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Techniques for Passive Sharing of Detailed User Status

Abstract:

This publication describes techniques for passively sharing a current, detailed status of a user (e.g., availability, what they are doing, how to best communicate with the user) with close contacts. A user opts in to a Status Manager and can enable customized sharing with individuals (e.g., family, friends). The Status Manager best determines the current status of the user by passively using contextual information, for example from the computing device sensors or associated applications. Utilizing this information, a notification can be displayed on the computing device (e.g., messaging applications, communication applications, on a launcher screen) of the close contact, informing them of the current status of the user, and vice versa.

Keywords:

User status, live status, current status, detailed status, passive sharing, software application, locate, travel information, emergency information, safety detection, calendar sharing, event sharing, message, messaging, notification

Background:

Users have a desire to share their current status with family members and close friends and to receive the current status of family members/close friends. For example, a parent may want to know if their child made it safely to school, or a close friend may want to know if the user is on their way over for dinner. A process for setting a detailed status can vary across computing devices (e.g., a smartphone) with varying levels of passive sharing. In an example, computing devices
may have social media applications (e.g., an application installed on the smartphone) with status updates that require the user to manually set or interact with a contact to share the current status of the user. To create a detailed status, the user may need to include information about one or more of their connection quality, battery level, activity, location, calendar events, current company, travel plans, or emergency information. Users do not always have the time or desire to provide such detailed information required for a useful status.

Furthermore, a close contact may want to know the best method to communicate with the user. In an example, if the user is on a flight to London and has their computing device in a Do Not Disturb (DND) mode or flight mode, the computing device may only inform the close contact that the user cannot talk at the moment, without any further explanation. It would be useful for a contact to know why they cannot communicate with the user (e.g., because the user is on a flight) and when would be a preferable time to contact them (e.g., after the user lands in London). As a result, there are barriers preventing a user from passively sharing their detailed current status with close contacts.

**Description:**

This publication describes techniques for passively sharing a current, detailed user status on computing devices. While the example computing device described in this publication is a smartphone, other types of computing devices can also support the techniques described in this publication.

A computing device may include one or more processors, transceivers for transmitting data to and receiving data from a base station (e.g., wireless access point, another computing device), sensors (e.g., a location sensor, a global navigation satellite system (GNSS) receiver, global
positioning satellite (GPS) receiver), a computer-readable medium (CRM), and/or an input/output device (e.g., a display, a speaker, a microphone). The CRM may include any suitable memory or storage device like random-access memory (RAM), static RAM (SRAM), dynamic RAM (DRAM), non-volatile RAM (NVRAM), read-only memory (ROM), or flash memory. The CRM includes device data (e.g., user data, multimedia data, applications, and/or an operating system of the device), which are executable by the processor(s) to enable the techniques described herein. The device data may include a Status Manager. The computing device performs operations under the direction of the Status Manager to determine the current status of the user and provide detailed notifications of the user status to close contacts.

As illustrated in Figure 1, the user can opt in to the Status Manager and can enable status sharing with select individuals (e.g., close family, friends), referred to herein as “close contacts.” The Status Manager determines the current status of the user using contextual information on the computing device (e.g., received from a sensor, stored in an application, and so forth). In an example, if the computing device is moving at a high speed, the Status Manager may determine that the user is likely in a moving vehicle. In another example, if the user’s current location is at their designated workplace, the Status Manager may determine the user is likely working. By utilizing context, the user is passively providing the Status Manager with information to best determine the current status of the user.

A user may be provided with controls allowing the user to make an election as to both if and when systems, applications, and/or features described herein may enable collection of user information (e.g., information about the social network of a user, social actions, social activities, profession, preferences of the user, a current location of the user), and if the user is sent content and/or communications from a server. In addition, certain data may be treated in one or more ways
before it is stored and/or used, so that personally identifiable information is removed. For example, the identity of a user may be treated so that no personally identifiable information can be determined for the user. In another example, the geographic location of the user may be generalized where location information is obtained (e.g., to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected, how that information is used, and what information is provided to their close contacts.

![Diagram of status notification process]

**Current status may include:**
- Connection quality
- Battery level
- Activity (e.g., driving, walking, busy at work, bedtime)
- Do Not Disturb mode
- Location
- Calendar event information
- Whether the user is with someone
- Travel information (e.g., flight or hotel bookings)
- Emergency or safety situations detected (e.g., car crash)

**Figure 1**

The operation of notifying a close contact of the current status of the user may appear as an update on messaging applications, communication applications, and/or on a launcher screen. The notification may vary across operating systems and applications installed on the CRM; for example, the notification may appear as a shaded bar to improve visibility. When the notification appears, the contact will be able to access detailed information about the current status of the user, and vice versa, which may include descriptive details identified herein.

In a first example, the Status Manager may determine the connection quality and/or battery level of the computing device and include such information in the current status of the user. If a mother is unsuccessfully trying to contact her child, the notification may indicate if the child is in
a location of poor connection quality or has lost battery charge on their computing device. This
detailed status can help the mother understand why her child is not answering their smartphone
when assessing the well-being and safety of the child.

In a second example, the Status Manager may best determine the current activity of the
user and include the information in the status. If the computing device determines the user is at
their designated workplace during working hours, the notification may indicate the user is busy at
work. A contact can use that information to avoid disturbing the user.

In a third example, the Do Not Disturb (DND) mode or flight mode may be detected by the
Status Manager and used to determine the current status of the user. If the user has elected to turn
on the DND mode (e.g., during a flight, while driving), the Status Manager can detect this setting
preference and share it with close contacts. This can provide useful information regarding the
intent of the user to refrain from communication at the present time, regardless of location or
activity.

In a fourth example, the location of the user may be determined by the Status Manager and
included in the current status of the user. If the user is at their London home during regular sleeping
hours, the computing device may determine the user is likely sleeping. A notification indicating
that it is “Bedtime in London” may appear, informing contacts of the status of the user. This can
prevent contacts from disturbing the user while they are sleeping.

In a fifth example, the calendar event or travel information of the user may be determined
by the Status Manager in an associated application. If the user is staying at a hotel to visit family
out of state, the computing device may use booking information stored on an associated application
(e.g., calendar, hotel booking application). The notification may indicate “Checking into the
Hilton.” After arriving at the hotel, perhaps the user attends lunch scheduled with their family at
2:00pm. The Status Manager can use a stored calendar event like “2:00pm Lunch with Family” to create a detailed status for close contacts.

In a sixth example, the Status Manager may include emergency or safety situations detected by the computing device to determine the current status of the user. If the computing device detects the car has been involved in a crash, the Status Manager can include that information in a notification. This may allow close contacts to keep track of the safety of a user throughout the day. If a parent is worried about their teenager driving safely to school in the rain, the parent may use the notification updates to check if there are any emergencies detected by the smartphone of the teenager.

References:


