

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

Defendants infringe the asserted claims of the '731 patent, either literally or under the doctrine of equivalents by, among other things, making, using, offering for sale, selling, and/or importing into the United States unlicensed systems, products, and/or services that infringe such claims of the '731 patent. Such unlicensed systems, products, and/or services include, by way of example and without limitation, the communications platform known as "Slack." The asserted claims are identified in the claim chart below.

Each element of these asserted claims, except where noted otherwise, is present literally or under the doctrine of equivalents in the accused product because there is no substantial difference between the claim element and the corresponding functionality in the accused product, *i.e.*, the corresponding functionality in the accused product does substantially the same thing, in substantially the same way to achieve substantially the same results as the claimed element. Wrinkl's investigation and discovery are ongoing, and Wrinkl therefore reserves the right to supplement, amend, and modify this information as discovery progresses, including by citation to documents, things, and testimony provided by Defendants and/or third parties. To date, for example, Defendants have failed to produce any source code or sufficient technical materials.

The chart below demonstrates infringement by Defendants but is not intended to construe or propose any construction for any claims of the '731 patent or limit infringement theories or contentions. Wrinkl identified elements of the accused product that correspond to the language in the preamble. By including such language in the chart, Wrinkl does not concede that the language in the preamble is limiting. The cited evidence is not exhaustive but exemplary in nature. Wrinkl may amend or supplement this chart (including by adding or removing asserted claims and accused products) with additional information learned in the course of discovery and investigation (including by citation to documents, things, and testimony provided by Defendants and/or third parties).

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'731 patent	Slack
1.[pre] An apparatus for use with a group-based communication system to facilitate messaging between users of said system, comprising:	CLAIM 1 Slack includes an apparatus for use with a group-based communication system to facilitate messaging communication over a network between users of said system. For example, Slack includes cloud-based computer servers (“Slack Servers”) that interoperate with and control the behavior of end-user devices that connect to the Slack platform (“Slack End-User Devices”) over a network between Slack users (e.g., the Internet) to create a group-based communication system to facilitate messaging communication over said network. Each Slack Server includes a processor that executes instructions that control the behavior of Slack End-User Devices, including by causing them to display user-interface features to users of such end-user devices. The Slack Servers also configure Slack End-User Devices by provisioning them with executable code that executes on a processor and causes the Slack End-User Devices to operate as clients for the Slack platform and to display user-interface features to users of the Slack End-User Devices, as shown in the exemplary image below. Those user-interface features enable users to send and receive messaging communications over a network (e.g., the Internet) in a group setting. https://slack.com/help/articles/115004071768-What-is-Slack-

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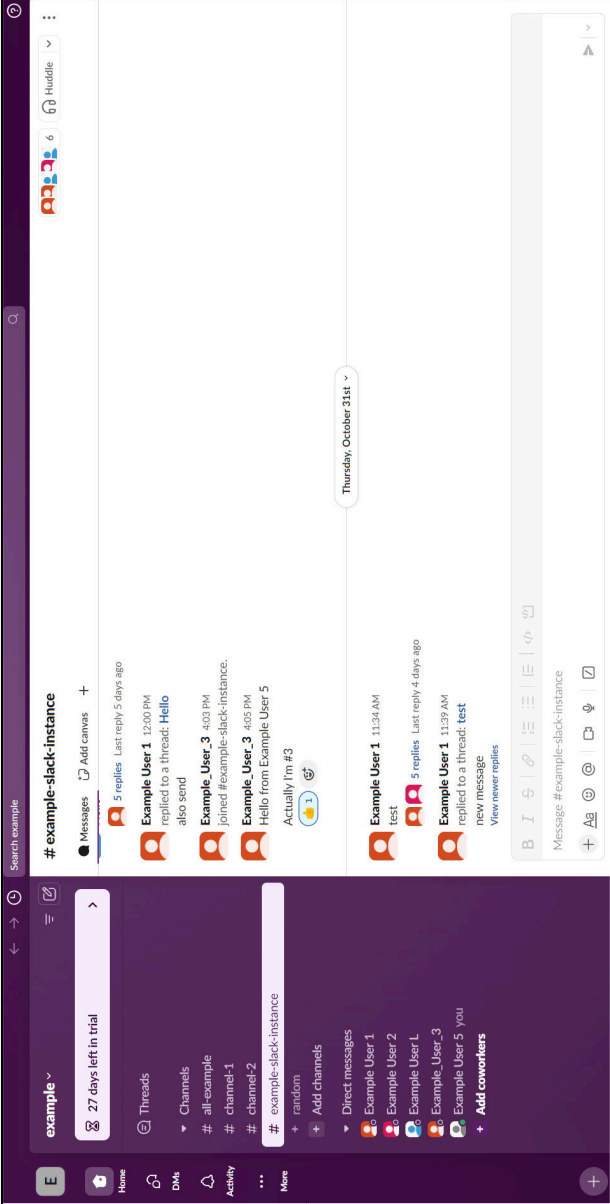
'731 patent	Slack
[1.a] a processor, and a memory associated with said processor having computer coded instructions therein, with said computer coded instructions executed by said processor, cause the apparatus to:	
[1.a] a processor, and a memory associated with said processor having computer coded instructions therein, with said computer coded instructions executed by said processor, cause the apparatus to:	Slack comprises a processor, and a memory associated with said processor having computer coded instructions therein, with said computer coded instructions that can be executed by the processor. For example, on information and belief, each Slack Server and/or each Slack End-User Device includes a processor, and a memory associated with such processor, the memory having computer coded instructions therein. Moreover, the computer coded instructions are configured to, when executed by the processor, cause Slack to perform certain functions, as further illustrated below.
[1.b] generate a group-based communication interface on a display screen of a user client device, the group-based communication interface defining:	Slack is configured to generate a group-based communication interface on a display screen of a user client device.

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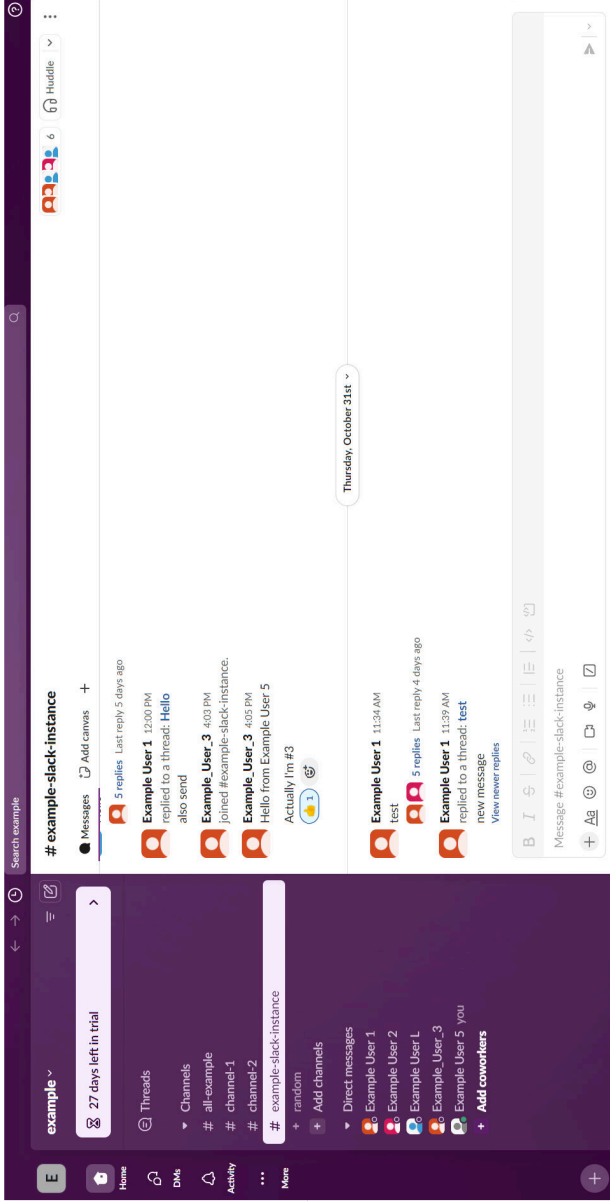
'731 patent	Slack
	For example, Slack is configured to generate a group-based communication interface on a display screen of a Slack End-User Device. An exemplary image of the Slack user interface is shown below:  The screenshot displays the Slack mobile application interface. On the left, a dark purple sidebar contains a list of channels under the heading 'example'. The channels listed are '# all-example channel-1', '# channel-2', and '# example-slack-instance'. Below the channels are options to '+ Add channels', '+ Direct messages', and '+ Add coworkers'. The main area on the right shows a message thread for the '# example-slack-instance' channel. The thread includes messages from 'Example User 1' and 'Example User 3' with timestamps and reply counts. A date separator indicates 'Thursday, October 31st'. At the bottom, there is a text input field and a 'Send' button.
[1.c] a first pane configured to display a plurality of channel identifiers corresponding to a respective one of a plurality of group-based communication channels, each of said plurality of channel identifiers corresponding to a respective one of a plurality of group-based communication channels, each of such channels having an associated group of members who are users of said system, and	The Slack user interface has a first pane configured to display a plurality of channel identifiers, each of said plurality of channel identifiers corresponding to a respective one of a plurality of group-based communication channels, each of such channels having an associated group of members who are users of said system. For example, the Slack user interface includes a first (left) pane configured to display a plurality of channel identifiers (e.g., in the “Channels” list), with each channel identifier corresponding to a respective one of a plurality of group-based communication channels, and each such channel having an associated group of members who are users of said system. <i>See, e.g.:</i>

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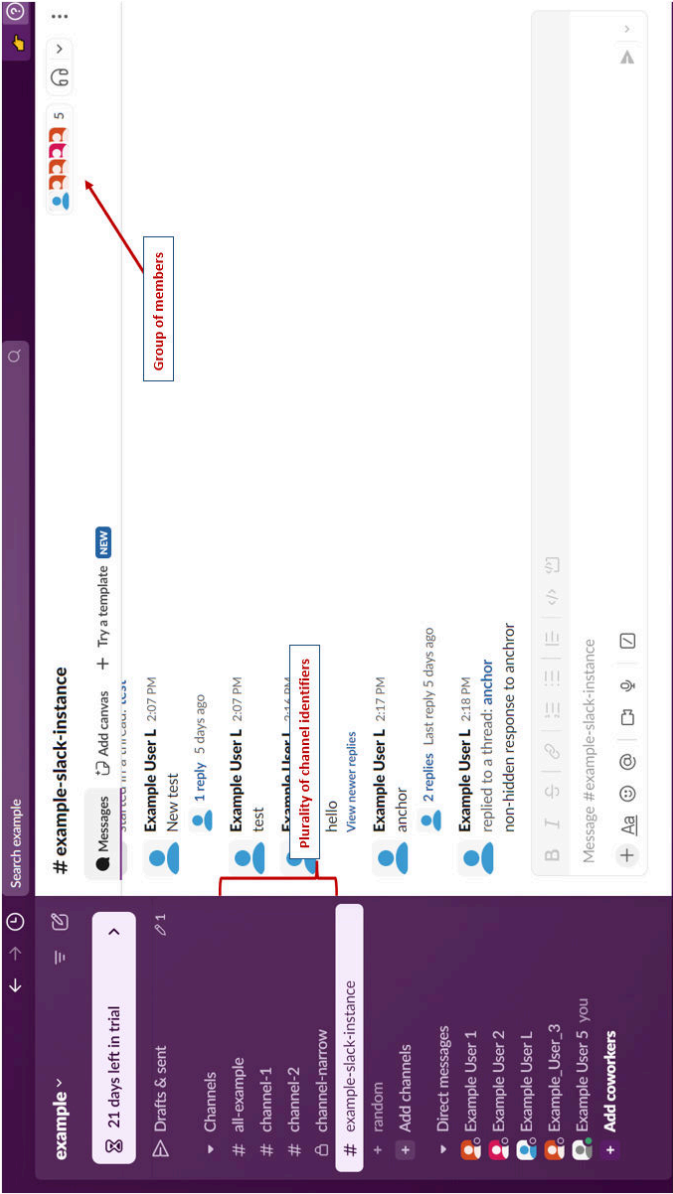
'731 patent	Slack
	 The screenshot displays the Slack application interface. On the left sidebar, a list of channels is shown, including '# example-slack-instance', '# all-example', '# channel-1', '# channel-2', and '# channel-narrow'. The main chat area shows a conversation in the '# example-slack-instance' channel. Messages from 'Example User L' are visible, including 'New test', 'test', 'hello', 'anchor', and 'replied to a thread: anchor non-hidden response to anchor'. A red box highlights the channel name in the sidebar, and a red arrow points to the 'Group of members' button in the top right corner of the chat area. The bottom input area contains a text field and various formatting and action buttons.

