US 20150015361A1

(19) **United States**

(12) **Patent Application Publication**

(10) **Pub. No.: US 2015/0015361 A1**

(43) **Pub. Date: Jan. 15, 2015**

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(54) **CONVENIENT ELECTRONIC GAME CALLING DEVICE**

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(21) Appl. No.: **14/499,020**

(22) Filed: **Sep. 26, 2014**

Related U.S. Application Data

(63) Continuation of application No. 13/113,050, filed on May 21, 2011, now abandoned, Continuation of application No. 13/220,551, filed on Aug. 29, 2011, Continuation-in-part of application No. 11/652,328, filed on Jan. 11, 2007, now abandoned.

Publication Classification

(51) **Int. Cl.**

A01M 31/00	(2006.01)
G08C 17/02	(2006.01)
G06Q 20/12	(2006.01)
H04M 1/725	(2006.01)
H04M 11/00	(2006.01)
G06F 3/16	(2006.01)
H04R 1/02	(2006.01)

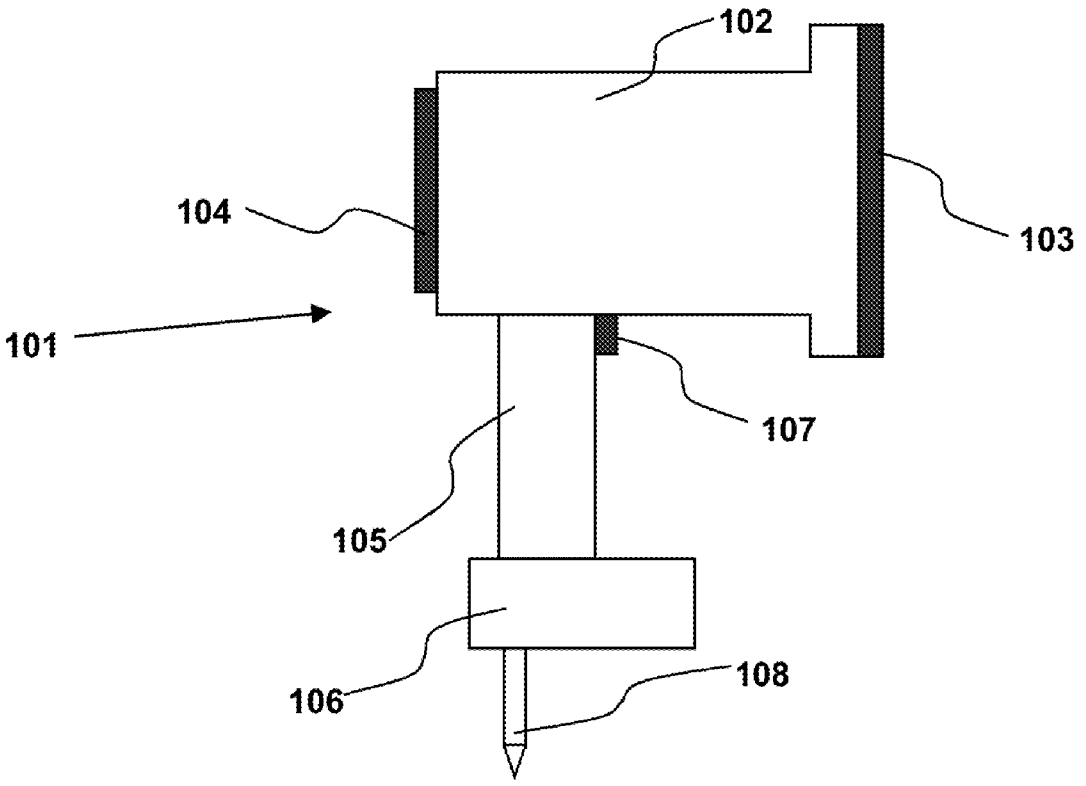
(52) **U.S. Cl.**

CPC ***A01M 31/004*** (2013.01); ***G06F 3/165*** (2013.01); ***G08C 17/02*** (2013.01); ***H04R 1/028*** (2013.01); ***H04M 1/72558*** (2013.01); ***H04M 11/007*** (2013.01); ***G06Q 20/123*** (2013.01); *G08C 2201/30* (2013.01); *H04R 2420/07* (2013.01); *H04R 2499/11* (2013.01)

USPC **340/4.42**

(57) **ABSTRACT**

A convenient electronic sound producing device is an electronic sound producing device that is physically configured to be easy to use in the field. A control module faces the use while the sound is projected away from the user. A pistol grip can be used to ease holding and using the call. A remote can further ease operation and allow control from a distance. A timer allows for nearly autonomous operation. Control modules can be fixed to a firearm, bow, crossbow, or camera to minimize the user's movement while simultaneously calling and preparing for a shot. A pinning hole or a stake can allow for reliably fixing the sound producing device to a surface, to vegetation, or to other objects.



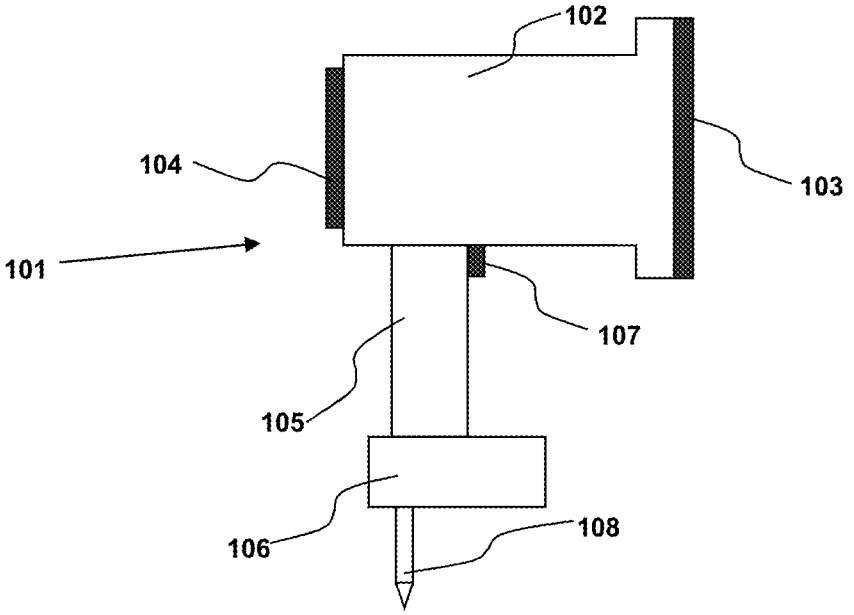


Fig. 1

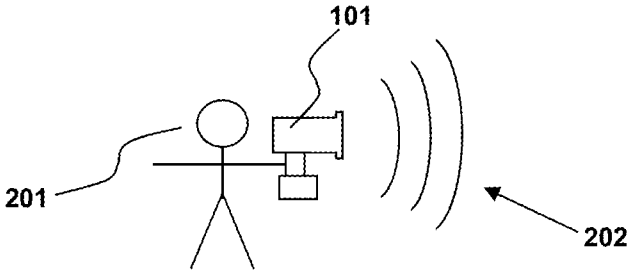


Fig. 2

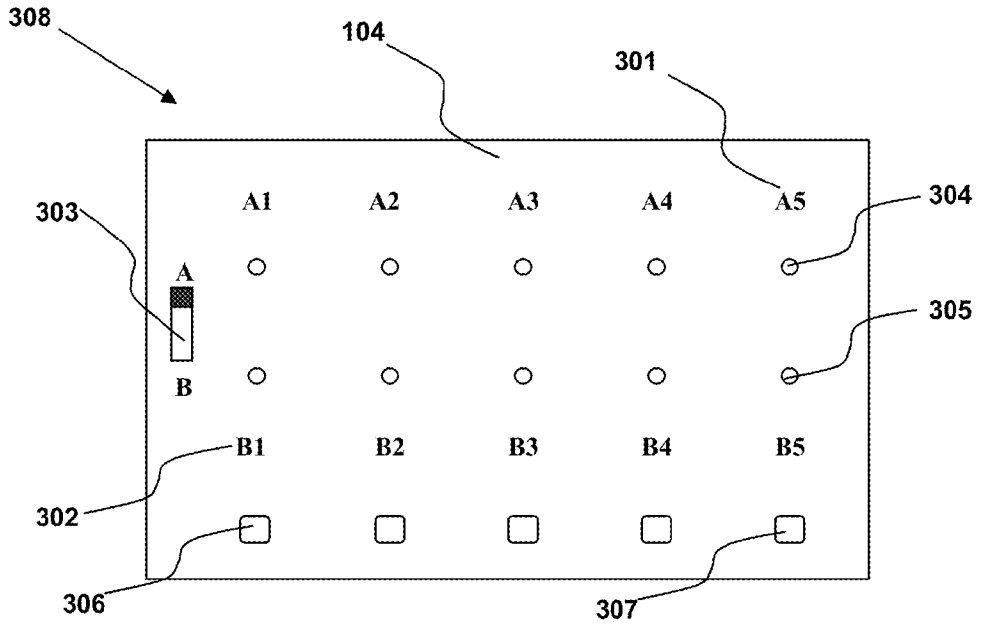

308
104
301
303
A1
A2
A3
A4
A5
304
A
B
305
B1
B2
B3
B4
B5
302
306
307

Fig. 3

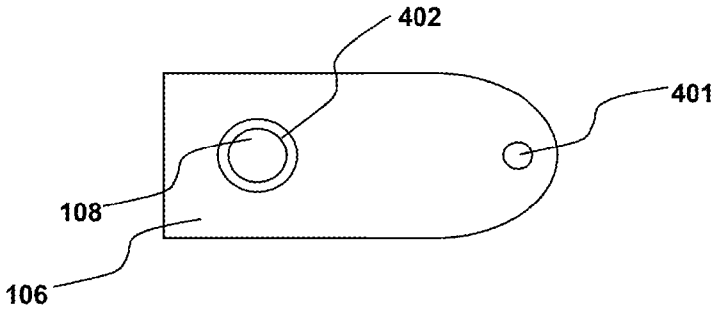

402
401
108
106

Fig. 4

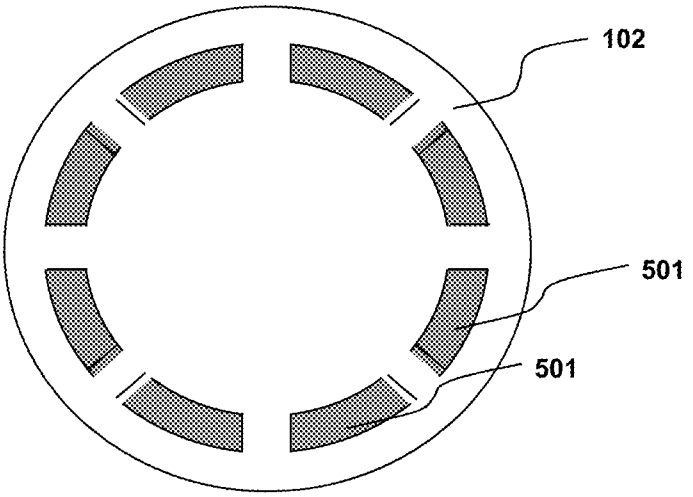


Fig. 5

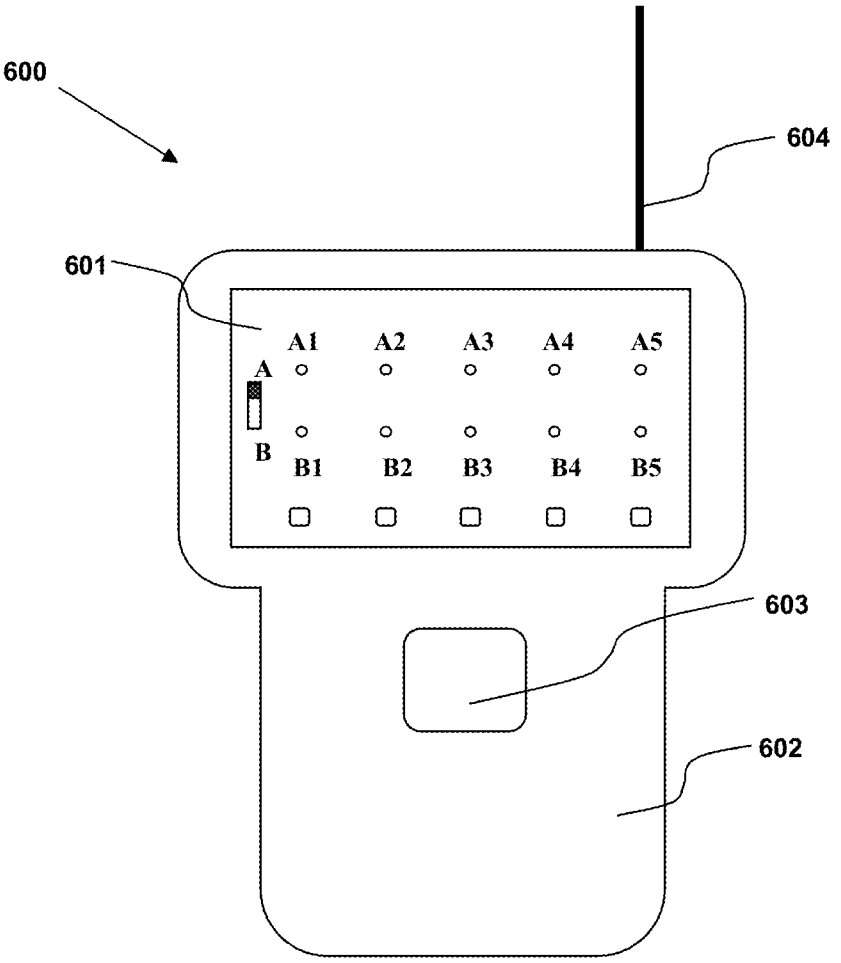


Fig. 6

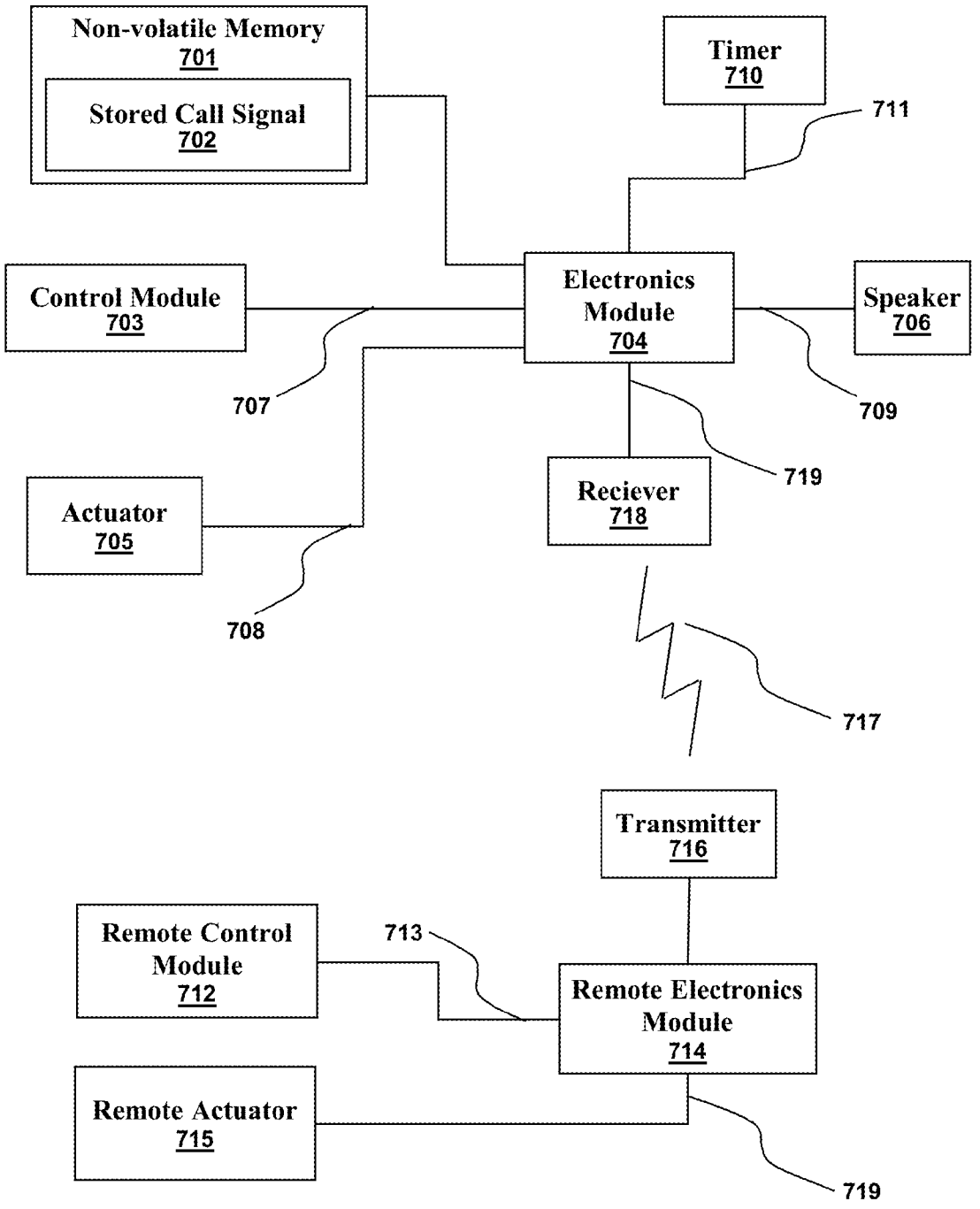

Non-volatile Memory
701
Stored Call Signal
702
Timer
710
711
Control Module
703
Electronics Module
704
Speaker
706
707
709
Actuator
705
Reciever
718
719
708
717
Transmitter
716
Remote Control Module
712
713
Remote Electronics Module
714
Remote Actuator
715
719

