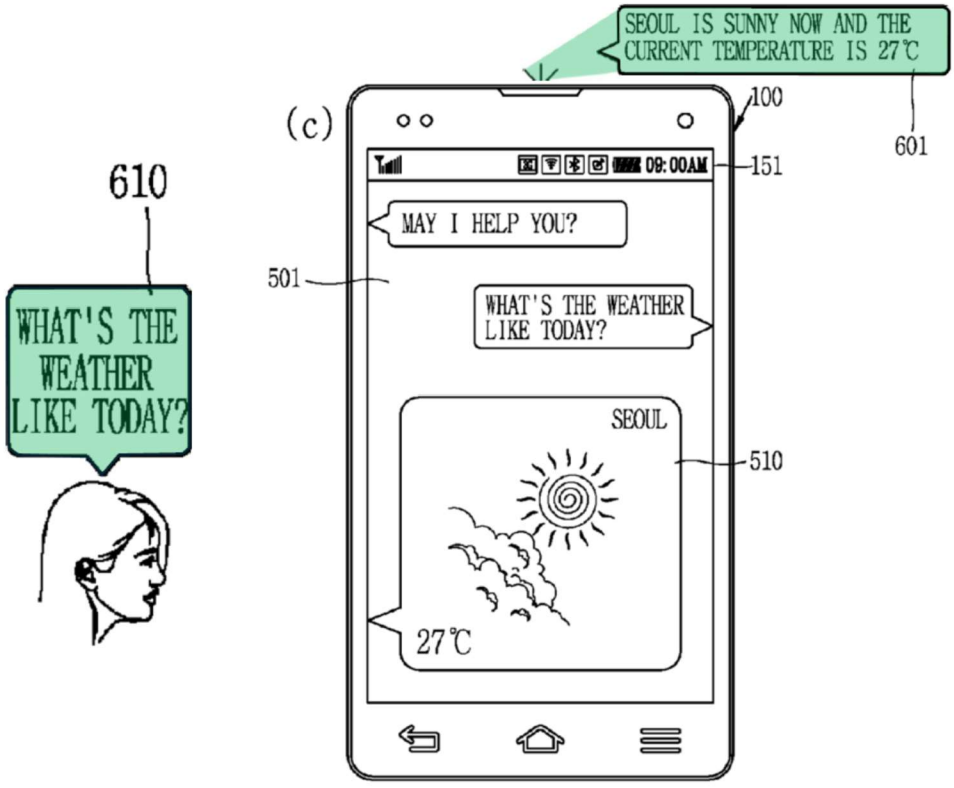
applications. Ocampo, [0051]. The mapping of commands to applications can be predefined by the device manufacturer, a program writer, or specified by the user. Ocampo, [0052]. Upon determining the appropriate application, Ocampo's system retrieves the necessary data for processing and otherwise responds to the command. Ocampo, [0053], [0054]. "The data may be retrieved in various suitable ways including, for example, communicating with a network, such as the Internet, to retrieve data, or communicating with a server, database, or storage device to retrieve data." Ocampo, [0056]. Thus, responsive data can be obtained from various sources, including networks, servers, databases, or storage devices, depending on the application and command type. Ocampo, [0056].

e. [1d] a voice-content generating unit configured to generate, based on content of the processing executed by the process executing unit, [an] output sentence that is text data for a voice to be output to the user; and

Ocampo and Yi each disclose [1d]. For example, Ocampo discloses a "*voice-content generating unit*" because it describes application determiner 512 selecting specific applications to generate content responsive to a user command using TTS (text-to-speech) output. Ocampo, [0047]-[0053]; Lipoff, ¶87. "Next, the audio signal that includes the obtained data in an audio format is output using one or more speakers 530 (416)" Ocampo, [0078]. Ocampo also explains that the user device "may use any suitable audio synthesizer technique" to convert the retrieved

text data to an audio signal. Ocampo, [0077]. Ocampo thus discloses generating an "*output sentence that is text data for a voice to be output to the user*" because it describes generating the text data used for voice output based on processed content according to element [1d]. Lipoff, ¶87.

Yi also discloses element [1d] because it describes controller 180 generating visible and audible data responsive to a user command. Yi, [0164]. For example, Yi explains that where a user asks, "What's the weather like today?" controller 180 "execute[s] a function for providing information related to today's weather" and "generate[s] data to be provided to the user among the [responsive] information." Yi, [0164], FIG. 5A.



Yi, FIGS. 5A(a) (left) (excerpt) (annotated), 5A(c) (right) (annotated).

Yi also explains that "[t]he audible data may correspond to a sound signal generated by converting at least part of the visible data into a voice." Yi, [0166]. "For example, the controller 180 may generate the audible data by converting information corresponding to the user's voice among the text of the visible data." Yi, [0166]. Thus, Yi also discloses element [1d].

f. [1e] an output controller configured to adjust a sound volume of voice data obtained by converting the output sentence thereinto, wherein

Ocampo and Yi each disclose [1e]. Ocampo discloses "*an output controller*" that uses dynamic text-to-speech (TTS) provisioning and an audio template selector 528 to adjust the volume of responses spoken to a user. Ocampo, [0004], [0024], [0027], [0073], FIGS. 1A, 1B, 4 (S412-S416), 5; Lipoff, ¶90. For example, "the user device may determine how far the user is from the user device and adjust a volume or intensity of the audio output signal accordingly." Ocampo, [0004], [0073]. As Ocampo explains, "the determined user attributes and environment attributes may be used by the audio template selector 528 to select an audio template for an audio output signal (412)." Ocampo, [0073]. In this way, when the user attributes indicate that a user is located close to the user device, "the audio template selector 528 in the user device may select an audio output template that has a low output volume and a whispering tone." Ocampo, [0073], [0075].