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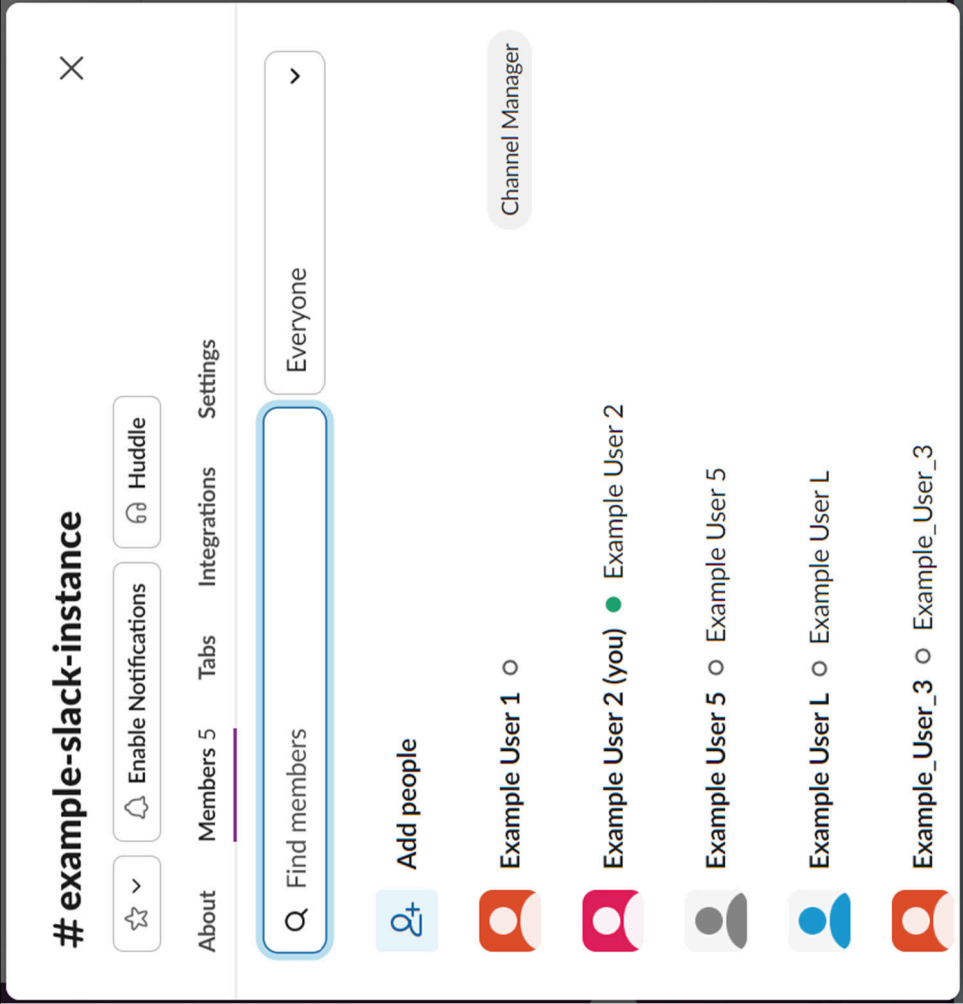
'731 patent	Slack
	
[1.d.] a second pane configured to display messaging communications associated with a selected one of said plurality of group-based communication channels	The Slack user interface has a second pane configured to display messaging communications associated with a selected one of said plurality of group-based communication channels corresponding to one of said plurality of channel identifiers. For example, when a user selects one of the plurality of group-based communication channels (e.g., “example-slack-instance”),

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corresponding to one of said plurality of channel identifiers,	a second pane displays messaging communications associated with that group-based communication channel. <i>See, e.g.:</i>
[1.e.] wherein, associated with said second pane, is a channel text entry field that is user operable to generate communication in said selected one of said plurality of group-based communication channels, and a title field displaying information identifying said selected one of said	Associated with the second pane in the Slack user interface is a channel text entry field that is user operable to generate communication in the selected one of said plurality of group-based communication channels and a title field displaying information identifying the selected one of said plurality of group-based communication channels. <i>See, e.g.:</i>

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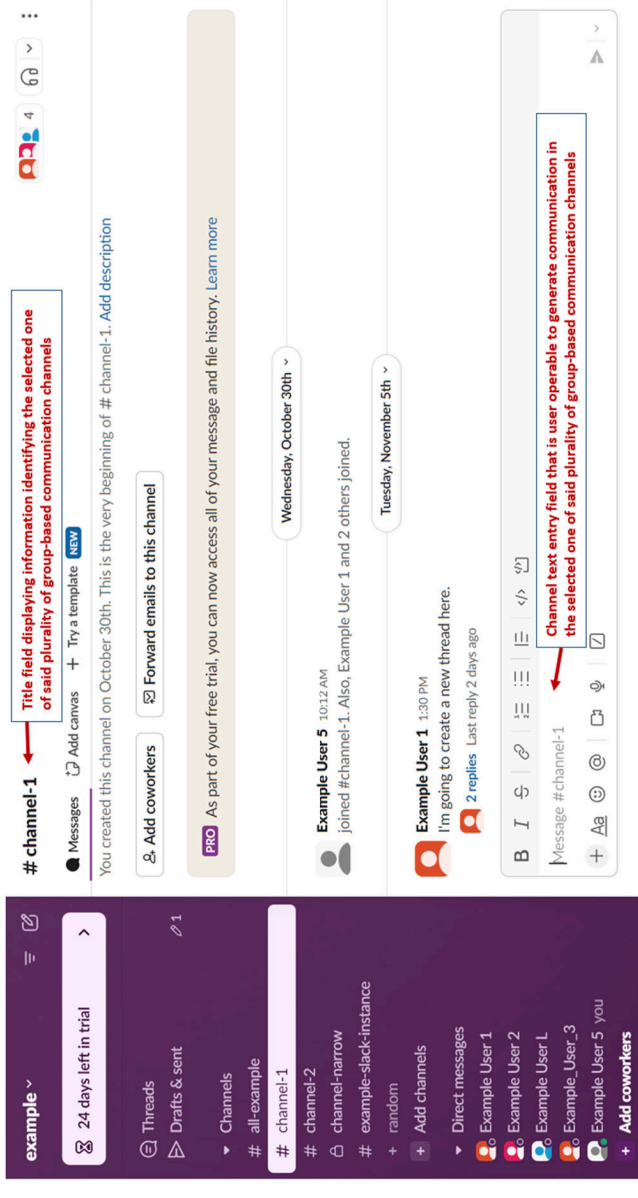
'731 patent	Slack
plurality of group-based communication channels,	
[1.f] receive a first messaging communication associated with the selected one of the plurality of group-based communication channels, the selected one of the plurality of group-based communication channels comprising messaging communications, including said first messaging communication, between members of the group associated with said selected one of the plurality of	Slack is configured to receive a first messaging communication associated with the selected one of the plurality of group-based communication channels. Moreover, the selected one of the plurality of group-based communication channels comprises messaging communications, including the first messaging communication, between members of the group associated with the selected one of the plurality of group-based communication channels. <i>See, e.g.:</i>

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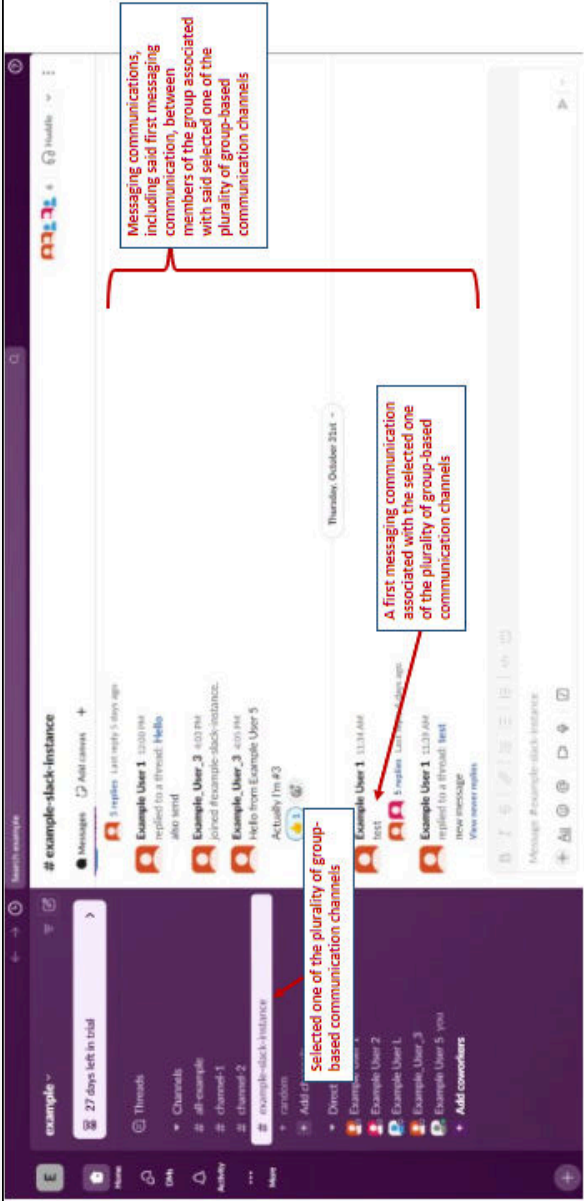
'731 patent	Slack
group-based communication channels;	
[1.g] display said first messaging communication within said second pane;	Slack is configured to display the first messaging communication within the second pane of the Slack user interface. <i>See</i> evidence cited in claim 1[f].
[1.h] display a first user-selectable control associated with said first messaging communication;	Slack is configured to display a first user-selectable control associated with the first messaging communication. <i>See, e.g.:</i>

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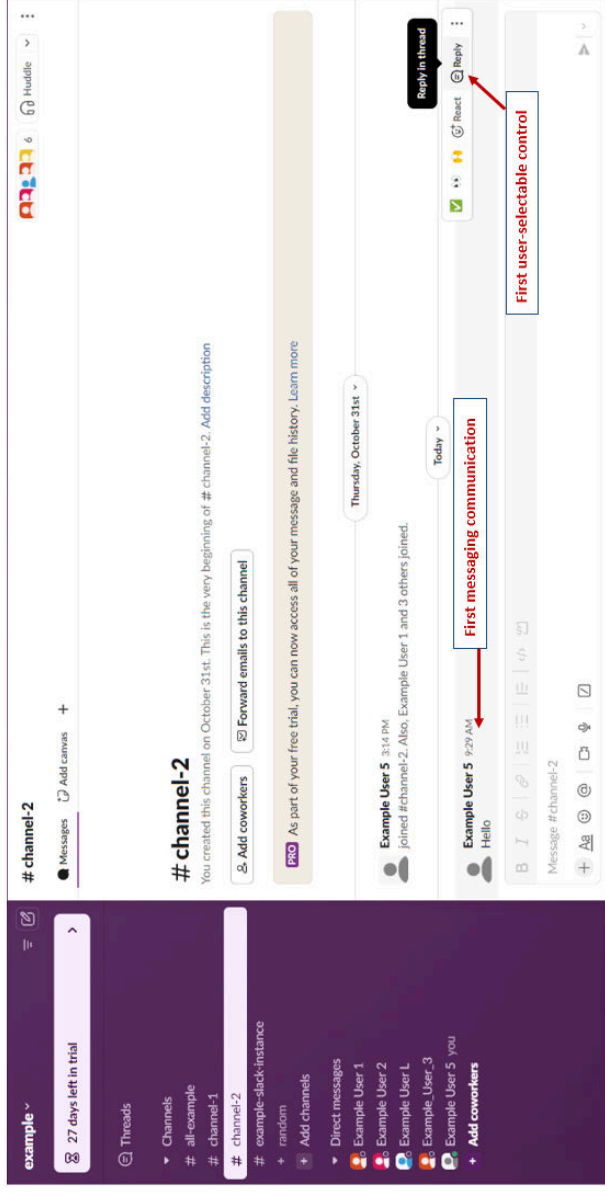
'731 patent	Slack
[1.i] in response to a user selection of said first user-selectable control, display a third pane, said third pane displaying said first messaging communication and having an associated sidebar text-entry field that is different from said channel text-entry field that is different from said channel text-entry field and operable to receive user input of an additional messaging communication;	 The screenshot shows the Slack interface for a channel named '# channel-2'. On the left is a sidebar with a list of channels, including '# channel-2'. The main area displays a message from 'Example User 5' at 3:14 PM. Below the message is a 'Reply in thread' button. A red box labeled 'First messaging communication' points to the message content. Another red box labeled 'First user-selectable control' points to the 'Reply in thread' button. The interface also shows a 'Forward email to this channel' button and a 'Add coworkers' button.
[1.i] in response to a user selection of the first user-selectable control, display a third pane displaying the first messaging communication and having an associated sidebar text-entry field that is different from the channel text-entry field and operable to receive user input of an additional messaging communication. For example, when a user clicks the “Reply” button associated with the first messaging communication, a third pane (labeled “Thread”) appears and displays the first messaging communication and an associated sidebar text-entry field (“Reply” field) that is different from the channel text-entry field and operable to receive user input of an additional messaging communication (“Reply”). <i>See, e.g.:</i>	

