

AN ANTI-EAVESDROPPING APPARATUS AND A PROCESSING METHOD ASSOCIATED THEREWITH

Field Of Invention

5 The present disclosure generally relates to an apparatus which can correspond to an anti-eavesdropping apparatus and a processing method associated with the apparatus.

Background

10 During a meeting, it is appreciable that certain discussion content may be considered highly sensitive and, consequently, may have to be kept confidential (i.e., confidential information). Hence there is a need to prevent eavesdropping so that unauthorized individuals (e.g., individuals not authorized to attend the meeting) do not have unauthorized access to such confidential information.

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Even if a meeting (e.g., to discuss confidential matters) is held at a secure meeting location, there is still a possibility that eavesdropping can occur via portable communication devices carried by participants of the meeting. For example, a portable communication device (e.g., a Smartphone) can be infected with malware
20 which could cause the portable communication device to covertly record the confidential discussion for later retrieval or to communicate the confidential discussion in real-time to unauthorized individuals/parties.

Conventional techniques to prevent eavesdropping include signal jamming or playing
25 audible white noise in the background during a meeting.

However, such conventional techniques are disruptive in the sense that the participants of the meeting would remain uncontactable for the duration of the meeting even in the event of an unforeseen emergency and white noise played could
30 be a distraction to the participants during the meeting. Moreover, it is also possible that even if white noise is used as a countermeasure against eavesdropping, sophisticated noise decoding algorithms could render such a countermeasure ineffective.

The present disclosure contemplates that there is therefore a need for a solution which addresses, at least in part, one or more of the forgoing problems.

5 **Summary of the Invention**

In accordance with an aspect of the disclosure, an apparatus is provided. The apparatus can correspond to an anti-eavesdropping apparatus which can impede eavesdropping by, for example, unauthorized individual(s) via one or more portable communication devices used by corresponding one or more users.

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Specifically, the apparatus can be suitable for preventing eavesdropping (e.g., by an unauthorized party) via a portable communication device (e.g., used by a user who is participating in a confidential discussion). The apparatus can include at least one babble noise generator and a casing.

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The babble noise generator can be configured to produce babble noise. In one embodiment, babble noise can be produced can be customized. Customization can, for example, be based on audio input captured from a user of the portable communication device.

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Specifically, the babble noise generator can include a processor, a storage part and an input portion. The storage part and the input portion can be coupled to the processor. The storage part can be configured to store at least one audio file which can correspond to base noise. The input portion can be configured to capture audio input (i.e., associated with a user of the portable communication device). The processor can be configured to process base noise and the captured audio input to produce babble noise. The babble noise generator can further include at least one speaker driver which can be coupled to the processor. Babble noise produced by the processor can be communicated to the speaker driver for output (i.e., babble noise can be output from the babble noise generator via the speaker driver).

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Appreciably, babble noise output from the babble noise generator can be based on a combination of the base noise and the captured audio input. In this manner, babble noise produced can be customized (i.e., customized babble noise).

- 5 In one embodiment, the babble noise generator can further include an indicator coupled to the processor. The indicator can be configured to provide an indication of operation status (e.g., active operation status or non-active operation status) of the apparatus. In one example, the indicator can correspond to a light emitting diode (LED) and the indication provided can be a lighted indication.

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The casing can be shaped and dimensioned in a manner so as to carry the portable communication device within the casing. Additionally, the casing can be shaped and dimensioned so as to carry the babble noise generator in a manner such that babble noise is generated within the casing.

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In one embodiment, the casing can include a lid portion and a body portion. The lid portion can be coupled to the body portion in a manner so as to be capable of being moved. Specifically, the lid portion can be coupled to the body portion in a manner so as to be capable of either being drawn towards the body portion or being drawn
20 away from the body portion.

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When the lid portion is drawn away from the body portion, an opening can be defined and access into the body portion can be allowed. When the lid portion is drawn towards the body portion in a manner so as to close the opening, access into the
25 body portion is impeded.

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In this regard, the portable communication device can be placed within the body portion via the opening. When the lid portion is drawn towards the body portion in a manner so as to close the opening, the portable communication device, after first
30 having been placed within the body portion, is enclosed within the casing.

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In one embodiment, the apparatus can include a sealant which can be carried along the opening. The sealant can function as a sound insulant when the lid portion has

been drawn in a manner so as to close the opening. The sealant can aid in one or both of impeding sound leakage from the casing and impeding introduction of ambient sound into the casing.

