SUMMARY

[0007] Techniques and technologies are described for context-aware caller redirection from a telephony environment to a messaging environment.

[0008] ~~In one example, a method for context-aware caller redirection from a telephony environment to a messaging environment is provided. The method includes receiving telephony information from a telephony system. The telephony information includes a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system. The method also includes selecting a selected messaging operator of a plurality of messaging operators based on the call context. The method also includes generating a messaging interface for the selected messaging operator. The messaging interface includes the caller identifier, the call context, and an input interface. The method also includes receiving a caller message from the caller via a messaging service. The method also includes updating the messaging interface to include the caller message in response to receipt of the caller message. The method also includes triggering transmission of an operator message to the caller device via the messaging service, the operator message input by the selected messaging operator via the input interface of the messaging interface. The method also includes updating the messaging interface to include the operator message in response to triggering transmission of the operator message.~~

According to a first aspect of the present invention, there is provided a method of context-aware caller redirection from a telephony environment to a messaging environment, the method including: receiving telephony information from a telephony system, the telephony information including a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system; selecting a first messaging operator of a plurality of messaging operators based on the call context; generating a messaging interface for the first messaging operator, the messaging interface including the caller identifier, the call context, and an input interface; receiving a caller message from the caller device via a messaging service; updating the messaging interface to include the caller message in response to receipt of the caller message; triggering transmission of an operator message to the caller device via the messaging service, the operator message input by the first messaging operator via the input interface of the messaging interface; and updating the messaging interface to include the operator message in response to triggering transmission of the operator message.

[0009] ~~In another example, a system for context-aware caller redirection is provided. The system includes one or more communication receivers, one or more memory units storing~~

~~instructions, and one or more processors. Execution of the instructions by the one or more processors causes the one or more processors to perform system operations. The system operations include receiving, using the one or more communication receivers, telephony information from a telephony system. The telephony information includes a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system. The system operations also include selecting a selected messaging operator of a plurality of messaging operators based on the call context. The system operations also include generating a messaging interface for the selected messaging operator. The messaging interface includes the caller identifier, the call context, and an input interface. The system operations also include receiving, using the one or more communication receivers, a caller message from the caller via a messaging service. The system operations also include updating the messaging interface to include the caller message in response to receipt of the caller message. The system operations also include triggering transmission of an operator message to the caller device via the messaging service, the operator message input by the selected messaging operator via the input interface of the messaging interface. The system operations also include updating the messaging interface to include the operator message in response to triggering transmission of the operator message.~~

According to a second aspect of the present invention, there is provided a system of context-aware caller redirection including of one or more servers, the system including: one or more communication receivers; one or more memory units storing instructions; and one or more processors, wherein execution the instructions by the one or more processors cause the one or more processors to: receive, using the one or more communication receivers, telephony information from a telephony system, the telephony information including a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system, select a first messaging operator of a plurality of messaging operators based on the call context, generate a messaging interface for the first messaging operator, the messaging interface including the caller identifier, the call context, and an input interface, receive, using the one or more communication receivers, a caller message from the caller device via a messaging service, update the messaging interface to include the caller message in response to receipt of the caller message, trigger transmission of an operator message to the caller device via the messaging service, the operator message input by the first messaging operator via the input interface of the messaging interface, and update the messaging interface to include the operator message in response to triggering transmission of the operator message.

[0010] ~~In another example, a non-transitory computer-readable medium is provided having stored thereon instructions that, when executed by one or more processors, cause the one or more processors to perform a method context-aware caller redirection from a telephony environment to a messaging environment. The method includes receiving telephony information from a telephony system. The telephony information includes a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system. The method also includes selecting a selected messaging operator of a plurality of messaging operators based on the call context. The method also includes generating a messaging interface for the selected messaging operator. The messaging interface includes the caller identifier, the call context, and an input interface. The method also includes receiving a caller message from the caller via a messaging service. The method also includes updating the messaging interface to include the caller message in response to receipt of the caller message. The method also includes triggering transmission of an operator message to the caller device via the messaging service, the operator message input by the selected messaging operator via the input interface of the messaging interface. The method also includes updating the messaging interface to include the operator message in response to triggering transmission of the operator message.~~

