IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

MULTIMODAL MEDIA LLC, *Plaintiff*, v. GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP., LTD., *Defendant*.	§ § § § § § § § § § §	Case No. 2:21-cv-00436-JRG-RSP

CLAIM CONSTRUCTION ORDER

On April 14, 2023, the Court held a hearing to determine the proper construction of disputed terms in United States Patent Nos. 7,929,949, 8,107,978, 8,161,116, 9,185,227, 10,552,030. Before the Court is the Opening Claim Construction Brief (Dkt. No. 58) filed by Plaintiff Multimodal Media LLC ("Multimodal"). Also before the Court is the Responsive Claim Construction Brief (Dkt. No. 60) filed by Defendant Guangdong Oppo Mobile Telecommunications Corp., Ltd. ("OPPO") as well as Plaintiff's reply (Dkt. No. 61). Further before the Court are the parties' Patent Rule 4-3 Joint Claim Construction and Prehearing Statement (Dkt. No. 54) and Patent Rule 4-5(d) Joint Claim Construction Chart (Dkt. No. 62). Having reviewed the arguments made by the parties at the hearing and in their claim construction briefing, having considered the intrinsic evidence, and having made subsidiary factual findings about the extrinsic evidence, the Court hereby issues this Claim Construction Order. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (*en banc*); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015).

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I. BACKGROUND

Plaintiff alleges infringement of United States Patent Nos. 7,929,949 (the "'949 Patent"), 8,107,978 (the "'978 Patent"), 9,185,227 (the "'227 Patent"), 10,552,030 (the "'030 Patent"), and

8,161,116 (the "'116 Patent") (Dkt. No. 58, Exs. A–E). The patents-in-suit relate to multimedia messaging. *See* Dkt. No. 58 at 1–3.

The '949 Patent, titled "Interactive Multimodal Messaging," issued on April 19, 2011, and bears a filing date of February 3, 2009. The Abstract of the '949 Patent states:

> A method and system is provided to enable a recipient to interact with an interactive multimodal message triggered on the recipient's mobile device. A sender creates the interactive multimodal message using a client application. A server stores the created interactive multimodal message. The server sends a notification to the recipient's mobile device. The notification comprises a pointer to the stored interactive multimodal message. The stored interactive multimodal message is triggered on the recipient's mobile device when the pointer in the notification is accessed. Service information is transmitted to the recipient's mobile device through the triggered interactive multimodal message. The interactive multimodal message triggered on the recipient's mobile device enables the recipient interaction. The interactive multimodal message may be forwarded to one or more second recipients simultaneously. At least a part of the forwarded interactive multimodal message is displayed differently to each of the second recipients.

The '978 Patent, titled "Addressing Voice SMS Messages," issued on January 31, 2012, and bears an earliest priority date of April 25, 2007. The Abstract of the '978 Patent states:

> Disclosed herein is a method and system for allowing voice short message service (SMS) messaging using methods of recipient addressing as used by text SMS messaging. A user creates a text SMS message and addresses the message to a recipient. The address of the recipient may be obtained from the address book stored locally on the user's mobile device. A client application intercepts the text SMS message and prompts whether the user wants to include a voice SMS message. If the user wants to include the voice SMS message, the user's voice message is recorded on a server. The text message along with a notification of the voice message is transmitted to the recipient. The recipient may use the information in the voice message notification to access and listen to the user's recorded voice message.

The '227 Patent, titled "Sender Driven Call Completion System," issued on November 10, 2015, and bears an earliest priority date of December 14, 2012. The Abstract of the '227 Patent states:

> A method and a system for completing an incomplete call made by a calling party to a called party, provide a call completion application on a calling party device.

> The call completion application detects an incomplete call, which is a call that is not connected to a called party device or a short duration call that does not enable an intended communication to occur between the calling party and the called party. The call completion application determines one or more call completion actions, for example, setting a reminder, transmitting media data, etc., to be performed to complete the incomplete call, for example, based on user selections, a duration of the incomplete call, user configuration of the call completion application on the calling party device, etc. The call completion application triggers execution of the determined call completion actions based on one or more action execution criteria for completing the incomplete call.

The ’030 Patent, titled “Multi-Gesture Media Recording System,” issued on February 4, 2020, and bears an earliest priority date of October 15, 2012. The Abstract of the ’030 Patent states:

> A computer implemented method and system for recording media data such as audio data in one or more communication modes based on gestures on a graphical user interface (GUI) of an electronic device is provided. A gesture based media recording application (GBMRA) provided on the electronic device defines multiple interface regions on the GUI. The GBMRA detects a gesture on an interface region and performs a first action associated with recording of the media data in a communication mode. The GBMRA detects another gesture on the same interface region or another interface region and performs a second action. The first action and the second action include at least one of triggering recording of the media data, switching from one communication mode to another for recording the media data, canceling recording of the media data, generating and displaying multiple options for performing an operation associated with the recorded media data, etc.

The ’116 Patent, titled “Method and System for Communicating a Data File Over a Network,” issued on April 17, 2012, and bears an earliest priority date of May 23, 2003. The Abstract of the ’116 Patent states:

> A method and system for forwarding information such as data files to a recipient across disparate or incompatible communication networks, which are not constrained by incompatible user devices. The sender sends information such as a data file to an intended recipient via a messaging server. The messaging server communicates with the intended recipient using basic communication tools that are generally compatible regardless of the network that the recipient is subscribed to. The messaging server stores the information, creates and sends a notification message to the intended recipient that she has information to be retrieved. The notification message includes a unique access address associated with the message,

> at which the recipient can retrieve the information. Different unique access addresses are associated with different messages.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with preliminary constructions with the aim of focusing the parties' arguments and facilitating discussion. Those preliminary constructions are noted below within the discussion for each term.

II. LEGAL PRINCIPLES

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). "In some cases, however, the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841 (citation omitted). "In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the 'evidentiary underpinnings' of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal." *Id.* (citing 517 U.S. 370).

To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See Phillips*, 415 F.3d at 1313; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in

the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *accord Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314–15.

"Claims 'must be read in view of the specification, of which they are a part.'" *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). "The specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *accord Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* The specification may also resolve the meaning of ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex*, 299 F.3d at 1325. But, "[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998)

(quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *accord Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc. v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent."). "[T]he prosecution history (or file wrapper) limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance." *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985).

Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Phillips*, 415 F.3d at 1317 (citations and internal quotation marks omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

The Supreme Court of the United States has "read [35 U.S.C.] § 112, ¶ 2 to require that a patent's claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig*

Instruments, Inc., 134 S. Ct. 2120, 2129 (2014). "A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus,* 134 S. Ct. 2120. "Indefiniteness must be proven by clear and convincing evidence." *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

III. AGREED TERMS

The parties reached agreement on constructions as stated in their January 20, 2023 P.R. 4-3 Joint Claim Construction and Prehearing Statement (Dkt. No. 54, Ex. A) and in their March 31, 2023 Joint Claim Construction Chart Pursuant to P.R. 4-5(d) (Dkt. No. 62, Ex. A). Those agreements are set forth in Appendix A to the present Claim Construction Order.

IV. DISPUTED TERMS

A. "interactive multimodal message"

"interactive multimodal message" ('949 Patent, Claims 1, 2, 4, 9)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"a message containing two or more forms of dynamic content that enables responsive communication"	"an interactive, seamless combination of graphics, text, and audio output or a combination of the above modalities with speech, text, and touch input or vice-versa having no awkward transitions, interruptions, or indications of disparity"

Dkt. No. 54, Ex. B at 1; *id.*, Ex. C at 1; Dkt. No. 62, Ex. A at 4.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary constructions:

Term	Preliminary Construction
"multimodal message"	"seamless combination of graphics, text, and audio output or a combination of the above modalities with speech, text, and touch input or vice-versa"
"interactive multimodal message"	Plain meaning apart from the Court's construction of "multimodal message" (above)

(1) The Parties' Positions

Plaintiff argues that "Defendant's construction is based upon th[e] lexicography for 'multimodal message,' but adds the statement that it has 'no awkward transitions, interruptions, or indications of disparity,'" and "this language is superfluous, vague, likely indefinite, and has no basis in the patent or file history." Dkt. No. 58 at 5. Plaintiff also argues that "Plaintiff's construction provides clarification for the additional term 'interactive,' which is merely parroted back in Defendant's construction." *Id.* at 6.

Defendant responds that "the specification of the '949 Patent explicitly defines multimodal message". Dkt. No. 60 at 5. Defendant also argues that its proposal of "no awkward transitions, interruptions, or indications or disparity" is supported by a dictionary definition, and "even assuming, *arguendo*, that this phrase was left out of the construction, the remainder of OPPO's proposed construction should be adopted because it is the only proposed construction that is consistent with the specification's lexicography for 'multimodal message.'" *Id.* at 6. Further, Defendant argues that Plaintiff's proposed construction improperly imports examples from the specification. *Id.*

Plaintiff replies that "Defendant cites to no legal authority, because none exists, for its proposal that lexicography of one term in a larger claim phrase must be imputed to the construction of the larger phrase." Dkt. No. 61 at 1. Plaintiff also reiterates that Defendant's proposal "does

not clarify the 'interactive multimodal message' for the jury, including the critical 'interactive' limitation." *Id.* Plaintiff also argues that "[i]nteractivity, by its nature, 'enables responsive communication,' and Defendant's attempt to cast this as improper narrowing of the claim ignores the plain meaning of 'interactive,' which is supported by the specification." *Id.* at 2 (citing '949 Patent at 5:33–40).

At the April 14, 2023 hearing, the parties presented oral arguments regarding this term.

(2) Analysis

Claim 1 of the '949 Patent, for example, recites (emphasis added; formatting modified):

> 1. A method of enabling a recipient to interact with an *interactive multimodal message* triggered on a mobile device of said recipient, comprising the steps of:
>
> creating said *interactive multimodal message* by a sender using a client application available to said sender, wherein said created *interactive multimodal message* is stored at a server;
>
> sending a notification comprising a pointer to said stored *interactive multimodal message* to said mobile device of the recipient by said server;
>
> triggering the stored *interactive multimodal message* on the mobile device of the recipient by accessing said pointer in said notification; and
>
> transmitting service information to the mobile device of the recipient through said triggered *interactive multimodal message*;
>
> whereby the *interactive multimodal message* triggered on the mobile device enables said recipient interaction.

The Background section of the specification states:

> Mobile communication service providers typically allow subscribers to make voice calls and to send text messages and multimedia messages over a communication network. Voice calls can only be made if a calling subscriber and a called subscriber are connected to each other via the mobile communication network at the same time. Often, a called subscriber may be busy and unable to answer a call from a calling subscriber. The called subscriber may therefore miss important calls. Text messages have a maximum character limit for every message; therefore the amount of information transmitted as a text message may be limited. Furthermore, the content of text messages is limited to plain text without visual enhancements or interactivity. Multimedia messages allow subscribers to send images, videos, and other kinds of multimedia content over the communication network. However, there is limited interactivity in the multimedia messages. The content of a single multimedia message remains unchanged when forwarded to different recipients.

'949 Patent at 1:23–49. The Summary of the Invention states:

> The method and system disclosed herein address the above stated need for enabling a recipient to interact with an interactive multimodal message comprising interactive dynamic content triggered on a mobile device.

Id. at 2:5–8.

The specification also discloses:

> FIG. 1 illustrates a method of enabling a recipient 205 to interact with an interactive multimodal message triggered on a mobile device of the recipient 205. *As used herein, the term "multimodal message" is a seamless combination of graphics, text, and audio output or a combination of the above modalities with speech, text, and touch input or vice-versa.*
>
> *The multimodal messages are a combination of voice data and other modalities, for example, image, video, etc., with a text short message service (SMS) message.* The multimodal messages enable use of multiple modalities of communication based on requirements of a sender 201 and the usage environment. As used herein, modalities refer to any human mode of interaction on the input side of an application, for example, the sender's 201 voice, any visual mode, or combination of voice and any visual mode, etc., that allows the sender 201 to speak, hear, type, touch or see in that application, and one or more human interaction modes on the output side of the application such as the recipient's 205 ability to hear, visually see, or simultaneously hear and visually see the output. Multimodal interactions thereby extend web or other application user interfaces to allow multiple modes of interaction, offering the sender 201, for example, the choice of using their voice, or an input device such as a key pad, keyboard, mouse, or stylus. For output, the recipient 205 will, for example, be able to listen to spoken prompts and audio, to view information on graphical displays, and to simultaneously listen to and view an output.

Id. at 3:8–35 (emphasis added).

The parties agree that this passage sets forth a definition for "multimodal message." *See* Dkt. No. 58 at 5; *see also* Dkt. No. 60 at 5. At the April 14, 2023 hearing, Plaintiff argued that the Court's preliminary construction was nonetheless incomplete because "graphics" might not necessarily be understood as including "image" and "video" (as set forth in the second emphasized sentence of the above-reproduced portion of the specification). In response, Defendant had no objection to including "image" and "video" within the scope of the construction. The parties thus

understand, and the Court agrees, that the word "graphics" in the Court's construction includes images and videos.

As to the word "seamless" that appears in the patentee's above-reproduced definition of "multimodal message," Defendant argues that its proposal of adding the phrase "no awkward transitions, interruptions, or indications or disparity" is an appropriate definition of "seamless" that is supported by a dictionary. Dkt. No. 60, Ex. A, *Merriam-Webster's Collegiate Dictionary* 1119 (11th ed. 2003) (OPPO00003110).

But a "claim should not rise or fall based upon the preferences of a particular dictionary editor, or the court's independent decision, uninformed by the specification, to rely on one dictionary rather than another," and "heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification." *Phillips*, 415 F.3d at 1321 & 1322. The Court therefore expressly rejects Defendant's proposal of a limitation that there are "no awkward transitions, interruptions, or indications of disparity."

As to Plaintiff's proposal that this term should be construed to explain that the message "enables responsive communication," Plaintiff cites the following disclosure in the specification:

> The recipient 205 interacts with the triggered interactive multimodal message. The interaction with the interactive multimodal message by the recipient 205 may, for example, comprise ending the interactive multimodal message, replying to the interactive multimodal message, or forwarding the interactive multimodal message to one or more second recipients. The interactive multimodal messages may be grouped based on predefined grouping rules.

'949 Patent at 5:33–40. On its face, however, this disclosure is an "example." *Id.* Further, Plaintiff's proposal of "enables responsive communication" appears to correspond to only *one* of these disclosed examples ("replying to the interactive multimodal message"), the other two

examples being "ending the interactive multimodal message" and "forwarding the interactive multimodal message to one or more second recipients."

Plaintiff also argues that "[i]nteractivity, by its nature, 'enables responsive communication,' and Defendant's attempt to cast this as improper narrowing of the claim ignores the plain meaning of 'interactive,' which is supported by the specification." Dkt. No. 61 at 2 (citing '949 Patent at 5:33–40). This concern can be addressed, however, by affording "interactive" its plain and ordinary meaning. Plaintiff's proposal is therefore rejected, and no further construction is necessary as to "interactive." *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims.").

Finally, Plaintiff argues that "the list of potential 'modes' in Defendant's construction is less than complete, because the specification also describes that the multimodal message may be 'web based scripted interfaces'" (Dkt. No. 58 at 6 (citing '949 Patent at 4:5-9)), but the above-reproduced passage from the specification sets forth a clear lexicography, and "the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316.

The Court therefore hereby construes the disputed term as set forth in the following chart:

Term	Construction
"multimodal message"	**"seamless combination of graphics, text, and audio output or a combination of the above modalities with speech, text, and touch input or vice-versa"**
"interactive multimodal message"	**Plain meaning (apart from the Court's construction of "multimodal message," above)**

B. "service information"

"service information" ('949 Patent, Claims 1, 5)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"content information a recipient can interact with including but not limited to, advertisements, alerts, stored audio files, and image previews"	"service-related content information"

Dkt. No. 54, Ex. B at 1; *id.*, Ex. C at 1; Dkt. No. 62, Ex. A at 4.

