



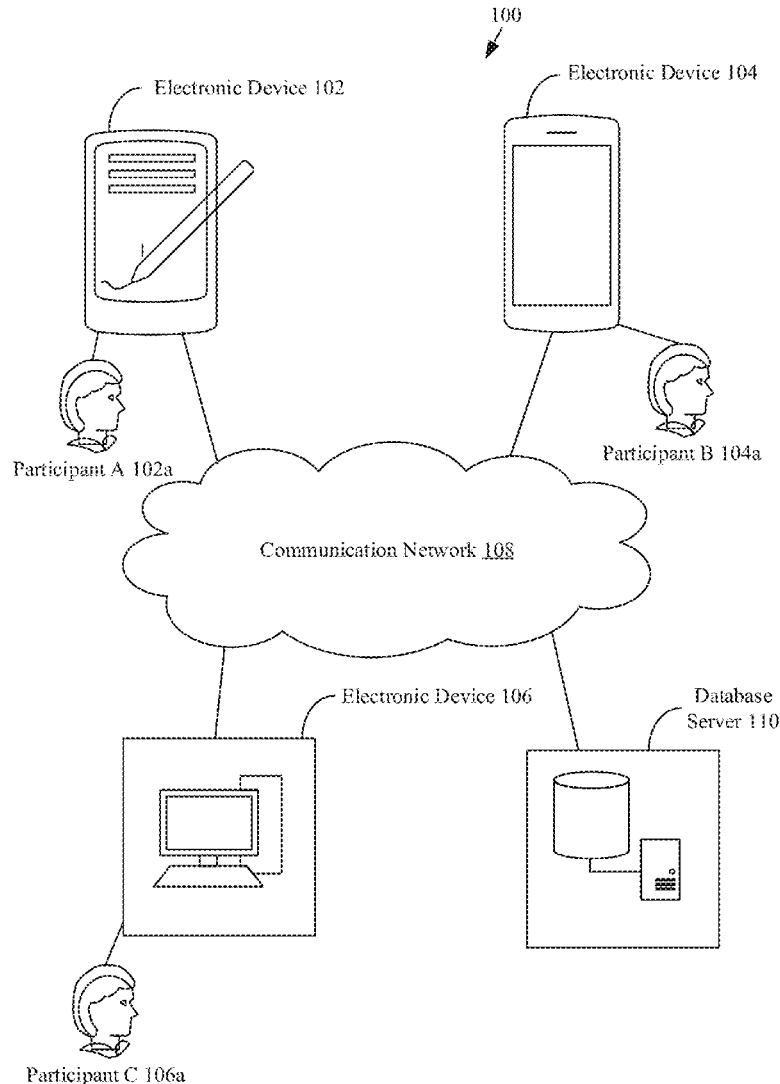
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YARLAGADDA et al.(10) **Pub. No.: US 2021/0367802 A1**(43) **Pub. Date: Nov. 25, 2021**(54) **MEETING SUMMARY GENERATION**(71) Applicant: **HUDDL Inc.**, Santa Clara, CA (US)(72) Inventors: **Krishna YARLAGADDA**, Sunnyvale, CA (US); **Harish RAJAMANI**, Hyderabad (IN); **Nava DAVULURI**, Sunnyvale, CA (US)(21) Appl. No.: **17/308,640**(22) Filed: **May 5, 2021****Related U.S. Application Data**

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H04L 12/18 (2006.01)(52) **U.S. Cl.**CPC **H04L 12/1831** (2013.01)(57) **ABSTRACT**

Provided is a method and a system for generating a summary of action points for participants in a meeting. The method is implemented by a central server including one or more processors. The method includes monitoring in real time, content consumed by participants during a first meeting and for a first defined time before the first meeting. The method includes tracking updates performed by participants to the content during and post the first meeting. The method includes identifying start time of a second meeting scheduled in continuation to first meeting based on calendar information associated with participants. The method includes generating summary of action points for participants based on content consumed by the participants during the first meeting and for the first defined time before the first meeting. The method includes displaying the summary to the participants before a second defined time of the start time of the second meeting.



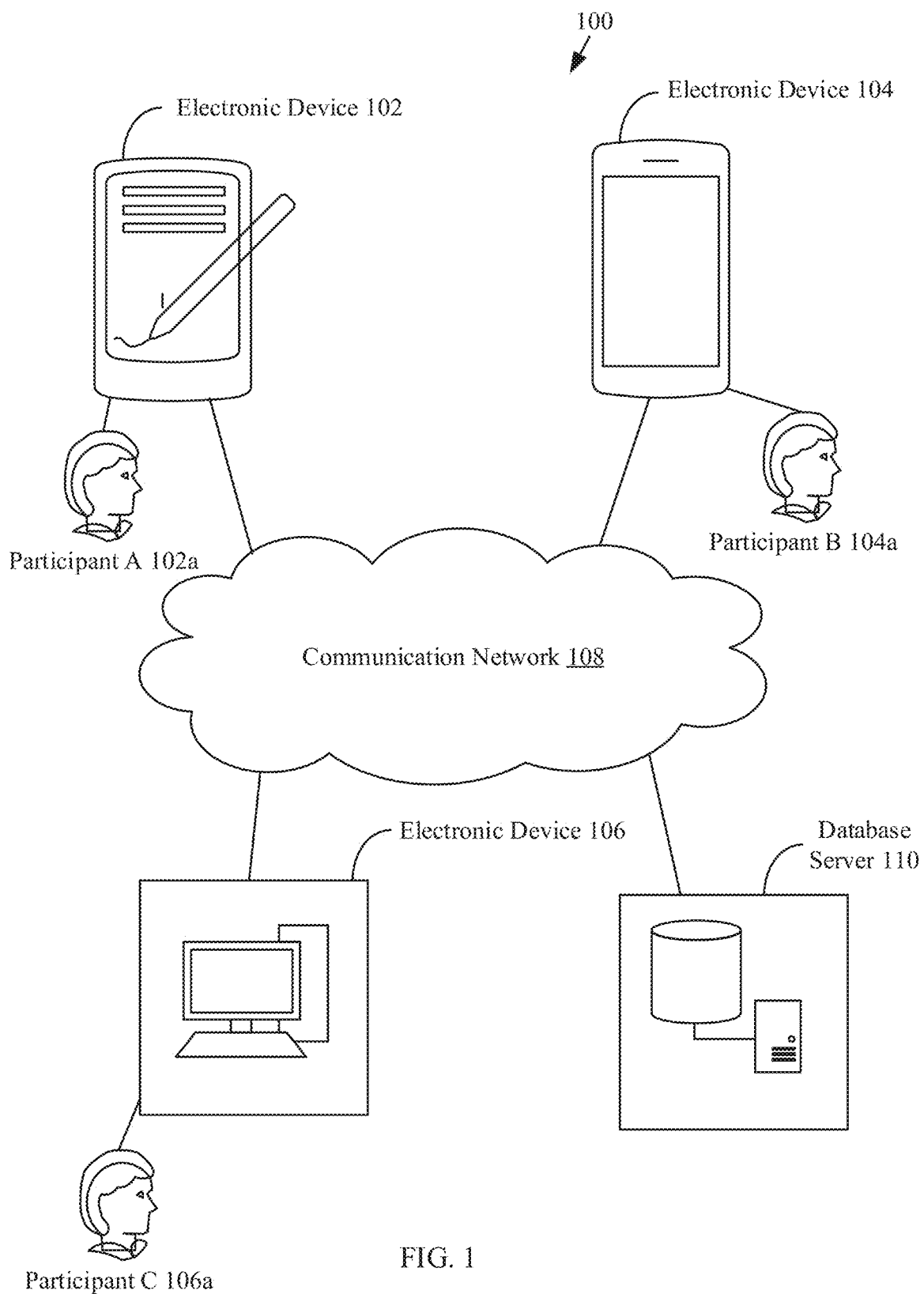


FIG. 1

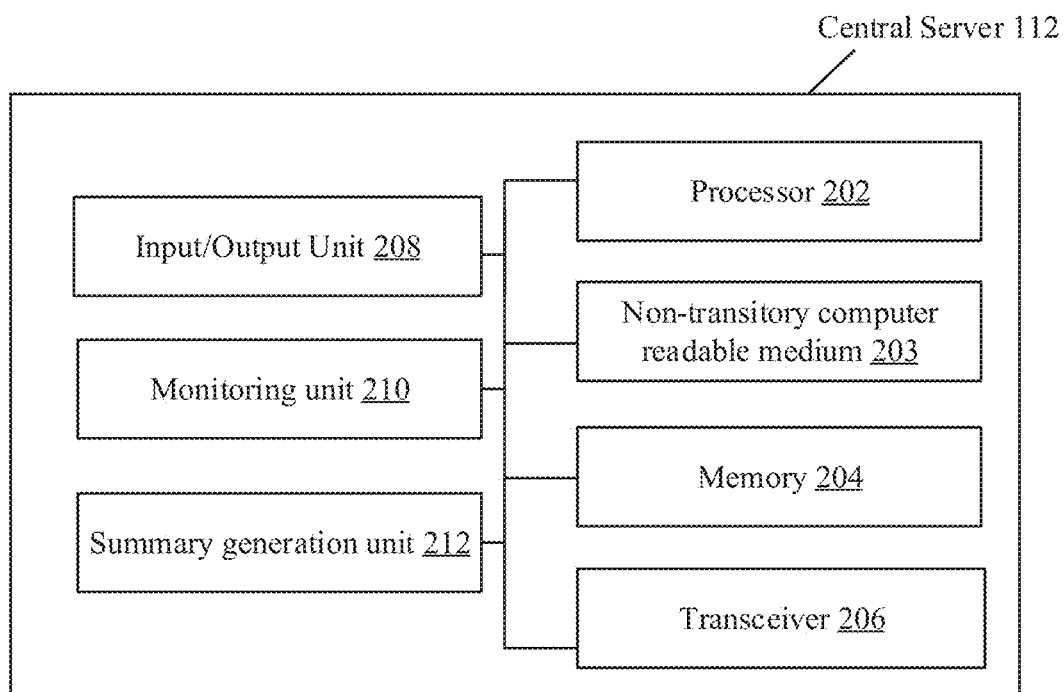


FIG. 2

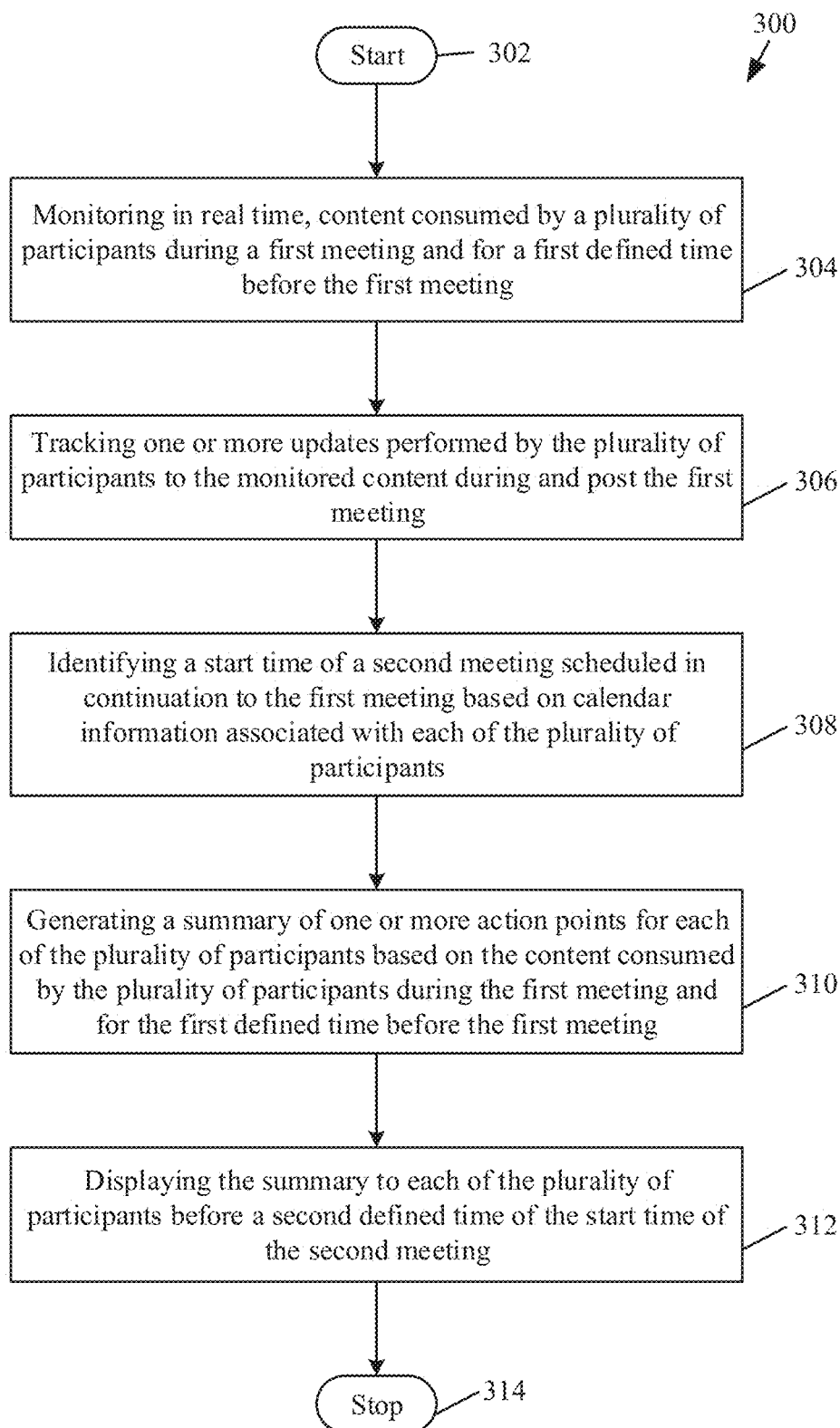


FIG. 3

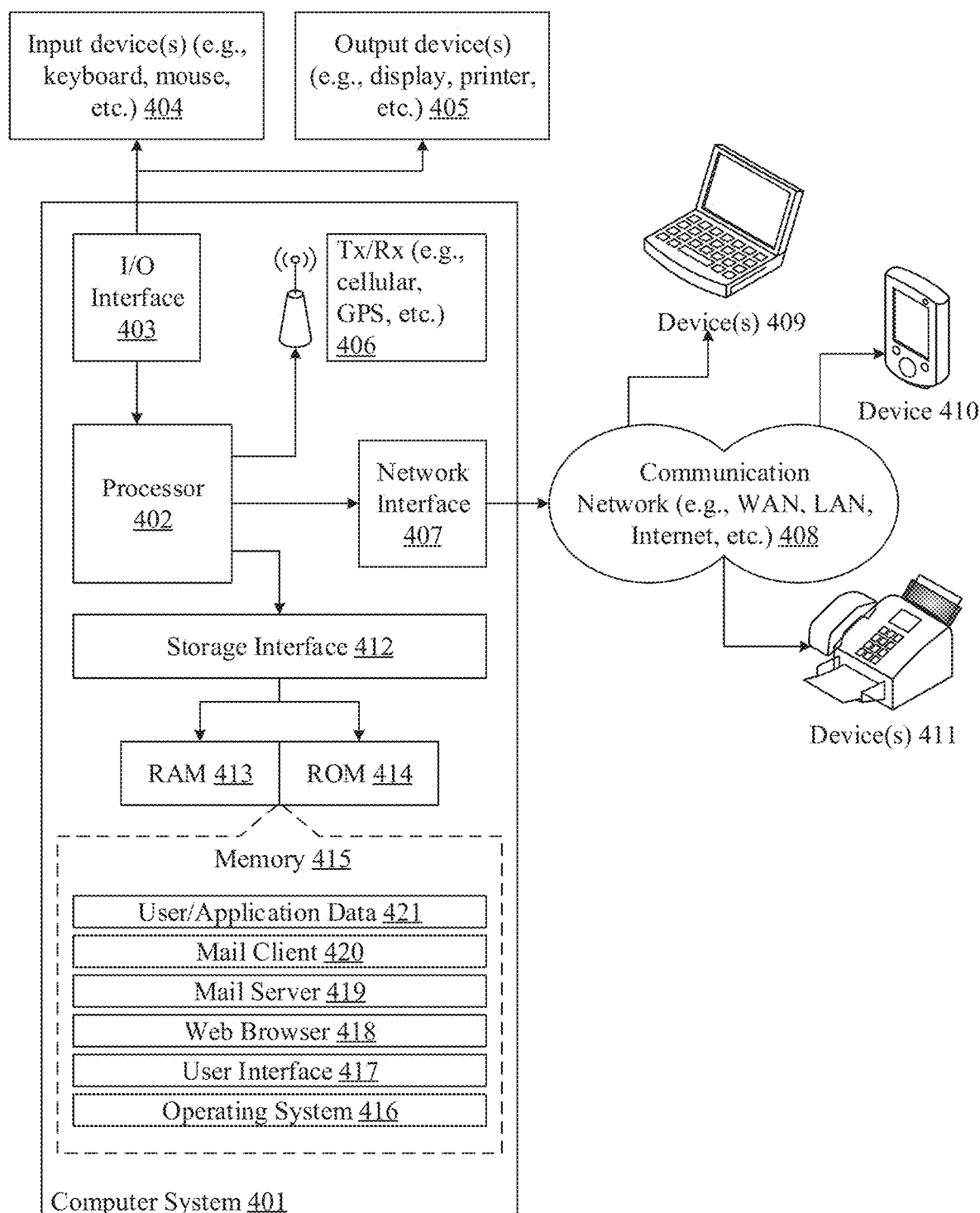


FIG. 4 Example Computer System

MEETING SUMMARY GENERATION

CROSS-REFERENCE TO RELATED APPLICATIONS/INCORPORATION BY REFERENCE

[0001] This application makes reference to, claims priority to, and claims benefit from U.S. Provisional Application Ser. No. 63/028,123, which was filed on May 21, 2020.