According to a third aspect of the present invention, there is provided a non-transitory computer readable storage medium having embodied thereon a program, wherein the program is executable by a processor to perform a method of context-aware caller redirection from a telephony environment to a messaging environment, the method including: receiving telephony information from a telephony system, the telephony information including a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system; selecting a first messaging operator of a plurality of messaging operators based on the call context; generating a messaging interface for the first messaging operator, the messaging interface including the caller identifier, the call context, and an input interface; receiving a caller message from the caller device via a messaging service; updating the messaging interface to include the caller message in response to receipt of the caller message; triggering transmission of an operator message to the caller device via the messaging service, the operator message input by the first messaging operator via the input interface of the messaging interface; and updating the messaging interface to include the operator message in response to triggering transmission of the operator message.

CLAIMS

~~**WHAT IS CLAIMED IS:**~~

1. A method of context-aware caller redirection from a telephony environment to a messaging environment, the method comprising:

receiving telephony information from a telephony system, the telephony information including a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system;

selecting a ~~selected~~first messaging operator of a plurality of messaging operators based on the call context;

generating a messaging interface for the ~~selected~~first messaging operator, the messaging interface including the caller identifier, the call context, and an input interface;

receiving a caller message from the caller device via a messaging service;

updating the messaging interface to include the caller message in response to receipt of the caller message;

triggering transmission of an operator message to the caller device via the messaging service, the operator message input by the ~~selected~~first messaging operator via the input interface of the messaging interface; and

updating the messaging interface to include the operator message in response to triggering transmission of the operator message.

2. The method of claim 1, further comprising triggering transmission of an introductory message to the caller device via the messaging service before receiving the caller message and before triggering transmission of the operator message, wherein the messaging interface includes the introductory message.

3. The method of claim 2, wherein the introductory message is a previously determined message.

4. The method of claim 2, further comprising generating at least part of the introductory message based on the telephony information.

5. The method of claim 2, further comprising generating an estimated wait time, wherein the introductory message includes the estimated wait time.

6. The method of claim 1, wherein selecting the ~~selected~~first messaging operator of ~~a~~the plurality of messaging operators based on the call context includes identifying that a skill associated with the ~~selected~~first messaging operator matches a skill required according to the call context.

7. The method of claim 1, wherein selecting the ~~selected~~first messaging operator of ~~a~~the plurality of messaging operators based on the call context includes identifying that a location associated with the ~~selected~~first messaging operator and a location associated with the call context are in a same predetermined geographic area of a plurality of predetermined geographic areas.

8. The method of claim 1, further comprising:

receiving, from the telephony system, a request for an estimated messaging wait time;

generating the estimated messaging wait time; and

sending, to the telephony system, the estimated messaging wait time, the telephony system communicating the estimated messaging wait time to the caller device.

9. The method of claim 1, further comprising determining, based on the telephony information, that the caller device is a mobile phone device with at least one messaging software application associated with the messaging service.

10. The method of claim 9, wherein the messaging service is a specialized messaging service other than short messaging service (SMS) and multimedia messaging service (MMS), and wherein determining that the caller device is ~~a~~the mobile phone device with at least one messaging software application associated with the messaging service includes transmitting a communication to the at least one messaging software application on the caller device and receiving a response to the communication.

11. The method of claim 1, further comprising:

identifying an optimal messaging service of a plurality of messaging services, wherein the caller device includes a software application corresponding to the optimal messaging service and wherein the caller device permits the software application to output notifications to ~~the~~a caller;

generating an introductory message based on the caller identifier; and

transmitting the introductory message to the caller device through the optimal messaging service, causing the software application to output a notification corresponding to the introductory message at the caller device.

12. The method of claim 1, wherein the messaging service is one of short messaging service (SMS) or multimedia messaging service (MMS).

13. The method of claim 1, wherein the caller identifier is a telephone number associated with the caller device.

14. The method of claim 1, further comprising:

generating an estimated wait time for the caller device to be connected to ~~a message~~the first messaging operator via the messaging service;

generating an estimated wait time for the caller device to be connected to a telephony operator via the telephony ~~service~~system; and

identifying that the estimated wait time for the caller device to be connected to ~~a~~the telephony operator exceeds the estimated wait time for the caller device to be connected to ~~a~~the first messaging operator by at least a threshold amount.

15. The method of claim 1, further comprising:

generating a contextual message based an evaluation of at least one of the caller device or the call context; and

sending the contextual message to the telephony system.