Fig. 7

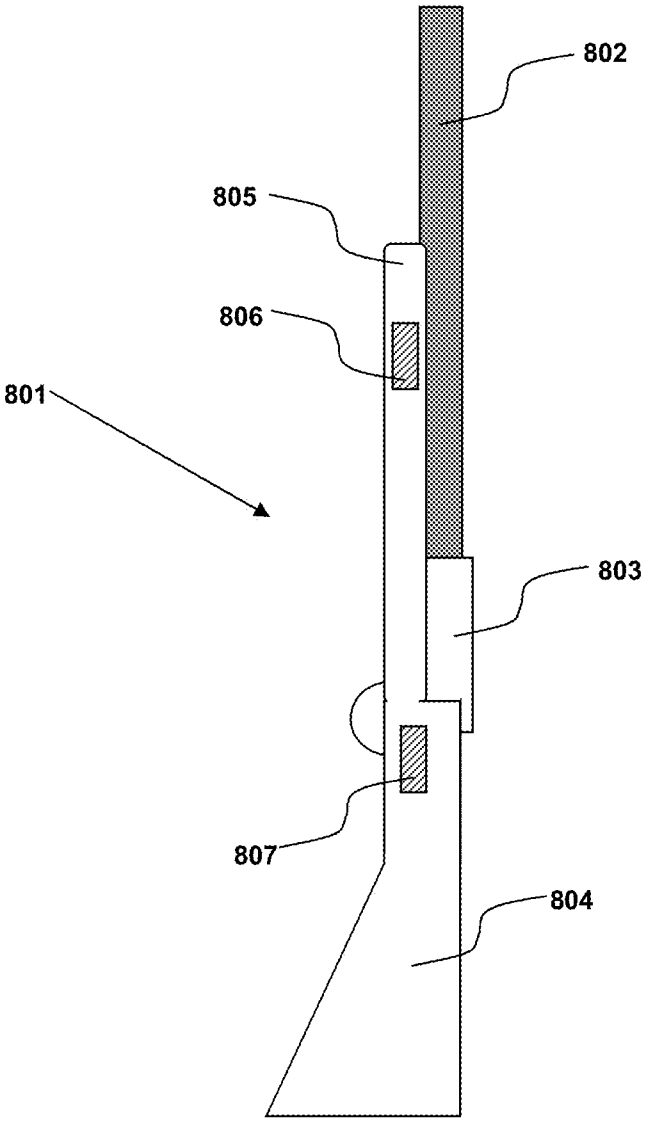


Fig. 8

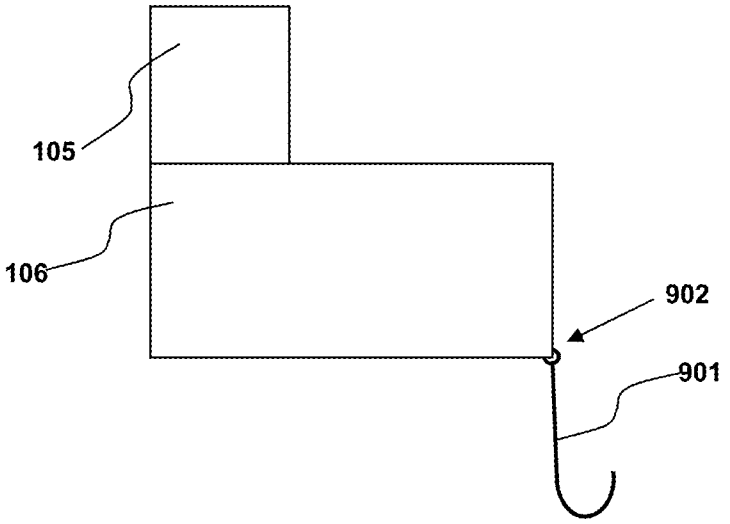


Fig. 9

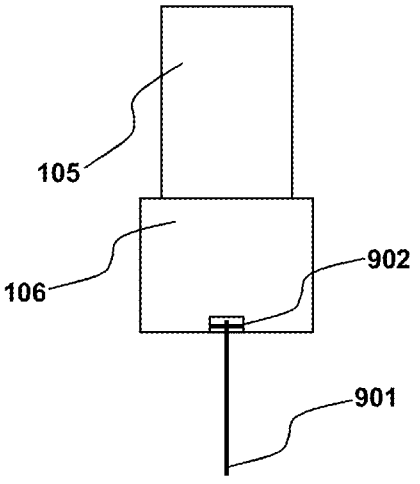


Fig. 10

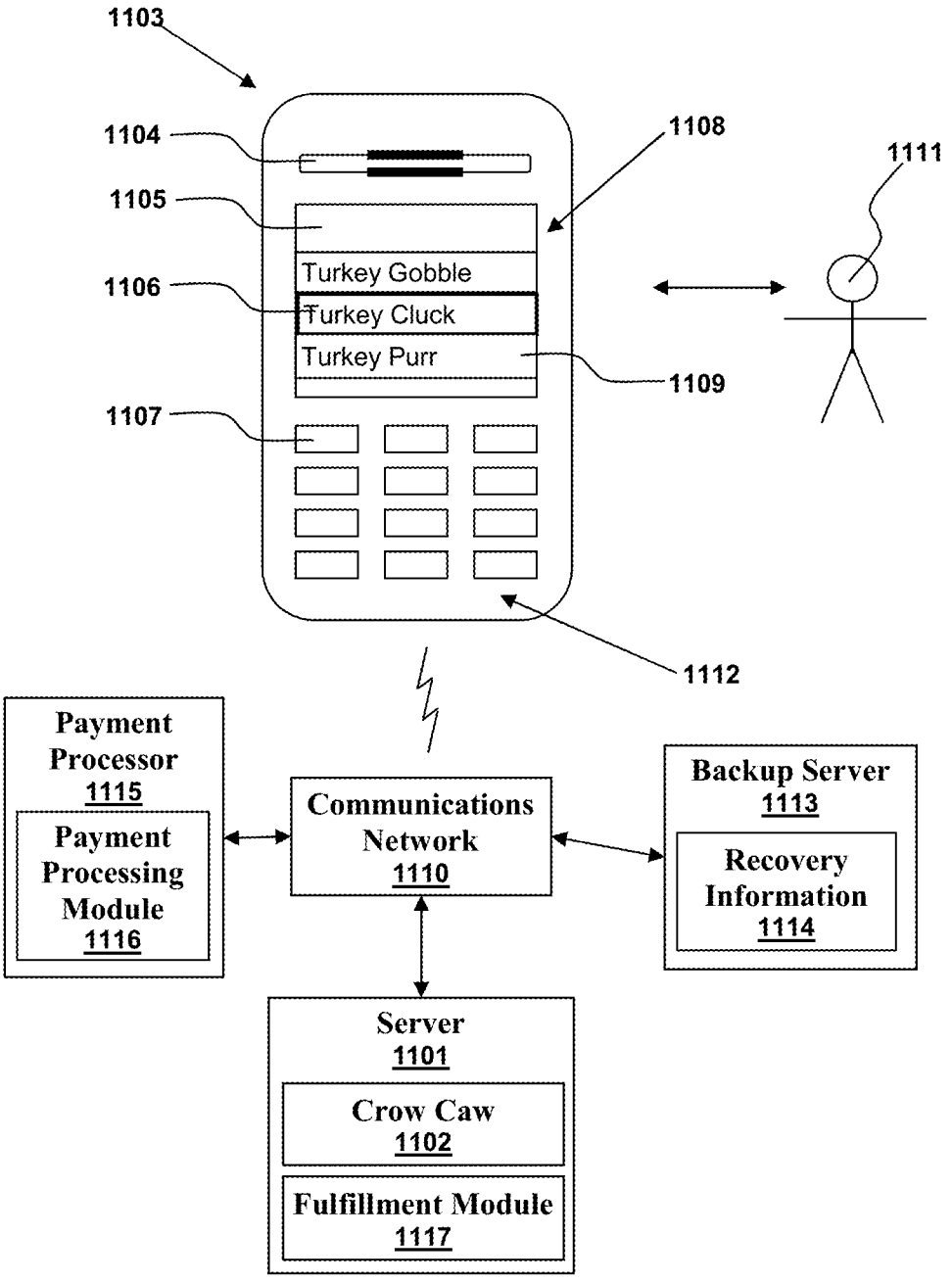

1103
1104
1105
1106
1107
1108
1109
1111
1112
Turkey Gobble
Turkey Cluck
Turkey Purr
Payment Processor 1115
Payment Processing Module 1116
Communications Network 1110
Backup Server 1113
Recovery Information 1114
Server 1101
Crow Caw 1102
Fulfillment Module 1117

Fig. 11

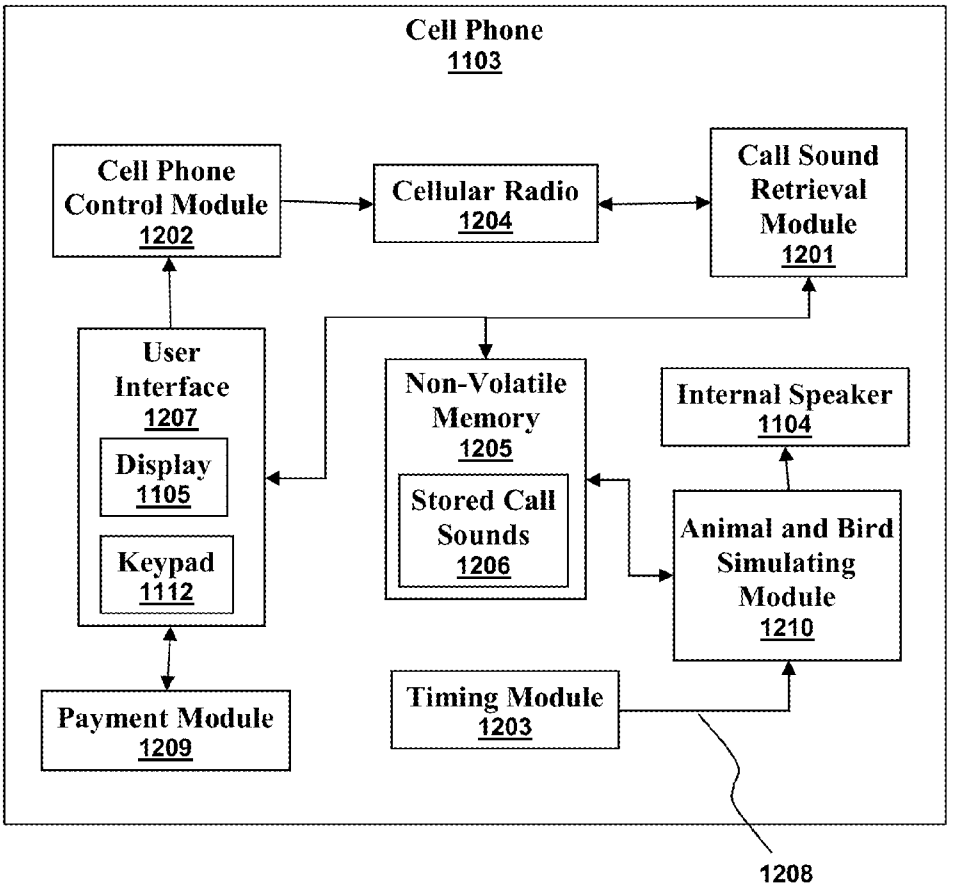

Cell Phone
1103
Cell Phone Control Module
1202
Cellular Radio
1204
Call Sound Retrieval Module
1201
User Interface
1207
Display
1105
Keypad
1112
Non-Volatile Memory
1205
Stored Call Sounds
1206
Internal Speaker
1104
Animal and Bird Simulating Module
1210
Payment Module
1209
Timing Module
1203
1208

