

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

IPA TECHNOLOGIES INC.,

Plaintiff,

v.

TCL COMMUNICATION TECHNOLOGY
HOLDINGS, LTD.; TCT MOBILE
LIMITED; and TCT MOBILE (US), INC.,

Defendants.

C.A. No. 16- 1236-RGA _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff IPA Technologies Inc. (“IPA”) as and for its complaint against TCL Communication Technology Holdings, Ltd., TCT Mobile Limited, and TCT Mobile (US), Inc. (collectively, “Alcatel” or “Defendants”) alleges as follows:

PARTIES

1. IPA is a Delaware corporation with a principal place of business at 600 Anton Blvd., Suite 1350, Costa Mesa, California 92626.
2. On information and belief, Defendant TCL Communication Technology Holdings, Ltd. is a Chinese company with its principal place of business at 15/F, TCL Tower, Gaoxin Nan Yi Road, Nanshan District, Shenzhen, Guangdong, P.R.C. 518157. TCL Communication Technology Holdings, Ltd. can be served with process pursuant to the Delaware Long Arm Statute, 10 *Del. C.* § 3104.
3. On information and belief, TCT Mobile Limited, a subsidiary of TCL Communication Technology Holdings, Ltd., is a company established under the laws of Hong Kong, having its registered office at Room 1520, Tower 6, Chicna Hong Kong City, 33 Canton Road, Tsim Sha Tsui, Kowloon, Hong Kong. On information and belief,

TCT Mobile Limited has a domestic address at 25 Edelman, Suite 200, Irvine, CA 92618.

TCT Mobile Limited can be served with process pursuant to the Delaware Long Arm Statute, 10 *Del. C.* § 3104.

4. On information and belief, Defendant TCT Mobile (US), Inc. is a Delaware corporation and subsidiary of TCL Communication Technology Holdings, Ltd. with its principal place of business at 25 Edelman, Suite 200, Irvine, CA 92618. TCT Mobile Limited can be served with process pursuant to the Delaware Long Arm Statute, 10 *Del. C.* § 3104.

JURISDICTION AND VENUE

5. This action arises under the patent laws of the United States, Title 35 of the United States Code. Accordingly, this Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has specific and general personal jurisdiction over Defendants pursuant to due process and/or the Delaware Long Arm Statute, due to Defendant TCT Mobile (US), Inc. having availed itself of the rights and benefits of Delaware by incorporating under Delaware law and due to Defendants' substantial business in this forum, including: (i) at least a portion of the infringement alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Delaware and in this Judicial District.

7. Venue is proper in this District under 28 U.S.C. §§ 1391 (b)-(c) and 1400(b) because Defendants are subject to personal jurisdiction in this District.

BACKGROUND

8. SRI International, Inc. (“SRI”), the original owner of the patents-in-suit, is an independent, not-for-profit research institute that conducts client-supported research and development for government agencies, commercial businesses, foundations, and other organizations.

9. Among its many areas of research, SRI has engaged in fundamental research and development related to personal digital assistants and speech-based navigation of electronic data sources.

10. SRI’s innovative work on personal digital assistants was a key area of development in one of the world’s largest artificial intelligence projects, the Cognitive Assistant that Learns and Organizes (“CALO”). The vision for the SRI-led CALO project, which was funded by the U.S. Defense Advanced Research Projects Agency (“DARPA”), was to create groundbreaking software that could revolutionize how computers support decision-makers.

11. SRI’s work on personal digital assistants and speech-based navigation of electronic data sources, which started before the launch of the CALO project, developed further as part of the project. SRI’s engineers were awarded numerous patents on their groundbreaking personal digital assistant and speech-based navigation inventions.

12. To bring the personal digital assistant and speech-based navigation technology to the marketplace, SRI formed the spin-off company Siri, Inc. in 2007, and granted it a non-exclusive license to the patent portfolio. The technology was demonstrated as an iPhone app at technology conferences and later released as an iPhone

3GS app in February 2010. In April 2010, Apple Inc. acquired Siri, Inc. In 2011, the Siri personal digital assistant was released as an integrated feature of the iPhone 4S.

13. Speech-based navigation of electronic data sources has continued to be implemented as an effective and user-friendly solution for interacting with electronic devices.

14. On May 6, 2016, IPA acquired the SRI speech-based navigation patent portfolio. IPA is a wholly-owned subsidiary of WiLAN, a leading technology innovation and licensing business actively engaged in research, development, and licensing of new technologies.

BACKGROUND ON DEFENDANTS

15. Defendant TCL Communication Technology Holdings, Ltd., together with its subsidiaries, designs, manufactures and markets an expanding portfolio of mobile and internet products worldwide under two key brands – Alcatel and TCL.¹ Defendant TCL Communication Technology Holdings, Ltd. and its subsidiaries are principally engaged in the research and development, manufacture and sale of mobile phones and other products and rendering of services.²

16. Defendant TCT Mobile Limited is a subsidiary of Defendant TCT Mobile Limited. TCT Mobile Limited's principal activities include the development and distribution of mobile handsets.³

¹ See, e.g., Annual Report 2015 at 3, available at http://www.tclcom.com/admin/documents/freport/e2618_Annual%20Report%202015.pdf.

² See, e.g., *id.* at 100.

³ See, e.g., *id.*

17. Defendant TCT Mobile (US), Inc. is a subsidiary of Defendant TCT Mobile Limited. Defendant TCT Mobile (US), Inc.’ principal activities include the distribution of mobile handsets.⁴

18. Defendant TCL Communication Technology Holdings, Ltd. together with its subsidiaries, such as Defendant TCT Mobile Limited and Defendant TCT Mobile (US), Inc., coordinate their activities to infringe IPA’s patents.