16. A system of context-aware caller redirection including of one or more servers, the system comprising:

one or more communication receivers;

one or more memory units storing instructions; and

one or more processors, wherein execution the instructions by the one or more processors cause the one or more processors to:

receive, using the one or more communication receivers, telephony information from a telephony system, the telephony information including a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system,

select a ~~selected~~first messaging operator of a plurality of messaging operators based on the call context,

generate a messaging interface for the ~~selected~~first messaging operator, the messaging interface including the caller identifier, the call context, and an input interface,

receive, using the one or more communication receivers, a caller message from the caller device via a messaging service,

update the messaging interface to include the caller message in response to receipt of the caller message,

trigger transmission of an operator message to the caller device via the messaging service, the operator message input by the ~~selected~~first messaging operator via the input interface of the messaging interface, and

update the messaging interface to include the operator message in response to triggering transmission of the operator message.

17. The system of claim 16, wherein execution the instructions by the one or more processors cause~~s~~ the one or more processors to trigger transmission of an introductory message to the caller device via the messaging service before receiving the caller message and before triggering transmission of the operator message, wherein the messaging interface includes the introductory message, wherein the introductory message is based on the telephony information.

18. The system of claim 16, further comprising a data store identifying skills corresponding to each of the plurality of messaging operators, wherein selecting the ~~selected~~first messaging operator of ~~a~~the plurality of messaging operators based on the call context includes identifying that a skill that corresponds to the ~~selected~~first messaging operator within the data store matches a skill required according to the call context.

19. The system of claim 16, further comprising one or more transmitters, wherein execution the instructions by the one or more processors cause the one or more processors to further:

generate an estimated messaging wait time, and

send the estimated messaging wait time to the telephony system using the one or more transmitters.

20. A non-transitory computer readable storage medium having embodied thereon a program, wherein the program is executable by a processor to perform a method of

context-aware caller redirection from a telephony environment to a messaging environment, the method comprising:

receiving telephony information from a telephony system, the telephony information including a caller identifier corresponding to a caller device and call context provided by the caller device during a telephone call between the caller device and the telephony system;

selecting a ~~selected~~first messaging operator of a plurality of messaging operators based on the call context;

generating a messaging interface for the ~~selected~~first messaging operator, the messaging interface including the caller identifier, the call context, and an input interface;

receiving a caller message from the caller device via a messaging service;

updating the messaging interface to include the caller message in response to receipt of the caller message;

triggering transmission of an operator message to the caller device via the messaging service, the operator message input by the ~~selected~~first messaging operator via the input interface of the messaging interface; and

updating the messaging interface to include the operator message in response to triggering transmission of the operator message.

21. The system of claim 17, wherein the introductory message is a previously determined message.

22. The system of claim 17, wherein execution the instructions by the one or more processors causes the one or more processors to generate at least part of the introductory message based on the telephony information.

23. The system of claim 17, wherein execution the instructions by the one or more processors causes the one or more processors to generate an estimated wait time, wherein the introductory message includes the estimated wait time.

24. The system of claim 16, wherein selecting the first messaging operator of the plurality of messaging operators based on the call context includes identifying that a location associated with the first messaging operator and a location associated with the call context are in a same predetermined geographic area of a plurality of predetermined geographic areas.

25. The system of claim 16, wherein execution the instructions by the one or more processors causes the one or more processors to further:

receive, from the telephony system, a request for an estimated messaging wait time;

generate the estimated messaging wait time; and

send, to the telephony system, the estimated messaging wait time, the telephony system communicating the estimated messaging wait time to the caller device.

26. The system of claim 16, wherein execution the instructions by the one or more processors causes the one or more processors to further:

determine, based on the telephony information, that the caller device is a mobile phone device with at least one messaging software application associated with the messaging service.

27. The system of claim 25, wherein the messaging service is a specialized messaging service other than short messaging service (SMS) and multimedia messaging service (MMS), and wherein determining that the caller device is the mobile phone device with at least one messaging software application associated with the messaging service

includes transmitting a communication to the at least one messaging software application on the caller device and receiving a response to the communication.