[0002] The above referenced application is hereby incorporated herein by reference in its entirety.

TECHNICAL FIELD

[0003] The presently disclosed embodiments are related, in general, to a summary generation of an online meeting. More particularly, the presently disclosed embodiments are related to a method and a system for generating a summary of one or more action points for each of a plurality of participants in the online meeting based on content consumed by the plurality of participants during the online meeting.

BACKGROUND

[0004] Meetings may be a common everyday occurrence especially for members of an organization. Groups of people may assemble often to discuss one or more determined topics. By way of example, there may be a status meeting, a budget meeting, a staff meeting, a product development meeting, a patent disclosure meeting, a board meeting, and the like. Meetings may be viewed by organizations as an important vehicle for facilitating communication amongst group members for the purpose of disseminating knowledge, problem solving, brainstorming and/or the like. Accordingly, many users of the organization may spend a large portion of their time in one or more meetings.

[0005] Conventionally, unproductive meetings may be incredibly expensive for the organization. This may be specifically true when information and responsibilities derived from the meetings may not be captured, tracked or managed efficiently. Often, a person who may attend the meeting may collect a multitude of information. The information may include action items, contact information, data files (including audio and video files), key points, decisions, and the like. However, the meeting participants may often fail to properly organize and distribute the information after the meeting.

[0006] Further, corporate users may have very busy schedules and, as such, it is quite hard to schedule meetings with a large audience. It may be especially difficult when the meeting has a long duration due to the large number of agenda items which need to be discussed with the large audience. For instance, if a meeting is to be 3 hours long and the invitee list has 20 or more invitees then it is unlikely in today's business environment that a host of the meeting will be able to find a 3-hour span where each and every invitee will have no conflicts. Thus, the meeting may have to be conducted in smaller timings where the agenda may be divided into multiple meetings. However, for such related and subsequent meetings many a times the participants would not have taken action on one or more items that may have been discussed during a previous meeting.

[0007] Further limitations and disadvantages of conventional and traditional approaches will become apparent to one of skill in the art, through comparison of described

systems with some aspects of the present disclosure, as set forth in the remainder of the present application and with reference to the drawings.

SUMMARY

[0008] A method and a system for generating a summary of one or more action points for each of a plurality of participants in a meeting is provided substantially as shown in, and/or described in connection with, at least one of the figures, as set forth more completely in the claims.

[0009] These and other features and advantages of the present disclosure may be appreciated from a review of the following detailed description of the present disclosure, along with the accompanying figures in which like reference numerals refer to like parts throughout.

BRIEF DESCRIPTION OF DRAWINGS

[0010] FIG. 1 is a block diagram that illustrates a system environment for generating a summary of one or more action points for each of a plurality of participants in a meeting, in accordance with at least one exemplary embodiment of the disclosure;

[0011] FIG. 2 is a block diagram that illustrates a central server configured to generate a summary of one or more action points for each of a plurality of participants in the meeting, in accordance with at least one exemplary embodiment of the disclosure;

[0012] FIG. 3 is a flowchart that illustrates a method for displaying the generated summary of one or more action points for each of a plurality of participants in the meeting, in accordance with at least one exemplary embodiment of the disclosure; and

[0013] FIG. 4 is a block diagram of an exemplary computer system for generating a summary of one or more action points for each of a plurality of participants in the meeting, in accordance with various exemplary embodiments of the present disclosure.

DETAILED DESCRIPTION

[0014] The illustrated embodiments provide a method and a system for generating a summary of one or more action points for each of a plurality of participants in a first meeting. The method may be implemented by a central server including one or more processors. The method may include monitoring in real time, content consumed by the plurality of participants during the first meeting and for a first defined time before the first meeting. In an exemplary embodiment, the monitored content may be associated with each of the plurality of participants. The method may include tracking one or more updates performed by the plurality of participants to the monitored content during and post the first meeting. The method may include identifying a start time of a second meeting scheduled in continuation to the first meeting based on calendar information associated with each of the plurality of participants. The method may include generating the summary of the one or more action points for each of the plurality of participants based on the content consumed by the plurality of participants during the first meeting and for the first defined time before the first meeting. The method may include displaying the summary to each of the plurality of participants before a second defined time of the start time of the second meeting. In an exemplary embodiment, displaying the summary may

include opening content for which the one or more updates may have been performed by the plurality of participants.

[0015] FIG. 1 is a block diagram that illustrates a system environment for generating a summary of one or more action points for each of a plurality of participants in a meeting, in accordance with at least one exemplary embodiment of the disclosure. Referring to FIG. 1, the system environment 100 may include a plurality of electronic devices, such as 102, 104 and 106, which are associated with a plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, a communication network 108, a database server 110, and a central server 112. Each of the plurality of electronic devices 102, 104, and 106 that are associated with the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, may be communicatively coupled with the database server 110, and the central server 112, via the communication network 108.

[0016] The plurality of electronic devices, such as electronic device 102, 104 and 106 may refer to a computing device used by a participant who has joined an online meeting to collaboratively work with a remaining plurality of participants. The plurality of electronic devices, such as electronic device 102, 104 and 106 may comprise of one or more processors and one or more memories. The one or more memories may include computer readable code that may be executable by the one or more processors to perform predetermined operations. In an exemplary embodiment, the plurality of electronic devices, such as electronic device 102, 104 and 106 may present a user-interface to the participant for performing one or more interactions on the electronic device. Examples of the plurality of electronic devices, such as electronic device 102, 104 and 106 may include, but are not limited to, a personal computer, a laptop, a personal digital assistant (PDA), a mobile device, a tablet, or any other computing device.

[0017] The plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a may be utilizing the electronic device 102, the electronic device 104 and the electronic device 106, respectively as shown in FIG. 1. The plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a may interact with the plurality of electronic devices, such as electronic device 102, 104 and 106 by performing one or more interactions on the user-interface presented to each of the respective participants of the associated electronic device.

[0018] In an exemplary embodiment, the communication network 108 may include a communication medium through which each of the plurality of electronic devices, such as 102, 104 and 106, the database server 110, and the central server 112 may communicate with each other. Such a communication may be performed, in accordance with various wired and wireless communication protocols. Examples of such wired and wireless communication protocols include, but are not limited to, Transmission Control Protocol and Internet Protocol (TCP/IP), User Datagram Protocol (UDP), Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), ZigBee, EDGE, infrared (IR), IEEE 802.11, 802.16, 2G, 3G, 4G, 5G, 6G cellular communication protocols, and/or Bluetooth (BT) communication protocols. The communication network 108 may include, but is not limited to, the Internet, a cloud network, a Wireless Fidelity (Wi-Fi) network, a Wireless Local Area Network

(WLAN), a Local Area Network (LAN), a telephone line (POTS), and/or a Metropolitan Area Network (MAN).

[0019] In an exemplary embodiment, the plurality of electronic devices, such as the electronic devices 102, 104 and 106 may include a database server 110. In an exemplary embodiment, the database server 110 may refer to a computing device that may be configured to store files associated with one or more applications installed on the electronic device. Further, the database server 110 may be configured to store information, such as, but not limited to, content consumed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during a first meeting and for a first defined time before the first meeting, calendar information associated with each of the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, meeting data, the one or more interactions, and/or the summary comprising of one or more action points.

[0020] In an exemplary embodiment, the plurality of electronic devices, such as electronic device 102, 104 and 106 may communicate with the database server 110 using one or more protocols such as, but not limited to, Open Database Connectivity (ODBC) protocol and Java Database Connectivity (JDBC) protocol. In an exemplary embodiment, the database server 110 may include a special purpose operating system specifically configured to perform one or more database operations on at least one of the meeting data, the calendar information, the summary, the content consumed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, and the like. Examples of database operations may include, but are not limited to, Select, Insert, Update, and Delete. In an exemplary embodiment, the database server 110 may include hardware that may be configured to perform one or more predetermined operations. In an exemplary embodiment, the database server 110 may be realized through various technologies such as, but not limited to, Microsoft® SQL Server, Oracle®, IBM DB2®, Microsoft Access®, PostgreSQL®, MySQL® and SQLite®, and the like.

[0021] A person having ordinary skill in the art will appreciate that the scope of the disclosure is not limited to realizing the plurality of electronic devices, such as electronic device 102, 104 and 106 and the database server 110 as separate entities. In an exemplary embodiment, the database server 110 may be realized as an application program installed on and/or running on the electronic device without departing from the scope of the disclosure.