Yi also discloses the "*output controller*" with its audio output module 153 for outputting visible and audible data responsive to user commands. Yi, [0165]. "The audible data may correspond to a sound signal generated by converting at least part of the visible data into a voice." Yi, [0166]. Said another way, "the controller 180 may generate the audible data by converting information corresponding to the user's voice among the text of the visible data." Yi, [0166]. Yi further explains that "the output of the audible data may be restricted by controlling the volume of the voice," thereby "*adjust[ing] a sound volume of voice data*." Yi, [0221]. Thus, Yi also discloses element [1e].

g. [1f] the voice-content generating unit is further configured to

i. [1f.i] generate a first output sentence as the output sentence when the acquired voice has been classified as the first voice, and

Ocampo discloses [1f.i] because it describes an application determiner 512 selecting an application to generate TTS (text-to-speech) output data responsive to a user command based on voice characteristics. Ocampo, [0018], [0024], [0037], [0038], [0047]-[0053], [0057], [0065], [0073], [0075], FIGS. 1A, 2A-2B, 4, 5; Lipoff, ¶92; *see supra* Section VII.A.1.e (discussing element [1d]'s "*voice-content generating unit*").

Upon receiving a user command for information, Ocampo's application determiner 512 retrieves responsive information and generates "*a first output*

sentence" based on user attributes determined from an analysis of the user's proximity and voice characteristics. Ocampo, Abstract, [0051], [0057]. For example, when the user device determines that the user is not near the device or is shouting the command (i.e., classifies the acquired voice "*as the first voice*"), the system will generate a text-based response for vocalizing at a louder volume. Ocampo, [0027], [0038], [0073], FIGS. 1B, 2B.

FIG. 1B

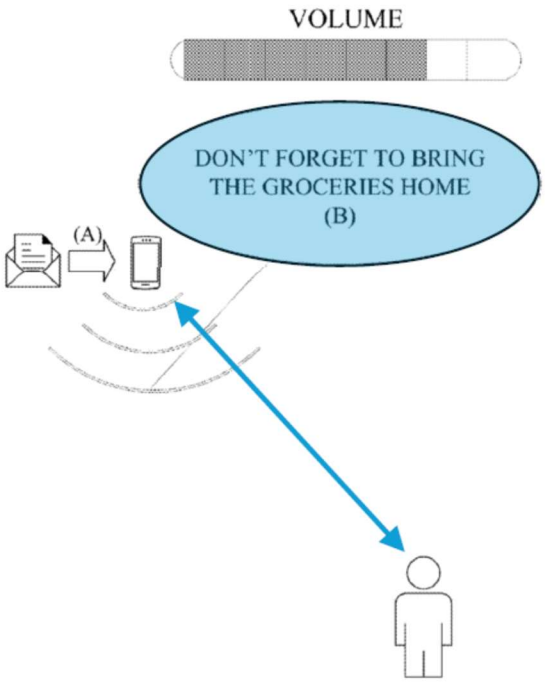


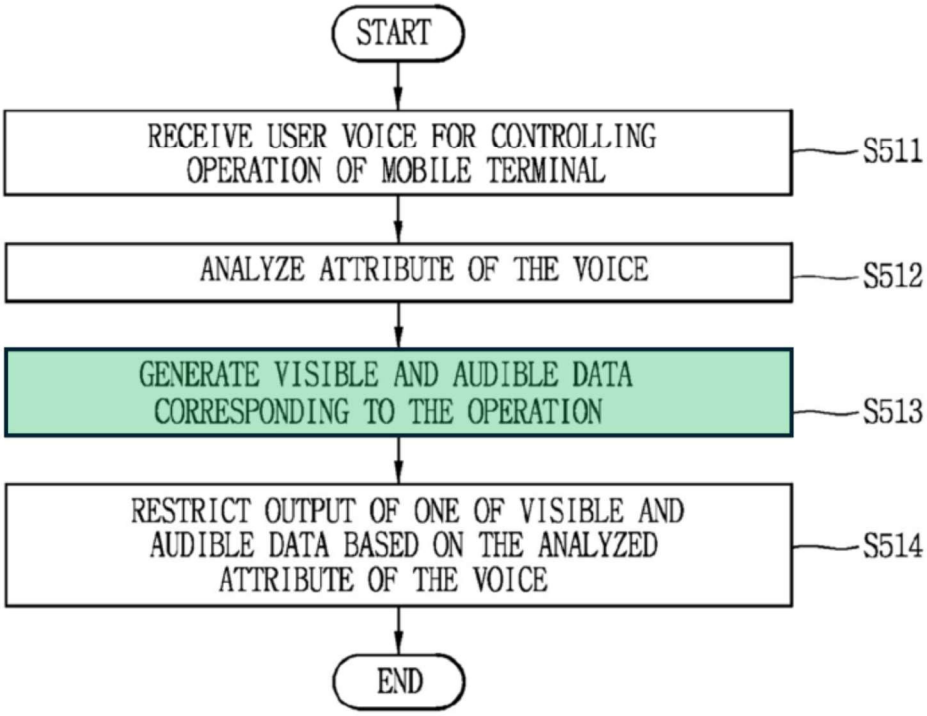
FIG. 2B

Ocampo, FIGS. 1B (left) (annotated), 2B (right) (annotated).

Ocampo thus discloses generating a "first output sentence" when the acquired voice has been classified as the first voice. Lipoff, ¶93.