28. The system of claim 16, wherein execution the instructions by the one or more processors causes the one or more processors to further:

identify an optimal messaging service of a plurality of messaging services, wherein the caller device includes a software application corresponding to the optimal messaging service and wherein the caller device permits the software application to output notifications to a caller;

generate an introductory message based on the caller identifier; and

transmit the introductory message to the caller device through the optimal messaging service, causing the software application to output a notification corresponding to the introductory message at the caller device.

29. The system of claim 16, wherein the messaging service is one of short messaging service (SMS) or multimedia messaging service (MMS).

30. The system of claim 16, wherein the caller identifier is a telephone number associated with the caller device.

31. The system of claim 16, wherein execution the instructions by the one or more processors causes the one or more processors to further:

generate an estimated wait time for the caller device to be connected to the first messaging operator via the messaging service;

generate an estimated wait time for the caller device to be connected to a telephony operator via the telephony system; and

identify that the estimated wait time for the caller device to be connected to the telephony operator exceeds the estimated wait time for the caller device to be connected to the first messaging operator by at least a threshold amount.

32. The system of claim 16, wherein execution the instructions by the one or more processors causes the one or more processors to further:

generate a contextual message based an evaluation of at least one of the caller device or the call context; and

send the contextual message to the telephony system.

33. The non-transitory computer readable storage medium of claim 20, further comprising triggering transmission of an introductory message to the caller device via the messaging service before receiving the caller message and before triggering transmission of the operator message, wherein the messaging interface includes the introductory message.

34. The non-transitory computer readable storage medium of claim 33, wherein the introductory message is a previously determined message.

35. The non-transitory computer readable storage medium of claim 33, further comprising generating at least part of the introductory message based on the telephony information.

36. The non-transitory computer readable storage medium of claim 33, further comprising generating an estimated wait time, wherein the introductory message includes the estimated wait time.

37. The non-transitory computer readable storage medium of claim 20, wherein selecting the first messaging operator of the plurality of messaging operators based on the call context includes identifying that a skill associated with the first messaging operator matches a skill required according to the call context.

38. The non-transitory computer readable storage medium of claim 20, wherein selecting the first messaging operator of the plurality of messaging operators based on the call context includes identifying that a location associated with the first messaging operator and a location associated with the call context are in a same predetermined geographic area of a plurality of predetermined geographic areas.

39. The non-transitory computer readable storage medium of claim 20, further comprising:

receiving, from the telephony system, a request for an estimated messaging wait time;

generating the estimated messaging wait time; and

sending, to the telephony system, the estimated messaging wait time, the telephony system communicating the estimated messaging wait time to the caller device.

40. The non-transitory computer readable storage medium of claim 20, further comprising determining, based on the telephony information, that the caller device is a mobile phone device with at least one messaging software application associated with the messaging service.

41. The non-transitory computer readable storage medium of claim 40, wherein the messaging service is a specialized messaging service other than short messaging service (SMS) and multimedia messaging service (MMS), and wherein determining that the caller device is the mobile phone device with at least one messaging software application associated with the messaging service includes transmitting a communication to the at least one messaging software application on the caller device and receiving a response to the communication.

42. The non-transitory computer readable storage medium of claim 20, further comprising:

identifying an optimal messaging service of a plurality of messaging services, wherein the caller device includes a software application corresponding to the optimal messaging service and wherein the caller device permits the software application to output notifications to a caller;

generating an introductory message based on the caller identifier; and

transmitting the introductory message to the caller device through the optimal messaging service, causing the software application to output a notification corresponding to the introductory message at the caller device.

43. The non-transitory computer readable storage medium of claim 20, wherein the messaging service is one of short messaging service (SMS) or multimedia messaging service (MMS).

44. The non-transitory computer readable storage medium of claim 20, wherein the caller identifier is a telephone number associated with the caller device.

45. The non-transitory computer readable storage medium of claim 20, further comprising:

generating an estimated wait time for the caller device to be connected to the first messaging operator via the messaging service;

generating an estimated wait time for the caller device to be connected to a telephony operator via the telephony system; and

identifying that the estimated wait time for the caller device to be connected to the telephony operator exceeds the estimated wait time for the caller device to be connected to the first messaging operator by at least a threshold amount.

46. The non-transitory computer readable storage medium of claim 20, further comprising:

generating a contextual message based an evaluation of at least one of the caller device or the call context; and

sending the contextual message to the telephony system.