19. Litigation records show that Defendant TCL Communication Technology Holdings, Ltd., Defendant TCT Mobile Limited, and Defendant TCT Mobile (US), Inc. are closely related companies. TCL Communication Technology Holdings, Ltd., TCT Mobile Limited, and TCT Mobile (US), Inc. were plaintiffs in at least one lawsuit involving mobile phone technology patents.⁵

20. Defendants were also petitioners in a number of *Inter Partes* Review of patents. The Defendants disclosed in their petitions that “TCL Corporation, TCL Communication Technology Holdings, Ltd., and TCT Mobile (US) Holdings Inc. are real parties-in-interest. TCT Mobile, Inc. and TCT Mobile (US) Inc. are wholly-owned subsidiaries of TCT Mobile (US) Holdings Inc.”⁶

⁴ See, e.g., *id.* at 101.

⁵ See, e.g., *TCL Communs. Tech. Holdings v. Telefonaktenbologet LM Ericsson*, No. SACV 14-00341 JVS (ANx), 2016 U.S. Dist. LEXIS 101920, at *1 (C.D. Cal. July 25, 2016).

⁶ See, e.g., *TCT MOBILE US INC. v. WIRELESS PROTOCOL INNOVATIONS*, 2012 Pat. App. Filings LEXIS 607, IPR2016-01494; see also *TCT MOBILE US INC. v. WIRELESS PROTOCOL INNOVATIONS*, 2016 Pat. App. Filings LEXIS 6265, PR2016-01702 (“Petitioners TCT Mobile (US) Inc. and TCT Mobile, Inc. as well as TCL Corporation, TCL Communication Technology Holdings, LTD., and TCT Mobile (US) Holdings Inc. are real parties-in-interest. Petitioners TCT Mobile (US) Inc. and TCT Mobile, Inc. are wholly-owned subsidiaries of TCT Mobile (US) Holdings Inc.”), *TCL CORP. v. ERICSSON*, 2015 Pat. App. Filings LEXIS 8336, IPR Case No. IPR2015-01650 (“The

BACKGROUND ON ACCUSED PRODUCTS

21. Defendants' accused products include and use the Android operating system.

22. The Google Now digital assistant has been included with the Android operating system since at least July 2012. Since at least October 2016, the functionality of the Google Now digital assistant has been included in Google's Voice Actions and use of the term "Google Now" has apparently been discontinued. The terms "Google Now" and "Google Now digital assistant" as used herein include but are not limited to the Voice Actions functionalities relating to the Google Now digital assistant.

23. The Google Now digital assistant uses features of the Android operating system such as voice search and cards for the display of selected information.

24. Voice search allows users to interact with the Google Now digital assistant using natural spoken language.

25. Cards present visual representations of voice search results, and allow further user interaction with the Google Now digital assistant through touch response.

26. Google Now can retrieve and display a variety of types of information such as directions, calendar, weather, flight, sports, and restaurant information.

27. Defendants' infringing products include mobile telephone and tablet products having the Google Now digital assistant, including but not limited to their A30, ALCATEL PIXI 7 4G LTE Tablet for Sprint, ALCATEL PIXI 7 Tablet, ALCATEL POP 7 LTE Tablet for T-Mobile, ALLURA, AT&T Trek HD 4G LTE Tablet, Conquest,

real parties-in-interest are TCL Corp.; TCL Communication Technology Holdings, Ltd.; TCT Mobile Limited; TCT Mobile Inc.; and TCT Mobile (US) Inc.”).

Dawn, Elevate, Evolve, Evolve 2, Fierce, FIERCE 4, Fierce XL, Flint, GO PLAY, Hero, IDEAL, Idol, IDOL 3 for Cricket, Idol 4, IDOL 4 for Cricket, Idol 4s, Idol Alpha, Idol Mini, Idol S, Idol Ultra, Idol X, MPop, One Touch Pop 7, One Touch SPop, Pixi 3, PIXI 4(6), Pixi 4 and Pixi 4 3G mobile telephones, PIXI 4(5), Pixi 7, PIXI Theatre, Pop 4 and Pop 8 tablets, Pop 4 Plus, Pop 4S, Pop Astro, Pop C1, Pop C3, Pop C5, Pop C7, Pop Icon, Scribe Easy, Scribe HD, Scribe HD-LTE, Scribe X, Snap, Snap LTE, Star, Streak, TRU, Xess, and XPop tablets, and related products and/or processes (“Alcatel Google Now-enabled products”).⁷

ASSERTED PATENTS

28. IPA is the owner by assignment of U.S. Patent No. 6,742,021 (the “’021 Patent”). The ’021 Patent is entitled “Navigating Network-Based Electronic Information Using Spoken Input With Multimodal Error Feedback.” The ’021 Patent issued on May 25, 2004. A true and correct copy of the ’021 Patent is attached hereto as Exhibit A.

29. IPA is the owner by assignment of U.S. Patent No. 6,523,061 (the “’061 patent”). The ’061 Patent is entitled “System, Method, and Article of Manufacture For Agent-Based Navigation in a Speech-Based Data Navigation System.” The ’061 Patent issued on February 18, 2003. A true and correct copy of the ’061 Patent is attached hereto as Exhibit B.

⁷ Plaintiff reserves the right to identify additional Alcatel products and features developed by Alcatel as this litigation proceeds.

COUNT I
(Infringement of U.S. Patent No. 6,742,021)

30. Plaintiff re-alleges and incorporates by reference the allegations in the foregoing paragraphs as if fully set forth herein.

31. Plaintiff is informed and believes, and on that basis alleges, that Defendants have infringed and are currently infringing one or more claims (*e.g.*, claim 1) of the '021 Patent, in violation of 35 U.S.C. § 271.

32. Defendants have infringed and are currently infringing literally and/or under the doctrine of equivalents, by, among other things, making, using, offering for sale, selling, and/or importing within this judicial district and elsewhere in the United States, without license or authority, Alcatel Google Now-enabled products falling within the scope of one or more claims of the '021 Patent, including claim 1.⁸

33. On information and belief, the Alcatel Google Now-enabled products perform a method for speech-based navigation of an electronic data source, the electronic data source being located at one or more network servers located remotely from a user. For example, Hugo Barra, Android's director of product management, explained in an interview that "Google Now touches every back-end of Google, every different web service that's been developed over the last ten years or so is part of this service."⁹ Consistent with this statement, the figure below was published in a companion article to the interview, showing that Google Now accesses resources and information which may

⁸ Plaintiff reserves the right to identify additional asserted claims as this litigation proceeds. For example, Plaintiff expressly reserves the right to identify additional asserted claims in its infringement contentions to be served during the discovery process.