[0022] In an exemplary embodiment, the central server 112 may refer to a computing device or a software framework hosting an application or a software service. In an embodiment, the central server 112 may be implemented to execute procedures such as, but not limited to, programs, routines, or scripts stored in one or more memories for supporting the hosted application or the software service. In an embodiment, the hosted application or the software service may be configured to perform one or more predetermined operations. The central server 112 may be realized through various types of application servers such as, but are not limited to, a Java application server, a .NET framework application server, a Base4 application server, a PHP framework application server, or any other application server framework.

[0023] The “meeting” mentioned in the disclosure herein refers to an online meeting conducted via one or more video

conferencing tools. The “meeting” may involve the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a interacting with each other and/or discussing one or more topics. In some examples, the meeting may be organized face to face or on a virtual platform over the communication network 108. Meeting on the virtual platform may involve the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, joining a meeting session (created by the central server 112 in the communication network 108) using the respective plurality of electronic devices, such as 102, 104 and 106.

[0024] Further, each meeting may have an associated metadata. The metadata may include at least a type of the meeting. Examples of types of meetings may include Status Update Meetings, Decision-Making Meetings, Problem-Solving Meetings, Team-Building Meetings, Idea-Sharing Meetings, Innovation Meetings, and the like. Additionally, during each meeting, the central server 112 may be configured to generate the meeting data. The meeting data may include data associated with the one or more interactions performed by the participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, during the meeting. In an exemplary embodiment, the one or more interactions may include events performed by the participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, by using the electronic devices or one or more device peripherals attached to the electronic devices. In an exemplary embodiment, the events may comprise at least one of a mouse click event, a scrolling event, a typing event, or a hover event.

[0025] In an exemplary embodiment, the first meeting may correspond to a meeting that may involve the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a interacting with each other and/or discussing the one or more topics.

[0026] In an exemplary embodiment, the second meeting may correspond to a meeting that may involve the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a interacting with each other and/or discussing the one or more topics. In an exemplary embodiment, the second meeting may have the same plurality of participants as that of the first meeting and may also include one or more new participants. Additionally, an agenda of either of the first meeting and the second meeting may form a subset of other. In other words, one or more points that may be in the agenda of the first meeting may also be present in the agenda of the second meeting and thus, the second meeting may be scheduled in continuation to the first meeting at a later point of time.

[0027] In an exemplary embodiment, the meeting (first meeting and second meeting) may be conducted on a video conferencing tool. Video conferencing tools may enable online communication for audio meetings, video meetings, and seminars between the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a. The video conferencing tools may have one or more built-in features such as chat, screen sharing, recording, and the like. The video conferencing tools used for hosting the meeting may help to enhance collaboration within employees in an organization. The employees may host or attend virtual meetings with fellow employees, company partners, and/or customers. Examples of such video conferencing

tools that may be utilized to conduct the meeting may include Skype®, Zoom®, Microsoft Teams®, Cisco Webex Meetings®, and the like.

[0028] In operation, before conducting the first meeting over the communication network 108 the central server 112 may be configured to create a meeting session. Prior to creation of the meeting session, the central server 112 may receive a request from an electronic device, such as 102 associated with a participant A 102a such as an organizer of the first meeting, to create the meeting session. Along with the request, the organizer of the first meeting (one of the participant, such as Participant A 102a) may define meeting joining information associated with the first meeting. Such meeting joining information associated with the first meeting may include at least an agenda of the first meeting, one or more topics to be discussed during the first meeting, a time duration of the first meeting, a schedule of the first meeting, meeting notes carried forwarded from previous meetings, and/or the like. After receiving the meeting joining information, the central server 112 may be configured to create the meeting session. Additionally, the central server 112 may share the meeting joining information with the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a.

[0029] The plurality of electronic devices, such as 102, 104 and 106 may enable the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a to join the first meeting based on the received meeting joining information. Further, during the first meeting, the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, may speak or share their respective video feeds. Additionally, or alternatively, the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, may share other content amongst each other in order to facilitate the discussions in the first meeting. The other content may include, but is not limited to, presentation content, screen sharing content, file sharing content, and/or the like.

[0030] In an exemplary embodiment, each of the plurality of electronic devices, such as 102, 104 and 106 may enable the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, to consume the content shared during the first meeting. Further, each of the plurality of electronic devices, such as 102, 104 and 106 may enable the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a, to perform the one or more interactions on the content being consumed. In an exemplary embodiment, the meeting data comprises data associated with the one or more interactions performed by the participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during the first meeting. In an exemplary embodiment, the one or more interactions may include events performed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a by using the plurality of electronic devices, such as 102, 104 and 106 or one or more device peripherals attached to the plurality of electronic devices, such as 102, 104 and 106. In an exemplary embodiment, the events may include at least one of a mouse click event, a scrolling event, a typing event, or a hover event.

[0031] In an exemplary embodiment, each of the plurality of electronic devices, such as 102, 104 and 106 may transmit the content consumed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C

106a during the first meeting and for the first defined time before the first meeting to the central server **112**. In an exemplary embodiment, the consumed content may include at least one of one or more applications, one or more files, one or more libraries, audio content, video content, meeting notes, presentation content, screen sharing content, and/or file sharing content that may be accessed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting. Further, the content may be associated with a plurality of attributes comprising an author name, a last modified time, a last modified date, a last modified author, a version number, a title, a category, a total editing time, a file size, a creation date, a last accessed date, a last accessed author name, a sharing status, an online status, and the like.

[0032] During the meeting, the central server **112** may be configured to receive the content consumed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting and for the first defined time before the first meeting. The first defined time may be user configurable.

[0033] Additionally, the central server **112** may monitor in real time, the content consumed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting and for the first defined time before the first meeting. In an exemplary embodiment, the monitored content may be associated with each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**.

[0034] Based on the real time monitoring, the central server **112** may be configured to track one or more updates performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** to the monitored content during and post the first meeting. In an exemplary embodiment, the tracked one or more updates may be stored in the central server **112** or alternatively may be transmitted to the database server **110** for storing.

[0035] Further, the central server **112** may be configured to identify a start time of a second meeting scheduled in continuation to the first meeting based on calendar information associated with each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**. In an exemplary embodiment, the first meeting and the second meeting may have the same plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** and agenda of either of the first meeting and the second meeting may form a subset of other.

[0036] Upon identification of the start time of the scheduled second meeting, the central server **112** may be configured to generate the summary of one or more action points for each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** based on the content consumed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting and for the first defined time before the first meeting. In an exemplary embodiment, in order to generate the summary of the one or more action points, the central server **112** may be configured to generate the meeting data associated with each participant of the first meeting. In an exemplary embodiment, the meeting data may include data associated with one or more interactions performed by each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting. In an exemplary embodiment,

the one or more interactions may include events performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**, by using the electronic device or one or more device peripherals attached to the electronic device. In an exemplary embodiment, the events may include at least one of a mouse click event, a scrolling event, a typing event, or a hover event.

[0037] In an exemplary embodiment, the meeting data may further include a transcript of each of the audio generated during the first meeting, the content shared during the first meeting, and/or meeting notes input by each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**.

[0038] After the meeting data is generated, the central server **112** may be configured to train a machine learning (ML) model associated with each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** based on the meeting data associated with each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**, respectively. In an exemplary embodiment, the central server **112** may be configured to further train the ML model based on metadata associated with the first meeting. In an exemplary embodiment, the metadata associated with the first meeting may include at least a type of the first meeting. Examples of types of meetings may include Status Update Meetings, Decision-Making Meetings, Problem-Solving Meetings, Team-Building Meetings, Idea-Sharing Meetings, Innovation Meetings, and the like.

[0039] After the ML model is trained, the central server **112** may be configured to determine the one or more action points to be performed by each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** before the start time of the second meeting based on the trained ML. Further, the central server **112** may be configured to display the summary including the one or more action points to each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** before a second defined time of the start time of the second meeting. In an exemplary embodiment, displaying the summary may include opening content for which the one or more updates may have been performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**. In an exemplary embodiment, the second defined time may be user configurable.

[0040] Additionally, the central server **112** may be configured to transmit the generated summary of the one or more action points to each of the plurality of electronic devices, such as electronic device **102**, **104** and **106**. Further, in an exemplary embodiment, the central server **112** may be configured to open and/or initiate content on each of the plurality of electronic devices, such as electronic device **102**, **104** and **106** before the second defined time of the start time of the second meeting. In an exemplary embodiment, the content that may be opened and/or initiated may correspond to at least one of the one or more applications, the one or more files, the one or more libraries, the audio content, the video content, the meeting notes, the presentation content, the screen sharing content, and/or the file sharing content that was accessed by the plurality of participants during the first meeting and the one or more updates may have been performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**.

