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CONTENT OUTPUT DEVICES AND USER INTERFACES

Abstract

The present disclosure generally relates to outputting light and managing controllable devices. In some examples, an electronic device that is configured to provide output associated with content displayed on a display generation component outputs light based on received information about the content displayed on the display generation component.

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATIONS [0001] This application is a continuation of U.S. Nonprovisional patent application Ser. No. 18/230,107, entitled "CONTENT OUTPUT DEVICES AND USER INTERFACES," filed on Aug. 3, 2023, which claims priority to U.S. Provisional Patent Application Ser. No. 63/403,495, entitled "CONTENT OUTPUT DEVICES AND USER INTERFACES," filed on Sep. 2, 2022, the entire contents of each of which are hereby incorporated by reference.

FIELD
[0002] The present disclosure relates generally to computer user interfaces, and more specifically to techniques for outputting light and managing controllable devices.
BACKGROUND
[0003] Electronic devices are configured to display visual content on a display, such as images and/or videos corresponding to a media file. Light sources are configured to generate light having different colors, brightness, and/or other properties. In addition, some electronic devices can be used to group accessory devices so that the accessory devices can output content in conjunction with one another.
BRIEF SUMMARY
[0004] Some techniques for outputting light and managing controllable devices using electronic devices, however, are generally cumbersome and inefficient. For example, some existing techniques use a complex and time-consuming user interface, which may include multiple key presses or keystrokes. Existing techniques require more time than necessary, wasting user time and device energy. This latter consideration is particularly important in battery-operated devices.
[0005] Accordingly, the present technique provides electronic devices with faster, more efficient methods and interfaces for outputting light and managing controllable devices. Such methods and interfaces optionally complement or replace other methods for outputting light and managing controllable devices. Such methods and interfaces reduce the cognitive burden on a user and produce a more efficient human-machine interface. Such methods and interfaces also reduce the number of unnecessary, extraneous, and/or repetitive user inputs. For battery-operated computing devices, such methods and interfaces conserve power and increase the time between battery charges.
[0006] In accordance with some embodiments, a method is described. The method is performed at a computer system that is in communication with one or more light sources. The method comprises: while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; and in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component.
[0007] In accordance with some embodiments, a non-transitory computer-readable storage medium is described. The non-transitory computer-readable storage medium stores one or more programs configured to be executed by one or more processors of a computer system that is in communication with one or more light sources, the one or more programs including instructions for: while the computer system is configured to provide output associated with content displayed

on a display generation component, receiving information associated with the content displayed on the display generation component; and in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component.

[0008] In accordance with some embodiments, a transitory computer-readable storage medium is described. The transitory computer-readable storage medium stores one or more programs configured to be executed by one or more processors of a computer system that is in communication with one or more light sources, the one or more programs including instructions for: while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; and in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component.

[0009] In accordance with some embodiments, a computer system is described. The computer system is in communication with one or more light sources. The computer system comprises: one or more processors; and memory storing one or more programs configured to be executed by the one or more processors, the one or more programs including instructions for: while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; and in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component.

[0010] In accordance with some embodiments, a computer system is described. The computer system is in communication with one or more light sources. The computer system comprises: means for, while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; and means for, in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component.

[0011] In accordance with some embodiments, a computer program product is described. The computer program product comprises one or more programs configured to be executed by one or more processors of a computer system that is in communication with one or more light sources, the one or more programs including instructions for: while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; and in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component.

[0012] In accordance with some embodiments, a method is described. The method is performed at a computer system that is in communication with one or more input devices and a display generation component. The method comprises: while displaying, via the display generation component, a user interface that includes a user interface object that, when selected, provides options for controlling a first remotely controllable external device, where the first remotely controllable external device is associated with a context, detecting, via the one or more input devices, a request to associate a second remotely controllable external device with the context; and in response to detecting the request to associate the second remotely controllable external device

with the context: in accordance with a determination that the second remotely controllable external device satisfies a set of one or more criteria, associating the second remotely controllable external device with the context; and in accordance with a determination that the second remotely controllable external device does not satisfy the set of one or more criteria, where the set of one or more criteria are not met when the second remotely controllable external device includes a first function that does not correspond to a second function of the first remotely controllable external device, forgoing associating the second remotely controllable external device with the context.

[0013] In accordance with some embodiments, a non-transitory computer-readable storage medium is described. The non-transitory computer-readable storage medium stores one or more programs configured to be executed by one or more processors of a computer system that is in communication with one or more input devices and a display generation component, the one or more programs including instructions for: while displaying, via the display generation component, a user interface that includes a user interface object that, when selected, provides options for controlling a first remotely controllable external device, where the first remotely controllable external device is associated with a context, detecting, via the one or more input devices, a request to associate a second remotely controllable external device with the context; and in response to detecting the request to associate the second remotely controllable external device with the context: in accordance with a determination that the second remotely controllable external device satisfies a set of one or more criteria, associating the second remotely controllable external device with the context; and in accordance with a determination that the second remotely controllable external device does not satisfy the set of one or more criteria, where the set of one or more criteria are not met when the second remotely controllable external device includes a first function that does not correspond to a second function of the first remotely controllable external device, forgoing associating the second remotely controllable external device with the context.

[0014] In accordance with some embodiments, a transitory computer-readable storage medium is described. The transitory computer-readable storage medium stores one or more programs configured to be executed by one or more processors of a computer system that is in communication with one or more input devices and a display generation component, the one or more programs including instructions for: while displaying, via the display generation component, a user interface that includes a user interface object that, when selected, provides options for controlling a first remotely controllable external device, where the first remotely controllable external device is associated with a context, detecting, via the one or more input devices, a request to associate a second remotely controllable external device with the context; and in response to detecting the request to associate the second remotely controllable external device with the context: in accordance with a determination that the second remotely controllable external device satisfies a set of one or more criteria, associating the second remotely controllable external device with the context; and in accordance with a determination that the second remotely controllable external device does not satisfy the set of one or more criteria, where the set of one or more criteria are not met when the second remotely controllable external device includes a first function that does not correspond to a second function of the first remotely controllable external device, forgoing associating the second remotely controllable external device with the context.

[0015] In accordance with some embodiments, a computer system is described. The computer system is in communication with one or more input devices and a display generation component. The computer system comprises: one or more processors; and memory storing one or more programs configured to be executed by the one or more processors, the one or more programs including instructions for: while displaying, via the display generation component, a user interface that includes a user interface object that, when selected, provides options for controlling a first remotely controllable external device, where the first remotely controllable external device is associated with a context, detecting, via the one or more input devices, a request to associate a second remotely controllable external device with the context; and in response to detecting the

request to associate the second remotely controllable external device with the context: in accordance with a determination that the second remotely controllable external device satisfies a set of one or more criteria, associating the second remotely controllable external device with the context; and in accordance with a determination that the second remotely controllable external device does not satisfy the set of one or more criteria, where the set of one or more criteria are not met when the second remotely controllable external device includes a first function that does not correspond to a second function of the first remotely controllable external device, forgoing associating the second remotely controllable external device with the context.

[0016] In accordance with some embodiments, a computer system is described. The computer system is in communication with one or more input devices and a display generation component. The computer system comprises: means for, while displaying, via the display generation component, a user interface that includes a user interface object that, when selected, provides options for controlling a first remotely controllable external device, where the first remotely controllable external device is associated with a context, detecting, via the one or more input devices, a request to associate a second remotely controllable external device with the context; and means for, in response to detecting the request to associate the second remotely controllable external device with the context: in accordance with a determination that the second remotely controllable external device satisfies a set of one or more criteria, associating the second remotely controllable external device with the context; and in accordance with a determination that the second remotely controllable external device does not satisfy the set of one or more criteria, where the set of one or more criteria are not met when the second remotely controllable external device includes a first function that does not correspond to a second function of the first remotely controllable external device, forgoing associating the second remotely controllable external device with the context.

[0017] In accordance with some embodiments, a computer program product is described. The computer program product comprises one or more programs configured to be executed by one or more processors of a computer system that is in communication with one or more input devices and a display generation component, the one or more programs including instructions for: while displaying, via the display generation component, a user interface that includes a user interface object that, when selected, provides options for controlling a first remotely controllable external device, where the first remotely controllable external device is associated with a context, detecting, via the one or more input devices, a request to associate a second remotely controllable external device with the context; and in response to detecting the request to associate the second remotely controllable external device with the context: in accordance with a determination that the second remotely controllable external device satisfies a set of one or more criteria, associating the second remotely controllable external device with the context; and in accordance with a determination that the second remotely controllable external device does not satisfy the set of one or more criteria, where the set of one or more criteria are not met when the second remotely controllable external device includes a first function that does not correspond to a second function of the first remotely controllable external device, forgoing associating the second remotely controllable external device with the context.

[0018] Executable instructions for performing these functions are, optionally, included in a non-transitory computer-readable storage medium or other computer program product configured for execution by one or more processors. Executable instructions for performing these functions are, optionally, included in a transitory computer-readable storage medium or other computer program product configured for execution by one or more processors.

[0019] Thus, devices are provided with faster, more efficient methods and interfaces for outputting light and managing controllable devices, thereby increasing the effectiveness, efficiency, and user satisfaction with such devices. Such methods and interfaces may complement or replace other methods for outputting light and managing controllable devices.

Description

DESCRIPTION OF THE FIGURES

[0020] For a better understanding of the various described embodiments, reference should be made to the Description of Embodiments below, in conjunction with the following drawings in which like reference numerals refer to corresponding parts throughout the figures.

[0021] FIG. **1**A is a block diagram illustrating a portable multifunction device with a touch-sensitive display in accordance with some embodiments.

[0022] FIG. **1**B is a block diagram illustrating exemplary components for event handling in accordance with some embodiments.

[0023] FIG. **2** illustrates a portable multifunction device having a touch screen in accordance with some embodiments.

[0024] FIG. **3** is a block diagram of an exemplary multifunction device with a display and a touch-sensitive surface in accordance with some embodiments.

[0025] FIG. **4**A illustrates an exemplary user interface for a menu of applications on a portable multifunction device in accordance with some embodiments.

[0026] FIG. **4**B illustrates an exemplary user interface for a multifunction device with a touch-sensitive surface that is separate from the display in accordance with some embodiments.

[0027] FIG. **5**A illustrates a personal electronic device in accordance with some embodiments.

[0028] FIG. **5**B is a block diagram illustrating a personal electronic device in accordance with some embodiments.

[0029] FIG. **5**C illustrates an electronic device in accordance with some embodiments.

[0030] FIG. **5**D is a block diagram illustrating an electronic device in accordance with some embodiments.

[0031] FIGS. **6**A-**6O** illustrate example techniques for outputting light, in accordance with some embodiments.

[0032] FIGS. **7**A-**7**C are a flow diagram of methods for outputting light, in accordance with some embodiments.

[0033] FIGS. **8**A-**8**V illustrate exemplary user interfaces for managing controllable devices, in accordance with some embodiments.

[0034] FIGS. **9**A-**9**D are a flow diagram of methods for managing controllable devices, in accordance with some embodiments.

DESCRIPTION OF EMBODIMENTS

[0035] The following description sets forth exemplary methods, parameters, and the like. It should be recognized, however, that such description is not intended as a limitation on the scope of the present disclosure but is instead provided as a description of exemplary embodiments.

[0036] There is a need for electronic devices that provide efficient methods and interfaces for outputting light and managing controllable devices. For example, there is a need for electronic devices that can provide output, such as audio output, and also cause light to be output based on content displayed on a display device. As another example, there is a need for electronic devices that can easily associate a first accessory device with a second accessory device that is currently outputting content so that the first accessory device and the second accessory device can operate in conjunction with one another. Such techniques can reduce the cognitive burden on a user who causes light to be output and/or manages controllable devices, thereby enhancing productivity. Further, such techniques can reduce processor and battery power otherwise wasted on redundant user inputs.

[0037] Below, FIGS. **1**A-**1**B, **2**, **3**, **4**A-**4**B, and **5**A-**5**D provide a description of exemplary devices for performing the techniques for outputting light and managing controllable devices. FIGS. **6**A-**6O** illustrate exemplary user interfaces for outputting light. FIGS. **7**A-**7**C are a flow diagram

illustrating methods of outputting light in accordance with some embodiments. The user interfaces in FIGS. **6**A-**60** are used to illustrate the processes described below, including the processes in FIGS. **7**A-**7**C. FIGS. **8**A-**8**V illustrate exemplary user interfaces for managing controllable devices. FIGS. **9**A-**9**D are a flow diagram illustrating methods of managing controllable devices in accordance with some embodiments. The user interfaces in FIGS. **8**A-**8**V are used to illustrate the processes described below, including the processes in FIGS. **9**A-**9**D.

[0038] The processes described below enhance the operability of the devices and make the user-device interfaces more efficient (e.g., by helping the user to provide proper inputs and reducing user mistakes when operating/interacting with the device) through various techniques, including by providing improved visual feedback to the user, reducing the number of inputs needed to perform an operation, providing additional control options without cluttering the user interface with additional displayed controls, performing an operation when a set of conditions has been met without requiring further user input, and/or additional techniques. These techniques also reduce power usage and improve battery life of the device by enabling the user to use the device more quickly and efficiently.

[0039] In addition, in methods described herein where one or more steps are contingent upon one or more conditions having been met, it should be understood that the described method can be repeated in multiple repetitions so that over the course of the repetitions all of the conditions upon which steps in the method are contingent have been met in different repetitions of the method. For example, if a method requires performing a first step if a condition is satisfied, and a second step if the condition is not satisfied, then a person of ordinary skill would appreciate that the claimed steps are repeated until the condition has been both satisfied and not satisfied, in no particular order. Thus, a method described with one or more steps that are contingent upon one or more conditions having been met could be rewritten as a method that is repeated until each of the conditions described in the method has been met. This, however, is not required of system or computer readable medium claims where the system or computer readable medium contains instructions for performing the contingent operations based on the satisfaction of the corresponding one or more conditions and thus is capable of determining whether the contingency has or has not been satisfied without explicitly repeating steps of a method until all of the conditions upon which steps in the method are contingent have been met. A person having ordinary skill in the art would also understand that, similar to a method with contingent steps, a system or computer readable storage medium can repeat the steps of a method as many times as are needed to ensure that all of the contingent steps have been performed.

[0040] Although the following description uses terms "first," "second," etc. to describe various elements, these elements should not be limited by the terms. In some embodiments, these terms are used to distinguish one element from another. For example, a first touch could be termed a second touch, and, similarly, a second touch could be termed a first touch, without departing from the scope of the various described embodiments. In some embodiments, the first touch and the second touch are two separate references to the same touch. In some embodiments, the first touch and the second touch are both touches, but they are not the same touch.

[0041] The terminology used in the description of the various described embodiments herein is for the purpose of describing particular embodiments only and is not intended to be limiting. As used in the description of the various described embodiments and the appended claims, the singular forms "a," "an," and "the" are intended to include the plural forms as well, unless the context clearly indicates otherwise. It will also be understood that the term "and/or" as used herein refers to and encompasses any and all possible combinations of one or more of the associated listed items. It will be further understood that the terms "includes," "including," "comprises," and/or "comprising," when used in this specification, specify the presence of stated features, integers, steps, operations, elements, and/or components, but do not preclude the presence or addition of one or more other features, integers, steps, operations, elements, components, and/or groups thereof.

[0042] The term "if" is, optionally, construed to mean "when" or "upon" or "in response to determining" or "in response to detecting," depending on the context. Similarly, the phrase "if it is determined" or "if [a stated condition or event] is detected" is, optionally, construed to mean "upon determining" or "in response to determining" or "upon detecting [the stated condition or event]" or "in response to detecting [the stated condition or event]," depending on the context.

[0043] Embodiments of electronic devices, user interfaces for such devices, and associated processes for using such devices are described. In some embodiments, the device is a portable communications device, such as a mobile telephone, that also contains other functions, such as PDA and/or music player functions. Exemplary embodiments of portable multifunction devices include, without limitation, the iPhone®, iPod Touch®, and iPad® devices from Apple Inc. of Cupertino, California. Other portable electronic devices, such as laptops or tablet computers with touch-sensitive surfaces (e.g., touch screen displays and/or touchpads), are, optionally, used. It should also be understood that, in some embodiments, the device is not a portable communications device, but is a desktop computer with a touch-sensitive surface (e.g., a touch screen display and/or a touchpad). In some embodiments, the electronic device is a computer system that is in communication (e.g., via wireless communication, via wired communication) with a display generation component. The display generation component is configured to provide visual output, such as display via a CRT display, display via an LED display, or display via image projection. In some embodiments, the display generation component is integrated with the computer system. In some embodiments, the display generation component is separate from the computer system. As used herein, "displaying" content includes causing to display the content (e.g., video data rendered or decoded by display controller **156**) by transmitting, via a wired or wireless connection, data (e.g., image data or video data) to an integrated or external display generation component to visually produce the content.

[0044] In the discussion that follows, an electronic device that includes a display and a touch-sensitive surface is described. It should be understood, however, that the electronic device optionally includes one or more other physical user-interface devices, such as a physical keyboard, a mouse, and/or a joystick.

[0045] The device typically supports a variety of applications, such as one or more of the following: a drawing application, a presentation application, a word processing application, a website creation application, a disk authoring application, a spreadsheet application, a gaming application, a telephone application, a video conferencing application, an e-mail application, an instant messaging application, a workout support application, a photo management application, a digital camera application, a digital video camera application, a web browsing application, a digital music player application, and/or a digital video player application.

[0046] The various applications that are executed on the device optionally use at least one common physical user-interface device, such as the touch-sensitive surface. One or more functions of the touch-sensitive surface as well as corresponding information displayed on the device are, optionally, adjusted and/or varied from one application to the next and/or within a respective application. In this way, a common physical architecture (such as the touch-sensitive surface) of the device optionally supports the variety of applications with user interfaces that are intuitive and transparent to the user.

[0047] Attention is now directed toward embodiments of portable devices with touch-sensitive displays. FIG. **1**A is a block diagram illustrating portable multifunction device **100** with touch-sensitive display system **112** in accordance with some embodiments. Touch-sensitive display **112** is sometimes called a "touch screen" for convenience and is sometimes known as or called a "touch-sensitive display system." Device **100** includes memory **102** (which optionally includes one or more computer-readable storage mediums), memory controller **122**, one or more processing units (CPUs) **120**, peripherals interface **118**, RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, input/output (I/O) subsystem **106**, other input control devices **116**, and external

port **124**. Device **100** optionally includes one or more optical sensors **164**. Device **100** optionally includes one or more contact intensity sensors **165** for detecting intensity of contacts on device **100** (e.g., a touch-sensitive surface such as touch-sensitive display system **112** of device **100**). Device **100** optionally includes one or more tactile output generators **167** for generating tactile outputs on device **100** (e.g., generating tactile outputs on a touch-sensitive surface such as touch-sensitive display system **112** of device **100** or touchpad **355** of device **300**). These components optionally communicate over one or more communication buses or signal lines **103**.

[0048] As used in the specification and claims, the term "intensity" of a contact on a touch-sensitive surface refers to the force or pressure (force per unit area) of a contact (e.g., a finger contact) on the touch-sensitive surface, or to a substitute (proxy) for the force or pressure of a contact on the touch-sensitive surface. The intensity of a contact has a range of values that includes at least four distinct values and more typically includes hundreds of distinct values (e.g., at least 256). Intensity of a contact is, optionally, determined (or measured) using various approaches and various sensors or combinations of sensors. For example, one or more force sensors underneath or adjacent to the touch-sensitive surface are, optionally, used to measure force at various points on the touch-sensitive surface. In some implementations, force measurements from multiple force sensors are combined (e.g., a weighted average) to determine an estimated force of a contact. Similarly, a pressure-sensitive tip of a stylus is, optionally, used to determine a pressure of the stylus on the touch-sensitive surface. Alternatively, the size of the contact area detected on the touch-sensitive surface and/or changes thereto, the capacitance of the touch-sensitive surface proximate to the contact and/or changes thereto, and/or the resistance of the touch-sensitive surface proximate to the contact and/or changes thereto are, optionally, used as a substitute for the force or pressure of the contact on the touch-sensitive surface. In some implementations, the substitute measurements for contact force or pressure are used directly to determine whether an intensity threshold has been exceeded (e.g., the intensity threshold is described in units corresponding to the substitute measurements). In some implementations, the substitute measurements for contact force or pressure are converted to an estimated force or pressure, and the estimated force or pressure is used to determine whether an intensity threshold has been exceeded (e.g., the intensity threshold is a pressure threshold measured in units of pressure). Using the intensity of a contact as an attribute of a user input allows for user access to additional device functionality that may otherwise not be accessible by the user on a reduced-size device with limited real estate for displaying affordances (e.g., on a touch-sensitive display) and/or receiving user input (e.g., via a touch-sensitive display, a touch-sensitive surface, or a physical/mechanical control such as a knob or a button).

[0049] As used in the specification and claims, the term "tactile output" refers to physical displacement of a device relative to a previous position of the device, physical displacement of a component (e.g., a touch-sensitive surface) of a device relative to another component (e.g., housing) of the device, or displacement of the component relative to a center of mass of the device that will be detected by a user with the user's sense of touch. For example, in situations where the device or the component of the device is in contact with a surface of a user that is sensitive to touch (e.g., a finger, palm, or other part of a user's hand), the tactile output generated by the physical displacement will be interpreted by the user as a tactile sensation corresponding to a perceived change in physical characteristics of the device or the component of the device. For example, movement of a touch-sensitive surface (e.g., a touch-sensitive display or trackpad) is, optionally, interpreted by the user as a "down click" or "up click" of a physical actuator button. In some cases, a user will feel a tactile sensation such as an "down click" or "up click" even when there is no movement of a physical actuator button associated with the touch-sensitive surface that is physically pressed (e.g., displaced) by the user's movements. As another example, movement of the touch-sensitive surface is, optionally, interpreted or sensed by the user as "roughness" of the touch-sensitive surface, even when there is no change in smoothness of the touch-sensitive surface. While such interpretations of touch by a user will be subject to the individualized sensory perceptions of

the user, there are many sensory perceptions of touch that are common to a large majority of users. Thus, when a tactile output is described as corresponding to a particular sensory perception of a user (e.g., an "up click," a "down click," "roughness"), unless otherwise stated, the generated tactile output corresponds to physical displacement of the device or a component thereof that will generate the described sensory perception for a typical (or average) user.

[0050] It should be appreciated that device **100** is only one example of a portable multifunction device, and that device **100** optionally has more or fewer components than shown, optionally combines two or more components, or optionally has a different configuration or arrangement of the components. The various components shown in FIG. **1**A are implemented in hardware, software, or a combination of both hardware and software, including one or more signal processing and/or application-specific integrated circuits.

[0051] Memory **102** optionally includes high-speed random access memory and optionally also includes non-volatile memory, such as one or more magnetic disk storage devices, flash memory devices, or other non-volatile solid-state memory devices. Memory controller **122** optionally controls access to memory **102** by other components of device **100**.

[0052] Peripherals interface **118** can be used to couple input and output peripherals of the device to CPU **120** and memory **102**. The one or more processors **120** run or execute various software programs (such as computer programs (e.g., including instructions)) and/or sets of instructions stored in memory **102** to perform various functions for device **100** and to process data. In some embodiments, peripherals interface **118**, CPU **120**, and memory controller **122** are, optionally, implemented on a single chip, such as chip **104**. In some other embodiments, they are, optionally, implemented on separate chips.

[0053] RF (radio frequency) circuitry **108** receives and sends RF signals, also called electromagnetic signals. RF circuitry **108** converts electrical signals to/from electromagnetic signals and communicates with communications networks and other communications devices via the electromagnetic signals. RF circuitry **108** optionally includes well-known circuitry for performing these functions, including but not limited to an antenna system, an RF transceiver, one or more amplifiers, a tuner, one or more oscillators, a digital signal processor, a CODEC chipset, a subscriber identity module (SIM) card, memory, and so forth. RF circuitry **108** optionally communicates with networks, such as the Internet, also referred to as the World Wide Web (WWW), an intranet and/or a wireless network, such as a cellular telephone network, a wireless local area network (LAN) and/or a metropolitan area network (MAN), and other devices by wireless communication. The RF circuitry **108** optionally includes well-known circuitry for detecting near field communication (NFC) fields, such as by a short-range communication radio. The wireless communication optionally uses any of a plurality of communications standards, protocols, and technologies, including but not limited to Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), high-speed downlink packet access (HSDPA), high-speed uplink packet access (HSUPA), Evolution, Data-Only (EV-DO), HSPA, HSPA+, Dual-Cell HSPA (DC-HSPDA), long term evolution (LTE), near field communication (NFC), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Bluetooth Low Energy (BTLE), Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a, IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, and/or IEEE 802.11ac), voice over Internet Protocol (VOIP), Wi-MAX, a protocol for e-mail (e.g., Internet message access protocol (IMAP) and/or post office protocol (POP)), instant messaging (e.g., extensible messaging and presence protocol (XMPP), Session Initiation Protocol for Instant Messaging and Presence Leveraging Extensions (SIMPLE), Instant Messaging and Presence Service (IMPS)), and/or Short Message Service (SMS), or any other suitable communication protocol, including communication protocols not yet developed as of the filing date of this document.

[0054] Audio circuitry **110**, speaker **111**, and microphone **113** provide an audio interface between a

user and device **100**. Audio circuitry **110** receives audio data from peripherals interface **118**, converts the audio data to an electrical signal, and transmits the electrical signal to speaker **111**. Speaker **111** converts the electrical signal to human-audible sound waves. Audio circuitry **110** also receives electrical signals converted by microphone **113** from sound waves. Audio circuitry **110** converts the electrical signal to audio data and transmits the audio data to peripherals interface **118** for processing. Audio data is, optionally, retrieved from and/or transmitted to memory **102** and/or RF circuitry **108** by peripherals interface **118**. In some embodiments, audio circuitry **110** also includes a headset jack (e.g., **212**, FIG. **2**). The headset jack provides an interface between audio circuitry **110** and removable audio input/output peripherals, such as output-only headphones or a headset with both output (e.g., a headphone for one or both ears) and input (e.g., a microphone).

[0055] I/O subsystem **106** couples input/output peripherals on device **100**, such as touch screen **112** and other input control devices **116**, to peripherals interface **118**. I/O subsystem **106** optionally includes display controller **156**, optical sensor controller **158**, depth camera controller **169**, intensity sensor controller **159**, haptic feedback controller **161**, and one or more input controllers **160** for other input or control devices. The one or more input controllers **160** receive/send electrical signals from/to other input control devices **116**. The other input control devices **116** optionally include physical buttons (e.g., push buttons, rocker buttons, etc.), dials, slider switches, joysticks, click wheels, and so forth. In some embodiments, input controller(s) **160** are, optionally, coupled to any (or none) of the following: a keyboard, an infrared port, a USB port, and a pointer device such as a mouse. The one or more buttons (e.g., **208**, FIG. **2**) optionally include an up/down button for volume control of speaker **111** and/or microphone **113**. The one or more buttons optionally include a push button (e.g., **206**, FIG. **2**). In some embodiments, the electronic device is a computer system that is in communication (e.g., via wireless communication, via wired communication) with one or more input devices. In some embodiments, the one or more input devices include a touch-sensitive surface (e.g., a trackpad, as part of a touch-sensitive display). In some embodiments, the one or more input devices include one or more camera sensors (e.g., one or more optical sensors **164** and/or one or more depth camera sensors **175**), such as for tracking a user's gestures (e.g., hand gestures and/or air gestures) as input. In some embodiments, the one or more input devices are integrated with the computer system. In some embodiments, the one or more input devices are separate from the computer system. In some embodiments, an air gesture is a gesture that is detected without the user touching an input element that is part of the device (or independently of an input element that is a part of the device) and is based on detected motion of a portion of the user's body through the air including motion of the user's body relative to an absolute reference (e.g., an angle of the user's arm relative to the ground or a distance of the user's hand relative to the ground), relative to another portion of the user's body (e.g., movement of a hand of the user relative to a shoulder of the user, movement of one hand of the user relative to another hand of the user, and/or movement of a finger of the user relative to another finger or portion of a hand of the user), and/or absolute motion of a portion of the user's body (e.g., a tap gesture that includes movement of a hand in a predetermined pose by a predetermined amount and/or speed, or a shake gesture that includes a predetermined speed or amount of rotation of a portion of the user's body).

[0056] A quick press of the push button optionally disengages a lock of touch screen **112** or optionally begins a process that uses gestures on the touch screen to unlock the device, as described in U.S. patent application Ser. No. 11/322,549, "Unlocking a Device by Performing Gestures on an Unlock Image," filed Dec. 23, 2005, U.S. Pat. No. 7,657,849, which is hereby incorporated by reference in its entirety. A longer press of the push button (e.g., **206**) optionally turns power to device **100** on or off. The functionality of one or more of the buttons are, optionally, user-customizable. Touch screen **112** is used to implement virtual or soft buttons and one or more soft keyboards.