Fig. 12

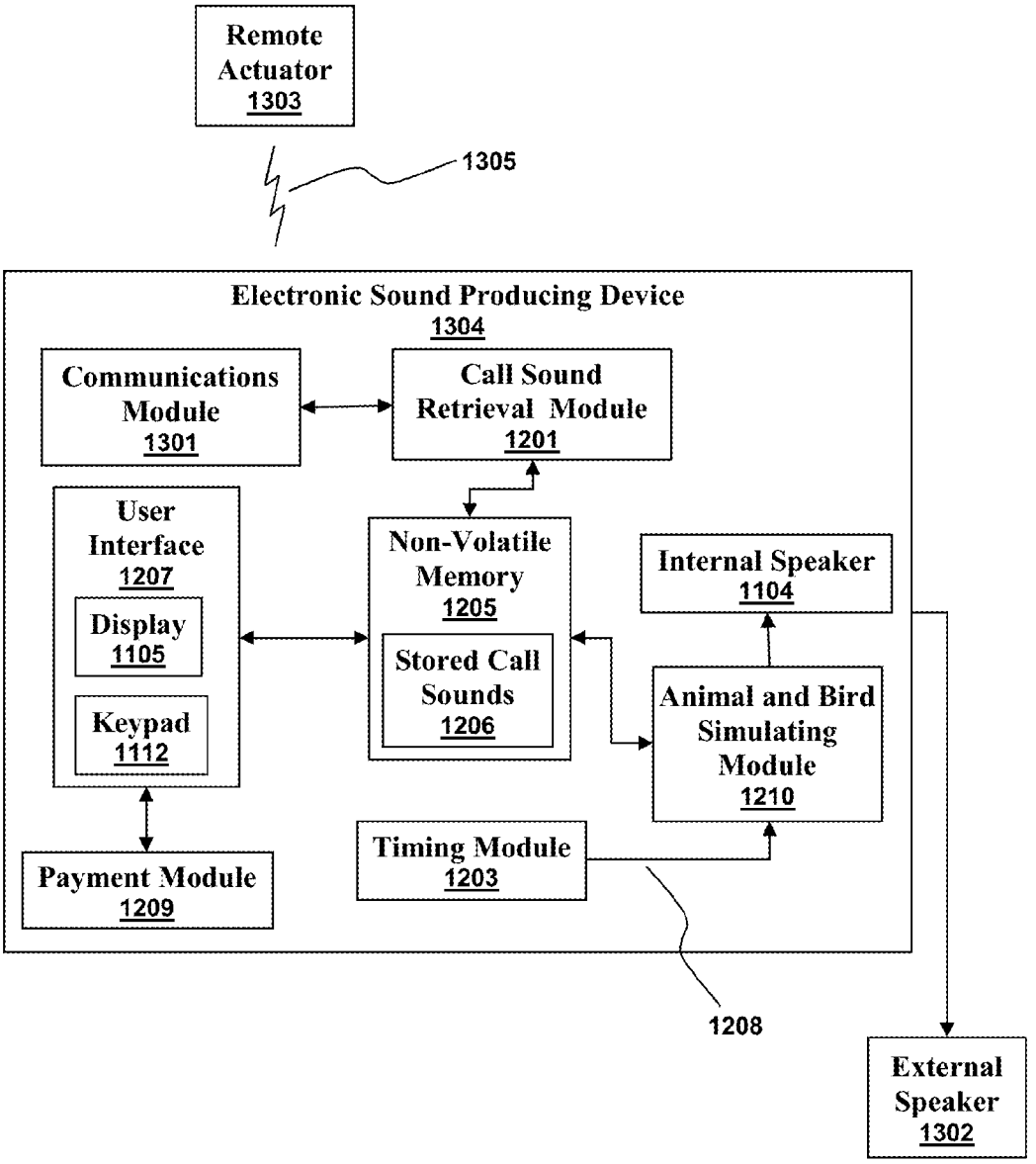

Remote Actuator 1303
1305
Electronic Sound Producing Device 1304
Communications Module 1301
Call Sound Retrieval Module 1201
User Interface 1207
Display 1105
Keypad 1112
Non-Volatile Memory 1205
Stored Call Sounds 1206
Internal Speaker 1104
Animal and Bird Simulating Module 1210
Timing Module 1203
Payment Module 1209
1208
External Speaker 1302

Fig. 13

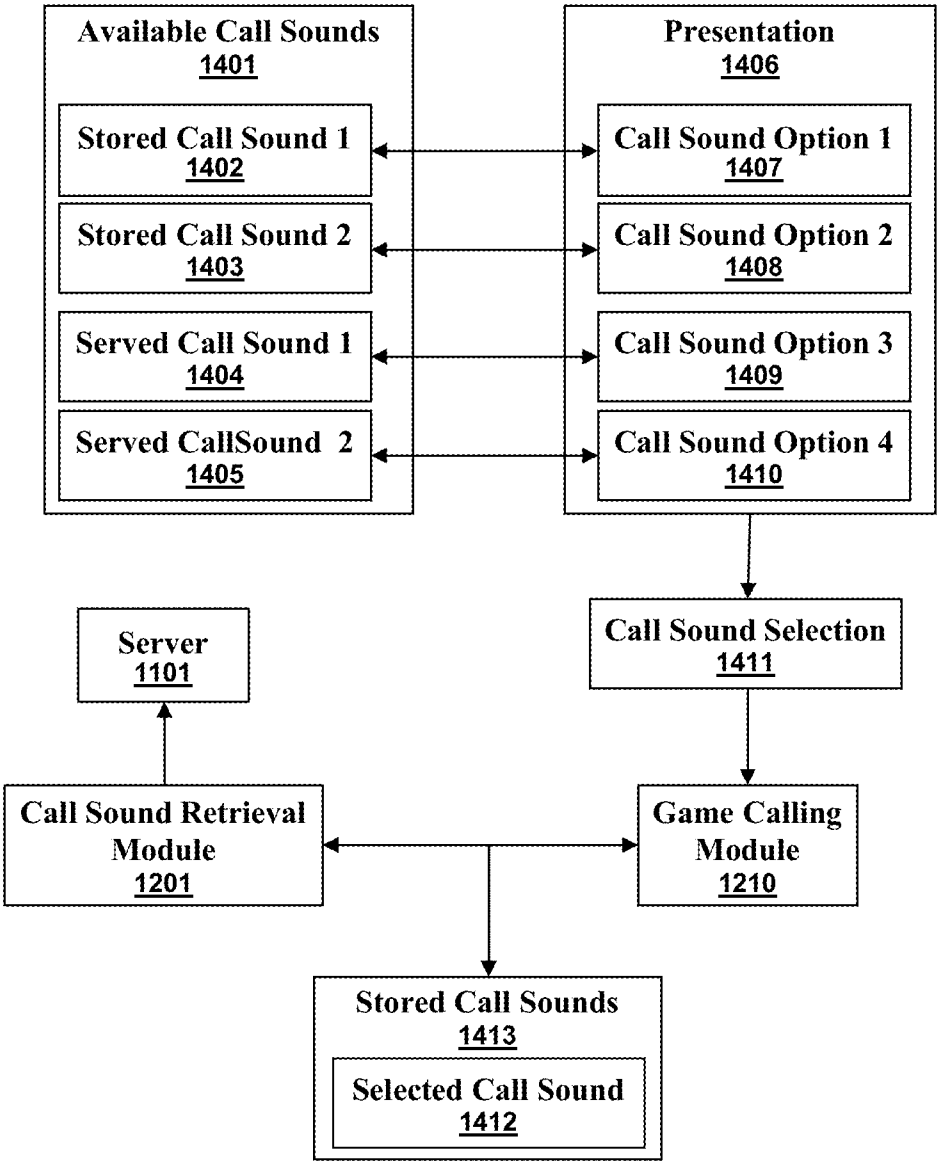

Available Call Sounds
1401
Stored Call Sound 1
1402
Stored Call Sound 2
1403
Served Call Sound 1
1404
Served CallSound 2
1405
Presentation
1406
Call Sound Option 1
1407
Call Sound Option 2
1408
Call Sound Option 3
1409
Call Sound Option 4
1410
Call Sound Selection
1411
Server
1101
Call Sound Retrieval Module
1201
Game Calling Module
1210
Stored Call Sounds
1413
Selected Call Sound
1412

Fig. 14

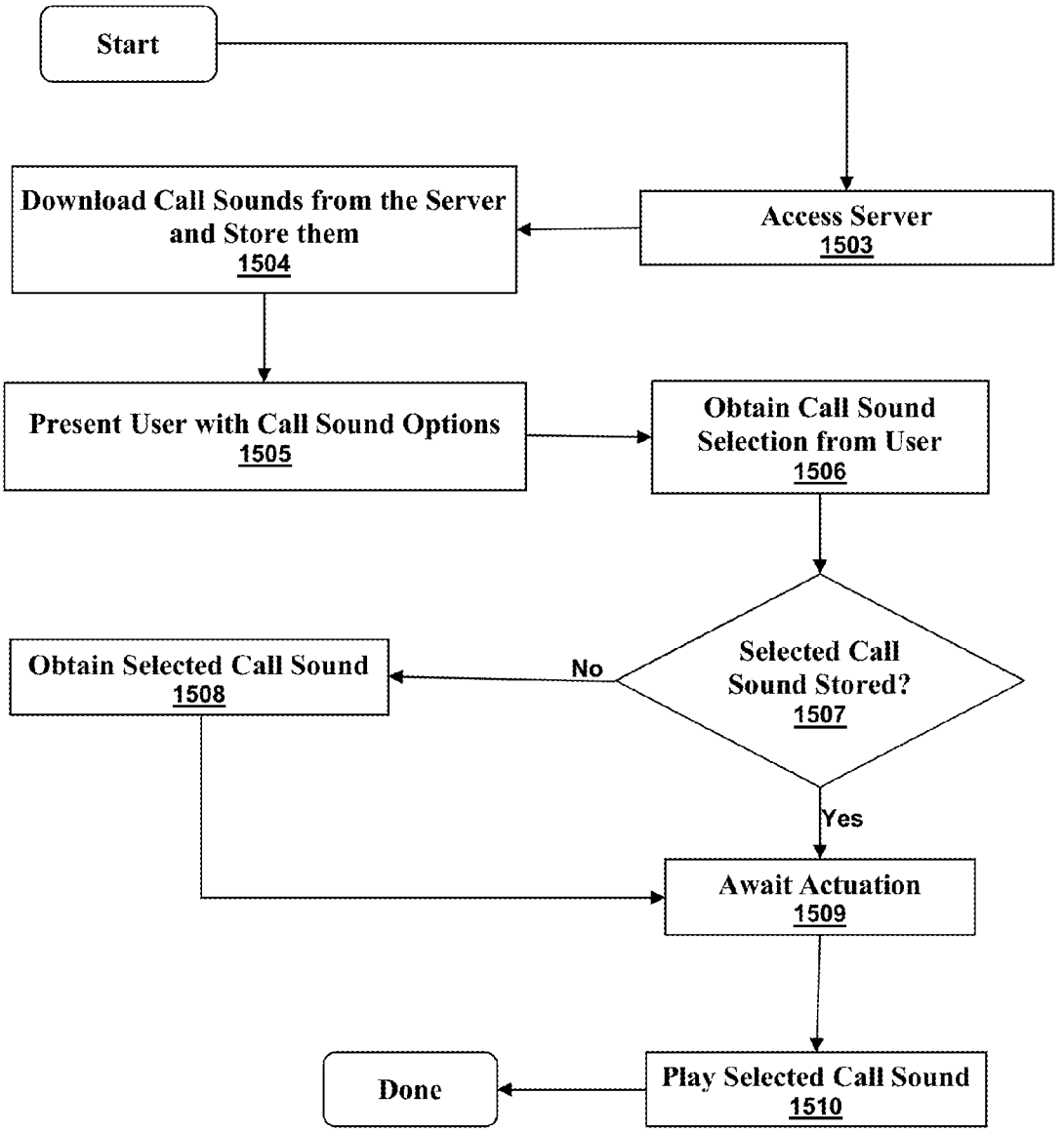

Start
Access Server
1503
Download Call Sounds from the Server and Store them
1504
Present User with Call Sound Options
1505
Obtain Call Sound Selection from User
1506
Selected Call Sound Stored?
1507
No
Yes
Obtain Selected Call Sound
1508
Await Actuation
1509
Play Selected Call Sound
1510
Done

Fig. 15

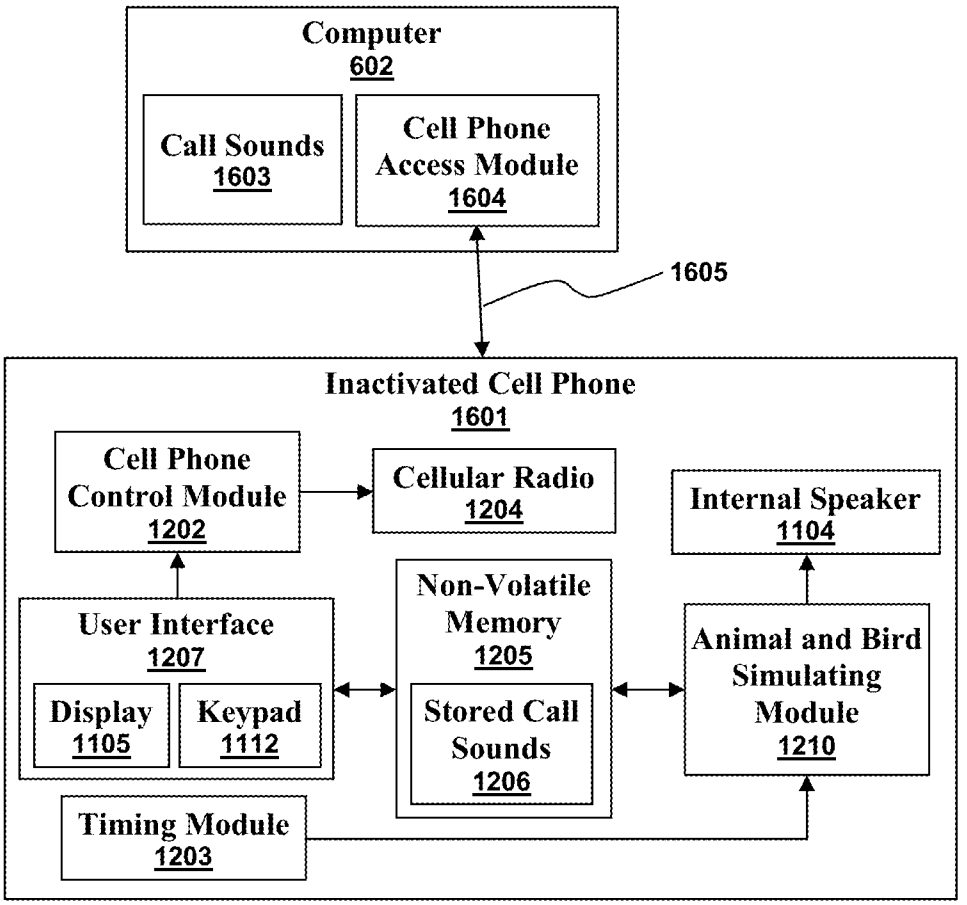

Computer
602
Call Sounds
1603
Cell Phone Access Module
1604
1605
Inactivated Cell Phone
1601
Cell Phone Control Module
1202
Cellular Radio
1204
Internal Speaker
1104
User Interface
1207
Display
1105
Keypad
1112
Non-Volatile Memory
1205
Stored Call Sounds
1206
Animal and Bird Simulating Module
1210
Timing Module
1203

Fig. 16

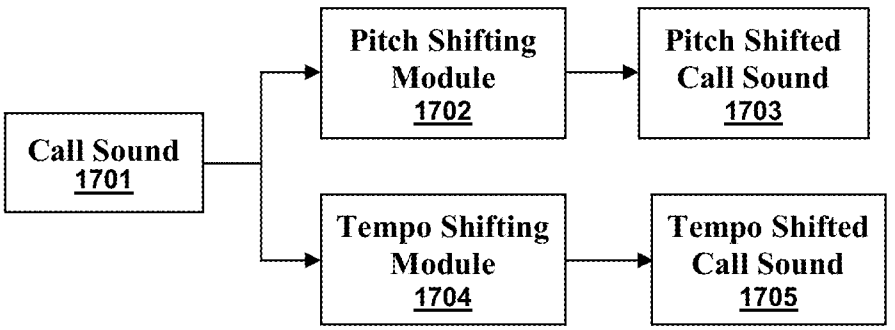

Call Sound
1701
Pitch Shifting Module
1702
Pitch Shifted Call Sound
1703
Tempo Shifting Module
1704
Tempo Shifted Call Sound
1705

Fig. 17

CONVENIENT ELECTRONIC GAME CALLING DEVICE

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This patent application is a continuation of and claims priority and benefit of U.S. patent application Ser. No. 13/113,050 filed May 21, 2011 entitled "Cell Phone Based Sound Production" and of U.S. patent application Ser. No. 13/220,551 filed Aug. 29, 2011 entitled "Convenient Electronic Sound Producing Device" and both of which are herein included by reference in their entirety. U.S. patent application Ser. No. 13/220,551 is a continuation in part of U.S. patent application Ser. No. 11/652,328 filed on Jan. 11, 2007 entitled "Convenient Electronic Sound Producing Device", and of U.S. patent application Ser. No. 13/113,050 and both of which are incorporated therein by reference in their entirety. U.S. patent application Ser. No. 13/113,050 is a continuation of U.S. patent application Ser. No. 11/622,370 filed on Jan. 11, 2007 entitled "Cell Phone Based Animal Sound Imitation" and which is incorporated therein by reference in its entirety. This application therefor claims priority and benefit of U.S. patent application Ser. Nos. 11/652,328, 11/622,370, 13/113,050, and 13/220,551.

TECHNICAL FIELD

[0002] Embodiments relate to sound producing devices, digital audio devices, remote controls, cellular telephones, communications networks, and data servers. Embodiments also relate to hunting, wildlife observation, and wildlife vocalizations.