- 5 In one embodiment, the babble noise generator can be configured to stop generating babble noise when the lid portion has been drawn away from the body portion.

Moreover, at least a portion of the casing can allow visual perception of the portable communication device when the portable communication device is enclosed within
10 the casing. Specifically, a user can be allowed visual perception of his/her portable communication device from outside of the casing when his/her portable communication device is enclosed within the casing.

In one example, the lid portion can include a window portion (e.g., made of
15 transparent glass or acrylic) for visual access into the casing. In another example, any part (or combination of parts) of the lid portion and/or body portion can be transparent so as to allow visual access into the casing. In yet another example, the lid portion and the body portion can be transparent so as to allow visual access into the casing. In this regard, the casing can, in part or in entirety, be made of
20 transparent material (e.g., acrylic).

In accordance with another aspect of the disclosure, a processing method for producing customized babble noise is provided. The processing method can be suitable for producing customized babble noise for an anti-eavesdropping apparatus
25 which can include a casing.

The processing method can include capturing audio input. Captured audio input can be based on a user whose portable communication device is enclosed within the casing. Audio input can be captured on one or both of real-time basis and
30 prerecorded basis.

The processing method can further include combining captured audio input with at least one audio file corresponding to base noise to produce customized babble noise.

Base noise can correspond to generic babble based on one or more prerecorded conversations.

The processing method can yet further include generating the customized babble noise within the casing.

Brief Description of the Drawings

Embodiments of the disclosure are described hereinafter with reference to the following drawings, in which:

Fig. 1 shows an apparatus which can correspond to an anti-eavesdropping apparatus, according to an embodiment of the disclosure; and

Fig. 2 shows a processing method in association with the apparatus of Fig. 1, according to an embodiment of the disclosure.

Detailed Description

The present disclosure relates to an apparatus suitable for preventing eavesdropping via one or more portable communication devices. The present disclosure contemplates that eavesdropping can occur on one or both of real-time basis and delayed basis. Eavesdropping on real-time basis can refer to, for example, an unauthorized party listening in on a confidential conversation/discussion via a portable communication device as the conversation/discussion is ongoing. Eavesdropping on delayed basis can refer to, for example, unauthorized audio recording (i.e., covert recording) of a confidential conversation/discussion via a portable communication device.

In this regard, the present disclosure contemplates an apparatus which is suitable for preventing eavesdropping which can occur on real-time basis and/or delayed basis.

Specifically, the apparatus can correspond to an anti-eavesdropping apparatus which can be in the form of, for example, to a container/an enclosure. Moreover, the apparatus can include a casing and at least one babble noise generator. The casing

can be shaped and dimensioned to carry the babble noise generator(s) and at least one portable communication device.

More specifically, the babble noise generator(s) can be configured to generate
5 babble noise within the apparatus and the portable communication device(s) can be carried within the apparatus.

When a portable communication device is enclosed within the apparatus,
eavesdropping via the portable communication device can be impeded by manner of
10 generated babble noise. Preferably, when enclosed within the apparatus, the portable communication device can still be visually perceivable (e.g., by a user of the portable communication device). These will be discussed in further details with reference to Fig. 1 and Fig. 2 hereinafter.

15 Fig. 1 shows an apparatus 100 which can be suitable for use for preventing eavesdropping, according to an embodiment of the disclosure. The present disclosure contemplates that eavesdropping by one or more unauthorized individuals can occur via one or more portable communication devices 100a used by corresponding one or more users who may be authorized participant(s) of a
20 confidential discussion. Examples of portable communication device(s) can include Mobile phone(s), Smartphone(s), electronic tablet device(s) and laptop(s).

The apparatus 100 can include a casing 102 and at least one babble noise generator 104. The casing 102 can be shaped and dimensioned in a manner so as to carry the
25 babble noise generator 104.

In one embodiment, the casing 102 can be shaped and dimensioned in a manner so as to carry the babble noise generator 104 therewithin. Specifically, the babble noise generator 104 can be carried within the casing 102 such that the babble noise
30 generator 104 can be enclosed within the casing 102.

In another embodiment, the casing 102 can be shaped and dimensioned in a manner so as to carry at least a portion of the babble noise generator 104 outside of the

casing 102. Specifically, a portion of the babble noise generator 104 can be carried within the casing 102 and a portion of the babble noise generator 104 can be carried outside of the casing 102.