⁹ The Verge, *Google Now and the predictive future of search* (Oct. 29, 2012), <https://www.youtube.com/watch?v=ZXtudZl5mzM>.

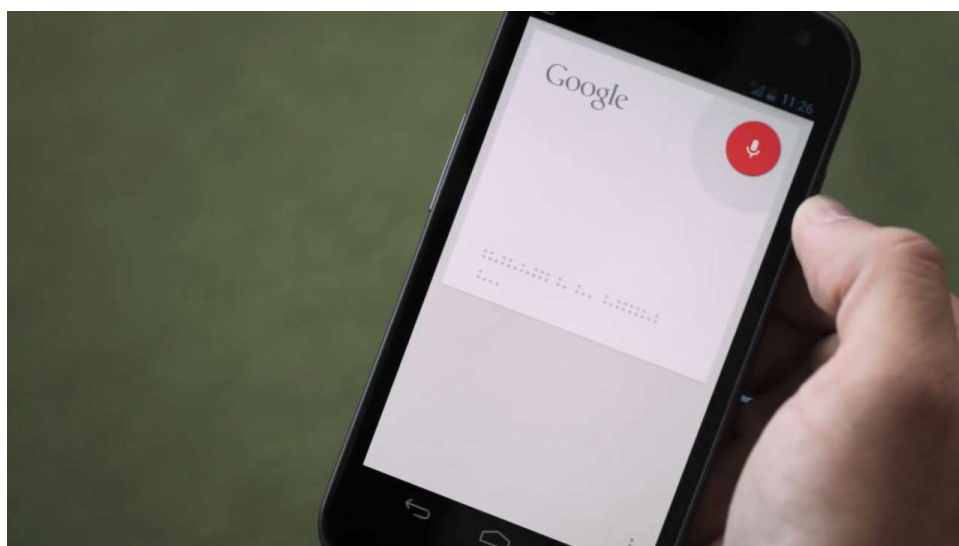
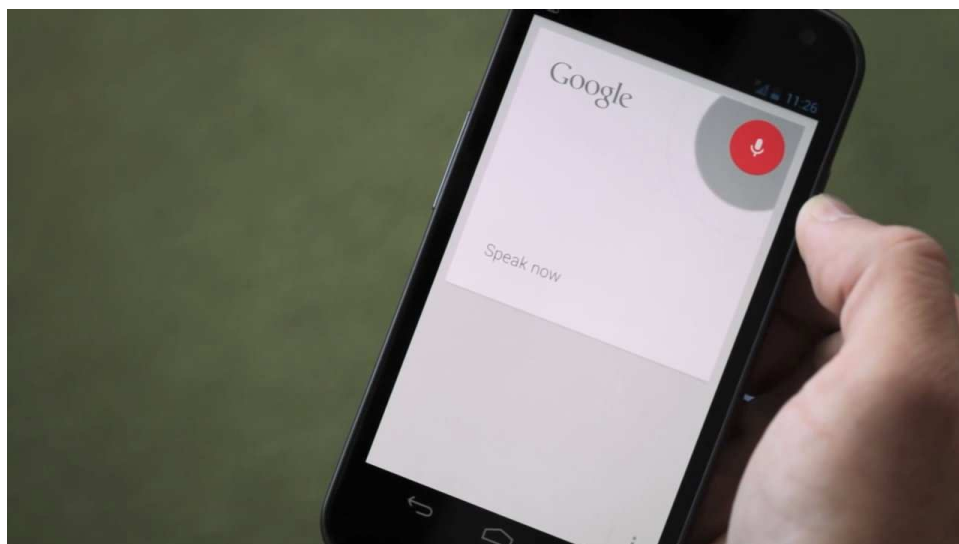
be locally stored on the device (*e.g.*, Android operating system), privately on remote servers (*e.g.*, Gmail), publicly accessible websites and databases (*e.g.*, News, weather, and stock quotes) and as well as information stored on other services and apps (*e.g.*, Google Maps, YouTube).¹⁰



34. On information and belief, the Alcatel Google Now-enabled products perform the step of receiving a spoken request for desired information from the user. For example, a segment of the interview video featuring Hugo Barra showed Google Now receiving Hugo Barra’s spoken request of “directions to the museum with the William Haley exhibition.” as shown below.¹¹

¹⁰ See, *e.g.*, Dieter Bohn, *Google Now: behind the predictive future of search*, Vox Media, Inc. (Oct. 29, 2012), <http://www.theverge.com/2012/10/29/3569684/google-now-android-4-2-knowledge-graph-neural-networks>.

¹¹ The Verge, *Google Now and the predictive future of search* (Oct. 29, 2012), <https://www.youtube.com/watch?v=ZXtudZl5mzM>.

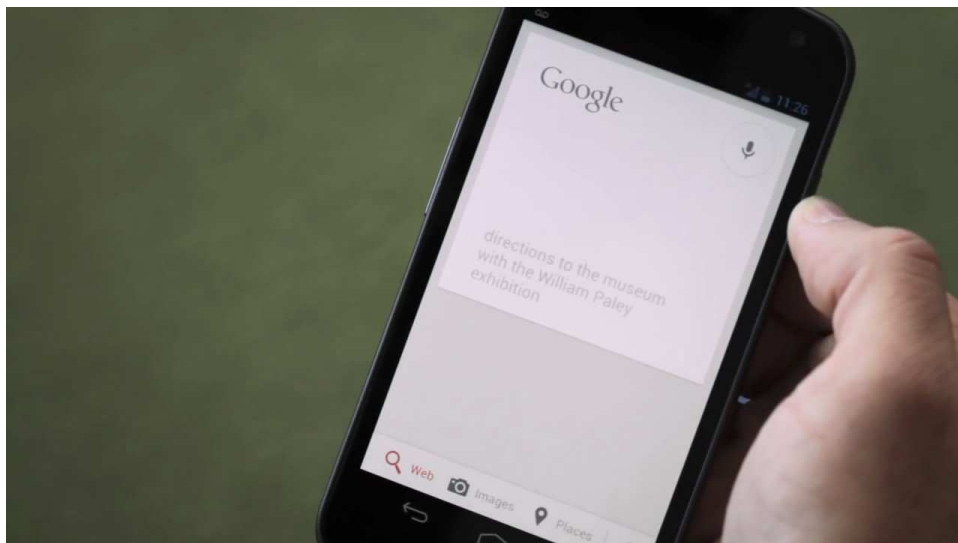


As another example, a segment of the interview video featuring Vincent Vanhoucke explained the process for turning sounds into something meaningful for the computer to interpret.¹²