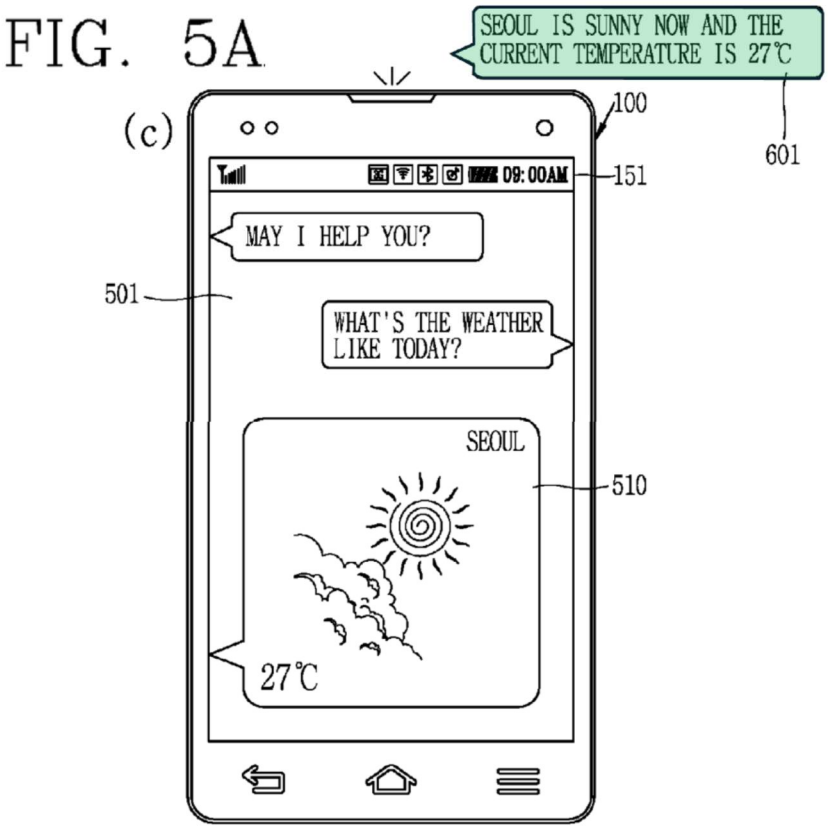
Yi also discloses [1f.i] because it likewise discloses generating text to vocalize in response to user commands based on an analysis of the user's voice. Yi, [0167], [0170]-[0171], [0182], [0183], [0253]. Yi explains that its mobile terminal will analyze the voice received at its microphone to identify attributes of the voice based on various criteria, including the user's proximity when voicing the command, whether the user whispered, etc. Yi, [0167], [0170]-[0171], [0182], [0183], [0253]. And based on the voice classification "*as the first voice*," Yi's controller 180 generates visible and audible data responsive to the user command. Yi, [0164], FIG. 4 (S513].

FIG. 4



Yi, FIG. 4 (annotated).

Yi gives specific, representative examples. Where the user asks, "What's the weather like today?" Yi explains that controller 180 will "*generate a first output sentence*" by "execut[ing] a function for providing information related to today's weather" that accounts for the user's proximity when "generat[ing] data to be provided to the user among the [responsive] information." Yi, [0163]-[0167], [0188], FIG. 5A(c). In particular, when the user is distanced from the microphone while asking, "What's the weather like today?" (i.e., classifies the user's voice as a first voice), the mobile terminal will respond audibly with a first output sentence: "Seoul is sunny now and the current temperature is 27ºC." Yi, [0181]-[0185], [0253]-[0254], FIGS. 5A(c).



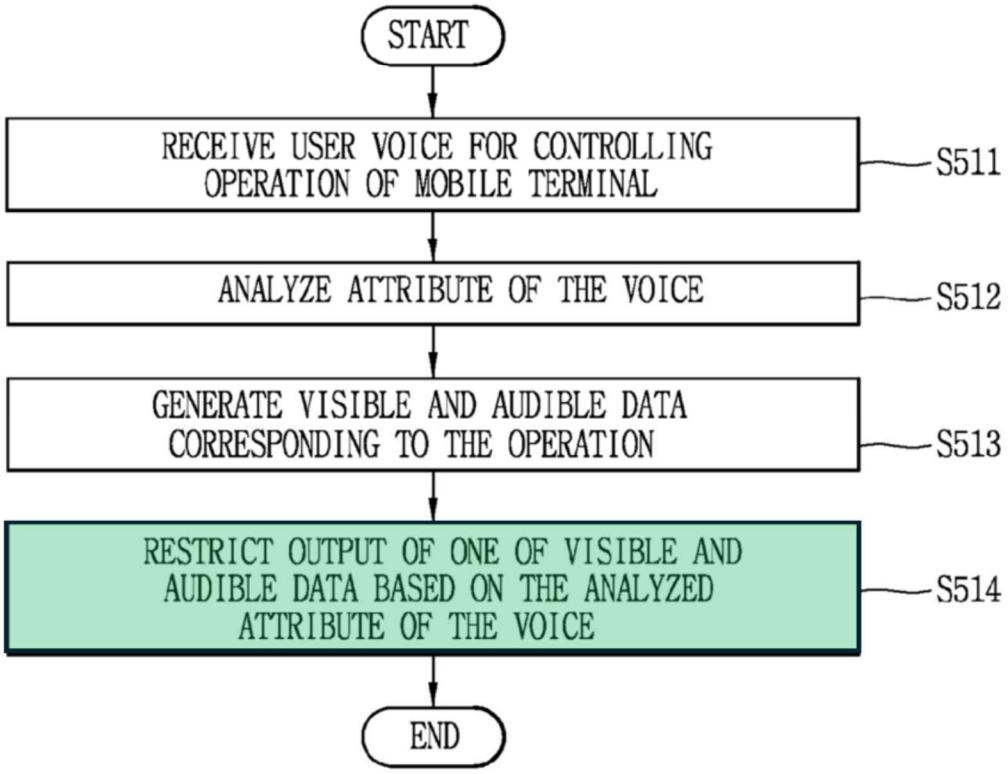
Yi, FIG. 5A(c) (annotated).

ii. [1f.ii] generate a second output sentence in which information is omitted as compared to the first output sentence as the output sentence when the acquired voice has been classified as the second voice, wherein

Ocampo, in combination with Yi, renders this element obvious. Yi discloses [1f.ii] by omitting information from output generated in response to a user command based on the user's detected distance from the device. Yi, [0167], [0170]-[0171], [0182]-[0184], [0253], FIG. 4 (S514); Lipoff, ¶96. As discussed in Section VII.A.1.g.i, *supra* (regarding element [1f.i]'s generation of a "first output sentence"), Yi's mobile terminal analyzes voice input through its microphone

based on various criteria for voice classification, including whisper status and proximity to the microphone. Yi, [0012], [0167], [0170]-[0171], [0182], [0183], [0253], FIG. 4 (S512, S513). Yi further explains that its mobile terminal "may control the output unit to restrict (limit) an output of at least one of the visible data and the audible data based on the voice (S514)." Yi, [0167], [0184], FIG. 4 (S514).