On the eve of the April 14, 2023 hearing, Plaintiff agreed to adopt Defendant's proposed construction. The Court included this construction as part of the preliminary constructions provided to counsel by the Court shortly before the start of the April 14, 2023 hearing, and during the hearing Plaintiff confirmed its agreement with this construction. The Court therefore hereby construes **"service information"** to mean **"service-related content information."**

C. "client application"

"client application" ('949 Patent, Claim 1)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"a program present on or accessible by the sender's mobile device"	Needs no construction; plain and ordinary meaning

Dkt. No. 54, Ex. B at 1; *id.*, Ex. C at 1.

Plaintiff submits that "the parties have reached agreement that 'client application' shall be construed to mean 'a program present on the sender's mobile device.'" Dkt. No. 58 at 7. Defendant's responsive claim construction brief acknowledges this agreement. Dkt. No. 60 at 9. Plaintiff replies that "this term is no longer in dispute." Dkt. No. 61 at 3. This agreement is set forth in Appendix A to the present Claim Construction Order.

D. "voice short message service"

"voice short message service" ('978 Patent, Claim 10)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"a service for integrating voice data to a text short message service message"	Needs no construction; plain and ordinary meaning

Dkt. No. 54, Ex. B at 1; *id.*, Ex. C at 1.

Plaintiff submits that "Plaintiff agrees that 'voice short message' service in claim 10 needs no construction." Dkt. No. 58 at 8. Defendant responds that "since Multimodal has agreed that 'voice short message service' needs no construction, it should be accorded its plain and ordinary

meaning." Dkt. No. 60 at 9. Plaintiff replies that "this term is no longer in dispute." Dkt. No. 61 at 3. This agreement is set forth in Appendix A to the present Claim Construction Order.

E. "client application"

"client application" ('978 Patent, Claims 10, 13, 14)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"a program present on or accessible by the sender's mobile device"	Needs no construction; plain and ordinary meaning

Dkt. No. 54, Ex. B at 1; *id.*, Ex. C at 1.

Plaintiff submits that "the parties have reached agreement that 'client application' shall be construed to mean 'a program present on the sender's mobile device.'" Dkt. No. 58 at 8. Defendant's responsive claim construction brief acknowledges this agreement. Dkt. No. 60 at 9. Plaintiff replies that "this term is no longer in dispute." Dkt. No. 61 at 3. This agreement is set forth in Appendix A to the present Claim Construction Order.

F. "wherein the client application transmits one of a text message, a voice message, and a combination thereof"

"wherein the client application transmits one of a text message, a voice message, and a combination thereof" ('978 Patent, Claim 13)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	Indefinite

Dkt. No. 54, Ex. B at 2; *id.*, Ex. C at 2; Dkt. No. 62, Ex. A at 4.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary construction: "wherein the client application transmits a text message, a voice message, or a combination thereof."

(1) The Parties' Positions

Plaintiff argues that "the claim language itself is clear: the transmission of a text message, or a voice message, or the combination of both text messages and a voice messages satisfies the limitation." Dkt. No. 58 at 8–9 (citation omitted). Plaintiff likewise argues that "the 'one of' language in claim 13 is not limited to *only* one of, but necessarily means *one or more of* when read in combination with the open-ended transition phrase." *Id.* at 9.

Defendant responds that this claim is indefinite because "this limitation explicitly requires the transmission of 'one of,' which is logically in conflict with 'a combination thereof.'" Dkt. No. 60 at 10. Defendant also argues that, "contrary to Multimodal's claims, even its own citations to the specification in support of its argument show the logical contradiction and the problem that renders the term indefinite." *Id.* at 11.

Plaintiff replies that there is no logical inconsistency here and that "the specification is replete with examples of a text message, or a voice message, or a combination thereof being sent by the client application." Dkt. No. 61 at 3 (citing '978 Patent at 6:37–44 & Figs. 4–7). Discussing these disclosures, Plaintiff argues that "as there is no way to send the voice message to either the recipient or the server without first passing through the client application, the specification discloses the client application sending the voice message." *Id.* at 5; *see id.* at 4–5.

At the April 14, 2023 hearing, the parties presented oral arguments regarding this term.

(2) Analysis

Claim 13 of the '978 Patent depends from Claim 10, and Claims 10 and 13 recite (emphasis added):

> 10. A system for voice short message service messaging, comprising:
> a client application on a mobile device, wherein *said client application integrates voice content to a text message* created by a user using methods of recipient addressing as used by text short message service messaging;
> a memory storage means on said mobile device for storing a list of addresses of recipients;
> a user interface on the mobile device for said user to input voice messages and text messages; and
> a server for remotely recording and storing said voice messages of the user, wherein said server is configured to provide access to said recipient for listening to said recorded voice message; and
> said client application for transmitting a voice message notification with an addressed text message to said recipients.
>
> * * *
>
> 13. The system of claim 10, *wherein the client application transmits one of a text message, a voice message, and a combination thereof.*

Defendant argues that Claim 13 is internally inconsistent because it recites both "one of" and "a combination thereof."

This claim language is sufficiently clear on its face, reciting that the client application transmits a text message, a voice message, or a combination thereof. The use of the word "and" in Claim 13 is *not* unclear. The claim simply uses the word "and" to set forth a list of three options (the list including "a text message," "a voice message," and "a combination thereof").

The opinions of Plaintiff's expert in this regard are further persuasive. *See* Dkt. No. 58, Ex. G, Jan. 20, 2023 McAlexander Decl. at ¶¶ 32–36. The contrary opinions of Defendant's expert are unpersuasive. *See id.*, Ex. H, Jan. 20, 2023 Edwards Decl. at ¶¶ 50–53.

Defendant also submits deposition testimony in which Plaintiff's expert testified regarding uses of the phrases "one of" and "at least one of" in the expert's own patents. Dkt. No. 60, Ex. B,

Feb. 14, 2023 McAlexander dep. at 83:7–18, 83:22–84:3, 84:22–85:3, 86:4–8, 86:24–87:7, 92:20–93:18, 94:2–16, 94:17–95:3, 95:8–14 & 96:7–13. This testimony as to unrelated patents does not affect the analysis of the patent here at issue. *See e.Digital Corp. v. Futurewei Techs., Inc.*, 772 F.3d 723, 727 (Fed. Cir. 2014) ("claims of unrelated patents must be construed separately").

The specification does not compel otherwise. Both sides cite the following portion of the specification:

> In order to integrate 104 the text SMS message with voice content, the client application 201a intercepts 104a the addressed text SMS message. The client application 201a then prompts 104b the user 202 as to whether a voice SMS message needs to be included. If the user 202 prefers [to] not include a voice SMS message, the client application 201a sends the intercepted text SMS message to the recipient. If the user 202 prefers to additionally add a voice SMS message, the client application 201a connects the mobile device 201 to a server 314. The user's voice message is recorded and stored on the server 314.
>
> A voice message notification is attached to the text SMS message and transmitted 105 to the addressed recipients. The recipients on receiving the text SMS message may use the information in the voice message notification to access and listen to the user's voice message stored on the server 314.

'978 Patent at 3:42–57; *see id.* at 4:64–5:6 (similar); *see also id.* at 7:39–43 ("If the user 202 chooses to send a text message without including a voice message, a text message is sent to the recipient as a normal text message 405b."); *id.* at Figs. 4–7. Defendant argues that these disclosures involve actions occurring at a voice server rather than as part of a message itself (*see* Dkt. No. 60 at 12), but these disclosures demonstrate a manner of creating a "combination" of a voice message and a text message, and this does not give rise to any indefiniteness in above-reproduced Claim 13.

Finally, particularly at the April 14, 2023 hearing, Defendant has relied heavily on *SuperGuide*, in which the Federal Circuit considered a recited listing that began with the phrase "at least one of":

> The phrase "at least one of" precedes a series of categories of criteria, and the patentee used the term "and" to separate the categories of criteria, which connotes a conjunctive list. A common treatise on grammar teaches that "an article of a preposition applying to all the members of the series must either be used only before the first term or else be repeated before each term." William Strunk, Jr. & E.B. White, *The Elements of Style* 27 (4th ed. 2000). Thus, "[i]n spring, summer, or winter" means "in spring, in summer, or in winter." *Id.* Applying this grammatical principle here, the phrase "at least one of" modifies each member of the list, i.e., each category in the list. Therefore, the district court correctly interpreted this phrase as requiring that the user select at least one value for each category; that is, at least one of a desired program start time, a desired program end time, a desired program service, and a desired program type[footnote 10].
>
> [footnote 10:] Indeed, SuperGuide does not articulate its argument that "at least one of" means "one or more of the four listed criteria" without using the term "or" to separate the four listed categories. *See Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001) (interpreting the phrase "at least one of two-digit, three-digit, or four-digit year-date representations" as "only two-digit, only three-digit, only four-digit, or any combination of two-, three-, and four-digit date-data").