¹² *Id.*



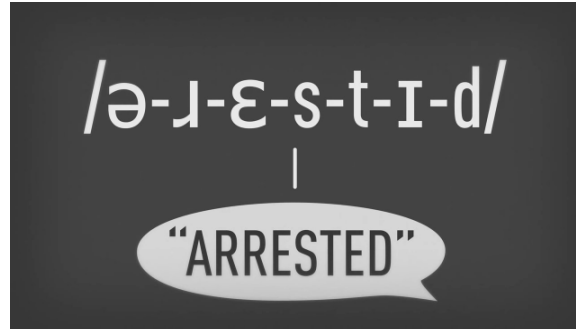
35. On information and belief, the Alcatel Google Now-enabled products perform the step of rendering an interpretation of the spoken request. For example, a segment of the interview video featuring Hugo Barra showed Google Now rendering an interpretation of Hugo Barra’s spoken request, as shown below.¹³



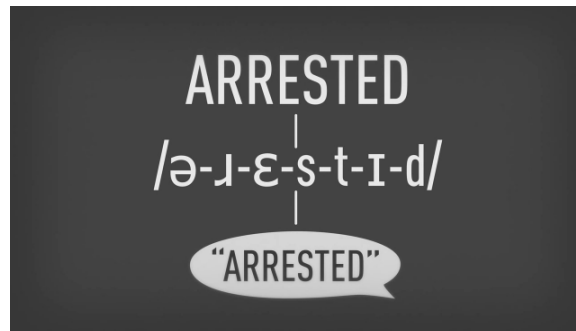
As another example, Vincent Vanhoucke explained that “[w]e want to turn sounds into what we call phonemes.”¹⁴

¹³ *Id.*

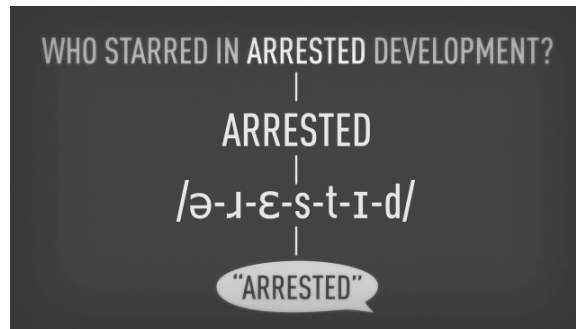
¹⁴ *Id.*



Vanhoucke explained “from the phonemes you want to turn them into words.”¹⁵



Vanhoucke explained “from the words you construct sentences.”¹⁶

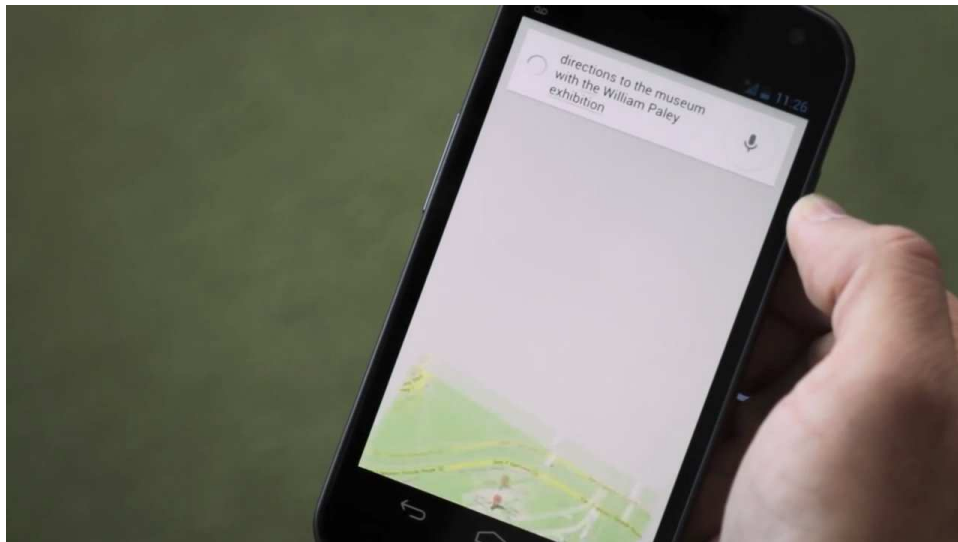


36. On information and belief, the Alcatel Google Now-enabled products perform the step of constructing at least part of a navigation query based upon the interpretation. For example, a segment of the interview video featuring Hugo Barra

¹⁵ *Id.*

¹⁶ *Id.*

showed Google Now constructing at least part of a navigation query based upon the interpretation of Hugo Barra's spoken request, as shown below.¹⁷



As another example, Vincent Vanhoucke explained that “once you have a sentence you have a transcript of what you said – you have to turn that into something that’s meaningful for the computer to interpret.”¹⁸