FIG. 4

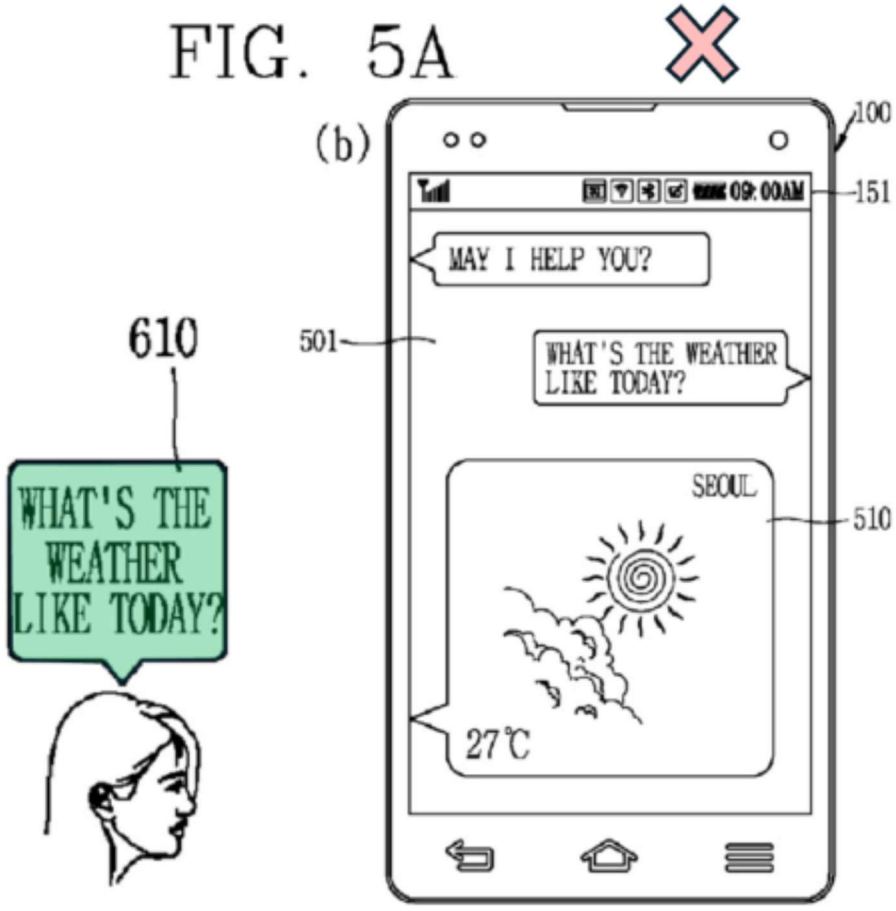


Yi, FIG. 4 (annotated).

In particular, "[w]hen the microphone 122 is sensed to be located close to the user" (i.e., "*when the acquired voice has been classified as the second voice*"), "the controller 180 may control the audio output module 153 to restrict the output of the audible data (S514')." Yi, [0184]. "That is, when the user consciously puts the mobile terminal close to the mouth to input the voice and when the mobile terminal and the user are closely located due to a surrounding environment, the output of the audible data may be restricted" to generate "*a second output sentence*" omitting responsive information. Yi, [0187]-[0188]; Lipoff, ¶97. This way, "when the user inputs the voice by putting the mobile terminal close to the mouth so as not to be heard by others, the audible data may not be exposed to the outside as well." Yi, [0188]; Lipoff, ¶97.

Yi depicts this omitting of textual information from the generated response as compared to a "first output sentence" throughout its figures using the above-discussed weather inquiry as the example. Yi, [0196], FIGS. 5A, 6A-6D, 8, 9A-9B. There, Yi's mobile terminal omits information when responding about the weather when the user is sensed close to the microphone. Yi, [0184], [0188], FIGS. 5A(b), 5B (S512c, S514'). For example, instead of audibly responding, "Seoul is sunny now and the current temperature is 27ºC," Yi describes omitting all or part of the audible response. Yi, [0184], [0188], FIGS. 5A(b), 5B (S512c, S514'). For

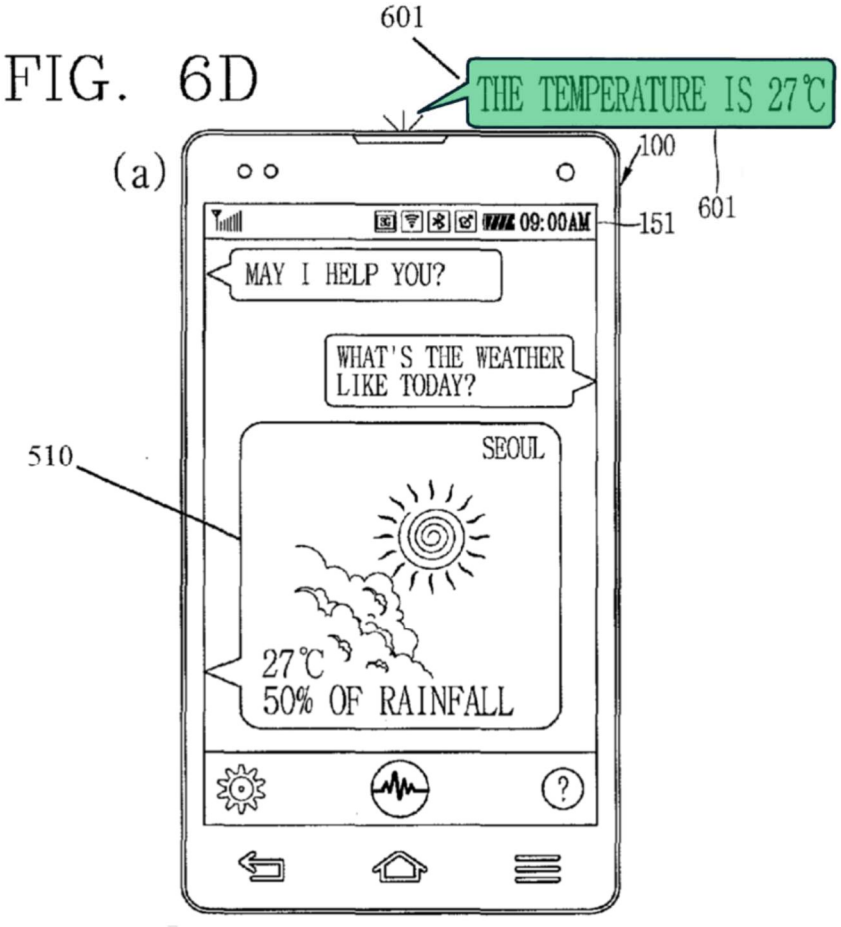
example, Figure 5A(b) of Yi illustrates omitting the vocalized response to the user entirely:



Yi, FIGS. 5A(a) (left) (excerpt) (annotated), 5A(b) (right) (second output sentence) (annotated).