SuperGuide Corp. v. DirecTV Enters., Inc., 358 F.3d 870, 886 (Fed. Cir. 2004).

Unlike *SuperGuide*, the recited listing in the present case includes "a combination thereof," which Defendant argues gives rise to indefiniteness because, Defendant argues, the limitation becomes nonsensical and internally inconsistent when, under *SuperGuide*, the term requires at least one of each of the listed items. A far more natural conclusion, however, is that the patentee's inclusion of "a combination thereof" simply renders *SuperGuide* inapplicable because redundancy is disfavored. *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010) ("Claims must be 'interpreted with an eye toward giving effect to all terms in the claim.'") (quoting *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006)). Defendant's oral arguments on this issue at the April 14, 2023 hearing do not compel otherwise. Rather, the patentee simply used the word "and" to set forth a list of three options. The Court's construction does not read out the phrase "one of" but rather explains that the patentee's use of the phrase "one of" together with "and," in setting forth the list, is logically equivalent to using "or."

The Court therefore hereby expressly rejects Defendant's indefiniteness argument. Defendant presents no alternative proposed construction. Nonetheless, based on the analysis set forth above, "some construction of the disputed claim language will assist the jury to understand the claims." *TQP Dev., LLC v. Merrill Lynch & Co.*, No. 2:08-CV-471-WCB, 2012 WL 1940849, at *2 (E.D. Tex. May 29, 2012) (Bryson, J., sitting by designation).

The Court accordingly hereby construes **"wherein the client application transmits one of a text message, a voice message, and a combination thereof"** to mean **"wherein the client application transmits a text message, a voice message, or a combination thereof."**

G. "detecting said incomplete call made by said calling party"

"detecting said incomplete call made by said calling party" ('227 Patent, Claim 1)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"identifying, on the calling party device, that an attempted call has not been connected"	Needs no construction; plain and ordinary meaning

Dkt. No. 54, Ex. B at 2; *id.*, Ex. C at 2.

Plaintiff submits: "Multimodal agrees that this term requires no construction and should be accorded its plain meaning." Dkt. No. 58 at 11. Defendant responds that "since Multimodal has agreed that this term requires no construction, it should be accorded its plain and ordinary meaning." Dkt. No. 60 at 13. Plaintiff replies "this term is no longer in dispute." Dkt. No. 61 at 5. This agreement is set forth in Appendix A to the present Claim Construction Order.

H. "wherein said call completion actions comprise setting a reminder to call back said called party at a configurable time, recording media data on said calling party device, transmitting said media data to a called party device, transmitting a missed call alert to said called party device, transmitting a notification on availability of said called party, transmitting said media data to a social networking platform, transmitting an automated message requesting said called party to call back said calling party when available, and any combination thereof"

"wherein said call completion actions comprise setting a reminder to call back said called party at a configurable time, recording media data on said calling party device, transmitting said media data to a called party device, transmitting a missed call alert to said called party device, transmitting a notification on availability of said called party, transmitting said media data to a social networking platform, transmitting an automated message requesting said called party to call back said calling party when available, and any combination thereof" ('227 Patent, Claims 1, 11)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	Indefinite

Dkt. No. 54, Ex. B at 2; *id.*, Ex. C at 2–3; Dkt. No. 62, Ex. A at 4–5.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary construction: "Plain and ordinary meaning."

(1) The Parties' Positions

Plaintiff argues: "The claim language and specification make clear that any one of the recited call completion actions meets the claims, and also any combination of call completion actions also meets the claims. The 'one or more of' claim language, combined with the open ended 'comprising' transitional phrase and the 'any combination thereof' language make the scope of the claims clear to the POSITA, who would accord them their plain meaning." Dkt. No. 58 at 12 (citation omitted). Plaintiff also argues that "both recording and transmitting media data would fall within the scope of the claim," and "if for some reason the calling party device received media data that it did not itself record, the mere transmission of this media data would also fall within the

scope of the claim." *Id.* at 13. Further, Plaintiff argues that there is "nothing in the claim or specification that requires the 'call completion actions' to each complete a call." *Id.*; *see id.* at 13 n.1.

Defendant responds that these claims are indefinite for reasons similar to those presented by Defendant as to above-discussed Claim 13 of the '978 Patent. Dkt. No. 60 at 14. Defendant argues that "this limitation includes nonsensical combinations such as 'transmitting said media data to a called party device' but not 'recording media data'" and such as "transmitting said media data to a Social Networking platform" without "recording media data." *Id.* (citations omitted). "In addition," Defendant argues, "a POSITA would not have been able to understand, with reasonable certainty, the scope of the invention because certain actions and combinations of actions that purport to be 'call completion actions' logically cannot lead to a possible call completion event." *Id.* (citation omitted).

Plaintiff replies that Defendant's response does not address Plaintiff's arguments that "the open ended 'comprising' term with the 'any combination thereof' language makes it clear that any of the recited call completion actions, and also any combination of those actions, meets the claims" and that "there is no requirement in the claim or elsewhere that any of the individual listed 'call completion actions' themselves must result in a completed call." Dkt. No. 61 at 6.

At the April 14, 2023 hearing, the parties presented oral arguments regarding this term together with the parties' arguments regarding "wherein the client application transmits one of a text message, a voice message, and a combination thereof," which is addressed above.

(2) Analysis

Claim 1 of the '227 Patent, for example, recites (emphasis added):

> 1. A computer implemented method for completing an incomplete call made by a calling party to a called party, comprising:

> providing a call completion application executable by at least one processor on a calling party device;
>
> detecting said incomplete call made by said calling party to said called party, by said call completion application on said calling party device, wherein said incomplete call is a call that is not connected to a called party device due to occurrence of one or more of a plurality of events;
>
> receiving one or more of a plurality of call completion actions to be performed by said call completion application on said calling party device to complete said detected incomplete call, wherein said plurality of call completion actions are selected according to one or more responses provided by said calling party through a graphical user interface of said calling party device, *wherein said call completion actions comprise setting a reminder to call back said called party at a configurable time, recording media data on said calling party device, transmitting said media data to a called party device, transmitting a missed call alert to said called party device, transmitting a notification of said detected incomplete call to said called party device, transmitting a notification on availability of said called party, transmitting said media data to a social networking platform, transmitting an automated message requesting said called party to call back said calling party when available, and any combination thereof*; and
>
> triggering execution of said received one or more of said call completion actions by said call completion application on said calling party device based on one or more of action execution criteria for said completion of detected incomplete call.

Defendant asserts that this disputed term renders Claims 1 and 11 of the ’227 Patent indefinite because, Defendant argues, some combinations of the recited actions are nonsensical and not all actions or combinations would result in a completed call.

Nothing in the claim language, however, requires that every action (or every combination of actions) necessarily results in a completed call. Indeed, the specification for example refers to setting a call reminder as being a call completion action even though an additional call would not necessarily result in call completion, and the Summary section of the specification states:

> The method and the system disclosed herein address the above stated need for completing an incomplete call made by a calling party to a called party by executing a call completion action, for example, one that leads to setting up a reminder, or one that leads to transmitting a voice message, a text message, a missed call alert, a notification of a call attempt, other calling party driven messages, etc., to the called party, etc., independent of a preconfigured call completion service on the called party’s network or a called party device, and for providing a sender, that is,

> the calling party the option to drive or trigger execution of the call completion action.

'227 Patent at 2:5–16; *see id.* at Fig. 5 ("List of Call Completion Actions Available to the Calling Party").