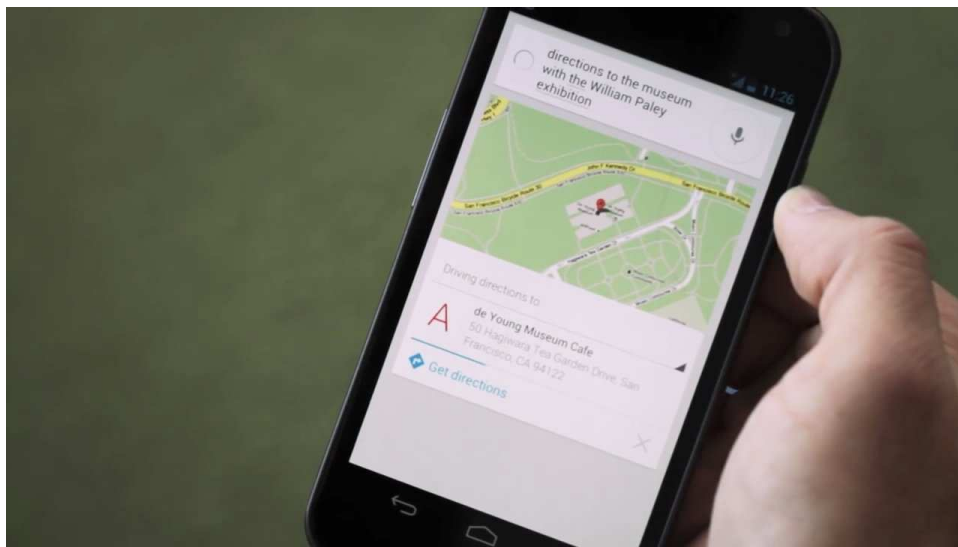
Vincent Vanhoucke stated, “so if you’re doing a search query, you’re asking for ‘pictures of cats,’ the computer has to understand that you’re really doing an image search for the word ‘cats.’”¹⁹

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

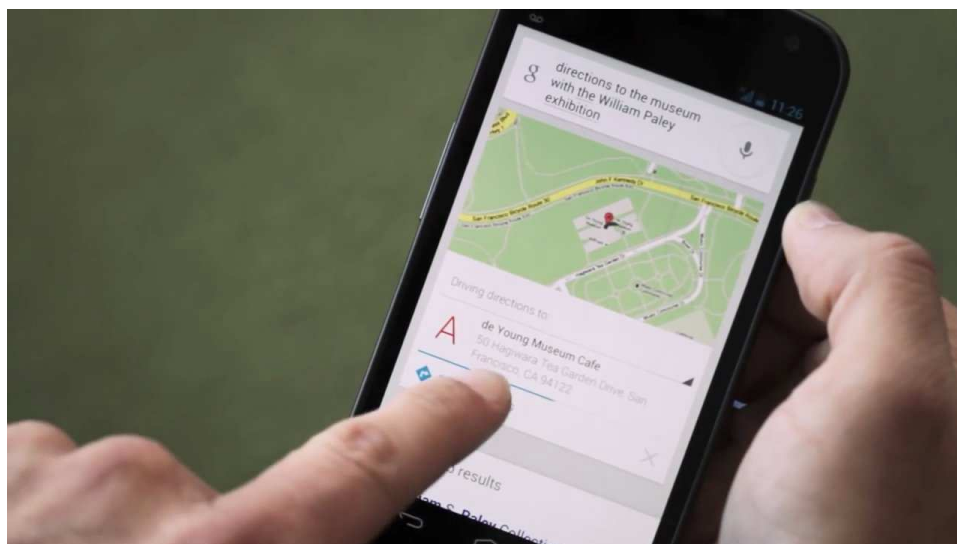
37. On information and belief, the Alcatel Google Now-enabled products perform the step of soliciting additional input from the user, including user interaction in a non-spoken modality different than the original request without requiring the user to request said non-spoken modality. For example, a segment of the interview video featuring Hugo Barra showed Google Now soliciting additional input from the Hugo Barra, by presenting search result / card having various information, including a map, an address, and the option of getting directions, as shown below, as shown below.²⁰



A user can select any of the presented information for further action, such as opening a larger map, opening a webpage (or search page) showing the information requested, or open a Google Maps app to get directions. In the video Hugo Barra touched the option of “Get directions.”²¹

²⁰ *Id.*

²¹ *Id.*



As another example, Google announced in its official blog that

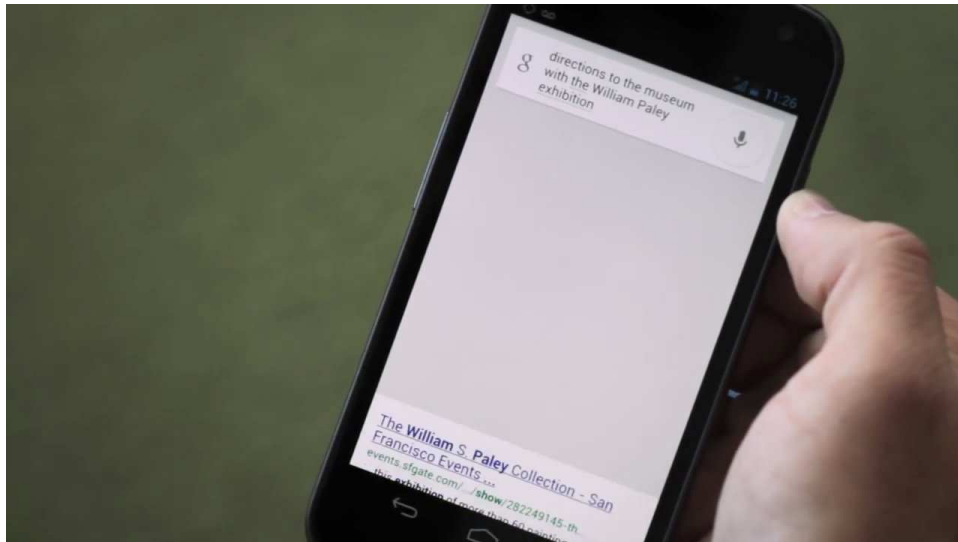
You're running late for an interview, but that little gas light on your dash has been on... for well... too long. You reroute Google Maps to the nearest gas station and start to fill up—and that's when you notice the gas across the street is 25 cents cheaper. When you finally close the tank, re-type the original address into your phone and get on the road again, you're short 15 minutes and \$5.

Over the next few weeks, we're rolling out an update to Google Maps on Android that will make your next gas stop more convenient and affordable. Now you can check out gas prices and add detours to your route, without having to exit out of navigation.²²

On information and believe, the Google Maps reroute example quoted above has been implemented by Google. For example, a user can add a detour for getting gas by speaking to an Alcatel Google Now-enabled product. Google Maps will solicit additional input from the user by presenting gas station options and the corresponding reroute paths for the user to choose from. The user can interact with Google Maps in a non-spoken modality by touch selecting a location option.

²² The official blog for Google Maps, *Google Maps making stressful times easier* (Oct. 20, 2015), <https://maps.googleblog.com/2015/10/google-maps-making-stressful-times.html>.

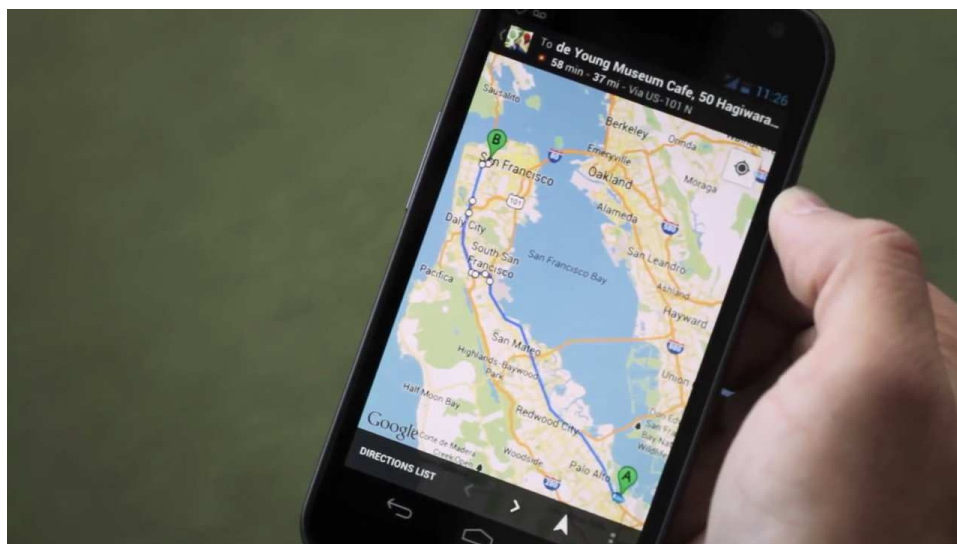
38. On information and belief, the Alcatel Google Now-enabled products perform the step of refining the navigation query, based upon the additional input. For example, a segment of the interview video featuring Hugo Barra showed Google Now refining the navigation query, based upon Hugo Barra's touch input.²³



39. On information and belief, the Alcatel Google Now-enabled products perform the step of using the refined navigation query to select a portion of the electronic data source. For example, a segment of the interview video featuring Hugo Barra showed Google Now using the refined navigation query to select a portion of the electronic data source for at least a map, Google Maps app, and other data affiliated with maps and navigation (*e.g.*, map, real-time traffic, and other alerts).²⁴

²³ *Id.*

²⁴ *Id.*



40. On information and belief, the Alcatel Google Now-enabled products perform the step of transmitting the selected portion of the electronic data source from the network server to a client device of the user. For example, a segment of the interview video featuring Hugo Barra showed Google Now transmitting the selected portion of the electronic data source from the network server to Hugo Barra’s device.²⁵ Hugo Barra noted in the video that “Google [Now] crosses all these various different pieces of information in my question to give me an answer back which in this case is actually a map.”²⁶

41. There are at least several types of direct infringers of the ‘021 Patent under 35 U.S.C. § 271(a). For example, employees of the Defendant TCT Mobile (US), Inc. use Google Now digital assistant to demonstrate the capabilities of Alcatel Google Now-enabled products in the course of employees’ sales, marketing, and distribution efforts. Employees of the Defendant TCT Mobile (US), Inc. use Google Now digital assistant to

²⁵ *Id.*

²⁶ *Id.*

perform speech-based navigation of electronic data sources in the course of their employment, directly infringing the '021 Patent.

42. On information and belief, consumers use, for example, Google Now digital assistant to directly infringe the '021 Patent.

43. Defendants have also infringed indirectly and continue to infringe indirectly the '021 Patent by active inducement under 35 U.S.C. § 271(b).

44. On information and belief, Defendants gained knowledge of the '021 Patent no later than the filing of this complaint or shortly thereafter.

45. On information and belief, Defendants have intended, and continue to intend, to induce patent infringement by their users and have had knowledge that the inducing acts would cause infringement or has been willfully blind to the possibility that its inducing acts would cause infringement. For example, Defendants encourage and instruct end users to perform speech-based navigation of an electronic data source using a method as claimed in claim 1 of the '021 Patent through the very nature of the products. On information and belief, Defendants also encourage and instruct end users to perform speech-based navigation of an electronic data source using a method as claimed in claim 1 of the '021 Patent through materials and information made available to users, including product manuals and technical information.²⁷ By using the infringing products to perform speech-based navigation of an electronic data source, users directly infringe at least claim 1 of the '021 Patent. By continuing to provide instructions to users on how to

²⁷ See also, e.g., Alcatel Onetouch Launches Two Affordable Smartphones With T-Mobile, 8/27/2014, available at <http://www.alcatelonetouch.us/press-aot-launches-affordable-smartphones-tmobile/> (Alcatel phones “allow[] users to do more including voice commands through Google Now.”).

use the infringing products to perform speech-based navigation of an electronic data source using a method as claimed in claim 1 of the '021 Patent, and by continuing to encourage such use, Defendants have and continue to specifically intend to induce infringement of the '021 Patent.

46. To the extent that facts learned in discovery show that Defendants' infringement of the '021 Patent is or has been willful, Plaintiff reserves the right to request such a finding at the time of trial.

47. To the extent applicable, the requirements of 35 U.S.C. § 287(a) have been met with respect to the '021 Patent.

48. As a result of Defendants' infringement of the '021 Patent, Plaintiff has suffered monetary damages in an amount adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendants, together with interest and costs as fixed by the Court, and Plaintiff will continue to suffer damages in the future unless Defendants' infringing activities are enjoined by this Court.

49. Unless a permanent injunction is issued enjoining Defendants and their agents, servants, employees, representatives, affiliates, and all others acting or in active concert therewith from infringing the '021 Patent, Plaintiff will be greatly and irreparably harmed.

COUNT II
(Infringement of U.S. Patent No. 6,523,061)

50. Plaintiff re-alleges and incorporates by reference the allegations in the foregoing paragraphs as if fully set forth herein.

51. Plaintiff is informed and believes, and on that basis alleges, that Defendants have infringed and are currently infringing one or more claims (*e.g.*, claim 1) of the '061 Patent, in violation of 35 U.S.C. § 271.

52. Defendants have infringed and are currently infringing literally and/or under the doctrine of equivalents, by, among other things, making, using, offering for sale, selling, and/or importing within this judicial district and elsewhere in the United States, without license or authority, Alcatel Google Now-enabled products falling within the scope of one or more claims of the '061 Patent, including claim 1.²⁸

53. On information and belief, the Alcatel Google Now-enabled products perform a method for utilizing agents for speech-based navigation of an electronic data source. For example, Hugo Barra explained in The Verge interview that “Google Now touches every back-end of Google, every different web service that’s been developed over the last ten years or so is part of this service.”²⁹ Consistent with this statement, a figure presented previously was published in a companion article to the interview, showing that Google Now accesses resources and information which may be locally stored on the device (*e.g.*, Android operating system), privately on remote servers (*e.g.*, Gmail), publicly accessible websites and databases (*e.g.*, News, weather, and stock quotes) and as well as information stored on other services and apps (*e.g.*, Google Maps,

²⁸ Plaintiff reserves the right to identify additional asserted claims as this litigation proceeds. For example, Plaintiff expressly reserves the right to identify additional asserted claims in its infringement contentions to be served during the discovery process.

²⁹ The Verge, *Google Now and the predictive future of search* (Oct. 29, 2012), <https://www.youtube.com/watch?v=ZXtudZl5mzM>.

YouTube).³⁰ In the interview, Scott Huffman, Engineering Director of Search at Google, stated that

We're obviously very excited about search on mobile devices on Android and about the idea of people being able to interact with their phone in just a natural way.

And if you think about what that takes, we feel like there's a few key elements that have to come together.

One obviously is voice recognition.

The second piece is once I have those words is natural language understanding.

And the third piece which is a fairly new thing for us that Google is understanding what are the basic kind of components and facts in the world.

And this is something we call our knowledge graph.

And it's really the first time in sort of computer science history that those three things are all available and not just available in some giant from computational center; but available, you know, in a powerful device that's in my pocket.³¹

Also in the interview, Vincent Vanhoucke, a Research Scientist at Google, stated that "[s]peech recognition is the process of turning sounds into meaning. And between those two there's many levels of processing."³²

54. On information and belief, the Alcatel Google Now-enabled products perform the step of receiving a spoken request for desired information from a user. For example, a segment of the interview video featuring Hugo Barra showed Google Now

³⁰ See, e.g., Dieter Bohn, *Google Now: behind the predictive future of search*, Vox Media, Inc. (Oct. 29, 2012), <http://www.theverge.com/2012/10/29/3569684/google-now-android-4-2-knowledge-graph-neural-networks>.

³¹ The Verge, *Google Now and the predictive future of search* (Oct. 29, 2012), <https://www.youtube.com/watch?v=ZXtudZl5mzM>.

³² *Id.*

receiving Hugo Barra’s spoken request of “directions to the museum with the William Haley exhibition,” as previously shown.³³ As another example, a segment of the interview video featuring Vincent Vanhoucke explained the process for turning sounds into something meaningful for the computer to interpret.³⁴



55. On information and belief, the Alcatel Google Now-enabled products perform the step of rendering an interpretation of the spoken request. For example, a segment of the interview video featuring Hugo Barra showed Google Now rendering an interpretation of Hugo Barra’s spoken request, as shown previously.³⁵ As another example, Vincent Vanhoucke explained that “[w]e want to turn sounds into what we call phonemes.”³⁶



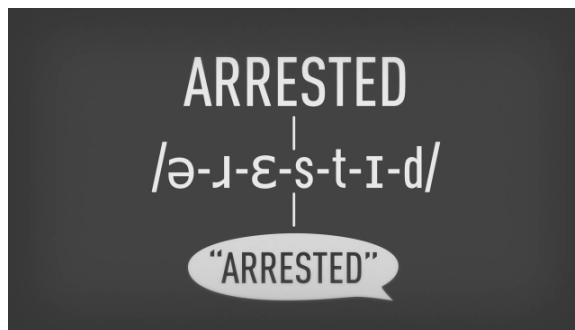
³³ *Id.*

³⁴ *Id.*

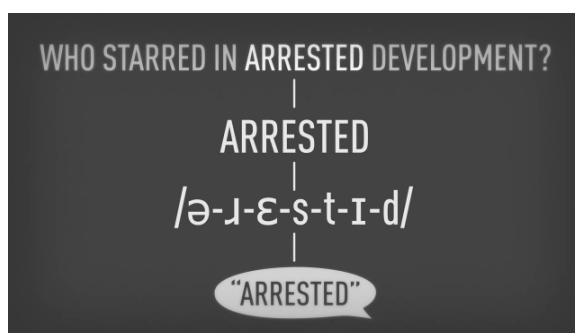
³⁵ *Id.*

³⁶ *Id.*

Vanhoucke explained “from the phonemes you want to turn them into words.”³⁷



Vanhoucke explained “from the words you construct sentences.”³⁸



56. On information and belief, the Alcatel Google Now-enabled products perform the step of constructing a navigation query based upon the interpretation. For example, a segment of the interview video featuring Hugo Barra showed Google Now constructing a navigation query based upon the interpretation of Hugo Barra’s spoken request, as shown previously.³⁹ As another example, Vincent Vanhoucke explained that “once you have a sentence you have a transcript of what you said – you have to turn that into something that’s meaningful for the computer to interpret.”⁴⁰