Yi also explains that "[t]he audible data 601 may include at least part of information included in the visible data 510." Yi, [0186], FIGS. 5-6. Indeed, Yi discloses other responses to the same request (i.e., "What's the weather like today?"), omitting a subset of the audible information available for response. Yi,

[0206], FIG. 6D(a). For example, Yi also illustrates the mobile terminal omitting the geographic location and "sunny" characterization from audible data:



Yi, FIG. 6D(a) (annotated) (second output sentence).

Accordingly, Yi discloses [1f.ii] because it describes generating a "*second output sentence*" for a given command that omits information when the user is near the device as compared to a "*first output sentence*" when the user is distanced from the device. Lipoff, ¶¶97-100.

A POSITA would have been motivated to apply Yi's techniques for restricting information vocalized to a user based on proximity and tone of voice into Ocampo's system that already adjusted the volume of its responses based on the same user attributes. Lipoff, ¶101. As Yi explains, restricting the output of audible data "prevent[s] data from being transferred even to another user" in quiet settings where the user has whispered a command, recognizing that "a user transfers a voice in [the] form of whispering when the user talks to a person close to him/her." Yi, [0170], [0180]; Lipoff, ¶101.

Implementing Yi's techniques for discreetly voicing responses to a user command by omitting information would have reflected the mere combination of known elements according to known methods to yield predictable results. Lipoff, ¶102. As explained above, both references use ubiquitous speech synthesis techniques (e.g., text-to-speech (TTS)) to achieve predictable results (e.g., voicing the text as modified for response.). *See, e.g.*, Ocampo, [0001]-[0003]; Yi, [0166], [0235]; Lipoff, ¶102. Indeed, both references recognize the importance of maintaining user privacy. Lipoff, ¶102; Ocampo, [0071]; Yi, [0170], [0180].

Accordingly, a POSITA would have had the skill and motivation to combine Ocampo's known techniques for generating TTS outputs in response to a user command with Yi's known means for restricting output to minimize exposure to third parties. Lipoff, ¶¶101-103.

h. [1g] the output controller is further configured to adjust the sound volume of voice data such that the sound volume of voice data obtained by converting the first output sentence thereinto differs from the sound volume of the voice data obtained by converting the second output sentence thereinto.

Both Ocampo and Yi disclose [1g]. As discussed, Ocampo discloses "*adjust[s] the sound volume of voice data*" based on user attributes when responding. Ocampo, [0004], [0073]. Ocampo explains that the user device converts the responsive textual data into an audio signal and controls the volume of that audio signal proportional to the determined proximity indicator. Ocampo, [0024], FIGS. 1A-1B. But when the user attributes indicate that a user is located close to the user device, "the audio template selector 528 in the user device may select an audio output template that has a low output volume and a whispering tone." Ocampo, [0073], [0075].

Yi also discloses an "*output controller*" because it describes how controller 180 uses audio output module 153 to output visible and audible data in response to user requests. Yi, [0165]. "The audible data may correspond to a sound signal generated by converting at least part of the visible data into a voice." Yi, [0166]. Said another way, "the controller 180 may generate the audible data by converting information corresponding to the user's voice among the text of the

visible data." Yi, [0166]. Yi further explains that "the output of the audible data may be restricted by controlling the volume of the voice." Yi, [0221].

2. Claim 2

a. [2a]: The voice-content control device according to claim 1, wherein the process executing unit comprises: an intention analyzing unit configured to extract intention information indicating an intention of the user based on the voice acquired by the voice acquiring unit; and

Ocampo discloses an "intention analyzing unit" because it describes processor 510 having a linguistic classifier that recognizes, among other things, the user's intention from spoken commands received at its microphone. Ocampo, [0022], [0025], [0047]-[0052], [0066]; Lipoff, ¶106. "[T]he linguistic classifier may identify words in the received audio signal," and, based on the recognized speech, "determine which application to use to process or respond to the command and whether the determined application is configured for TTS output." Ocampo, [0051], [0066]. For example, when Ocampo's user device receives the voiced request, "Can you remind me what's on my to-do list?" the device determines the user's intention to consult "the user's to-do or reminder list to respond to the user query." Ocampo, [0029], [0036], FIG. 2A.

b. [2b]: an acquisition content information acquiring unit configured to acquire acquisition content information which is notified to the user based on the extracted intention information, and

Ocampo also discloses "*an acquisition content information acquiring unit*" because it describes application determiner 512 acquiring information responsive to spoken user commands based on the identified intention of the user. Ocampo, [0049], [0051]-[0053], [0056]; Lipoff, ¶107; *see also supra* Section VII.A.1.d (regarding element [1c]'s "analyz[ing] the voice acquired by the voice acquiring unit to execute processing required by the user"). Ocampo explains that once application determiner 512 classifies the command according to the user's voiced intention, "[t]he user device may obtain data from any suitable source to respond to the user query." Ocampo, [0036], [0049]-[0053], [0056].