BACKGROUND

[0003] People have made and used sound producing devices to produce sounds since prehistoric times and continue to make and use them. Sounds are produced for a variety of reasons. Call sounds are sounds whose purpose is to imitate an animal. Certain sounds can entice an animal to respond and sometimes to come closer. Other sounds are enjoyable to humans and can invoke a human response. Over time, sound production technology has changed while the purposes have largely remained the same.

[0004] A person uses a call sound producing device to produce a call sound. In general, the sound is an attractive sound such as an imitation of an animal vocalization. Different sounds are appropriate for enticing different responses. For example, elk can respond to any of a variety of elk vocalizations or other attractive sounds such as antlers thrashing in brush. Similarly, turkey can respond to any of a variety of turkey vocalizations or other attractive sounds such as beating wings. Predators, such as coyotes, often respond to prey animal vocalizations such as those of a distressed rabbit.

[0005] Electronic sound producing devices are devices that are readily available from a variety of manufacturers. These devices can store digitized game animal vocalizations and other sounds. Electronic sound producing devices, however, are additional pieces of equipment that must be carried or bought. Furthermore, current electronic sound producing devices have cumbersome methods at best for obtaining and storing new sounds. A need therefore exists for an easily loaded and carried electronic sound producing device.

[0006] U.S. patent application Ser. No. 13/113,050, of which this application is a continuation, discloses embodiments in which a cell phone is used to store and produce sounds and vocalizations. U.S. patent application Ser. No. 13/113,050 is included herein by reference and in its entirety for its teachings of cell phones, servers, communications networks, sound altering modules, and the other hardware and software infrastructure and modules involved that result in devices capable of obtaining, storing, and producing sounds on cell phones.

[0007] U.S. patent application Ser. No. 13/220,551, of which this application is a continuation, discloses embodiments in which a device is used to store and produce sounds and vocalizations. U.S. patent application Ser. No. 13/220,551 is included herein by reference and in its entirety for its teachings of sound producing devices, remote controls, remote actuators, wireless speakers, servers, communications networks, sound altering modules, and the other hardware and software infrastructure and modules involved that result in devices capable of obtaining, storing, and producing call sounds on electronic devices.

BRIEF SUMMARY

[0008] The following summary is provided to facilitate an understanding of some of the innovative features unique to the embodiments and is not intended to be a full description. A full appreciation of the various aspects of the embodiments can be gained by taking the entire specification, claims, drawings, and abstract as a whole.

[0009] It is therefore an aspect of the embodiments for a sound producing module to play a call sound on a speaker. Optionally, a user can operate a control module to select what sound or sounds to play and can operate an actuator to cause the sound to actually be played.

[0010] It is also an aspect of embodiments that the call sounds can be obtained from a remote server. Furthermore, recovery information can be generated such that lost sounds can be recovered. Lost sounds are sounds that were stored in the non-volatile memory but have become lost due to malfunction, error, or some other event.

[0011] It is also an aspect of embodiments that a cell phone can obtain the call sounds from a remote server. A presentation on the cell phone display offers the user a number of available call sounds. The user can select one to thereby cause it to be downloaded and become playable as one of the stored call sounds. In some embodiments the cell phone can also be used to select what sound is to be played and to trigger the playing of that sound.

[0012] It is an aspect of certain embodiments to have a remote controller optionally attached to a weapon such that the user can operate the electronic game call without letting go of the weapon.

[0013] It is also another aspect of the embodiments that a sound producing module accesses the stored call sounds and plays them on a speaker. The speaker can be an internal speaker that is part of the electronic device or can be an external speaker that is not. External speakers receive signals from the electronic device and uses them to produce sound. Signals can be transmitted using wires, wirelessly using electromagnetic radiation, or in some other way.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The accompanying figures, in which like reference numerals refer to identical or functionally similar elements throughout the separate views and which are incorporated in

and form a part of the specification, further illustrate aspects of the embodiments and, together with the background, brief summary, and detailed description serve to explain the principles of the embodiments.

[0015] FIG. **1** illustrates a sound producing device in accordance with aspects of embodiments;

[0016] FIG. **2** illustrates a user using a sound producing device in accordance with aspects of embodiments;

[0017] FIG. **3** illustrates a control module in accordance with aspects of embodiments;

[0018] FIG. **4** illustrates a base in accordance with aspects of embodiments;

[0019] FIG. **5** illustrates speaker ports in a housing in accordance with aspects of embodiments;

[0020] FIG. **6** illustrates a remote in accordance with aspects of embodiments;

[0021] FIG. **7** illustrates a high level block diagram of a sound producing device in accordance with aspects of embodiments;

[0022] FIG. **8** illustrates a firearm configured for use with a sound producing device in accordance with aspects of embodiments;

[0023] FIG. **9** illustrates a side view of using a hook in a pinning hole in accordance with aspects of embodiments;

[0024] FIG. **10** illustrates a front view of using a hook in a pinning hole in accordance with aspects of embodiments;

[0025] FIG. **11** illustrates a cell phone adapted for use as a call sound producing device in accordance with aspects of embodiments;

[0026] FIG. **12** illustrates a high level block diagram of a cell phone adapted for use as a call sound producing device in accordance with aspects of embodiments;

[0027] FIG. **13** illustrates a high level block diagram of an electronic call sound producing device in accordance with aspects of embodiments;

[0028] FIG. **14** illustrates available call sounds in accordance with aspects of embodiments;

[0029] FIG. **15** illustrates a high level block diagram of obtaining and playing a call sound in accordance with aspects of embodiments;

[0030] FIG. **16** illustrates a high level block diagram of using an inactivated cell phone as an electronic call sound producing device in accordance with aspects of embodiments; and

[0031] FIG. **17** illustrates shifting a call sound in pitch and tempo in accordance with aspects of embodiments.

DETAILED DESCRIPTION

[0032] The particular values and configurations discussed in these non-limiting examples can be varied and are cited merely to illustrate at least one embodiment and are not intended to limit the scope thereof. In general, the figures are not to scale.

[0033] FIG. **1** illustrates a call sound producing device **101** in accordance with aspects of embodiments. A housing **102** has a control module **104** mounted in back and a speaker **103** mounted in front. The housing **102** is illustrated as having a pistol grip **105** and a base **106**. A trigger type actuator **107** is mounted to the housing **102** such that a user holding the pistol grip **105** can squeeze it. A deployable spike **108** is shown extending from the bottom of the base. The deployable spike **108** is not fixed in place but can be removed. In some embodiments, the deployable spike **108** can be stored within the housing **102** and can be deployed by a user. The deployable spike **108** is used to fix the sound producing device **101** in place. For example, the deployable spike **108** can be driven into the ground so that the sound producing device **101** is fixed in place on the ground.

[0034] FIG. **2** illustrates a user **201** using a call sound producing device **101** in accordance with aspects of embodiments. The user **201** is holding the pistol grip and squeezing the actuator. The sound producing device **101** is producing a call sound **202**. Notice that the user **201** is looking at the control module on the back of the housing and that the call sound is emitted from the front of the housing. A spike such as that illustrated in FIG. **1** is not illustrated as deployed in FIG. **2**.

[0035] FIG. **3** illustrates a control module **104** in accordance with aspects of embodiments. The control module **104** has a control layout **308** that specifies the positions of labels, indicators, and buttons. As such, the control module **104** has two label rows, each row having five labels. The control module **104** also has two indicator rows, each having five indicators. The top label row has labels such as "A5" **301**. The labels used are intended to indicate where labels can be positioned. In practice, the labels can be "coyote howl", "distressed rabbit", "cat howl", or any other call name. The top indicator row has indicators such as the "A5" indicator **304**. A light emitting diode (LED) can be used as an indicator. The lower label row is illustrated as positioned under the lower indicator row and containing labels such as "B1". The lower indicator row contains indicators such as the "B5" indicator **305**.

[0036] A selector row can contain buttons such as the leftmost button **306**. A bank selector **303** can be used to select the top row or the bottom row. The bank selector **303** is illustrated as selecting the top row. Pressing the rightmost button **307** with the bank selector **303** in the top position selects call sound "A5" and the "A5" indicator **301** lights up.

[0037] Multifunction indicators, such as multifunction LEDs can also be used. A multifunction LED can display two or more colors. For example, a control module can have two label rows and a multifunction LED row. In this case the "A5" indicator **304** becomes the "A5/B5" indicator **304** and the "B5" indicator does not exist. A red "A5/B5" indictor **304** can indicate that call sound "A5" is selected whereas a green "A5/B5" indictor **304** can indicate that call sound "B5" is selected.

[0038] FIG. **4** illustrates a base **106** in accordance with aspects of embodiments. The deployable spike **108** is illustrated mounted in a spike hole **402** in the base. A pinning hole **401** in the base **106** can be used in a number of ways. The pinning hole **401** can be used to hang the sound producing device from a tree branch, in which case the sound producing device would be up side down. A nail or pin through the pinning hole **401** can fix the sound producing device to another object, such as a tree or the ground. A cord can be threaded through the pinning hole **401** and tied to something or used to hang the sound producing device from a tree branch.

[0039] FIG. **5** illustrates speaker ports **501** in a housing **102** in accordance with aspects of embodiments. Those practiced in the arts of acoustics or speaker enclosures are familiar with systems and methods for using speaker ports to improve the sound of a speaker.

[0040] FIG. **6** illustrates a remote **600** in accordance with aspects of embodiments. The remote **600** has a remote housing **602** and a remote control module **601**. Notice that the

remote control module **601** and the control module illustrated in FIG. **3** have the same configuration of labels, indicators, selectors, and bank selector. It is advantageous for the control module and the remote control module **601** to look the same and be operated the same because a user who can use one can immediately use the other without additional instruction. The remote **600** also has a remote actuator **603**.

[0041] The remote **600** can communicate with the sound producing device such that remote operations are equivalent to directly operating the sound producing device. For example, pressing the remote actuator **603** can cause a remote output signal corresponding to actuation to be sent to the sound producing device that then reacts as if the actuator **107** was operated. Similarly, selecting a call remotely can cause a remote output signal corresponding to call selection to be sent to the sound producing device that then reacts as if the control module were used to select a call. For example, a user can select call "A4" on the remote **600**. The remote's "A4" indicator is lit in response and a remote output signal is transmitted. The sound producing device receives the remote output signal, selects the "A4" call, and lights the sound producing device's "A4" indicator. If the sound producing device plays a call sound on selection, then the sound producing device can also play a call sound on remote selection.

[0042] Placement of the control module on the back of the sound producing device allows the user to observe it from a distance while directing call sounds in a forward direction. In practice, a user can position the sound producing device and then move back from it. The user can remotely select calls and see the reaction on the control module. As such, the user is confident that remote operation is working reliably.

[0043] The sound producing device and the remote can be kept in synchronization if the sound producing device can send a call output signal to the remote. One example of synchronization is that when a user selects a call sound on the remote, the remote sends a remote output signal to the call sound producing device. The call sound producing device can respond by selecting the desired call sound, lighting the appropriate indicator on the control module, and sending a call output signal to the remote. The remote can respond by lighting the appropriate indicator on the remote control module. A second example is when the user uses the control module to select a call sound. The call sound producing device can respond by lighting the appropriate indicator on the control module and sending a call output signal to the remote. The remote can respond by lighting the appropriate indicator on the remote control module.

[0044] FIG. **7** illustrates a high level block diagram of a sound producing device in accordance with aspects of embodiments. Non-volatile memory **701**, such as a flash memory, read only memory, or magnetic disk can contain at least one stored call signal **702**. An electronics module **704** can access the stored call signal **702**. A control module **703** and the electronics module **704** use control signals **707** to communicate. An actuator **705** sends an actuation signal **708** to the electronics module **704**. The electronics module **704** obtains one of the possibly many stored call signals **702** based on the control signals **707**. On receiving the actuation signal **708**, the electronics module **704** sends a call signal **709** to the speaker **706**. The speaker **706** then produces a call sound.

[0045] A timer **710** can be used to trigger periodic call sounds. The user can use a timer control interface on the control module **703** or remote control module **712** to select a time interval. Those practiced in setting alarm clocks, cooking timers, watches, or similar devices are familiar with timer control interfaces. The timer **710** can repeatedly produce a timed actuation signal **711** each time the time interval elapses. As such, the timer can count down until the time interval ends and then automatically reset and begin counting down again. The electronics module reacts to the timed actuation signal by sending the call signal **709** to the speaker **706**.

[0046] A remote can contain a remote control module **712**, transmitter **716**, and remote electronics module **714**. The remote control module **712** and the remote electronics module **714** can use remote electronic module inputs **713** to communicate. The remote electronics module **714** can send a remote output signal to a transmitter **716**, such as a radio, that transmits it to a receiver **718** from which the remote output signal goes to the electronics module **704**. As such, the electronics module **704** can react to the remote control module **712** in the same way it would react to the control module **703**. Similarly, a remote actuator **715** can send a remote actuation signal **719** to the remote electronics module **714** such that, eventually, the electronics module **704** reacts by producing the call signal **709**.

[0047] FIG. **8** illustrates a firearm **801** configured for use with a sound producing device in accordance with aspects of embodiments. The firearm **801** has a barrel **802**, action **803**, and stock **804**. A forward interface **806** can be attached to the fore stock **805**, which is the front part of the stock **804**. A back interface **807** can be located near the action **803**. While aiming the firearm **801**, a user can manipulate the forward interface **806** with one hand or the back interface **807** with the other hand. The front interface **806** can have a remote actuator, a remote control module, or both. The back interface **807** can also have a remote actuator, a remote control module, or both. The firearm **801** is illustrated with both a front interface **806** and back interface **807** although in practice only one interface is needed. A bow, crossbow, or camera can also be configured with an interface such as the back interface **807** or front interface **806**. A fastener, such as glue, adhesive, or Velcro can be used for attaching an interface.

[0048] FIG. **9** illustrates a side view of using a hook in a pinning hole in accordance with aspects of embodiments. The lower portion of a pistol grip **105** is connected to a base having a pinning hole **902**. A hook **901** is attached to the pinning hole **902**. The sound producing device can be hung by the hook. Other hanging means, such as cords, carabiners, or wire can be used instead of the hook.

[0049] FIG. **10** illustrates a front view of using a hook in a pinning hole in accordance with aspects of some embodiments. The lower portion of a pistol grip **105** is connected to a base having a pinning hole **902**. A hook **901** is attached to the pinning hole **902**. In this embodiment, unlike that illustrated in FIG. **4**, the pinning hole **902** does not pass from the top of the base to the bottom of the base. Instead, it passes from the front of the base to the bottom of the base. In other embodiments, the pinning hole can be positioned elsewhere on the housing.

[0050] FIG. **11** illustrates a cell phone **1103** adapted for use as a call sound producing device in accordance with aspects of embodiments. The cell phone **1103** is illustrated as having an internal speaker **1104**, display **1105**, and keypad **1112**. The display **1105** is illustrated as showing a presentation **1108** of available sounds such as "Turkey Cluck" **1106** and "Turkey Purr" **1109**. "Turkey Cluck" **1106** is also the selected sound as indicated by the heavy outline. The keypad **1112** is a human input device (HID) having keys **1107** that a user **1111** can

press. Many cell phones have other HIDs such as joy sticks or touch sensitive displays. Regardless of the HID, the user **1111** can manipulate the HID to navigate the user interface and to select available call sounds.

[0051] The cell phone **1103** can use a communications network **1110** to send and receive data from a server **1101**. The cell phone **1103** can download a served sound, such as "Crow Caw" **1102** from the server and store it in non-volatile memory. Non-volatile memory is memory that persists after a device is turned off. Storing "Crow Caw" in non-volatile memory creates the "Crow Caw" stored sound.

[0052] Non-volatile memory can fail for a number of reasons. For example, the cell phone can catch fire destroying all stored data. A backup server **1113** can be used to recover the stored data. The backup server **1113** can contain recovery information **1114** or the recovery information **1114** can be held elsewhere, perhaps in removable storage. The recovery information **1114** can be used to recover all the call sounds that the user **1111** had stored in the cell phone **1103**.

[0053] Sounds can be free or can be paid for. When they are paid for, the user **1111** can provide information to a payment processor **1115** who uses a payment processing module **1116** to obtain payment. The information often includes an account number, user identifier, and the sound, or sounds, which the user **1111** wants. The payment processor **1115** can then inform a fulfillment module **1117** that the user **1111** is allowed to access the sounds. The user **1111** can then obtain the sounds from the server **1101**.

[0054] Permission information can be used to prevent or allow the playing of sounds. The permission information can be used to restrict the playable sounds to those obtained from a specific server or provider. For example, a provider can encrypt a sound so that a decryption key is required for playing it. The permission information can restrict playing to a specific device. For example, every cell phone has a unique identifier that can be used to verify that a particular cell phone is allowed to play a particular sound. Another possibility is that a password can be required to unlock a sound. Those familiar with the digital rights management are familiar with permission information.

[0055] FIG. **12** illustrates a high level block diagram of a cell phone **1103** adapted for use as a sound producing device in accordance with aspects of embodiments. The cell phone **1103** has a non-volatile memory **1205** for storing stored call sounds **1206**. The keypad **1112**, display **1105**, and any other HIDs are part of the user interface **1207**. The cell phone uses a cellular radio **1204** to communicate with the communications network. The user interface **1207** is used to select available sounds and the sound retrieval module **1201** can use the cellular radio **1204** to help obtain served sounds from a server. A sound producing module **1210** can access the stored call sounds **1206** and play them on a speaker.

[0056] The sound producing module **1210** can play a call sound when a key is pressed, upon receiving a timed actuation signal **1208**, or upon some other event. A timing module **1203** can produce the timed actuation signal **1208**. A timed actuation signal can be periodic or can occur once after a time period elapses.

[0057] The cell phone **1103** can also contain a payment module **1209** and a cell phone control module **1202**. The payment module **1209** interacts with the payment processing module of FIG. **11** to facilitate payment. The cell phone control module **1202** can shut down and restart the cellular radio **1204**. Shutting down the cellular radio **1204** conserves energy while using the cell phone **1103** as a sound producing device. The reason is that being outside the range of the communications network makes the cellular radio **1204** useless. Furthermore, many cell phones go into a power consumptive mode when searching for a communications network or when barely in range of a communications network.

[0058] FIG. **13** illustrates a high level block diagram of an electronic sound producing device **1304** in accordance with aspects of embodiments. The electronic sound producing device **1304** has many of the same components as the cell phone of FIGS. **11** and **12**. However, a communications module **1301** takes the place of the cellular radio. A remote actuator **1303** is illustrated sending a remote actuation signal **1305** that can trigger the sound producing module **1210** to play the selected call sound. The sound producing module **1210** can play the call sound on an external speaker **1302**. The external speaker can have a wired or wireless connection to the electronic sound producing device **1304**.

[0059] FIG. **14** illustrates available sounds **1401** in accordance with aspects of embodiments. Stored call sound 1 **1402** and stored call sound 2 **1403** are in the non-volatile memory while served call sound 1 **1404** and served call sound 2 **1405** are on a server. All four call sounds are available because the call sound retrieval module can obtain the served call sounds and store them. A presentation **1406** presents a user with available call sounds. Available call sound 1 **1407** corresponds to stored call sound 1 **1402**. Available call sound 2 **1408** corresponds to stored call sound 2 **1403**. Available call sound 3 **1409** corresponds to served call sound 1 **1404**. Available call sound 4 **1410** corresponds to served call sound 2 **1405**.

[0060] The user selects one of the available call sounds as the call sound selection **1411**. The call sound selection **1411** corresponds to the selected call sound **1412** that is also one of the available call sounds **1401**. The call sound selection is communicated to the game calling module **1210**. If the selected call sound **1412** is not among the stored call sounds **1413**, then the call sound retrieval module **1201** can obtain it from the server **1101** and store it. The game calling module **1210** can play the selected call sound **1412**.

[0061] FIG. **15** illustrates a high level block diagram of obtaining and playing a call sound in accordance with aspects of embodiments. After the start **1501**, the server is accessed **1503** and call sounds downloaded for storage **1504**. The user is presented with the available call sounds **1505** and makes a call sound selection **1506**. If the selected call sound is not stored **1507**, then it must be obtained **1508** from the server. Once the selected call sound is stored, an actuation signal can be waited for **1509**. On receiving the actuation signal, the selected call sound is played **1510** and the process is done **1511**.

[0062] FIG. **16** illustrates a high level block diagram of using an inactivated cell phone **1601** as an electronic call sound producing device in accordance with aspects of embodiments. A cell phone, such as that illustrated in FIG. **12**, can be inactivated by removing its association with a cellular network. For example, people often upgrade their cell phones and end up with an old cell phone that is inactivated. They cannot use the old cell phone to make calls or to access the cellular network because it is inactivated. An Inactivated cell phone **1601** can have a functioning cellular radio, but the cellular network ignores it. As such, the cellular radio merely wastes power.

[0063] The inactivated cell phone **1601** can function as an electronic call sound producing device similar to the cell phone **1103** of FIG. **2** with a few exceptions. The inactivated cell phone cannot use the cellular radio to connect to a server and obtain additional sounds. Call sounds can, however, be obtained from a computer **1602** with access to sounds **1603**. Most cell phones, inactivated or not, can be connected to a computer by a link **1605**. Some links are wired and others, such as Bluetooth links, are wireless. Most computers require a cell phone access module **1604** in order to access the data and modules within a cell phone. Regardless, the computer **1602** can place stored sounds **1206** into a cell phone. In fact, a computer **1602** can configure an inactivated cell phone **1601** as an electronic sound producing device by downloading all the required sounds and modules. As such, a useless inactivated cell phone can be recycled to produce an electronic call sound producing device.

[0064] FIG. **17** illustrates shifting a sound **1701** in pitch and tempo in accordance with aspects of the embodiments. A sound **1701** passing through a pitch shifting module **1702** results in a pitch shifted sound **1703**. Passing a sound **1701** through a tempo shifting module **1704** results in a tempo shifted call sound **1705**. Those practiced in the art of signal processing are familiar with techniques for shifting a signal's pitch or tempo.

[0065] Pitch can be shifted by modulation or by using a Fourier transform algorithm to obtain the signals spectrum. The spectrum can then simply be moved in the frequency domain and then converted back into a temporal signal. Tempo can be altered by adding or deleting sample points in the signal's digital waveform. Resampling can also be used for changing tempo. Sound engineers in the music industry often use signal processing packages to manipulate music. Pitch shifting modules, tempo shifting, and resampling modules are among the most basic modules within a modern signal processing package.

[0066] As anyone who has played a phonographic record or an analog magnetic tape at the wrong speed knows, shifting tempo can cause an induced pitch change. As such, pitch shifting modules are often used to correct for the induced pitch change.

[0067] It will be appreciated that variations of the above-disclosed and other features and functions, or alternatives thereof, may be desirably combined into many other different systems or applications. Also that various presently unforeseen or unanticipated alternatives, modifications, variations or improvements therein may be subsequently made by those skilled in the art which are also intended to be encompassed by the following claims.

What is claimed is:

1. An animal call system operating in cooperation with a cell phone comprising an input device, a display, a communications module, an internal speaker and a non-volatile memory, the animal call system comprising:

a plurality of stored call sounds that are stored in the non-volatile memory of the cell phone;

a user interface wherein a user manipulates the input device and observes the display to interact with the user interface to choose a selected call sound from amongst the stored call sounds;

an animal and bird simulating module that accesses the stored call sounds and causes the selected call sound to be produced by at least one speaker wherein the internal speaker is one of the at least one speaker;

a presentation displayed on the display that offers a plurality of served call sounds from which the user selects a desired call sound;

a sound retrieval module that obtains the desired call sound from a server and wherein the sound retrieval module stores the desired call sound in the non-volatile memory such that the desired call sound becomes one of the stored call sounds.

2. The animal call system of claim **1** wherein an external speaker is another of the at least one speaker, wherein the communications module wirelessly communicates with the external speaker, and wherein the external speaker produces the selected call sound.

3. The animal call system of claim **1** further comprising a remote actuator wherein a user operates the remote actuator to trigger the playing of the selected sound;

4. The animal call system of claim **1** further comprising:

a remote controller wherein the user manipulates the remote to choose the selected sound and to remotely trigger the playing the selected sound on the speaker.

5. The animal call system of claim **1** wherein the user manipulates the cell phone to choose the selected sound and to remotely trigger the playing of the selected sound on one of the at least one speaker.

6. The animal call system of claim **1** wherein the cell phone further comprises a timing module that produces a timed actuation signal that triggers the animal and bird simulating module to cause the selected call signal to be produced by the at least one speaker.

7. The animal call system of claim **1** further comprising a payment module wherein the payment module tenders a payment to a payment processor to thereby obtain access to the served sound.

8. The animal call system of claim **1** further comprising a remote actuator and a weapon attachment that attaches the remote actuator to a weapon wherein the user operates the remote actuator to trigger the playing of the selected call sound.

9. The animal call system of claim **1** wherein the external speaker further comprises an external non-volatile memory and wherein the selected call sound is stored in the external non-volatile memory.

10. The animal call system of claim **1** wherein the cell phone is an inactivated cell phone wherein the cell phone is inactivated because it is not associated with a cellular network.

11. The animal call system of claim **1** wherein the cell phone is an inactivated cell phone wherein the cell phone is inactivated because it ignored by a cellular network with which it was previously associated.

12. The animal call system of claim **1** further comprising:

a remote actuator and a weapon attachment that attaches the remote actuator to a weapon wherein the user operates the remote actuator to trigger the playing of the selected call sound;

a remote controller wherein the user manipulates the remote controller to choose the selected sound;

a payment module wherein the payment module tenders a payment to a payment processor to thereby obtain access to the served sound;

an external speak that is another of the at least one speaker, wherein the communications module wirelessly communicates with the external speaker, and wherein the external speaker produces the selected call sound;

wherein the user optionally manipulates the cell phone to choose the selected sound and to remotely trigger the playing of the selected sound on one of the at least one speaker;

a timing module that produces a timed actuation signal that triggers the animal and bird simulating module to cause the selected call signal to be produced by the at least one speaker;

wherein the server offers a plurality of served call sounds to the user;

wherein the cell phone is an inactivated cell phone wherein the cell phone is inactivated because it is ignored by a cellular network with which it was previously associated; and

recovery information for recovering lost sounds for the user wherein the user has lost certain of the stored sounds that thereby become lost sounds

13. A system comprising:

a remote actuator in communication with a cell phone, the cell phone comprising an input device, a display, a communications module, an internal speaker and a non-volatile memory wherein a plurality of stored call sounds are stored in the non-volatile memory;

wherein the cell phone further comprises a user interface wherein a user manipulates the user interface to choose a selected call sound from amongst the stored call sounds;

wherein the cell phone further comprises an animal and bird simulating module that accesses the stored call sounds and causes the selected call sound to be produced by at least one speaker wherein the internal speaker is one of the at least one speaker;

wherein the cell phone further comprises a presentation displayed on the display that offers a plurality of served call sounds from which the user selects a desired call sound;

wherein the cell phone further comprises a sound retrieval module that obtains the desired call sound from a server and wherein the sound retrieval module stores the desired call sound in the non-volatile memory such that the desired call sound becomes one of the stored call sounds; and

wherein the user operates the remote actuator to trigger the playing of the selected call sound by the at least one speaker.

14. The system of claim **13** further comprising a weapon attachment that attaches the remote actuator to a weapon wherein the user operates the remote actuator to trigger the playing of the selected call sound.

15. The system of claim **13** further comprising a weapon and wherein the weapon comprises the remote actuator.

16. The system of claim **13** wherein an external speaker is another of the at least one speaker, wherein the communications module wirelessly communicates with the external speaker, and wherein the external speaker produces the selected call sound.

17. The system of claim **13** wherein the server stores recovery information for recovering lost call sounds wherein certain of the stored call sounds are lost to thereby become lost sounds.

18. A system comprising:

a server that offers a plurality of served call sounds to a user of a cell phone wherein the user selects one of the served call sounds to be a selected call sound, wherein a sound retrieval module retrieves the selected call sound from the server and stores the selected sound in a non-volatile memory as one of a plurality of stored call sounds and wherein the user operates the cell phone to thereby play the stored sounds from a speaker; and

recovery information for recovering lost sounds for the user wherein the user has lost certain of the stored sounds that thereby become lost sounds.

19. The system of claim **18** further comprising a payment processing module and a fulfillment module wherein the cell phone is allowed to obtain the selected sound from the fulfillment module only after a corresponding payment to the payment processing module.

20. The system of claim **18** further comprising permission information that restricts the playing of a sound obtained from the server to a particular cell phone.

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