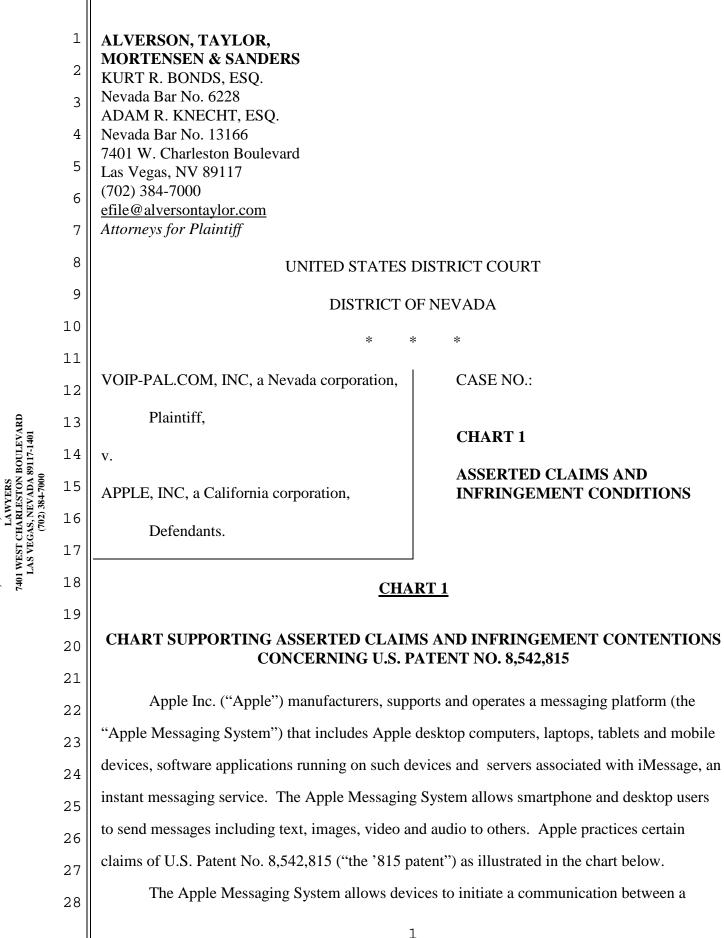
ALVERSON, TAYLOR, MORTENSEN & SANDERS



caller and a callee, which may be an Apple subscriber or a non-subscriber. A profile that includes calling attributes is used as part of the process that classifies a communication.

The following chart applies claims 1, 7, 27, 28, 34, 54, 72 – 74, 92, 93 and 111 of the '815 patent to the Apple Messaging System.

б		U.S. Patent No. 8,542,815
7	Disputed Claim	Accused Device/Instrumentality
8	1. [1p] A process for operating a	The Apple Messaging System includes a call routing controller to facilitate communication between callers and callees in a system comprising a
9	call routing controller to	plurality of nodes with which callers and callees are associated.
10	facilitate	The Apple Messaging System offers messaging services through its
11	communication between callers	Messages application, which is available for Apple desktop computers, laptops, tablets and mobile devices running OS X, iOS and watchOS
12	and callees in a	operating systems.
13	system comprising a	
14	plurality of nodes with	Fac * Set NV Set NV Edit Minsupes 21 Efrica Contect
15	which callers and callees are	C Seven Per Zmarket Par Londo brille a musice Provide the like a musice Per Londo brille a musice
16	associated, the	Messages.
17	process comprising:	Unlimited texting.
18	1 0	Unlimited fun.
19		If you're a texter, you'll love Messages on iPhone, iPad and iPod touch. Now they all come with iMessage, a service that's an even
20		better kind of texting. Because it's free for you and anyone texting over Wi-Fi using an
21		iOS device or Mac with iMessage. And it's unlimited." So say as much as you want.
22		Image: Second
23		
24		Apple Messages allows iPads and iPhones connected to a cellular network
25		and/or Wi-Fi network to send messages including text, audio, video and
26		images to other smartphone users.
27		The Apple Messaging System uses a call routing controller that includes one or more Apple servers and/or the caller Apple device.
28		

	U.S. Patent No. 8,542,815
Disputed Claim	Accused Device/Instrumentality
	The Apple Messaging System utilizes a plurality of nodes with which callers and callees are associated.
[1a] in response to initiation of a	The Apple Messaging System receives a caller identifier and a callee identifier in response to initiation of a call by a calling subscriber.
call by a calling	
subscriber, receiving a caller	A message is initiated by the software application. Initiation of the message begins with the establishment of communication between Apple
identifier and a	Messages and an Apple server. The message initiation includes the caller
callee identifier;	identifier, which includes the Apple ID or other identifier of the caller.
	The message initiation includes information associated with the recipient
	based on the contact list of the smartphone or entered by the user. The callee identifier includes a phone number associated with the callee.
	cance identifier merudes a priorie number associated with the cance.
[1b] locating a caller dialing	The Apple Messaging System locates a caller dialing profile comprising a username associated with the caller and a plurality of calling attributes
profile	associated with the caller.
comprising a username	A calling profile is located by an Apple server based on the Apple ID or
associated with	other identifier of the caller, or are located on the Apple device. Calling
the caller and a plurality of	attributes include information used in the classification of a call, such as settings stored on the caller device, information stored on an Apple server
calling attributes	and/or information obtained regarding the connection of the caller device
associated with the caller;	to the network.
the canor,	
[1c] determining	The Apple Messaging System determines a match when at least one of sai
a match when at least one of said	calling attributes matches at least a portion of said callee identifier.
calling attributes matches at least	The Apple Messaging System matches at least one of the calling attributes and at least a portion of the calles identifier in processing the calles
a portion of said	and at least a portion of the callee identifier in processing the callee identifier.
callee identifier;	
[1d] classifying the call as a	The Apple Messaging System classifies the call as a public network call when the match meets public network classification criteria and classifyin
public network	the call as a private network call when the match meets private network
call when said match meets	classification criteria.
public network	The Apple Messaging System allows messages to be sent using iMessage
	3

