IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

REMOTE CONCEPTS LLC, Plaintiff, v. **SLACK TECHNOLOGIES, INC.,** Defendant.	**Civil Action No. 1:20-cv-3452** **JURY TRIAL DEMANDED**

COMPLAINT

This is an action for patent infringement in which Remote Concepts LLC ("Remote Concepts" or "Plaintiff") makes the following allegations against Slack Technologies, Inc. ("Slack" or "Defendant"):

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 United States Code ("U.S.C.") to prevent and enjoin Defendant from infringing and profiting, in an illegal and unauthorized manner, and without authorization and/or consent from Plaintiff from U.S. Patent No. 7,016,942 ("the '942 Patent").

PARTIES

2. Remote Concepts LLC is a limited liability company organized and existing under the laws of the state of Texas.

3. Defendant Slack Technologies, Inc. is a corporation organized and existing under the laws of Delaware that maintains an established place of business at 1681 Chestnut Pl, Denver,

CO 80202. Defendant may be served at Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808.

JURISDICTION AND VENUE

4. This is an action for infringement of a United States patent arising under 35 U.S.C. §§ 271(a)-(b), 281, and 284 - 85. This Court has subject matter jurisdiction over this action under 28 U.S.C. §1331 and §1338(a).

5. Venue is proper in this district pursuant to 28 U.S.C. § 1400(b). Defendant has a regular place of business in this district at 1681 Chestnut Pl, Denver, CO 80202 and has committed acts of patent infringement in this district.

6. Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Colorado Long Arm Statute, due at least to Defendant's substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; (ii) having a regular established place of business within the forum state; and (iii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Colorado and in this district.

U.S. PATENT NO. 7,016,942

7. Remote Concepts incorporates paragraphs 1 through 7 as though fully set forth herein.

8. On March 21, 2006, United States Patent No. 7,016,942 (the "'942 Patent") was duly and legally issued by the United States Patent and Trademark Office for an invention entitled "Dynamic Hosting." A true and correct copy of the '942 Patent is attached hereto as Exhibit A.

9. Gary Odom is the listed inventor of the '942 Patent.

10. Plaintiff is the owner by assignment of the '942 Patent, with all rights in and to that patent.

11. The '942 Patent is valid and enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

12. The '942 Patent recognized problems with the existing client-server environment, wherein a client computer's performance potential was largely untapped. Exhibit A at 1:12-14. As broadband-based connectivity increased, client computers were then able to sustain network connectivity indefinitely, in contrast to previously short-lived dial-up connections. Exhibit A at 15-18.

13. In a traditional client-server setup, one or more clients connect directly to a server through a network. *Id.* 2:26-28. The clients receive data from the server and the server acts as a conduit for data transfer between clients — in other words, the server is a hub for data communication between the clients. *Id.* at 2:28-33. In the prior art, a server acts as the host, and may also have a backup server, but at no point does a client dynamically become the server for the other clients. *Id.* at 34-41. The inventions disclosed in the '942 Patent perform a method for dynamic hosting, which is where a computer connects to a server in a network as a client and one of the clients begins to act as the host or server for the other clients, thereby no longer using the server to function as the host or server for the other clients. *Id.* at 2:59-65. This allows for a novel solution to a technological problem, *i.e.*, "offloading server tasks to specific clients" and "creating self-sustaining dynamic client-server configurations independent of the server to which the clients originally connected." *Id.* at 1:33-36.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 7,016,942

14. Defendant, directly or through its intermediaries, makes, uses, imports, sells, and/or offers for sale products and/or systems that infringes the claims of the '942 patent when placed into operation by Defendant or its end users, *i.e.*, Slack Voice and Video calls which utilize WebRTC and substantially similar products (the "Accused Instrumentalities").

15. Upon information and belief, Defendant has been and is now infringing claim 13 of the '942 Patent in the State of Colorado, in this Judicial District, and elsewhere in the United States, by, among other things, directly or through intermediaries, making, using, selling and/or offering for sale the Accused Instrumentalities, covered by one or more claims of the '942 Patent to the injury of Plaintiff. Defendant is directly infringing, literally infringing, and/or infringing the '942 Patent under the doctrine of equivalents. Defendant is thus liable for infringement of the '942 Patent pursuant to 35 U.S.C. § 271(a).

16. When placed into operation by Defendant or its end users, the Accused Instrumentalities infringe claim 13 of the '942 Patent as they perform a computer implemented method for channeling data through a network from an initial client/server connectivity to direct client-to-client communication comprising the following steps: at least a first and second client computers connecting through a network to a static server at a pre-designated address, thereby respectively establishing a communications session with said static server, wherein said first client computer and said second client computer not communicating with each other prior to respectively establishing said communications session with said static server; said first computer transmitting a first data to said second computer via said static server; while said first computer maintaining network connectivity to said static server, said first computer directly transmitting a second data to said second computer without said static server intervening.

17. For example, regarding Claim 13, Slack Voice and Video calls is used to set up video calls between users.

Slack voice and video call security

Looking for details about the security of Slack's voice and video features? You're in the right place!

Tip: If you're having connection, audio, or video issues with Slack Calls, click here to begin troubleshooting.

Security

We use the WebRTC standard for real-time communications with the latest recommended security techniques. Here's how we protect the integrity and confidentiality of a call:

- All traffic is encrypted in transit.
- Media traffic is encrypted with SRTP using a DTLS-SRTP key exchange.
- Real-time data channel traffic is encrypted with DTLS.
- HTTPS or secure WebSockets using TLS 1.2 are used for signaling communication with our media server.

https://slack.com/help/articles/115003560786-Slack-voice-and-video-call-security-

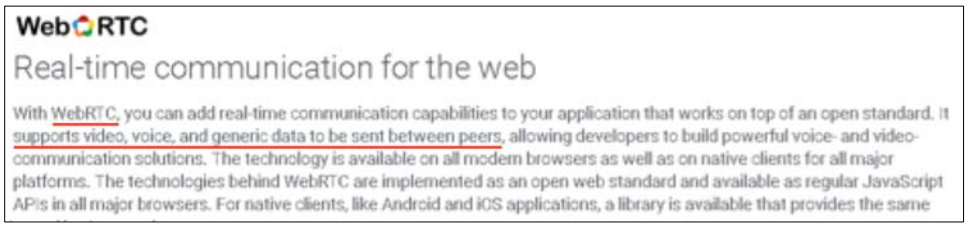
Slack Calls are now in beta, on Mac, Windows, iOS, Android and Chrome. If you haven't given it a try yet, please do (and let us know how it goes)! Our help center article on Calls has more details on the feature.

We wanted to answer the age-old question that we have all asked each other during a voice call when quality degrades: "Is it my connection or yours?". We wanted a UI that the user can *trust*. So we decided to build in the logic to answer that question for you. It's much better than a generic "Having network issues" warning.

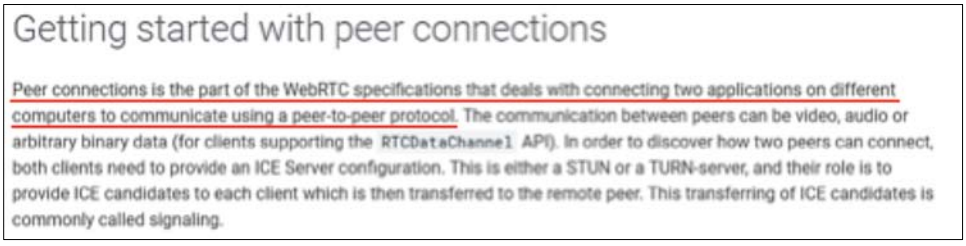
We utilize a selective forwarding architecture to better support group calls. In this architecture, participants communicate only with the media server and are unaware of the state of each other's network. In this post, we'll talk about how we analyze real-time control protocol (RTCP) feedback from each of the users to generate correct feedback to all users about their individual uplink / downlink quality.

We use Janus as our selective forwarding unit (SFU) and WebRTC for voice chat. WebRTC provides us with standardized RTCP feedback but Janus doesn't analyze it out of the box. This post is about us adding this support. Most code excerpts that you see are from Janus alongside some of our customizations.

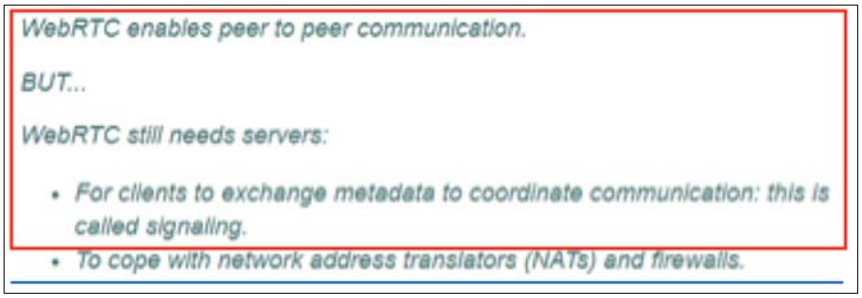
https://slack.engineering/calls-is-it-you-or-is-it-me/



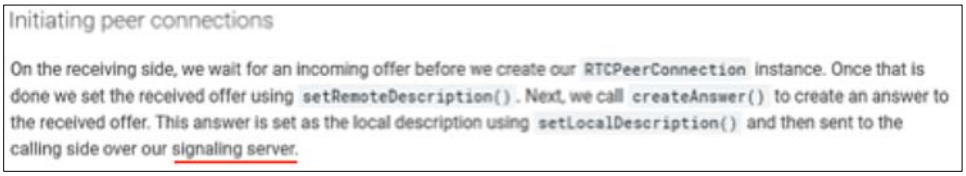
https://webrtc.org/



https://webrtc.org/getting-started/peer-connections



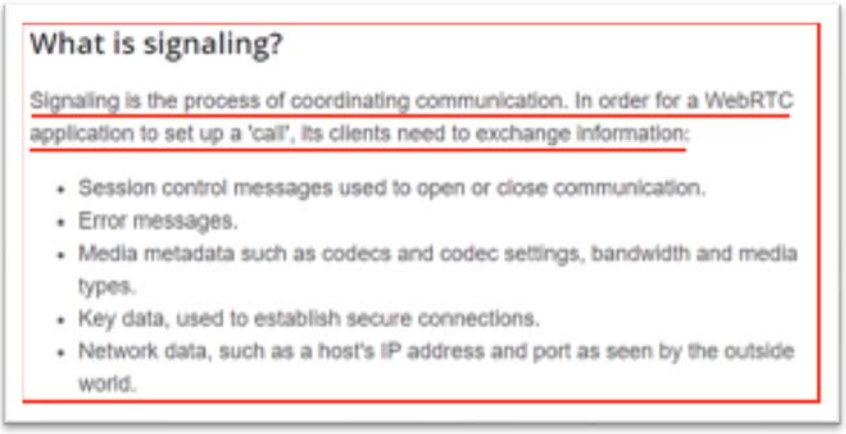
https://www.html5rocks.com/en/tutorials/webrtc/infrastructure/



https://webrtc.org/getting-started/peer-connections

18. Prior to establishing a voice or video conference, the Accused Instrumentalities connects users to a signaling server to coordinate communication with each other. In general, each server almost have a static address such as a pre-designated name address (URL) that can be translated to an actual IP address (the same is also supported by the patent specification) thus, the signaling server can be asserted as "a static server" with pre-designated address.

https://www.html5rocks.com/en/tutorials/webrtc/infrastructure

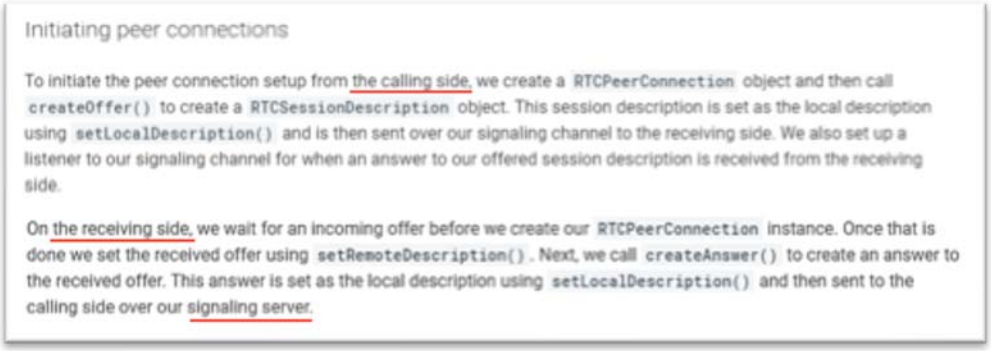


What is signaling?

Signaling is the process of coordinating communication. In order for a WebRTC application to set up a 'call', its clients need to exchange information:

- Session control messages used to open or close communication.
- Error messages.
- Media metadata such as codecs and codec settings, bandwidth and media types.
- Key data, used to establish secure connections.
- Network data, such as a host's IP address and port as seen by the outside world.

https://www.html5rocks.com/en/tutorials/webrtc/infrastructure/



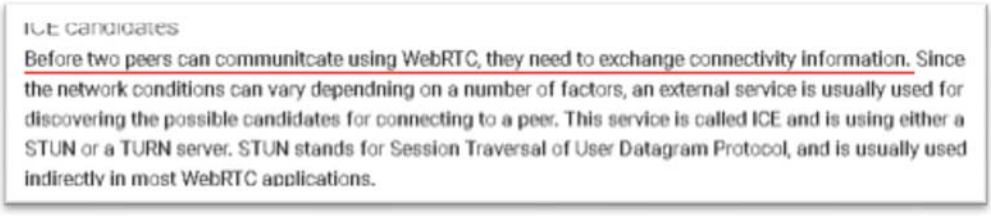
Initiating peer connections

To initiate the peer connection setup from the calling side, we create a `RTCPeerConnection` object and then call `createOffer()` to create a `RTCSessionDescription` object. This session description is set as the local description using `setLocalDescription()` and is then sent over our signaling channel to the receiving side. We also set up a listener to our signaling channel for when an answer to our offered session description is received from the receiving side.

On the receiving side, we wait for an incoming offer before we create our `RTCPeerConnection` instance. Once that is done we set the received offer using `setRemoteDescription()`. Next, we call `createAnswer()` to create an answer to the received offer. This answer is set as the local description using `setLocalDescription()` and then sent to the calling side over our signaling server.

https://webrtc.org/getting-started/peer-connections

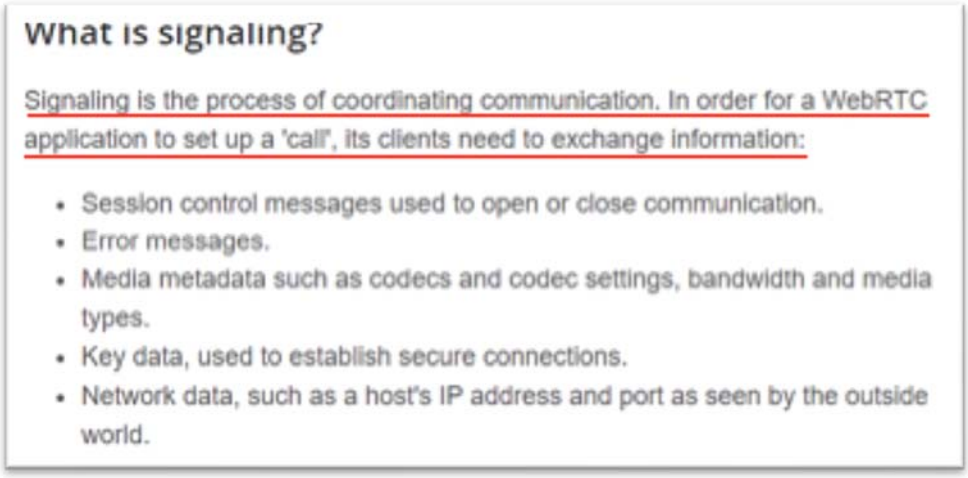
19. Before the Accused Instrumentalities establishes peer-peer communication between users, each client shares its connectivity information such as IP address, port number etc. with the signaling server, this process is called signaling in WebRTC.



ICE candidates

Before two peers can communitcate using WebRTC, they need to exchange connectivity information. Since the network conditions can vary dependning on a number of factors, an external service is usually used for discovering the possible candidates for connecting to a peer. This service is called ICE and is using either a STUN or a TURN server. STUN stands for Session Traversal of User Datagram Protocol, and is usually used indirectly in most WebRTC applications.

https://webrtc.org/getting-started/peer-connections



What is signaling?

Signaling is the process of coordinating communication. In order for a WebRTC application to set up a 'call', its clients need to exchange information:

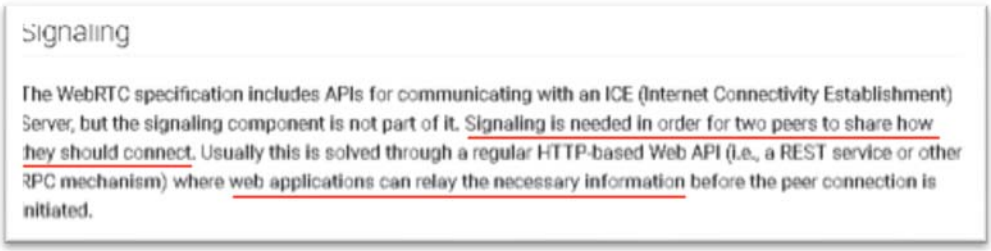
- Session control messages used to open or close communication.
- Error messages.
- Media metadata such as codecs and codec settings, bandwidth and media types.
- Key data, used to establish secure connections.
- Network data, such as a host's IP address and port as seen by the outside world.

https://www.html5rocks.com/en/tutorials/webrtc/infrastructure/

The exchange of information via signaling must have completed successfully before peer-to-peer streaming can begin.

https://www.html5rocks.com/en/tutorials/webrtc/basics/

20. During the signaling process, the Accused Instrumentalities share the connectivity information of one user via the signaling server with the other user (called as receiving peer) to establish the peer-to-peer connection.

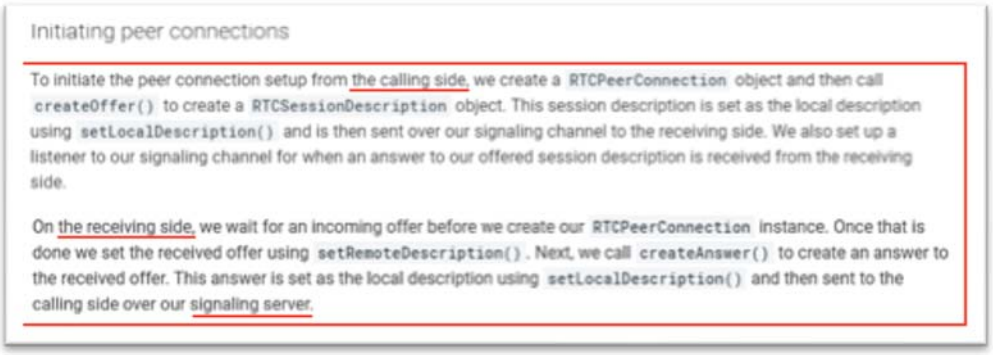


Signaling

The WebRTC specification includes APIs for communicating with an ICE (Internet Connectivity Establishment) Server, but the signaling component is not part of it. Signaling is needed in order for two peers to share how they should connect. Usually this is solved through a regular HTTP-based Web API (i.e., a REST service or other RPC mechanism) where web applications can relay the necessary information before the peer connection is initiated.

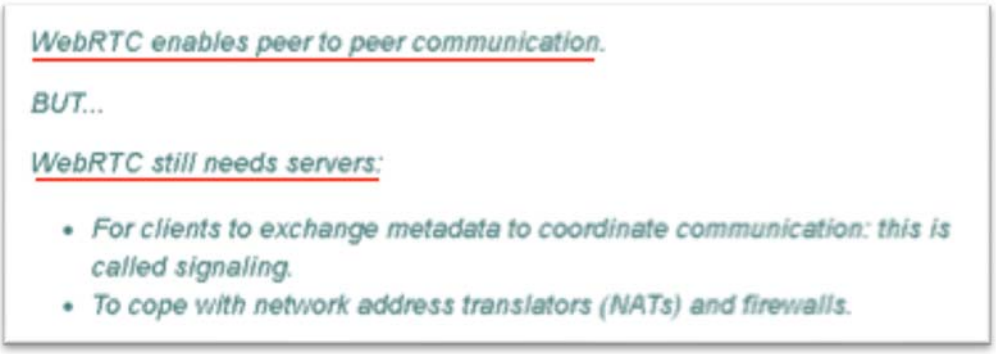
https://webrtc.org/getting-started/peer-connections

https://www.html5rocks.com/en/tutorials/webrtc/infrastructure/

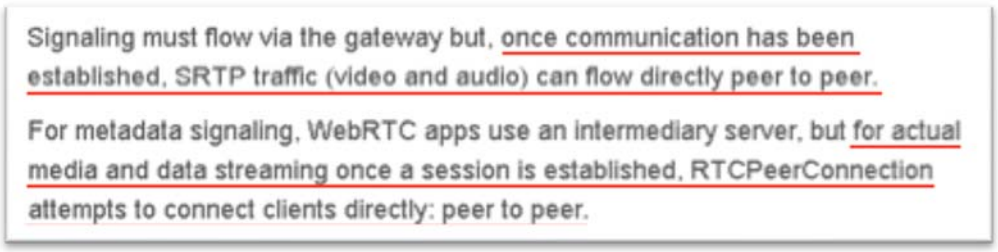


https://webrtc.org/getting-started/peer-connections

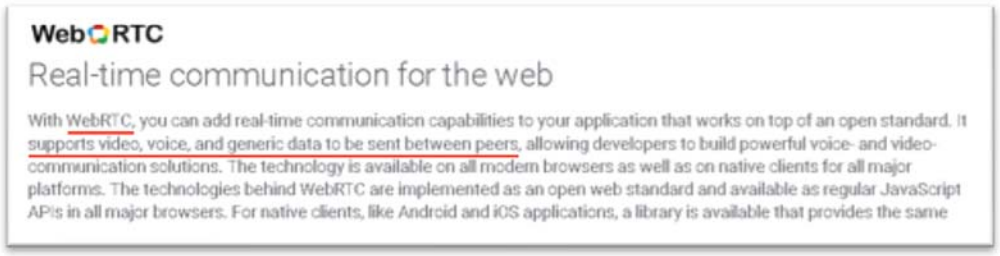
21. In the Accused Instrumentalities, one user maintains the connection with signaling server while communicating directly with the other user.



https://www.html5rocks.com/en/tutorials/webrtc/infrastructure/

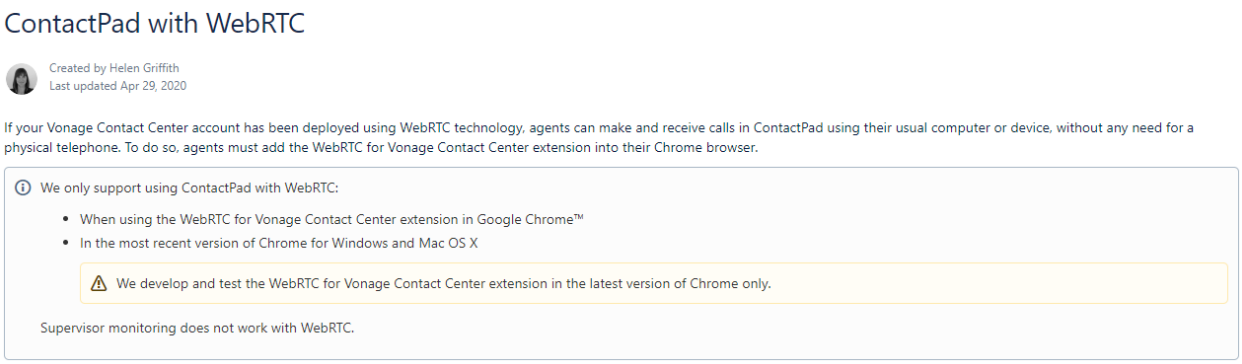


https://www.html5rocks.com/en/tutorials/webrtc/infrastructure/



https://webrtc.org/

22. As a further example regarding Claim 13 of the ’942 Patent, ContactPad requires adding the WebRTC for Vonage Contact Center



23. When placed into operation by Defendant or its end users, the Accused Instrumentality infringes claim 14 of the ’942 Patent as it performs the method of claim 13, and further, wherein a third client computer connecting to said static server after said first and second computers, wherein said third client computer and said first client computer not communicating with each other prior to said third computer connecting to said static server; said first client directly

transmitting at least a portion of said second data to said third client computer without said static server receiving said transmission.

24. As a result of Defendant's infringement of the '942 Patent, Plaintiff has suffered monetary damages and is entitled to a money judgment in an amount adequate to compensate for Defendant's infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendant, together with interest and costs as fixed by the court.

COUNT II
INDUCED INFRINGEMENT

25. Upon information and belief, Defendant has been and is now inducing the infringement by its end users of the Claim 13 of the '942 Patent in the State of Delaware, in this Judicial District, and elsewhere in the United States by, among other things, making, using, selling, and/or offering for sale the Accused Instrumentalities to the injury of Plaintiff. Defendant's end users are directly infringing, literally infringing, and/or infringing claim 13 of the '942 Patent under the doctrine of equivalents. Defendant is thus liable for infringement of claim 13 pursuant to 35 U.S.C. § 271(b).

26. Defendant has had knowledge of the '942 Patent since at least the filing of this complaint.

27. By advertising, selling, instruction and providing the Accused Instrumentalities to end users wherein the Accused Instrumentalities infringes upon ordinary use by an end user, Defendant specifically intended to induce infringement. Furthermore, Defendant remains aware that these normal and customary activities would infringe claim 13 of the '942 Patent. Defendant has had knowledge of the '942 Patent since the filing of this complaint, and actually induces others, such as end-use customers, to directly infringe by using, selling, supplying, and or distributing the

Accused Instrumentalities within the United States. Defendant is aware since the filing of this Complaint, that such actions would induce actual infringement

28. As shown above, Defendant has and continues to directly infringe claim 13 of the ’942 Patent by its end users in accordance with 35 U.S.C. § 271(b).

29. As shown above, Defendant and its end users have engaged in and currently engage in activities that constitute direct infringement of claim 13 of the ’942 Patent.

30. As shown above, the operation and use by Defendant or its end users of the Accused Instrumentalities constitutes direct infringement of claim 13 of the ’942 Patent.

31. Defendant’s affirmative act of selling and/or offering for sale the Accused Instrumentalities and providing instruction, advertisement of the infringing features, and support for the Accused Instrumentalities have induced and continues to induce Defendant’s end users to use the Accused Instrumentalities in its normal and customary way to infringe claim 13 of the ’942 Patent.

32. Additionally, for example, in connection with the sale and/or offering for sale of the Accused Instrumentalities, Defendant provides instructions and support to resellers and end-use customers regarding the user and operation of the Accused Instrumentalities. Specifically, Defendant provides instructions on its website which leads to infringement by end-users. *See e.g.* https://slack.com/help/articles/115003560786-Slack-voice-and-video-call-security- When end-users follow such instructions and support, they directly infringe claim 13 of the ’942 Patent. Defendant knows or should have known that by providing such instructions and support, resellers and end-use customers follow these instructions and support and directly infringe claim 13 of the ’942 Patent.

33. Accordingly, Defendant has performed and continues to perform acts that constitute indirect infringement, and would induce actual infringement, with the knowledge of claim 13 of the '942 Patent and with the knowledge or willful blindness to the fact that the induced acts would constitute infringement.

PRAYER FOR RELIEF

Plaintiff requests that the Court find in its favor and against Defendant, and that the Court grant Plaintiff the following relief:

a. Judgment that one or more claims of the '942 Patent have been infringed, either literally and/or under the doctrine of equivalents, by Defendant;

b. Judgment that Defendant accounts for and pay to Plaintiff all damages and costs incurred by Plaintiff, caused by Defendant's infringing activities and other conduct complained of herein;

c. That Plaintiff be granted pre-judgment and post-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;

d. That this Court declare this an exceptional case and award Plaintiff reasonable attorneys' fees and costs in accordance with 35 U.S.C. § 285; and

e. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

DEMAND FOR JURY TRIAL

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury or any issues so triable by right.

DATED November 22, 2020. Respectfully submitted,

By: */s/ Hao Ni*
Hao Ni
Texas Bar No. 24047205
hni@nilawfirm.com

Ni, Wang & Massand, PLLC
8140 Walnut Hill Ln., Ste. 500
Dallas, TX 75251
Tel: (972) 331-4600
Fax: (972) 314-0900

ATTORNEY FOR PLAINTIFF
REMOTE CONCEPTS LLC