[0041] FIG. 2 is a block diagram that illustrates a central server configured to generate a summary of one or more action points for each of a plurality of participants in the meeting, in accordance with at least one exemplary embodiment of the disclosure. FIG. 2 has been explained in conjunction with the elements of FIG. 1. Referring to FIG. 2, there is shown the central server 112, which may include a processor 202, a non-transitory computer readable medium 203, a memory 204, a transceiver 206, an input/output unit 208, a monitoring unit 210, and a summary generation unit 212. The processor 202 may be communicatively coupled to the non-transitory computer readable medium 203, the memory 204, the transceiver 206, the input/output unit 208, the monitoring unit 210, and the summary generation unit 212 and may operate in conjunction with each other to generate the summary. Further, the transceiver 206 may be communicatively coupled to the communication network 108.

[0042] The processor 202 comprises suitable logic, circuitry, interfaces, and/or code that may be configured to execute a set of instructions stored in the memory 204. The processor 202 may be implemented based on several processor technologies known in the art. The processor 202 operates in coordination with the non-transitory computer readable medium 203, the transceiver 206, the input/output unit 208, the monitoring unit 210, and the summary generation unit 212 to generate the summary. Examples of the processor 202 include, but not limited to, an X86-based processor, a Reduced Instruction Set Computing (RISC) processor, an Application-Specific Integrated Circuit (ASIC) processor, a Complex Instruction Set Computing (CISC) processor, and/or other processor.

[0043] The non-transitory computer readable medium 203 may include any tangible or non-transitory storage media or memory media such as electronic, magnetic, or optical media—e.g., disk or CD/DVD-ROM coupled to processor 202.

[0044] The memory 204 comprises suitable logic, circuitry, interfaces, and/or code that may be configured to store the set of instructions, which are executed by the processor 202. In an exemplary embodiment, the memory 204 may be configured to store one or more programs, routines, or scripts that are executed in coordination with the processor 202. The memory 204 may be implemented based on a Random Access Memory (RAM), a Read-Only Memory (ROM), a Hard Disk Drive (HDD), a storage server, and/or a Secure Digital (SD) card.

[0045] The transceiver 206 comprises of suitable logic, circuitry, interfaces, and/or code that may be configured to receive the content consumed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during the first meeting and for the first defined time before the first meeting, via the communication network 108. The transceiver 206 may be further configured to receive the meeting data and the metadata associated with the first meeting. The transceiver 206 may be further configured to transmit the generated summary to each of the plurality of electronic devices, such as electronic device 102, 104 and 106. The transceiver 206 may implement one or more known technologies to support wired or wireless communication with the communication network 108. In an exemplary embodiment, the transceiver 206 may include, but is not limited to, an antenna, a radio frequency (RF) transceiver, one or more amplifiers, a tuner, one or more

oscillators, a digital signal processor, a Universal Serial Bus (USB) device, a coder-decoder (CODEC) chipset, a subscriber identity module (SIM) card, and/or a local buffer. The transceiver 206 may communicate via wireless communication with networks, such as the Internet, 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). The wireless communication may use any of a plurality of communication standards, protocols and technologies, such as: Global System for Mobile Communications (GSM), Enhanced Data GSM Environment (EDGE), wideband code division multiple access (W-CDMA), code division multiple access (CDMA), time division multiple access (TDMA), Bluetooth, Wireless Fidelity (Wi-Fi) (e.g., IEEE 802.11a, IEEE 802.11b, IEEE 802.11g and/or IEEE 802.11n), voice over Internet Protocol (VoIP), Wi-MAX, a protocol for email, instant messaging, and/or Short Message Service (SMS).

[0046] The input/output unit 208 comprises suitable logic, circuitry, interfaces, and/or code that may be configured to display the generated summary. The input/output unit 208 comprises of various input and output devices that are configured to communicate with the processor 202. Examples of the input devices include, but are not limited to, a keyboard, a mouse, a joystick, a touch screen, a microphone, a camera, and/or a docking station. Examples of the output devices include, but are not limited to, a display screen and/or a speaker. The display screen may be configured to display the generated summary.

[0047] The monitoring unit 210 comprises suitable logic, circuitry, interfaces, and/or code that may be configured to monitor in real time, the content consumed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during the first meeting and for the first defined time before the first meeting. The monitoring unit 210 may be further configured to track the one or more updates performed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a to the monitored content during and post the first meeting. The monitoring unit 210 may be further configured to identify the start time of the second meeting scheduled in continuation to the first meeting based on the calendar information associated with each of the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a.

[0048] The summary generation unit 212 comprises suitable logic, circuitry, interfaces, and/or code that may be configured to generate the summary of one or more action points for each of the plurality of participants based on the content consumed by the plurality of participants during the first meeting and for the first defined time before the first meeting. The summary generation unit 212 may be configured to generate the meeting data associated with each of the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a. The summary generation unit 212 may be configured to train the ML model associated with each of the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a based on the meeting data.

[0049] In operation, the plurality of electronic devices, such as 102, 104 and 106 may enable the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a to connect to the first meeting for working collaboratively and to discuss one or more topics

during the first meeting. For example, the first meeting (scheduled on Dec. 30, 2020 from 11:00 am to 12 pm) may be of type “Status Update Meeting” and the agenda of the meeting may include the below points:

[0050] Decide new features to be included in the new release of the software

[0051] Check current software development status

[0052] Decide software update release date

[0053] Check updates regarding hiring of candidates in the development team

[0054] In an exemplary embodiment, the plurality of electronic devices, such as **102**, **104** and **106**, may enable the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** to consume content during the first meeting. In an exemplary embodiment, the content may include at least one of the one or more applications, the one or more files, the one or more libraries, the audio content, the video content, the meeting notes, the presentation content, the screen sharing content, and/or the file sharing content that may be accessed by the plurality of participants during the first meeting and post the first meeting. In an exemplary embodiment, the content may be associated with the plurality of attributes comprising the author name, the last modified time, the last modified date, the last modified author, the version number, the title, the category, the total the editing time, the file size, the creation date, the last accessed date, the last accessed author name, the sharing status, and the online status.

[0055] For example, during the first meeting, the Participant A **102a** may have opened a File 1. Further, Participant B **104a** may have spoken that “Participant A **102a** needs to update the File 1 before the next meeting to include the new software features”. Additionally, Participant C **106a** may have initiated an Application 1 via a screen sharing session during the first meeting to explain one or more new features that need to be included in the software before the release. Further, Participant A **102a** may have spoken that “Let us discuss about hiring of developers in the next meeting. Participant C **106a** must update the File 2 containing details of eligible candidates”. Additionally, Participant B **104a** may have accessed an Application 2 before a first defined time before the first meeting. In an example, File 1 may have the below mentioned plurality of attributes.

[0056] File Size: 84 kb

[0057] Author name: XYZ

[0058] Last accessed date: Dec. 30, 2020

[0059] Last modified date: Nov. 30, 2020

[0060] Last accessed author name: Participant A **102a**

Similarly, File 2 may have the below mentioned plurality of attributes.

[0061] File Size: 102 kb

[0062] Author name: ABC

[0063] Last accessed date: Oct. 10, 2020

[0064] Last modified date: Oct. 10, 2020

[0065] Last accessed author name: Participant A **102a**

[0066] Once the first meeting is in progress, each of the plurality of electronic devices, such as **102**, **104** and **106** may enable each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** to perform the one or more interactions on the content being consumed. In an exemplary embodiment, the one or more interactions may include events performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** by using the electronic device

or one or more device peripherals attached to the electronic device. In an exemplary embodiment, the events may include at least one of a mouse click event, a scrolling event, a typing event, or a hover event. In an exemplary embodiment, the meeting data comprises data associated with the one or more interactions performed by plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting. In an exemplary embodiment, each of the plurality of electronic devices, such as electronic device **102**, **104** and **106** may be configured to transmit in real time the consumed content and the meeting data associated with the first meeting to the central server **112**. The transceiver **206** may be configured to receive in real time the meeting data and the consumed content by plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting and for the first defined time before the first meeting. In an exemplary embodiment, the first defined time may be user configurable. For example, the user configurable time may be 15 minutes before the scheduled time of the meeting.

[0067] Upon receiving the consumed content and the meeting data in real time, the monitoring unit **210** may be configured to monitor the content consumed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** during the first meeting and for the first defined time before the first meeting. In an exemplary embodiment, the monitored content is associated with each of the plurality of participants. For example, continuing with the previous example, the monitoring unit **210** may monitor and determine that File 1 was opened by Participant A **102a** and the Participant A **102a** may have performed a hover event. Further, the monitoring unit **210** may monitor and determine that the screen sharing session was initiated by the Participant C **106a** and the Application 1 was initiated during the meeting. Further, the monitoring unit **210** may monitor and determine that Participant B **104a** may have accessed an Application 2 ten minutes (the first defined time) before the first meeting. Additionally, the monitoring unit **210** may monitor and determine the audio of Participant A **102a** and also the click event performed by the Participant A **102a** on File 2.

[0068] Further, the monitoring unit **210** may be configured to track the one or more updates performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** to the monitored content during the first meeting and post the first meeting. For example, Participant A **102a** may make edits to File 2 during the meeting and the Participant C **106a** may have made one or more updates to the one or more libraries post the first meeting to include new software features.

[0069] Additionally, the monitoring unit **210** may be configured to identify the start time of the second meeting scheduled in continuation to the first meeting based on the calendar information associated with each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**. For example, calendar information for each of the Participant A **102a**, Participant B **104a**, and Participant C **106a** may show a follow up “Status Update Meeting” with agenda similar to that of the first meeting. In an exemplary embodiment, the first meeting and the second meeting may have same plurality of participants and agenda of either of the first meeting and the second meeting may form a subset of other.

[0070] For example, the second meeting may be scheduled on Jan. 1, 2021 from 11:00 am to 12:00 pm and includes the same plurality of participants i.e. Participant A 102a, Participant B 104a, and Participant C 106a and the agenda of the second meeting may be as below:

[0071] Check status of the new features that were decided to be included in the new release of the software in the first meeting conducted on Dec. 30, 2020

[0072] Check current software development status

[0073] Determine software update release date

[0074] Check updates regarding hiring of developers in the development team

[0075] After identifying the start time of the second meeting scheduled in continuation to the first meeting, the summary generation unit 212 may be configured to generate the summary of the one or more action points for each of the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a based on the meeting data and the content consumed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during the first meeting and for the first defined time before the first meeting.

[0076] In an exemplary embodiment, in order to generate the summary, the summary generation unit 212 may be configured to generate the meeting data associated with each of the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a of the first meeting. In an exemplary embodiment, the meeting data may include data associated with the one or more interactions performed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during the first meeting. In an exemplary embodiment, the meeting data may further include a transcript of the audio generated by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during the first meeting, transcript of the content shared by the participant during the first meeting, and/or meeting notes inputted by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a during the meeting.

[0077] Further, the summary generation unit 212 may be configured to train the machine learning (ML) model associated with the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a based on the meeting data. Additionally, the summary generation unit 212 may be configured to train the ML model based on metadata associated with the first meeting. In an exemplary embodiment, the metadata associated with the first meeting may include at least a type of the first meeting.

[0078] In an exemplary embodiment, the one or more interactions performed by each participant and the content consumed by each participant may be monitored and tracked to create the machine learning model associated with each participant. In an exemplary embodiment, the machine learning model may comprise of one or more graphs including one or more nodes. In an exemplary embodiment, each of the one or more nodes may represent the content consumed by the participant and traversal amongst such one or more nodes may be based on the meeting data. In an exemplary embodiment, the ML model may be trained using either one of: one or more supervised learning techniques, one or more semi-supervised learning techniques, or one or more unsupervised learning techniques. In an exemplary

embodiment, the ML model may be trained based on the type of the meeting. Examples of types of meetings may include Status Update Meetings, Decision-Making Meetings, Problem-Solving Meetings, Team-Building Meetings, Idea-Sharing Meetings, Innovation Meetings, and the like.

[0079] Upon training the ML model associated with each participant, the summary generation unit 212 may be configured to determine the one or more action points to be performed by the participant before the start time of the second meeting based on the trained ML. In an exemplary embodiment, the summary generation unit 212 may be configured to train the ML model based on the tracked one or more updates associated with the consumed content and the meeting data.

[0080] In an exemplary embodiment, the monitoring unit 210 may be configured to track one or more updates made by the Participant A 102a to File 1 and determine changes in the plurality of attributes associated with File 1 before the second defined time of the start time of the second meeting. Further, the monitoring unit 210 may be configured to track one or more updates made by the Participant C 106a to File 2 and determine one or more changes in the plurality of attributes associated with File 2 before the second defined time of the start time of the second meeting.

[0081] For example, the Participant A 102a may have made one or more edits to the File 1 to include new software features. Further, Participant C 106a may have made one or more edits to the File 2 to include details of one or more eligible candidates for hiring in the development team. Such one or more updates may be tracked by the monitoring unit 210 and the plurality of attributes associated with each of the File 1 and File 2 may be changed. In an example, File 1 may have the below mentioned updated plurality of attributes.

[0082] File Size: 94 kb

[0083] Author name: XYZ

[0084] Last accessed date: Jan. 1, 2021

[0085] Last modified date: Jan. 1, 2021

[0086] Last accessed author name: Participant A 102a
Similarly, File 2 may have the below mentioned updated plurality of attributes.

[0087] File Size: 143 kb

[0088] Author name: ABC

[0089] Last accessed date: Jan. 1, 2021

[0090] Last modified date: Dec. 31, 2020

[0091] Last accessed author name: Participant C 106a

[0092] Upon tracking the one or more updates performed by the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a to the monitored content during and post the first meeting and after identification of the start time of the second meeting scheduled in continuation to the first meeting, the summary generation unit 212 may be configured to the summary of the one or more action points for each of the plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a based on the content consumed by the plurality of participants during the first meeting and for the first defined time before the first meeting.

[0093] For example, in continuation of the previous example, the summary generation unit 212 may be configured to generate the summary of one or more action points for plurality of participants, such as Participant A 102a, Participant B 104a, and Participant C 106a. For example, the generated summary of one or more action points may include the below points:

[0094] Open File 1 on electronic device **102** associated with Participant A **102a** before the second defined time (15 minutes) of the start time of the second meeting so that Participant A **102a** may make any required updates based on the discussion in the last meeting.

[0095] Open the updated File 1 on each of the plurality of electronic devices, such as electronic device **102**, **104** and **106** and display the updates made to File 1 by Participant A **102a**.

[0096] Initiate before the second defined time (15 minutes) of the start time of the second meeting the Application 1 on the electronic device **106** associated with Participant C **106a** because the Participant C **106a** had initiated Application 1 during the first meeting to discuss about the one or more new features that need to be included in the software before the release.

[0097] Open File 2 on electronic device **106** associated with Participant C **106a** before the second defined time (15 minutes) of the start time of the second meeting so that Participant C **106a** may include details of eligible candidates for hiring in File 2.

[0098] Open the updated File 2 on each of the plurality of electronic devices, such as electronic device **102**, **104** and **106** and display the updates made to File 2 by Participant C **106a**.

[0099] After the summary is generated, the input/output unit **208** may be configured to display the summary to each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** before the second defined time (15 minutes) of the start time of the second meeting. In an exemplary embodiment, displaying the summary may include opening content (one or more files, or one or more applications) for which the one or more updates have been performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**. In an exemplary embodiment, the second defined time may be user configurable.

[0100] Additionally, the summary generation unit **212** may be configured to display the one or more updates performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** and may also display the change in the plurality of attributes associated with the content that was consumed during and post the first meeting before the second defined time of the start time of the second meeting.

[0101] Further, the transceiver **206** may be configured to transmit the generated summary of the one or more action points to each of the plurality of electronic devices, such as electronic device **102**, **104** and **106**. In an exemplary embodiment, the plurality of electronic devices, such as electronic device **102**, **104** and **106** may be configured to display the summary to each of the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** before the second defined time (15 minutes) of the start time of the second meeting. In an exemplary embodiment, displaying the summary may include opening content (one or more files, or one or more applications) for which the one or more updates have been performed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a**. In an exemplary embodiment, the second defined time may be user configurable. In an exemplary embodiment, the summary may be displayed as a pop-up to the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C

106a. Thus, the summary generation unit **212** may automatically understand the content consumed by the plurality of participants, such as Participant A **102a**, Participant B **104a**, and Participant C **106a** in the first meeting and provide the summary before the start of the second meeting to enable the participants to work in a more collaborative and effective manner.

[0102] FIG. 3 is a flowchart that illustrates a method for displaying the generated summary of one or more action points for each of a plurality of participants in the meeting, in accordance with at least one exemplary embodiment of the disclosure. Referring to FIG. 3, the method **300** starts at **302** and proceeds to **304**. At **304**, a central server **112** may be configured to monitor in real time, content consumed by a plurality of participants during a first meeting and for a first defined time before the first meeting. At **306**, the central server **112** may be configured to track one or more updates performed by the plurality of participants to the monitored content during and post the first meeting. At **308**, the central server **112** may be configured to identify a start time of a second meeting scheduled in continuation to the first meeting based on calendar information associated with each of the plurality of participants. At **310**, the central server **112** may be configured to generate a summary of one or more action points for each of the plurality of participants based on the content consumed by the plurality of participants during the first meeting and for the first defined time before the first meeting. At **312**, the central server **112** may be configured to display the summary to each of the plurality of participants before a second defined time of the start time of the second meeting. In an exemplary embodiment, displaying the summary may comprise opening content for which the one or more updates may have been performed by the plurality of participants. Control passes to end operation **314**.

[0103] FIG. 4 is a block diagram of an exemplary computer system for implementing a dynamically generated news feed, in accordance with various exemplary embodiments of the present disclosure. Referring to FIG. 4, there is shown an exemplary computer system **401**, which may comprise a central processing unit ("CPU" or "processor") **402**, an I/O interface **403**, an input device **404**, an output device **405**, a transceiver **406**, a network interface **407**, a communication network **408**, devices, such as **409**, **410** and **411**, storage interface **412**, one or more memory devices, such as RAM **413**, ROM **414**, and memory device **415**.

[0104] Variations of computer system **401** may be used for generating and displaying the summary. The computer system **401** may comprise a central processing unit ("CPU" or "processor") **402**. Processor **402** may comprise at least one data processor for executing program components for executing user- or system-generated requests. A user may include a person, a person using a device such as those included in this disclosure, or such a device itself. The processor **402** may include specialized processing units such as integrated system (bus) controllers, memory management control units, floating point units, graphics processing units, digital signal processing units, etc. The processor **402** may include a microprocessor, such as AMD Athlon, Duron or Opteron, ARM's application, embedded or secure processors, IBM PowerPC, Intel's Core, Itanium, Xeon, Celeron or other line of processors, etc. The processor **402** may be implemented using mainframe, distributed processor, multi-core, parallel, grid, or other architectures. Some exemplary

embodiments may utilize embedded technologies like application-specific integrated circuits (ASICs), digital signal processors (DSPs), Field Programmable Gate Arrays (FPGAs), etc.

[0105] The processor **402** may be disposed in communication with one or more input/output (I/O) devices via I/O interface **403**. The I/O interface **403** may employ communication protocols/methods such as, without limitation, audio, analog, digital, monoaural, RCA, stereo, IEEE-1394, serial bus, universal serial bus (USB), infrared, PS/2, BNC, coaxial, component, composite, digital visual interface (DVI), high-definition multimedia interface (HDMI), RF antennas, S-Video, VGA, IEEE 802.n/b/g/n/x, Bluetooth, cellular (e.g., code-division multiple access (CDMA), high-speed packet access (HSPA+), global system for mobile communications (GSM), long-term evolution (LTE), WiMax, or the like), etc.

[0106] Using the I/O interface **403**, the computer system **401** may communicate with one or more I/O devices. For example, the input device **404** may be an antenna, keyboard, mouse, joystick, (infrared) remote control, camera, card reader, fax machine, dongle, biometric reader, microphone, touch screen, touchpad, trackball, sensor (e.g., accelerometer, light sensor, GPS, gyroscope, proximity sensor, or the like), stylus, scanner, storage device, transceiver, video device/source, visors, etc. Output device **405** may be a printer, fax machine, video display (e.g., cathode ray tube (CRT), liquid crystal display (LCD), light-emitting diode (LED), plasma, or the like), audio speaker, etc. In some exemplary embodiments, a transceiver **406** may be disposed in connection with the processor **402**. The transceiver may facilitate various types of wireless transmission or reception. For example, the transceiver may include an antenna operatively connected to a transceiver chip (e.g., Texas Instruments WiLink WL1283, Broadcom BCM4750IUB8, Infineon Technologies X-Gold 618-PMB9800, or the like), providing IEEE 802.11a/b/g/n, Bluetooth, FM, global positioning system (GPS), 2G/3G HSDPA/HSUPA communications, etc.

[0107] In some exemplary embodiments, the processor **402** may be disposed in communication with a communication network **408** via a network interface **407**. The network interface **407** may communicate with the communication network **408**. The network interface may employ connection protocols including, without limitation, direct connect, Ethernet (e.g., twisted pair 10/100/1000 Base T), transmission control protocol/internet protocol (TCP/IP), token ring, IEEE 802.11a/b/g/n/x, etc. The communication network **408** may include, for example, a direct interconnection, local area network (LAN), wide area network (WAN), wireless network (e.g., using Wireless Application Protocol), the Internet, etc. Using the network interface **407** and the communication network **408**, the computer system **401** may communicate with devices **409**, **410**, and **411**. These devices may include, without limitation, personal computer(s), server(s), fax machines, printers, scanners, various mobile devices such as cellular telephones, smartphones (e.g., Apple iPhone®, BlackBerry®, Android®-based phones, etc.), tablet computers, eBook readers (Amazon Kindle®, Nook, etc.), laptop computers, notebooks, gaming consoles (Microsoft Xbox®, Nintendo DS®, Sony PlayStation®, etc.), or the like. In some exemplary embodiments, the computer system **1101** may itself embody one or more of these devices.

[0108] In some exemplary embodiments, the processor **402** may be disposed in communication with one or more memory devices (e.g., RAM **413**, ROM **414**, etc.) via a storage interface **412**. The storage interface may connect to memory devices including, without limitation, memory drives, removable disc drives, etc., employing connection protocols such as serial advanced technology attachment (SATA), integrated drive electronics (IDE), IEEE-1394, universal serial bus (USB), fiber channel, small computer systems interface (SCSI), etc. The memory drives may further include a drum, magnetic disc drive, magneto-optical drive, optical drive, redundant array of independent discs (RAID), solid-state memory devices, solid-state drives, etc.

[0109] The memory devices may store a collection of program or database components, including, without limitation, an operating system **416**, user interface application **417**, web browser **418**, mail server **419**, mail client **420**, user/application data **421** (e.g., any data variables or data records discussed in this disclosure), etc. The operating system **416** may facilitate resource management and operation of the computer system **401**. Examples of operating systems include, without limitation, Apple Macintosh OS X, UNIX, Unix-like system distributions (e.g., Berkeley Software Distribution (BSD), FreeBSD, NetBSD, OpenBSD, etc.), Linux distributions (e.g., Red Hat, Ubuntu, Kubuntu, etc.), IBM OS/2, Microsoft Windows (XP, Vista/7/8, etc.), Apple iOS, Google Android, Blackberry OS, or the like. User interface **417** may facilitate display, execution, interaction, manipulation, or operation of program components through textual or graphical facilities. For example, user interfaces may provide computer interaction interface elements on a display system operatively connected to the computer system **401**, such as cursors, icons, check boxes, menus, scrollers, windows, widgets, etc. Graphical user interfaces (GUIs) may be employed, including, without limitation, Apple Macintosh operating systems' Aqua, IBM OS/2, Microsoft Windows (e.g., Aero, Metro, etc.), Unix X-Windows, web interface libraries (e.g., ActiveX, Java, Javascript, AJAX, HTML, Adobe Flash, etc.), or the like.

[0110] In some exemplary embodiments, the computer system **401** may implement a web browser **1118** stored program component. The web browser may be a hypertext viewing application, such as Microsoft Internet Explorer, Google Chrome, Mozilla Firefox, Apple Safari, etc. Secure web browsing may be provided using HTTPS (secure hypertext transport protocol), secure sockets layer (SSL), Transport Layer Security (TLS), etc. Web browsers may utilize facilities such as AJAX, DHTML, Adobe Flash, JavaScript, Java, application programming interfaces (APIs), etc. In some exemplary embodiments, the computer system **401** may implement a mail server **519** stored program component. The mail server may be an Internet mail server such as Microsoft Exchange, or the like. The mail server may utilize facilities such as ASP, ActiveX, ANSI C++/C#, Microsoft .NET, CGI scripts, Java, JavaScript, PERL, PHP, Python, WebObjects, etc. The mail server may utilize communication protocols such as internet message access protocol (IMAP), messaging application programming interface (MAPI), Microsoft Exchange, post office protocol (POP), simple mail transfer protocol (SMTP), or the like. In some exemplary embodiments, the computer system **401** may implement a mail client **420** stored program component. The

mail client may be a mail viewing application, such as Apple Mail, Microsoft Entourage, Microsoft Outlook, Mozilla Thunderbird, etc.

[0111] In some exemplary embodiments, computer system 401 may store user/application data 421, such as the data, variables, records, etc. as described in this disclosure. Such databases may be implemented as fault-tolerant, relational, scalable, secure databases such as Oracle or Sybase. Alternatively, such databases may be implemented using standardized data structures, such as an array, hash, linked list, struct, structured text file (e.g., XML), table, or as object-oriented databases (e.g., using ObjectStore, Poet, Zope, etc.). Such databases may be consolidated or distributed, sometimes among the various computer systems discussed above in this disclosure. It is to be understood that the structure and operation of the computer or database component may be combined, consolidated, or distributed in any working combination.

[0112] Furthermore, one or more computer-readable storage media may be utilized to implement various exemplary embodiments consistent with the present invention. A computer-readable storage medium refers to any type of physical memory on which information or data readable by a processor may be stored. Thus, a computer-readable storage medium may store instructions for execution by one or more processors, including instructions for causing the processor(s) to perform operations or stages consistent with the exemplary embodiments described herein. The term “computer-readable medium” should be understood to include tangible items and exclude carrier waves and transient signals, i.e., non-transitory. Examples include Random Access Memory (RAM), Read-Only Memory (ROM), volatile memory, nonvolatile memory, hard drives, Compact Disc (CD) ROMs, Digital Video Disc (DVDs), flash drives, disks, and any other known physical storage media.

[0113] Various exemplary embodiments of the disclosure encompass numerous advantages including methods and systems for generating a summary of a first meeting that may be displayed before the second meeting. In an exemplary embodiment, the methods and systems may identify a start time of the second meeting scheduled in continuation to the first meeting and may generate summary of one or more action points associated with each participant of the second meeting based on content consumed by the participants in the first meeting. Disclosed methods and systems effectively monitor and track in real time one or more updates performed by the plurality of participants to the content consumed during and post the first meeting and thus may generate an accurate summary of action points for each of the participant, thereby providing a context to the second meeting and also ensure that the action items discussed on the first meeting have been actioned upon before the second meeting is initiated. This ensures that the second meeting is much more productive. Additionally, as a trained machine learning model is used to generate the summary hence the generated summary of the action points for each of the participants is much accurate.

[0114] Thus, the claimed operations as discussed above are not routine, conventional, or well understood in the art, as the claimed operation enable the following solutions to the existing problems in conventional technologies.

[0115] The present disclosure may be realized in hardware, or a combination of hardware and software. The present disclosure may be realized in a centralized fashion,

in at least one computer system, or in a distributed fashion, where different elements may be spread across several interconnected computer systems. A computer system or other apparatus adapted for carrying out the methods described herein may be suited. A combination of hardware and software may be a general-purpose computer system with a computer program that, when loaded and executed, may control the computer system such that it carries out the methods described herein. The present disclosure may be realized in hardware that comprises a portion of an integrated circuit that also performs other functions.

[0116] A person with ordinary skills in the art will appreciate that the systems, modules, and sub-modules have been illustrated and explained to serve as examples and should not be considered limiting in any manner. It will be further appreciated that the variants of the above disclosed system elements, modules, and other features and functions, or alternatives thereof, may be combined to create other different systems or applications.

[0117] Those skilled in the art will appreciate that any of the aforementioned operations and/or system modules may be suitably replaced, reordered, or removed, and additional operations and/or system modules may be inserted, depending on the needs of a particular application. In addition, the systems of the aforementioned exemplary embodiments may be implemented using a wide variety of suitable processes and system modules, and are not limited to any particular computer hardware, software, middleware, firmware, microcode, and the like. The claims can encompass exemplary embodiments for hardware and software, or a combination thereof.

[0118] While the present disclosure has been described with reference to certain exemplary embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted without departing from the scope of the present disclosure. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the present disclosure without departing from its scope. Therefore, it is intended that the present disclosure not be limited to the particular exemplary embodiment disclosed, but that the present disclosure will include all exemplary embodiments falling within the scope of the appended claims.

What is claimed is:

1. A method, comprising:

monitoring, by a processor in real time, content consumed by a plurality of participants during a first meeting and for a first defined time before the first meeting, wherein the monitored content is associated with each of the plurality of participants;

tracking, by the processor, one or more updates performed by the plurality of participants to the monitored content during and post the first meeting;

identifying, by the processor, a start time of a second meeting scheduled in continuation to the first meeting based on calendar information associated with each of the plurality of participants;

generating, by the processor, a summary of one or more action points for each of the plurality of participants based on the content consumed by the plurality of participants during the first meeting and for the first defined time before the first meeting; and

displaying, by the processor, the summary to each of the plurality of participants before a second defined time of

the start time of the second meeting, wherein displaying the summary comprises opening content for which the one or more updates have been performed by the plurality of participants.

2. The method of claim 1, wherein the content comprises at least one of one or more applications, one or more files, one or more libraries, audio content, video content, meeting notes, presentation content, screen sharing content, and/or file sharing content that is accessed by the plurality of participants.

3. The method of claim 1, wherein the content is associated with a plurality of attributes comprising author name, last modified time, last modified date, last modified author, version number, title, category, total editing time, file size, creation date, last accessed date, last accessed author name, sharing status, and online status.

4. The method of claim 1, wherein generating the summary of the one or more action points comprises:

generating, by the processor, meeting data associated with a participant of the first meeting, wherein the meeting data comprises data associated with one or more interactions performed by the participant during the first meeting;

training, by the processor, a machine learning (ML) model associated with the participant based on the meeting data associated with the participant; and

determining, by the processor, the one or more action points to be performed by the participant before the start time of the second meeting based on the trained ML.

5. The method of claim 4, wherein the meeting data further comprises a transcript of the audio generated by the participant during the first meeting, a transcript of the content shared by the participant during the first meeting, and/or meeting notes inputted by the participant.

6. The method of claim 4, wherein the one or more interactions comprises events performed by the plurality of participants by using the electronic device or one or more device peripherals attached to the electronic device, wherein the events comprise at least one of a mouse click event, a scrolling event, a typing event, or a hover event.

7. The method of claim 4 further comprising training, by the processor, the ML model based on metadata associated with the first meeting, wherein the metadata associated with the first meeting comprises at least a type of the first meeting.

8. The method of claim 1, wherein the first meeting and the second meeting have same plurality of participants and agenda of either of the first meeting and the second meeting forms a subset of other.

9. The method of claim 1, wherein the first defined time and second defined time is user configurable.

10. A central server, comprising:

a hardware processor; and

a memory communicatively coupled to the hardware processor, wherein the memory stores processor instructions, which, on execution, causes the hardware processor to:

monitor in real time, content consumed by a plurality of participants during a first meeting and for a first defined time before the first meeting, wherein the monitored content is associated with each of the plurality of participants;

track one or more updates performed by the plurality of participants to the monitored content during and post the first meeting;

identify a start time of a second meeting scheduled in continuation to the first meeting based on calendar information associated with each of the plurality of participants;

generate a summary of one or more action points for each of the plurality of participants based on the content consumed by the plurality of participants during the first meeting and for the first defined time before the first meeting; and

display the summary to each of the plurality of participants before a second defined time of the start time of the second meeting, wherein displaying the summary comprises opening content for which the one or more updates have been performed by the plurality of participants.

11. The central server of claim 10, wherein the content comprises at least one of one or more applications, one or more files, one or more libraries, audio content, video content, meeting notes, presentation content, screen sharing content, and/or file sharing content that is accessed by the plurality of participants.

12. The central server of claim 10, wherein the content is associated with a plurality of attributes comprising author name, last modified time, last modified date, last modified author, version number, title, category, total editing time, file size, creation date, last accessed date, last accessed author name, sharing status, and online status.

13. The central server of claim 10, wherein the hardware processor is further configured to:

generate meeting data associated with a participant of the first meeting, wherein the meeting data comprises data associated with one or more interactions performed by the participant during the first meeting;

train a machine learning (ML) model associated with the participant based on the meeting data associated with the participant; and

determine the one or more action points to be performed by the participant before the start time of the second meeting based on the trained ML.

14. The central server of claim 13, wherein the meeting data further comprises a transcript of the audio generated by the participant during the first meeting, a transcript of the content shared by the participant during the first meeting, and/or meeting notes inputted by the participant.

15. The central server of claim 13, wherein the one or more interactions comprises events performed by the plurality of participants by using the electronic device or one or more device peripherals attached to the electronic device, wherein the events comprise at least one of a mouse click event, a scrolling event, a typing event, or a hover event.

16. The central server of claim 13, wherein the hardware processor is further configured to train the ML model based on metadata associated with the first meeting, wherein the metadata associated with the first meeting comprises at least a type of the first meeting.

17. The central server of claim 10, wherein the first meeting and the second meeting have same plurality of participants and agenda of either of the first meeting and the second meeting forms a subset of other.

18. The central server of claim 10, wherein the first defined time and second defined time is user configurable.

19. A non-transitory computer readable medium having stored thereon, computer executable instructions, which when executed by at least one hardware processor in an electronic device, causes the electronic device to perform operations, the operations comprising:

- monitoring in real time, content consumed by a plurality of participants during a first meeting and for a first defined time before the first meeting, wherein the monitored content is associated with each of the plurality of participants;

- tracking one or more updates performed by the plurality of participants to the monitored content during and post the first meeting;

- identifying a start time of a second meeting scheduled in continuation to the first meeting based on calendar information associated with each of the plurality of participants;

- generating a summary of one or more action points for each of the plurality of participants based on the content consumed by the plurality of participants during the first meeting and for the first defined time before the first meeting; and

- displaying the summary to each of the plurality of participants before a second defined time of the start time of the second meeting, wherein displaying the summary comprises opening content for which the one or more updates have been performed by the plurality of participants.

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