As Ocampo further explains, "[t]he data may be retrieved in various suitable ways[,] including, for example, communicating with a network, such as the Internet, to retrieve data, or communicating with a server, database, or storage device to retrieve data." Ocampo, [0056]. Moreover, "[t]he source from where data is obtained from depends on various factors[,] including the type of application and type of command." Ocampo, [0056]. The "*acquire[d] acquisition content information*" responsive to the user command is then converted to voice using dynamic TTS provisioning and output as an audio signal to the user. Ocampo,

[0049], [0077]-[0078], FIG. 4 (414, 416). Thus, Ocampo discloses that the "*acquire[d] acquisition content information*" is "*notified to the user*" as an "audio signal that includes the obtained data in an audio format . . . output using one or more speakers." Ocampo, [0078], FIG. 4 (416).

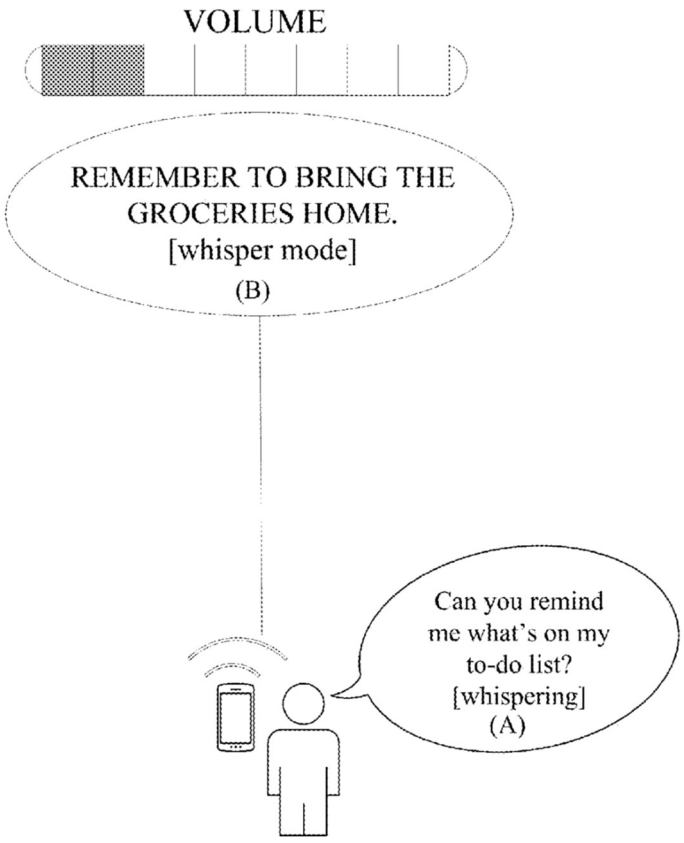
c. [2c]: the voice-content generating unit is further configured to generate the text data including the acquisition content information as the output sentence.

Ocampo discloses [2c] because it describes using dynamic text-to-speech (TTS) provisioning to generate the text data voiced to the user based on the acquired content responsive to a given user command. Ocampo, [0049]; *see also supra* Section VII.A.1.e (regarding element [1d]'s "*a voice-content generating unit configured to generate, based on content of the processing executed by the process executing unit, [an] output sentence that is text data for a voice to be output to the user*"). One of ordinary skill in the art would understand that TTS provisioning involves converting written text generated in response to a user command into spoken words using synthetic voices. Lipoff, ¶109-111.

And as Ocampo depicts in Figure 2A, when receiving the voiced request, "Can you remind me what's on my to-do list?" the user device will consult "the user's to-do or reminder list to respond to the user query." Ocampo, [0036],

FIG. 2A. Based on the acquired content, the user device generates a text response vocalized to the user using TTS provisioning:

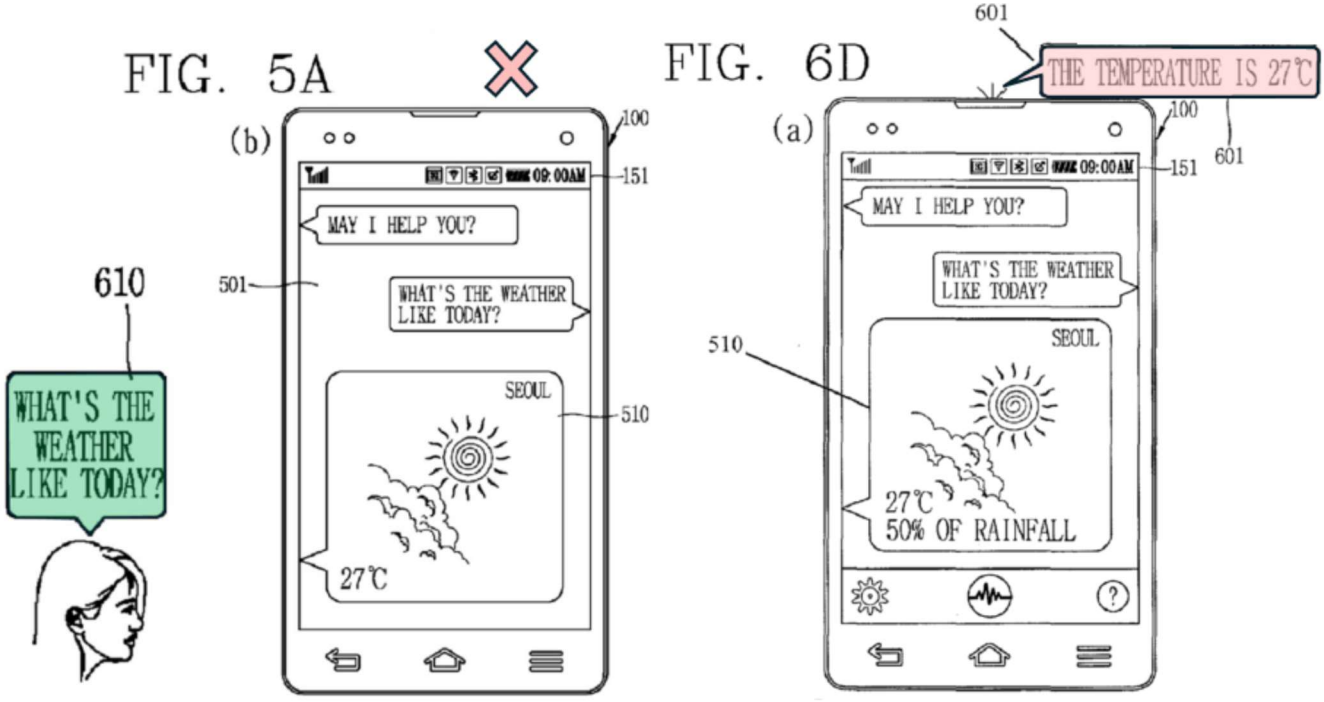
FIG. 2A



Ocampo, FIG. 2A; *see also* Ocampo, [0029], [0036]. "As shown in FIG. 2A, the user device outputs an audio signal to inform the user that bringing the groceries home was on the user's to-do list (B)." Ocampo, [0037].

