SYSTEMS AND METHODS FOR MANAGING INTERACTION INVITATIONS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 62,886,647, filed August 14, 2019 and titled "SYSTEMS AND METHODS FOR MANAGING INTERACTION INVITATIONS" which is hereby incorporated by reference in its entirety and for all purposes.

FIELD

[0002] The present disclosure relates generally to facilitating routing of communications. More specifically, techniques are provided to automatically initiate interaction invitations, and to dynamically route invitation acceptances, such as invitations and acceptances involving a user invited to interact with an agent using artificial intelligence (AI) and machine learning techniques.

SUMMARY

[0002a] According to a first aspect of the present disclosure, there is provided a computer-implemented method including: determining capacities associated with a plurality of terminal devices, wherein the capacities are based on workloads for agents associated with the plurality of terminal devices; accessing historical acceptance data for past interaction invitations to user devices associated with one or more criteria; accessing current data for current user devices in a network, wherein the current data includes associations between the current user devices and the one or more criteria; determining a current number of available interactions based on the historical acceptance data and the current data for the current user devices; and facilitating interactions between the agents and one or more devices of the current user devices using predictive interaction invitations generated in accordance with the current number of available interactions and the historical acceptance data.

[0002b] According to a second aspect of the present disclosure, there is provided a system, including: one or more data processors; and a non-transitory computer-readable storage medium containing instructions which, when executed on the one or more data processors, cause the one or more data processors to perform operations including: determining capacities associated with a plurality of terminal devices, wherein the capacities are based on workloads for agents associated with the plurality of terminal devices; accessing historical acceptance data for past interaction invitations to user devices associated with one or more criteria; accessing current data for current user devices in a network, wherein the current data includes associations between the current user

devices and the one or more criteria; determining a current number of available interactions based on the historical acceptance data and the current data for the current user devices; and facilitating interactions between the agents and one or more devices of the current user devices using predictive interaction invitations generated in accordance with the current number of available interactions and the historical acceptance data.

[0002c] According to a second aspect of the present disclosure, there is provided a computer-program product tangibly embodied in a non-transitory machine-readable storage medium, including instructions configured to cause a data processing apparatus to perform operations including: determining capacities associated with a plurality of terminal devices, wherein the capacities are based on workloads for agents associated with the plurality of terminal devices; accessing historical acceptance data for past interaction invitations to user devices associated with one or more criteria; accessing current data for current user devices in a network, wherein the current data includes associations between the current user devices and the one or more criteria; determining a current number of available interactions based on the historical acceptance data and the current data for the current user devices; and facilitating interactions between the agents and one or more devices of the current user devices using predictive interaction invitations generated in accordance with the current number of available interactions and the historical acceptance data.

[0003] Embodiments described herein related systems and methods for automatically managing interaction invitations in a communication system. In some embodiments, elements of the communication system can be considered a computer implemented predictive invitation or dialing system. Various embodiments can use history information from the communication to match terminal (e.g. agent) device capacity in the system to possible interactions that can be initiated proactively by the system with user devices that are connected to the system. In some examples, this can also involve supplemental information about the users associated with the user devices, as well as agents associated with the terminal devices having capacity. Machine learning analysis can be used in such a communication system to increase capacity utilization of terminal devices while avoiding negative user experiences (e.g., such as negative experiences where a system contacts a user device with an invitation and then has a user wait for an agent after the user accepts an invitation). Invitation interaction management described herein can use machine learning to avoid such negative results while improving system efficiencies and utilization.

[0004] One example embodiment includes a communication server determining capacities associated with a terminal devices based on workloads for agents associated with the terminal