Further, to whatever extent some combinations of actions might be inoperable, Defendant does not persuasively show that this gives rise to indefiniteness. *See Network-1 Techs., Inc. v. Hewlett-Packard Co.*, 981 F.3d 1015, 1025 (Fed. Cir. 2020) ("it is . . . improper to add limitations to constructions to exclude only certain inoperable embodiments") (citing *Cordis Corp. v. Medtronic AVE, Inc.*, 511 F.3d 1157, 1174 (Fed. Cir. 2008)). The opinions of Plaintiff's expert in this regard are further persuasive. *See* Dkt. No. 58, Ex. G, Jan. 20, 2023 McAlexander Decl. at ¶¶ 38–42. The contrary opinions of Defendant's expert do not compel otherwise. Dkt. No. 58, Ex. H, Jan. 20, 2023 Edwards Decl. at ¶¶ 55–57.

Finally, Defendant's reliance on *SuperGuide*, 358 F.3d at 886, is unavailing for the same reasons set forth in the discussion of the term "wherein the client application transmits one of a text message, a voice message, and a combination thereof," above.

The Court therefore hereby expressly rejects Defendant's indefiniteness argument. Defendant presents no alternative proposed construction, and no further construction is necessary.

The Court accordingly hereby construes **"wherein said call completion actions comprise setting a reminder to call back said called party at a configurable time, recording media data on said calling party device, transmitting said media data to a called party device, transmitting a missed call alert to said called party device, transmitting a notification on availability of said called party, transmitting said media data to a social networking platform, transmitting an automated message requesting said called party to call back said calling party when available, and any combination thereof"** to have its **plain meaning**.

I. "one of text data, audio data, video data, audiovisual data, image data, multimedia data, message data, and any combination thereof"

"one of text data, audio data, video data, audiovisual data, image data, multimedia data, message data, and any combination thereof" ('227 Patent, Claims 8, 17)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	Indefinite

Dkt. No. 54, Ex. B at 3; *id.*, Ex. C at 3; Dkt. No. 62, Ex. A at 5–6.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary construction: "text data, audio data, video data, audiovisual data, image data, multimedia data, message data, or any combination thereof."

(1) The Parties' Positions

Plaintiff incorporates its arguments as to other terms that recite "and any combination thereof" (addressed above), and Plaintiff argues that "this phrase is not indefinite because the POSITA would have understood that an occurrence of one of the claimed types of media data satisfies the claim, and also that any combination of the recited elements also satisfies the claim." Dkt. No. 58 at 15.

Defendant responds that these claims are indefinite for reasons similar to those presented by Defendant as to above-discussed Claim 13 of the '978 Patent and Claims 1 and 11 of the '227 Patent. Dkt. No. 60 at 15. Defendant argues that "[t]he claim specifically recites 'one of' with respect to the recited data types, which is inconsistent with 'any combination thereof' as also recited by the claim." *Id.*

Plaintiff replies that "the claim uses open-ended 'comprising' language," and because "the specification contains references to both types of data in the singular, as well as in combination, 'one of' should not be limited to 'only one of.'" Dkt. No. 61 at 7.

At the April 14, 2023 hearing, the parties presented oral arguments regarding this term together with the parties' arguments regarding "wherein the client application transmits one of a text message, a voice message, and a combination thereof," which is addressed above.

(2) Analysis

Claim 8 of the '227 Patent, for example, recites (emphasis added):

> 8. The computer implemented method of claim 1, wherein said media data comprises one of text data, audio data, video data, audiovisual data, image data, multimedia data, message data, and any combination thereof.

Defendant presents essentially the same indefiniteness argument for this term as for the terms "wherein the client application transmits one of a text message, a voice message, and a combination thereof" and "wherein said call completion actions comprise . . .," which are discussed above. For the same reasons discussed above, Defendant's arguments are likewise unpersuasive as to the term "one of text data, audio data, video data, audiovisual data, image data, multimedia data, message data, and any combination thereof." The opinions of Defendant's expert are likewise unpersuasive. *See* Dkt. No. 58, Ex. H, Jan. 20, 2023 Edwards Decl. at ¶¶ 59–61. And here, too, "some construction of the disputed claim language will assist the jury to understand the claims." *TQP*, 2012 WL 1940849, at *2.

The Court therefore hereby construes **"one of text data, audio data, video data, audiovisual data, image data, multimedia data, message data, and any combination thereof"** to mean **"text data, audio data, video data, audiovisual data, image data, multimedia data, message data, or any combination thereof."**

J. "interface regions"

"interface regions" ('030 Patent, Claims 1, 2, 8, 9)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"areas provided on the GUI of an electronic device that enable interfacing and interactions with a user of the electronic device"	"sections of a user interface that are configurable to display control icons and are responsive to physical gestures"

Dkt. No. 54, Ex. B at 3; *id.*, Ex. C at 3.

Plaintiff argues that "the patentee chose to act as his own lexicographer with respect to this term." Dkt. No. 58 at 15. Defendant responds that "OPPO no longer disputes construction of this term." Dkt. No. 60 at 16. Plaintiff replies that "this term is no longer in dispute" (Dkt. No. 61 at 7), and the parties set forth an agreed-upon construction in their March 31, 2023 Joint Claim Construction Chart Pursuant to P.R. 4-5(d). Dkt. No. 62, Ex. A at 2–3. This agreement is set forth in Appendix A to the present Claim Construction Order.

K. "gesture based media recording application"

"gesture based media recording application" ('030 Patent, Claims 1, 2, 6, 8, 13)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	"an executable program which receives control and actuation commands from physical actions on a user interface, the executable program operational within a runtime environment and configured to record audio, video, imagery, and text"

Dkt. No. 54, Ex. B at 3; *id.*, Ex. C at 4; Dkt. No. 62, Ex. A at 6.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary construction: "Plain meaning apart from the Court's construction of 'gesture' (below)."

(1) The Parties' Positions

Plaintiff argues that "Defendant's construction is improper because it specifies that the application 'receives control and actuation commands from physical actions on the user interface,'" and "the receipt of these commands is already specified elsewhere in the claims." Dkt. No. 58 at 16. Plaintiff also argues that "Defendant's construction is improper because it limits the gesture-based media recording application to a 'program operational within a runtime environment,'" arguing that "the intrinsic record makes no mention of a 'runtime environment,' and there is no basis to limit the term in this way." *Id.*

Defendant responds that Plaintiff's arguments as to this term are inconsistent with Plaintiff's arguments as to the next term ("detecting . . ."). Dkt. No. 60 at 17.

Plaintiff replies that Defendant's proposal improperly limits this term to a "runtime environment" and "Defendant has not shown that this term is in need of construction, and has not shown why its overly narrow construction, including actions that are specified in other parts of the claim, [is] necessary." Dkt. No. 61 at 7.

At the April 14, 2023 hearing, the parties submitted this term on the briefs and presented no oral arguments.

(2) Analysis

Claim 1 of the '030 Patent, for example, recites (emphasis added):

> 1. A computer implemented method for recording media data, comprising:
> providing a *gesture based media recording application* executable by at least one processor configured to manage a graphical user interface of an electronic

> device for said recording of media data in one or more recording modes on said electronic device;
>
> defining one or more interface regions on said graphical user interface of said electronic device by said *gesture based media recording application*;
>
> detecting a first gesture from among multiple gestures on a first of said defined interface regions, by said *gesture based media recording application*, wherein said first gesture is a press and hold gesture;
>
> starting said recording of media data in a push to talk (PTT) recording mode, by said *gesture based media recording application*, on said detection of said first gesture on said first of said defined interface regions;
>
> dynamically changing, by said *gesture based media recording application*, functions associated with said one or more defined interface regions based on said detected first gesture on said one of said defined interface regions; and
>
> detecting a second gesture from among said multiple gestures, by said *gesture based media recording application*, wherein said second gesture is a slide and hold gesture, or a swipe and hold gesture from said first of said defined interface regions to a second of said defined interface regions proximate to said first of said defined interface regions, and wherein said recording of said media data continues uninterrupted during and after performance of said second gesture.

As to the present disputed term, Defendant's proposal of "an executable program" would be redundant with the "executable by . . ." language that is already recited in the claim, and Defendant does not persuasively justify referring to "a runtime environment." Further, Defendant's proposal of "physical actions on a user interface" is redundant with the discussion of "gestures" as to the "detecting . . ." terms (which are addressed separately below).