3. Claim 3: The voice-content control device according to claim 1, wherein, on generating the second sentence, the voice-content generating unit is further configured to omit a part of information included in the voice spoken by the user.

Yi discloses claim 3 because it describes omitting information included in the voice spoken by the user when generating a "*second [output] sentence*" when the acquired voice has been classified as the "*second voice*." Lipoff, ¶112. As discussed in Section VII.A.1.g.ii, *supra* (as to element [1f.ii]), Yi generates a second sentence omitting information by "control[ing] the output unit to restrict (limit) an output of at least one of the visible data and the audible data based on the voice (S514)." Yi, [0167], FIG. 4 (S514). Yi further discloses omitting a part of information included in the voice spoken by the user. For example, Figures 5A and 6D of Yi illustrate the mobile terminal avoiding redundant information (e.g., "weather" and "today") from the voice spoken by the user when providing its response to the user's weather inquiry:



Yi, FIGS. 5A(a) (left) (excerpt) (annotated), 5A(b) (center) (annotated), 6D(a) (right) (annotated).

Accordingly, Yi discloses claim 3 because it describes "*generating a second sentence*" that "*omit[s] a part of information included in the voice spoken by the user*. Lipoff, ¶112.

4. Independent Claim 4

a. [4pre] A voice-content control method, comprising:

If the preamble is limiting, Ocampo discloses it because Ocampo describes methods for controlling a user device's voiced response to a user command. Ocampo, [0003], [0024], [0028]; Lipoff, ¶113; *see supra* Section VII.A.1.a (regarding [1pre]). Ocampo discloses a voice-content control device that

automatically controls and modifies audio responses to user commands based on multiple factors, including the user's proximity to the device. Ocampo, Abstract, [0003]. For example, "[i]n response to receiving a command to provide information to a user, a device retrieves information and determines user and environment attributes including: (i) a distance between the device and the user when the user uttered the query; and (ii) voice features of the user." Ocampo, Abstract. Indeed, Ocampo explains that the "TTS operation executed on a user device may automatically control and modify an audio output based on multiple factors[,] including the user's voice . . . ." Ocampo, [0003].

b. [4a] calculating a distance between a user and a voice-content control device;

Ocampo discloses [4a] for reasons discussed for [1a], *supra*. Lipoff, ¶114.

c. [4b] acquiring a voice spoken by a user;

Ocampo discloses [4b]. *See supra* Section VII.A.1.c (discussing element [1b] regarding "*acquired by a voice acquiring unit*"); Lipoff, ¶115. Ocampo explains that the user device actuates its microphones to obtain "samples of the user's voice." Ocampo, [0031]. The user device uses these samples to determine user attributes. Ocampo, [0026].

d. [4c] analyzing the acquired voice to classify the acquired voice as either one of a first voice and a second voice based on the distance between the user and the voice-content control device;

Ocampo discloses [4c] for reasons discussed for [1b], *supra*. Lipoff, ¶116.

e. [4d] analyzing the acquired voice to execute processing intended by the user;

Ocampo discloses [4d] for reasons discussed for [1c], *supra*. Lipoff, ¶117.

f. [4e] generating, based on content of the executed processing, [an] output sentence that is text data for a voice to be output to the user; and

Ocampo discloses [4e] for reasons discussed for [1d], *supra*. Lipoff, ¶118.

g. [4f] adjusting a sound volume of voice data obtained by converting the output sentence thereinto, wherein at the generating,

Ocampo discloses [4f] for reasons discussed for [1e], *supra*. Lipoff, ¶119.

i. [4f.i] a first output sentence is generated as the output sentence when the acquired voice has been classified as the first voice, and

Ocampo discloses [4f.i] for reasons discussed for [1f.i], *supra*. Lipoff, ¶120.

ii. [4f.ii] a second output sentence is generated as the output sentence in which a part of information included in the first output sentence is omitted when the acquired voice has been classified as the second voice, wherein

Ocampo discloses [4f.ii] for reasons discussed for [1f.ii], *supra*. Lipoff, ¶121.

h. [4g] at adjusting the sound volume of voice data, further adjusting the sound volume of voice data such that the sound volume of voice data obtained by converting the first output sentence thereinto differs from the sound volume of voice data obtained by converting the second output sentence thereinto.

Ocampo discloses [4g] for reasons discussed for [1g], *supra*. Lipoff, ¶122.

5. Independent Claim 5

a. [5pre] A non-transitory storage medium that stores a voice-content control program that causes a computer to execute:

If the preamble is limiting, Ocampo discloses it. Lipoff, ¶123; *see also supra* Section VII.A.1.a (regarding [1pre]). Ocampo explains that "all of the functional operations and/or actions described in this specification" may be implemented as computer-program instructions "encoded on a computer readable medium for execution by, or to control the operation of, [a] data processing apparatus." Ocampo, [0090]. "The computer-readable medium may be a machine-readable storage device, a machine-readable storage substrate, a memory device, a composition of matter effecting a machine-readable propagated signal, or a combination of one or more of them." Ocampo, [0090].

b. [5a] calculating a distance between a user and a voice-content control device;

Ocampo discloses [5a] for reasons discussed for [1a], *supra*. Lipoff, ¶124.

c. [5b] acquiring a voice spoken by a user;