	U.S. Patent No. 8,542,815
Disputed Claim	Accused Device/Instrumentality
classification criteria and	and using SMS/MMS. Private network classification criteria represents routing the message using the iMessage system. Public network
classifying the	classification criteria represents routing the message using SMS/MMS.
call as a private network call	Calling attributes are used to establish a private and public network classification criteria.
when said match meets private	An example of calling attributes being used to establish private and public
network classification	network classification criteria is the use of caller information to interpret the callee identifier. For example, if the callee identifier is an international
criteria;	phone number with international dialing digits (IDD) or national dialing digits (NDD) prepended, information associated with the registered
	location of the caller and/or the physical location of the caller is used to
	determine how to reformat the callee identifier before it can be determined if the callee is an Apple subscriber with iMessage available.
	Another example of calling attributes being used to establish private and public network classification criteria is the use of saved information on the
	caller device and/or saved information stored on Apple servers regarding recently sent messages. For example, if a message is being sent to a calle
	that has recently been sent a message using iMessage, the message may b
	classified as private based on the saved information. Similarly, if a message is being sent to a callee that has recently been sent a message
	using SMS/MMS, the message may be classified as public based on the saved information.
[1e] when the call is classified	The Apple Messaging System produces a private network routing messag for receipt by a call controller that identifies an address, on the private
as a private	network, associated with the callee, when the call is classified as a private
network call, producing a	network call.
private network	The iMessage protocol is based on the Apple Push Notification Service.
routing message for receipt by a	a user message is sent using iMessage, a message is sent to an Apple Push Notification server which communicates with the callee's device.
call controller, said private	Angle Duck Netification Consist
network routing	Apple Push Notification Service
message identifying an	Apple Push Notification service (APNs) is the centerpiece of the remote notifications feature. It is a robust and highly efficient service for propagating information to iOS (and, indirectly, watchOS), tvOS, and OS X
address, on the	devices. Each device establishes an accredited and encrypted IP connection with APNs and receives notifications over this persistent connection. If a notification for an app arrives when that app is not
private network, associated with	running, the device alerts the user that the app has data waiting for it.
the callee;	The Messages application indicates that a message is sent using iMessage by filling in the text bubble of the message with the color blue.

	U.S. Patent No. 8,542,815
Disputed Claim	Accused Device/Instrumentality
[1f] when the call is classified as a public	The Apple Messaging System produces a public network routing messag for receipt by the call controller that identifies a gateway to the public network, when the call is classified as a public network call.
network call,	If a manual state of the Manual Andrews and the Manual Andrews
producing a public network routing message	If a message is sent using SMS/MMS, the device running the Messages application delivers the message using a gateway associated with the cellular network.
for receipt by the	The Massages employed in diastes that a massage is cant to a non Appl
call controller, said public network routing	The Messages application indicates that a message is sent to a non-Apple subscriber by filling in the text bubble of the message with the color gree
message	
identifying a gateway to the	
public network.	
7. The process of	The Apple Messaging System formats said callee identifier into a pre-
claim 1 further comprising	defined digit format to produce a re-formatted callee identifier.
formatting said	
callee identifier into a pre-	
defined digit	
format to	
produce a re- formatted callee	
identifier.	
27. [27p] A non-	The Apple Massaging System includes a pop transitory computer readely
transitory computer	The Apple Messaging System includes a non-transitory computer readab medium encoded with codes for directing a processor to execute a metho of operating a call routing controller to facilitate communication between
readable medium	callers and callees in a system comprising a plurality of nodes with whic
encoded with codes for	callers and callees are associated.
directing a processor to	See claim element [1p].
execute a method	
of operating a call routing	
controller to facilitate	
communication	
between callers and callees in a	

	U.S. Patent No. 8,542,815	
isputed Claim	Accused Device/Instrumentality	
ystem		
omprising a		
lurality of odes with		
which callers and		
allees are		
ssociated, the		
nethod		
omprising:		
27a] in response	See claim element [1a].	
o initiation of a		
all by a calling		
ubscriber,		
eceiving a caller dentifier and a		
allee identifier;		
27b] locating a	See claim element [1b].	
aller dialing		
rofile		
omprising a sername		
ssociated with		
ne caller and a		
lurality of		
alling attributes		
ssociated with he caller;		
27c]	See claim element [1c].	
letermining a	-	
natch when at		
east one of said		
alling attributes natches at least		
portion of said		
allee identifier;		
27d] classifying	See claim element [1d].	
he call as a		
oublic network call when said		
natch meets		

	U.S. Patent No. 8,542,815
Disputed Claim	Accused Device/Instrumentality
public network	
classification	
criteria and	
classifying the	
call as a private	
network call	
when said match	
meets private	
network	
classification	
criteria;	
[07 ₀] where the	See alaim alamant [1a]
[27e] when the	See claim element [1e].
call is classified	
as a private network call,	
producing a	
private network	
routing message	
for receipt by a	
call controller,	
said private	
network routing	
message	
identifying an	
address, on the	
private network,	
associated with	
the callee; and	
[27f] when the	See claim element [1f].
call is classified	
as a public	
network call,	
producing a	
public network	
routing message	
for receipt by a	
call controller,	
said public	
network routing	
message	
identifying a gateway to the	

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
public network.		
28. [28p] A call outing apparatus for facilitating communications between callers and callees in a system comprising a blurality of nodes with which callers and callees are associated, the apparatus comprising: 28a] receiving neans for receiving a caller dentifier and a	The Apple Messaging System includes a call routing apparatus for facilitating communications between callers and callees in a system comprising a plurality of nodes with which callers and callees are associated. See claim element [1p].	
callee identifier, n response to nitiation of a call by a calling subscriber;		
[28b] means for ocating a caller dialing profile comprising a username associated with the caller and a	See claim element [1b].	
blurality of calling attributes associated with the caller;		
[28c] means for letermining a match when at east one of said	See claim element [1c].	

	U.S. Patent No. 8,542,815
Disputed Claim	Accused Device/Instrumentality
calling attributes	
matches at least	
a portion of said	
allee identifier;	
28d] means for	See claim element [1d].
classifying the	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
call as a public	
network call	
when said match	
meets public	
network	
classification	
criteria;	
[29a] maana far	See alaim alamant [1d]
[28e] means for	See claim element [1d].
classifying the call as a private	
network call	
when said match	
meets private	
network	
classification	
criteria;	
[28f] means for	See claim element [1e].
producing a	
private network	
routing message	
for receipt by a	
call controller, when the call is	
classified as a	
private network	
call, said private	
network routing	
message	
identifying an	
address, on the	
private network,	
associated with	
the callee; and	
[28g] means for	See claim element [1f].

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
producing a		
public network		
routing message		
for receipt by a		
call controller,		
when the call is		
classified as a		
public network		
call, said public		
network routing		
message		
identifying a		
gateway to the		
public network.		
34. The	See claim 7.	
apparatus of		
claim 28 further		
comprising		
formatting		
means for		
formatting said		
callee identifier		
into a pre-		
defined digit		
format to		
produce a re-		
formatted callee		
identifier.		
54. [54p] A	The Apple Messaging System and the carrier system includes a call rout	
process for	controller to establish a call between a caller and a callee in a	
operating a call	communication system.	
routing		
controller to	See claim element [1p].	
establish a call	~~ [-F].	
between a caller		
and a callee in a		
communication		
system, the		
process		
comprising:		
[54a] in response	See claim element [1b].	

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
to initiation of a		
call by a calling		
subscriber,		
locating a caller dialing profile		
comprising a		
plurality of		
calling attributes		
associated with		
the caller; and		
[54b] when at least one of said	See claim elements [1c], [1d].	
calling attributes		
and at least a		
portion of a		
callee identifier		
associated with		
the callee match		
and when the		
match meets a		
private network classification		
criterion,		
enterion,		
[54c] producing	See claim element [1e].	
a private network		
routing message		
for receipt by a		
call controller, said private		
network routing		
message		
identifying an		
address, on a		
private network,		
the address being		
associated with		
the callee; and		
[54d] when at	See claim elements [1c], [1d].	
least one of said	see chain crements [10], [14].	
calling attributes		
and said at least		

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
said portion of said callee identifier associated with the callee match and when the match meets a public network classification criterion,		
[54e] producing a public network routing message for receipt by a call controller, said public network routing message identifying a gateway to a public network.	See claim element [1f].	
72. The process of claim 54 further comprising causing the private network routing message or the public network routing message to be communicated to a call controller to effect routing of the call.	The Apple Messaging System causes causing the private network routin message or the public network routing message to be communicated to call controller to effect routing of the call.	
73. A non- transitory computer readable medium encoded with codes for	The Apple Messaging System include a non-transitory computer readable medium encoded with codes for directing a processor to execute the method of claim 54. See claim elements [54p], [54a], [54b], [54c], [54d] and [54e].	

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
directing a		
processor to execute the		
method of claim		
54.		
74. [74p] A call	The Apple Messaging System and the carrier system include a call routing	
routing	controller apparatus for establishing a call between a caller and a callee in	
controller	communication system.	
apparatus for establishing a	See claim clement [1p].	
call between a	bee channe crement [1p].	
caller and a		
callee in a communication		
system, the		
apparatus		
comprising:		
[74a] a processor	The Apple Messaging System and the carrier system consists of multiple	
operably	machines with processors at multiple Apple locations, including servers	
configured to:	and gateways accessible over local and wide area networks.	
[74b] access a	The Apple Messaging System and the carrier system includes a database	
database of caller		
dialing profiles wherein each	a respective subscriber, to locate a dialing profile associated with the calle in response to initiation of a call by a calling subscriber.	
dialing profile	in response to initiation of a can by a canning subscriber.	
associates a	See claim elements [1a], [1b].	
plurality of		
calling attributes with a respective		
subscriber, to		
locate a dialing profile		
associated with		
the caller, in		
response to		
initiation of a call by a calling		
subscriber; and		
[74c] produce a private network	See claim element [1e].	

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
routing message		
for receipt by a		
call controller,		
said private		
network routing		
message		
identifying an		
address, on a		
private network,		
through which the call is to be		
routed,		
louleu,		
[74d] when at	See claim elements [1c], [1d].	
least one of said		
calling attributes		
and at least a		
portion of a		
callee identifier		
associated with		
the callee match		
and when the		
match meets a		
private network		
classification		
criterion, the		
address being		
associated with the callee; and		
ine cante, allu		
[74e] produce a	See claim element [1f].	
public network		
routing message		
for receipt by a		
call controller,		
said public		
network routing		
message		
identifying a		
gateway to a		
public network,		
[74f] when of	Saa alaim alamanta [1a] [1d]	
[74f] when at least one of said	See claim elements [1c], [1d].	

	U.S. Patent No. 8,542,815
Disputed Claim	Accused Device/Instrumentality
calling attributes	
and said at least	
said portion of	
said callee	
identifier	
associated with	
the callee match	
and when the	
match meets a	
public network	
classification	
criterion.	
92. The	The Apple Messaging System causes the private network routing messa
apparatus of	or the public network routing message to be communicated to a call
claim 74 wherein	controller to effect routing of the call.
said processor is	
further operably	
configured to	
cause the private	
network routing	
message or the	
public network	
routing message	
to be	
communicated to	
a call controller	
to effect routing	
of the call.	
93. [93p] A call	The Apple Messaging System establishes a call between a caller and a
routing	callee in a communication system.
controller	
apparatus for	See claim clement [1p].
establishing a	
call between a	
caller and a	
callee in a	
communication	
system, the	
apparatus	
comprising:	
[93a] means for	See claim element [74b].

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
accessing a		
database of caller		
dialing profiles		
wherein each		
dialing profile associates a		
plurality of		
calling attributes		
with a respective		
subscriber, to		
locate a dialing		
profile		
associated with		
the caller, in		
response to		
initiation of a		
call by a calling		
subscriber; and		
[93b] means for	See claim element [74c].	
producing a	see chain clement [7 lej.	
private network		
routing message		
for receipt by a		
call controller,		
said private		
network routing		
message		
identifying an		
address, on a private network,		
through which		
the call is to be		
routed,		
·		
[93c] when at	See claim element [74d].	
least one of said		
calling attributes		
and at least a		
portion of a		
callee identifier		
associated with		
the callee match and when the		

U.S. Patent No. 8,542,815		
Disputed Claim	Accused Device/Instrumentality	
match meets a		
private network		
classification		
criterion, the		
address being associated with		
the callee; and		
the cance, and		
[93d] means for	See claim element [74e].	
producing a		
public network		
routing message		
for receipt by a		
call controller, said public		
network routing		
message		
identifying a		
gateway to a		
public network		
[02a] where at	See alaim alamant [74f]	
[93e] when at least one of said	See claim element [74f]	
calling attributes		
and said at least		
said portion of		
said callee		
identifier		
associated with the callee match		
and when the		
match meets a		
public network		
classification		
criterion.		
111. The	The Apple Messaging System comprises means for causing the privation	
apparatus of	network routing message or the public network routing message to be	
claim 93 further	communicated to a call controller to effect routing of the call.	
comprising		
means for		
causing the		
private network		
routing message		

		U.S. Patent No.	8 542 815
	Disputed Claim		o,542,615 Device/Instrumentality
(or the public	Accuscu i	sevice/institumentanty
I	network routing message to be		
0	communicated to		
t	a call controller to effect routing		
0	of the call.		
		18	

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EXHIBIT B

ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS CONCERNING THE '005 PATENT

A. <u>Asserted Claim No. 3 regarding iMessage (the '005 patent)</u>

Apple Inc. ("Apple") supports and operates iMessage, an instant messaging service supported by the Messages application that allows smartphone and desktop users to send messages including text, images, video and audio to other users. The Messages software application runs on Apple desktop computers, laptops, tablets and mobile devices running OS X, iOS and watchOS operating systems. Apple practices directly and/or indirectly infringe certain claims of the '005 patent by utilizing a caller dialing profile comprising a plurality of calling attributes to form network classification criteria.

In particular, devices running the Messages application initiate a communication between a caller and a callee, and the callee may be an Apple subscriber or a non-subscriber. The communication is sent using iMessage in the case that the callee is an Apple subscriber, and utilizes SMS/MMS if the user is not an Apple user or if iMessage is not available.

B. <u>Asserted Claim No. 4 regarding Wifi Calling (the '005 patent)</u>

Apple also supports "Wi-Fi Calling" on desktop computers, laptops, tablets and mobile devices In the case of Wi-Fi Calling, an Apple device initiates a call between a caller and a callee using carrier based voice over IP ("VoIP") system and the callee may be a subscriber of the carrier or a non-subscriber. A caller profile that includes calling attributes is used as part of the process that routes the message or the call from the subscriber to either another subscriber or a non-subscriber. A pple practices directly and/or indirectly infringe certain claims of the '005 patent" by utilizing a caller dialing profile comprising a plurality of calling attributes to form network classification criteria.

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C. <u>Introduction to the '005 Claim Chart</u>

As explained in the chart below, the use of calling attributes is needed for one or more of the following purposes: (1) local interpretation of the callee identifier; (2) handling inactive,

VPLM00317

2 claims 1, 26, 74 and 94 of the '005 patent to Apple products and services. These claims should 3 be understood to be exemplary and not exhaustive of all claims of the '005 patent that are 4 practiced by Apple. 5 U.S. Patent No. 9,179,005 6 **Disputed Claim** Accused Device/Instrumentality 1. [1p] A process The Apple system produces a routing message for routing communications 7 for producing a between a caller and a callee in a communication system. routing message 8 for routing Apple offers messaging services through its Messages application, which is 9 communications available for Apple desktop computers, laptops, tablets and mobile devices between a caller running OS X, iOS and watchOS operating systems. 10 and a callee in a communication 11 system, the 12 process comprising: 13 Messages. 14 Unlimited texting. 15 limited fun 16 If you're a texter, you'll love Messages on iPhone, iPad and iPod touch. Now they all Nov 17 come with iMessage, a service that's an even better kind of texting. Because it's free for 18 you and anyone texting over Wi-Fi using an iOS device or Mac with iMessage. And it's D G F н J unlimited.* So say as much as you want. 19 в N C V M 20 21 22 Apple Messages allows iPads and iPhones connected to a cellular network and/or Wi-Fi network to send messages including text, audio, video and 23 images to other smartphone users, including both Apple subscribers and to non-subscribers. 24 Apple supports Wi-Fi Calling on desktop, tablet and mobile devices 25 including iPhone and Apple Watch devices. 26 27 28

suspended or blocked accounts; (3) handling customer billing authorization. This chart applies

		U.S. Patent No. 9,179,005
1	Disputed Claim	Accused Device/Instrumentality
		Make a call with Wi-Fi Calling
:		With Wi-Fi Calling, you can place a phone call in an area with little or no cellular coverage. Learn how to make a voice call using Wi-Fi Calling.
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		Wi-Fi Calling is a carrier-based system that allows Mac desktop
		computers, iPads, iPhones and Apple Watches connected to a Wi-Fi network to place calls to other users, including both carrier subscribers a
		to non-subscribers.
	[1a] using a caller identifier associated with the caller to	The Apple system uses a caller identifier associated with the caller to
		locate a caller dialing profile comprising a plurality of calling attributes
		associated with the caller.
	the caller to	
	the caller to locate a caller	In Apple Messages, a message or a call can be initiated by the software
	the caller to	
	the caller to locate a caller dialing profile comprising a plurality of	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Apple
	the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The
	the caller to locate a caller dialing profile comprising a plurality of calling attributes	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Apple ID of the caller.
	the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Apple ID of the caller.
	the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Appl ID of the caller.
	the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Apple ID of the caller. 2 Enter your Apple ID and password. Tap "Sign In." Any phone number and all email addresses associated with your Apple ID will be displayed. Cancel iMessage iphnappleseed@icloud.com (408) 555-2345 johnappleseed@icloud.com
	the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Apple ID of the caller.
	the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Appl ID of the caller.
	the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with	In Apple Messages, a message or a call can be initiated by the software application. Initiation of the message begins with the establishment of communication between Apple Messages and an Apple server. The message initiation includes the caller identifier, which includes the Appl D of the caller.

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Disputed Claim	Accused Device/Instrumentality
	Calling attributes are looked up by the Apple server based on the Apple II of the caller. Calling attributes also include information, such as settings, stored on the iPhone associated with the Apple Messages application.
	In the case of Wi-Fi Calling, a call is initiated by the Apple device beginning with the establishment of communication between the device and a controller operated by the carrier. The message initiation includes the phone number of the caller.
	Place a Wi-Fi call from your iPhone
	Turn on Wi-Fi calling in Settings > Phone > Wi-Fi Calling. You might need to enter or confirm your addre for emergency services.*
	lf Wi-Fi Calling is available, you'll see Wi-Fi after your carrier name in the status bar. Then your calls will u Wi-Fi Calling.
	wi-ri calling.
	Calling attributes are used as part of the process that classifies the communication as a public or private network communication. For
	example, Apple uses calling attributes for one or more of the following
	reasons:
	<u>1. Local interpretation of the callee identifier.</u> In particular, the callee identifier may be the dialing string for the VoIP or Messages customer an
	such dialing string may need to be interpreted according to the location
	from which the caller is registered, for example to handle international, national and local dialing patterns. Certain locations permit abbreviated
	dialing for special services. For example, 911 for emergency services, 41 for directory services and 311 for municipal services. In these cases, whi the callee identifier is the three digit dialing string, the actual number to
	which the call or message should be routed to depends on the location of the caller.
	2. Inactive, suspended or blocked accounts. In certain cases the status of
	the caller account must be consulted before the call or message can be
	routed. The caller account could be closed, blocked or banned preventing an outgoing communication. The caller account could also be set up to
	block certain outgoing calls, such as international calls or toll destination (such as 976 prefixes or premium messaging services (PMS)). The caller account could also be set up to block calls to specific numbers
	account could also be set up to block calls to specific numbers.
	<u>3. Customer billing authorization</u> . In cases where a communication involves a purchase, the caller account needs to be consulted to validate t customer credit card, to determine if a purchase limit has been reached,

Disp	uted Claim	U.S. Patent No. 9,179,005 Accused Device/Instrumentality
Dispt		and/or to determine if purchases have been blocked altogether.
least	when at one of said g attributes	The Apple system determines if at least one of the calling attributes and a least a portion of a callee identifier associated with the callee meet privat network classification criteria.
and a portic callee assoc the ca privat	t least a on of a e identifier iated with allee meet te network fication	As noted above, initiation of the message or call begins with the establishment of communication between Apple Messages and an Apple server, or the establishment of communication between the Apple device and the carrier controller. The message or call initiation includes information associated with the recipient based on the contact list of the smartphone. The callee identifier includes information from the contact entry for the recipient, including the phone number associated with that recipient.
		The Apple system allows calls and messages to other Apple subscribers and to non-subscribers. Private network routing criteria represents routing
		to another Apple subscriber in the case of Apple Messages, and represent routing to another subscriber of the carrier in the case of Wi-Fi Calling.
		Calling attributes are used for a number of different purposes to establish
		private network classification criteria.
		<u>1. Local interpretation of the callee identifier.</u> A private network classification would mean that the callee is a subscriber after the dialing string has been processed according to the regional interpretation of dialidigits. For example an "Emergency Address" is needed in the case of 9
		calls that are handled using Wi-Fi Calling.
		* When cellular service is available, your iPhone uses it for emergency calls. If you turned on Wi-Fi Calling and cellul
		service isn't available, emergency calls might use Wi-Fi calling. Emergency calls might send your device's location information to help emergency workers find you, regardless of whether you turn on Location Services.
		• •
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		C Phone Wi-Fi Calling
		Wi-Fi Calling on This iPhone
		Make and receive calls over Wi-Fi with your T-Mobile account. About Wi-Fi Calling & Privacy
		Update Emergency Address
		Wi-Ficalling requires an address to help emergency response services respond to calls. Review your carrier's emergency calling information to understand the limits of emergency calling over Wi-Fi.

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Disputed Claim	Accused Device/Instrumentality
	2. Inactive, suspended or blocked accounts. A private network
	classification would mean that the callee is a subscriber and the account the caller is active and/or that the caller account has not blocked communication with the callee.
	If your Apple ID is locked
	If you or someone else enters your password, security questions, or other account
	information incorrectly too many times, your Apple ID automatically locks to protec your security and you can't sign in to any Apple services. You can unlock your Apple ID after you verify your identity.
	If your Apple ID is locked for security reasons, you might see one of these alerts:
	• "This Apple ID has been disabled for security reasons"
	 "You can't sign in because your account was disabled for security reasons" "This Apple ID has been locked for security reasons"
	<u>3. Customer billing authorization.</u> A private network classification woul mean that the callee is a subscriber and the caller account has sufficient
	authorization to process the charge associated with the communication.
[1c] producing a private network	The Apple system produces a private network routing message for receip by a call controller which identifies an address on the private network
routing message for receipt by a	associated with the callee.
call controller, said private	If the callee is an Apple subscriber and if iMessages are available on the callee phone, internal information is used to determine how to route the
network routing message	message to the callee. The callee could be connected to a local Apple no or may be accessible over a wide area network on another Apple node. I
identifying an address, on the	the case of Wi-Fi Calling, the carrier operated controller routes the call to its own subscriber.
private network,	
associated with the callee; and	
[1d] when at	The Apple system determines if at least one of the calling attributes and a
least one of said calling attributes	least a portion of the callee identifier meet public network classification criteria.
and at least a portion of said	The Apple system allows calls to other Apple subscribers and to non-
	subscribers and Wi-Fi Calling allows calls to other carrier subscribers an

Disputed Claim network classification eriterion,	Accused Device/Instrumentalitybetween a subscriber and a non-subscriber. Calling attributes are used for number of different purposes to establish a public network classification criteria.1. Local interpretation of the callee identifier. classification would mean that the callee is a non-subscriber after the dialing string has been processed according to the regional interpretation o dialing digits. For example an "Emergency Address" is needed in the case of 911 calls that are handled using Wi-Fi Calling.
classification	number of different purposes to establish a public network classification criteria. <u>1. Local interpretation of the callee identifier</u> . A public network classification would mean that the callee is a non-subscriber after the dialing string has been processed according to the regional interpretation o dialing digits. For example an "Emergency Address" is needed in the case
	classification would mean that the callee is a non-subscriber after the dialing string has been processed according to the regional interpretation o dialing digits. For example an "Emergency Address" is needed in the case
	of 911 calls that are handled using Wi-Fi Calling.
	* When cellular service is available, your iPhone uses it for emergency calls. If you turned on Wi-Fi Calling and cellular service isn't available, emergency calls might use Wi-Fi calling. Emergency calls might send your device's location
	information to help emergency workers find you, regardless of whether you turn on Location Services.
	•
	Wi-Fi Calling on This iPhone Make and receive calls over WI-Fi with your T-Mobile sccount. About Wi-Fi Calling & Privacy
	Update Emergency Address
	Wi-Fi calling requires an address to help emergency response services respond to calls. Review your carrier's emergency calling information to understand the limits of emergency calling over Wi-Fi.
	2. Inactive, suspended or blocked accounts. A public network
	classification would mean that the callee is a non-subscriber and the
	account of the caller is active and/or that the caller account has not blocked communication with the callee.

1	U.S. Patent No. 9,179,005
2 Disputed Claim	Accused Device/Instrumentality
3	If your Apple ID is locked
5	If you or someone else enters your password, security questions, or other account information incorrectly too many times, your Apple ID automatically locks to protect your security and you can't sign in to any Apple services. You can unlock your Apple
	ID after you verify your identity.
	If your Apple ID is locked for security reasons, you might see one of these alerts:
	 "This Apple ID has been disabled for security reasons" "You can't sign in because your account was disabled for security reasons"
	"This Apple ID has been locked for security reasons"
	<u>3. Customer billing authorization.</u> A public network classification would
	mean that the callee is a non-subscriber and the caller account has sufficient authorization to process the charge associated with the
2	communication.
[1e] producing a	The Apple system produces a public network routing message for receipt
public network	by a call controller which identifies a gateway to the public network.
routing message for receipt by the	If the callee is a non-subscriber, a PSTN gateway or a SMS/MMS gateway
call controller,	is selected for connection and this information is relayed to the callee to set up the media stream or to deliver the message.
said public network routing	up me media stream of to deriver me message.
identifying o	
gateway to the	
public network.	
26. [26p] A call	The Apple system includes a call routing controller apparatus that produces
routing controller	a routing message for routing communications between a caller and a callee in a communication system.
apparatus for	
producing a routing message	In the case of Apple Messages, the caller is an Apple subscriber and the callee may be either an Apple subscriber or a non-subscriber, in the case of
for routing	Wi-Fi Calling, the caller is a carrier subscriber and the callee may be either
communications between a caller	a carrier subscriber or a non-subscriber. Messages and calls are set up by a call controller operated by Apple or the carrier that produces a routing
and a callee in a communication	message.
system, the	See claim element [1p].
apparatus comprising:	

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Disputed Claim	Accused Device/Instrumentality	
[26a] at least one processor operably configured to:	The Apple system and the carrier system consists of multiple machines with processors at multiple Apple locations, including servers and gateways accessible over local and wide area networks.	
[26b] use a caller identifier associated with the caller to locate a caller dialing profile comprising a plurality of calling attributes associated with the caller;	See claim element [1a].	
[26c] when at least one of said calling attributes and at least a portion of a callee identifier associated with the callee meet private network classification criteria,	See claim element [1b].	
[26d] produce a private network routing message for receipt by a call controller, said private network routing message identifying an address, on the private network, associated with the callee; and	See claim element [1c].	

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Disputed Claim	Accused Device/Instrumentality
[26e] when at least one of said calling attributes and at least a portion of said callee identifier meet a public network classification criterion,	See claim element [1d].
[26f] produce a	See claim element [1e].
public network	see chann chement [10].
routing message	
for receipt by the call controller,	
said public	
network routing	
message identifying a	
gateway to the	
public network.	
74. [74p] A	The Apple system and the carrier system routes communications in a
method of	packet switched network in which a first participant identifier is associate
routing communications	with a first participant and a second participant identifier is associated with a second participant in a communication.
in a packet	a second participant in a communication.
switched	Apple offers messaging services through its Messages application, which
network in which a first participant	available for Apple desktop computers, laptops, tablets and mobile devic running OS X, iOS and watchOS operating systems.
identifier is	running 05 /x, 105 and waterios operating systems.
associated with a	
first participant and a second	
participant	
identifier is	
associated with a second	
participant in a	
communication,	
the method comprising:	
comprising.	

	U.S. Patent No. 9,179,005
Disputed Claim	Accused Device/Instrumentality
	More standing More standing Unlimited texting. More standing Unlimited fun. More standing If you're a texter, you'll love Messages on More standing
	iPhone, IPad and iPod touch. Now they all come with iMessage, a service that's an even better kind of texting. Because it's free for you and anyone texting over Wi-Fi using an iOS device or Mac with iMessage. And it's unlimited.* So say as much as you want.
	Apple Messages allows iPads and iPhones connected to a cellular ne and/or Wi-Fi network to send messages including text, audio, video images to other smartphone users, including both Apple subscribers non-subscribers.
	Apple supports Wi-Fi Calling on desktop, tablet and mobile devices including iPhone and Apple Watch devices. Make a call with Wi-Fi Calling With Wi-Fi Calling, you can place a phone call in an area with little or no cellular coverage. Learn how to make a voice call using Wi-Fi Calling.
	Jane Andrew Construction of the second secon

	U.S. Patent N	o. 9,179,005		
Disputed Claim	Accuse	d Device/Instrumental	ity	
	Wi-Fi Calling is a carrier-bas computers, iPads, iPhones ar network to place calls to othe to non-subscribers.	nd Apple Watches conn	ected to a Wi-Fi	
[74a] after the first participant has accessed the packet switched network to initiate the communication, using the first participant identifier to	After the first participant has initiate the communication, u locate a first participant profi- associated with the first parti In Apple Messages, a messag application. Initiation of the communication between App message initiation includes the ID of the caller.	uses the first participant ile comprising a pluralit cipant. ge or a call can be initia message begins with th ble Messages and an Ap	identifier is user by of attributes ted by the softwa e establishment ople server. The	d to are of
locate a first participant profile comprising a	2 Enter your Apple ID and password.	Cancel iMessage Enter Apple ID Sign in with your Apple ID or create a new account b octivate iMessage.	✓ iMessage iMessage People will message you using yo address. What would you like to.	N our email use?
plurality of attributes	Any phone number and all email addresses associated with your Apple ID will be displayed.	johnappleseed@icloud.com	(408) 555-2345	
associated with the first participant;	Note: A phone number will be displayed only if you are setting up your iPhone, or if you are setting up another iOS device after you've set		johnappleseed@me.com	
	up your iPhone. Tap Next.	ASDFGHJKL		
	Calling attributes are looked	up by the Apple server	based on the An	nle
	of the caller. Calling attribut stored on the iPhone associat	es also include informa	tion, such as set	ting
			0 11	1.
	In the case of Wi-Fi Calling, beginning with the establish	nent of communication	between the dev	
	and a controller operated by the phone number of the call	-	ge initiation inclu	ides

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Disputed Claim	Accused Device/Instrumentality
	Place a Wi-Fi call from your iPhone
	Turn on Wi-Fi calling in Settings > Phone > Wi-Fi Calling. You might need to enter or confirm your address for emergency services.*
	If Wi-Fi Calling is available, you'll see Wi-Fi after your carrier name in the status bar. Then your calls will use Wi-Fi Calling.
	Calling attributes are used as part of the process that classifies the communication as a public or private network communication. For example, Apple uses calling attributes for one or more of the following reasons:
	1. Local interpretation of the callee identifier. In particular, the callee
	identifier may be the dialing string for the VoIP or Messages customer and such dialing string may need to be interpreted according to the location
	from which the caller is registered, for example to handle international, national and local dialing patterns. Certain locations permit abbreviated
	dialing for special services. For example, 911 for emergency services, 41
	for directory services and 311 for municipal services. In these cases, whil the callee identifier is the three digit dialing string, the actual number to
	which the call or message should be routed to depends on the location of the caller.
	2. Inactive, suspended or blocked accounts. In certain cases the status of
	the caller account must be consulted before the call or message can be routed. The caller account could be closed, blocked or banned preventing
	an outgoing communication. The caller account could also be set up to
	block certain outgoing calls, such as international calls or toll destinations (such as 976 prefixes or premium messaging services (PMS)). The caller account could also be set up to block calls to specific numbers.
	3. Customer billing authorization. In cases where a communication
	involves a purchase, the caller account needs to be consulted to validate the
	customer credit card, to determine if a purchase limit has been reached, and/or to determine if purchases have been blocked altogether.
[74b] when at	The Apple system determines if at least one of the first participant
least one of the first participant attributes and at	attributes and at least a portion of the second participant identifier meet a first network classification criterion.
least a portion of	As noted above, initiation of the message or call begins with the
the second participant identifier meet a	establishment of communication between Apple Messages and an Apple server, or the establishment of communication between the Apple device and the carrier controller. The message or call initiation includes

	U.S. Patent No. 9,179,005
Disputed Claim	Accused Device/Instrumentality
first network classification criterion,	information associated with the recipient based on the contact list of the smartphone. The callee identifier includes information from the contact entry for the recipient, including the phone number associated with that
enterion,	recipient.
	The Apple system allows calls and messages to other Apple subscribers and to non-subscribers. Private network routing criteria represents routing to another Apple subscriber in the case of Apple Messages, and represents
	routing to another subscriber of the carrier in the case of Wi-Fi Calling. Calling attributes are used for a number of different purposes to establish a private network classification criteria
	private network classification criteria.
	<u>1. Local interpretation of the callee identifier.</u> A private network classification would mean that the callee is a subscriber after the dialing
	string has been processed according to the regional interpretation of dialing digits. For example an "Emergency Address" is needed in the case of 911
	calls that are handled using Wi-Fi Calling.
	* When cellular service is available, your iPhone uses it for emergency calls. If you turned on Wi-Fi Calling and cellular
	service isn't available, emergency calls might use Wi-Fi calling. Emergency calls might send your device's location information to help emergency workers find you, regardless of whether you turn on Location Services.
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	Phone Wi-Fi Calling
	Wi-Fi Calling on This iPhone
	Make and receive calls over WI-FI with your T-Mobile account. About Wi-Fi Calling & Privacy
	Update Emergency Address
	Wi-Fi calling requires an address to help emergency response services respond to calls. Review your carrier's emergency calling information to understand the limits
	of emergency calling over Wi-Fi.
	2. Inactive, suspended or blocked accounts. A private network
	classification would mean that the callee is a subscriber and the account of the caller is active and/or that the caller account has not blocked
	communication with the callee.
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Disputed Claim	Accused Device/Instrumentality
	If your Apple ID is locked
	If you or someone else enters your password, security questions, or other account information incorrectly too many times, your Apple ID automatically locks to protect your security and you can't sign in to any Apple services. You can unlock your Apple ID after you verify your identity.
	If your Apple ID is locked for security reasons, you might see one of these alerts:
	 "This Apple ID has been disabled for security reasons" "You can't sign in because your account was disabled for security reasons" "This Apple ID has been locked for security reasons"
	<u>3. Customer billing authorization.</u> A private network classification would mean that the callee is a subscriber and the caller account has sufficient
	authorization to process the charge associated with the communication.
[74c] producing	The Apple system produces a first network routing message for receipt by
a first network routing message	controller which identifies an address, associated with the second participant, in a first portion of the packet switched network, which is
for receipt by a	controlled by an entity.
controller, the first network	If the callee is an Apple subscriber and if iMessages are available on the
routing message	callee phone, internal information is used to determine how to route the
identifying an address in a first	message to the callee. The callee could be connected to a local Apple noc or may be accessible over a wide area network on another Apple node. In
portion of the	the case of Wi-Fi Calling, the carrier operated controller routes the call to
packet switched network, the	its own subscriber.
address being associated with	
the second	
participant, the first portion	
being controlled	
by an entity; and	
[74d] when at least one of the	The Apple system determines if at least one of the first participant attributes and at least a portion of the second participant identifier meet a
first participant	second network classification criterion.
attributes and at least a portion of	The Apple system allows calls to other Apple subscribers and to non-
the second participant	subscribers and Wi-Fi Calling allows calls to other carrier subscribers and to non-subscribers. Public network routing criteria represents routing
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	U.S. Patent No. 9,179,005	
	Disputed Claim	Accused Device/Instrumentality
	identifier meet a second network classification criterion,	between a subscriber and a non-subscriber. Calling attributes are used for number of different purposes to establish a public network classification criteria. <u>1. Local interpretation of the callee identifier.</u> A public network classification would mean that the callee is a non-subscriber after the
		dialing string has been processed according to the regional interpretation o dialing digits. For example an "Emergency Address" is needed in the case of 911 calls that are handled using Wi-Fi Calling.
		* When cellular service is available, your iPhone uses it for emergency calls. If you turned on Wi-Fi Calling and cellular
		service isn't available, emergency calls might use Wi-Fi calling. Emergency calls might send your device's location information to help emergency workers find you, regardless of whether you turn on Location Services.
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		Phone Wi-Fi Calling
		Wi-Fi Calling on This iPhone Make and receive calls over Wi-Fi with your T-Mobile account. About Wi-Fi Calling & Privacy
		Update Emergency Address
		Wi-Fi calling requires an address to help emergency response services respond to calls. Review your carrier's emergency calling information to understand the limits of emergency calling over Wi-Fi.
		2. Inactive, suspended or blocked accounts. A public network
		classification would mean that the callee is a non-subscriber and the account of the caller is active and/or that the caller account has not blocked
		communication with the callee.
1		
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	U.S. Patent No. 9,179,005
Disputed Claim	Accused Device/Instrumentality
	If your Apple ID is locked
	If you or someone else enters your password, security questions, or other account information incorrectly too many times, your Apple ID automatically locks to protect your security and you can't sign in to any Apple services. You can unlock your Apple ID after you verify your identity.
	If your Apple ID is locked for security reasons, you might see one of these alerts:
	 "This Apple ID has been disabled for security reasons" "You can't sign in because your account was disabled for security reasons"
	 "This Apple ID has been locked for security reasons"
	<u>3. Customer billing authorization.</u> A public network classification would mean that the callee is a non-subscriber and the caller account has
	sufficient authorization to process the charge associated with the
	communication.
[74e] producing	The Apple system produces a second network routing message for receipt
a second network routing message	by the controller which identifies an address in a second portion of the packet switched network, which is not controlled by the entity.
for receipt by the	
controller, the second network	If the callee is a non-subscriber, a PSTN gateway or a SMS/MMS gatewa is selected for connection and this information is relayed to the callee to s up the media stream or to deliver the message.
routing message identifying an	up the media stream of to deriver the message.
address in a second portion of	
the packet	
switched network, the	
second portion not controlled by	
the entity.	
94. [94p] A	The Apple system routes communications in a packet switched network in
system for routing communications	which a first participant in a communication has an associated first participant identifier and a second participant in the communication has a
	associated second participant identifier.
in a packet switched	The first participant is an Apple subscriber and/or a carrier subscriber and
network in which a first participant in a	has an associated first participant identifier, which includes an Apple ID and/or a phone number, and the second participant may be either an Apple subscriber or carrier subscriber or a non-subscriber, and has an associated
	35 VPLM00

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Disputed Claim	Accused Device/Instrumentality
communication	second participant identifier, which includes a phone number.
has an associated first participant	See claim element [74p].
identifier and a	see claim clement [/+p].
second	
participant in the	
communication has an associated	
second	
participant	
identifier, the	
system	
comprising:	
[94a] a controller	The Apple system and the carrier system consists of multiple machines
comprising:	with processors, some of which constitute controllers that communicate
a processor operably	with the first participant when the call or message is initiated.
configured to	
access a	
memory,	
wherein the processor is	
configured to:	
6	
[94b] after the	See claim element [74a]
first participant has accessed the	
packet switched	
network to	
initiate the	
communication, locate a first	
participant	
profile in the	
memory using	
the first participant	
identifier, the	
first participant	
profile	
comprising a plurality of	
attributes	

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Disputed Claim	Accused Device/Instrumentality
associated with the first participant;	
[94c] produce a first network routing message when at least one of the first participant attributes and at least a portion of the second participant identifier meet a first network classification criterion,	See claim element [74b]
[94d] the first network routing message identifying an address in a first portion of the packet switched network, the address being associated with the second participant, the first portion being controlled by an entity; and [94e] produce a second network routing message when at least one of the first participant attributes and at least a portion of	See claim element [74c] See claim element [74d]
the second	37

U.S. Patent No. 9,179,005	
Disputed Claim	Accused Device/Instrumentality
participant identifier meet a second network classification criterion,	
[94f] the second network routing message identifying an address in a second portion of the packet switched network, the second portion not controlled by the entity.	See claim element [74e]