- 5 In yet another embodiment, the casing 102 can be shaped and dimensioned in a manner so as to carry the babble noise generator 104 outside of the casing 102.

The casing 102 can include a first face 102a, a second face 102b and sides 102c. The first face 102a can be opposite of the second face 102b in position. Moreover,
10 the first and second faces 102a/102b can be spaced apart in a manner so that the sides 102c are defined between the first and second faces 102a/102b.

The first face 102a can correspond to a lid portion of the casing 102. The second face 102b and the sides 102c can correspond to a body portion of the casing 102.
15 The lid portion can be coupled to the body portion. Specifically, the lid portion can be moveably coupled to the body portion in a manner so as to be capable of being one of drawn towards the body portion and drawn away from the body portion.

In one embodiment, as shown in Fig. 1, the body portion can be shaped and
20 dimensioned in a manner so as to be capable of carrying one or both of at least one babble noise generator 104 and at least one portable communication device 100a. In this regard, the body portion can, for example, correspond to a receptacle shaped and dimensioned to carry the babble noise generator 104 and/or the portable communication device 100a. Specifically, the babble noise generator 104 and/or the
25 portable communication device 100a can be carried within the body portion.

Additionally, the lid portion one of allows access and impedes access into the body portion. Specifically, when the lid portion is drawn away from the body portion, an opening 106 can be defined and access into the body portion can be allowed (e.g.,
30 for placing a portable communication device 100a into the body portion) via the opening 106.

Moreover, the lid portion 102a can be drawn towards the body portion in a manner so as to close the opening 106 (e.g., after a portable communication device 100a has been placed in the body portion), thereby impeding access into the body portion. When the opening 106 has been closed after a portable communication device 100a and the babble noise generator 104 has been placed within the body portion, it is appreciable that the babble noise generator 104 and the portable communication device 100a are enclosed within the casing 102.

In one embodiment, at least a portion of the casing 102 can be transparent so as to allow visual access into the at least a portion of the casing 102 when the opening 106 is closed. For example, visual access can be allowed into the body portion so that a portable communication device 100a enclosed within the casing 102 can still be visually perceived from outside of the casing 102. In one example, the lid portion can include a window portion (e.g., made of transparent glass or acrylic) for visual access into the casing 102. In another example, any combination of the first face 102a, the second face 102b and the sides 102c can be transparent so as to allow visual access into the casing 102. In yet another example, the first face 102a, the second face 102b and the sides 102c can be transparent so as to allow visual access into the casing 102. In this regard, the casing 102 can, in part or in entirety, be made of transparent material (e.g., acrylic).

In one embodiment, the apparatus 100 can include a sealant 108 which can be carried along the opening 106. The sealant 108 can, for example, be a rubberized seal which can function as a sound insulant when the opening 106 is closed by the lid portion. Specifically, when the lid portion has been drawn so as to close the opening 106, the sealant 108 can aid in one or both of impeding escape of sound/noise from the casing 102 (i.e., impede sound leakage from the casing 102) and introduction of ambient sound/noise (i.e., from outside of the casing 102) into the casing 102.

The babble noise generator 104 can, for example, correspond to an audio player (e.g., an MP3 player) which can be configured to produce babble noise. In this

regard, babble noise can generated within the casing 102 by the babble noise generator 104.

The babble noise generator 104 can include a housing 104a, a processor (not shown) and at least one speaker driver 104b. The babble noise generator 104 can, as an option, further include a sensor 104c. The babble noise generator 104 can, as a further option, yet further include an indicator 104d. The babble noise generator 104 can, as yet a further option, further include a storage part (not shown). In yet a further additional option, the babble noise generator 102 can include an input portion (not shown).

The housing 104a can be shaped and dimensioned in a manner so as to carry the processor, the speaker driver 104b, the sensor 104c, the indicator 104d and the storage part.

The processor can be coupled to the speaker driver 104b, the sensor 104c, the indicator 104d, the storage part or any combination thereof. Specifically, the processor can be coupled to the speaker driver 104b, the sensor 104c, the indicator 104d and/or the storage part by manner of one or both of wired coupling and wireless coupling.

The processor can, for example, correspond to a microprocessor configured for one or more of the following:

- 1) receiving at least one sensor signal
- 2) generating at least one control signal
- 3) generating at least one audio signal

Specifically, the processor can be configured to receive one or more sensor signals, generate one or more control signals and/or generate one or more audio signals.