[0057] Touch-sensitive display **112** provides an input interface and an output interface between the device and a user. Display controller **156** receives and/or sends electrical signals from/to touch

screen **112**. Touch screen **112** displays visual output to the user. The visual output optionally includes graphics, text, icons, video, and any combination thereof (collectively termed "graphics"). In some embodiments, some or all of the visual output optionally corresponds to user-interface objects.

[0058] Touch screen **112** has a touch-sensitive surface, sensor, or set of sensors that accepts input from the user based on haptic and/or tactile contact. Touch screen **112** and display controller **156** (along with any associated modules and/or sets of instructions in memory **102**) detect contact (and any movement or breaking of the contact) on touch screen **112** and convert the detected contact into interaction with user-interface objects (e.g., one or more soft keys, icons, web pages, or images) that are displayed on touch screen **112**. In an exemplary embodiment, a point of contact between touch screen **112** and the user corresponds to a finger of the user.

[0059] Touch screen **112** optionally uses LCD (liquid crystal display) technology, LPD (light emitting polymer display) technology, or LED (light emitting diode) technology, although other display technologies are used in other embodiments. Touch screen **112** and display controller **156** optionally detect contact and any movement or breaking thereof using any of a plurality of touch sensing technologies now known or later developed, including but not limited to capacitive, resistive, infrared, and surface acoustic wave technologies, as well as other proximity sensor arrays or other elements for determining one or more points of contact with touch screen **112**. In an exemplary embodiment, projected mutual capacitance sensing technology is used, such as that found in the iPhone® and iPod Touch® from Apple Inc. of Cupertino, California.

[0060] A touch-sensitive display in some embodiments of touch screen **112** is, optionally, analogous to the multi-touch sensitive touchpads described in the following U.S. Pat. No. 6,323,846 (Westerman et al.), U.S. Pat. No. 6,570,557 (Westerman et al.), and/or U.S. Pat. No. 6,677,932 (Westerman), and/or U.S. Patent Publication 2002/0015024A1, each of which is hereby incorporated by reference in its entirety. However, touch screen **112** displays visual output from device **100**, whereas touch-sensitive touchpads do not provide visual output.

[0061] A touch-sensitive display in some embodiments of touch screen **112** is described in the following applications: (1) U.S. patent application Ser. No. 11/381,313, "Multipoint Touch Surface Controller," filed May 2, 2006; (2) U.S. patent application Ser. No. 10/840,862, "Multipoint Touchscreen," filed May 6, 2004; (3) U.S. patent application Ser. No. 10/903,964, "Gestures For Touch Sensitive Input Devices," filed Jul. 30, 2004; (4) U.S. patent application Ser. No. 11/048,264, "Gestures For Touch Sensitive Input Devices," filed Jan. 31, 2005; (5) U.S. patent application Ser. No. 11/038,590, "Mode-Based Graphical User Interfaces For Touch Sensitive Input Devices," filed Jan. 18, 2005; (6) U.S. patent application Ser. No. 11/228,758, "Virtual Input Device Placement On A Touch Screen User Interface," filed Sep. 16, 2005; (7) U.S. patent application Ser. No. 11/228,700, "Operation Of A Computer With A Touch Screen Interface," filed Sep. 16, 2005; (8) U.S. patent application Ser. No. 11/228,737, "Activating Virtual Keys Of A Touch-Screen Virtual Keyboard," filed Sep. 16, 2005; and (9) U.S. patent application Ser. No. 11/367,749, "Multi-Functional Hand-Held Device," filed Mar. 3, 2006. All of these applications are incorporated by reference herein in their entirety.

[0062] Touch screen **112** optionally has a video resolution in excess of 100 dpi. In some embodiments, the touch screen has a video resolution of approximately 160 dpi. The user optionally makes contact with touch screen **112** using any suitable object or appendage, such as a stylus, a finger, and so forth. In some embodiments, the user interface is designed to work primarily with finger-based contacts and gestures, which can be less precise than stylus-based input due to the larger area of contact of a finger on the touch screen. In some embodiments, the device translates the rough finger-based input into a precise pointer/cursor position or command for performing the actions desired by the user.

[0063] In some embodiments, in addition to the touch screen, device **100** optionally includes a touchpad for activating or deactivating particular functions. In some embodiments, the touchpad is

a touch-sensitive area of the device that, unlike the touch screen, does not display visual output. The touchpad is, optionally, a touch-sensitive surface that is separate from touch screen **112** or an extension of the touch-sensitive surface formed by the touch screen.

[0064] Device **100** also includes power system **162** for powering the various components. Power system **162** optionally includes a power management system, one or more power sources (e.g., battery, alternating current (AC)), a recharging system, a power failure detection circuit, a power converter or inverter, a power status indicator (e.g., a light-emitting diode (LED)) and any other components associated with the generation, management and distribution of power in portable devices.

[0065] Device **100** optionally also includes one or more optical sensors **164**. FIG. **1**A shows an optical sensor coupled to optical sensor controller **158** in I/O subsystem **106**. Optical sensor **164** optionally includes charge-coupled device (CCD) or complementary metal-oxide semiconductor (CMOS) phototransistors. Optical sensor **164** receives light from the environment, projected through one or more lenses, and converts the light to data representing an image. In conjunction with imaging module **143** (also called a camera module), optical sensor **164** optionally captures still images or video. In some embodiments, an optical sensor is located on the back of device **100**, opposite touch screen display **112** on the front of the device so that the touch screen display is enabled for use as a viewfinder for still and/or video image acquisition. In some embodiments, an optical sensor is located on the front of the device so that the user's image is, optionally, obtained for video conferencing while the user views the other video conference participants on the touch screen display. In some embodiments, the position of optical sensor **164** can be changed by the user (e.g., by rotating the lens and the sensor in the device housing) so that a single optical sensor **164** is used along with the touch screen display for both video conferencing and still and/or video image acquisition.

[0066] Device **100** optionally also includes one or more depth camera sensors **175**. FIG. **1**A shows a depth camera sensor coupled to depth camera controller **169** in I/O subsystem **106**. Depth camera sensor **175** receives data from the environment to create a three dimensional model of an object (e.g., a face) within a scene from a viewpoint (e.g., a depth camera sensor). In some embodiments, in conjunction with imaging module **143** (also called a camera module), depth camera sensor **175** is optionally used to determine a depth map of different portions of an image captured by the imaging module **143**. In some embodiments, a depth camera sensor is located on the front of device **100** so that the user's image with depth information is, optionally, obtained for video conferencing while the user views the other video conference participants on the touch screen display and to capture selfies with depth map data. In some embodiments, the depth camera sensor **175** is located on the back of device, or on the back and the front of the device **100**. In some embodiments, the position of depth camera sensor **175** can be changed by the user (e.g., by rotating the lens and the sensor in the device housing) so that a depth camera sensor **175** is used along with the touch screen display for both video conferencing and still and/or video image acquisition.

[0067] Device **100** optionally also includes one or more contact intensity sensors **165**. FIG. **1**A shows a contact intensity sensor coupled to intensity sensor controller **159** in I/O subsystem **106**. Contact intensity sensor **165** optionally includes one or more piezoresistive strain gauges, capacitive force sensors, electric force sensors, piezoelectric force sensors, optical force sensors, capacitive touch-sensitive surfaces, or other intensity sensors (e.g., sensors used to measure the force (or pressure) of a contact on a touch-sensitive surface). Contact intensity sensor **165** receives contact intensity information (e.g., pressure information or a proxy for pressure information) from the environment. In some embodiments, at least one contact intensity sensor is collocated with, or proximate to, a touch-sensitive surface (e.g., touch-sensitive display system **112**). In some embodiments, at least one contact intensity sensor is located on the back of device **100**, opposite touch screen display **112**, which is located on the front of device **100**.

[0068] Device **100** optionally also includes one or more proximity sensors **166**. FIG. **1**A shows

proximity sensor **166** coupled to peripherals interface **118**. Alternately, proximity sensor **166** is, optionally, coupled to input controller **160** in I/O subsystem **106**. Proximity sensor **166** optionally performs as described in U.S. patent application Ser. No. 11/241,839, "Proximity Detector In Handheld Device"; U.S. Ser. No. 11/240,788, "Proximity Detector In Handheld Device"; U.S. Ser. No. 11/620,702, "Using Ambient Light Sensor To Augment Proximity Sensor Output"; U.S. Ser. No. 11/586,862, "Automated Response To And Sensing Of User Activity In Portable Devices"; and U.S. Ser. No. 11/638,251, "Methods And Systems For Automatic Configuration Of Peripherals," which are hereby incorporated by reference in their entirety. In some embodiments, the proximity sensor turns off and disables touch screen **112** when the multifunction device is placed near the user's ear (e.g., when the user is making a phone call).

[0069] Device **100** optionally also includes one or more tactile output generators **167**. FIG. **1**A shows a tactile output generator coupled to haptic feedback controller **161** in I/O subsystem **106**. Tactile output generator **167** optionally includes one or more electroacoustic devices such as speakers or other audio components and/or electromechanical devices that convert energy into linear motion such as a motor, solenoid, electroactive polymer, piezoelectric actuator, electrostatic actuator, or other tactile output generating component (e.g., a component that converts electrical signals into tactile outputs on the device). Contact intensity sensor **165** receives tactile feedback generation instructions from haptic feedback module **133** and generates tactile outputs on device **100** that are capable of being sensed by a user of device **100**. In some embodiments, at least one tactile output generator is collocated with, or proximate to, a touch-sensitive surface (e.g., touch-sensitive display system **112**) and, optionally, generates a tactile output by moving the touch-sensitive surface vertically (e.g., in/out of a surface of device **100**) or laterally (e.g., back and forth in the same plane as a surface of device **100**). In some embodiments, at least one tactile output generator sensor is located on the back of device **100**, opposite touch screen display **112**, which is located on the front of device **100**.

[0070] Device **100** optionally also includes one or more accelerometers **168**. FIG. **1**A shows accelerometer **168** coupled to peripherals interface **118**. Alternately, accelerometer **168** is, optionally, coupled to an input controller **160** in I/O subsystem **106**. Accelerometer **168** optionally performs as described in U.S. Patent Publication No. 20050190059, "Acceleration-based Theft Detection System for Portable Electronic Devices," and U.S. Patent Publication No. 20060017692, "Methods And Apparatuses For Operating A Portable Device Based On An Accelerometer," both of which are incorporated by reference herein in their entirety. In some embodiments, information is displayed on the touch screen display in a portrait view or a landscape view based on an analysis of data received from the one or more accelerometers. Device **100** optionally includes, in addition to accelerometer(s) **168**, a magnetometer and a GPS (or GLONASS or other global navigation system) receiver for obtaining information concerning the location and orientation (e.g., portrait or landscape) of device **100**.

[0071] In some embodiments, the software components stored in memory **102** include operating system **126**, communication module (or set of instructions) **128**, contact/motion module (or set of instructions) **130**, graphics module (or set of instructions) **132**, text input module (or set of instructions) **134**, Global Positioning System (GPS) module (or set of instructions) **135**, and applications (or sets of instructions) **136**. Furthermore, in some embodiments, memory **102** (FIG. **1**A) or **370** (FIG. **3**) stores device/global internal state **157**, as shown in FIGS. **1**A and **3**. Device/global internal state **157** includes one or more of: active application state, indicating which applications, if any, are currently active; display state, indicating what applications, views or other information occupy various regions of touch screen display **112**; sensor state, including information obtained from the device's various sensors and input control devices **116**; and location information concerning the device's location and/or attitude.

[0072] Operating system **126** (e.g., Darwin, RTXC, LINUX, UNIX, OS X, IOS, WINDOWS, or an embedded operating system such as VxWorks) includes various software components and/or

drivers for controlling and managing general system tasks (e.g., memory management, storage device control, power management, etc.) and facilitates communication between various hardware and software components.

[0073] Communication module **128** facilitates communication with other devices over one or more external ports **124** and also includes various software components for handling data received by RF circuitry **108** and/or external port **124**. External port **124** (e.g., Universal Serial Bus (USB), FIREWIRE, etc.) is adapted for coupling directly to other devices or indirectly over a network (e.g., the Internet, wireless LAN, etc.). In some embodiments, the external port is a multi-pin (e.g., 30-pin) connector that is the same as, or similar to and/or compatible with, the 30-pin connector used on iPod® (trademark of Apple Inc.) devices.

[0074] Contact/motion module **130** optionally detects contact with touch screen **112** (in conjunction with display controller **156**) and other touch-sensitive devices (e.g., a touchpad or physical click wheel). Contact/motion module **130** includes various software components for performing various operations related to detection of contact, such as determining if contact has occurred (e.g., detecting a finger-down event), determining an intensity of the contact (e.g., the force or pressure of the contact or a substitute for the force or pressure of the contact), determining if there is movement of the contact and tracking the movement across the touch-sensitive surface (e.g., detecting one or more finger-dragging events), and determining if the contact has ceased (e.g., detecting a finger-up event or a break in contact). Contact/motion module **130** receives contact data from the touch-sensitive surface. Determining movement of the point of contact, which is represented by a series of contact data, optionally includes determining speed (magnitude), velocity (magnitude and direction), and/or an acceleration (a change in magnitude and/or direction) of the point of contact. These operations are, optionally, applied to single contacts (e.g., one finger contacts) or to multiple simultaneous contacts (e.g., "multitouch"/multiple finger contacts). In some embodiments, contact/motion module **130** and display controller **156** detect contact on a touchpad.

[0075] In some embodiments, contact/motion module **130** uses a set of one or more intensity thresholds to determine whether an operation has been performed by a user (e.g., to determine whether a user has "clicked" on an icon). In some embodiments, at least a subset of the intensity thresholds are determined in accordance with software parameters (e.g., the intensity thresholds are not determined by the activation thresholds of particular physical actuators and can be adjusted without changing the physical hardware of device **100**). For example, a mouse "click" threshold of a trackpad or touch screen display can be set to any of a large range of predefined threshold values without changing the trackpad or touch screen display hardware. Additionally, in some implementations, a user of the device is provided with software settings for adjusting one or more of the set of intensity thresholds (e.g., by adjusting individual intensity thresholds and/or by adjusting a plurality of intensity thresholds at once with a system-level click "intensity" parameter).

[0076] Contact/motion module **130** optionally detects a gesture input by a user. Different gestures on the touch-sensitive surface have different contact patterns (e.g., different motions, timings, and/or intensities of detected contacts). Thus, a gesture is, optionally, detected by detecting a particular contact pattern. For example, detecting a finger tap gesture includes detecting a finger-down event followed by detecting a finger-up (liftoff) event at the same position (or substantially the same position) as the finger-down event (e.g., at the position of an icon). As another example, detecting a finger swipe gesture on the touch-sensitive surface includes detecting a finger-down event followed by detecting one or more finger-dragging events, and subsequently followed by detecting a finger-up (liftoff) event.

[0077] Graphics module **132** includes various known software components for rendering and displaying graphics on touch screen **112** or other display, including components for changing the visual impact (e.g., brightness, transparency, saturation, contrast, or other visual property) of graphics that are displayed. As used herein, the term "graphics" includes any object that can be

displayed to a user, including, without limitation, text, web pages, icons (such as user-interface objects including soft keys), digital images, videos, animations, and the like.

[0078] In some embodiments, graphics module **132** stores data representing graphics to be used. Each graphic is, optionally, assigned a corresponding code. Graphics module **132** receives, from applications etc., one or more codes specifying graphics to be displayed along with, if necessary, coordinate data and other graphic property data, and then generates screen image data to output to display controller **156**.

[0079] Haptic feedback module **133** includes various software components for generating instructions used by tactile output generator(s) **167** to produce tactile outputs at one or more locations on device **100** in response to user interactions with device **100**.

[0080] Text input module **134**, which is, optionally, a component of graphics module **132**, provides soft keyboards for entering text in various applications (e.g., contacts module **137**, e-mail client module **140**, IM module **141**, browser module **147**, and any other application that needs text input).

[0081] GPS module **135** determines the location of the device and provides this information for use in various applications (e.g., to telephone module **138** for use in location-based dialing; to camera module **143** as picture/video metadata; and to applications that provide location-based services such as weather widgets, local yellow page widgets, and map/navigation widgets).

[0082] Applications **136** optionally include the following modules (or sets of instructions), or a subset or superset thereof: [0083] Contacts module **137** (sometimes called an address book or contact list); [0084] Telephone module **138**; [0085] Video conference module **139**; [0086] E-mail client module **140**; [0087] Instant messaging (IM) module **141**; [0088] Workout support module **142**; [0089] Camera module **143** for still and/or video images; [0090] Image management module **144**; [0091] Video player module; [0092] Music player module; [0093] Browser module **147**; [0094] Calendar module **148**; [0095] Widget modules **149**, which optionally include one or more of: weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, dictionary widget **149-5**, and other widgets obtained by the user, as well as user-created widgets **149-6**; [0096] Widget creator module **150** for making user-created widgets **149-6**; [0097] Search module **151**; [0098] Video and music player module **152**, which merges video player module and music player module; [0099] Notes module **153**; [0100] Map module **154**; and/or [0101] Online video module **155**.

[0102] Examples of other applications **136** that are, optionally, stored in memory **102** include other word processing applications, other image editing applications, drawing applications, presentation applications, JAVA-enabled applications, encryption, digital rights management, voice recognition, and voice replication.

[0103] In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, contacts module **137** are, optionally, used to manage an address book or contact list (e.g., stored in application internal state **192** of contacts module **137** in memory **102** or memory **370**), including: adding name(s) to the address book; deleting name(s) from the address book; associating telephone number(s), e-mail address(es), physical address(es) or other information with a name; associating an image with a name; categorizing and sorting names; providing telephone numbers or e-mail addresses to initiate and/or facilitate communications by telephone module **138**, video conference module **139**, e-mail client module **140**, or IM module **141**; and so forth.

[0104] In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, telephone module **138** are optionally, used to enter a sequence of characters corresponding to a telephone number, access one or more telephone numbers in contacts module **137**, modify a telephone number that has been entered, dial a respective telephone number, conduct a conversation, and disconnect or hang up when the conversation is completed. As noted above, the wireless communication optionally uses any of a plurality of communications standards, protocols,

and technologies.

[0105] In conjunction with RF circuitry **108**, audio circuitry **110**, speaker **111**, microphone **113**, touch screen **112**, display controller **156**, optical sensor **164**, optical sensor controller **158**, contact/motion module **130**, graphics module **132**, text input module **134**, contacts module **137**, and telephone module **138**, video conference module **139** includes executable instructions to initiate, conduct, and terminate a video conference between a user and one or more other participants in accordance with user instructions.

[0106] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, e-mail client module **140** includes executable instructions to create, send, receive, and manage e-mail in response to user instructions. In conjunction with image management module **144**, e-mail client module **140** makes it very easy to create and send e-mails with still or video images taken with camera module **143**.

[0107] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, the instant messaging module **141** includes executable instructions to enter a sequence of characters corresponding to an instant message, to modify previously entered characters, to transmit a respective instant message (for example, using a Short Message Service (SMS) or Multimedia Message Service (MMS) protocol for telephony-based instant messages or using XMPP, SIMPLE, or IMPS for Internet-based instant messages), to receive instant messages, and to view received instant messages. In some embodiments, transmitted and/or received instant messages optionally include graphics, photos, audio files, video files and/or other attachments as are supported in an MMS and/or an Enhanced Messaging Service (EMS). As used herein, "instant messaging" refers to both telephony-based messages (e.g., messages sent using SMS or MMS) and Internet-based messages (e.g., messages sent using XMPP, SIMPLE, or IMPS).

[0108] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, GPS module **135**, map module **154**, and music player module, workout support module **142** includes executable instructions to create workouts (e.g., with time, distance, and/or calorie burning goals); communicate with workout sensors (sports devices); receive workout sensor data; calibrate sensors used to monitor a workout; select and play music for a workout; and display, store, and transmit workout data.

[0109] In conjunction with touch screen **112**, display controller **156**, optical sensor(s) **164**, optical sensor controller **158**, contact/motion module **130**, graphics module **132**, and image management module **144**, camera module **143** includes executable instructions to capture still images or video (including a video stream) and store them into memory **102**, modify characteristics of a still image or video, or delete a still image or video from memory **102**.

[0110] In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, and camera module **143**, image management module **144** includes executable instructions to arrange, modify (e.g., edit), or otherwise manipulate, label, delete, present (e.g., in a digital slide show or album), and store still and/or video images.

[0111] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, browser module **147** includes executable instructions to browse the Internet in accordance with user instructions, including searching, linking to, receiving, and displaying web pages or portions thereof, as well as attachments and other files linked to web pages.

[0112] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, e-mail client module **140**, and browser module **147**, calendar module **148** includes executable instructions to create, display, modify, and store calendars and data associated with calendars (e.g., calendar entries, to-do lists, etc.) in accordance with user instructions.

[0113] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, and browser module **147**, widget modules **149** are mini-applications that are, optionally, downloaded and used by a user (e.g., weather widget **149-1**, stocks widget **149-2**, calculator widget **149-3**, alarm clock widget **149-4**, and dictionary widget **149-5**) or created by the user (e.g., user-created widget **149-6**). In some embodiments, a widget includes an HTML (Hypertext Markup Language) file, a CSS (Cascading Style Sheets) file, and a JavaScript file. In some embodiments, a widget includes an XML (Extensible Markup Language) file and a JavaScript file (e.g., Yahoo! Widgets).

[0114] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, and browser module **147**, the widget creator module **150** are, optionally, used by a user to create widgets (e.g., turning a user-specified portion of a web page into a widget).

[0115] In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, search module **151** includes executable instructions to search for text, music, sound, image, video, and/or other files in memory **102** that match one or more search criteria (e.g., one or more user-specified search terms) in accordance with user instructions.

[0116] In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, audio circuitry **110**, speaker **111**, RF circuitry **108**, and browser module **147**, video and music player module **152** includes executable instructions that allow the user to download and play back recorded music and other sound files stored in one or more file formats, such as MP3 or AAC files, and executable instructions to display, present, or otherwise play back videos (e.g., on touch screen **112** or on an external, connected display via external port **124**). In some embodiments, device **100** optionally includes the functionality of an MP3 player, such as an iPod (trademark of Apple Inc.).

[0117] In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, and text input module **134**, notes module **153** includes executable instructions to create and manage notes, to-do lists, and the like in accordance with user instructions.

[0118] In conjunction with RF circuitry **108**, touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, text input module **134**, GPS module **135**, and browser module **147**, map module **154** are, optionally, used to receive, display, modify, and store maps and data associated with maps (e.g., driving directions, data on stores and other points of interest at or near a particular location, and other location-based data) in accordance with user instructions.

[0119] In conjunction with touch screen **112**, display controller **156**, contact/motion module **130**, graphics module **132**, audio circuitry **110**, speaker **111**, RF circuitry **108**, text input module **134**, e-mail client module **140**, and browser module **147**, online video module **155** includes instructions that allow the user to access, browse, receive (e.g., by streaming and/or download), play back (e.g., on the touch screen or on an external, connected display via external port **124**), send an e-mail with a link to a particular online video, and otherwise manage online videos in one or more file formats, such as H.264. In some embodiments, instant messaging module **141**, rather than e-mail client module **140**, is used to send a link to a particular online video. Additional description of the online video application can be found in U.S. Provisional Patent Application No. 60/936,562, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Jun. 20, 2007, and U.S. patent application Ser. No. 11/968,067, "Portable Multifunction Device, Method, and Graphical User Interface for Playing Online Videos," filed Dec. 31, 2007, the contents of which are hereby incorporated by reference in their entirety.

[0120] Each of the above-identified modules and applications corresponds to a set of executable instructions for performing one or more functions described above and the methods described in

this application (e.g., the computer-implemented methods and other information processing methods described herein). These modules (e.g., sets of instructions) need not be implemented as separate software programs (such as computer programs (e.g., including instructions)), procedures, or modules, and thus various subsets of these modules are, optionally, combined or otherwise rearranged in various embodiments. For example, video player module is, optionally, combined with music player module into a single module (e.g., video and music player module **152**, FIG. **1**A). In some embodiments, memory **102** optionally stores a subset of the modules and data structures identified above. Furthermore, memory **102** optionally stores additional modules and data structures not described above.

[0121] In some embodiments, device **100** is a device where operation of a predefined set of functions on the device is performed exclusively through a touch screen and/or a touchpad. By using a touch screen and/or a touchpad as the primary input control device for operation of device **100**, the number of physical input control devices (such as push buttons, dials, and the like) on device **100** is, optionally, reduced.

[0122] The predefined set of functions that are performed exclusively through a touch screen and/or a touchpad optionally include navigation between user interfaces. In some embodiments, the touchpad, when touched by the user, navigates device **100** to a main, home, or root menu from any user interface that is displayed on device **100**. In such embodiments, a "menu button" is implemented using a touchpad. In some other embodiments, the menu button is a physical push button or other physical input control device instead of a touchpad.

[0123] FIG. **1**B is a block diagram illustrating exemplary components for event handling in accordance with some embodiments. In some embodiments, memory **102** (FIG. **1**A) or **370** (FIG. **3**) includes event sorter **170** (e.g., in operating system **126**) and a respective application **136-1** (e.g., any of the aforementioned applications **137-151**, **155**, **380-390**).

[0124] Event sorter **170** receives event information and determines the application **136-1** and application view **191** of application **136-1** to which to deliver the event information. Event sorter **170** includes event monitor **171** and event dispatcher module **174**. In some embodiments, application **136-1** includes application internal state **192**, which indicates the current application view(s) displayed on touch-sensitive display **112** when the application is active or executing. In some embodiments, device/global internal state **157** is used by event sorter **170** to determine which application(s) is (are) currently active, and application internal state **192** is used by event sorter **170** to determine application views **191** to which to deliver event information.

[0125] In some embodiments, application internal state **192** includes additional information, such as one or more of: resume information to be used when application **136-1** resumes execution, user interface state information that indicates information being displayed or that is ready for display by application **136-1**, a state queue for enabling the user to go back to a prior state or view of application **136-1**, and a redo/undo queue of previous actions taken by the user.

[0126] Event monitor **171** receives event information from peripherals interface **118**. Event information includes information about a sub-event (e.g., a user touch on touch-sensitive display **112**, as part of a multi-touch gesture). Peripherals interface **118** transmits information it receives from I/O subsystem **106** or a sensor, such as proximity sensor **166**, accelerometer(s) **168**, and/or microphone **113** (through audio circuitry **110**). Information that peripherals interface **118** receives from I/O subsystem **106** includes information from touch-sensitive display **112** or a touch-sensitive surface.

[0127] In some embodiments, event monitor **171** sends requests to the peripherals interface **118** at predetermined intervals. In response, peripherals interface **118** transmits event information. In other embodiments, peripherals interface **118** transmits event information only when there is a significant event (e.g., receiving an input above a predetermined noise threshold and/or for more than a predetermined duration).

[0128] In some embodiments, event sorter **170** also includes a hit view determination module **172**

and/or an active event recognizer determination module **173**.

[0129] Hit view determination module **172** provides software procedures for determining where a sub-event has taken place within one or more views when touch-sensitive display **112** displays more than one view. Views are made up of controls and other elements that a user can see on the display.

[0130] Another aspect of the user interface associated with an application is a set of views, sometimes herein called application views or user interface windows, in which information is displayed and touch-based gestures occur. The application views (of a respective application) in which a touch is detected optionally correspond to programmatic levels within a programmatic or view hierarchy of the application. For example, the lowest level view in which a touch is detected is, optionally, called the hit view, and the set of events that are recognized as proper inputs are, optionally, determined based, at least in part, on the hit view of the initial touch that begins a touch-based gesture.

[0131] Hit view determination module **172** receives information related to sub-events of a touch-based gesture. When an application has multiple views organized in a hierarchy, hit view determination module **172** identifies a hit view as the lowest view in the hierarchy which should handle the sub-event. In most circumstances, the hit view is the lowest level view in which an initiating sub-event occurs (e.g., the first sub-event in the sequence of sub-events that form an event or potential event). Once the hit view is identified by the hit view determination module **172**, the hit view typically receives all sub-events related to the same touch or input source for which it was identified as the hit view.

[0132] Active event recognizer determination module **173** determines which view or views within a view hierarchy should receive a particular sequence of sub-events. In some embodiments, active event recognizer determination module **173** determines that only the hit view should receive a particular sequence of sub-events. In other embodiments, active event recognizer determination module **173** determines that all views that include the physical location of a sub-event are actively involved views, and therefore determines that all actively involved views should receive a particular sequence of sub-events. In other embodiments, even if touch sub-events were entirely confined to the area associated with one particular view, views higher in the hierarchy would still remain as actively involved views.

[0133] Event dispatcher module **174** dispatches the event information to an event recognizer (e.g., event recognizer **180**). In embodiments including active event recognizer determination module **173**, event dispatcher module **174** delivers the event information to an event recognizer determined by active event recognizer determination module **173**. In some embodiments, event dispatcher module **174** stores in an event queue the event information, which is retrieved by a respective event receiver **182**.