The Court therefore hereby expressly rejects Defendant's proposed construction, and no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568 ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *see also O2 Micro*, 521 F.3d at 1362; *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) ("Unlike *O2 Micro*, where the court failed to resolve the parties' quarrel, the district court rejected Defendants' construction."); *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012);

Summit 6, LLC v. Samsung Elecs. Co., Ltd., 802 F.3d 1283, 1291 (Fed. Cir. 2015); *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 977–79 (Fed. Cir. 2021).

The Court accordingly hereby construes **"gesture based media recording application"** to have its **plain meaning** (apart from the Court's construction of "gesture," below).

L. "[detecting/detect] a [first/second/third] gesture"

"detecting a [first/second/third] gesture" ('030 Patent, Claims 1, 2) **"detect a [first/second/third] gesture"** ('030 Patent, Claims 8, 9)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	"changing the state of a software component based on sensing a physical touch or motion on a user interface"

Dkt. No. 54, Ex. B at 3; *id.*, Ex. C at 4–5; Dkt. No. 62, Ex. A at 6.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary constructions:

Term	Preliminary Construction
"gesture"	"a user action or an actuation by a user performed manually, for example, by use of a finger, a thumb, a hand, etc., on the GUI, or by using an input device, for example, a physical button, a computer mouse, a pointing device, a light pen, a touch pad, a touch sensitive display device, a track ball, a pointing stick, any device capable of sensing a tactile input, etc."
"detecting a [first/second/third] gesture" "detect a [first/second/third] gesture"	Plain meaning apart from the Court's construction of "gesture" (above)

(1) The Parties' Positions

Plaintiff argues: "Defendant seeks to add computer science terminology regarding 'changing the state of software' in an attempt to confuse the jury and provide a more complicated definition of easily-understandable terms. Further, Defendant's construction is overly narrow, limiting the gestures to 'physical touch or motion on a user interface.' Gestures are not so limited in the specification . . . ." Dkt. No. 58 at 17 (citation omitted).

Defendant responds that Plaintiff "should be held to its representation that the detecting limitation 'already specifies' receipt of commands from physical actions on a user interface," and "should be held to its representation that the detecting limitation 'already specifies' receipt of commands from physical actions on a user interface." Dkt. No. 60 at 18 (citing Dkt. No. 58 at 16). Defendant argues that "OPPO's construction here, 'changing the state of a software component based on sensing a physical touch or motion on a user interface' is consistent with Multimodal's statements elsewhere in its brief that the 'detecting' step already specifies this, and should be adopted because Multimodal has agreed and admitted that this is what the 'detecting' term 'already specifies.'" Dkt. No. 60 at 18.

Plaintiff replies, in full, as follows:

> Defendant presents an incomprehensible argument that because it improperly attempted to add already-recited claim limitations into the prior construction, its overly narrow construction should somehow be allowed here for reasons unascertainable to Multimodal. Defendant's proposed construction here is overly narrow, adds the confusing terminology "changing the state," and unduly limits the gestures that can be detected. There is no logical inconsistency, and the term should be accorded its plain meaning.

Dkt. No. 61 at 8.

At the April 14, 2023 hearing, the parties submitted this term on the briefs and presented no oral arguments.

(2) Analysis

The specification discloses:

> [A]s used herein, *the term "gesture" refers to a user action or an actuation by a user performed manually, for example, by use of a finger, a thumb, a hand, etc., on the GUI, or by using an input device, for example, a physical button, a computer mouse, a pointing device, a light pen, a touch pad, a touch sensitive display device, a track ball, a pointing stick, any device capable of sensing a tactile input, etc.* The gestures comprise, for example, a drag and drop gesture, a click gesture, a double click gesture, a click and hold gesture, a tap gesture, a tap and hold gesture, a hold and swipe gesture, a touch gesture, a slide gesture, a glide gesture, a scrolling gesture, etc., or any combination thereof.

'030 Patent at 6:41–53 (emphasis added). The patentee thus set forth an explicit definition of "gesture," and "the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316.

Further, Defendant does not persuasively justify its proposal of "changing the state of a software component," and Defendant does not demonstrate any need for, or benefit from, its proposal to construe "detecting" to mean "sensing."

The Court therefore hereby construes these disputed terms as set forth in the following chart:

Term	Construction
"gesture"	**"a user action or an actuation by a user performed manually, for example, by use of a finger, a thumb, a hand, etc., on the GUI, or by using an input device, for example, a physical button, a computer mouse, a pointing device, a light pen, a touch pad, a touch sensitive display device, a track ball, a pointing stick, any device capable of sensing a tactile input, etc"**
"detecting a [first/second/third] gesture" **"detect a [first/second/third] gesture"**	**Plain meaning (apart from the Court's construction of "gesture," above)**

M. "interface definition module"

"interface definition module" ('030 Patent, Claim 8)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Not subject to 112 ¶ 6 Plain and ordinary meaning	Function: "defining a plurality of interface regions on said graphical user interface of said electronic device" Structure: "A software component of the gesture based media recording application configured to define multiple interface regions on the graphical user interface and associate a predefined function with each of the defined user interface regions. The interface definition module further configured to dynamically chan[g]e the functionality of the interface regions to a different predefined function. [FIG. 8, 15:21–36]"

Dkt. No. 54, Ex. B at 4; *id.*, Ex. C at 5; Dkt. No. 62, Ex. A at 6–7.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary construction: "Function: 'defining a plurality of interface regions on said graphical user interface of said electronic device, and dynamically changing functions associated with said one or more defined interface regions based on said detected first gesture on said one of said defined interface regions' / Corresponding Structure: 'A software component of the gesture based media recording application that is (a) configured to define multiple interface regions on the graphical user interface and associate a predefined function with each of the defined user interface regions and (b) configured to dynamically change the functionality of the interface regions to a different predefined function; and equivalents thereof.'"

(1) The Parties' Positions

Plaintiff argues that Defendants cannot overcome the presumption against means-plus-function treatment for this non-means term. Dkt. No. 58 at 18. In particular, Plaintiff argues that "in this instance, the term 'module' is not a nonce term but rather a specific software component." *Id.* at 19. Alternatively, if the Court finds that this is a means-plus-function term, "Plaintiff agrees with the structure and function proposed by OPPO, with the addition of 'and equivalents thereof.'" *Id.* at 20.

Defendant responds that "[t]he term 'interface definition module' is a nonce term and subject to § 112 ¶ 6 because it does not connote sufficiently definite structure." Dkt. No. 60 at 19. Defendant argues that "'software' and other terms like it do not connote sufficiently definite structure to save a nonce term from § 112 ¶ 6." *Id.* at 21 (citations omitted).

Plaintiff replies by reiterating that Defendant's expert agrees that this "module" refers to a particular software structure. Dkt. No. 61 at 8–9. Plaintiff argues that "Defendant attempts to deflect this admission by arguing that the admitted structure of the 'module' is just the corresponding structure that performs the claimed function[, b]ut nowhere does [Defendant's expert] conflate these inquiries." *Id.* at 9. Plaintiff also cites several cases in which courts found that software connoted structure. *See id.* at 9–10.

At the April 14, 2023 hearing, the parties submitted this term on the briefs and presented no oral arguments.

(2) Analysis

Title 35 U.S.C. § 112(f) (formerly § 112, ¶ 6) provides: "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover

the corresponding structure, material, or acts described in the specification and equivalents thereof." "In exchange for using this form of claiming, the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function." *Triton Tech of Tex., LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014).

"[T]he failure to use the word 'means' . . . creates a rebuttable presumption . . . that § 112, para. 6 does not apply." *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (citations and internal quotation marks omitted). "When a claim term lacks the word 'means,' the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Id.* at 1349 (citations and internal quotation marks omitted).

Williamson, in an *en banc* portion of the decision, abrogated prior statements that the absence of the word "means" gives rise to a "strong" presumption against means-plus-function treatment. *Id.* (citation omitted). *Williamson* also abrogated prior statements that this presumption "is not readily overcome" and that this presumption cannot be overcome "without a showing that the limitation essentially is devoid of anything that can be construed as structure." *Id.* (citations omitted). Instead, *Williamson* found, "henceforth, we will apply the presumption as we have done prior to *Lighting World* . . . ." *Id.* (citing *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004)). In a subsequent part of the decision not considered *en banc*, *Williamson* affirmed the district court's finding that the term "distributed learning control module" was a means-plus-function term that was indefinite because of lack of corresponding structure, and in doing so *Williamson* stated that "'module' is a well-known nonce word." 792 F.3d at 1350.