The sensor 104c can correspond to, for example, a mechanical sensor, a magnetic sensor, an optical sensor or any combination thereof. The storage part can correspond to one or both of removable external storage such as a Secure Digital

(SD) card and internal storage (e.g., flash memory, hard disk drive) which can be configured to store one or more audio files (e.g., MP3 audio files). The indicator 104d can, for example, correspond to a light emitting diode (LED). The input portion can, for example, correspond to a microphone configurable to capture audio input from one or more users (e.g., corresponding to one or more owners of corresponding one or more portable communication devices 100a).

Moreover, an audio file can, for example, be associated with base noise corresponding to an audio recording associated with generic babble. In one example, generic babble can arise from/ be generated by at least two separate conversations occurring simultaneously in close proximity. In another example, generic babble can arise from/ be generated by a plurality of individuals speaking simultaneously (i.e., a plurality of individuals speaking at the same time). Audio input captured from a user can, for example, correspond to speech utterance of the user.

In general, sensor signal(s) can be generated by, and communicated from, the sensor 104c. Sensor signal(s) can be communicated to the processor and based on the sensor signal(s) received, the processor can be configured to generate control signal(s). Based on the generated control signal(s), audio signal(s) corresponding to babble noise can be produced and communicated from the babble noise generator 104 via the speaker driver 104b. Moreover, as an option, based on the generated control signals, the indicator 104d can be activated to provide an indication as to, for example, whether the opening 106 has been closed and/or whether the babble noise generator 104 is generating babble noise within the casing 102. Additionally, babble noise can be generated based on one or both of:

- 1) the audio file(s) only; and
- 2) a combination of the audio file(s) and audio input captured.

These will be discussed in further detail hereinafter.

The sensor 104c can be configured to detect whether the opening 106 has been closed and generate one or more sensor signals accordingly. Preferably, the sensor 104c can be configured to generate one or more sensor signals indicative of whether the opening 106 has been closed. Alternatively, the sensor 104c can be configured

to generate at least one sensor signal when the opening 106 has been closed and at least one other sensor signal when the opening 106 remains unclosed. Sensor signal(s) can be communicated from the sensor 104c to the processor.

- 5 The processor can be configured to receive the sensor signal(s) and generate control signal(s) based on the received sensor signal(s). In one example, a first control signal and a second control signal can be generated based on the received sensor signal(s) which can be indicative that the opening 106 has been closed. The first control signal can, for example, correspond to an audio retrieval control signal and
10 the second control signal can, for example, correspond to an indicator activation control signal.

In one embodiment, when the processor receives sensor signal(s) indicative that the opening 106 has been closed, the processor can generate an audio retrieval control
15 signal for producing audio signal(s) to be output from the babble noise generator 104 via the speaker driver 104b.

In one example, the audio retrieval control signal can be generated and communicated to the storage part to retrieve one or more audio files. The audio file(s)
20 retrieved can, for example, be processed (e.g., by manner of decoding) so as to produce audio signal(s) which can be communicated to the speaker driver 104d.

In another example, the audio retrieval control signal can be generated and communicated to the storage part to retrieve one or more audio files. Moreover,
25 captured audio input can be processed in combination with the retrieved one or more audio files. For example, captured audio input can be combined with a retrieved audio file using audio mixing based techniques.

In one embodiment, audio input from a user can be captured on real-time basis (e.g.,
30 real-time recording via the input portion). In another embodiment, audio input from a user can be captured by manner of prerecording. In yet another embodiment, audio input from a user can be captured by manner of a combination of real-time basis and prerecording.

Capture of audio input of a user on real-time basis can, for example, be by manner of activating the input portion to capture audio input from the user only after the user has placed his/her portable communication device 100a within the apparatus 100 and the opening 106 has been closed. In this regard, the input portion can, for example, correspond to a microphone which can be activated when the opening 106 has been closed. For example, the audio retrieval control signal can be communicated to the input portion to activate the input portion for capturing audio input from a user after the user has placed his/her portable communication device 100a within the apparatus 100 and the opening 106 has been closed. For example, when the microphone (i.e., the input portion) has been activated, a user can speak into the microphone so that audio input (e.g. speech utterance) can be captured from the user. In one example, the microphone can protrude from one of the sides 102c of the casing 102 while being electrically connected to the babble noise generator 104 which can be carried within the casing 102.