[0134] In some embodiments, operating system **126** includes event sorter **170**. Alternatively, application **136-1** includes event sorter **170**. In yet other embodiments, event sorter **170** is a stand-alone module, or a part of another module stored in memory **102**, such as contact/motion module **130**.

[0135] In some embodiments, application **136-1** includes a plurality of event handlers **190** and one or more application views **191**, each of which includes instructions for handling touch events that occur within a respective view of the application's user interface. Each application view **191** of the application **136-1** includes one or more event recognizers **180**. Typically, a respective application view **191** includes a plurality of event recognizers **180**. In other embodiments, one or more of event recognizers **180** are part of a separate module, such as a user interface kit or a higher level object from which application **136-1** inherits methods and other properties. In some embodiments, a respective event handler **190** includes one or more of: data updater **176**, object updater **177**, GUI updater **178**, and/or event data **179** received from event sorter **170**. Event handler **190** optionally utilizes or calls data updater **176**, object updater **177**, or GUI updater **178** to update the application

internal state **192**. Alternatively, one or more of the application views **191** include one or more respective event handlers **190**. Also, in some embodiments, one or more of data updater **176**, object updater **177**, and GUI updater **178** are included in a respective application view **191**.

[0136] A respective event recognizer **180** receives event information (e.g., event data **179**) from event sorter **170** and identifies an event from the event information. Event recognizer **180** includes event receiver **182** and event comparator **184**. In some embodiments, event recognizer **180** also includes at least a subset of: metadata **183**, and event delivery instructions **188** (which optionally include sub-event delivery instructions).

[0137] Event receiver **182** receives event information from event sorter **170**. The event information includes information about a sub-event, for example, a touch or a touch movement. Depending on the sub-event, the event information also includes additional information, such as location of the sub-event. When the sub-event concerns motion of a touch, the event information optionally also includes speed and direction of the sub-event. In some embodiments, events include rotation of the device from one orientation to another (e.g., from a portrait orientation to a landscape orientation, or vice versa), and the event information includes corresponding information about the current orientation (also called device attitude) of the device.

[0138] Event comparator **184** compares the event information to predefined event or sub-event definitions and, based on the comparison, determines an event or sub-event, or determines or updates the state of an event or sub-event. In some embodiments, event comparator **184** includes event definitions **186**. Event definitions **186** contain definitions of events (e.g., predefined sequences of sub-events), for example, event **1** (**187-1**), event **2** (**187-2**), and others. In some embodiments, sub-events in an event (e.g., **187-1** and/or **187-2**) include, for example, touch begin, touch end, touch movement, touch cancellation, and multiple touching. In one example, the definition for event **1** (**187-1**) is a double tap on a displayed object. The double tap, for example, comprises a first touch (touch begin) on the displayed object for a predetermined phase, a first liftoff (touch end) for a predetermined phase, a second touch (touch begin) on the displayed object for a predetermined phase, and a second liftoff (touch end) for a predetermined phase. In another example, the definition for event **2** (**187-2**) is a dragging on a displayed object. The dragging, for example, comprises a touch (or contact) on the displayed object for a predetermined phase, a movement of the touch across touch-sensitive display **112**, and liftoff of the touch (touch end). In some embodiments, the event also includes information for one or more associated event handlers **190**.

[0139] In some embodiments, event definitions **186** include a definition of an event for a respective user-interface object. In some embodiments, event comparator **184** performs a hit test to determine which user-interface object is associated with a sub-event. For example, in an application view in which three user-interface objects are displayed on touch-sensitive display **112**, when a touch is detected on touch-sensitive display **112**, event comparator **184** performs a hit test to determine which of the three user-interface objects is associated with the touch (sub-event). If each displayed object is associated with a respective event handler **190**, the event comparator uses the result of the hit test to determine which event handler **190** should be activated. For example, event comparator **184** selects an event handler associated with the sub-event and the object triggering the hit test.

[0140] In some embodiments, the definition for a respective event (**187**) also includes delayed actions that delay delivery of the event information until after it has been determined whether the sequence of sub-events does or does not correspond to the event recognizer's event type.

[0141] When a respective event recognizer **180** determines that the series of sub-events do not match any of the events in event definitions **186**, the respective event recognizer **180** enters an event impossible, event failed, or event ended state, after which it disregards subsequent sub-events of the touch-based gesture. In this situation, other event recognizers, if any, that remain active for the hit view continue to track and process sub-events of an ongoing touch-based gesture.

[0142] In some embodiments, a respective event recognizer **180** includes metadata **183** with

configurable properties, flags, and/or lists that indicate how the event delivery system should perform sub-event delivery to actively involved event recognizers. In some embodiments, metadata **183** includes configurable properties, flags, and/or lists that indicate how event recognizers interact, or are enabled to interact, with one another. In some embodiments, metadata **183** includes configurable properties, flags, and/or lists that indicate whether sub-events are delivered to varying levels in the view or programmatic hierarchy.

[0143] In some embodiments, a respective event recognizer **180** activates event handler **190** associated with an event when one or more particular sub-events of an event are recognized. In some embodiments, a respective event recognizer **180** delivers event information associated with the event to event handler **190**. Activating an event handler **190** is distinct from sending (and deferred sending) sub-events to a respective hit view. In some embodiments, event recognizer **180** throws a flag associated with the recognized event, and event handler **190** associated with the flag catches the flag and performs a predefined process.

[0144] In some embodiments, event delivery instructions **188** include sub-event delivery instructions that deliver event information about a sub-event without activating an event handler. Instead, the sub-event delivery instructions deliver event information to event handlers associated with the series of sub-events or to actively involved views. Event handlers associated with the series of sub-events or with actively involved views receive the event information and perform a predetermined process.

[0145] In some embodiments, data updater **176** creates and updates data used in application **136-1**. For example, data updater **176** updates the telephone number used in contacts module **137**, or stores a video file used in video player module. In some embodiments, object updater **177** creates and updates objects used in application **136-1**. For example, object updater **177** creates a new user-interface object or updates the position of a user-interface object. GUI updater **178** updates the GUI. For example, GUI updater **178** prepares display information and sends it to graphics module **132** for display on a touch-sensitive display.

[0146] In some embodiments, event handler(s) **190** includes or has access to data updater **176**, object updater **177**, and GUI updater **178**. In some embodiments, data updater **176**, object updater **177**, and GUI updater **178** are included in a single module of a respective application **136-1** or application view **191**. In other embodiments, they are included in two or more software modules.

[0147] It shall be understood that the foregoing discussion regarding event handling of user touches on touch-sensitive displays also applies to other forms of user inputs to operate multifunction devices **100** with input devices, not all of which are initiated on touch screens. For example, mouse movement and mouse button presses, optionally coordinated with single or multiple keyboard presses or holds; contact movements such as taps, drags, scrolls, etc. on touchpads; pen stylus inputs; movement of the device; oral instructions; detected eye movements; biometric inputs; and/or any combination thereof are optionally utilized as inputs corresponding to sub-events which define an event to be recognized.

[0148] FIG. **2** illustrates a portable multifunction device **100** having a touch screen **112** in accordance with some embodiments. The touch screen optionally displays one or more graphics within user interface (UI) **200**. In this embodiment, as well as others described below, a user is enabled to select one or more of the graphics by making a gesture on the graphics, for example, with one or more fingers **202** (not drawn to scale in the figure) or one or more styluses **203** (not drawn to scale in the figure). In some embodiments, selection of one or more graphics occurs when the user breaks contact with the one or more graphics. In some embodiments, the gesture optionally includes one or more taps, one or more swipes (from left to right, right to left, upward and/or downward), and/or a rolling of a finger (from right to left, left to right, upward and/or downward) that has made contact with device **100**. In some implementations or circumstances, inadvertent contact with a graphic does not select the graphic. For example, a swipe gesture that sweeps over an application icon optionally does not select the corresponding application when the gesture

corresponding to selection is a tap.

[0149] Device **100** optionally also include one or more physical buttons, such as "home" or menu button **204**. As described previously, menu button **204** is, optionally, used to navigate to any application **136** in a set of applications that are, optionally, executed on device **100**. Alternatively, in some embodiments, the menu button is implemented as a soft key in a GUI displayed on touch screen **112**.

[0150] In some embodiments, device **100** includes touch screen **112**, menu button **204**, push button **206** for powering the device on/off and locking the device, volume adjustment button(s) **208**, subscriber identity module (SIM) card slot **210**, headset jack **212**, and docking/charging external port **124**. Push button **206** is, optionally, used to turn the power on/off on the device by depressing the button and holding the button in the depressed state for a predefined time interval; to lock the device by depressing the button and releasing the button before the predefined time interval has elapsed; and/or to unlock the device or initiate an unlock process. In an alternative embodiment, device **100** also accepts verbal input for activation or deactivation of some functions through microphone **113**. Device **100** also, optionally, includes one or more contact intensity sensors **165** for detecting intensity of contacts on touch screen **112** and/or one or more tactile output generators **167** for generating tactile outputs for a user of device **100**.

[0151] FIG. **3** is a block diagram of an exemplary multifunction device with a display and a touch-sensitive surface in accordance with some embodiments. Device **300** need not be portable. In some embodiments, device **300** is a laptop computer, a desktop computer, a tablet computer, a multimedia player device, a navigation device, an educational device (such as a child's learning toy), a gaming system, or a control device (e.g., a home or industrial controller). Device **300** typically includes one or more processing units (CPUs) **310**, one or more network or other communications interfaces **360**, memory **370**, and one or more communication buses **320** for interconnecting these components. Communication buses **320** optionally include circuitry (sometimes called a chipset) that interconnects and controls communications between system components. Device **300** includes input/output (I/O) interface **330** comprising display **340**, which is typically a touch screen display. I/O interface **330** also optionally includes a keyboard and/or mouse (or other pointing device) **350** and touchpad **355**, tactile output generator **357** for generating tactile outputs on device **300** (e.g., similar to tactile output generator(s) **167** described above with reference to FIG. **1**A), sensors **359** (e.g., optical, acceleration, proximity, touch-sensitive, and/or contact intensity sensors similar to contact intensity sensor(s) **165** described above with reference to FIG. **1**A). Memory **370** includes high-speed random access memory, such as DRAM, SRAM, DDR RAM, or other random access solid state memory devices; and optionally includes non-volatile memory, such as one or more magnetic disk storage devices, optical disk storage devices, flash memory devices, or other non-volatile solid state storage devices. Memory **370** optionally includes one or more storage devices remotely located from CPU(s) **310**. In some embodiments, memory **370** stores programs, modules, and data structures analogous to the programs, modules, and data structures stored in memory **102** of portable multifunction device **100** (FIG. **1**A), or a subset thereof. Furthermore, memory **370** optionally stores additional programs, modules, and data structures not present in memory **102** of portable multifunction device **100**. For example, memory **370** of device **300** optionally stores drawing module **380**, presentation module **382**, word processing module **384**, website creation module **386**, disk authoring module **388**, and/or spreadsheet module **390**, while memory **102** of portable multifunction device **100** (FIG. **1**A) optionally does not store these modules.

[0152] Each of the above-identified elements in FIG. **3** is, optionally, stored in one or more of the previously mentioned memory devices. Each of the above-identified modules corresponds to a set of instructions for performing a function described above. The above-identified modules or computer programs (e.g., sets of instructions or including instructions) need not be implemented as separate software programs (such as computer programs (e.g., including instructions)), procedures,

or modules, and thus various subsets of these modules are, optionally, combined or otherwise rearranged in various embodiments. In some embodiments, memory **370** optionally stores a subset of the modules and data structures identified above. Furthermore, memory **370** optionally stores additional modules and data structures not described above.

[0153] Attention is now directed towards embodiments of user interfaces that are, optionally, implemented on, for example, portable multifunction device **100**.

[0154] FIG. **4**A illustrates an exemplary user interface for a menu of applications on portable multifunction device **100** in accordance with some embodiments. Similar user interfaces are, optionally, implemented on device **300**. In some embodiments, user interface **400** includes the following elements, or a subset or superset thereof: [0155] Signal strength indicator(s) **402** for wireless communication(s), such as cellular and Wi-Fi signals; [0156] Time **404**; [0157] Bluetooth indicator **405**; [0158] Battery status indicator **406**; [0159] Tray **408** with icons for frequently used applications, such as: [0160] Icon **416** for telephone module **138**, labeled "Phone," which optionally includes an indicator **414** of the number of missed calls or voicemail messages; [0161] Icon **418** for e-mail client module **140**, labeled "Mail," which optionally includes an indicator **410** of the number of unread e-mails; [0162] Icon **420** for browser module **147**, labeled "Browser;" and [0163] Icon **422** for video and music player module **152**, also referred to as iPod (trademark of Apple Inc.) module **152**, labeled "iPod;" and [0164] Icons for other applications, such as: [0165] Icon **424** for IM module **141**, labeled "Messages;" [0166] Icon **426** for calendar module **148**, labeled "Calendar;" [0167] Icon **428** for image management module **144**, labeled "Photos;" [0168] Icon **430** for camera module **143**, labeled "Camera;" [0169] Icon **432** for online video module **155**, labeled "Online Video;" [0170] Icon **434** for stocks widget **149-2**, labeled "Stocks;" [0171] Icon **436** for map module **154**, labeled "Maps;" [0172] Icon **438** for weather widget **149-1**, labeled "Weather;" [0173] Icon **440** for alarm clock widget **149-4**, labeled "Clock;" [0174] Icon **442** for workout support module **142**, labeled "Workout Support;" [0175] Icon **444** for notes module **153**, labeled "Notes;" and [0176] Icon **446** for a settings application or module, labeled "Settings," which provides access to settings for device **100** and its various applications **136**.

[0177] It should be noted that the icon labels illustrated in FIG. **4**A are merely exemplary. For example, icon **422** for video and music player module **152** is labeled "Music" or "Music Player." Other labels are, optionally, used for various application icons. In some embodiments, a label for a respective application icon includes a name of an application corresponding to the respective application icon. In some embodiments, a label for a particular application icon is distinct from a name of an application corresponding to the particular application icon.

[0178] FIG. **4**B illustrates an exemplary user interface on a device (e.g., device **300**, FIG. **3**) with a touch-sensitive surface **451** (e.g., a tablet or touchpad **355**, FIG. **3**) that is separate from the display **450** (e.g., touch screen display **112**). Device **300** also, optionally, includes one or more contact intensity sensors (e.g., one or more of sensors **359**) for detecting intensity of contacts on touch-sensitive surface **451** and/or one or more tactile output generators **357** for generating tactile outputs for a user of device **300**.

[0179] Although some of the examples that follow will be given with reference to inputs on touch screen display **112** (where the touch-sensitive surface and the display are combined), in some embodiments, the device detects inputs on a touch-sensitive surface that is separate from the display, as shown in FIG. **4**B. In some embodiments, the touch-sensitive surface (e.g., **451** in FIG. **4**B) has a primary axis (e.g., **452** in FIG. **4**B) that corresponds to a primary axis (e.g., **453** in FIG. **4**B) on the display (e.g., **450**). In accordance with these embodiments, the device detects contacts (e.g., **460** and **462** in FIG. **4**B) with the touch-sensitive surface **451** at locations that correspond to respective locations on the display (e.g., in FIG. **4**B, **460** corresponds to **468** and **462** corresponds to **470**). In this way, user inputs (e.g., contacts **460** and **462**, and movements thereof) detected by the device on the touch-sensitive surface (e.g., **451** in FIG. **4**B) are used by the device to manipulate the user interface on the display (e.g., **450** in FIG. **4**B) of the multifunction device when

the touch-sensitive surface is separate from the display. It should be understood that similar methods are, optionally, used for other user interfaces described herein.

[0180] Additionally, while the following examples are given primarily with reference to finger inputs (e.g., finger contacts, finger tap gestures, finger swipe gestures), it should be understood that, in some embodiments, one or more of the finger inputs are replaced with input from another input device (e.g., a mouse-based input or stylus input). For example, a swipe gesture is, optionally, replaced with a mouse click (e.g., instead of a contact) followed by movement of the cursor along the path of the swipe (e.g., instead of movement of the contact). As another example, a tap gesture is, optionally, replaced with a mouse click while the cursor is located over the location of the tap gesture (e.g., instead of detection of the contact followed by ceasing to detect the contact). Similarly, when multiple user inputs are simultaneously detected, it should be understood that multiple computer mice are, optionally, used simultaneously, or a mouse and finger contacts are, optionally, used simultaneously.

[0181] FIG. **5**A illustrates exemplary personal electronic device **500**. Device **500** includes body **502**. In some embodiments, device **500** can include some or all of the features described with respect to devices **100** and **300** (e.g., FIGS. **1**A-**4**B). In some embodiments, device **500** has touch-sensitive display screen **504**, hereafter touch screen **504**. Alternatively, or in addition to touch screen **504**, device **500** has a display and a touch-sensitive surface. As with devices **100** and **300**, in some embodiments, touch screen **504** (or the touch-sensitive surface) optionally includes one or more intensity sensors for detecting intensity of contacts (e.g., touches) being applied. The one or more intensity sensors of touch screen **504** (or the touch-sensitive surface) can provide output data that represents the intensity of touches. The user interface of device **500** can respond to touches based on their intensity, meaning that touches of different intensities can invoke different user interface operations on device **500**.

[0182] Exemplary techniques for detecting and processing touch intensity are found, for example, in related applications: International Patent Application Serial No. PCT/US2013/040061, titled "Device, Method, and Graphical User Interface for Displaying User Interface Objects Corresponding to an Application," filed May 8, 2013, published as WIPO Publication No. WO/2013/169849, and International Patent Application Serial No. PCT/US2013/069483, titled "Device, Method, and Graphical User Interface for Transitioning Between Touch Input to Display Output Relationships," filed Nov. 11, 2013, published as WIPO Publication No. WO/2014/105276, each of which is hereby incorporated by reference in their entirety.

[0183] In some embodiments, device **500** has one or more input mechanisms **506** and **508**. Input mechanisms **506** and **508**, if included, can be physical. Examples of physical input mechanisms include push buttons and rotatable mechanisms. In some embodiments, device **500** has one or more attachment mechanisms. Such attachment mechanisms, if included, can permit attachment of device **500** with, for example, hats, eyewear, earrings, necklaces, shirts, jackets, bracelets, watch straps, chains, trousers, belts, shoes, purses, backpacks, and so forth. These attachment mechanisms permit device **500** to be worn by a user.

[0184] FIG. **5**B depicts exemplary personal electronic device **500**. In some embodiments, device **500** can include some or all of the components described with respect to FIGS. **1**A, **1**B, and **3**. Device **500** has bus **512** that operatively couples I/O section **514** with one or more computer processors **516** and memory **518**. I/O section **514** can be connected to display **504**, which can have touch-sensitive component **522** and, optionally, intensity sensor **524** (e.g., contact intensity sensor). In addition, I/O section **514** can be connected with communication unit **530** for receiving application and operating system data, using Wi-Fi, Bluetooth, near field communication (NFC), cellular, and/or other wireless communication techniques. Device **500** can include input mechanisms **506** and/or **508**. Input mechanism **506** is, optionally, a rotatable input device or a depressible and rotatable input device, for example. Input mechanism **508** is, optionally, a button, in some examples.

[0185] Input mechanism **508** is, optionally, a microphone, in some examples. Personal electronic device **500** optionally includes various sensors, such as GPS sensor **532**, accelerometer **534**, directional sensor **540** (e.g., compass), gyroscope **536**, motion sensor **538**, and/or a combination thereof, all of which can be operatively connected to I/O section **514**.

[0186] Memory **518** of personal electronic device **500** can include one or more non-transitory computer-readable storage mediums, for storing computer-executable instructions, which, when executed by one or more computer processors **516**, for example, can cause the computer processors to perform the techniques described below, including processes **700** and **900** (FIGS. **7**A-**7**C and **9**A-**9**D). A computer-readable storage medium can be any medium that can tangibly contain or store computer-executable instructions for use by or in connection with the instruction execution system, apparatus, or device. In some examples, the storage medium is a transitory computer-readable storage medium. In some examples, the storage medium is a non-transitory computer-readable storage medium. The non-transitory computer-readable storage medium can include, but is not limited to, magnetic, optical, and/or semiconductor storages. Examples of such storage include magnetic disks, optical discs based on CD, DVD, or Blu-ray technologies, as well as persistent solid-state memory such as flash, solid-state drives, and the like. Personal electronic device **500** is not limited to the components and configuration of FIG. **5**B, but can include other or additional components in multiple configurations.

[0187] As used here, the term "affordance" refers to a user-interactive graphical user interface object that is, optionally, displayed on the display screen of devices **100**, **300**, and/or **500** (FIGS. **1**A, **3**, and **5**A-**5**B). For example, an image (e.g., icon), a button, and text (e.g., hyperlink) each optionally constitute an affordance.

[0188] As used herein, the term "focus selector" refers to an input element that indicates a current part of a user interface with which a user is interacting. In some implementations that include a cursor or other location marker, the cursor acts as a "focus selector" so that when an input (e.g., a press input) is detected on a touch-sensitive surface (e.g., touchpad **355** in FIG. **3** or touch-sensitive surface **451** in FIG. **4**B) while the cursor is over a particular user interface element (e.g., a button, window, slider, or other user interface element), the particular user interface element is adjusted in accordance with the detected input. In some implementations that include a touch screen display (e.g., touch-sensitive display system **112** in FIG. **1**A or touch screen **112** in FIG. **4**A) that enables direct interaction with user interface elements on the touch screen display, a detected contact on the touch screen acts as a "focus selector" so that when an input (e.g., a press input by the contact) is detected on the touch screen display at a location of a particular user interface element (e.g., a button, window, slider, or other user interface element), the particular user interface element is adjusted in accordance with the detected input. In some implementations, focus is moved from one region of a user interface to another region of the user interface without corresponding movement of a cursor or movement of a contact on a touch screen display (e.g., by using a tab key or arrow keys to move focus from one button to another button); in these implementations, the focus selector moves in accordance with movement of focus between different regions of the user interface. Without regard to the specific form taken by the focus selector, the focus selector is generally the user interface element (or contact on a touch screen display) that is controlled by the user so as to communicate the user's intended interaction with the user interface (e.g., by indicating, to the device, the element of the user interface with which the user is intending to interact). For example, the location of a focus selector (e.g., a cursor, a contact, or a selection box) over a respective button while a press input is detected on the touch-sensitive surface (e.g., a touchpad or touch screen) will indicate that the user is intending to activate the respective button (as opposed to other user interface elements shown on a display of the device).

[0189] As used in the specification and claims, the term "characteristic intensity" of a contact refers to a characteristic of the contact based on one or more intensities of the contact. In some embodiments, the characteristic intensity is based on multiple intensity samples. The characteristic

intensity is, optionally, based on a predefined number of intensity samples, or a set of intensity samples collected during a predetermined time period (e.g., 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10 seconds) relative to a predefined event (e.g., after detecting the contact, prior to detecting liftoff of the contact, before or after detecting a start of movement of the contact, prior to detecting an end of the contact, before or after detecting an increase in intensity of the contact, and/or before or after detecting a decrease in intensity of the contact). A characteristic intensity of a contact is, optionally, based on one or more of: a maximum value of the intensities of the contact, a mean value of the intensities of the contact, an average value of the intensities of the contact, a top 10 percentile value of the intensities of the contact, a value at the half maximum of the intensities of the contact, a value at the 90 percent maximum of the intensities of the contact, or the like. In some embodiments, the duration of the contact is used in determining the characteristic intensity (e.g., when the characteristic intensity is an average of the intensity of the contact over time). In some embodiments, the characteristic intensity is compared to a set of one or more intensity thresholds to determine whether an operation has been performed by a user. For example, the set of one or more intensity thresholds optionally includes a first intensity threshold and a second intensity threshold. In this example, a contact with a characteristic intensity that does not exceed the first threshold results in a first operation, a contact with a characteristic intensity that exceeds the first intensity threshold and does not exceed the second intensity threshold results in a second operation, and a contact with a characteristic intensity that exceeds the second threshold results in a third operation. In some embodiments, a comparison between the characteristic intensity and one or more thresholds is used to determine whether or not to perform one or more operations (e.g., whether to perform a respective operation or forgo performing the respective operation), rather than being used to determine whether to perform a first operation or a second operation.

[0190] FIG. **5**C illustrates exemplary electronic device **580**. Device **580** includes body **580**A. In some embodiments, device **580** can include some or all of the features described with respect to devices **100**, **300**, and **500** (e.g., FIGS. **1**A-**5**B). In some embodiments, device **580** has one or more speakers **580**B (concealed in body **580**A), one or more microphones **580**C, one or more touch-sensitive surfaces **580**D, and one or more displays **580**E. Alternatively, or in addition to a display and touch-sensitive surface **580**D, the device has a touch-sensitive display (also referred to as a touchscreen). As with devices **100**, **300**, and **500**, in some embodiments, touch-sensitive surface **580**D (or the touch screen) optionally includes one or more intensity sensors for detecting intensity of contacts (e.g., touches) being applied. The one or more intensity sensors of touch-sensitive surface **580**D (or the touchscreen) can provide output data that represents the intensity of touches. The user interface of device **580** can respond to touches based on their intensity, meaning that touches of different intensities can invoke different user interface operations on device **580**. In some embodiments, the one or more displays **580**E are one or more light-emitting diodes (LEDs). For example, a display can be a single LED, an LED cluster (e.g., a red, a green, and a blue LED), a plurality of discrete LEDs, a plurality of discrete LED clusters, or other arrangement of one or more LEDs. For example, the display **580**E can be an array of nine discrete LED clusters arranged in a circular shape (e.g., a ring). In some examples, the one or more displays are comprised of one or more of another type of light-emitting elements.

[0191] FIG. **5**D depicts exemplary personal electronic device **580**. In some embodiments, device **580** can include some or all of the components described with respect to FIGS. **1**A, **1**B, **3**, and **5**A-**5**B. Device **580** has bus **592** that operatively couples I/O section **594** with one or more computer processors **596** and memory **598**. I/O section **594** can be connected to display **582**, which can have touch-sensitive component **584** and, optionally, intensity sensor **585** (e.g., contact intensity sensor). In some embodiments, touch-sensitive component **584** is a separate component than display **582**. In addition, I/O section **594** can be connected with communication unit **590** for receiving application and operating system data, using Wi-Fi, Bluetooth, near field communication (NFC), cellular, and/or other wireless communication techniques. Device **580** can include input mechanisms **588**.

Input mechanism **588** is, optionally, a button, in some examples. Input mechanism **588** is, optionally, a microphone, in some examples. Input mechanism **588** is, optionally, a plurality of microphones (e.g., a microphone array).

[0192] Electronic device **580** includes speaker **586** for outputting audio. Device **580** can include audio circuitry (e.g., in I/O section **594**) that receives audio data, converts the audio data to an electrical signal, and transmits the electrical signal to speaker **586**. Speaker **586** converts the electrical signal to human-audible sound waves. The audio circuitry (e.g., in I/O section **594**) also receives electrical signals converted by a microphone (e.g., input mechanism **588**) from sound waves. The audio circuitry (e.g., in I/O section **594**) converts the electrical signal to audio data. Audio data is, optionally, retrieved from and/or transmitted to memory **598** and/or RF circuitry (e.g., in communication unit **590**) by I/O section **594**.

[0193] Memory **598** of personal electronic device **580** can include one or more non-transitory computer-readable storage mediums, for storing computer-executable instructions, which, when executed by one or more computer processors **596**, for example, can cause the computer processors to perform the techniques described below, including processes **700** and **900** (FIGS. **7**A-**7**C and **9**A-**9**D). A computer-readable storage medium can be any medium that can tangibly contain or store computer-executable instructions for use by or in connection with the instruction execution system, apparatus, or device. In some examples, the storage medium is a transitory computer-readable storage medium. In some examples, the storage medium is a non-transitory computer-readable storage medium. The non-transitory computer-readable storage medium can include, but is not limited to, magnetic, optical, and/or semiconductor storages. Examples of such storage include magnetic disks, optical discs based on CD, DVD, or Blu-ray technologies, as well as persistent solid-state memory such as flash, solid-state drives, and the like. Personal electronic device **580** is not limited to the components and configuration of FIG. **5**D, but can include other or additional components in multiple configurations.

[0194] Attention is now directed towards embodiments of user interfaces ("UI") and associated processes that are implemented on an electronic device, such as portable multifunction device **100**, device **300**, or device **500**.

[0195] FIGS. **6**A-**6**O illustrate examples of techniques for outputting light, in accordance with some embodiments. The user interfaces in these figures are used to illustrate the processes described below, including the processes in FIGS. **7**A-**7**C.

[0196] FIG. **6**A illustrates schematic **600** of a configuration of devices, which includes display **602**, first electronic device **604**, second electronic device **606**, first speaker accessory device **608**, second speaker accessory device **610**, and remote control **612**. In some embodiments, first electronic device **604** includes one or more features of electronic devices **100**, **300**, and/or **500**. In some embodiments, first electronic device **604** is a smartphone. In some embodiments, second electronic device **606** includes one or more features of electronic devices **100**, **300**, and/or **500**. In some embodiments, second electronic device **606** is a media streaming device. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** include one or more features of electronic devices **100**, **300**, and/or **500**. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** include a smart speaker.

[0197] At FIG. **6**A, first electronic device **604** is in communication with second electronic device **606**, first speaker accessory device **608**, and second speaker accessory device **610**, as indicated by dashed lines. In some embodiments, first electronic device **604** is in communication with display **602** via second electronic device **606**. In some embodiments, first electronic device **604** is in communication (e.g., direct communication, indirect communication, Bluetooth communication, Wi-Fi communication, and/or other Internet connection communication technique) with display **602**. Second electronic device **606** is in communication with display **602**, first electronic device **604**, first speaker accessory device **608**, second speaker accessory device **610**, and remote control **612**, as indicated by dashed lines.

[0198] In some embodiments, first electronic device **604** is configured to control and/or adjust settings of second electronic device **606**, first speaker accessory device **608**, and/or second speaker accessory device **610** in response to detecting one or more user inputs. For instance, in some embodiments, first electronic device **604** can cause second electronic device **606** to initiate playback of a media item (e.g., a movie, a television show, a song, a playlist, a podcast, a video game, and/or a slideshow) and/or to pause and/or stop playback of a media item. In some embodiments, first electronic device **604** can adjust a volume of audio outputted by first speaker accessory device **608** and/or second speaker accessory device **610**.

[0199] In some embodiments, second electronic device **606** causes display **602** to display one or more images and/or videos associated with a media item. For instance, in some embodiments, second electronic device **606** transmits and/or sends information to display **602** so that display **602** can display the one or more images and/or videos. At FIG. **6**A, second electronic device **606** is in communication with remote control **612** and can cause display **602** to initiate display of the one or more images and/or videos in response to user input received and/or detected at remote control **612**. In some embodiments, second electronic device **606** is configured to adjust a volume of audio output of first speaker accessory device **608** and/or second speaker accessory device **610** in response to one or more user inputs received at remote control **612**. As set forth below, in some embodiments, second electronic device **606** provides audio information (e.g., audio data related to content displayed on display **602**) to first speaker accessory device **608** and/or second speaker accessory device **610** so that first speaker accessory device **608** and/or second speaker accessory device **610** output audio associated with the media item being played back by second electronic device **606**.

[0200] Further still, in some embodiments, second electronic device **606** provides information (e.g., information related to media content and/or data related to colors, brightness, and/or contrast of images and/or video displayed on display **602**) to first speaker accessory device **608** and/or second speaker accessory device **610**. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** output light based on and/or in accordance with the information. In some embodiments, second electronic device **606** provides light information (e.g., information associated with a color, brightness, and/or contrast of light) that is based on the media item, and the first speaker accessory device **608** and/or the second speaker accessory device **610** output light based on the light information. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** output audio and light concurrently based on information received from second electronic device **606** (and/or another electronic device).

[0201] For instance, at FIG. **6**B, display **602**, second electronic device **606**, first speaker accessory device **608**, and second speaker accessory device **610** are illustrated in environment **613** (e.g., a physical environment). Display **602** is positioned on (e.g., mounted on) wall **613***a* of environment **613** and second electronic device **606**, first speaker accessory device **608**, and second speaker accessory device **610** are positioned on (e.g., resting on and/or placed on) table **613***b* of environment **613**. At FIG. **6**B, second electronic device **606** is in communication with display **602** via a wired connection (e.g., a high-definition multimedia interface connection and/or another wired connection). In some embodiments, second electronic device **606** is in communication with display **602** via a wireless communication technique, such as Bluetooth, Wi-Fi, and/or other Internet connection. Second electronic device **606** is in communication with first speaker accessory device **608** and second speaker accessory device **610** via a wireless communication technique. In some embodiments, second electronic device **606** is in communication with first speaker accessory device **608** and/or second speaker accessory device **610** via a wired connection. As set forth above, display **602**, second electronic device **606**, first speaker accessory device **608**, and/or second speaker accessory device **610** are in communication with first electronic device **604** (e.g., via a wireless communication technique).

[0202] At FIG. **6**B, display **602** is displaying first trailer page **614** based on information received

from second electronic device **606**. First trailer page **614** includes a preview of a media item configured to be played back and/or initiated by second electronic device **606**. First trailer page **614** provides information about the media item, and is displayed prior to second electronic device **606** initiating playback of the media item. For instance, in some embodiments, second electronic device **606** causes display **602** to display one or more browsing menus (e.g., browsing menus of one or more applications) that enable a user to select a media item to experience (e.g., watch and/or listen to). In some embodiments, when a user selects a user interface object corresponding to a respective media item, second electronic device **606** causes display **602** to display first trailer page **614**, which provides a user with additional information about the media item. In some embodiments, second electronic device **606** does not initiate playback of the media item when causing display **602** to display first trailer page **614**. In some embodiments, first trailer page **614** is static and does not change over time. In some embodiments, first trailer page **614** includes a preview image, series of images, and/or video corresponding to the media item (e.g., a preview of the media item that does not include playback of the full duration of the media item).

[0203] At FIG. **6**B, while second electronic device **606** causes display **602** to display first trailer page **614**, second electronic device **606** provides (e.g., transmits and/or sends) information to first speaker accessory device **608** and second speaker accessory device **610**. In some embodiments, the information includes information about first trailer page **614**, such as information about colors, brightness, and/or contrasts of one or more images and/or videos of first trailer page **614**. In some embodiments, the information includes information about one or more colors, brightness, and/or contrasts of light to be output by first speaker accessory device **608** and/or second speaker accessory device **610**. At FIG. **6**B, first speaker accessory device **608** outputs light **616***a* and second speaker accessory device **610** outputs light **616***b* based on the information. Light **616***a* and light **616***b* include a first color, as represented by first hatching at FIG. **6**B. First trailer page **614** displayed on display **602** also includes background **614***a*, having the first color, as represented by the first hatching. Accordingly, first speaker accessory device **608** and second speaker accessory device **610** output light **616***a* and light **616***b*, respectively, which include one or more properties (e.g., color, brightness, and/or contrast) that is based on first trailer page **614** (e.g., visual properties of first trailer page **614**, such as color, brightness, and/or contrast). As set forth below, in some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** are configured to output light having multiple different colors (e.g., concurrently output light having different colors). In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** output light and output audio concurrently.

[0204] At FIG. **6**B, first speaker accessory device **608** and second speaker accessory device **610** output light **616***a* and light **616***b*, respectively, such that light **616***a* and light **616***b* are projected onto wall **613***a* of environment **613**. In some embodiments, light **616***a* and/or light **616***b* are projected onto different surfaces and/or objects of an environment (e.g., environment **613**) in which first speaker accessory device **608** and/or second speaker accessory device **610** are located. First speaker accessory device **608** and second speaker accessory device **610** are configured to output light **616***a* and/or light **616***b* so that light **616***a* and/or light **616***b* projects onto surfaces and/or objects so that a user can better view light **616***a* and/or light **616***b*. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** are positioned within an environment so that light **616***a* and/or light **616***b* are not projected onto an object and/or surface. In some embodiments, light **616***a* and/or light **616***b* are output from a top portion of first speaker accessory device **608** and/or second speaker accessory device **610**, respectively, and project off one or more surfaces of first speaker accessory device **608** and/or second speaker accessory device **610**, respectively. First speaker accessory device **608** and second speaker accessory device **610** outputting light **616***a* and light **616***b*, respectively, based on first trailer page **614** provides a user viewing first trailer page **614** with a more enjoyable and/or an improved sensory experience.

[0205] FIGS. **6**C-**60** illustrate display **602**, first speaker accessory device **608**, second speaker

accessory device **610**, and remote control **612** outputting various content and/or receiving one or more user inputs. While display **602**, first speaker accessory device **608**, second speaker accessory device **610**, and/or remote control **612** are not shown in environment **613** at FIGS. **6**C-**60**, display **602**, first speaker accessory device **608**, second speaker accessory device **610**, and/or remote control **612** are configured to operate as described with respect to FIGS. **6**C-**60** in environment **613** and/or in a different environment. In addition, while FIGS. **6**C-**60** do not display first electronic device **604** and second electronic device **606**, display **602**, first speaker accessory device **608**, second speaker accessory device **610**, and/or remote control **612** are configured to be in communication with first electronic device **604** and/or second electronic device **606**, as set forth above with reference to FIGS. **6**A and **6**B.

[0206] FIG. **6**C illustrates first speaker accessory device **608** and second speaker accessory device **610** outputting light that is based on one or more visual elements of a trailer page. For instance, at FIG. **6**C, display **602** displays second trailer page **618** based on information received from second electronic device **606**. Second trailer page **618** corresponds to a media item, such as a movie and/or television show. Second trailer page **618** provides a user with information related to the media item and enables a user to cause playback of the media item. For instance, second trailer page **618** includes play user interface object **618***a* and more information user interface object **618***b*. Second electronic device **606** is in communication with remote control **612**, which is configured to receive user inputs and cause second electronic device **606** to perform operations in response to the user inputs. For instance, in some embodiments, in response to detecting one or more user inputs at remote control **612** requesting to select more information user interface object **618***b*, second electronic device **606** causes display **602** to display an information user interface that includes additional information and/or details related to the media item. As set forth below, in response to detecting user input **650***a* corresponding to play button **612***a* of remote control **612** (e.g., while focus is on play user interface object **618***a*, as indicated by border **618***c* displayed around play user interface object **618***a*, or play user interface object **618***a* is otherwise designated), second electronic device **606** initiates playback of the media item and causes display **602** to display one or more images and/or video associated with the media item.

[0207] At FIG. **6**C, first speaker accessory device **608** outputs first light **616***c* and second light **616***d*, and second speaker accessory device **610** outputs third light **616***e* and fourth light **616***f*. As set forth above, first speaker accessory device **608** and second speaker accessory device **610** receive information from second electronic device **606** that includes information related to content displayed on display **602** and/or includes information about one or more properties of the light that first speaker accessory device **608** and second speaker accessory device **610** are configured to output. For instance, in some embodiments, the information includes information about one or more colors associated with images and/or video displayed on display **602** (e.g., colors of second trailer page **618**). In some embodiments, the information includes information about one or more colors, brightness, and/or contrast of first light **616***c*, second light **616***d*, third light **616***e*, and/or fourth light **616***f*. As such, first speaker accessory device **608** and/or second speaker accessory device **610** output light that is based on one or more properties of the content (e.g., one or more visual properties, such as one or more colors) displayed on display **602**.

[0208] At FIG. **6**C, first light **616***c* includes a second color, as indicated by second hatching, and second light **616***d* includes a third color, as indicated by third hatching. Second trailer page **618** displayed on display **602** includes first portion **618***d* that includes the second color, as indicated by the second hatching shown at FIG. **6**C, and second portion **618***e* that includes the third color, as indicated by the third hatching shown at FIG. **6**C. Thus, first speaker accessory device **608** outputs first light **616***c* and second light **616***d*, which match colors of first portion **618***d* and second portion **618***e* of second trailer page **618** displayed on display **602**. At FIG. **6**C, third light **616***e* includes a fourth color, as indicated by fourth hatching, and fourth light **616***f* includes a fifth color, as indicated by fifth hatching. Second trailer page **618** displayed on display **602** includes third portion

618*f* that includes the fourth color, as indicated by the fourth hatching shown at FIG. **6**C, and fourth portion **618***g* that includes the fifth color, as indicated by the fifth hatching shown at FIG. **6**C. Thus, second speaker accessory device **610** outputs third light **616***e* and fourth light **616***f,* which match colors of third portion **618***f* and fourth portion **618***g* of second trailer page **618** displayed on display **602**. At FIG. **6**C, first speaker accessory device **608** and second speaker accessory device **610** output light that includes two different colors. As set forth below, in some embodiments, first speaker accessory device **608** and second speaker accessory device **610** output light having a single color. In some embodiments, first speaker accessory device **608** and second speaker accessory device **610** output light having one or more colors that are different from one another.

[0209] In some embodiments, first speaker accessory device **608** and second speaker accessory device **610** output light **616***c*, **616***d*, **616***e*, and/or **616***f,* which are based on one or more colors of second trailer page **618**, but do not match the one or more colors of second trailer page **618** (e.g., the colors of light **616***c*, **616***d*, **616***e*, and/or **616***f* complement and/or otherwise match a color scheme of second trailer page **618**). First speaker accessory device **608** and second speaker accessory device **610** can therefore provide a user that is viewing second trailer page **618** on display **602** a more enjoyable and/or an improved sensory experience.

[0210] At FIG. **6**C, first speaker accessory device **608** and second speaker accessory device **610** are not outputting audio because a media item associated with second trailer page **618** is not being played back (e.g., second electronic device **606** has not initiated playback of the media item). In some embodiments, second trailer page **618** includes a static image representative of the media item associated with second trailer page **618**. In some embodiments, second trailer embodiments, second trailer page **618** includes audio that is output via first speaker accessory device **608** and/or second speaker accessory device **610**.

[0211] At FIG. **6**C, second electronic device **606** receives an indication of user input **650***a* (e.g., a press gesture or other selection/navigation input) corresponding to play button **612***a* of remote control **612** (e.g., while focus is on play user interface object **618***a*, as indicated by border **618***c* displayed around play user interface object **618***a*, or play user interface object **618***a* is otherwise designated). In response to receiving the indication of user input **650***a*, second electronic device **606** initiates playback of the media item associated with second trailer page **618** and causes display **602** to display first media content **620**, as shown at FIG. **6**D.

[0212] At FIG. **6**D, first speaker accessory device **608** and second speaker accessory device **610** output light that is based on one or more first visual elements of the media item at a first playback time of the media item. For instance, at FIG. **6**D, first media content **620** includes a scene and/or image of a movie and/or television show associated with the media item. First media content **620** is associated with the first playback time of the media item. For instance, the media item includes a playback duration and first media content **620** is associated with the first playback time that is within the playback duration of the media item. In some embodiments, as the playback duration of the media item progresses (e.g., plays back), display **602** displays different content and first speaker accessory device **608** and/or second speaker accessory device **610** output different audio and/or output different light. In some embodiments, display **602** displays different content and first speaker accessory device **608** and/or second speaker accessory device **610** output different audio and/or output different light as the media item plays back and without receiving an indication of user input at remote control **612**.

[0213] First media content **620** includes background **620***a*, which includes a first background color, as indicated by sixth hatching at FIG. **6**D. As set forth above, first speaker accessory device **608** and second speaker accessory device **610** output light based on received information, such as information about one or more colors, brightness, and/or contrasts of one or more images displayed on display **602**. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** receive the information from second electronic device **606**. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610**

receive the information from another electronic device (e.g., display **602**, first electronic device **604**, and/or a server). At FIG. **6**D, first speaker accessory device **608** outputs light **616***g* having the first background color, as indicated by sixth hatching at FIG. **6**D, and second speaker accessory device **610** outputs light **616***h* having the first background color, as indicated by sixth hatching at FIG. **6**D. In some embodiments, light **616***g* and light **616***h* are based on information about first media content **620**, such as a color, brightness, and/or contrast of one or more images associated with first media content **620** (e.g., background **620***a* of first media content **620**). For instance, at FIG. **6**D, light **616***g*, light **616***h*, and background **620***a* of first media content **620** each include the first background color. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** receive information about one or more properties (e.g., one or more colors, brightness, and/or contrast) of light **616***g* and/or light **616***h*, respectively. In some embodiments, second electronic device **606** (and/or a different electronic device) determines the one or more properties of light **616***g* and/or light **616***h* based on first media content **620**.

[0214] In some embodiments, first media content **620** includes multiple colors, such that light **616***g* and/or light **616***h* include more than one color that is based on the multiple colors of first media content **620**. Therefore, first speaker accessory device **608** and second speaker accessory device **610** can provide a more enjoyable and/or an improved sensory experience for a user viewing first media content **620** (e.g., the media item associated with first media content **620**).

[0215] At FIG. **6**D, first speaker accessory device **608** outputs first audio **622***a* and second speaker accessory device **610** outputs second audio **622***b*. First audio **622***a* and second audio **622***b* are associated with first media content **620** and are based on audio information received by first speaker accessory device **608** and second speaker accessory device **610**, respectively. In some embodiments, first audio **622***a* and second audio **622***b* are different from one another. For instance, in some embodiments, first audio **622***a* includes a left channel audio output of audio associated with first media content **620** (e.g., the media item associated with first media content **620**) and second audio **622***b* includes a right channel audio output of audio associated with first media content **620** (e.g., the media item associated with first media content **620**). In some embodiments, first audio **622***a* and second audio **622***b* are the same as one another. In some embodiments, first audio **622***a* and/or second audio **622***b* include audio output that includes speech, dialogue, music, and/or sound effects associated with first media content **620** (e.g., the media item associated with first media content **620**). As such, first speaker accessory device **608** and/or second speaker accessory device **610** are configured to output audio that is associated with the media item. Thus, a user viewing first media content **620** on display **602** can listen to the audio of the media item via first audio **622***a* and second audio **622***b*.

[0216] At FIG. **6**E, first speaker accessory device **608** and second speaker accessory device **610** output light that is based on one or more second visual elements of the media item at a second playback time, different from the first playback time, of the media item. For instance, at FIG. **6**E, display **602** is displaying second media content **624**, which includes a second scene and/or image of a movie and/or television show associated with the media item. Second media content **624** is associated with the second playback time of the media item that is different from (e.g., after) the first playback time associated with first media content **620**. Accordingly, as the playback duration of the media item progresses (e.g., plays back), display **602** displays different content and/or first speaker accessory device **608** and/or second speaker accessory device **610** output different audio and/or output different light (e.g., light with different characteristics and/or properties). In some embodiments, display **602** displays different content and/or first speaker accessory device **608** and/or second speaker accessory device **610** output different audio and/or output different light as the media item plays back and without receiving an indication of user input at remote control **612**.

[0217] At FIG. **6**E, second media content **624** includes first portion **624***a* and second portion **624***b*. First portion **624***a* includes a second background color, as indicated by seventh hatching at FIG. **6**E, and second portion **624***b* includes a third background color, as indicated by eighth hatching at

FIG. **6**E. First portion **624***a* of second media content **624** is displayed on first display area **602***a* of display **602** and second portion **624***b* of second media content **624** is displayed on second display area **602***b* of display **602**. At FIG. **6**E, first speaker accessory device **608** outputs light **616***i* having the second background color, as indicated by seventh hatching, and second speaker accessory device **610** outputs light **616***j* having the third background color, as indicated by eighth hatching. Therefore, first speaker accessory device **608** outputs light **616***i* that is based on first portion **624***a* of second media content **624** and second speaker accessory device **610** outputs light **616***j* that is based on second portion **624***b* of second media content **624**. As shown at FIG. **6**B, first speaker accessory device **608** is positioned in environment **613** at a first location that is proximate to (e.g., closer to as compared to second speaker accessory device **610**) display area **602***a* where first portion **624***a* is displayed on display **602** at FIG. **6**E. At FIG. **6**B, second speaker accessory device **610** is positioned in environment **613** at a second location that is proximate to (e.g., closer to as compared to first speaker accessory device **608**) display area **602***b* where second portion **624***b* is displayed on display **602** at FIG. **6**E. As such, first speaker accessory device **608** and second speaker accessory device **610** can output light having different properties based on positions and/or locations of different portions of content displayed on display **602**.

[0218] In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** include a configuration that indicates a position of first speaker accessory device **608** and/or second speaker accessory device **610** with respect to display **602** (e.g., in environment **613**). In some embodiments, second electronic device **606** (and/or another electronic device) causes first speaker accessory device **608** and second speaker accessory device **610** to output light having different properties from one another based on the configuration of first speaker accessory device **608** and second speaker accessory device **610**. For instance, in some embodiments, second electronic device **606** (and/or another electronic device) provides first information to first speaker accessory device **608** and provides second information, different from the first information, to second speaker accessory device **610**. In some embodiments, first speaker accessory device **608** outputs light (e.g., light **616***i*) having first properties based on the first information and second speaker accessory device **610** outputs light (e.g., light **616***j*) having second properties, different from the first properties, based on the second information. In some embodiments, the properties of light include one or more colors, brightness, and/or contrast. In some embodiments, the first information includes information based on display area **602***a* of display **602** and the second information includes information based on display area **602***b* of display **602**.

[0219] At FIG. **6**E, first speaker accessory device **608** outputs audio **622***c* and second speaker accessory device **610** outputs audio **622***d*. Audio **622***c* and audio **622***d* are associated with second media content **624** (e.g., a playback time of the media item associated with second media content **624**) and are based on audio information received by first speaker accessory device **608** and second speaker accessory device **610**, respectively. As set forth above, in some embodiments, audio **622***c* and audio **622***d* are different from one another. For instance, in some embodiments, audio **622***c* includes a left channel audio output of audio associated with second media content **624** and audio **622***d* includes a right channel audio output of audio associated with second media content **624**. In some embodiments, audio **622***c* and audio **622***d* are the same as one another. In some embodiments, audio **622***c* and/or audio **622***d* include audio output that includes speech, dialogue, music, and/or sound effects associated with second media content **624** (e.g., the media item associated with second media content **624**). As such, first speaker accessory device **608** and/or second speaker accessory device **610** are configured to output audio that is associated with the media item. Thus, a user viewing second media content **624** on display **602** can listen to the audio of the media item via audio **622***c* and audio **622***d*.

[0220] At FIG. **6**F, first speaker accessory device **608** and second speaker accessory device **610** output light that is based on attributes of a sporting event at a first time of the sporting event. For instance, at FIG. **6**F, display **602** displays first sporting event **626**, which includes a representation

(e.g., an image, a frame of a video, and/or a frame of a live video) of a sporting event (e.g., a soccer game). First sporting event **626** includes scoreboard **628** having first team score **628***a*, second team score **628***b*, and time indicator **628***c* (e.g., time remaining within a portion (e.g., half, quarter, or period) of the sporting event and/or time elapsed since a start of the sporting event). First team score **628***a* indicates that Team A has two points and second team score **628***b* indicates that Team B has zero points. Accordingly, Team A is currently winning the sporting event. First team score **628***a* includes a first team color, as indicated by ninth hatching, representative of a first color scheme (e.g., team colors) associated with Team A. Similarly, second team score **628***b* includes a second team color, as indicated by tenth hatching, representative of a second color scheme (e.g., team colors) associated with Team B.

[0221] At FIG. **6**F, first speaker accessory device **608** and second speaker accessory device **610** receive information from second electronic device **606** (and/or another electronic device) that is based on a current score and/or a recent event of the sporting event. For instance, at FIG. **6**F, first speaker accessory device **608** and second speaker accessory device **610** output light **616***k* and light **6161**, respectively, where light **616***k* and light **6161** each include the first team color. First speaker accessory device **608** and second speaker accessory device **610** output light **616***k* and light **6161**, respectively, because Team A is the team that is currently winning the sporting event. Thus, a user viewing first sporting event **626** can easily determine which team participating in the sporting event is currently winning via light **616***k* and/or light **6161**.

[0222] At FIG. **6**F, first speaker accessory device **608** and second speaker accessory device **610** output audio **622***e* and audio **622***f*, respectively. Audio **622***e* and audio **622***f* are associated with first sporting event **626** (e.g., audio of a commentator of the sporting event and/or audio otherwise associated with the sporting event) and are based on audio information received by first speaker accessory device **608** and second speaker accessory device **610**, respectively. As such, first speaker accessory device **608** and second speaker accessory device **610** output audio and light concurrently to improve an experience of a user viewing first sporting event **626**.

[0223] At FIG. **6**G, first speaker accessory device **608** and second speaker accessory device **610** output light that is based on attributes of the sporting event at a second time, different from the first time. For instance, at FIG. **6**G, display **602** is displaying second sporting event **630**, which also includes a representation of the sporting event associated with first sporting event **626** (e.g., the same sporting event associated with first sporting event **626** at a different time of the sporting event). Second sporting event **630** includes scoreboard **628** and event indicator **632**. Scoreboard **628** includes first team score **628***a* indicating that Team A has a score of two points and second team score **628***b* indicating that Team B has a score of three points. Event indicator **632** (e.g., "GOAL!") indicates that Team B has recently scored their third point and has taken the lead over Team B. In some embodiments, display **602** does not display event indicator **632**, but instead displays second team score **628***b* with an updated score for Team B.

[0224] At FIG. **6**G, first speaker accessory device **608** and second speaker accessory device **610** output light **616***m* and light **616***n*, respectively. As shown at FIG. **6**G, light **616***m* and light **616***n* both include the second team color associated with Team B, as represented by the tenth hatching. In some embodiments, first speaker accessory device **608** and second speaker accessory device **610** output light **616***m* and light **616***n*, respectively, based on Team B scoring a point and/or a goal, as indicated by event indicator **632**. In some embodiments, first speaker accessory device **608** and second speaker accessory device **610** output light **616***m* and light **616***n*, respectively, based on Team B taking the lead over Team A in the sporting event. In some embodiments, first speaker accessory device **608** and second speaker accessory device **610** output light **616***m* and light **616***n*, respectively, based on both Team B scoring the point and/or the goal and Team B taking the lead over Team A in the sporting event.

[0225] In some embodiments, when Team A and Team B are tied, first speaker accessory device **608** outputs light **616***k* having the first team color associated with Team A and second speaker

accessory device **610** outputs light **616***n* having the second team color associated with Team B. In some embodiments, when a team that is not currently winning the sporting event scores a point and/or a goal, first speaker accessory device **608** and/or second speaker accessory device **610** output light having a color associated with the team that scored the point and/or the goal for a predetermined period of time before outputting light having a color associated with the team that is currently in the lead. As set forth above, first speaker accessory device **608** and second speaker accessory device **610** receive information from second electronic device **606** that provides information about the sporting event and/or information about one or more properties of the light in which first speaker accessory device **608** and second speaker accessory device are configured to output.

[0226] While FIGS. **6**F and **6**G illustrate first sporting event **626** and second sporting event **630** that includes a representation of a soccer game, first sporting event **626** and/or second sporting event **630** can include a representation of any sporting event. Accordingly, first speaker accessory device **608** and/or second speaker accessory device **610** can output light to indicate a currently winning team and/or participant of a sporting event, a team and/or participant that recently scored a point and/or a goal, and/or a team and/or participant that recently received an advantage and/or a penalty.

[0227] At FIG. **6**H, first speaker accessory device **608** and second speaker accessory device **610** output light based on one or more visual elements of a symbol. For instance, at FIG. **6**H, display **602** is displaying logo **634**, which includes a logo and/or a brand symbol. Logo **634** includes first portion **634***a* having a first logo color and second portion **634***b* having a second logo color, as indicated by eleventh and twelfth hatching, respectively. In some embodiments, display **602** displays logo **634** as part of a currently playing media item. In some embodiments, display **602** displays logo **634** as part of an inactive screen and/or screen saver.

[0228] At FIG. **6**H, first speaker accessory device **608** outputs light **616***o* having the first logo color, as represented by the eleventh hatching, and second speaker accessory device **610** outputs light **616***p* having the second logo color, as represented by the twelfth hatching. First speaker accessory device **608** and second speaker accessory device **610** receive information related to logo **634** (e.g., one or more visual properties of first portion **634***a*, second portion **634***b*, and/or another portion of logo **634**) and/or information about one or more properties of light **616***o* and light **616***p*. As set forth above, in some embodiments, first speaker accessory device **608** and second speaker accessory device **610** output light **616***o* and light **616***p*, respectively, based on a configuration of first speaker accessory device **608** and second speaker accessory device **610**, such as a configuration (e.g., a physical configuration) of first speaker accessory device **608** and second speaker accessory device **610** relative to display **602**. For instance, at FIG. **6**B, first speaker accessory device **608** is positioned at the first location that is proximate to (e.g., as compared to second speaker accessory device **610**) first portion **634***a* when first portion **634***a* is displayed on display **602** at FIG. **6**H. At FIG. **6**B, second speaker accessory device **610** is positioned at the second location that is proximate to (e.g., as compared to first speaker accessory device **608**) second portion **634***b* when second portion **634***b* is displayed on display **602** at FIG. **6**H.

[0229] In some embodiments, while display **602** is displaying logo **634**, first speaker accessory device **608** and/or second speaker accessory device **610** output light having both the first logo color and the second logo color (e.g., instead of first speaker accessory device **608** outputting light having the first logo color and second speaker accessory device **610** outputting light having the second logo color). In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** output audio concurrently with light **616***o* and/or light **616***p*, respectively, while display **602** is displaying logo **634**.

[0230] At FIG. **6**I, first speaker accessory device **608** and second speaker accessory device **610** output light based on one or more visual elements of an artist page and/or a playlist page. For instance, at FIG. **6**I, display **602** is displaying media page **636** that includes an artist page and/or a

playlist page, which corresponds to one or more media items, such as one or more songs of a playlist and/or an album. The artist page and/or playlist page provides a user with information related to the one or more media items and enables a user to cause playback of the one or more media items. For instance, media page **636** includes play user interface object **636***a* and playlist user interface object **636***b*. Second electronic device **606** is in communication with remote control **612**, which is configured to receive user inputs and cause second electronic device **606** to perform operations in response to the user inputs. For instance, in some embodiments, in response to detecting one or more user inputs at remote control **612** requesting to select playlist user interface object **636***b*, second electronic device **606** causes display **602** to display an information user interface that includes additional information and/or details related to the one or more media items (e.g., one or more songs included in a playlist). As set forth below, in response to detecting user input **650***b* corresponding to play button **612***a* of remote control **612** (e.g., while focus is on play user interface object **636***a*, as indicated by border **636***c* displayed around play user interface object **636***a*, or play user interface object **636***a* is otherwise designated), second electronic device **606** initiates playback of a media item of the one or more media items and causes display **602** to display one or more images and/or video associated with the media item.

[0231] At FIG. **6**I, media page **636** includes background **636***d* having a fourth background color, as indicated by thirteenth hatching. First speaker accessory device **608** outputs light **616***q* having the fourth background color and second speaker accessory device **610** outputs light **616***r* having the fourth background color. As set forth above, first speaker accessory device **608** and second speaker accessory device **610** receive information from second electronic device **606** that includes information related to content displayed on display **602** and/or includes information about one or more properties of the light that first speaker accessory device **608** and second speaker accessory device **610** are configured to output. For instance, in some embodiments, the information includes information about one or more colors associated with images and/or video displayed on display **602** (e.g., colors of background **636***d* of media page **636**). In some embodiments, the information includes information about one or more colors, brightness, and/or contrast of light **616***q* and/or **616***r*. As such, first speaker accessory device **608** and/or second speaker accessory device **610** output light that is based on one or more properties of media page **636** (e.g., one or more visual properties of media page **636**, such as one or more colors) displayed on display **602**.

[0232] While FIG. **6**I shows light **616***q* and light **616***r* having the fourth background color, which matches the fourth background color of background **636***d*, in some embodiments, light **616***q* and/or light **616***r* include one or more different colors from the fourth background color that is based on background **636***d* and/or another portion of media page **636**.

[0233] At FIG. **6**I, second electronic device **606** receives an indication of user input **650***b* corresponding to button **612***b* of remote control **612**. In response to receiving the indication of user input **650***b*, second electronic device **606** initiates playback of a media item of the one or more media items associated with media page **636**, such as a song included in a playlist of songs. After second electronic device **606** initiates playback of the media item, display **602** displays first media item content **638**, as shown at FIG. **6**J.

[0234] At FIG. **6**J, first speaker accessory device **608** and second speaker accessory device **610** output light based on one or more visual properties of first media item content **638**. First media item content **638** includes information about the media item. For instance, first media item content **638** includes background **638***a*, visual element **638***b*, and media item indicator **638***c*. Background **638***a* includes symbols, icons, images, and/or visual elements that are associated with the media item being played back, such as a song of a playlist. In some embodiments, background **638***a* includes a color that is based on one or more properties of visual element **638***b*. For instance, at FIG. **6**J, visual element **638***b* includes a representation of an album cover and/or image associated with the media item. Both background **638***a* and visual element **638***b* include a first media item color, as indicated by fourteenth hatching at FIG. **6**J. Media item indicator **638***c* includes text

identifying and/or providing information about the media item, such as a song title, an artist name, an album name, and/or a playlist name.

[0235] At FIG. **6**J, first speaker accessory device **608** outputs light **616***s* having the first media item color and second speaker accessory device **610** outputs light **616***t* having the first media item color. First speaker accessory device **608** and second speaker accessory device **610** receive information from second electronic device **606** (and/or another electronic device) that includes information about first media item content **638** (e.g., first speaker accessory device and/or second speaker accessory device **610** determine one or more properties of light **616***s* and/or light **616***t*, respectively) and/or information about one or more properties of light **616***s* and light **616***t*, respectively, where the one or more properties of light **616***s* and light **616***t* are based on first media item content **638** (e.g., second electronic device **606** and/or another electronic device determines the one or more properties of light **616***s* and light **616***t*). Accordingly, first speaker accessory device **608** and second speaker accessory device **610** output light **616***s* and light **616***t*, respectively, which is based on one or more properties (e.g., visual properties) of first media item content **638**, such as one or more colors of background **638***a* and/or visual element **638***b*.

[0236] At FIG. **6**J, first speaker accessory device **608** outputs audio **622***g* and second speaker accessory device **610** outputs audio **622***h*. Audio **622***g* and audio **622***h* are associated with first media item content **638** (e.g., audio of a song) and are based on audio information received by first speaker accessory device **608** and second speaker accessory device **610**, respectively. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** receive the audio information from second electronic device **606**. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** receive the audio information from another electronic device (e.g., first electronic device **604** and/or a server). As such, first speaker accessory device **608** and second speaker accessory device **610** output audio and light concurrently to improve an experience of a user viewing first media item content **638**.

[0237] In some embodiments, media page **636** is associated with the media item and a second media item. In some embodiments, after the media item corresponding to first media item content **638** ends (e.g., plays back for the entire duration of the media item and/or is skipped), second electronic device **606** (and/or another electronic device) causes playback of the second media item and/or causes display **602** to display second media item content **640**, as shown at FIG. **6**K.

[0238] At FIG. **6**K, first speaker accessory device **608** and second speaker accessory device **610** output light based on one or more visual properties of second media item content **640**. Second media item content **640** includes information about the second media item. For instance, second media item content **640** includes background **640***a*, visual element **640***b*, and media item indicator **640***c*. Background **640***a* includes symbols, icons, images, and/or visual elements that are associated with the media item being played back, such as a song of a playlist. In some embodiments, background **640***a* includes a color that is based on one or more properties of visual element **640***b*. For instance, at FIG. **6**K, visual element **640***b* includes a representation of an album cover and/or image associated with the media item. Both background **640***a* and visual element **640***b* include a second media item color, as indicated by fifteenth hatching at FIG. **6**K. Media item indicator **640***c* includes text identifying and/or providing information about the second media item, such as a song title, an artist name, an album name, and/or a playlist name.

[0239] At FIG. **6**K, first speaker accessory device **608** outputs light **616***u* having one or more first properties, such as a first brightness and the second media item color, and second speaker accessory device **610** outputs light **616***v* having one or more second properties, such as a second brightness and the second media item color. First speaker accessory device **608** and second speaker accessory device **610** receive information from second electronic device **606** (and/or another electronic device) that includes information about second media item content **640** (e.g., first speaker accessory device and/or second speaker accessory device **610** determine one or more properties of light **616***u* and/or light **616***v*, respectively) and/or information about one or more properties of light

616*u* and light **616***v*, respectively, where the one or more properties of light **616***u* and light **616***v* are based on second media item content **640** (e.g., second electronic device **606** and/or another electronic device determines the one or more properties of light **616***u* and light **616***v*). As set forth below, in some embodiments, one or more properties of light **616***u* and/or light **616***v* are based on a volume level of audio outputted by first speaker accessory device **608** and second speaker accessory device **610**, respectively. Accordingly, first speaker accessory device **608** and second speaker accessory device **610** output light **616***u* and light **616***v*, respectively, which is based on one or more properties (e.g., visual properties) of second media item content **640**, such as one or more colors of background **640***a* and/or visual element **640***b*, and/or a volume level of audio outputted by first speaker accessory device **608** and second speaker accessory device **610**.

[0240] At FIG. **6**K, first speaker accessory device **608** outputs audio **622***i* and second speaker accessory device **610** outputs audio **622***j*. Audio **622***i* and audio **622***j* are associated with second media item content **640** (e.g., audio of a song) and are based on audio information received by first speaker accessory device **608** and second speaker accessory device **610**, respectively. As such, first speaker accessory device **608** and second speaker accessory device **610** output audio and light concurrently to improve an experience of a user viewing second media item content **640**. At FIG. **6**K, first speaker accessory device **608** outputs audio **622***i* at a first volume, as indicated first volume indicator **642***a*. Second speaker accessory device **610** outputs audio **622***j* at a second volume, as indicated by second volume indicator **642***b*. In some embodiments, the first volume of audio **622***i* and the second volume of audio **622***j* are the same. Illustrated first volume indicator **642***a* and second volume indicator **642***b* are provided for clarity, but are not part of the second media item content **640** displayed on display **602**.

[0241] Light **616***u* includes a first brightness that is based on the first volume of audio **622***i* and light **616***v* includes a second brightness that is based on the second volume of audio **622***j*. For instance, at FIG. **6**K, fifteenth hatching representative of light **616***u* indicates that light **616***u* includes both the second media item color and the first brightness. Similarly, fifteenth hatching representative of light **616***v* indicates that light **616***v* includes both the second media item color and the second brightness. Therefore, in some embodiments, one or more properties of light output by first speaker accessory device **608** and/or second speaker accessory device **610** are based on content displayed on display **602** and/or a volume level of audio outputted by first speaker accessory device **608** and/or second speaker accessory device **610**.

[0242] In some embodiments, first speaker accessory device **608** and second speaker accessory device **610** are configured to adjust the respective volumes of audio **622***i* and audio **622***j* in response receiving an indication of user input (e.g., receiving an indication of user input corresponding to remote control **612** from second electronic device **606** and/or another electronic device). In some embodiments, first speaker accessory device **608** and second speaker accessory device **610** are configured to adjust the respective volumes of audio **622***i* and audio **622***j* based on information received from second electronic device **606** (and/or another electronic device) without receiving an indication of user input. For instance, in some embodiments, audio information associated with a media item includes different volumes at different playback times. Thus, first speaker accessory device **608** and second speaker accessory device **610** automatically adjust the volume of audio **622***i* and audio **622***j*, respectively, based on the audio information associated with the media file.

[0243] At FIG. **6**K, second electronic device **606** (and/or another electronic device) receives an indication of user input **650***c* corresponding to volume button **612***c* of remote control **612**. In response to receiving the indication of user input **650***c*, second electronic device **606** (and/or another electronic device) causes first speaker accessory device **608** and second speaker accessory device **610** to adjust the volumes of audio **622***i* and audio **622***j*, respectively, as shown at FIG. **6**L.

[0244] At FIG. **6**L, display **602** maintains display of second media item content **640** and displays volume adjustment indicator **644** overlaid on second media item content **640**. In some

embodiments, display **602** displays volume adjustment indicator **644** in response to receiving information from second electronic device **606** (and/or another electronic device) indicative of user input **650***c*. In some embodiments, volume adjustment indicator **644** moves and or is animated on display **602** to visually show an adjustment in volume of output of audio (e.g., audio output from a speaker of display **602** and/or audio **622***i* and audio **622***j*). In some embodiments, display **602** does not include and/or display volume adjustment indicator **644**. For instance, as set forth above, in some embodiments, volume of audio output associated with second media item content **640** (e.g., audio **622***i* and/or audio **622***j*) is adjusted without receiving an indication of user input (e.g., user input **650***c*).

[0245] At FIG. **6**L, first speaker accessory device **608** and second speaker accessory device **610** adjust a brightness of the outputted light based on an adjustment in the volume of audio output by first speaker accessory device **608** and second speaker accessory device **610**. For instance, at FIG. **6**L, first volume indicator **642***a* shows that audio **622***i* is at a third volume, greater than the first volume, and second volume indicator **642***b* shows that audio **622***j* is at a fourth volume, greater than the second volume. Accordingly, first speaker accessory device **608** and second speaker accessory device **610** increased the volume of audio **622***i* and audio **622***j*, respectively, in response to receiving an indication of user input **650***c* from second electronic device **606** (and/or another electronic device). At FIG. **6**L, first speaker accessory device **608** outputs light **616***w* having one or more third properties, such as the second media item color and a third brightness, and second speaker accessory device **610** outputs light **616***x* having the one or more fourth properties, such as the second media item color and a fourth brightness. Light **616***w* includes a third brightness, greater than the first brightness, that is based on the third volume of audio **622***i* and light **616***x* includes a fourth brightness, greater than the second brightness, that is based on the fourth volume of audio **622***j*. For instance, at FIG. **6**L, sixteenth hatching representative of light **616***w* indicates that light **616***w* includes the second media item color and the third brightness. Similarly, sixteenth hatching representative of light **616***x* indicates that light **616***x* includes the second media item color and the fourth brightness.

[0246] Therefore, first speaker accessory device **608** outputs light **616***w* that maintains the second media item color, but includes a greater brightness than light **616***u* because of the increase in volume of audio **622***i*. Similarly, second speaker accessory device **610** outputs light **616***x* that maintains the second media item color, but includes a greater brightness than light **616***v* because of the increase in volume of audio **622***j*. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** do not adjust the brightness of the outputted light based on a change in volume of audio outputted by first speaker accessory device **608** and/or second speaker accessory device **610**, respectively. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** adjust a different property of the outputted light based on the change in volume of audio outputted by first speaker accessory device **608** and/or second speaker accessory device **610**, respectively.

[0247] First speaker accessory device **608** and/or second speaker accessory device **610** are configured to output light having one or more predetermined properties (e.g., light having a predetermined color) when a function and/or operation is available to be performed by second electronic device **606** (and/or another electronic device). For instance, at FIG. **6**M, while display **602** is displaying second media item content **640** and while first speaker accessory device **608** outputs light **616***w*, second speaker accessory device **610** outputs light **616***y*, which includes one or more properties that are different from light **616***x*, as indicated by seventeenth hatching at FIG. **6**M. Light **616***y* provides guidance and/or prompts a user that a function and/or operation is available to be performed. In some embodiments, second speaker accessory device **610** outputs light **616***y* based on receiving information from second electronic device **606** (and/or another electronic device) that the function and/or operation is available to be performed.

[0248] In some embodiments, second electronic device **606** (and/or another electronic device)

provides information to second speaker accessory device **610** (and/or first speaker accessory device **608**) in response to receiving an indication of one or more user inputs (e.g., a touch gesture detected at remote control **612**), in response to receiving an indication of a notification, and/or in response to receiving an indication that an external device (e.g., headphones) is within communication range of second electronic device **606** (and/or another electronic device). Therefore, second speaker accessory device **610** outputs light **616***y* to provide guidance to a user that the function and/or operation can be performed. In some embodiments, the function and/or operation can be performed by second electronic device **606** (and/or another electronic device) in response to receiving an indication of one or more second user inputs at remote control **612**. As set forth below, in some embodiments, the function and/or operation is causing display **602** to display a settings user interface (e.g., settings user interface **648**) that enables control of playback of a media item, display of content on display **602**, launching and/or navigating to one or more applications, and/or connecting an external device.

[0249] At FIG. **6**M, display **602** is displaying prompt **646** overlaid on second media item content **640**. In some embodiments, prompt **646** is also displayed when the function and/or operation is available to be performed. Thus, in some embodiments, prompt **646** provides additional guidance to a user that the function and/or operation is able to be performed (e.g., in response to one or more user inputs). At FIG. **6**M, prompt **646** is partially displayed on display **602**, such that a portion of prompt **646** is not shown on display **602**. Partially displaying prompt **646** on display **602** provides an indication and/or guidance to a user that providing one or more user inputs causes additional user interfaces and/or information to be displayed on display **602**. For instance, by displaying a portion of prompt **646** on display **602**, a user can understand that additional visual elements are not displayed on display **602** and that providing one or more user inputs can cause such additional elements to be displayed on display **602**. In some embodiments, display **602** does not display prompt **646** when second speaker accessory device **610** outputs light **616***y*.

[0250] At FIG. **6**M, second electronic device **606** (and/or another electronic device) receives an indication of user input **650***d* corresponding to button **612***b* of remote control **612**. In response to receiving the indication of user input **650***d*, second electronic device **606** (and/or another electronic device) initiates performance of the function and/or operation and causes display of settings user interface **648**, as shown at FIG. **6**N.

[0251] At FIG. **6**N, second electronic device **606** (and/or another electronic device) causes display **602** to display settings user interface **648** in response to receiving the indication of user input **650***d*. Settings user interface **648** includes user interface objects that enable control of second electronic device **606** (and/or another electronic device). For instance, in some embodiments, in response to receiving an indication of user input selecting user interface object **648***a*, second electronic device **606** initiates a sleep mode and causes display **602** to cease displaying second media item content **640** and settings user interface **648**.

[0252] At FIG. **6**N, first speaker accessory device **608** outputs light **616***z* and second speaker accessory device **610** outputs light **616***aa*. Light **616***z* includes one or more properties (e.g., one or more colors, brightness, and/or contrast) that are different from light **616***w*, where light **616***w* is output by first speaker accessory device **608** prior to (e.g., before) display **602** displaying settings user interface **648**. Similarly, light **616***aa* includes one or more properties (e.g., one or more colors, brightness, and/or contrast) that are different from light **616***x* and/or light **616***y*, where light **616***x* and light **616***y* are output by second speaker accessory device **610** prior to (e.g., before) display **602** displaying settings user interface **648**. Therefore, in some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** adjust and/or change one or more properties of the outputted light based on display **602** displaying settings user interface **648**. In some embodiments, first speaker accessory device **608** maintains output of light **616***w* when display **602** displays settings user interface **648** and second speaker accessory device **610** maintains output of light **616***x* and/or light **616***y* when display **602** displays settings user interface **648**.

[0253] First speaker accessory device **608** and/or second speaker accessory device **610** are configured to perform functions in addition to outputting light and audio. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** are smart speakers that are in communication with an external device (e.g., a server) via a wireless communication technique (e.g., Bluetooth, Wi-Fi, and/or other Internet connection). Accordingly, in some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** can request and/or receive information from the external device, such as news, weather information, media items (e.g., music and/or podcasts), and/or location information. In some embodiments, first speaker accessory device **608** and/or second speaker accessory device **610** can perform various functions in response to user inputs (e.g., voice inputs) that include a predetermined word and/or phrase (e.g., "Hey Assistant"). In some embodiments, in response to detecting the predetermined word and/or phrase, first speaker accessory device **608** and/or second speaker accessory device **610** are configured to detect utterances (e.g., speech) of a user and determine a function to perform based on the detected utterances of the user.

[0254] For instance, at FIG. **6**N, second speaker accessory device **610** detects user input **650***e* (e.g., a voice command) requesting second speaker accessory device **610** to perform a function (e.g., "Hey Assistant, what's the weather?"). At FIG. **6**N, user input **650***e* includes a voice input and/or voice command requesting that second speaker accessory device **610** provide information about the current weather. In response to detecting user input **650***e*, second speaker accessory device **610** outputs light **616***ab* and outputs audio **622***k*, as shown at FIG. **6**O.

[0255] At FIG. **6**O, audio **622***k* includes the response "The weather is sunny and 70°," which is a response to the request associated with user input **650***e*. In addition, light **616***ab* includes a virtual assistant color, as indicated by nineteenth hatching at FIG. **6**O. Light **616***ab* is different from light **616***v*, light **616***x*, light **616***y*, and/or light **616***aa* and is associated with performing an operation that includes outputting audio **622***k* (e.g., performing a function in response to detecting user input **650***e*). For instance, at FIG. **6**O, first speaker accessory device **608**, which did not detect user input **650***e*, maintains output of light **616***z* and does not output audio **622***k*. Thus, first speaker accessory device **608** and/or second speaker accessory device **610** can provide visual indications associated with the current functions and/or operations in which first speaker accessory device **608** and/or second speaker accessory device **610** are performing.

[0256] FIGS. **7**A-**7**C are a flow diagram illustrating a method for outputting light using a computer system in accordance with some embodiments. Method **700** is performed at a computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) (e.g., an electronic device; a smart device, such as a smartphone, a smartwatch, and/or a smart speaker; a mobile device; a wearable device; and/or a set of devices in communication with one another (e.g., two or more smart speakers operating independently of one another or operating together as a stereo pair)) that is in communication with one or more light sources (e.g., a light device (e.g., integrated into the computer system or connected to the computer system) and/or a light accessory, such as a light bulb and/or a light emitting diode ("LED")). In some embodiments, the computer system is in communication with a display generation component (e.g., a display controller, a touch-sensitive display system, a projector, a display screen, a display monitor, and/or a holographic display) via a wireless connection, such as Bluetooth, Wi-Fi, and/or another Internet connection. In some embodiments, the computer system is in communication with the display generation component via an intermediate device, such as a server. In some embodiments, the one or more light sources are included in and/or attached to a housing of the computer system. In some embodiments, the one or more lights sources are in wireless (e.g., Bluetooth, Wi-Fi, and/or an Internet connection) and/or wired communication with the computer system. Some operations in method **700** are, optionally, combined, the orders of some operations are, optionally, changed, and some operations are, optionally, omitted.

[0257] As described below, method **700** provides an intuitive way for outputting light. The method

reduces the cognitive burden on a user for outputting light, thereby creating a more efficient human-machine interface. For battery-operated computing devices, enabling a user to output light faster and more efficiently conserves power and increases the time between battery charges.

[0258] While the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) is configured to provide output (e.g., **622***a*-**622***j*) (e.g., audio output) (in some embodiments, output that is different from light) associated with content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on a display generation component (e.g., **602** and/or **802**) (e.g., the computer system is in communication with one or more devices (e.g., speakers) and/or includes one or more devices (e.g., speakers) that are configured to output second content (e.g., audio) that relates to the content displayed on the display generation component, such as audio of a video, audio of a song, audio of a podcast, audio of a movie and/or television show, audio of a sporting event, and/or audio of other multimedia content), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) receives (**702**) information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed (e.g., currently displayed) on the display generation component (e.g., **602** and/or **802**) (e.g., information about images, symbols, icons, graphics, logos, objects, teams, and/or other visual elements displayed on the display generation component, such as colors associated with (and/or included in) the images, symbols, icons, graphics, logos, objects, teams, and/or other visual elements; information about a type of the content, such as a movie, television show, song, playlist, album, artist, sporting event, podcast, and/or other type of multimedia; information about timing of the content (e.g., what images are displayed at what playback times of the content); information about a status of the content (e.g., a current playback time, a team that is winning a sporting event, an event that occurred (such as a player or team scoring), a current volume of audio output, and/or whether the content is currently playing or is paused); and/or information about characteristics of the content, such as a network and/or brand associated with the content; an album, artist, playlist, and/or track title of a song of the content; and/or general colors associated with the content (e.g., colors that are associated with the content generally and not based on images currently displayed on the display generation component)).

[0259] In response to receiving the information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display (e.g., **602** and/or **802**), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**704**), via the one or more light sources, light (e.g., **616***a*-**616***ab*) (e.g., causes light to be emitted via the one or more light sources that are in communication with the computer system) in accordance with the received information (e.g., based on the received information) associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) (e.g., one or more characteristics of the light (e.g., color, intensity, brightness, color temperature, contrast, hardness, and/or direction) is based on the information about the content displayed on the display generation component so that the light is perceived as part of the experience associated with the content). In some embodiments, the light (e.g., **616***a*-**616***ab*) includes one or more colors that are based on the received information about the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**). In some embodiments, the light (e.g., **616***a*-**616***ab*) changes in color, intensity, brightness, color temperature, contrast, hardness, and/or direction over time as playback of the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) progresses.

[0260] Outputting the light in accordance with the received information associated with the content displayed on the display generation component improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0261] In some embodiments, the light (e.g., **616***a*-**616***ab*) (e.g., visible light emitted from the one or more light sources) includes a first color (e.g., a first set of one or more light sources of the one

or more light sources outputs a first portion of the light having a first color that is based on the received information associated with the content displayed on the display generation component) and a second color (e.g., a second set of one or more light sources of the one or more light sources outputs a second portion of the light having a second color, different from the first color, that is based on the received information associated with the content displayed on the display generation component), different from the first color. Outputting the light including a first color and a second color, different from the first color improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0262] In some embodiments, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputting, via the one or more light sources, the light (e.g., **616a-616ab**) in accordance with the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) includes the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) adjusting (e.g., changing an amount, transitioning between different amounts and/or states, and/or otherwise modifying) one or more properties (e.g., color, intensity, brightness, color temperature, contrast, hardness, and/or direction) of the light (e.g., **616a-616ab**) over time (e.g., as the content is played back) based on timing information (e.g., what images are displayed at what playback times of the content and/or a status of the content (e.g., a current playback time, a team that is winning a sporting event, an event that occurred (such as a player or team scoring)) of the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) (e.g., the computer system adjusts the one or more properties of the light based on the content updating and/or playing back over time). Adjusting one or more properties of the light over time based on timing information improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0263] In some embodiments, the light (e.g., **616a-616ab**) includes a third color (e.g., a third set of one or more light sources of the one or more light sources outputs the light having a third color that is based on a fourth color of at least a portion of the content displayed on the display generation component) that is based on a fourth color of at least a portion of the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) (e.g., the third color matches and/or corresponds to at least one color that is associated with the content (e.g., a color currently displayed on the display generation component) and/or the third color is based on a set of one or more colors that are associated with the content (e.g., one or more colors that are currently displayed on the display generation component)). The light including the third color that is based on the fourth color of at least a portion of the content displayed on the display generation component improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0264] In some embodiments, the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) includes a sporting event (e.g., a sporting event associated with first sporting event **626** and/or second sporting event **630**) (e.g., a game, match, competition, and/or contest that includes individuals and/or teams competing against one another, such as a basketball game, a football game, a soccer game, a baseball game, a hockey game, and/or a tennis match), the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component includes a status (e.g., a score represented by scoreboard **628** and/or an event indicated by event indicator **632**) (e.g., a current score, a recently scored goal and/or point, a player and/or team that is in the lead and/or winning, and/or a player and/or team that has won the sporting event) of the sporting event (e.g., the sporting event associated with first sporting event

626 and/or second sporting event **630**), and the light (e.g., **616***a***-616***ab*) includes one or more properties based on the status (e.g., the score represented by scoreboard **628** and/or an event indicated by event indicator **632**) of the sporting event (e.g., the sporting event associated with first sporting event **626** and/or second sporting event **630**) (e.g., the light includes one or more colors representative of a player and/or team that is in the lead, a player and/or team that recently scored a goal and/or point, a player and/or team that has won, and/or a player and/or team that has gained an advantage (e.g., a penalty kick and/or a power play)). The light including one or more properties based on the status of the sporting event provides a user with an ability to quickly and easily identify a current standing and/or condition of the sporting event, thereby providing improved visual feedback.

[0265] In some embodiments, the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) includes a trailer page (e.g., **614** and/or **618**) (e.g., a preview user interface that includes one or more images, text, symbols, video, and/or icons that provide information about a media file that can be played back and/or output from the trailer page). In some embodiments, the trailer page includes a playback user interface object, such as a selectable user interface object and/or affordance that, when selected, causes a second computer system (e.g., the computer system or a different computer system) to initiate playback and/or output of a media file associated with the trailer pager and/or the content (e.g., causes the computer system to display second content associated with the media file and/or the trailer page). The content including a trailer page improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0266] In some embodiments, while displaying the trailer page (**706**) (e.g., **614** and/or **618**), the trailer page (e.g., **614** and/or **618**) including a playback user interface object (e.g., **618***a*) and in accordance with a determination that user input (e.g., **650***a*) corresponding to the playback user interface object (e.g., **618***a*) has been received (e.g., user input requesting selection of the playback user interface object and/or to initiate and/or output a media file associated with the trailer page), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**708**), via the one or more light sources, the light (e.g., **616***a***-616***ab*) as dynamic light (e.g., one or more properties of the light changes over time based on changes and/or updates of second content that is displayed in response to receiving the user input corresponding to the playback user interface object). While displaying the trailer page (**706**) (e.g., **614** and/or **618**), the trailer page (e.g., **614** and/or **618**) including the playback user interface object (e.g., **618***a*) and in accordance with a determination that user input (e.g., **650***a*) corresponding to the playback user interface object (e.g., **618***a*) has not been received (e.g., the computer system and/or a second computer system has not detected user input requesting to select the playback user interface object and/or initiate and/or output a media file associated with the trailer page), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**710**), via the one or more light sources, the light (e.g., **616***a***-616***ab*) as static light (e.g., one or more properties of the light do not change over time, but are maintained while the trailer page having the playback user interface object is displayed). In some embodiments, when the computer system receives an indication that user input corresponding to the playback user interface object was received (e.g., by the computer system and/or a second computer system), second content associated with a media file is displayed via the display generation component, where the second content includes dynamic content, such as a video, that changes over time. In some embodiments, when the computer system does not receive an indication that user input corresponding to the playback user interface object was received, display of the trailer page having the playback user interface object is maintained.

[0267] Outputting the light as dynamic light when user input corresponding to the playback user interface object is received and outputting the light as static light when user input corresponding to the playback user interface object is not received provides a user with confirmation about whether

the user input was received or not, thereby providing improved visual feedback.

[0268] In some embodiments, prior to receiving an indication of user input (e.g., **650***a*) corresponding to the playback user interface object (e.g., **618***a*) (e.g., before the computer system detects and/or receives an indication that another computer system detected user input selecting the playback user interface object), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**712**), via the one or more light sources, the light (e.g., **616***a*-**616***ab*) having a first brightness (e.g., a brightness shown at FIG. **6**C) (e.g., a first amount of lumen output and/or a first amount of wattage and/or power supplied to the one or more light sources). In response to receiving the indication of user input (e.g., **650***a*) corresponding to the playback user interface object (e.g., **618***a*) (e.g., in response to the computer system detecting and/or in response to the computer system receiving an indication that another computer system detected user input selecting the playback user interface object), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**714**), via the one or more light sources, the light (e.g., **616***a*-**616***ab*) having a second brightness (e.g., a brightness shown at FIG. **6**D and/or **6**E) (e.g., a second amount of lumen output and/or a second amount of wattage and/or power supplied to the one or more light sources), greater than the first brightness (e.g., a brightness shown at FIG. **6**C). Outputting the light at a first brightness prior to receiving an indication of user input corresponding to the playback user interface object and outputting the light at a second brightness in response to receiving an indication of user input corresponding to the playback user interface object provides a user with confirmation about whether the user input was received or not, thereby providing improved visual feedback.

[0269] In some embodiments, the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) includes content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) from a currently playing media file (e.g., a current and/or active movie being played back, displayed, and/or output, album art corresponding to current and/or active audio output (e.g., a song, a podcast, an audio book, and/or streamed audio), a current and/or active sporting event being played back, displayed, and/or output, and/or a current and/or active television show being played back, displayed, and/or output). In some embodiments, the currently playing media file does not include a paused and/or stopped media file that includes a static image corresponding to a portion of the media file displayed on the display generation component (e.g., **602** and/or **802**). The content including a content from a currently playing media file improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0270] In some embodiments, at a first playback time of the currently playing media file (e.g., a first time that is within a duration of time associated with the media file and/or a first time that is measured from a starting point and/or an ending point of the media file), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**716**), via the one or more light sources, the light (e.g., **616***a*-**616***ab*) having one or more first properties (e.g., properties of light **616***g* and/or light **616***h* shown at FIG. **6**D) (e.g., a first color, intensity, brightness, color temperature, contrast, hardness, and/or direction). At a second playback time (e.g., a second time that is within the duration of time associated with the media file and/or a second time that is measured from the starting point and/or the ending point of the media file), different from the first playback time, of the currently playing media file, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**718**), via the one or more light sources, the light (e.g., **616***a*-**616***ab*) having one or more second properties (e.g., properties of light **616***i* and/or light **616***j* shown at FIG. **6**E) (e.g., a second color, intensity, brightness, color temperature, contrast, hardness, and/or direction), different from the one or more first properties. Outputting the light having one or more first properties at a first playback time and outputting the light having one or more second properties, different from the first properties, at a second playback time, different from the first playback time, improves an experience of a user viewing the content without needing additional user input,

thereby reducing the number of inputs needed to perform an operation.

[0271] In some embodiments, the output (e.g., **622a**-**622j**) (e.g., audio content associated with the currently playing media file) associated with the currently playing media file (e.g., an album and/or a playlist) includes audio output (e.g., **622a**-**622j**) associated with a first song (e.g., audio **622g** and/or audio **622h**) (e.g., a first track and/or first portion of the album and/or playlist) and a second song (e.g., audio **622i** and/or **622j**) (e.g., a second track and/or second portion of the album and/or playlist), different from the first song. While outputting the audio output (e.g., **622a**-**622j**) corresponding to the first song (e.g., audio **622g** and/or **622h**) and while outputting, via the one or more light sources, the light (e.g., **616a**-**616ab**) having one or more third properties (e.g., properties of light **616s** and/or light **616t** shown at FIG. **6**L) (e.g., a third color, intensity, brightness, color temperature, contrast, hardness, and/or direction), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) transitions (**720**) to outputting the audio output (e.g., **622a**-**622j**) corresponding to the second song (e.g., audio **622i** and/or audio **622j**). Concurrently with transitioning to outputting the audio output (e.g., **622a**-**622j**) corresponding to the second song (e.g., audio **622i** and/or **622j**), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**722**), via the one or more light sources, the light (e.g., **616a**-**616ab**) having one or more fourth properties (e.g., properties of light **616u** and/or light **616v** shown at FIG. **6**K) (e.g., a fourth color, intensity, brightness, color temperature, contrast, hardness, and/or direction), different from the one or more third properties (e.g., properties of light **616s** and/or light **616t** shown at FIG. **6**L).

[0272] Outputting the light having one or more fourth properties, different from the one or more third properties, concurrently with transitioning to outputting the audio output corresponding to the second song improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0273] In some embodiments, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) includes a smart speaker (e.g., **608** and/or **610**) (e.g., an audio output device that is configured to be in communication with one or more external devices and/or the Internet, so that the audio output device can perform functions in addition to outputting audio (e.g., via voice commands and/or other user input)). In response to receiving, via one or more input devices (e.g., one or more audio detection devices, such as one or more microphones) in communication with the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**), a voice input (e.g., **650e**) (e.g., speech (e.g., speech including one or more keyword and/or key phrases) recognized, via sound recognition, requesting the computer system to perform a predetermined operation and/or function), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**724**), via the one or more light sources, second light (e.g., **616ab**) different from the light (e.g., **616a**-**616ab**) (e.g., the light includes one or more first properties that are different from one or more second properties of the second light, such as a different color). Outputting second light that is different from the light in response to receiving voice input allows a user to visually confirm that the computer system recognized, received, and/or detected the voice input, thereby improving visual feedback.

[0274] In some embodiments, while outputting, via the one or more light sources, the light (e.g., **616a**-**616ab**) in accordance with the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) at a third brightness (e.g., a brightness of light **616u** and/or light **616v** shown at FIG. **6**K) (e.g., a third amount of lumen output and/or a third amount of wattage and/or power supplied to the one or more light sources), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) receives (**726**) an indication (in some embodiments, an input (e.g., **650c**) requesting an increase in the volume) of an increase in volume of audio (e.g., **622a**-**622j**) associated with the output (e.g., **622a**-**622j**). In response to receiving the indication of the increase in volume of the audio (e.g., **622a**-**622j**) associated with the output (e.g., **622a**-**622j**), the computer system

(e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputs (**728**), via the one or more light sources, the light (e.g., **616***a*-**616***ab*) in accordance with the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) at a fourth brightness (e.g., a brightness of light **616***w* and/or light **616***x* shown at FIG. **6**L) (e.g., a fourth amount of lumen output and/or a fourth amount of wattage and/or power supplied to the one or more light sources), greater than the third brightness (e.g., a brightness of light **616***u* and/or light **616***v* shown at FIG. **6**K) (e.g., when the computer system outputs the audio associated with the output at an increased volume, the computer system outputs the light at an increased brightness). Outputting the light at a fourth brightness, greater than the third brightness, in response to receiving an indication of an increase in volume of the audio associated with the output allows a user to visually confirm that the computer system increased the volume in response to receiving the user input, thereby improving visual feedback.

[0275] In some embodiments, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) is in communication with a second computer system (e.g., **608** and/or **610**) (e.g., an electronic device; a smart device, such as a smartphone, a smartwatch, and/or a smart speaker; a mobile device; a wearable device; and/or a set of devices in communication with one another (e.g., two or more smart speakers operating independently of one another or operating together as a stereo pair)) that is of a same type (e.g., a same type of device and/or computer system, such as a smart speaker) as the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**). The computer system being in communication with a second computer system that is of the same type as the computer system improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0276] In some embodiments, the light (e.g., **616***a*-**616***ab*) includes one or more fifth properties (e.g., properties of light **616***i*) (e.g., a fifth color, intensity, brightness, color temperature, contrast, hardness, and/or direction) that are different from one or more sixth properties (e.g., properties of light **616***j*) (e.g., a fourth color, intensity, brightness, color temperature, contrast, hardness, and/or direction) of third light (e.g., **616***a*-**616***ab*) outputted by the second computer system (e.g., **608** and/or **610**) (e.g., the second computer system is configured to output third light, via one or more second light sources, in accordance with the received information associated with the content displayed on the display generation component and the third light is different from the light). The lighting including one or more fifth properties that are different from one or more sixth properties of the third light outputted by the second computer system improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0277] In some embodiments, the light (e.g., **616***a*-**616***ab*) corresponds to a first portion (e.g., **618***d*, **618***e*, **618***f*, **618***g*, **624***a*, and/or **624***b*) (e.g., a first portion of a display area of the display generation component, a first portion of a color scheme and/or arrangement of the content, and/or a first portion of an image, video, symbol, and/or icon of the content) of the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**), and the second computer system (e.g., **608** and/or **610**) is configured to output fourth light (e.g., **616***a*-**616***ab*) (e.g., the second computer system causes light to be emitted via one or more second light sources that are in communication with the second computer system) that corresponds to a second portion (e.g., **618***d*, **618***e*, **618***f*, **618***g*, **624***a*, and/or **624***b*) (e.g., a second portion of a display area of the display generation component, a second portion of a color scheme and/or arrangement of the content, and/or a second portion of an image, video, symbol, and/or icon of the content) of the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**), different from the first portion (e.g., **618***d*, **618***e*, **618***f*, **618***g*, **624***a*, and/or **624***b*). The light output by the computer system corresponding to a first portion of the received information associated with the content displayed

on the display generation component and fourth light output by the second computer system corresponding to a second portion of the received information associated with the content displayed on the display generation component improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0278] In some embodiments, the light (e.g., **616***a*-**616***ab*) includes a fifth color (e.g., a color of light **616***c* and/or **616***e*) (e.g., a fifth set of one or more light sources of the one or more light sources outputs the light having a fifth color) and a sixth color (e.g., a color of light **616***d* and/or **616***f*) (e.g., a sixth set of one or more light sources of the one or more light sources outputs the light having a sixth color), different from the fifth color (e.g., a color of light **616***c* and/or **616***e*), and the second computer system (e.g., **608** and/or **610**) is configured to output fifth light (e.g., **616***a*-**616***ab*) (e.g., the second computer system causes light to be emitted via one or more second light sources that are in communication with the second computer system) that includes a seventh color (e.g., a color of light **616***c* and/or **616***e*) (e.g., a seventh set of one or more light sources of the one or more light sources outputs the light having a seventh color) and an eighth color (e.g., a color of light **616***d* and/or **616***f*) (e.g., an eighth set of one or more light sources of the one or more light sources outputs the light having a eighth color), different from the seventh color (e.g., a color of light **616***c* and/or **616***e*). The light output by the computer system including a fifth color and a sixth color, different from the fifth color, and fifth light output by the second computer system including a seventh color and an eighth color, different from the seventh color, improves an experience of a user viewing the content without needing additional user input, thereby reducing the number of inputs needed to perform an operation.

[0279] In some embodiments, outputting, via the one or more light sources, the light (e.g., **616***a*-**616***ab*) in accordance with the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) includes, in accordance with a determination that a predetermined function (e.g., displaying a settings menu and/or displaying one or more selectable options that control output of the output and/or content) is available (e.g., one or more conditions are met (e.g., an indication of one or more detected user inputs is received, an indication of a notification and/or event is received, and/or an indication of a detected external device is received) that enable the predetermined function to be performed by the computer system and/or a different computer system), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputting the light (e.g., **616***a*-**616***ab*) having one or more seventh properties (e.g., properties of light **616***y*) (e.g., a seventh color, intensity, brightness, color temperature, contrast, hardness, and/or direction) (in some embodiments, the one or more seventh properties guide and/or prompt a user to provide a user input that causes performance of the predetermined function) (in some embodiments, the light having the one or more seventh properties is output in a direction, with a color, and/or a brightness that signals and/or provides guidance to a user that user input will cause performance of the predetermined function). Outputting, via the one or more light sources, the light (e.g., **616***a*-**616***ab*) in accordance with the received information associated with the content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) displayed on the display generation component (e.g., **602** and/or **802**) includes, in accordance with a determination that the predetermined function is not available (e.g., one or more conditions are not met (e.g., an indication of one or more detected user inputs is not received, an indication of a notification and/or event is not received, and/or an indication of a detected external device is not received) that enable the predetermined function to be performed by the computer system and/or a different computer system), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) outputting the light (e.g., **616***a*-**616***ab*) having one or more eighth properties (e.g., properties of light **616***x*) (e.g., an eighth color, intensity, brightness, color temperature, contrast, hardness, and/or direction), different from the one or more seventh properties (e.g., properties of light **616***y*).

[0280] Outputting the light having the one or more seventh properties in accordance with a determination that a predetermined function is available and outputting the light having one or more eight properties, different from the one or more seventh properties, in accordance with a determination that the predetermined function is not available allows a user to quickly provide the user input to cause the third computer system to perform the predetermined function, thereby improving visual feedback.

[0281] Note that details of the processes described above with respect to method **700** (e.g., FIGS. **7**A-**7**C) are also applicable in an analogous manner to the methods described below. For example, method **900** optionally includes one or more of the characteristics of the various methods described above with reference to method **700**. For example, a computer system performing method **900** can group a computer system performing method **900** with other accessory devices. For brevity, these details are not repeated below.

[0282] FIGS. **8**A-**8**V illustrate examples of techniques for managing controllable accessories, in accordance with some embodiments. The user interfaces in these figures are used to illustrate the processes described below, including the processes in FIGS. **9**A-**9**D.

[0283] In some embodiments, any of the inputs described herein (e.g., input **850***a*, **850***b*, **850***c*, **850***d*, **850***e*, **850***f*, **850***g*, **850***h*, **850***i*, **850***j*, **850***k*, **850***l*, **850***m*, **850***n*, **8500**, **850***p*, **850***q*, **850***r*, and/or **850***s*) is or includes a touch input (e.g., a tap gesture and/or a swipe gesture). In some embodiments, any of the inputs described herein (e.g., input **850***a*, **850***b*, **850***c*, **850***d*, **850***e*, **850***f*, **850***g*, **850***h*, **850***i*, **850***j*, **850***k*, **850***l*, **850***m*, **850***n*, **8500**, **850***p*, **850***q*, **850***r*, and/or **850***s*) is or includes a voice input (e.g., a voice command to select a user interface element or to activate a feature or perform a function, such as a feature or function associated with a user interface element). In some embodiments, any of the inputs described herein (e.g., input **850***a*, **850***b*, **850***c*, **850***d*, **850***e*, **850***f*, **850***g*, **850***h*, **850***i*, **850***j*, **850***k*, **850***l*, **850***m*, **850***n*, **8500**, **850***p*, **850***q*, **850***r*, and/or **850***s*) is or includes a gesture (e.g., hand gesture, facial gesture, and/or an air gesture to select a user interface element or to activate a feature or perform a function, such as a feature or function associated with a user interface element) and/or is or includes a voice command. In some embodiments, any of the inputs described herein (e.g., input **850***a*, **850***b*, **850***c*, **850***d*, **850***e*, **850***f*, **850***g*, **850***h*, **850***i*, **850***j*, **850***k*, **850***l*, **850***m*, **850***n*, **8500**, **850***p*, **850***q*, **850***r*, and/or **850***s*) is or includes activation (e.g., a press, a rotation, and/or a movement) of a hardware device (e.g., a button, a rotatable input mechanism, a rotatable and depressible input mechanism, a mouse button, a button of a remote control, and/or a joystick). In some embodiments, any of the user interface elements described as being selected herein (e.g., an icon, affordance, button, and/or selectable option) is selected by activating a hardware device while the user interface element is in focus (e.g., highlighted, bolded, outlined, visually distinguished from other user interface elements, and/or located at or near a cursor).

[0284] FIG. **8**A illustrates electronic device **800** displaying, via display **802**, home user interface **804** associated with a home automation system. In some embodiments, the home automation system includes one or more accessory devices (e.g., devices configured to be in communication with and/or controlled by electronic device **800**) that are associated with a location, such as a structure, a home, an office, and/or an apartment. At FIG. **8**A, electronic device **800** is configured to adjust and/or control a state and/or settings of one or more of the accessory devices of the home automation system via home user interface **804**. In some embodiments, home user interface **804** is a user interface that is first displayed by electronic device **800** in response to launching an application associated with the home automation system.

[0285] At FIG. **8**A, home user interface **804** includes home indicator **804***a* (e.g., "123 MAIN ST.") that provides an indication of a location (e.g., a physical address) associated with the home automation system. In addition, home user interface **804** includes category region **806**, camera region **808**, scene region **810**, and first room region **812**. In some embodiments, home user interface **804** is scrollable so that one or more additional regions corresponding to respective

rooms, scenes, types or categories of accessory devices, and/or designated accessory devices (e.g., favorites) of the home automation system can be displayed in response to a swipe and/or scroll gesture on home user interface **804**.

[0286] In response to receiving an indication of an event, electronic device **800** is configured to display a designated region (e.g., platter) on home user interface **804** that enables electronic device **800** to group and/or associate accessory devices with one another. Displaying the designated region facilitates an ability of a user to group and/or associate accessory devices with one another by reducing the number of inputs needed to create an accessory group. For instance, by displaying the designated region on home user interface **804**, electronic device **800** enables a user to group and/or associate accessory devices with one another without having to navigate to additional user interfaces to search for particular accessory devices. FIGS. **8**A-**8**Q illustrate electronic device **800** displaying the designated region (e.g., designated region **814**) in response to receiving an indication that an accessory device initiated playback of a media item. At FIGS. **8**A-**8**Q, electronic device **800** enables accessory devices to be grouped and/or associated with one another, such that the grouped accessory devices output content associated with the media item in conjunction with one another. While FIGS. **8**A-**8**Q relate to electronic device **800** displaying the designated region in response to receiving an indication that an accessory device initiated playback of a media item, electronic device **800** is also configured to display designated regions (e.g., designated region **842** and/or designated region **848**) in response to receiving an indication and/or request to create a new scene and/or a new room of the home automation system, as set forth below with reference to FIGS. **8**R-**8**V.

[0287] At FIG. **8**A, electronic device **800** receives an indication that an accessory device of the home automation initiates (e.g., starts and/or begins) outputting and/or playing back content. In some embodiments, electronic device **800** receives the indication from the accessory device (e.g., electronic device **800** is in communication with the accessory device). In some embodiments, electronic device **800** receives the indication from a different electronic device (e.g., a server). In response to receiving the indication that the accessory device of the home automation system initiates outputting and/or playing back content, electronic device **800** displays home user interface **804**, as shown at FIG. **8**B.

[0288] At FIG. **8**B, home user interface **804** includes home indicator **804***a*, designated region **814** (e.g., a platter), and accessories region **816**. In some embodiments, home user interface **804** is scrollable, such that electronic device **800** displays category region **806**, camera region **808**, scene region **810**, and/or first room region **812** in response to receiving user input. In some embodiments, in response to receiving the indication that the accessory device of the home automation system initiates outputting and/or playing back content, electronic device **800** displays designated region **814** and accessories region **816** at a position above category region **806**, camera region **808**, scene region **810**, and/or first room region **812**. Thus, in some embodiments, category region **806**, camera region **808**, scene region **810**, and/or first room region **812** are still included and/or part of home user interface **804**, but are displayed at different positions and/or locations on home user interface **804**, as compared to FIG. **8**A. In some embodiments, electronic device **800** does not display accessories region **816** in response to receiving the indication that the accessory device initiates outputting and/or playing back content. In some embodiments, electronic device **800** displays category region **806**, camera region **808**, scene region **810**, and/or first room region **812** below designated region **814** in response to receiving the indication that the accessory device initiates outputting and/or playing back content.

[0289] At FIG. **8**B, designated region **814** includes first user interface object **814***a* corresponding to an accessory device of the home automation system that initiated outputting and/or playing back content. At FIG. **8**B, first user interface object **814***a* corresponds to a television accessory device. In some embodiments, the television accessory device provides information to electronic device **800** that the television accessory device has been turned on, activated, and/or has initiated outputting

content. In some embodiments, electronic device **800** displays designated region **814** including first user interface object **814***a* based on receiving the information from the television accessory device. Designated region **814** provides a visual indication to a user of electronic device **800** that an accessory device of the home automation system is currently outputting content. Designated region **814** includes content indicator **814***b* (e.g., "TV SHOW") that provides a visual indication of the content being output by the television accessory device. For instance, at FIG. **8**B, content indicator **814***b* indicates that the television accessory device is configured to and/or is outputting a television show. In some embodiments, content indicator **814***b* includes information about the television show, such as an episode number, an episode name, a series name, a season number, and/or an air date of the television show. As set forth below, electronic device **800** can associate one or more additional accessory devices with the content being output by television accessory device in response to receiving one or more user inputs requesting to associate the one or more additional accessory devices with the content.

[0290] For instance, accessories region **816** of home user interface **804** includes accessory user interface objects **816***a*-**816***i* corresponding to respective accessory devices of the home automation system. Electronic device **800** is configured to control and/or adjust settings of an accessory device in response to detecting user input corresponding to a respective accessory user interface object **816***a*-**816***i*. As set forth below, in some embodiments, electronic device **800** can associate an accessory device corresponding to a respective accessory device user interface object **816***a*-**816***i* with the content initiated by the television accessory device when the accessory device is compatible with one or more accessory devices (e.g., the television accessory device) associated with the content and displayed in designated region **814**. In some embodiments, electronic device **800** determines whether an accessory device corresponding to a respective accessory user interface object **816***a*-**816***i* is compatible with one or more accessory devices associated with the content based on a function of the accessory device. For instance, when the accessory device corresponding to a respective accessory user interface object **816***a*-**816***i* is configured to perform a function and/or operation that is consistent with the current content being outputted and/or played back by the television accessory device, electronic device **800** can associate the accessory device with the content.

[0291] In some embodiments, when electronic device **800** associates an accessory device corresponding to a respective accessory user interface object **816**-**816***i* with the content, the additional accessory device is configured to output second content that is based on the content in which the television accessory device is currently outputting. For instance, in some embodiments, the television accessory device is outputting a video (e.g., the television show), and when electronic device **800** associates a speaker accessory device with the content being outputted by the television accessory device, the speaker accessory device outputs audio corresponding to the video.

[0292] At FIG. **8**B, electronic device **800** detects user input **850***a* (e.g., a tap gesture, a tap gesture that includes a duration that exceeds a predefined duration, or other selection/navigation input) corresponding to selection of accessory user interface object **816***h*. In response to detecting user input **850***a*, electronic device **800** displays accessory user interface **818**, as shown at FIG. **8**C.

[0293] At FIG. **8**C, accessory user interface **818** includes control user interface objects **818***a*-**818***g* that enable electronic device **800** to adjust an operation of and/or settings of a light accessory device associated with accessory user interface object **816***h*. For instance, accessory user interface **818** enables control of a brightness, a color temperature, and/or an operation state (e.g., whether the light accessory device is on or off) of the light accessory device. At FIG. **8**C, electronic device **800** detects user input **850***b* (e.g., a tap gesture or other selection/navigation input) corresponding to exit user interface object **818***h* of accessory user interface **818**. In response to detecting user input **850***b*, electronic device **800** displays (e.g., re-displays) home user interface **804**, as shown at FIG. **8**D.

[0294] At FIG. **8**D, electronic device **800** detects user input **850***c* (e.g., a tap and/or press gesture having a duration that exceeds a predefined duration followed by movement or another

selection/navigation input) on accessory user interface object **816***c* requesting to associate a speaker accessory device (e.g., kitchen speaker) corresponding to accessory user interface object **816***c* with content being (e.g., configured to be) output and/or played back by the television accessory device. At FIG. **8**D, accessory user interface object **816***c* includes a first appearance (e.g., a first color, font, shading, emphasis, size, and/or shape, such as a substantially square and/or block shape). As set forth below, electronic device **800** is configured to change an appearance of accessory user interface object **816***c* based on a determination as to whether the speaker accessory device can be associated with the content being output (e.g., configured to be output by) the television accessory device.

[0295] At FIG. **8**D, electronic device **800** determines whether the speaker accessory device satisfies a set of criteria that indicates whether the speaker accessory device can be associated with content being output and/or played back by the television accessory device. For instance, as set forth above, electronic device **800** determines that the speaker accessory device can be associated with the content being output and/or played back by the television accessory device based on a function of the speaker accessory device. In some embodiments, electronic device **800** determines that the speaker accessory device includes a function, such as a primary function, that includes outputting audio. In some embodiments, electronic device **800** determines that the function of the speaker accessory device is compatible with the content being output and/or played back by the television accessory device. For instance, the speaker accessory device can output audio that is associated with the television show that is configured to be and/or is currently being output by the television accessory device.

[0296] As set forth below, in some embodiments, electronic device **800** determines that a respective accessory device associated with one of accessory user interface objects **816***a*-**816***i* cannot be associated with the content being output and/or played back by the television accessory device when the respective accessory device does not satisfy the set of one or more criteria. For instance, in some embodiments, the respective accessory device does not include a function (e.g., any function) that is compatible with the content configured to be output and/or currently being output by the television accessory device. In some embodiments, electronic device **800** does not enable the respective accessory device to be associated with the content when electronic device **800** determines that the respective accessory device does not satisfy the set of one or more criteria, as set forth below with reference to FIGS. **8**H and **8**I.

[0297] At FIG. **8**D, electronic device **800** determines that the speaker accessory device can be associated with the content being output and/or played back by the television accessory device. Based on the determination that the speaker accessory device can be associated with the content, electronic device **800** changes an appearance of accessory user interface object **816***c* after detecting user input **850***c*, as shown at FIG. **8**E.

[0298] At FIG. **8**E, accessory user interface object **816***c* includes a second appearance (e.g., a second color, font, shading, emphasis, size, and/or shape, such as a substantially circular and/or rounded shape) that is different from the first appearance. The second appearance provides a visual indication to a user of electronic device **800** that the speaker accessory device corresponding to accessory user interface object **816***c* can be associated with the content. At FIG. **8**E, while user input **850***c* is maintained, electronic device **800** detects movement component **850***d* of user input **850***c*. For instance, electronic device **800** detects a request to move accessory user interface object **816***c* from accessories region **816** toward designated region **814**. At FIG. **8**E, electronic device **800** displays accessory user interface object **816***c* at first position **820***a* in accessories region **816** and in response to detecting movement component **850***d* of user input **850***c*, electronic device **800** is configured to move accessory user interface object **816***c* toward second position **820***b* in designated region **814**.

[0299] At FIG. **8**F, electronic device **800** displays movement of accessory user interface object **816***c* toward designated region **814** in response to detecting movement component **850***d* of user

input **850***c*. As shown at FIG. **8**F, accessory user interface object **816***c* is displayed at third position **820***c*, which is between first position **820***a* in accessories region **816** and second position **820***b* in designated region **814**. Thus, electronic device **800** animates and/or moves accessory user interface object **816***c* in response to detecting movement component **850***d* of user input **850***c* (and in accordance with the determination that the speaker accessory device corresponding to accessory user interface object **816***c* is able to be associated with the content).

[0300] At FIG. **8**G, electronic device **800** displays accessory user interface object **816***c* at second position **820***b* in designated region **814**. In some embodiments, when electronic device **800** displays accessory user interface object **816***c* within designated region **814** (e.g., at second position **820***b* and/or another position), electronic device **800** causes the speaker accessory device corresponding to accessory user interface object **816***c* to output content (e.g., audio output) that is based on the content being output by the television accessory device. In other words, accessory devices that include corresponding accessory user interface objects within designated region **814** are configured to operate in conjunction with another, such that the accessory devices output content that are based on the same media file (e.g., a television show). For instance, at FIG. **8**G, the television accessory device causes a display (e.g., a display different from display **802**) to display one or more images associated with the television show and the speaker accessory device outputs audio output associated with the television show.

[0301] At FIG. **8**G, first user interface object **814***a* is displayed at a first size that is larger than a second size of accessory user interface object **816***c*. In some embodiments, electronic device **800** displays a user interface object corresponding to a primary device at a larger size within designated region **814** as compared to non-primary devices. In some embodiments, electronic device **800** determines that the television accessory device corresponding to first user interface object **814***a* is the primary device because the television accessory device initiated output of the content. In some embodiments, electronic device **800** determines that the television accessory device is the primary device because the television accessory device was the first accessory device to include a corresponding user interface object in designated region **814**.

[0302] At FIG. **8**G, electronic device **800** displays suggestion indicators **822** next to accessory user interface objects **816***e*, **816***g*, **816***h*, and **816***i* in accessories region **816**. Suggestion indicator **822** provides a visual indication that one or more accessory devices are suggested for associating with the content (e.g., the content being output by the television accessory device and the speaker accessory device at FIG. **8**G). For instance, in some embodiments, electronic device **800** determines which accessory devices corresponding to accessory user interface objects **816***a*, **816***b*, and **816***d*-**816***i* satisfy the set of one or more criteria that enable a respective accessory device to be associated with the content. In some embodiments, electronic device **800** determines which accessory devices can be associated with the content prior to receiving user input selecting a respective accessory user interface object. In some embodiments, electronic device **800** does not display suggestion indicator **822** next to accessory user interface objects corresponding to accessory devices that electronic device **800** determines do not satisfy the set of one or more criteria and/or cannot be associated with the content.

[0303] At FIG. **8**G, electronic device **800** detects user input **850***e*, user input **850***f*, and user input **850***g* corresponding to accessory user interface object **816***g*, accessory user interface object **816***h*, and accessory user interface object **816***i*, respectively. User input **850***e*, user input **850***f*, and user input **850***g* each include a contact component (e.g., a tap and/or press gesture that includes a duration that exceeds a predefined duration) and a movement component. The movement component of user input **850***e*, user input **850***f*, and user input **850***g* includes movement from accessories region **816** toward designated region **814**. As such, user input **850***e* includes a request to associate a second speaker accessory device (e.g., living room speaker) corresponding to accessory user interface object **816***g* with the content, user input **850***f* includes a request to associate a first light accessory device (e.g., living room light) corresponding to accessory user interface object

816h with the content, and user input **850**g includes a request to associate a second light accessory device (e.g., kitchen light) corresponding to accessory user interface object **816**i with the content.

[0304] As set forth above, in some embodiments, electronic device **800** determines that the second speaker accessory device, the first light accessory device, and the second light accessory device satisfy the set of one or more criteria prior to detecting user inputs **850**e, **850**f, and/or **850**g. In some embodiments, in response to detecting user input **850**e, user input **850**f, and user input **850**g, electronic device **800** determines that the second speaker accessory device, the first light accessory device, and the second light accessory device satisfy the set of one or more criteria and/or can be associated with the content. Based on the determination that the second speaker accessory device, the first light accessory device, and the second light accessory device satisfy the set of one or more criteria and/or can be associated with the content, electronic device **800** displays accessory user interface objects **816**g-**816**i in designated region **814**, as shown at FIG. **8**H. In some embodiments, electronic device **800** displays movement of accessory user interface objects **816**g-**816**i from accessories region **816** toward designated region **814**, as set forth above with reference to FIGS. **8**E-**8**G.

[0305] At FIG. **8**H, electronic device **800** displays designated region **814** including first user interface object **814**a, accessory user interface object **816**c, and accessory user interface objects **816**g-**816**i. When electronic device **800** displays accessory user interface objects **816**g-**816**i in designated region **814**, electronic device **800** causes the second speaker accessory device, the first light accessory device, and the second light accessory device to output content (e.g., audio and/or light output) that is in conjunction with content outputted by the television accessory device and/or the speaker accessory device. In some embodiments, second speaker accessory device outputs audio output that is based on audio of the television show. In some embodiments, first light accessory device and/or second light accessory device output light that includes one or more properties (e.g., one or more colors, brightness, and/or contrast) that is based on one or more visual elements of the television show displayed on a display (e.g., one or more visual elements that the television accessory device causes to be displayed on the display).

[0306] At FIG. **8**H, electronic device **800** detects user input **850**h (e.g., a tap and/or press gesture that includes a duration that exceeds a predefined duration or another selection/navigation input) corresponding to accessory user interface object **816**d in accessories region **816**. As set forth above, in some embodiments, electronic device **800** does not associate a respective accessory device with the content when electronic device **800** determines that the respective accessory device does not satisfy the set of one or more criteria. For instance, at FIG. **8**H, electronic device **800** determines that a lock accessory device corresponding to accessory user interface object **816**d does not satisfy the set of one or more criteria and cannot be associated with the content. In some embodiments, electronic device **800** determines that the lock accessory device does not include a function (e.g., any function) that is compatible with outputting content, such as a television show. In some embodiments, electronic device **800** determines that the lock accessory device includes a function that enables a lock of a door to change between a locked position and an unlocked position. In some embodiments, electronic device **800** determines that the lock accessory device does not include an additional function and/or determines that the lock accessory device does not include any function that enables the lock accessory device to output content that is consistent with and/or compatible with the television show.

[0307] Based on the determination that the lock accessory device does not satisfy the set of one or more criteria (and after detecting user input **850**h), electronic device **800** displays accessory user interface object **816**d corresponding to the lock accessory device with appearance **824**, as shown at FIG. **8**I. At FIG. **8**I, appearance **824** includes a darkened, blurred, and/or greyed out appearance indicating that the lock accessory device corresponding to accessory user interface object **816**d cannot be associated with the content (and/or cannot be moved toward designated region **814**). Therefore, when a user of electronic device **800** attempts to associate a non-compatible accessory

device with the content, electronic device **800** provides a visual indication that the non-compatible accessory device cannot be associated with the content. As set forth below with reference to FIGS. **8**T and **8**V, in some embodiments, electronic device **800** can associate any accessory device with other accessory devices. In some embodiments, electronic device **800** determines whether a respective accessory device can be associated with the content using a different set of one or more criteria that is not based on a function of the respective accessory device.

[0308] Electronic device **800** is configured to arrange user interface objects within designated region **814** to provide an indication of a configuration of the corresponding accessory devices relative to one another. For instance, at FIG. **8**J, electronic device **800** displays designated region **814** having first user interface object **814***a* at first position **826***a*, accessory user interface object **816***c* at second position **826***b*, accessory user interface object **816***g* at third position **826***c*, accessory user interface object **816***h* at fourth position **826***d*, and accessory user interface object **816***i* at fifth position **826***e*. As shown at FIG. **8**J, accessory user interface object **816***c* is at second position **826***b*, which is to the right of first user interface object **814***a*, and accessory user interface object **816***g* is at third position **826***c*, which is to the left of first user interface object **814***a*. As set forth above, accessory user interface object **816***c* corresponds to the speaker accessory device and accessory user interface object **816***g* corresponds to the second speaker accessory device. In some embodiments, electronic device **800** causes the speaker accessory device to output a right channel of audio output corresponding to audio of the television show and causes the second speaker accessory device to output a left channel of audio output corresponding to audio of the television show. In some embodiments, electronic device **800** is configured to adjust a configuration (e.g., which of the speaker accessory devices outputs the left and right channels of audio output) of the speaker accessory device and the second speaker accessory device in response to user input.

[0309] For instance, at FIG. **8**J, electronic device **800** detects user input **850***i* (e.g., a swipe gesture, a slide gesture, a drag gesture, or another selection/navigation input) corresponding to accessory user interface object **816***g*. In response to detecting user input **850***i*, electronic device **800** switches the respective positions of accessory user interface object **816***g* and accessory user interface object **816***c* in designated region **814**, as shown at FIG. **8**K.

[0310] At FIG. **8**K, electronic device **800** displays accessory user interface object **816***c* at third position **826***c* and accessory user interface object **816***g* at second position **826***b* within designated region **814**. In some embodiments, when electronic device **800** displays accessory user interface object **816***c* at third position **826***c*, the speaker accessory device is configured to output the left channel of audio output associated with the television show. Similarly, in some embodiments, when electronic device **800** displays accessory user interface object **816***g* at second position **826***b*, the second speaker accessory device is configured to output the right channel of audio output associated with the television show. Thus, electronic device **800** can change and/or modify a configuration of the accessory devices associated with the content in response to detecting user input requesting to move the corresponding user interface objects within designated region **814**. In some embodiments, electronic device **800** can cause first light accessory device and second light accessory device to output light having different properties based on the respective positions of accessory user interface object **816***h* and accessory user interface object **816***i* within designated region **814**.

[0311] At FIG. **8**K, electronic device **800** receives an indication that output of the content by the accessory devices that include corresponding user interface objects in designated region **614** has been stopped, paused, and/or ceased. For instance, in some embodiments, electronic device **800** receives the indication from the television accessory device. In some embodiments, electronic device **800** receives the indication from a different accessory device and/or an external device (e.g., a server). In response to receiving the indication that output of the content has stopped, paused, and/or ceased, electronic device **800** ceases display of designated region **814** and/or accessories region **816** and displays home user interface **804** as shown at FIG. **8**L.

[0312] At FIG. **8**L, electronic device **800** does not display designated region **814** on home user interface **804** to visually indicate that the output of content has stopped, paused, and/or ceased. Therefore, a user of electronic device **800** can quickly determine whether content is being output by one or more accessory devices of the home automation system based on whether home user interface **804** includes designated region **814**. At FIG. **8**L, electronic device **800** receives an indication that output of the content has resumed, initiated, and/or otherwise started. For instance, in some embodiments, electronic device **800** receives the indication from the television accessory device. In some embodiments, electronic device **800** receives the indication from a different accessory device and/or an external device (e.g., a server). In response to receiving the indication that the output of the content has resumed, initiated, and/or otherwise started, electronic device **800** displays home user interface **804** including designated region **814** and accessories region **816**, as shown at FIG. **8**M.

[0313] At FIG. **8**M, designated region **814** includes first user interface object **814***a*, accessory user interface object **816***c*, and accessory user interface objects **816***g*-**816***i*. Electronic device **800** displays first user interface object **814***a*, accessory user interface object **816***c*, and accessory user interface objects **816***g*-**816***i* at the same respective positions within designated region **814** as shown at FIG. **8**K. Thus, even though the content was stopped, paused, and/or ceased, electronic device **800** maintains the respective positions of first user interface object **814***a*, accessory user interface object **816***c*, and accessory user interface objects **816***g*-**816***i* when electronic device **800** receives the indication that the output of the content has resumed, initiated, and/or otherwise started.

[0314] At FIG. **8**N, electronic device **800** detects user input **850***j* (e.g., a tap and/or press gesture that includes a duration that exceeds a predefined duration or another selection/navigation input) corresponding to accessory user interface object **816***c* in designated region **814**. User input **850***j* includes movement component **850***k* requesting to disassociate and/or remove an association of the speaker accessory device from the content. At FIG. **8**N, accessory user interface object **816***c* is displayed at third position **826***c* in designated region. In response to detecting user input **850***j* including movement component **850***k*, electronic device **800** displays an animation of accessory user interface object **816***c* moving from third position **826***c* in designated region **814** toward position **828** in accessories region **816**, as shown at FIG. **8**O.

[0315] At FIG. **8**O, electronic device **800** displays accessory user interface object **816***c* at position **830**, which is between third position **826***c* and position **828**. At FIG. **8**O, while electronic device **800** continues to detect user input **850***j* including movement component **850***k*, electronic device **800** displays movement of accessory user interface object **816***c* toward position **828**.

[0316] At FIG. **8**P, electronic device **800** displays accessory user interface object **816***c* at position **828** in accessories region **816**. When electronic device **800** displays accessory user interface object **816***c* in accessories region **816**, electronic device **800** does not cause the speaker accessory device to output content (e.g., audio output) that is based on the content, such as the television show. In other words, at FIG. **8**P, the speaker accessory device is no longer associated with the content, and therefore, does not output audio based on the content (e.g., audio associated with the television show). Therefore, electronic device **800** can quickly associate and/or disassociate respective accessory devices from the content via user input.

[0317] At FIG. **8**P, electronic device **800** detects user input **850***l* (e.g., a tap gesture or other selection/navigation input) corresponding to designated region **814**. In response to detecting user input **850***l*, electronic device **800** displays content user interface **832**, as shown at FIG. **8**Q. Additionally or alternatively, electronic device **800** detects user input **850***m* (e.g., a tap gesture or other selection/navigation input) corresponding to add user interface object **804***b* of home user interface **804**. In response to detecting user input **850***m*, electronic device **800** displays menu **834**, as shown at FIG. **8**R.

[0318] At FIG. **8**Q, content user interface **832** includes accessory user interface objects **832***a*-**832***d* corresponding to the respective accessory devices that are associated with the content. At FIG. **8**Q,

electronic device **800** organizes and/or sorts accessory user interface objects **832a-832d** based on a room and of the respective accessory devices. For instance, in some embodiments, the respective accessory devices are associated with (e.g., programmatically mapped to) different rooms of a location associated with the home automation system. Therefore, a user of electronic device **800** can quickly view and/or identify which accessory devices are associated with the content and/or where the accessory devices are positioned within the location.

[0319] In some embodiments, in response to detecting user input corresponding to one or more of accessory user interface objects **832a-832d**, electronic device **800** displays an accessory user interface, such as a user interface similar to accessory user interface **818**. The accessory user interface enables electronic device **800** to adjust and/or modify one or more settings and/or operation states of a respective accessory device. Therefore, a user can quickly access and/or control an accessory user interface for a respective accessory device that is associated with the content via content user interface **832**.

[0320] At FIG. **8R**, menu **834** includes selectable options **834a-834f** that enable electronic device **800** to add accessory devices, scenes, automations, rooms, authorized user accounts, and/or additional home automation systems. At FIG. **8R**, electronic device **800** detects user input **850n** (e.g., a tap gesture or other selection/navigation input) corresponding to selectable option **834b** of menu **834**. In response to detecting user input **850n**, electronic device **800** displays add scene user interface **836**, as shown at FIG. **8S**. Additionally or alternatively, electronic device **800** detects user input **8500** (e.g., a tap gesture or other selection/navigation input) corresponding to selectable option **834d** of menu **834**. In response to detecting user input **8500**, electronic device **800** displays add room user interface **838**, as shown at FIG. **8U**.

[0321] At FIG. **8S**, add scene user interface **836** enables electronic device **800** to create a new scene for the home automation system. In some embodiments, a scene enables electronic device **800** to control and/or adjust a state of one or more accessory devices of the home automation system via user input, based on a location of electronic device **800**, and/or based on a condition being satisfied (e.g., a current time of day is at a predetermined time associated with activating and/or deactivating a scene). In some embodiments, a scene is user-defined in that a user selects which accessory devices of the home automation system to include in a scene and how the selected accessory devices are controlled when the scene is activated. In some embodiments, a scene is predetermined and/or suggested by electronic device **800** based on user habits. In some embodiments, electronic device **800** controls and/or adjusts a state of multiple accessory devices of the home automation system in response to a single user input selecting a scene user interface object (e.g., user interface objects displayed in scenes region **810** of home user interface **804**). Accordingly, scenes allow a user to easily control accessory devices and/or groups of accessory devices of the home automation system and reduces a number of user inputs needed to control and/or adjust the accessory devices and/or groups of accessory devices.

[0322] At FIG. **8S**, add scene user interface **836** includes scene name user interface object **836a** and add accessory user interface object **836b**. At FIG. **8S**, electronic device **800** detects user input **850p** (e.g., a tap gesture or other selection/navigation input) corresponding to selection of scene name user interface object **836a**. In some embodiments, in response to detecting user input **850p**, electronic device **800** displays a keyboard (e.g., a virtual keyboard) that enables a user of electronic device **800** to provide and/or input a name of a new scene. In some embodiments, electronic device **800** detects one or more user inputs associated with naming the new scene. At FIG. **8S**, electronic device **800** detects user input **850q** (e.g., a tap gesture or other selection/navigation input) corresponding to add accessory user interface object **836b**. In response to detecting user input **850q**, electronic device **800** displays accessory user interface **840**, as shown at FIG. **8T**.

[0323] At FIG. **8T**, accessory user interface **840** includes second designated region **842** and accessories region **844**. Accessories region **844** includes accessory user interface objects **844a-844i** corresponding to respective accessory devices of the home automation system. In some

embodiments, accessory user interface **840** is scrollable, such that electronic device **800** is configured to display additional accessory user interface objects in accessories region **844** in response to detecting user input (e.g., a swipe gesture or other selection/navigation input). Second designated region **842** corresponds to accessory devices of the home automation system that are included in the new scene. At FIG. **8**T, second designated region **842** is blank, and thus, no accessory devices have been added to the new scene. In some embodiments, electronic device **800** is configured to add respective accessory devices to the new scene in response to detecting user input corresponding to one or more of accessory user interface objects **844***a*-**844***i* of accessories region **844**.

[0324] Second designated region **842** and accessories region **844** are configured to operate and/or function similar to designated region **814** and accessories region **816** described above with reference to FIGS. **8**A-**8**R. In some embodiments, electronic device **800** is configured to add any respective accessory device to the new scene. In some embodiments, electronic device **800** is configured to add a respective accessory device to the new scene when the respective accessory device satisfies a set of one or more second criteria. In some embodiments, the set of one or more second criteria include determining whether the respective accessory device corresponds to, is consistent with, and/or is configurable with an overall function, context, and/or theme of the new scene. For instance, in some embodiments, electronic device **800** determines that a garage door accessory device cannot be included in and/or associated with a new scene that is directed to entertainment.

[0325] At FIG. **8**U, add room user interface **838** enables electronic device **800** to create a new room for the home automation system. As set forth above, in some embodiments, electronic device **800** associates (e.g., programmatically maps) respective accessory devices with rooms of a location of the home automation system. Associating accessory devices with particular rooms of the location enables a user to quickly find various accessory devices and/or to determine where a respective accessory device is positioned within the location of the home automation system.

[0326] At FIG. **8**U, add room user interface **838** includes room name user interface object **838***a* and continue user interface object **838***b*. At FIG. **8**U, electronic device **800** detects user input **850***r* (e.g., a tap gesture or other selection/navigation input) corresponding to selection of room name user interface object **838***a*. In some embodiments, in response to detecting user input **850***r*, electronic device **800** displays a keyboard (e.g., a virtual keyboard) that enables a user of electronic device **800** to provide and/or input a name of a new room. In some embodiments, electronic device **800** detects one or more user inputs associated with naming the new room. At FIG. **8**U, electronic device **800** detects user input **850***s* (e.g., a tap gesture or other selection/navigation input) corresponding to continue user interface object **838***b*. In response to detecting user input **850***s*, electronic device **800** displays accessory user interface **846**, as shown at FIG. **8**V.

[0327] At FIG. **8**V, accessory user interface **846** includes third designated region **848** and accessories region **852**. Accessories region **852** includes accessory user interface objects **852***a*-**852***i* corresponding to respective accessory devices of the home automation system. At FIG. **8**V, accessory user interface objects **852***a*-**852***i* correspond to respective accessory devices of the home automation system that have not yet been associated with a room of the location of the home automation system. Thus, at FIG. **8**V, accessory user interface objects **852***a*-**852***i* do not include room designations and/or indicators because the respective accessory devices have not been associated with a room of the location. In some embodiments, accessories region **852** includes accessory user interface objects corresponding to accessory devices that have been associated with a room of the location, thereby enabling a user of electronic device **800** to change the room designation of a respective accessory device. In some embodiments, accessory user interface **846** is scrollable, such that electronic device **800** is configured to display additional accessory user interface objects in accessories region **852** in response to detecting user input (e.g., a swipe gesture or other selection/navigation input). Third designated region **848** corresponds to accessory devices

of the home automation system that are included in the new room. At FIG. **8**V, third designated region **848** is blank, and thus, no accessory devices have been added to the new room. In some embodiments, electronic device **800** is configured to add respective accessory devices to the new room in response to detecting user input corresponding to one or more of accessory user interface objects **852***a*-**852***i* of accessories region **852**.

[0328] Third designated region **848** and accessories region **852** are configured to operate and/or function similar to designated region **814** and accessories region **816** described above with reference to FIGS. **8**A-**8**R. In some embodiments, electronic device **800** is configured to add any respective accessory device to the new room that has not already been associated with a room of the location. In some embodiments, electronic device **800** is configured to add a respective accessory device to the new room when the respective accessory device satisfies a set of one or more third criteria. In some embodiments, the set of one or more third criteria include determining whether the respective accessory device corresponds to and/or is consistent with a description and/or room name of the new room. For instance, in some embodiments, electronic device **800** determines that a garage door accessory device cannot be included in and/or associated with a new room that is entitled and/or designated as an office.

[0329] FIGS. **9**A-**9**D are a flow diagram illustrating a method for managing controllable devices using a computer system in accordance with some embodiments. Method **900** is performed at a computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) (e.g., an electronic device; a smart device, such as a smartphone or a smartwatch; a mobile device; and/or a wearable device) that is in communication with one or more input devices and a display generation component (e.g., **602** and/or **802**) (e.g., a display controller, a touch-sensitive display system, a projector, a display screen, a display monitor, and/or a holographic display). Some operations in method **900** are, optionally, combined, the orders of some operations are, optionally, changed, and some operations are, optionally, omitted.

[0330] As described below, method **900** provides an intuitive way for managing controllable devices. The method reduces the cognitive burden on a user for managing controllable devices, thereby creating a more efficient human-machine interface. For battery-operated computing devices, enabling a user to manage controllable devices faster and more efficiently conserves power and increases the time between battery charges.

[0331] While displaying, via the display generation component (e.g., **602** and/or **802**), a user interface (e.g., **804**) (e.g., a user interface for a home automation system that is configured to enable control of the home automation system (e.g., one or more devices and/or accessories of the home automation system) via the computer system) that includes a user interface object (e.g., **814***a*) (e.g., an affordance displayed in a predefined region of the user interface) that, when selected, provides options for controlling a first remotely controllable external device (e.g., a remotely controllable external device associated with first user interface object **814***a*) (e.g., a first accessory of a home automation system, such as a television, a light, an outlet, and/or a speaker (e.g., a smart speaker)), wherein the first remotely controllable external device is associated with a context (e.g., currently playing content (e.g., music, a movie, a TV show, and/or media that includes an image, video, lighting data, and/or audio), recently played content, a scene (e.g., a set of defined settings for one or more remotely controllable accessories), one or more currently active (e.g., on and/or otherwise in an active state) accessories, and/or one or more recently controlled accessories), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) detects (**902**), via the one or more input devices, a request to associate a second remotely controllable external device (e.g., a remotely controllable external device associated with one of accessory user interface objects **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) (e.g., a second accessory of the home automation system, such as a television, a light, an outlet, and/or a speaker (e.g., a smart speaker), that is different from the first remotely controllable external device) with the context (e.g., add the second remotely controllable external device to a group of devices that includes the first remotely controllable

external device, such that the first remotely controllable external device and the second remotely controllable external device are configured to function based on the context and/or output content (e.g., images, video, lighting, and/or audio) that corresponds to the context (e.g., a media file, a video, a movie, a song, a television show, and/or a podcast));

[0332] In response to detecting the request to associate the second remotely controllable external device (e.g., a remotely controllable external device associated with one of accessory user interface objects **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) with the context (**904**) and in accordance with a determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with one of accessory user interface objects **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) satisfies a set of one or more criteria (e.g., the second remotely controllable external device includes a function that is compatible with, consistent with, and/or configurable with the context, such that the second remotely controllable external device can function based on the context and/or perform an operation that is coordinated with (e.g., complements, enhances, and/or duplicates) operations being performed by other remotely controllable external devices that are associated with the context), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) associates (**906**) the second remotely controllable external device (e.g., a remotely controllable external device associated with one of accessory user interface objects **816***a*-**816***i*, **844***a*-**44***i*, and/or **852***a*-**852***i*) with the context (e.g., associates a remotely controllable external device associated with accessory user interface object **816***c* with the context as shown at FIGS. **8**D-**8**G) (e.g., grouping the second remotely controllable external device with the first remotely controllable external device, such that the first remotely controllable external device is configured to function based on the context and/or output first content based on the context and the second remotely controllable external device is configured to function based on the context and/or output second content that is based on the context). In some embodiments, the context includes a currently playing media file and associating the second remotely controllable external device with the context enables the second remotely controllable external device to output content (e.g., output audio, output visual elements via a display, and/or output lighting) based on the media file. In some embodiments, the second remotely controllable external device functions based on the context and/or outputs content that is based on the context after being associated with the context. In some embodiments, associating the second remotely controllable external device with the context includes displaying (e.g., updating and/or changing) the user interface to indicate (e.g., displaying a visual indication on the user interface) that the second remotely controllable external device is associated with the context.

[0333] In response to detecting the request to associate the second remotely controllable external device (e.g., a remotely controllable external device associated with one of accessory user interface objects **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) with the context (**904**) and in accordance with a determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with one of accessory user interface objects **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) does not satisfy the set of one or more criteria (e.g., the second remotely controllable external device does not include a function (e.g., a primary function) that is compatible with, consistent with, and/or configurable with the context, such that the second remotely controllable external device cannot function based on the context and/or perform an operation that complements, enhances, and/or duplicates operations being performed by other remotely controllable external devices that are associated with the context), wherein the set of one or more criteria are not met when the second remotely controllable external device (e.g., a remotely controllable external device associated with one of accessory user interface objects **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) includes (e.g., is configured to perform) a first function (e.g., the second remotely controllable external device is configured to perform an action, an operation, and/or a task, such as display content, cause content to be displayed on a display generation component, output audio content, output light, and/or output another sensory experience) (in some

embodiments, the function is a primary function of the second remotely controllable external device, such as a function that the second remotely controllable external device is primarily configured to perform) that does not correspond to (e.g., is not compatible with, is not consistent with, is not configurable with, and/or does not match) a second function of the first remotely controllable external device (e.g., a remotely controllable external device associated with one of first user interface object **814***a*) (e.g., the first function of the second remotely controllable external device is not compatible with, is not consistent with, and/or is not configurable with the second function of the first remotely controllable external device so that the second remotely controllable external device cannot operate in conjunction with and/or in coordination with the first remotely controllable external device (e.g., the first remotely controllable external device and the second remotely controllable external device cannot output content that is associated with the same media file)) (in some embodiments, the first function does not correspond to the second function when the first function is an action, such as locking a door, that is not related to an action of the second function, such as outputting audio and/or media content) (in some embodiments, the second remotely controllable external device is associated with the context when the second remotely controllable external device includes at least one function that corresponds to, is compatible with, is consistent, with and/or is configurable with at least one function of the first remotely controllable external device), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) forgoes (**908**) associating the second remotely controllable external device with the context (e.g., forgoes associating a remotely controllable external device associated with accessory user interface object **816***d* with the context as shown at FIGS. **8**H and **8**I) (e.g., not grouping the second remotely controllable external device with the first remotely controllable external device, such that the second remotely controllable external device does not function based on the context and/or output content that is based on the context).

[0334] Associating the second remotely controllable external device with the context when the second remotely controllable external device satisfies the set of one or more criteria and forgoing associating the second remotely controllable external device with the context when the second remotely controllable external device does not satisfy the set of one or more criteria allows a user to easily group devices that are compatible with one another without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0335] In some embodiments, the context includes content (e.g., **614**, **618**, **620**, **624**, **626**, **630**, **634**, **636**, **638**, and/or **640**) (e.g., images, video, lighting, and/or audio) that is currently being outputted (e.g., the first remotely controllable external device is actively displaying an image, displaying a video, outputting light, and/or outputting audio) by the first remotely controllable external device (e.g., a remotely controllable external device associated with first user interface object **814***a*). The context including content that is currently being output by the first remotely controllable external device allows a user to quickly cause another remotely controllable external device to output content in coordination with the first remotely controllable external device without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0336] In some embodiments, the user interface (e.g., **804**) includes an indication (e.g., **814***b*) (e.g., text, a symbol, an icon, an image, and/or another visual element that provides information about the content, such as a title, a track title, an artist name, an episode number, a season number, an album title, a podcast title, and/or a playlist name) of the content that is currently being outputted by the first remotely controllable external device. The user interface including an indication of the content that is currently being output by the first remotely controllable external device allows a user to easily understand that associating the second remotely controllable device with the context causes the second remotely controllable external device to output the content in coordination with the first remotely controllable external device, thereby providing improved visual feedback.

[0337] In some embodiments, the context includes the first remotely controllable external device

being associated with a location (e.g., as shown at FIGS. **8**U and **8**V) (e.g., the first remotely controllable external device is programmatically mapped to a location, area, and/or region (e.g., a physical location, area, and/or region)) (in some embodiments, the location is an area and/or region of a structure that is associated with an automation system (e.g., a home automation system) that is configured to be controlled by the computer system). The context including the first remotely controllable external device being associated with a location allows a user to quickly cause another remotely controllable external device to be associated with the location without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0338] In some embodiments, the context includes the first remotely controllable external device being associated with a scene (e.g., as shown at FIGS. **8**S and **8**T) (e.g., a control option that enables adjustment (e.g., coordinated and/or concurrent adjustment) of multiple devices and/or accessories to a predefined state and/or operating mode). The context including the first remotely controllable external device being associated with a location allows a user to quickly cause another remotely controllable external device to be associated with the scene without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0339] In some embodiments, the user interface (e.g., **804**) includes a device region (e.g., **816**, **844**, and/or **852**) (e.g., a region of the user interface that is separate from and/or visually distinct from a designated region that includes the user interface object). The device region (e.g., **816**, **844**, and/or **852**) includes a first device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a first selectable user interface object and/or affordance that enables control of and/or adjustment of settings of the third remotely controllable external device), different from the user interface object (e.g., **814a**), that corresponds to a third remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a third accessory of the home automation system, such as a television, a light, an outlet, and/or a speaker (e.g., a smart speaker), that is different from the first remotely controllable external device) of an automation system (e.g., a home automation system that includes one or more remotely controllable external devices that are configured to be controlled by the computer system) that includes the first remotely controllable external device. The device region (e.g., **816**, **844**, and/or **852**) includes a second device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a second selectable user interface object and/or affordance that enables control of and/or adjustment of settings of the fourth remotely controllable external device), different from the user interface object (e.g., **814a**), that corresponds to a fourth remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a fourth accessory of the home automation system, such as a television, a light, an outlet, and/or a speaker (e.g., a smart speaker), that is different from the first remotely controllable external device) of the automation system that includes the first remotely controllable external device.

[0340] The user interface including a device region having a first device user interface object and a second device user interface object allows a user to easily select and/or choose which remotely controllable external devices to associate with the context without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0341] In some embodiments, in response to detecting a request (e.g., **850c**, **850d**, **850e**, **850f**, **850g**, and/or **850h**) to associate the third remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) with the context (**910**) (e.g., add the third remotely controllable external device to a group of devices that includes the first remotely controllable external device, such that the first remotely controllable external device and the third remotely controllable external device are configured to function based on the context and/or output content (e.g., images, video, lighting, and/or audio) that corresponds to the context (e.g., a media file, a video, a movie, a song, a television show, and/or a podcast)) and in accordance with a determination that the third remotely

controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) satisfies the set of one or more criteria (e.g., the third remotely controllable external device includes a function that is compatible with, consistent with, and/or configurable with the context, such that the third remotely controllable external device can function based on the context and/or perform an operation that is coordinated with (e.g., complements, enhances, and/or duplicates) operations being performed by other remotely controllable external devices that are associated with the context), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) associates (**912**) the third remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) with the context (e.g., grouping the third remotely controllable external device with the first remotely controllable external device, such that the first remotely controllable external device is configured to function based on the context and/or output first content based on the context and the third remotely controllable external device is configured to function based on the context and/or output second content that is based on the context).

[0342] Associating the third remotely controllable external device with the context in response to detecting a request to associate the third remotely controllable external device with the context and in accordance with a determination that the third remotely controllable external device satisfies the set of one or more criteria allows a user to easily select and/or choose which remotely controllable external devices to associate with the context without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0343] In some embodiments, the device region (e.g., **816**, **844**, and/or **852**) includes, in accordance with a determination that the context is a first context, a first suggested device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a selectable user interface object and/or affordance that enables control of and/or adjustment of settings of the fifth remotely controllable external device) corresponding to a fifth remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a fifth accessory of the home automation system, such as a television, a light, an outlet, and/or a speaker (e.g., a smart speaker), that is different from the first remotely controllable external device) for associating with the first context (e.g., the first suggested device user interface object includes an appearance and/or is displayed at a position that indicates to a user of the computer system that the fifth remotely controllable external device associated with the first suggested device user interface object satisfies the set of one or more criteria and/or is otherwise able to be associated with the first context). The device region (e.g., **816**, **844**, and/or **852**) includes, in accordance with a determination that the context is a second context, different from the first context, a second suggested device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a selectable user interface object and/or affordance that enables control of and/or adjustment of settings of the sixth remotely controllable external device) corresponding to a sixth remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a sixth accessory of the home automation system, such as a television, a light, an outlet, and/or a speaker (e.g., a smart speaker), that is different from the first remotely controllable external device), different from the fifth remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**), for associating with the second context (e.g., the second suggested device user interface object includes an appearance and/or is displayed at a position that indicates to a user of the computer system that the sixth remotely controllable external device associated with the second suggested device user interface object satisfies the set of one or more criteria and/or is otherwise able to be associated with the second context).

[0344] The device region including a first suggested device user interface object in accordance with

a determination that the context is a first context and the device region including a second suggested device user interface object in accordance with a determination that the context is a second context, different from the first context, allows a user to easily understand that the fifth remotely controllable external device can be associated with the context, thereby providing improved visual feedback.

[0345] In some embodiments, the first suggested device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) includes a suggestion indicator (e.g., **822**) (e.g., text, a symbol, an icon, and/or an image, such as a dot positioned next to and/or within the suggested device user interface object). In some embodiments, the device region (e.g., **816**, **844**, and/or **852**) includes a device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) that does not include a suggestion indicator (e.g., **822**) when a remotely controllable external device corresponding to the device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) is not a suggested device for associating with the context. Including a suggestion indicator with the first suggested device user interface object allows a user to easily understand that the fifth remotely controllable external device can be associated with the context, thereby providing improved visual feedback.

[0346] In some embodiments, the device region (e.g., **816**, **844**, and/or **852**) includes a third device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a selectable user interface object and/or affordance that enables control of and/or adjustment of settings of the second remotely controllable external device) corresponding to the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**), and the request (e.g., **850c**, **850d**, **850e**, **850f**, **850g**, and/or **850h**) to associate the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) with the context includes user input (e.g., **850c**, **850d**, **850e**, **850f**, **850g**, and/or **850h**) (e.g., user input including a sustained contact component and a movement component of the sustained contact (e.g., movement of the sustained contact toward a designated region of the user interface that includes the user interface object), a swipe gesture, and/or a slide gesture) corresponding to selection of the third device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**). The request to associate the second remotely controllable external device with the context including user input corresponding to selection of the third device user interface object allows a user to request to associate the second remotely controllable external device with the context without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0347] In some embodiments, the user input (e.g., **850c**, **850d**, **850e**, **850f**, **850g**, and/or **850h**) corresponding to selection of the third device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) includes a sustained contact component (e.g., **850c**) (e.g., a tap gesture, a touch gesture, and/or a press gesture that is detected and/or held for at least a predetermined amount of time (e.g., one second, two seconds, three seconds, or five seconds)) and a movement component (e.g., **850d**) (e.g., movement of the sustained contact component), where the movement component (e.g., **850**) includes movement (e.g., detected movement from a first position and/or location on the display generation component toward a second position and/or location on the display generation component) from the device region (e.g., **816**, **844**, and/or **852**) toward a designated region (e.g., **814**, **842**, and/or **848**) (e.g., a region of the user interface that is separate from (e.g., does not overlap with) and/or visually distinct from the device region) of the user interface (e.g., **804**) that includes the user interface object (e.g., **814a**) (e.g., the user interface object is displayed in the designated region of the user interface). The user input corresponding to the third device user interface object including a sustained contact component and a movement component allows a user to request to associate the second remotely controllable external device with the context without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0348] In some embodiments, in accordance with the determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) satisfies the set of one or more criteria, the computer system (e.g., **100, 300, 500, 604, 606, 608, 610**, and/or **800**) displays (**914**), via the display generation component (e.g., **602** and/or **802**), an animation (e.g., displaying movement and/or changes in an appearance of the third device user interface object over time) of the third device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) moving from the device region (e.g., **816**, **844**, and/or **852**) toward a designated region (e.g., **814**, **842**, and/or **848**) (e.g., a region of the user interface that is separate from (e.g., does not overlap with) and/or visually distinct from the device region) of the user interface (e.g., **804**) that includes the user interface object (e.g., **814a**) (e.g., the user interface object is displayed in the designated region of the user interface). Displaying an animation of the third device user interface object moving from the device region toward a designated region of the user interface that includes the user interface object provides visual confirmation to a user of the computer system that the second remotely controllable external device can be associated with the context, thereby providing improved visual feedback.

[0349] In some embodiments, in accordance with the determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) satisfies the set of one or more criteria (**916**), the computer system (e.g., **100, 300, 500, 604, 606, 608, 610**, and/or **800**) forgoes (**918**) display (e.g., no longer displaying, ceasing to display, and/or not displaying) of the third device user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) in the device region (e.g., **816**, **844**, and/or **852**) (e.g., the third device user interface object is not displayed in the device region). In accordance with the determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) satisfies the set of one or more criteria (**916**), the computer system (e.g., **100, 300, 500, 604, 606, 608, 610**, and/or **800**) displays (**920**), via the display generation component (e.g., **602** and/or **802**), a second user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a selectable user interface object and/or affordance) in a second designated region (e.g., **814**, **842**, and/or **848**) (e.g., a region of the user interface that is separate from (e.g., does not overlap with) and/or visually distinct from the device region) of the user interface (e.g., **804**) that includes the user interface object (e.g., **814a**) (e.g., the user interface object is displayed in the designated region of the user interface), where the second user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) corresponds to the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., the second user interface object provides visual confirmation that the second remotely controllable external device has been associated with the context). Displaying a second user interface object in a second designated region of the user interface that includes the user interface object provides visual confirmation to a user of the computer system that the second remotely controllable external device is associated with the context, thereby providing improved visual feedback.

[0350] In some embodiments, the device region (e.g., **816**, **844**, and/or **852**) and the second designated region (e.g., **814**, **842**, and/or **848**) of the user interface (e.g., **804**) do not overlap with one another (e.g., the device region and the designated region are visually distinct regions, portions, and/or sections of the user interface). The device region and the designated region of the user interface not overlapping with one another allows a user to easily distinguish which devices are associated with the context and which devices are not associated with the context, thereby providing improved visual feedback.

[0351] In some embodiments, in accordance with the determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with a

respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) does not satisfy the set of one or more criteria, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) displays (**922**), via the display generation component (e.g., **602** and/or **802**), an animation (e.g., an animation changing an appearance of accessory user interface object **816d** to appearance **824** as shown at FIGS. **8**H and **8**I) (e.g., displaying movement and/or a change in appearance over time of the third device user interface object, such as darkening, shaking, blurring, and/or jiggling the third device user interface object over time) of the third device user interface object (e.g., **816a**-**816i**, **844a-844i**, and/or **852a-852i**) indicating that the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) does not satisfy the set of one or more criteria (ISE, that the second remotely controllable external device is not configured to be associated with the context) (e.g., the animation visually indicates that the second remotely controllable external device is not compatible with and/or does not correspond to the context and/or the animation visually indicates that the third device user interface object cannot be moved from the device region toward a designated region of the user interface that includes the user interface object). In some embodiments, the computer system does not display movement of the third device user interface object in response to detecting user input corresponding to the third device user interface object to further indicate that the second remotely controllable external device is not configured to be associated with the context when the second remotely controllable external device does not satisfy the set of one or more criteria.

[0352] Displaying the animation of the third device user interface object indicating that the second remotely controllable external device is not configured to be associated with the context in accordance with the determination that the second remotely controllable external device does not satisfy the set of one or more criteria allows a user to quickly understand that the second remotely controllable external device cannot be associated with the context, thereby providing improved visual feedback.

[0353] In some embodiments, the set of one or more criteria includes a first criterion that is met when the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) includes a primary function (e.g., an action, an operation, and/or a task that the second remotely controllable external device is primarily configured to perform, such as display content, cause content to be displayed on a display generation component, output audio content, output light, and/or output another sensory experience) that corresponds to the context (e.g., the primary function of the second remotely controllable external device is compatible with, is consistent with, and/or is configurable with the context so that the second remotely controllable external device cannot operate in conjunction with and/or in coordination with the first remotely controllable external device (e.g., the first remotely controllable external device and the second remotely controllable external device output content that is associated with the same media file)). Associating the second remotely controllable external device with the context when the second remotely controllable external device includes a primary function that corresponds to the context allows a user to quickly group remotely controllable external devices that are compatible with one another without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0354] In some embodiments, the set of one or more criteria includes a second criterion that is met when the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) has a first configuration and the first remotely controllable external device (e.g., a remotely controllable external device associated with first user interface object **814a**) has the first configuration (e.g., the first remotely controllable external device and the second remotely controllable external device are both associated with (e.g., programmatically mapped to) a

particular area, region, and/or portion of a location, such as the same room of a home). Associating the second remotely controllable external device with the context when the second remotely controllable external device and the first remotely controllable external device include a first configuration allows a user to quickly group remotely controllable external devices that are associated with one another without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0355] In some embodiments, in accordance with the determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) satisfies the set of one or more criteria, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) displays (**924**), via the display generation component (e.g., **602** and/or **802**), a third user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) (e.g., a selectable user interface object and/or affordance) corresponding to the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) in a third designated region (e.g., **814**, **842**, and/or **848**) (e.g., the third user interface object provides visual confirmation that the second remotely controllable external device has been associated with the context). The third designated region (e.g., **814**, **842**, and/or **848**) includes the user interface object (**926**) (e.g., **814a**), the first remotely controllable external device (e.g., a remotely controllable external device associated with first user interface object **814a**) is a primary device associated with the context (**928**) (e.g., the first remotely controllable external device is configured to control, cause, and/or initiate output of content (e.g., a multimedia file), the first remotely controllable external device is in communication with one or more additional remotely controllable external devices that are associated with the context and/or provides information about the content to the one or more additional remotely controllable external devices, and/or the first remotely controllable external device was the first device to be associated with the context), and the user interface object (e.g., **814a**) corresponding to the first remotely controllable external device (e.g., a remotely controllable external device associated with first user interface object **814a**) is displayed at a first size (e.g., a size of first user interface object **814a** shown at FIG. **8**G) (e.g., a first portion of a display area of the display generation component) that is greater than a second size (e.g., a size of accessory user interface object **816c** shown at FIG. **8**G) (e.g., a second portion of the display area of the display generation component that is less than the first portion) of the third user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) corresponding to the second remotely controllable external device (**930**) (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**).

[0356] Displaying the user interface object corresponding to the first remotely controllable external device at a larger size than the third user interface object corresponding to the second remotely controllable external device provides visual feedback to a user of the computer system about which device is the primary device associated with the context, thereby providing improved visual feedback.

[0357] In some embodiments, in accordance with a determination that the first remotely controllable external device (e.g., a remotely controllable external device associated with first user interface object **814a**) and the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816a-816i**, **844a-844i**, and/or **852a-852i**) include a first configuration (e.g., a first output configuration (e.g., a first speaker configured to output a left channel of audio output and a second speaker configured to output a right channel of audio output), a first physical configuration, and/or a first primary/secondary device configuration), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) displays (**932**) the third user interface object (e.g., **816a-816i**, **844a-844i**, and/or **852a-852i**) at a first location (e.g., **826b**) within the designated region (e.g., **814**, **842**, and/or **848**)

relative to the user interface object (e.g., **814***a*). In accordance with a determination that the first remotely controllable external device (e.g., a remotely controllable external device associated with first user interface object **814***a*) and the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) include a second configuration (e.g., a second output configuration (e.g., a first speaker configured to output a left channel of audio output and a second speaker configured to output a right channel of audio output), a second physical configuration, and/or a second primary/secondary device configuration), different from the first configuration, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) displays (**934**) the third user interface object (e.g., **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) at a second location (e.g., **826***c*), different from the first location (e.g., **826***b*), within the designated region (e.g., **814**, **842**, and/or **848**) relative to the user interface object (e.g., **814***a*).

[0358] Displaying the third user interface object at a first location within the designated region in accordance with a determination that the first remotely controllable external device and the second remotely controllable external device include a first configuration and displaying the third user interface object at a second location, different from the first location, within the designated region in accordance with a determination that the first remotely controllable external device and the second remotely controllable external device include a second configuration, different from the first configuration, provides visual feedback to a user of the computer system about how the devices are configured to operate with one another, thereby providing improved visual feedback.

[0359] In some embodiments, in accordance with the determination that the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) satisfies the set of one or more criteria, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) provides (**936**) the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) with an ability to function in accordance with the context (e.g., the second remotely controllable external device is configured to function based on the context and/or output second content that is based on the context). In some embodiments, the context includes a currently playing media file and associating the second remotely controllable external device with the context enables the second remotely controllable external device to output content (e.g., output audio, output visual elements via a display, and/or output lighting) based on the media file. In some embodiments, the second remotely controllable external device functions based on the context and/or outputs content that is based on the context after being associated with the context. Providing the second remotely controllable external device with an ability to function in accordance with the context in accordance with the determination that the second remotely controllable external device satisfies the set of one or more criteria allows a user to quickly group devices together without having to navigate to an additional user interface, thereby reducing the number of inputs needed to perform an operation.

[0360] In some embodiments, while (or, optionally, after) the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) is associated with the context, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) detects (**938**), via the one or more input devices, a request (e.g., **850***j* and/or **850***k*) to disassociate the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) with the context (e.g., remove the second remotely controllable external device from a group of devices that includes the first remotely controllable external device, such that the first remotely controllable external device and the second remotely controllable external device are not (e.g., no longer) configured to function based on the context and/or output content (e.g., images, video, lighting,

and/or audio) that corresponds to the context (e.g., a media file, a video, a movie, a song, a television show, and/or a podcast)). In response to detecting the request (e.g., **850***j* and/or **850***k*) to disassociate the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) with the context, the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) disassociates (**940**) the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i,* **844***a*-**844***i*, and/or **852***a*-**852***i*) with the context (e.g., ungrouping the second remotely controllable external device from the first remotely controllable external device, such that the first remotely controllable external device is configured to function based on the context and/or output first content based on the context, but the second remotely controllable external device is not configured to function based on the context and/or output second content that is based on the context). Disassociating the second remotely controllable external device with the context in response to the request to disassociate the second remotely controllable external device with the context allows a user to easily remove devices from a group of devices without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0361] In some embodiments, the request (e.g., **850***j* and/or **850***k*) to disassociate the second remotely controllable external device (e.g., a remotely controllable external device associated with a respective accessory user interface object **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) with the context includes user input (e.g., **850***j* and/or **850***k*) (e.g., user input including a sustained contact component and a movement component of the sustained contact (e.g., movement of the sustained contact toward a designated region of the user interface that includes the user interface object), a swipe gesture, and/or a slide gesture) corresponding to selection of a fourth user interface object (e.g., **816***a*-**816***i*, **844***a*-**844***i*, and/or **852***a*-**852***i*) in a designated region (e.g., **814**, **842**, and/or **848**) of the user interface (e.g., **804**) that includes the user interface object (e.g., **814***a*), wherein the user input (e.g., **850***j* and/or **850***k*) includes a sustained contact component (e.g., **850***j*) (e.g., a tap gesture, a touch gesture, and/or a press gesture that is detected and/or held for at least a predetermined amount of time (e.g., one second, two seconds, three seconds, or five seconds)) and a movement component (e.g., **850***k*) (e.g., movement of the sustained contact component), and wherein the movement component (e.g., **850***k*) includes movement (e.g., detected movement from a first position and/or location on the display generation component toward a second position and/or location on the display generation component) away from the designated region (e.g., **814**, **842**, and/or **848**) (e.g., toward the device region and/or another portion of the user interface that is not the designated region). The request to disassociate the second remotely controllable external device with the context including user input having a sustained contact component and a movement component allows a user to request to disassociate the second remotely controllable external device with the context without having to navigate to another user interface, thereby reducing the number of inputs needed to perform an operation.

[0362] In some embodiments, while displaying, via the display generation component (e.g., **602** and/or **802**), the user interface (e.g., **804**) that includes the user interface object (e.g., **814***a*), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) detects (**942**) user input (e.g., **850***a* and/or **850***l*) (e.g., a tap gesture, a tap gesture that includes a duration exceeding a predefined duration, a press gesture, and/or a touch gesture) corresponding to selection of the user interface object (e.g., **814***a*). In response to detecting the user input (e.g., **850***a* and/or **850***l*) corresponding to selection of the user interface object (e.g., **814***a*), the computer system (e.g., **100**, **300**, **500**, **604**, **606**, **608**, **610**, and/or **800**) displays (**944**), via the display generation component (e.g., **602** and/or **802**), a second user interface (e.g., **818** and/or **832**) (e.g., a user interface that is different from the user interface) that includes a fourth user interface object (e.g., **818***a*-**818***g* and/or **832***a*-**832***d*) (e.g., a selectable user interface object and/or an affordance) that, when selected, controls one or more functions of the first remotely controllable external device (e.g., a remotely controllable external

device associated with first user interface object **814a**) (e.g., in response to detecting user input corresponding to the fourth user interface object, the computer system is configured to adjust an operating state and/or a setting of the first remotely controllable external device). Displaying the second user interface that includes a fourth user interface object for controlling the first remotely controllable external device in response to detecting user input corresponding to selection of the user interface object allows a user to individually control the first remotely controllable external device without having to provide additional user inputs to search for the first remotely controllable external device, thereby reducing the number of inputs needed to perform an operation.

[0363] Note that details of the processes described above with respect to method **900** (e.g., FIGS. **9**A-**9**D) are also applicable in an analogous manner to the methods described above. For example, method **700** optionally includes one or more of the characteristics of the various methods described above with reference to method **900**. For example, a computer system performing method **700** can be grouped by a computer system performing method **900** with other accessory devices. For brevity, these details are not repeated below.

[0364] The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the techniques and their practical applications. Others skilled in the art are thereby enabled to best utilize the techniques and various embodiments with various modifications as are suited to the particular use contemplated.

[0365] Although the disclosure and examples have been fully described with reference to the accompanying drawings, it is to be noted that various changes and modifications will become apparent to those skilled in the art. Such changes and modifications are to be understood as being included within the scope of the disclosure and examples as defined by the claims.

[0366] As described above, one aspect of the present technology is the gathering and use of data available from various sources to output content that enhances an experience of a user. The present disclosure contemplates that in some instances, this gathered data may include personal information data that uniquely identifies or can be used to contact or locate a specific person. Such personal information data can include demographic data, location-based data, telephone numbers, email addresses, social network IDs, home addresses, data or records relating to a user's health or level of fitness (e.g., vital signs measurements, medication information, exercise information), date of birth, or any other identifying or personal information.

[0367] The present disclosure recognizes that the use of such personal information data, in the present technology, can be used to the benefit of users. For example, the personal information data can be used to determine content to output and/or to suggest accessory devices for grouping. Further, other uses for personal information data that benefit the user are also contemplated by the present disclosure. For instance, health and fitness data may be used to provide insights into a user's general wellness, or may be used as positive feedback to individuals using technology to pursue wellness goals.

[0368] The present disclosure contemplates that the entities responsible for the collection, analysis, disclosure, transfer, storage, or other use of such personal information data will comply with well-established privacy policies and/or privacy practices. In particular, such entities should implement and consistently use privacy policies and practices that are generally recognized as meeting or exceeding industry or governmental requirements for maintaining personal information data private and secure. Such policies should be easily accessible by users, and should be updated as the collection and/or use of data changes. Personal information from users should be collected for legitimate and reasonable uses of the entity and not shared or sold outside of those legitimate uses. Further, such collection/sharing should occur after receiving the informed consent of the users. Additionally, such entities should consider taking any needed steps for safeguarding and securing

access to such personal information data and ensuring that others with access to the personal information data adhere to their privacy policies and procedures. Further, such entities can subject themselves to evaluation by third parties to certify their adherence to widely accepted privacy policies and practices. In addition, policies and practices should be adapted for the particular types of personal information data being collected and/or accessed and adapted to applicable laws and standards, including jurisdiction-specific considerations. For instance, in the US, collection of or access to certain health data may be governed by federal and/or state laws, such as the Health Insurance Portability and Accountability Act (HIPAA); whereas health data in other countries may be subject to other regulations and policies and should be handled accordingly. Hence different privacy practices should be maintained for different personal data types in each country.

[0369] Despite the foregoing, the present disclosure also contemplates embodiments in which users selectively block the use of, or access to, personal information data. That is, the present disclosure contemplates that hardware and/or software elements can be provided to prevent or block access to such personal information data. For example, in the case of outputting content, the present technology can be configured to allow users to select to "opt in" or "opt out" of participation in the collection of personal information data during registration for services or anytime thereafter. In addition to providing "opt in" and "opt out" options, the present disclosure contemplates providing notifications relating to the access or use of personal information. For instance, a user may be notified upon downloading an app that their personal information data will be accessed and then reminded again just before personal information data is accessed by the app.

[0370] Moreover, it is the intent of the present disclosure that personal information data should be managed and handled in a way to minimize risks of unintentional or unauthorized access or use. Risk can be minimized by limiting the collection of data and deleting data once it is no longer needed. In addition, and when applicable, including in certain health related applications, data de-identification can be used to protect a user's privacy. De-identification may be facilitated, when appropriate, by removing specific identifiers (e.g., date of birth, etc.), controlling the amount or specificity of data stored (e.g., collecting location data a city level rather than at an address level), controlling how data is stored (e.g., aggregating data across users), and/or other methods.

[0371] Therefore, although the present disclosure broadly covers use of personal information data to implement one or more various disclosed embodiments, the present disclosure also contemplates that the various embodiments can also be implemented without the need for accessing such personal information data. That is, the various embodiments of the present technology are not rendered inoperable due to the lack of all or a portion of such personal information data. For example, content can be output by inferring preferences based on non-personal information data or a bare minimum amount of personal information, such as the content being requested by the device associated with a user, other non-personal information, or publicly available information.

Claims

1. A computer system configured to communicate with one or more light sources and one or more input devices, wherein the computer system includes a smart speaker, the computer system comprising: one or more processors; and memory storing one or more programs configured to be executed by the one or more processors, the one or more programs including instructions for: while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component; while outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation

component, receiving, via the one or more input devices, a voice input; and in response to receiving the voice input, outputting, via the one or more light sources, second light different from the light.

2. The computer system of claim 1, wherein the light includes a first color and a second color, different from the first color.

3. The computer system of claim 1, wherein outputting, via the one or more light sources, the light in accordance with the received information associated with the content displayed on the display generation component includes adjusting one or more properties of the light over time based on timing information of the received information associated with the content displayed on the display generation component.

4. The computer system of claim 1, wherein the light includes a third color that is based on a fourth color of at least a portion of the content displayed on the display generation component.

5. The computer system of claim 1, wherein: the content displayed on the display generation component includes a sporting event, the received information associated with the content displayed on the display generation component includes a status of the sporting event, and the light includes one or more properties based on the status of the sporting event.

6. The computer system of claim 1, wherein the content displayed on the display generation component includes a trailer page.

7. The computer system of claim 6, wherein the one or more programs further include instructions for: while displaying the trailer page, the trailer page including a playback user interface object: in accordance with a determination that user input corresponding to the playback user interface object has been received, outputting, via the one or more light sources, the light as dynamic light; and in accordance with a determination that user input corresponding to the playback user interface object has not been received, outputting, via the one or more light sources, the light as static light.

8. The computer system of claim 6, wherein the one or more programs further include instructions for: prior to receiving an indication of user input corresponding to the playback user interface object, outputting, via the one or more light sources, the light having a first brightness; and in response to receiving the indication of user input corresponding to the playback user interface object, outputting, via the one or more light sources, the light having a second brightness, greater than the first brightness.

9. The computer system of claim 1, wherein the content displayed on the display generation component includes content from a currently playing media file.

10. The computer system of claim 9, wherein the one or more programs further include instructions for: at a first playback time of the currently playing media file, outputting, via the one or more light sources, the light having one or more first properties; and at a second playback time, different from the first playback time, of the currently playing media file, outputting, via the one or more light sources, the light having one or more second properties, different from the one or more first properties.

11. The computer system of claim 9, wherein the output associated with the currently playing media file includes audio output associated with a first song and a second song, different from the first song, wherein the one or more programs further include instructions for: while outputting the audio output corresponding to the first song and while outputting, via the one or more light sources, the light having one or more third properties, transitioning to outputting the audio output corresponding to the second song; and concurrently with transitioning to outputting the audio output corresponding to the second song, outputting, via the one or more light sources, the light having one or more fourth properties, different from the one or more third properties.

12. The computer system of claim 1, wherein the one or more programs further include instructions for: while outputting, via the one or more light sources, the light in accordance with the received information associated with the content displayed on the display generation component at a third brightness, receiving an indication of an increase in volume of audio associated with the output; and in response to receiving the indication of the increase in volume of the audio associated with

the output, outputting, via the one or more light sources, the light in accordance with the received information associated with the content displayed on the display generation component at a fourth brightness, greater than the third brightness.

13. The computer system of claim 1, wherein the computer system is in communication with a second computer system that is of a same type as the computer system.

14. The computer system of claim 13, wherein the light includes one or more fifth properties that are different from one or more sixth properties of third light outputted by the second computer system.

15. The computer system of claim 13, wherein: the light corresponds to a first portion of the received information associated with the content displayed on the display generation component, and the second computer system is configured to output fourth light that corresponds to a second portion of the received information associated with the content displayed on the display generation component, different from the first portion.

16. The computer system of claim 13, wherein: the light includes a fifth color and a sixth color, different from the fifth color, and the second computer system is configured to output fifth light that includes a seventh color and an eighth color, different from the seventh color.

17. The computer system of claim 1, wherein outputting, via the one or more light sources, the light in accordance with the received information associated with the content displayed on the display generation component includes: in accordance with a determination that a predetermined function is available, outputting the light having one or more seventh properties; and in accordance with a determination that the predetermined function is not available, outputting the light having one or more eighth properties, different from the one or more seventh properties.

18. A non-transitory computer-readable storage medium storing one or more programs configured to be executed by one or more processors of a computer system that is in communication with one or more light sources and one or more input devices, wherein the computer system includes a smart speaker, the one or more programs including instructions for: while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component; while outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component, receiving, via the one or more input devices, a voice input; and in response to receiving the voice input, outputting, via the one or more light sources, second light different from the light.

19. A method, comprising: at a computer system that is in communication with one or more light sources and one or more input devices, wherein the computer system includes a smart speaker: while the computer system is configured to provide output associated with content displayed on a display generation component, receiving information associated with the content displayed on the display generation component; in response to receiving the information associated with the content displayed on the display generation component, outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component; while outputting, via the one or more light sources, light in accordance with the received information associated with the content displayed on the display generation component, receiving, via the one or more input devices, a voice input; and in response to receiving the voice input, outputting, via the one or more light sources, second light different from the light.