Here, Claim 8 of the '030 Patent recites (emphasis added):

> 8. A computer implemented system for recording media data, comprising:
>
> a processor;
>
> a non-transitory computer readable storage medium communicatively coupled to said processor, said non-transitory computer readable storage medium configured to store a gesture based media recording application, wherein said gesture based media recording application, when executed by said processor, manages a graphical user interface of an electronic device for said recording of media data;
>
> said gesture based media recording application comprising:
>
> an *interface definition module* configured to define a plurality of interface regions on said graphical user interface of said electronic device;
>
> a detection module configured to detect a first gesture from among multiple gestures on a first of said defined interface regions, wherein said first gesture is a press and hold gesture;
>
> an action management module configured to start said recording of media data in a push to talk (PTT) recording mode, on said detection of said first gesture on said first of said defined interface regions;
>
> said *interface definition module* configured to dynamically change functions associated with said one or more defined interface regions based on said detected first gesture on said one of said defined interface regions; and
>
> said detection module further configured to detect a second gesture from among said multiple gestures, wherein said second gesture is a slide and hold gesture, or a swipe and hold gesture from said first of said defined interface regions to a second of said defined interface regions proximate to said first of said defined interface regions, and wherein said recording of said media data continues uninterrupted during and after performance of said second gesture.

On one hand, because the term "interface definition module" does not use the word "means," there arises a presumption that this term is *not* a means-plus-function term governed by 35 U.S.C. § 112 ¶ 6. *See Williamson*, 792 F.3d at 1349.

On the other hand, the limitation "an interface definition module configured to define a plurality of interface regions on said graphical user interface of said electronic device" is "in a format consistent with traditional means-plus-function claim limitations" because it essentially

"replaces the term 'means' with the term 'module'" and thus recites a "module configured to" in place of a "means for." *Id.* at 1350. The same is true as to the limitation "said interface definition module configured to dynamically change functions associated with said one or more defined interface regions based on said detected first gesture on said one of said defined interface regions."

Further, although "the presence of modifiers can change the meaning of 'module,' the presence of these particular terms does not provide any structural significance to the term 'module' in this case." *Id.* at 1351. That is, the phrase "interface definition" does not impart any structure to the term but rather is merely functional.

Plaintiff cites the opinion of its expert that "interface definition module" refers to a particular software module that is part of the media recording application. *See* Dkt. #58, Ex. G, Jan. 20, 2023 McAlexander Decl. at ¶ 50. This opinion of Plaintiff's expert is unpersuasive in light of the statements in *Williamson* that "'[m]odule' is a well-known nonce word that can operate as a substitute for 'means' in the context of § 112, para. 6," and that "'module' is simply a generic description for software or hardware that performs a specified function." 792 F.3d at 1350 (citation omitted). It is likewise unpersuasive that the "interface definition module" is recited in relation to a "graphical user interface." *See* Dkt. #58, Ex. G, Jan. 20, 2023 McAlexander Decl. at ¶¶ 51–52. Although interactions with a structural component can in some cases weigh in favor of finding that a term connotes structure, here it does not necessarily follow that the "interface definition module" connotes structure. Instead, this term does not refer to any known class of structure but instead attempts to encompass anything that performs the claimed function, and the term thus "fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Williamson*, 792 F.3d at 1349 (citations and internal quotation marks omitted).

Plaintiff also cites the opinion of *Defendant's* expert that "in my opinion a POSITA would understand that the word 'module' in this context would refer to a software component resident in the client application that manages the user interface." Dkt. No. 58, Ex. H, Jan. 20, 2023 Edwards Decl. at ¶ 63. But the opinions of Defendant's expert regarding the presence of corresponding structure are insufficient to show that this "module" term connotes structure because, "while related, these two inquiries are distinct." *MTD Prods. Inc. v. Iancu*, 933 F.3d 1336, 1344 (Fed. Cir. 2019). The Federal Circuit has further explained:

> [T]he first step in the means-plus-function analysis requires us to determine whether the entire claim limitation at issue connotes "sufficiently definite structure" to a person of ordinary skill in the art. In so doing, we naturally look to the specification, prosecution history, and relevant external evidence to construe the limitation. While this inquiry may be similar to looking for corresponding structure in the specification, our precedent requires it when deciding whether a claim limitation lacking means connotes sufficiently definite structure to a person of ordinary skill in the art. Because these inquiries are distinct, it is possible to find that a claim limitation does not connote sufficiently definite structure despite the presence of some corresponding structure in the specification.

Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1296–97 (Fed. Cir. 2014) (citations omitted), *abrogated on other grounds by Williamson*, 792 F.3d 1339. Plaintiff's effort to distinguish *Rain Computing* is therefore likewise unavailing. *See Rain Computing, Inc. v. Samsung Elecs. Am.*, 989 F.3d 1002, 1006–07 (Fed. Cir. 2021) (finding that the presumption against means-plus-function treatment was rebutted as to a claim that recited a "user identification module").

Plaintiff also relies on the following disclosure in the specification:

> The media recording application 801 comprises an interface definition module 801a, a detection module 801b, a media recording module 801c, and an action management module 801d. The interface definition module 801a defines multiple interface regions 301 on the GUI 302 of the electronic device 303 as exemplarily illustrated in FIGS. 3A–3D, FIGS. 4A–4D, and FIGS. 6A–6E. The interface definition module 801a further associates a predefined function from multiple predefined functions with each of the defined interface regions 301 on the GUI 302 as disclosed in the detailed description of FIGS. 3A–3D and FIGS. 4A–4D. The interface definition module 801a also dynamically changes the predefined function

> associated with one of the defined interface regions 301 to another one of the predefined functions based on one or more communication modes and user preferences. In an embodiment, the interface definition module 801a configures predefined functions for one or more defined interface regions 301 based on the user's preferences as disclosed in the detailed description of FIG. 5.

'030 Patent at 15:18–37. These disclosures regarding the "interface definition module 801a," as part of "media recording application 801" in this particular embodiment, do *not* demonstrate that the term "interface definition module" connotes structure as a general matter in the relevant art. *See, e.g., MTD*, 933 F.3d at 1344.

On balance, the presumption against means-plus-function treatment is rebutted. Plaintiff presents no alternative proposed construction, submitting instead that: "Should the Court disagree with Plaintiff and both experts regarding the recitation of structure and find that the claimed 'interface definition module' is subject to 112 ¶ 6, Plaintiff agrees with the structure and function proposed by OPPO, with the addition of 'and equivalents thereof.'" Dkt. No. 58 at 20.

The Court therefore hereby finds that **"an interface definition module configured to define a plurality of interface regions on said graphical user interface of said electronic device"** and **"interface definition module configured to dynamically change functions associated with said one or more defined interface regions based on said detected first gesture on said one of said defined interface regions"** are means-plus-function term, the claimed function is **"defining a plurality of interface regions on said graphical user interface of said electronic device, and dynamically changing functions associated with said one or more defined interface regions based on said detected first gesture on said one of said defined interface regions,"** and the corresponding structure is **"a software component of the gesture based media recording application that is (a) configured to define multiple interface regions on the graphical user interface and associate a predefined function with each of the defined**

user interface regions and (b) configured to dynamically change the functionality of the interface regions to a different predefined function; and equivalents thereof."

N. "detection module"

"detection module" ('030 Patent, Claim 8)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Not subject to 112 ¶ 6 Plain and ordinary meaning	Function: "detecting a first gesture from among multiple gestures on a first of said defined interface regions, wherein said first gesture is a press and hold gesture" Structure: "A software component of the gesture based media recording application configured to detect one or more physical touch or other gesture on a defined region of a graphical user interface. [FIG 8, 15:38–48]"

Dkt. No. 54, Ex. B at 4; *id.*, Ex. C at 5; Dkt. No. 62, Ex. A at 7.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary construction: "Function: 'detecting a first gesture from among multiple gestures on a first of said defined interface regions, and detecting a second gesture from among said multiple gestures' / Corresponding Structure: '[a] software component of the gesture based media recording application configured to detect one or more physical touch or other gesture on a defined region of a graphical user interface; and equivalents thereof.'"

(1) The Parties' Positions

Plaintiff presents essentially the same arguments for this term as for the term "interface definition module" (addressed above). *See* Dkt. No. 58 at 20–22.

Defendant responds that "Multimodal's arguments attempting to avoid this term being found subject to § 112 ¶ 6 are nearly identical to the arguments it made for 'interface definition module', and they are without merit for the same reasons." Dkt. No. 60 at 22–23.

Plaintiff replies that "the dispute regarding the claimed 'detection module' is related in all important respects to the dispute above for the 'interface definition module,' and Multimodal stands on its arguments above." Dkt. No. 61 at 10.

At the April 14, 2023 hearing, the parties submitted this term on the briefs and presented no oral arguments.

(2) Analysis

Legal principles regarding 35 U.S.C. § 112(f), as well as Claim 8 of the '030 Patent, are set forth above as to the term "interface definition module."

Essentially the same analysis applies to the term "detection module" as discussed above regarding the term "interface definition module." Here again, the opinions of Plaintiff's expert are unpersuasive in light of statements in *Williamson*, the relationships between the "detection module" and other parts of the claim are insufficient to impart structure, and the opinions of Defendant's expert cited by Plaintiff relate to the corresponding structure inquiry and do *not* warrant finding that "detection module" connotes structure. *See* Dkt. No. 58, Ex. G, Jan. 20, 2023 McAlexander Decl. at ¶¶ 57–59; *see also id.*, Ex. H, Jan. 20, 2023 Edwards Decl. at ¶ 65; *Williamson*, 792 F.3d at 1350.

The presumption against means-plus-function treatment is therefore rebutted. Plaintiff presents no alternative proposed construction, submitting instead that Plaintiff agrees with the structure and function proposed by Defendant except that Plaintiff proposes adding "and equivalents thereof" pursuant to 35 U.S.C. § 112(f). *See* Dkt. No. 58 at 22.

The Court therefore hereby finds that **"a detection module configured to detect a first gesture from among multiple gestures on a first of said defined interface regions"** and **"said detection module further configured to detect a second gesture from among said multiple gestures"** are means-plus-function terms, the claimed function is **"detecting a first gesture from among multiple gestures on a first of said defined interface regions, and detecting a second gesture from among said multiple gestures,"** and the corresponding structure is **"a software component of the gesture based media recording application configured to detect one or more physical touch or other gesture on a defined region of a graphical user interface; and equivalents thereof."**

O. "action management module"

"action management module" ('030 Patent, Claim 8)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Not subject to 112 ¶ 6 Plain and ordinary meaning	Function: "starting said recording of media data in a push to talk (PTT) recording mode, on said detection of said first gesture on said first of said defined interface regions" Structure: "A software component of the gesture based media recording application configured to perform a predefined action based on the detection of a gesture on a defined region of a graphical user interface. [FIG. 8, 15:42–55]"

Dkt. No. 54, Ex. B at 4; *id.*, Ex. C at 6; Dkt. No. 62, Ex. A at 7–8.

Shortly before the start of the April 14, 2023 hearing, the Court provided the parties with the following preliminary construction: "Function: 'starting said recording of media data in a push

to talk (PTT) recording mode, on said detection of said first gesture on said first of said defined interface regions' / Corresponding Structure: 'a software component of the gesture based media recording application configured to perform a predefined action based on the detection of a gesture on a defined region of a graphical user interface; and equivalents thereof.'"

(1) The Parties' Positions

Plaintiff presents essentially the same arguments for this term as for the term "interface definition module" (addressed above). *See* Dkt. No. 58 at 22–24.

Defendant responds that Plaintiff's arguments are the same for this term as for other above-discussed terms, and "myriad cases have found that 'software' and other terms like it do not connote sufficiently definite structure to save a nonce term from § 112 ¶ 6." Dkt. No. 60 at 24.

Plaintiff replies that "the dispute regarding the claimed 'action management module' is related in all important respects to the dispute above for the 'interface definition module,' and Multimodal stands on its arguments above." Dkt. No. 61 at 10.

At the April 14, 2023 hearing, the parties submitted this term on the briefs and presented no oral arguments.

(2) Analysis

Legal principles regarding 35 U.S.C. § 112(f), as well as Claim 8 of the '030 Patent, are set forth above as to the term "interface definition module."

Essentially the same analysis applies to the term "action management module" as discussed above regarding the term "interface definition module." Here again, the opinions of Plaintiff's expert are unpersuasive in light of statements in *Williamson*, the relationships between the "action management module" and other parts of the claim are insufficient to impart structure, and the opinions of Defendant's expert cited by Plaintiff relate to the corresponding structure inquiry and

do *not* warrant finding that "action management module" connotes structure. *See* Dkt. No. 58, Ex. G, Jan. 20, 2023 McAlexander Decl. at ¶¶ 64–66; *see also id.*, Ex. H, Jan. 20, 2023 Edwards Decl. at ¶ 67; *Williamson*, 792 F.3d at 1350.

The presumption against means-plus-function treatment is therefore rebutted. Plaintiff presents no alternative proposed construction, submitting instead that Plaintiff agrees with the structure and function proposed by Defendant except that Plaintiff proposes adding "and equivalents thereof" pursuant to 35 U.S.C. § 112(f). *See* Dkt. No. 58 at 24.

The Court therefore hereby finds that **"an action management module configured to start said recording of media data in a push to talk (PTT) recording mode, on said detection of said first gesture on said first of said defined interface regions"** is a means-plus-function term, the claimed function is **"starting said recording of media data in a push to talk (PTT) recording mode, on said detection of said first gesture on said first of said defined interface regions,"** and the corresponding structure is **"a software component of the gesture based media recording application configured to perform a predefined action based on the detection of a gesture on a defined region of a graphical user interface; and equivalents thereof."**

V. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patent-in-suit.

The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in

the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 21st day of April, 2023.

ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE

APPENDIX A

Term	Parties' Agreement
"memory storage means" ('978 Patent, Cl. 10)	Subject to 35 U.S.C. § 112, ¶ 6 Structure: "a floppy disk, a flexible disk, hard disk, magnetic tape, any other magnetic medium, a Compact Disc-Read Only Memory (CD-ROM), Digital Versatile Disc (DVD), any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a Random Access Memory (RAM), a Programmable Read-Only Memory (PROM), an Erasable Programmable Read-Only Memory (EPROM), an Electrically Erasable Programmable Read-Only Memory (EEPROM), a flash memory, any other memory chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can read" Function: "storing a list of addresses of recipients"
"operating system" ('978 Patent, Cl. 14)	Plain and ordinary meaning
"wherein the client application is provided on an operating system of the mobile device" ('978 Patent, Cl. 14)	Plain and ordinary meaning
"pointer" ('949 Patent, Cl. 1)	"a link that directs to the interactive multimodal message"
"call completion application" ('227 Pat., Cls. 1, 5, 6, 9, 10, 11 & 15	"a software module that completes an incomplete call made by a calling party without any dependence on the underlying network or called party's device"
Preamble of Claim 1 of the '116 Patent	Preamble is limiting; plain and ordinary meaning

Preamble of Claims 1 and 11 of the ’227 Patent	Preamble is limiting; plain and ordinary meaning
“client application” (’949 Patent, Cl. 1)	“a program present on the sender’s mobile device”
“client application” (’978 Patent, Cls. 10, 13, 14)	“a program present on the sender’s mobile device”
“voice short message service” (’978 Patent, Cl. 10)	Needs no construction; plain and ordinary meaning
“detecting said incomplete call made by said calling party” (’227 Patent, Cl. 1)	Needs no construction; plain and ordinary meaning
“interface regions” (’030 Patent, Cls. 1, 2, 8, 9)	“areas provided on the GUI of an electronic device that enable interfacing and interactions with a user of the electronic device”

Dkt. No. 54, Ex. A; Dkt. 62, Ex. A.