Ocampo also discloses [5b]. Lipoff, ¶125; *see supra* Section VII.A.1.c (discussing element [1b] regarding "acquired by a voice acquiring unit"). Ocampo explains that the user device actuates its microphones to obtain "samples of the user's voice." Ocampo, [0031]. The user device uses these samples to determine user attributes. Ocampo, [0026].

d. [5c] analyzing the acquired voice to classify the acquired voice as either one of a first voice and a second voice based on the distance between the user and the voice-content control device;

Ocampo discloses [5c] for reasons discussed for [1b], *supra*. Lipoff, ¶126.

e. [5d] analyzing the acquired voice to execute processing intended by the user;

Ocampo discloses [5d] for reasons discussed for [1c], *supra*. Lipoff, ¶127.

f. [5e] generating, based on content of the executed processing, [an] output sentence that is text data for a voice to be output to the user; and

Ocampo discloses [5e] for reasons discussed for [1d], *supra*. Lipoff, ¶128.

g. [5f] adjusting a sound volume of voice data obtained by converting the output sentence thereinto, wherein at the generating,

Ocampo discloses [5f] for reasons discussed for [1e], *supra*. Lipoff, ¶129.

i. [5f.i] a first output sentence is generated as the output sentence when the acquired voice has been classified as the first voice, and

Ocampo discloses [5f.i] for reasons discussed for [1f.i], *supra*. Lipoff, ¶130.

ii. [5f.ii] a second output sentence is generated as the output sentence in which a part of information included in the first output sentence is omitted when the acquired voice has been classified as the second voice, wherein

Ocampo discloses [5f.ii] for reasons discussed for [1f.ii], *supra*. Lipoff, ¶131.

h. [5g] at adjusting the sound volume of voice data, further adjusting the sound volume of voice data such that the sound volume of voice data obtained by converting the first output sentence thereinto differs from the sound volume of voice data obtained by converting the second output sentence thereinto.

Ocampo discloses [5g] for reasons discussed for [1g], *supra*. Lipoff, ¶132.

VIII. Mandatory Notices

A. Real Party-in-Interest Under 37 C.F.R. § 42.8(b)(1)

The Petitioner and the real party-in-interest is Google LLC.[3]

B. Related Matters Under 37 C.F.R. § 42.8(b)(2)

To the best of Petitioner's knowledge, the '337 patent is or has been involved in the following cases:

Name	Number	Forum	Filed
SoundClear Technologies LLC v. Google LLC	3:24-cv-00540 (1:24-cv-01281)[4]	E.D. Va.	July 25, 2024
SoundClear Technologies LLC v. Amazon.com, Inc. et al.	1:24-cv-01283	E.D. Va.	July 25, 2024
SoundClear Technologies LLC v. Amazon.com, Inc. et al.	25-1288	CAFC	Dec. 16, 2024

[3] Google LLC is a subsidiary of XXVI Holdings Inc., which is a subsidiary of Alphabet Inc. XXVI Holdings Inc. and Alphabet Inc. are not real parties-in-interest to this proceeding.

[4] SoundClear filed its original complaint with the Alexandria Division (Case 1:24-cv-01281), but the Court *sua sponte* transferred the case intradistrict to the Richmond Division where it became redesignated as Case Number 3:24-cv-540.

C. Lead and Backup Counsel Under 37 C.F.R. § 42.8(b)(3)

Petitioner provides the following designation of counsel:

Lead Counsel	Back-Up Counsel
Erika H. Arner (Reg. No. 57,540) erika.arner@finnegan.com Finnegan, Henderson, Farabow, Garrett & Dunner, LLP 1875 Explorer Street Suite 800 Reston, VA 20190-6023 Tel.: 571-203-2700 Fax: 202-408-4400	Cory C. Bell (Reg. No. 75,096) cory.bell@finnegan.com Finnegan, Henderson, Farabow, Garrett & Dunner, LLP 2 Seaport Lane, 6th Floor Boston, MA 02210-2001 Tel.: 617-646-1641 Fax: 202-408-4400 Michael V. Young (Reg. No. 61,180) michael.young@finnegan.com Daniel C. Tucker (Reg. No. 62,781) daniel.tucker@finnegan.com Finnegan, Henderson, Farabow, Garrett & Dunner, LLP 1875 Explorer Street Suite 800 Reston, VA 20190-6023 Tel.: 571-203-2700 Fax: 202-408-4400 Safiya Aguilar (Reg. No. 77,212) safiya.aguilar@finnegan.com Finnegan, Henderson, Farabow, Garrett & Dunner, LLP 901 New York Avenue, NW Washington, DC 20001-4413 Tel.: 202-408-4000 Fax: 202-408-4400

D. Service Information Under 37 C.F.R. § 42.8(b)(4)

Please address correspondence to lead and backup counsel at the addresses above and Google-Soundclear-IPRs@finnegan.com. Petitioner consents to electronic service by e-mail.

IX. Standing

Petitioner certifies that the ’337 patent is available for *inter partes* review and Petitioner is not barred or estopped from requesting *inter partes* review to challenge the claims on the grounds herein.

X. Conclusion

Petitioner requests the Board institute this IPR and find all claims unpatentable.

Date: June 12, 2025

Respectfully submitted,

/Erika H. Arner/
Erika H. Arner, Lead Counsel
Reg. No. 57,540

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(a)(1)(i), the undersigned hereby certifies that the foregoing PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 11,069,337 contains 7,681 words, excluding parts of this Petition exempted under § 42.24(a), as measured by the word-processing system used to prepare this paper.

Date: June 12, 2025

Respectfully submitted,

/Erika H. Arner/
Erika H. Arner, Lead Counsel
Reg. No. 57,540

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing **Petition for *Inter Partes* Review of U.S. Patent No. 11,069,337, Power of Attorney, and Exhibits 1001-1014** were served on June 12, 2025, by FedEx Priority Overnight® on the correspondence address of record indicated in the Patent Office's Patent Center system for U.S. Patent No. 11,069,337.

Kevin Sprenger
DAIGNAULT IYER LLP
8229 Boone Boulevard
Suite 450
Vienna, VA 22182

Date: June 12, 2025

/Lisa C. Hines/
Lisa C. Hines
Case Manager
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP