

METHOD AND APPARATUS FOR GENERATING AND SENDING A TWO-DIMENSIONAL CODE IN A MESSAGE

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BACKGROUND

Field

[0001] This disclosure is generally related to mobile communications. More specifically,
this disclosure is related to generating and sending a two-dimensional code in a communication
10 message.

Related Art

[0002] Advancements in low-power circuits, battery technologies, and cellular and
wireless networks has resulted in the proliferation of various types of mobile computing systems.
15 In many cases, consumers prefer to perform their computing tasks on laptops, tablet computers,
and smartphones over traditional desktop (non-mobile) computers.

[0003] With such mobile devices, a user may communicate with others, access the
Internet, or perform other online tasks anytime and anywhere. However, due to their small size
and/or their portability, a user is typically only able to access one application at a time. For
20 example, users oftentimes communicate with others while on the go using a messaging
application on their mobile device. On mobile devices, such as smartphones and tablet
computers, the messaging application may consume the complete display screen.

[0004] Unfortunately, existing messaging applications typically have a limited set of
features, which limits the types of content that a user can share with others. If a user wishes to
25 send other types of content to others, the user may need to switch to another application suitable
for communicating such content on the mobile device, which can degrade the user experience
and decrease communication efficiency.

SUMMARY

30 [0004a] The invention is defined in the independent claims. Further embodiments of the
invention are defined in the dependent claims.

[0005] One embodiment provides a code-generating system that can generate and insert a
two-dimensional (2-D) code into a message from within a messaging application on a mobile
computing device. During operation, the system can receive a request to generate a 2-D code,

What Is Claimed Is:

1. A method, comprising:
obtaining, by a personal computing device presenting a messaging application to a first
5 user, a request to generate a two-dimensional optical code, wherein the messaging application facilitates message-based communication between the first user and a second user;
presenting, in the messaging application, a user-interface for providing a message content to represent as the two-dimensional optical code;
generating, using the messaging application, the two-dimensional optical code
10 representing the message content;
generating, for the second user, a message comprising the two-dimensional optical code in the messaging application; and
transmitting the message, which is destined to the second user.
- 15 2. The method of claim 1, further comprising:
entering the message comprising the two-dimensional optical code into an input field of the messaging application.
- 20 3. The method of claim 1, wherein generating the message involves:
obtaining, from the first user, additional message content that is not to be converted into a two-dimensional optical code; and
generating the message comprising the two-dimensional optical code and the additional message content.
- 25 4. The method of claim 1, wherein presenting the user-interface in the messaging application involves presenting a graphical control element of the messaging application.
5. The method of claim 1, wherein presenting the user-interface in the messaging application involves presenting the user-interface as an overlay window of the messaging
30 application.
6. The method of claim 1, wherein generating the two-dimensional optical code involves processing the message content on the personal computing device.

7. The method of claim 1, wherein generating the two-dimensional optical code involves sending the message content to a code-generating server.

8. The method of claim 7, wherein sending the message to the second user involves the code-generating server sending the message to a personal computing device of the second user.

9. The method of claim 1, wherein transmitting the message to the second user involves transmitting the message to a messaging server.

10. The method of claim 1, wherein transmitting the message to the second user involves transmitting the message to a personal computing device of the second user.

11. A non-transitory computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform a method, the method comprising:
obtaining a request to generate a two-dimensional optical code, while a first user is composing a message in a messaging application, wherein the messaging application facilitates message-based communication between the first user and a second user;
presenting, in the messaging application, a user-interface for providing a message content to represent as the two-dimensional optical code;
generating, using the messaging application, the two-dimensional optical code representing the message content;
generating, for the second user, a message comprising the two-dimensional optical code in the messaging application; and
transmitting the message, which is destined to the second user.

12. The storage medium of claim 11, further comprising:
entering the message comprising the two-dimensional optical code into an input field of the messaging application.

13. The storage medium of claim 11, wherein generating the message involves:
obtaining, from the first user, additional message content that is not to be converted into a two-dimensional optical code; and
generating the message comprising the two-dimensional optical code and the additional message content.

14. The storage medium of claim 11, wherein generating the two-dimensional optical code involves one or more of:

processing the message content by the messaging application or another local code-generating application; and

5 sending the message content to a code-generating server.

15. The storage medium of claim 11, wherein transmitting the message to the second user involves one or more of:

transmitting the message to a messaging server;

10 transmitting the message to a personal computing device of the second user; and

a code-generating server sending the message to the personal computing device of the second user.

16. An apparatus, comprising:

15 a user-interface mechanism operable to:

obtain a request to generate a two-dimensional optical code, while a first user is composing a message in a messaging application, wherein the messaging application facilitates message-based communication between the first user and a second user; and

20 present, in the messaging application, a user-interface for providing a message content to represent as the two-dimensional optical code;

a code-generating mechanism operable to generate, using the messaging application, the two-dimensional optical code representing the message content;

25 a message-composing module operable to generate, for the second user, a message comprising the two-dimensional optical code in the messaging application; and

a message-exchange mechanism operable to transmit the message, which is destined to the second user.

17. The apparatus of claim 16, wherein the message-composing module is further
30 operable to enter the message comprising the two-dimensional optical code into an input field of the messaging application.

18. The apparatus of claim 16, wherein the message-composing module is further operable to:

obtain, from the first user, additional message content that is not to be converted into a two-dimensional optical code; and

generate the message comprising the two-dimensional optical code and the additional message content.

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19. The apparatus of claim 16, wherein generating the two-dimensional optical code involves one or more of:

processing the message content by the messaging application or another local code-generating application; and

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sending the message content to a code-generating server.

20. The apparatus of claim 16, wherein transmitting the message to the second user involves one or more of:

transmitting the message to a messaging server;

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transmitting the message to a personal computing device of the second user; and

a code-generating server sending the message to the personal computing device of the second user.

21. A computer program or a computer program product comprising instructions which, when executed by a personal computing device, cause the personal computing device to carry out the method of any one of claims 1 to 10.

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