Capture of audio input of a user by manner of prerecording can, for example, be by manner of a prior recording of a user's speech utterance which has been stored in the storage part in the form of an audio file (e.g., an MP3 file). In one example, the input portion (e.g., a microphone) can be activated without a user first having to put his/her portable communication device 100a within the apparatus 100 before speaking into the microphone (i.e., the input portion) to record and store his/her speech utterance in the storage part (e.g., internal flash memory). In another example, a user's speech utterance can be prerecorded and stored as an audio file in, for example, a SD card (i.e., external storage) which can be plugged into the babble noise generator 104 for retrieval based on the audio retrieval control signal (in which case, the storage part can correspond to a receptacle capable of receiving the external storage and electrically connecting the received external storage to the processor).

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Earlier mentioned, audio signal(s) produced can correspond to babble noise which can be output from the speaker driver 104b. Specifically, babble noise can be output from the speaker driver 104b and communicated within the casing 102. In this

manner, babble noise can be generated within the casing 102 by the babble noise generator 104.

Moreover, it is appreciable that babble noise produced can be customized based on a user (i.e., based on audio input captured from the user) to produce customized babble noise. Specifically, babble noise can be produced based on customization via audio input captured from a user. The present disclosure contemplates that user specific customization of babble noise (i.e. customized babble noise produced based on specific user's voice/speech) can be an effective countermeasure against sophisticated noise decoding algorithms (i.e., improve resistance to reverse engineering by manner of sophisticated noise decoding algorithms).

The indicator activation control signal can be communicated to the indicator 104d to provide an indication to a user concerning operation status (i.e., active or non-active) of the apparatus 100. In one example, after a user has placed his/her portable communication device 100a within the apparatus 100 and the opening 106 is closed, an indicator activation control signal can be communicated to the indicator 104d to provide a lighted indication (e.g., where the indicator 104d corresponds to an LED) to indicate that the apparatus 100 is in active operation status. Specifically, the indicator 104d can, for example, correspond to an LED which can be lit (i.e., upon receipt of an indicator activation control signal) after a user has placed his/her portable communication device 100a and the opening 106 is closed to indicate that the apparatus 100 is in active operation status.

The present disclosure contemplates that providing an indication to a user concerning operation status of the apparatus 100 can be useful. In one example, a user can be kept informed as to whether babble noise is being generated within the casing 102. In another example, a user can be prompted, based on the provided indication, to speak into the input portion for the purpose of capturing audio input from the user.

Earlier mentioned, when a portable communication device 100a is enclosed within the apparatus 100, eavesdropping via the portable communication device 100a can

be impeded by manner of generated babble noise. Moreover, at least a portion of the casing 102 can be transparent so as to allow visual access into at least a portion of the casing 102 when the opening 106 is closed.

- 5 The present disclosure contemplates that even after a portable communication device 100a is enclosed within the apparatus 100 and babble noise is generated within the casing 102 so as to impede eavesdropping via the portable communication device 100a, the communicative functionality of the portable communication device 100a is not impaired per se.

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Specifically, the present disclosure contemplates that it is useful to provide an apparatus 100 capable of containing a portable communication device 100a in a manner so as to impede eavesdropping (i.e., via the communication device 100a) and, at the same time, not impede incoming communication to the communication
15 device 100a. More specifically, the present disclosure contemplates that it may be useful for a user of a communication device 100a to remain contactable even when there is a need to prevent/impede eavesdropping.

Hence the apparatus 100, according to an embodiment of the disclosure, can be
20 capable of containing a portable communication device 100a such that the portable communication device 100a is still be capable of receiving incoming communication(s) (e.g., an incoming call or a message based communication) when enclosed within the casing 102. At the same time, when enclosed within the casing 102, eavesdropping via the portable communication device 100a can be
25 prevented/impeded by manner of generating babble noise within the casing 102.

In one example, a portable communication device 100a, subjected to generated babble noise, can still be capable of receiving one or more messages (e.g., electronic text messages and/or electronic mails) when enclosed within the casing 102.
30 Notification(s) concerning received message(s) can be displayed by the portable communication device 100a. Notification(s) displayed by the portable communication device 100a can be visually perceived by the user of the portable communication

device 100a even when the portable communication device 100a is enclosed within the casing 102.

In another example, a portable communication device 100a enclosed within the casing 102 and subjected to generated babble noise can still be capable of receiving an incoming call. Notification(s) concerning an incoming call can be displayed by the portable communication device 100a. Notification(s) displayed by the portable communication device 100a can be visually perceived by the user of the portable communication device 100a even when the portable communication device 100a is enclosed within the casing 102.

Referring to Fig. 2, a processing method 200 associated with the apparatus 100 is shown, according to an embodiment of the disclosure. Earlier mentioned, the apparatus 100 can correspond to an anti-eavesdropping apparatus. In this regard, the processing method 200 can be suitable for producing customized babble noise for the anti-eavesdropping apparatus.

Specifically, the processing method 200 can be associated with generating customized babble noise within the casing 102 using the babble noise generator 104.

The processing method 200 can include a capturing step 202, a combining step 204 and an output step 206.

At the capturing step 202, audio input can be captured. Specifically, audio input captured can be based on a user (e.g., speech utterance(s) from the user) of a portable communication device 100a which is placed within the casing 102. More specifically, captured audio input can be based on a user whose portable communication device 100a is enclosed within the casing 102. Audio input can be captured via the input portion. As mentioned earlier, the input portion can, for example, correspond to a microphone.

Moreover, capturing of audio input can be one or both of on real-time basis and on prerecorded basis. Earlier mentioned, capture of audio input of a user on real-time

basis can, for example, be by manner of activating the input portion to capture audio input from the user only after the user has placed his/her portable communication device 100a within the apparatus 100 and the opening 106 has been closed. Capture of audio input of a user by manner of prerecording can, for example, be by
5 manner of a prior recording of a user's speech utterance which has been stored in the storage part in the form of an audio file (e.g., an MP3 file).

At the combining step 204, captured audio input can be combined with one or more audio files. Specifically, captured audio input can be processed, by the processor, in
10 combination with at least one audio file which can correspond to base noise to produce customized babble noise. For example, captured audio input can be combined with an audio file using audio mixing based techniques. Earlier mentioned, an audio retrieval control signal can be communicated to the storage part to retrieve one or more audio files.

15 In this regard, the audio file(s) retrieved from the storage part can correspond to base noise and captured audio input (e.g., captured speech utterance) can be combined with the base noise to produce customized babble noise. Base noise can correspond to generic babble based on one or more prerecorded conversations. In
20 one embodiment, the user is not a party of the one or more prerecorded conversations. Customized babble noise can be produced by the processor based on a combination of captured audio input and base noise.

At the output step 206, customized babble noise can be generated within the casing
25 102. Specifically, customized babble noise can be output from the babble noise generator 104 into the casing 102. More specifically, customized babble noise can be output from the babble noise generator 104 via the speaker driver 104b. Yet more specifically, customized babble noise produced by the processor can be communicated from the processor to the speaker driver 104b and output from the
30 babble noise generator 104 into the casing 102 via the speaker driver 104b. In this manner, customized babble noise can be generated within the apparatus 100.

Appreciably, babble noise generated within the apparatus 100 can be customized based on a user of the portable communication device 100a. Specifically, customized babble noise can be generated based on user specific customization.

- 5 It should be further appreciated by the person skilled in the art that variations and combinations of features described above, not being alternatives or substitutes, may be combined to form yet further embodiments.

10 In the foregoing manner, various embodiments of the disclosure are described for addressing at least one of the foregoing disadvantages. Such embodiments are intended to be encompassed by the following claims, and are not to be limited to specific forms or arrangements of parts so described and it will be apparent to one skilled in the art in view of this disclosure that numerous changes and/or modification can be made, which are also intended to be encompassed by the following claims.

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In one example, in the absence of sensor signal(s) indicative that the opening 106 has been closed being received by the processor, audio signal(s) are not generated and/or not output from the babble noise generator 104. Specifically, the babble noise generator 104 can be configured to stop generating babble noise when the lid portion
20 has been drawn away from the body portion.

In another example, a portable power source (not shown) such as a battery can be provided and coupled to, for example, the babble noise generator 104 to improve portability of the apparatus 100.

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In yet another example, although it is earlier mentioned that babble noise generated within the apparatus 100 can be customized based on a user (i.e., a user who uses the portable communication device 100a), it is appreciable that customized babble noise can also be produced based on a person (i.e., another person who has not
30 placed his/her portable communication device within the casing 102) whom the user may be conversing with.