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[1.j] wherein said third pane and said sidebar text-entry field are displayed simultaneously with said first pane, said second pane and said channel text-entry field; and	The screenshot illustrates the Slack user interface with three distinct panes labeled at the top: 1st Pane, 2nd Pane, and 3rd Pane. The 1st Pane (left sidebar) contains a list of channels and a search bar. The 2nd Pane (main channel view) displays the content of a selected channel, including messages and a text entry field at the bottom labeled 'Channel text-entry field'. The 3rd Pane (thread view) is a modal window that appears over the main channel view, showing a specific message thread and its own text entry field labeled 'Sidebar text-entry field'. A red arrow points from the 'Channel text-entry field' in the 2nd pane to the 'Sidebar text-entry field' in the 3rd pane, indicating simultaneous display. Another red arrow points to the 'First messaging communication' in the thread view.
[1.j] wherein said third pane and said sidebar text-entry field are displayed simultaneously with said first pane, said second pane and said channel text-entry field; and	Slack is configured to display the third pane and the sidebar text-entry field simultaneously with the first pane, the second pane, and the channel text-entry field. <i>See, e.g.:</i>

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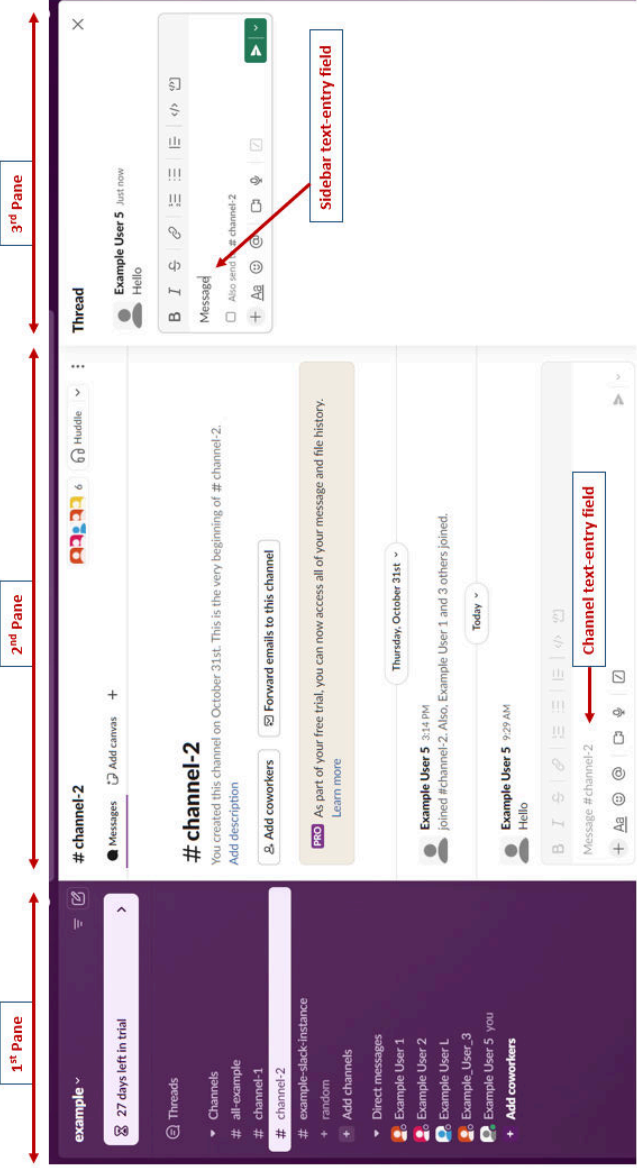
'731 patent	Slack
	 The screenshot illustrates the Slack user interface, divided into three distinct panes as indicated by red arrows and labels at the top: 1st Pane: The left sidebar containing a list of channels. A search bar at the top shows 'example' and '27 days left in trial'. Below it, a list of channels is visible, including '# channel-2'. 2nd Pane: The main workspace area. It displays the content of the selected channel, '# channel-2'. A message from 'Example User 5' is visible, stating 'You created this channel on October 31st. This is the very beginning of # channel-2.' Below the message, there are buttons for 'Add description', 'Add coworkers', and 'Forward emails to this channel'. 3rd Pane: A thread view that appears when a message is clicked. It shows a detailed view of the message from 'Example User 5' with a 'Message' input field. A red arrow points to this field, labeled 'Channel text-entry field'. Another red arrow points to a 'Sidebar text-entry field' in the top right corner of the thread view.
[1.k] wherein said first messaging communication is displayed within said third pane and said second pane simultaneously;	Slack is configured to display the first messaging communication within the third and the second panes simultaneously. See, e.g.:

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'731 patent	Slack
	The screenshot illustrates the Slack user interface, divided into three distinct panes: 1st Pane: The left sidebar containing navigation elements like 'example', '27 days left in trial', 'Threads', 'Channels', and a list of channels including '# all-example', '# channel-1', and '# channel-2'. 2nd Pane: The main workspace area showing the details of '# channel-2', including a description, 'Add coworkers', and a list of recent messages. 3rd Pane: A thread view showing a specific message from 'Example User 5' with a response from 'Example User 1'. A red arrow points from the label First messaging communication to the message input field in the 3rd pane, indicating the location of the user input for additional messaging.
[1.1] receive user input of an additional messaging communication in said sidebar text-entry field;	Slack is configured to receive user input of an additional messaging communication in the sidebar text-entry field. See, e.g.:

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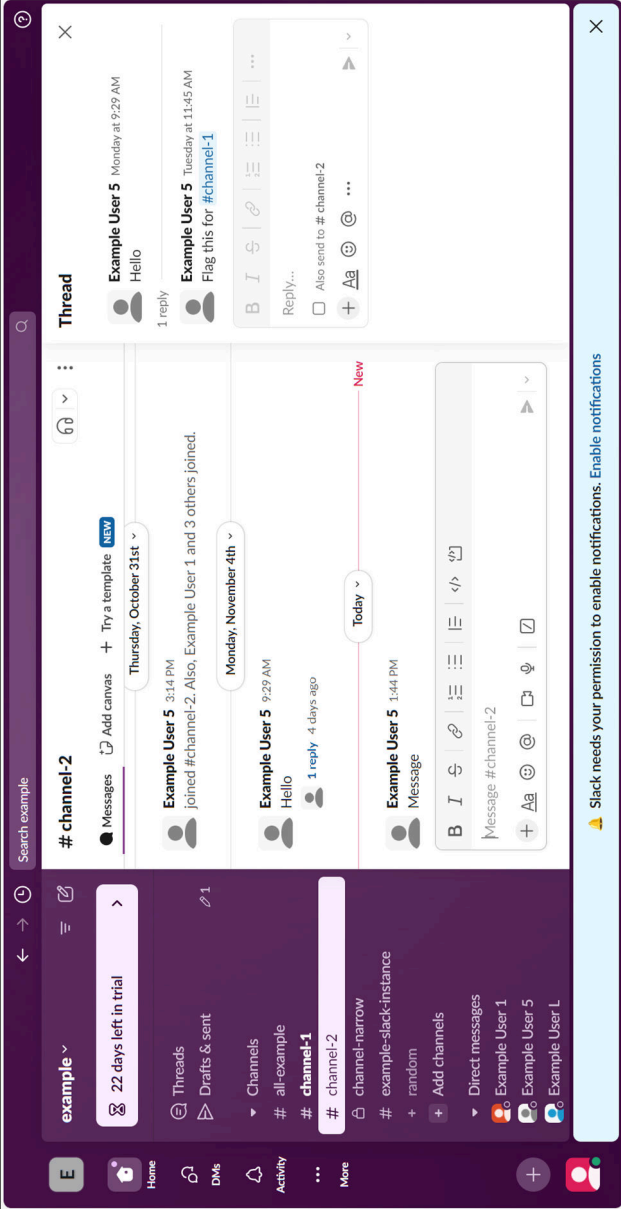
'731 patent	Slack
	The screenshot illustrates the Slack interface with three panes. The 1st Pane (left) displays a sidebar with a list of channels, including #channel-2. The 2nd Pane (middle) shows the content of #channel-2, including a message from Example User 5 and a thread. The 3rd Pane (right) shows a message input field with a dropdown menu for selecting a channel to receive additional communication. A red arrow points to the dropdown menu with the text "Receive user input of an additional messaging communication in said sidebar text-entry field".
[1.m] after receipt of said user input:	Slack is configured to, after receipt of the user input, perform certain functions, as explained below.
[1.n] transmit said additional messaging communication, via a network, to at least one member of the group associated with said selected group-based communication channel and	Slack is configured to, after receipt of the user input, transmit the additional messaging communication, via a network, to at least one member of the group associated with said selected group-based communication channel. For example, after a user enters a reply in the third pane and Slack receives that reply, Slack transmits the reply via a network (e.g., the Internet) to at least one member of the group associated with the selected group-based communication channel. <i>See, e.g.:</i>

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'731 patent	Slack
	The screenshot illustrates the Slack user interface, divided into three distinct panes as indicated by red arrows and labels at the top: 1st Pane: The left sidebar containing navigation elements like 'example -', '24 days left in trial', 'Threads', 'Channels', and a list of channels including '# channel-2'. 2nd Pane: The main workspace displaying the selected channel, '# channel-2'. It shows a message history, a search bar, and a list of members. A red box highlights the text 'Other users in channel' pointing to the member list. 3rd Pane: A thread view opened from a message in the main channel. It shows a conversation between 'Example User 5' and 'Example User 1'. A red box highlights the text 'Transmitted additional messaging communication to other members of the group-based channel' pointing to the thread header.

As shown in the screenshot below taken from the screen of a different user (“Example User 2”), Slack transmits the additional messaging communication to at least one member of the group associated with said selected group-based communication channel:

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'731 patent	Slack
	 The screenshot displays the Slack mobile application interface. At the top, there's a navigation bar with a search icon and a back arrow. Below this, the main content area shows a channel view for '# channel-2'. The channel header includes a search bar, a 'Messages' button, and a 'Try a template' button. The channel list on the left shows '# channel-1' and '# channel-2'. The main message area displays a message from 'Example User 5' at 3:14 PM, stating 'joined #channel-2. Also, Example User 1 and 3 others joined.' Below this, there's a message from 'Example User 5' at 9:29 AM saying 'Hello'. A thread is visible for the 'Hello' message, showing a reply from 'Example User 5' at 11:45 AM: 'Flag this for #channel-1'. The bottom navigation bar includes icons for Home, DMs, Activity, and a 'More' menu. A status bar at the very bottom indicates 'Slack needs your permission to enable notifications. Enable notifications'.

See also, e.g.,

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'731 patent	Slack
	The screenshot illustrates the Slack interface with three panes. The 1st pane (left) shows a sidebar with a search bar and a list of channels. The 2nd pane (middle) shows a channel view with a message history and a thread. The 3rd pane (right) shows a thread view with a message history and a thread. A red arrow points from the 2nd pane to the 3rd pane, labeled "Transmitted additional messaging communication to other members of the group-based channel".
[1.o] display, in said third pane, a first subsidiary communication thread having an anchor message, said thread comprising said first messaging communication together with said additional messaging communication, wherein said first messaging communication is the anchor message of said first subsidiary communication thread;	Slack is configured to display, in said third pane, a first subsidiary communication thread (labeled “Thread” in the exemplary figure below) having an anchor message, said thread comprising said first messaging communication together with said additional messaging communication, wherein said first messaging communication is the anchor message of said first subsidiary communication thread. <i>See, e.g.:</i>

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[1.p] display a second user-selectable control associated with said first messaging communication in said second pane, said second user-selectable control being a subsidiary communication thread. For example, in the second pane, just below and indented from the first messaging communication, there is a second user-selectable control (e.g., the “3 replies” link shown below) indicating that the first messaging communication is an anchor message of a subsidiary communication thread. <i>See, e.g.:</i>	The screenshot illustrates the Slack interface with three panes labeled 1st pane, 2nd pane, and 3rd pane. The 1st pane shows a list of channels including #channel-2. The 2nd pane shows the #channel-2 channel with messages and a thread view. The 3rd pane shows a thread view for a message in #channel-2. Red arrows and boxes highlight the 'Anchor message' and 'First subsidiary communication thread'.
[1.p] display a second user-selectable control associated with said first messaging communication in said second pane, said second user-selectable control being a subsidiary communication thread. For example, in the second pane, just below and indented from the first messaging communication, there is a second user-selectable control (e.g., the “3 replies” link shown below) indicating that the first messaging communication is an anchor message of a subsidiary communication thread. <i>See, e.g.:</i>	Slack is configured to display a second user-selectable control associated with said first messaging communication in the second pane, said second user-selectable control being associated with an indication that said first messaging communication is an anchor message of a subsidiary communication thread. For example, in the second pane, just below and indented from the first messaging communication, there is a second user-selectable control (e.g., the “3 replies” link shown below) indicating that the first messaging communication is an anchor message of a subsidiary communication thread. <i>See, e.g.:</i>

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'731 patent	Slack
	The screenshot shows the Slack interface. The left sidebar (labeled '1st pane') contains a list of channels and a search bar. The main area (labeled '2nd pane') shows a channel with messages. A message in the thread is highlighted with a red box and labeled 'First messaging communication'. Below this message is a button labeled 'View thread' which is highlighted with a red box and labeled 'Second user-selectable control indicating the first messaging communication is an anchor message'. A red arrow points from the '1st pane' to the '2nd pane'.
[1.q] in response to a user selection of said second user-selectable control, cause at least a portion of said first subsidiary communication thread containing said first messaging communication to be displayed in said third pane. For example, when a user clicks the second user-selectable control, at least a portion of the first subsidiary communication thread appears in the third pane. <i>See, e.g.:</i>	Slack is configured to, in response to a user selection of the second user-selectable control, cause at least a portion of said first subsidiary communication thread containing said first messaging communication to be displayed in said third pane. For example, when a user clicks the second user-selectable control, at least a portion of the first subsidiary communication thread appears in the third pane. <i>See, e.g.:</i>

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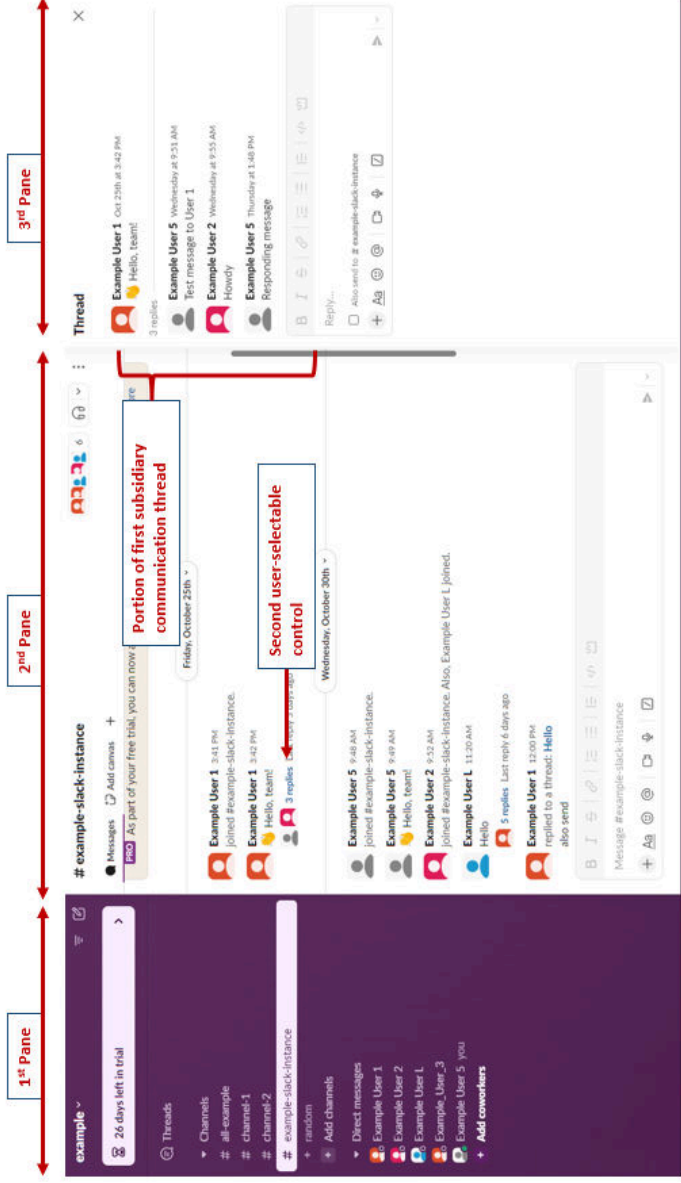
'731 patent	Slack
	 The screenshot illustrates the Slack interface divided into three panes. The 1st pane (left) shows a sidebar with a search bar and a list of channels. The 2nd pane (middle) shows a channel view with messages and a thread. The 3rd pane (right) shows a thread view. Red arrows and boxes highlight specific features: 'Portion of first subsidiary communication thread' and 'Second user-selectable control'.
2. The apparatus of claim 1, further comprising instructions for causing the apparatus to display said additional messaging while said additional messaging communication is being displayed in said third pane.	CLAIM 2 Slack comprises instructions for causing the apparatus to display said additional messaging communication in said second pane while said additional messaging communication is being displayed in said third pane. <i>See, e.g.,</i>

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'731 patent	Slack
	1st Pane 2nd Pane 3rd Pane example - 17 days left in trial Threads Drafts & sent Channels # all-example # channel-1 # channel-2 # channel-arrow # example-slack-instance random Add channels Direct messages Example User 1 Example User 2 Example User 1 Example User 2 Example User 3 Example User 5 you Add coworkers Apps Add apps # example-slack-instance Messages Add canvas Welcome to the # example-slack-instance channel This channel is for everything Example-slack-instance. Hold meetings, share docs, and make decisions together with your team. Edit description. Add coworkers Forward emails to this channel 2:41 PM Example User 1 joined Example-slack-instance. 2:42 PM Example User 1 Hello, team! 3 replies Last reply 14 days ago Friday, October 29th 8:48 AM Example User 5 joined Example-slack-instance. 8:49 AM Example User 5 Hello, team! 8:52 AM Example User 2 joined Example-slack-instance. 10:20 AM Example User L Hello 9 replies Last reply 7 days ago View newer replies also send 11:00 AM Example User 1 replied to a thread: Hello 3:03 PM Example User 2 joined Example-slack-instance. 3:05 PM Example User 2 Hello from Example User 5 Actually I'm #2 Thread Example User L Oct 30th at 10:20 AM Hello 9 replies Example User 1 Oct 30th at 11:00 AM Response Example User 1 Oct 30th at 11:00 AM response Example User 1 Oct 30th at 11:00 AM Hello Example User 1 Oct 30th at 11:00 AM Hello Also sent to the channel Example User L Oct 30th at 11:00 AM Also sent to the channel Example User L Nov 9th at 1:54 PM hello Example User L Nov 9th at 1:54 PM Hello Example User L Nov 9th at 1:54 PM Hello Example User L Nov 9th at 1:54 PM Hello Example User L Nov 9th at 1:54 PM Hello Can you attend the meeting? Also sent to a example-slack-instance

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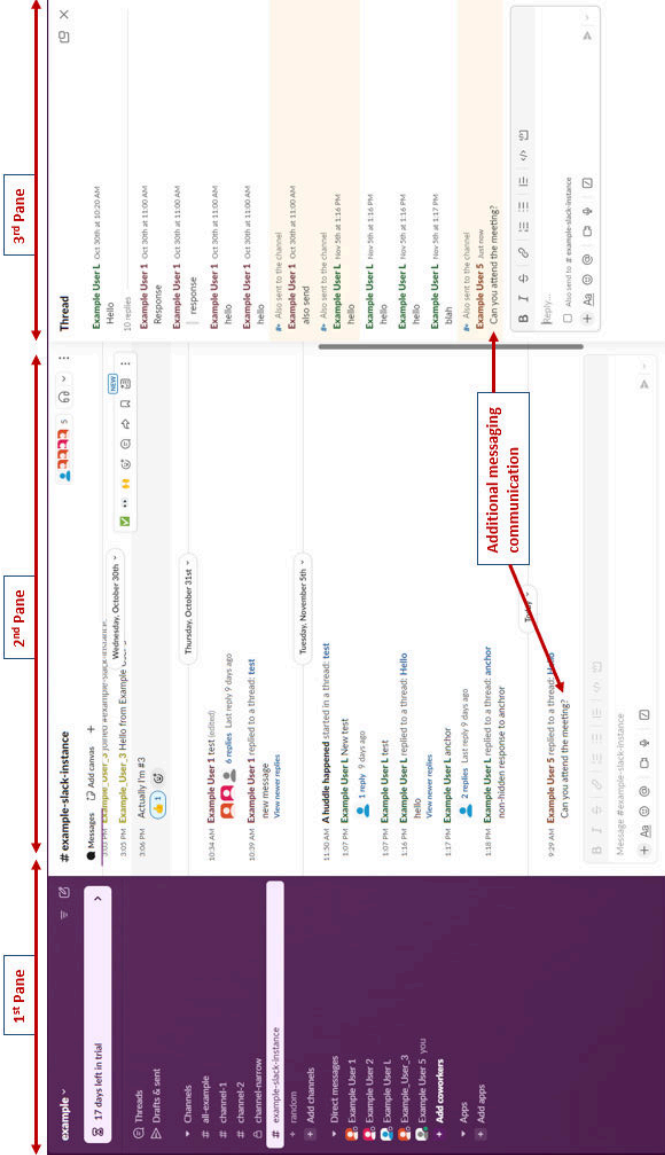
'731 patent	Slack
	
3.[pre] The apparatus of claim 2, wherein displaying said additional messaging communication in said second pane comprises providing a third user-selectable control associated with said additional messaging communication in said second pane. For example, when a user hovers his cursor over the additional messaging communication in the second pane, a third user-selectable control associated with the additional messaging communication appears in the second pane. See, e.g.,	CLAIM 3 Slack is configured such that displaying said additional messaging communication in said second pane comprises providing a third user-selectable control associated with said additional messaging communication in said second pane. For example, when a user hovers his cursor over the additional messaging communication in the second pane, a third user-selectable control associated with the additional messaging communication appears in the second pane. See, e.g.,

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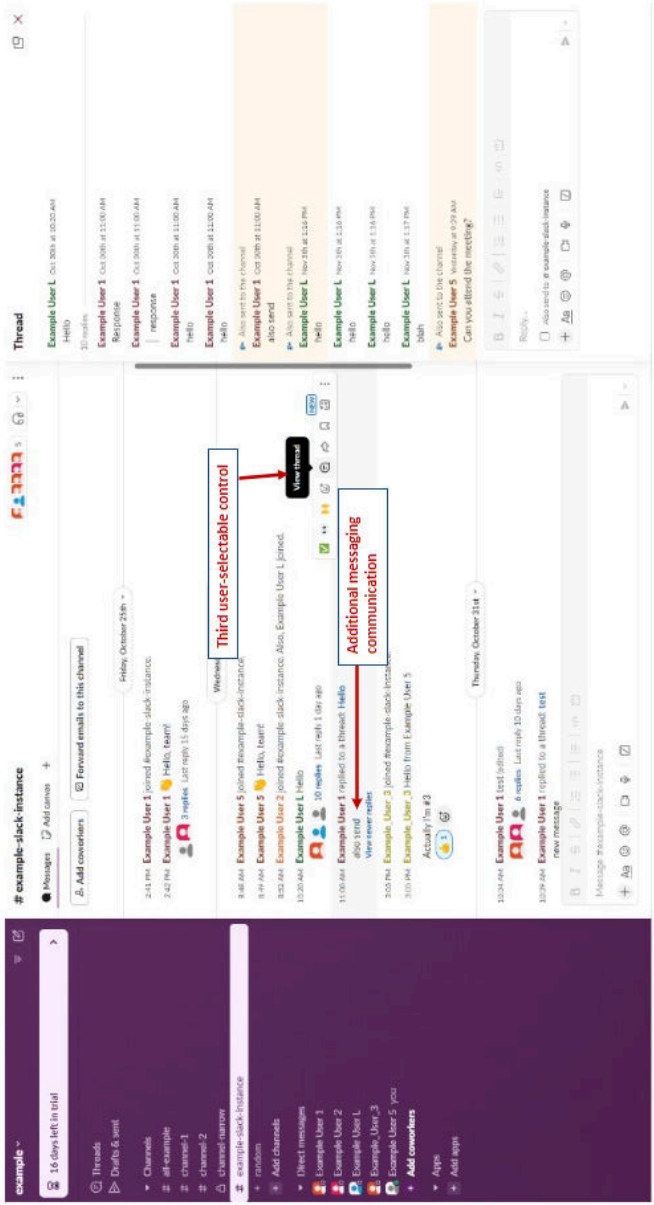
'731 patent	Slack
[3.a] in response to user selection of said third user-selectable control, cause at least a portion of said first subsidiary communication thread containing said additional messaging communication to be displayed in a third pane. For example, when a user clicks on the third user-selectable control, the corresponding first subsidiary communication thread (“Thread”) containing the additional messaging communication appears in the third pane. <i>See, e.g.,</i>	
in response to user selection of said third user-selectable control, cause at least a portion of said first subsidiary communication thread containing said additional messaging communication to be displayed in a third pane. For example, when a user clicks on the third user-selectable control, the corresponding first subsidiary communication thread (“Thread”) containing the additional messaging communication appears in the third pane. <i>See, e.g.,</i>	The third user-selectable control is configured to, in response to user selection of said third user-selectable control, cause at least a portion of said first subsidiary communication thread containing said additional messaging communication to be displayed in a third pane. For example, when a user clicks on the third user-selectable control, the corresponding first subsidiary communication thread (“Thread”) containing the additional messaging communication appears in the third pane. <i>See, e.g.,</i>

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'731 patent	Slack
4. The apparatus of claim 3, wherein providing said third user-selectable control comprises displaying said third user-selectable control proximate to said additional messaging communication.	CLAIM 4 Slack is configured such that providing the third user-selectable control comprises displaying said third user-selectable control proximate to said additional messaging communication. <i>See, e.g.:</i>

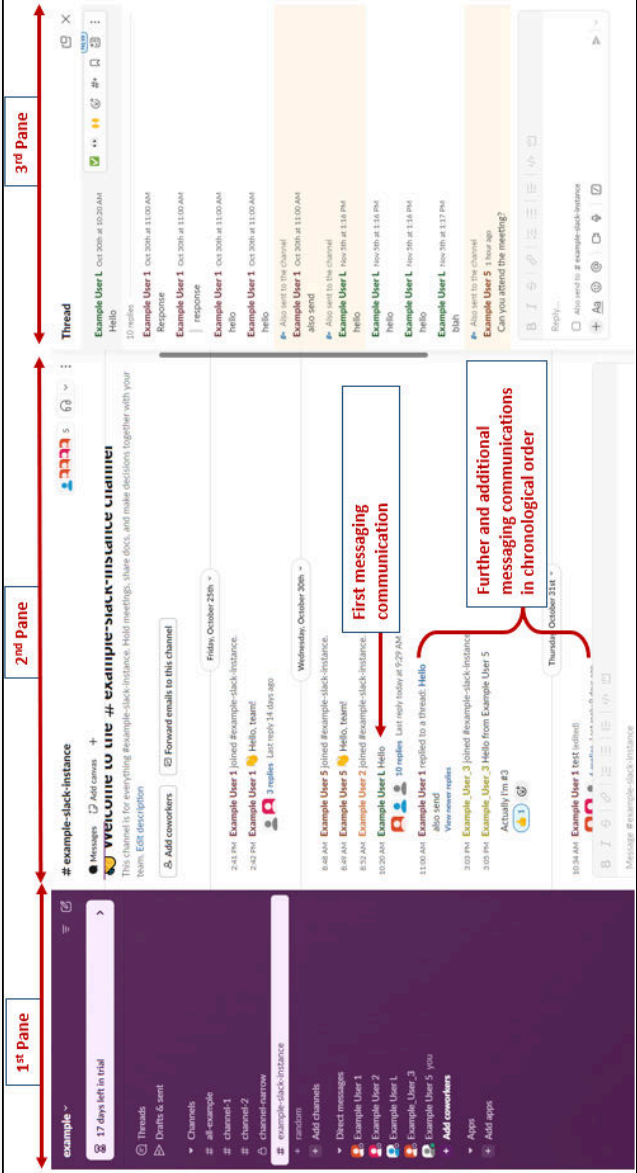
EXHIBIT A

Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
	The screenshot shows the Slack web interface. On the left is a sidebar with a search bar and a list of channels. The main area displays a channel named '# example-slack-instance' with a list of messages. A thread is expanded for a message from 'Example User 1'. Within the thread, two red boxes with arrows point to specific elements: one labeled 'Third user-selectable control' points to a 'View thread' button, and another labeled 'Additional messaging communication' points to a message from 'Example User 3' that says 'Hello from Example User 3'.
5. The apparatus of claim 2, wherein further messaging communications other than said first messaging communication and said additional messaging communication comprises displaying said additional messaging communication in the second pane in chronological order relative to said further messaging communications that are displayed in the second pane.	CLAIM 5 Slack is configured to display further messaging communications other than said first messaging communication and said additional messaging communication comprises displaying said additional messaging communication in the second pane in chronological order relative to said further messaging communications that are displayed in the second pane. See, e.g.,

EXHIBIT A

Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

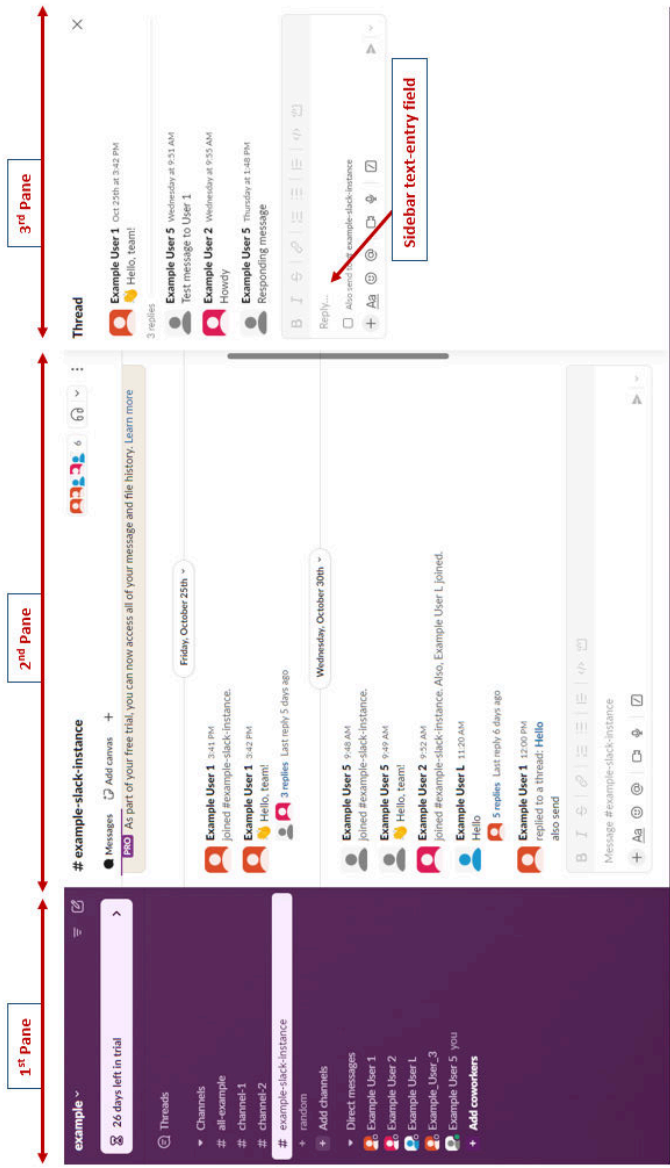
'731 patent	Slack
communications that are displayed in the second pane.	

CLAIM 6

6. The apparatus of claim 3, wherein causing at least a portion of said first subsidiary communication to be displayed in said third pane comprises displaying said sidebar text-entry field associated with said third pane that is operable to receive said additional messaging communication. For example, when a user clicks on the third user-selectable control, the corresponding first subsidiary communication thread (“Thread”) containing the additional messaging communication and the sidebar text-entry field appear in the third pane. <i>See, e.g.,</i>	Slack is configured such that causing at least a portion of said first subsidiary communication thread containing said additional messaging communication to be displayed in said third pane comprises displaying said sidebar text-entry field associated with said third pane that is operable to receive said additional messaging communication. For example, when a user clicks on the third user-selectable control, the corresponding first subsidiary communication thread (“Thread”) containing the additional messaging communication and the sidebar text-entry field appear in the third pane. <i>See, e.g.,</i>
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EXHIBIT A

Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
	 The screenshot illustrates the Slack interface divided into three panes. The 1st pane (left) is a sidebar containing a search bar, a list of channels (e.g., #example-slack-instance), and a list of threads. The 2nd pane (middle) displays a channel view with messages and a thread. The 3rd pane (right) shows a thread view with messages and a sidebar text-entry field. A red arrow points to the 'Sidebar text-entry field' in the 3rd pane.
7. The apparatus of claim 3, wherein displaying said additional messaging communication in said second pane comprises, while said additional messaging communication is displayed in said second pane, displaying identifying information associated with the anchor message in association with said additional messaging communication in said second pane.	CLAIM 7 Slack is configured such that displaying the additional messaging communication in the second pane comprises, while said additional messaging communication is displayed in said second pane, displaying identifying information associated with the anchor message in association with said additional messaging communication in said second pane. <i>See, e.g.,</i>

Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

8. The apparatus of claim 3, wherein, displaying said additional messaging communication in said second pane comprises, while said additional messaging communication is displayed in said second pane, displaying an indicator identifying said additional messaging communication as associated with a subsidiary communication thread in association

EXHIBIT A

Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

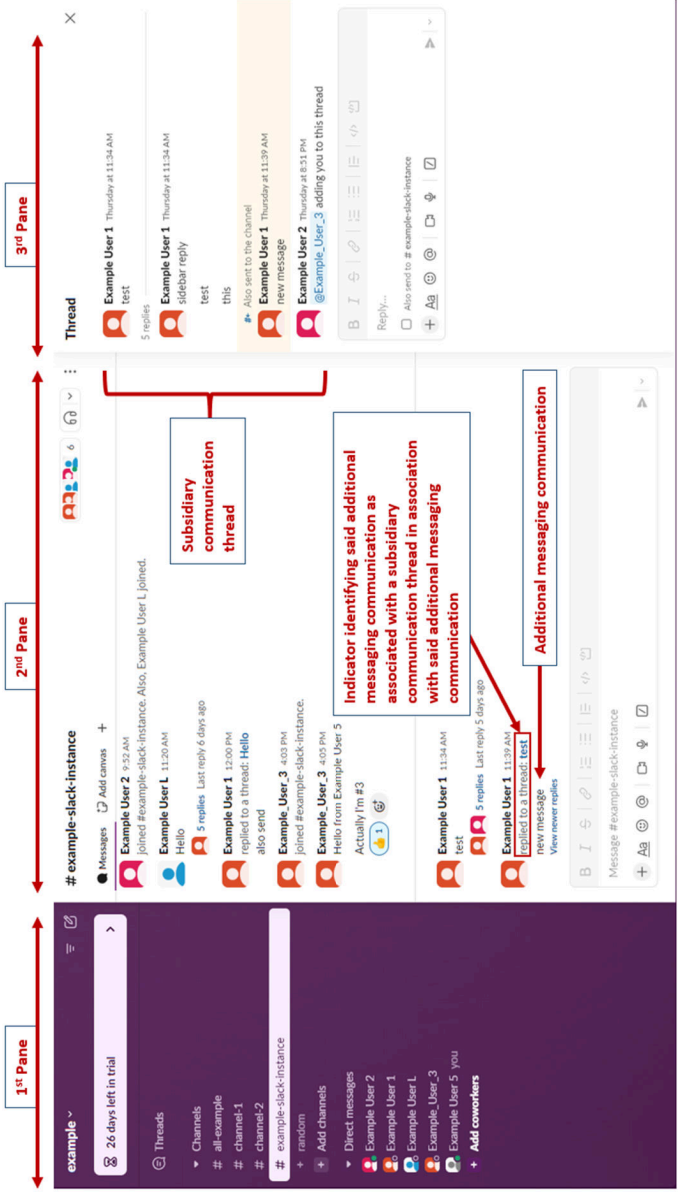
'731 patent	Slack
with said additional messaging communication in said second pane.	 The screenshot illustrates the Slack interface with three distinct panes. The 1st pane (left) is a sidebar containing a search bar, a list of channels, and a section for 'Add channels'. The 2nd pane (middle) displays a channel view with a list of messages. A callout box labeled 'Subsidiary communication thread' points to a message in the channel. The 3rd pane (right) shows a thread view with replies. A callout box labeled 'Additional messaging communication' points to a message in the thread. The interface includes various icons for messages, threads, and user avatars.
9. The apparatus of claim 7, wherein at least some of said identifying information associated with said anchor message comprises a fourth user-selectable control operable to cause the display of at least a portion of said subsidiary communication thread in said third pane. For example, the identifying information is a link, and clicking the link causes the third pane to appear and display at least a portion of the subsidiary communication thread. See, e.g.,	CLAIM 9 Slack is configured such that at least some of said identifying information associated with said anchor message comprises a fourth user-selectable control operable to cause the display of at least a portion of said subsidiary communication thread in said third pane. For example, the identifying information is a link, and clicking the link causes the third pane to appear and display at least a portion of the subsidiary communication thread. See, e.g.,

EXHIBIT A

Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

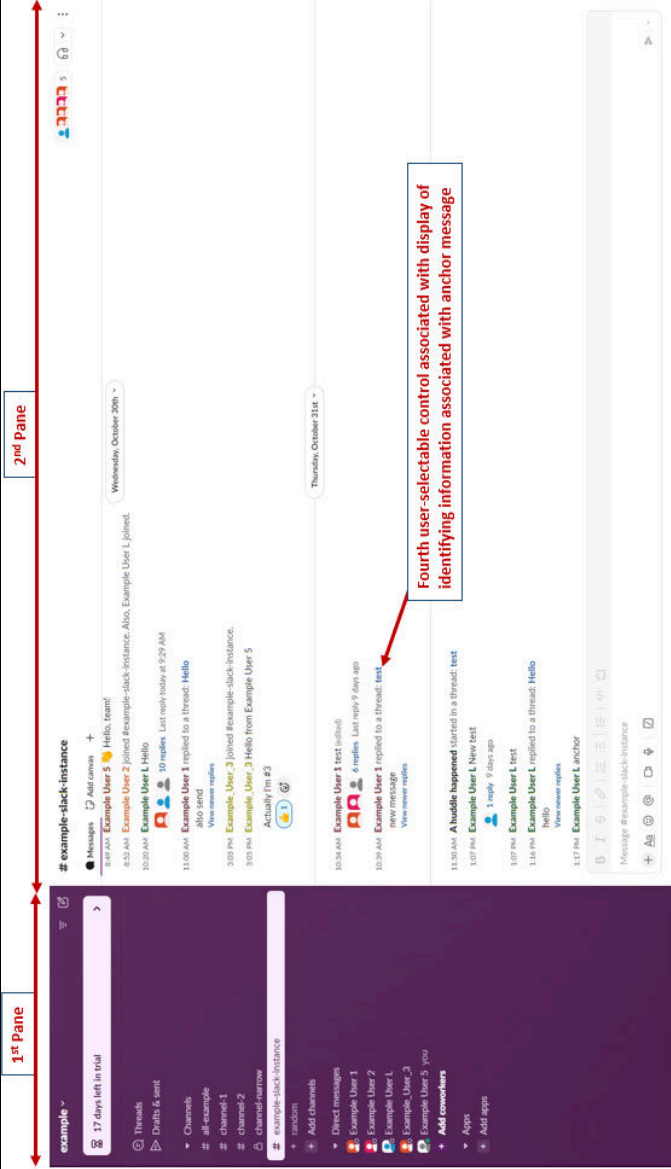
'731 patent	Slack
	 The screenshot displays the Slack application interface. It is divided into two main panes. The left pane, labeled '1st Pane', contains a sidebar with navigation elements including a search bar, a list of channels (e.g., '# example-slack-instance', '# all example', '# channel-1', '# channel-2', '# channel-narrow'), and a section for 'Direct messages' and 'Add channels'. The right pane, labeled '2nd Pane', shows a message history for the selected channel. It includes a header with the channel name and a date separator. The message history shows several messages from various users, including 'Example User 1', 'Example User 2', 'Example User L', and 'Example User L anchor'. A red arrow points from a text box to a specific message in the history. The text box contains the text: 'Fourth user-selectable control associated with display of identifying information associated with anchor message'.

EXHIBIT A

Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
10. The apparatus of claim 1, wherein displaying said third pane having said associated sidebar text-entry field further comprises displaying said sidebar text-entry field simultaneously with the display of said channel text-entry field, and wherein both said sidebar text-entry field and said channel text-entry field are selectable by a user to receive input representing a new message	1st pane 2nd pane 3rd pane Display of subsidiary communication thread Fourth user-selectable control associated with display of identifying information associated with anchor message
10. The apparatus of claim 1, wherein displaying said third pane having said associated sidebar text-entry field further comprises displaying said sidebar text-entry field simultaneously with the display of said channel text-entry field, and wherein both said sidebar text-entry field and said channel text-entry field are selectable by a user to receive input representing a new message	CLAIM 10 Slack is configured such that displaying said third pane having said associated sidebar text-entry field further comprises displaying said sidebar text-entry field simultaneously with the display of said channel text-entry field, and wherein both said sidebar text-entry field and said channel text-entry field are selectable by a user to receive input representing a new message while they are being simultaneously displayed. <i>See, e.g.:</i>

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

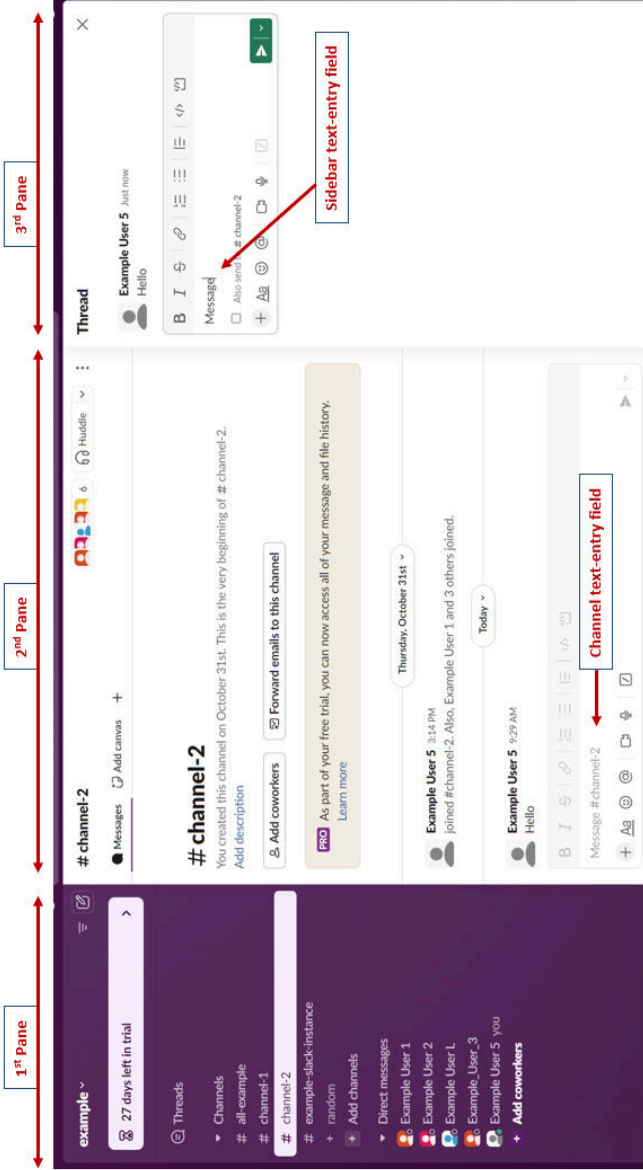
'731 patent	Slack
message while they are being simultaneously displayed.	
12. The apparatus of claim 1, further comprising instructions for receiving a request to permit a non-member user that is not a member of the associated group of members of said group-based communication channel to receive messaging communications comprising said subsidiary communication thread and, in response to receiving said request, enabling said non-member user to receive such communications. For example, Slack includes instructions for receiving a request from a user to permit (“Invite”) a non-member user who is not a member of the channel to join the channel and thus receive messaging communications in the channel, including the subsidiary communication thread, and, in response to receiving that request, enabling that non-member user to receive such communications. <i>See, e.g.,</i>	CLAIM 12 Slack comprises instructions for receiving a request to permit a non-member user that is not a member of the associated group of members of said group-based communication channel to receive messaging communications comprising said subsidiary communication thread and, in response to receiving said request, enabling said non-member user to receive such communications. For example, Slack includes instructions for receiving a request from a user to permit (“Invite”) a non-member user who is not a member of the channel to join the channel and thus receive messaging communications in the channel, including the subsidiary communication thread, and, in response to receiving that request, enabling that non-member user to receive such communications. <i>See, e.g.,</i>

EXHIBIT A
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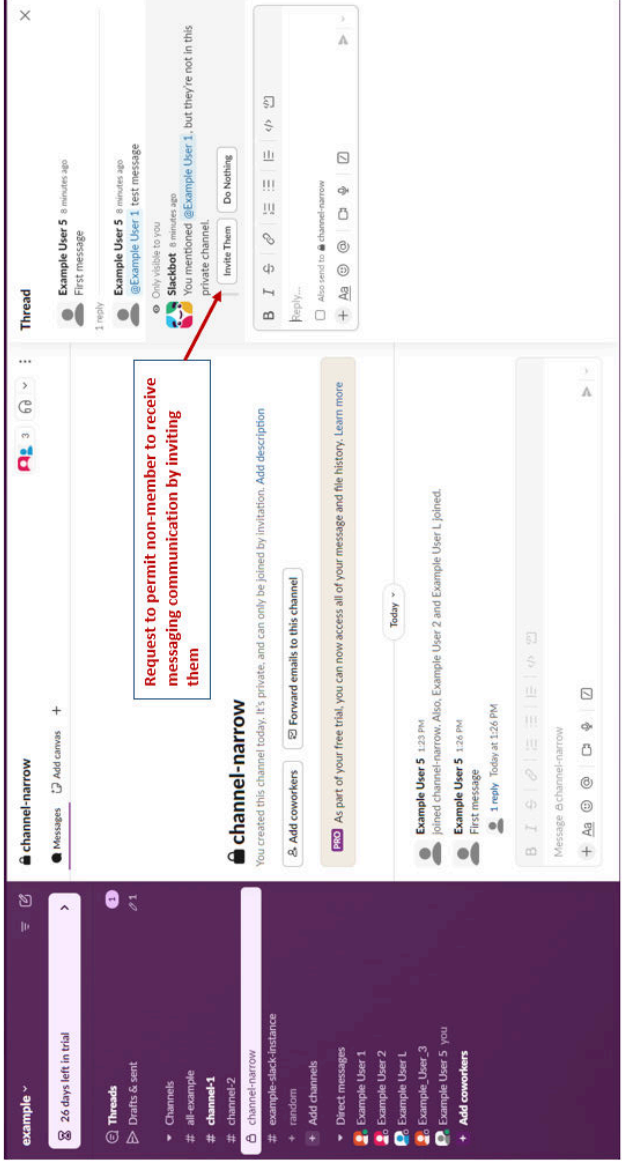
Slack	
'731 patent request, enabling said non-member user to receive such communications.	
13.[pre] The apparatus of claim 1, further comprising instructions for displaying a fifth user-selectable control, said control being operable to:	CLAIM 13 Slack comprises instructions for displaying a fifth user-selectable control. See, e.g.,

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Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

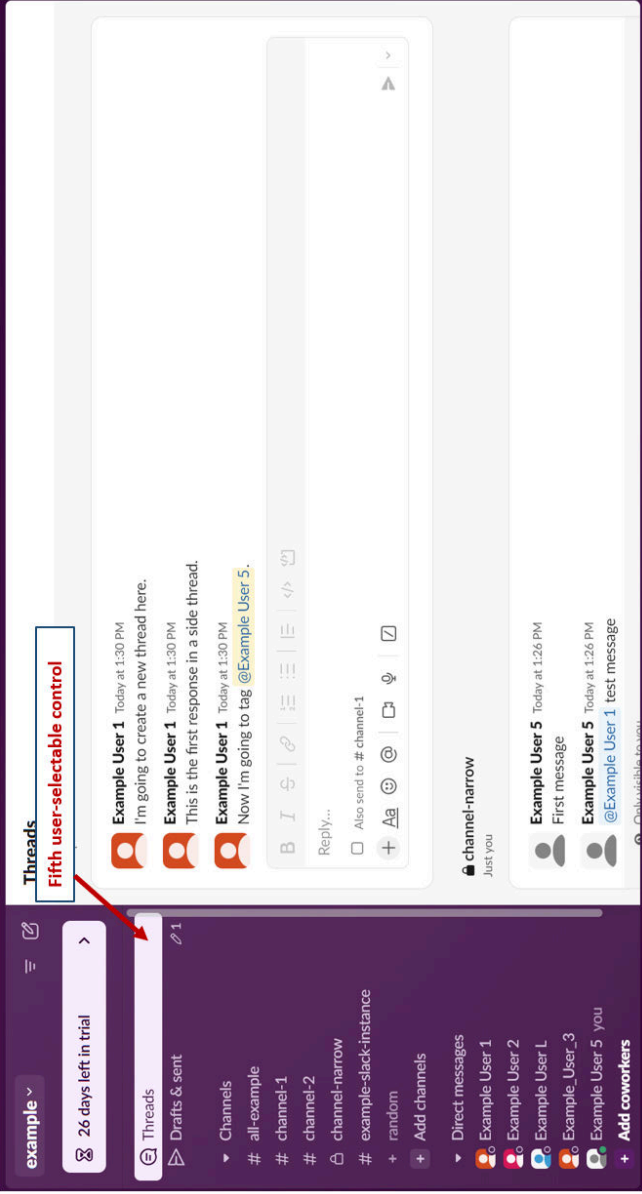
'731 patent	Slack
	
[13.a] in response to user selection of said fifth user-selectable control, selectively display messaging communications having a specific type associated with said selected fifth user-selectable control, said fifth user-selectable control, said messaging communications being from at least two separate group-based communication channels.	The fifth user-selectable control is operable to, in response to user selection of said fifth user-selectable control, selectively display messaging communications having a specific type associated with said selected fifth user-selectable control, said messaging communications being from at least two separate group-based communication channels. <i>See, e.g.,</i>

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
14. The apparatus of claim 13, wherein said specific type is a class of messaging communications in which the messaging communications are all parts of subsidiary communication threads that incorporate messaging generated by a specific user of said system. For example, when a user selects the fifth user-selectable control, the Slack user interface displays all “Threads” in which said user has participated (i.e., that incorporate messaging communications generated by said specific user who selected the fifth user-selectable control). <i>See, e.g.,</i>	CLAIM 14 Slack is configured such that the specific type is a class of messaging communications in which the messaging communications are all parts of subsidiary communication threads that incorporate messaging communications generated by a specific user of said system. For example, when a user selects the fifth user-selectable control, the Slack user interface displays all “Threads” in which said user has participated (i.e., that incorporate messaging communications generated by said specific user who selected the fifth user-selectable control). <i>See, e.g.,</i>

EXHIBIT A
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'731 patent	Slack
15.[pre] A method for operating an apparatus for use with a group-based communication system to facilitate messaging communication over a network between users of said system, comprising:	CLAIM 15 Slack utilizes a method for operating an apparatus for use with a group-based communication system to facilitate messaging communication over a network between users of said system. See claim 1.pre and 1.a.
[15.a] generating a group-based communication interface on a display screen of a user client	See claim 1.b

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
device, the group-based communication interface defining:	
[15.b] a first pane configured to display a plurality of channel identifiers, each of said plurality of channel identifiers corresponding to a respective one of a plurality of group-based communication channels, each of such channels having an associated group of members who are users of said system, and	See claim 1.c
[15.c] a second pane configured to display messaging communications associated with a selected one of said plurality of group-based communication channels corresponding to one of said plurality of channel identifiers,	See claim 1.d
[15.d] wherein, associated with said second pane, is a channel text entry field that is user operable to generate communication in said selected one of said plurality of group-based communication channels, and a title field displaying information identifying said selected one of said plurality of group-based communication channels,	See claim 1.e
[15.e] receiving a first messaging communication associated with the selected one of the plurality of	See claim 1.f

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
group-based communication channels, the selected one of the plurality of group-based communication channels comprising messaging communications, including said first messaging communication, between members of the group associated with said selected one of the plurality of group-based communication channels;	
[15.f] displaying said first messaging communication within said second pane;	See claim 1.g
[15.g] displaying a first user-selectable control associated with said first messaging communication;	See claim 1.h
[15.h] in response to a user selection of said first user-selectable control, displaying a third pane, said third pane displaying said first messaging communication and having an associated sidebar text-entry field that is different from said channel text-entry field and operable to receive user input of an additional messaging communication;	See claim 1.i
[15.i] wherein said third pane and said sidebar text-entry field are displayed simultaneously with said first pane, said second pane and said channel text-entry field; and	See claim 1.j

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
[15.j] wherein said first messaging communication is displayed within said third pane and said second pane simultaneously;	See claim 1.k
[15.k] receiving user input of an additional messaging communication in said sidebar text-entry field;	See claim 1.l
[15.l] after receipt of said user input:	See claim 1.m
[15.m] transmitting said additional messaging communication, via a network, to at least one member of the group associated with said selected group-based communication channel and	See claim 1.n
[15.n] displaying, in said third pane, a first subsidiary communication thread having an anchor message, said thread comprising said first messaging communication together with said additional messaging communication, wherein said first messaging communication is the anchor message of said first subsidiary communication thread;	See claim 1.o
[15.o] displaying a second user-selectable control associated with said first messaging communication in said second pane, said second user-selectable control being associated with an indication that	See claim 1.p

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent		Slack
said first messaging communication is an anchor message of a subsidiary communication thread and being configured to:		
[15.p] in response to a user selection of said second user-selectable control, cause at least a portion of said first subsidiary communication thread containing said first messaging communication to be displayed in said third pane.		See claim 1.q
CLAIM 16		
16. The method of claim 15, further comprising displaying said additional messaging communication in said second pane while said additional messaging communication is being displayed in said third pane.		See claim 2
CLAIM 17		
17.[pre] The method of claim 16, wherein displaying said additional messaging communication in said second pane comprises providing a third user-selectable control associated with said additional messaging communication in said second pane, wherein said third user-selectable control is configured to:		See claim 3.pre
[17.a] in response to user selection of said third user-selectable control,		See claim 3.a

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent		Slack
cause at least a portion of said first subsidiary communication thread containing said additional messaging communication to be displayed in a third pane.		
		CLAIM 18
18. The method of claim 17, wherein displaying said additional messaging communication in said second pane comprises causing at least a portion of said subsidiary communication thread to be displayed in said third pane comprises displaying said sidebar text-entry field associated with said third pane that is operable to receive said additional messaging communication.	See claim 6	
		CLAIM 19
19. The method of claim 17, wherein displaying said additional messaging communication in said second pane comprises, while said additional messaging communication is displayed in said second pane, identifying information associated with the anchor message is also displayed in association with said additional messaging communication in said second pane.	See claim 7	
		CLAIM 20
20. The method of claim 17, wherein, while said additional	See claim 8	

EXHIBIT A
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'731 patent	Slack
messaging communication is displayed in said second pane, an indicator identifying said additional messaging communication as associated with a subsidiary communication thread is also displayed in association with said additional messaging communication in said second pane.	
CLAIM 21	
21. The method of claim 19, wherein at least some of said identifying information associated with said anchor message comprises a fourth user-selectable control operable to cause the display of at least a portion of said subsidiary communication thread in said third pane.	See claim 9
CLAIM 22	
22. The method of claim 15, wherein displaying said third pane having said associated sidebar text-entry field further comprises displaying said sidebar text-entry field simultaneously with the display of said channel text-entry field, and wherein both said sidebar text-entry field and said channel text-entry field are selectable by a user to receive input representing a new message while they are being simultaneously displayed.	See claim 10

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent		Slack
CLAIM 23		
23.[pre] The method of claim 15, further comprising displaying a fifth user-selectable control, said control being operable to:	See claim 13.pre	
[23.a] in response to user selection of said fifth user-selectable control, selectively display messaging communications having a specific type associated with said selected fifth user-selectable controls, said messaging communications being from at least two separate group-based communication channels.	See claim 13.a	
CLAIM 24		
24. The method of claim 23, wherein said specific type is a class of messaging communications in which the messaging communications are all parts of subsidiary communication threads that incorporate messaging communications generated by a specific user of said system.	See claim 14	
CLAIM 25		
25.[pre] One or more non-transitory computer-readable media storing instructions executable by one or more processors that, when executed by the one or more processors, cause the one or more processors to perform acts comprising:	Slack comprises one or more non-transitory computer-readable media storing instructions executable by one or more processors that, when executed by the one or more processors, cause the one or more processors to perform certain acts, as shown below. See claim 1.pre and 1.a.	

EXHIBIT A
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'731 patent	Slack
[25.a] generating a group-based communication interface on a display screen of a user client device, the group-based communication interface defining:	See claim 1.b
[25.b] a first pane configured to display a plurality of channel identifiers, each of said plurality of channel identifiers corresponding to a respective one of a plurality of group-based communication channels, each of such channels having an associated group of members who are users of said system, and	See claim 1.c
[25.c] a second pane configured to display messaging communications associated with a selected one of said plurality of group-based communication channels corresponding to one of said plurality of channel identifiers,	See claim 1.d
[25.d] wherein, associated with said second pane, is a channel text entry field that is user operable to generate one communication in said selected one of said plurality of group-based communication channels, and a title field displaying information identifying said selected one of said plurality of group-based communication channels,	See claim 1.e

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
[25.e] receiving a first messaging communication associated with the selected one of the plurality of group-based communication channels, the selected one of the plurality of group-based communication channels comprising messaging communications, including said first messaging communication, between members of the group associated with said selected one of the plurality of group-based communication channels;	See claim 1.f
[25.f] displaying said first messaging communication within said second pane;	See claim 1.g
[25.g] displaying a first user-selectable control associated with said first messaging communication;	See claim 1.h
[25.h] in response to a user selection of said first user-selectable control, displaying a third pane, said third pane displaying said first messaging communication and having an associated sidebar text-entry field that is different from said channel text-entry field and operable to receive user input of an additional messaging communication;	See claim 1.i
[25.i] wherein said third pane and said sidebar text-entry field are	See claim 1.j

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
displayed simultaneously with said first pane, said second pane and said channel text-entry field;	
[25.j] and wherein said first messaging communication is displayed within said third pane and said second pane simultaneously;	See claim 1.k
[25.k] receiving user input of an additional messaging communication in said sidebar text-entry field;	See claim 1.l
[25.l] after receipt of said user input:	See claim 1.m
[25.m] transmitting said additional messaging communication, via a network, to at least one member of the group associated with said selected group-based communication channel and	See claim 1.n
[25.n] display, in said third pane, a first subsidiary communication thread having an anchor message, said thread comprising said first messaging communication together with said additional messaging communication, wherein said first messaging communication is the anchor message of said first subsidiary communication thread;	See claim 1.o
[25.o] displaying a second user-selectable control associated with	See claim 1.p

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent		Slack
said first messaging communication in said second pane, said second user-selectable control being associated with an indication that said first messaging communication is an anchor message of a subsidiary communication thread, and being configured to:		
[25.p] in response to a user selection of said second user-selectable control, cause at least a portion of said first subsidiary communication thread containing said first messaging communication to be displayed in said third pane.	See claim 1.q	
CLAIM 26		
26. The one or more non-transitory computer-readable media of claim 25, wherein said acts further comprise displaying said additional messaging communication in said second pane while said additional messaging communication is being displayed in said third pane.	See claim 2	
CLAIM 27		
27.[pre] The one or more non-transitory computer-readable media of claim 26, wherein displaying said additional messaging communication in said second pane comprises providing a third user-selectable control associated with	See claim 3.pre	

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent		Slack
said additional messaging communication in said second pane, wherein said third user-selectable control is configured to:		
[27.a] in response to user selection of said third user-selectable control, cause at least a portion of said first subsidiary communication thread containing said additional messaging communication to be displayed in a third pane.	See claim 3.a	
CLAIM 28		
28.[pre] The one or more non-transitory computer-readable media of claim 25, further comprising instructions for displaying a fifth user-selectable control, said control being operable to:	See claim 13.pre	
[28.a] in response to user selection of said fifth user-selectable control, selectively display messaging communications having a specific type associated with said selected fifth user-selectable controls, said messaging communications being from at least two separate group-based communication channels.	See claim 13.a	
CLAIM 29		
29. The one or more non-transitory computer-readable media of claim 28, wherein said specific type is a class of messaging communications	See claim 14	

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
in which the messaging communications are all parts of subsidiary communication threads that incorporate messaging communications generated by a specific user of said system.	
CLAIM 30	
30.[pre] An apparatus comprising at least a processor, and a memory associated with the processor having computer coded instructions therein, wherein the computer coded instructions are configured to, when executed by the processor, cause the apparatus to perform acts explained below. <i>See</i> claim 1,pre and 1.a.	
[30.a] receiving a first messaging communication associated with a communication platform;	Slack is configured to receive a first messaging communication associated with a communication platform. <i>See, e.g.:</i>

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

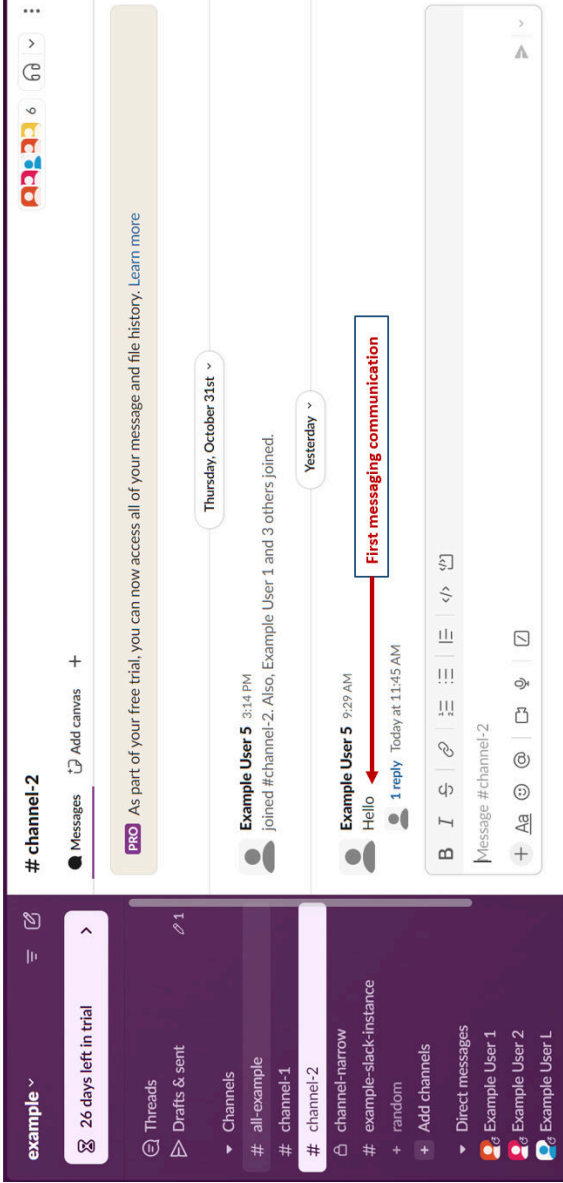
'731 patent	Slack
	 The screenshot shows the Slack mobile application. On the left is a sidebar with a list of channels: 'example', '26 days left in trial', 'Threads', 'Drafts & sent', 'Channels', '# all-example', '# channel-1', and '# channel-2'. The '# channel-2' channel is selected. The main area shows a message thread. At the top, it says 'Example User 5' joined #channel-2. Below that, a message from 'Example User 5' says 'Hello'. A red box highlights the first message in the thread, labeled 'First messaging communication'. The bottom of the screen shows a text input field with a plus icon on the left and a send icon on the right.
[30.b] causing the first messaging communication to be rendered within a messaging pane in a communication interface of the communication platform;	Slack is configured to cause the first messaging communication to be rendered within a messaging pane in a communication interface of the communication platform. See, e.g.:

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

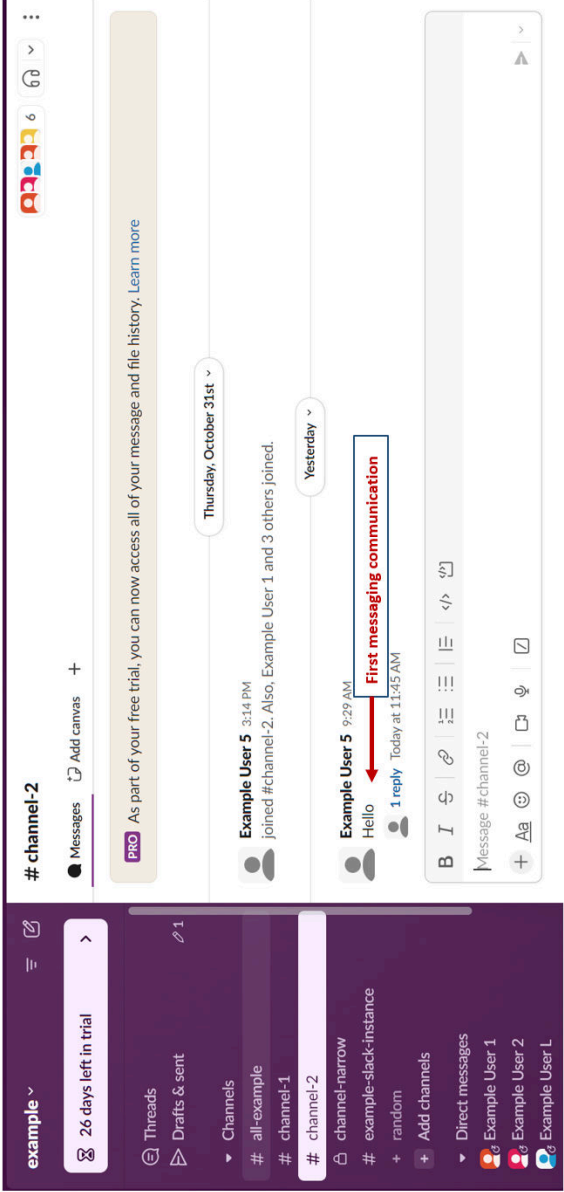
'731 patent	Slack
	
[30.c] receiving a thread request to create a subsidiary thread communication;	Slack is configured to receive a thread request to create a subsidiary thread communication. For example, when a user hovers his cursor over the first messaging communication, Slack displays a “Reply” button, and when a user clicks that button, Slack receives a thread request to create a subsidiary thread communication. See, e.g.:

EXHIBIT A
Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

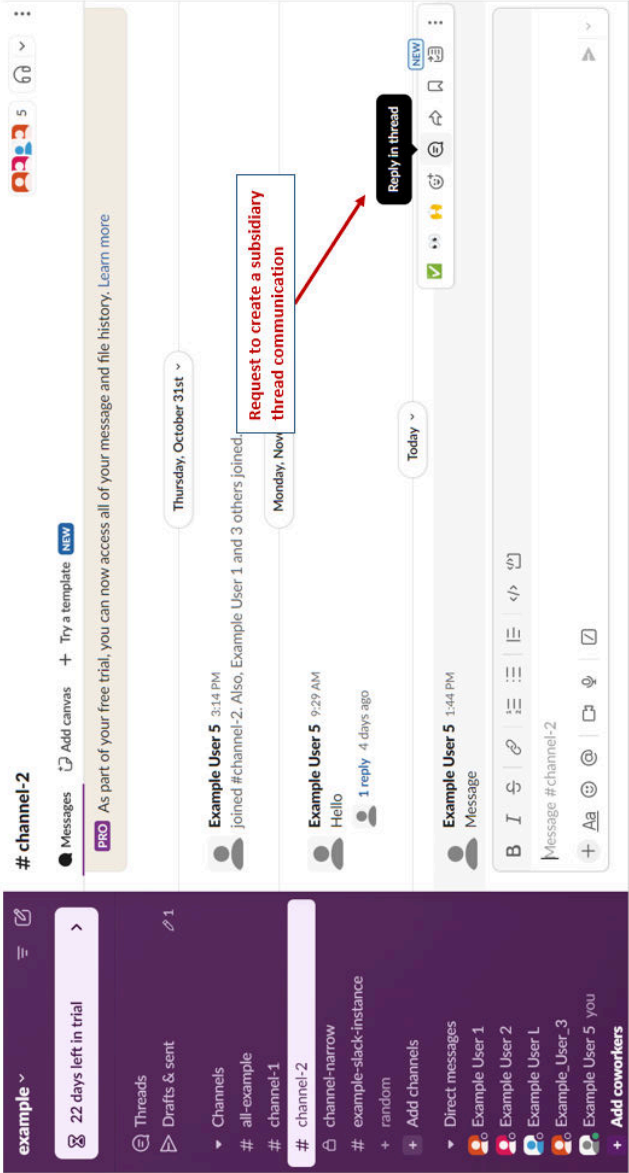
'731 patent	Slack
[30.d] in response to receiving the thread request, generating and transmitting for display a thread summary indicator within the messaging pane proximate the first messaging communication, wherein the thread summary indicator is configured to be selectable by a user with access to the first messaging communication, there is a thread summary indicator (e.g., the “3 replies” link shown below) that is selectable by a user with access to the first messaging communication. <i>See, e.g.:</i>	
[30.d] in response to receiving the thread request, generating and transmit for display a thread summary indicator renderable within the messaging pane proximate the first messaging communication, wherein the thread summary indicator is configured to be selectable by a user with access to the first messaging communication. For example, in the messaging pane, just below and indented from the first messaging communication, there is a thread summary indicator (e.g., the “3 replies” link shown below) that is selectable by a user with access to the first messaging communication. <i>See, e.g.:</i>	Slack is configured to, in response to receiving the thread request, generate and transmit for display a thread summary indicator renderable within the messaging pane proximate the first messaging communication, wherein the thread summary indicator is configured to be selectable by a user with access to the first messaging communication. For example, in the messaging pane, just below and indented from the first messaging communication, there is a thread summary indicator (e.g., the “3 replies” link shown below) that is selectable by a user with access to the first messaging communication. <i>See, e.g.:</i>

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Initial Claim Chart Relating the Accused Product to the Asserted Claims of U.S. Patent No. 11,973,731

'731 patent	Slack
	The screenshot illustrates the Slack user interface. The left sidebar, labeled '1st Pane', contains a search bar, a list of channels, and a 'Threads' section. The main area, labeled '2nd Pane', displays a message thread within a channel. A red arrow points from the 'Threads' section in the sidebar to the thread in the main area. Another red arrow points from a 'User-selectable thread summary indicator' in the thread to the 'Threads' section. The thread shows a message from 'Example User 1' with a 'Hello, team!' message. Below the message, there is a 'View thread' button and a '3 replies' indicator. The thread also shows a 'First messaging communication' and a 'User-selectable thread summary indicator'.
[30.e] receiving an indication of an input indicating a selection of the thread summary indicator; and	Slack is configured to receive an indication of an input indicating a selection of the thread summary indicator. For example, when a user clicks the thread summary indicator, Slack receives an indication of that click.
[30.f] causing, based at least in part on receiving the indication of the input, rendering of the subsidiary thread communication to a thread communication pane within the communication interface, wherein a list pane, the messaging pane, and the thread communication pane are configured to be rendered within a defined display window as viewable simultaneously. See, e.g.:	Slack is configured to cause, based at least in part on receiving the indication of the input, rendering of the subsidiary thread communication to a thread communication pane within the communication interface, wherein a list pane, the messaging pane, and the thread communication pane are configured to be rendered within a defined display window as viewable simultaneously. See, e.g.:

EXHIBIT A

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defined display window as viewable simultaneously.	The screenshot displays the Slack application interface, which is divided into three main panes. The leftmost pane is the 'List pane', which contains a sidebar with a search bar, a list of channels (including #channel-1 and #channel-2), and a list of direct messages. The middle pane is the 'Messaging pane', which shows the conversation for #channel-2. It includes a header with the channel name and a description, followed by a list of messages from Example User 5. The rightmost pane is the 'Thread communication pane', which is a modal window that opens when a message is selected. It shows the selected message and its replies in a threaded format. Red arrows at the top of the interface point to each of these three panes, labeled 'List pane', 'Messaging pane', and 'Thread communication pane' respectively.