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*



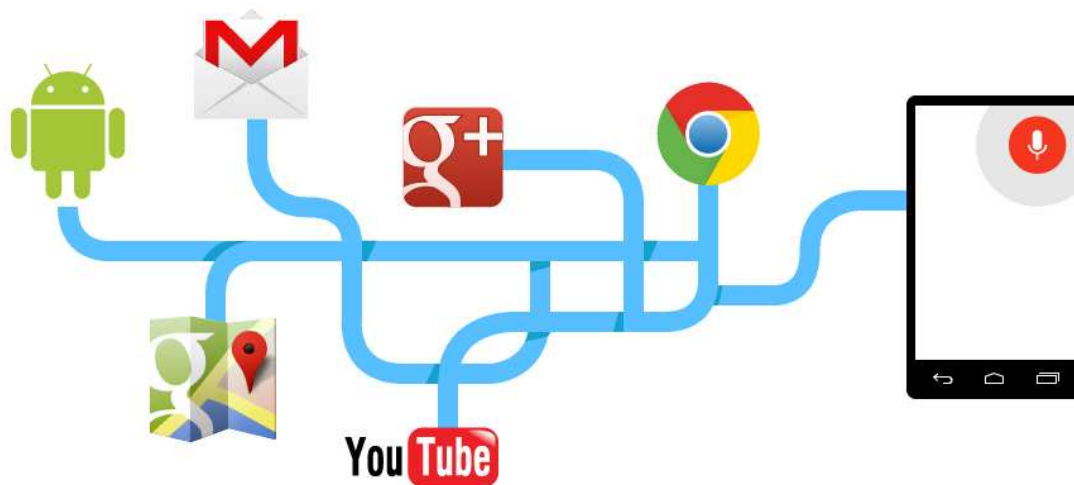
Vincent Vanhoucke stated, “so if you’re doing a search query, you’re asking for ‘pictures of cats,’ the computer has to understand that you’re really doing an image search for the word ‘cats.’”⁴¹

57. On information and belief, the Alcatel Google Now-enabled products perform the step of routing the navigation query to at least one agent, wherein the at least one agent utilizes the navigation query to select a portion of the electronic data source. For example, a segment of the interview video featuring Hugo Barra showed his Android smartphone routing the navigation query to at least one agent (*e.g.*, Google Now, Google Search and Google Maps), wherein the at least one agent utilizes the navigation query to select a portion of the electronic data source for at least a map, Google Maps app, and other data affiliated with maps and navigation (*e.g.*, map, real-time traffic, and other alerts), as shown previously.⁴² Consistent with this statement, the figure below was published in a companion article to the interview, showing that Google Now accesses resources and information which may be locally stored on the device (*e.g.*, Android operating system), privately on remote servers (*e.g.*, Gmail),

⁴¹ *Id.*

⁴² *Id.*

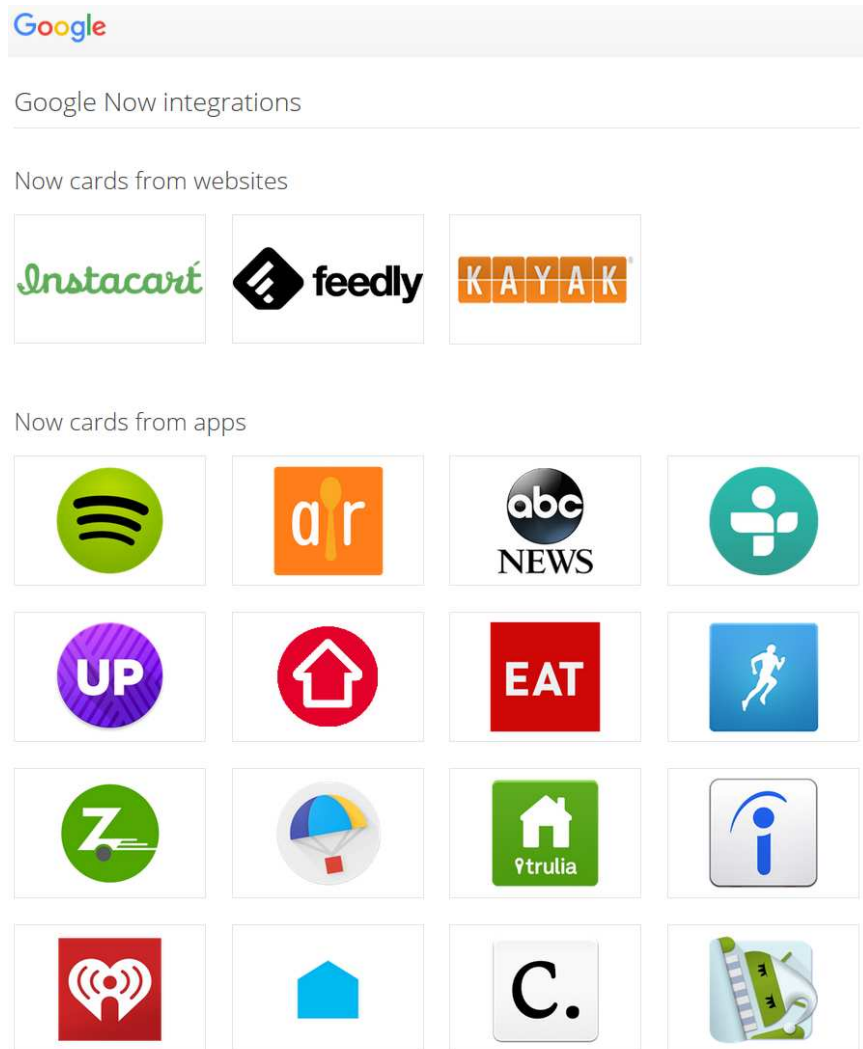
publicly accessible websites and databases (*e.g.*, News, weather, and stock quotes) and as well as information stored on other services and apps (*e.g.*, Google Maps, YouTube).⁴³



58. On information and belief, the Alcatel Google Now-enabled products perform the step of invoking a user interface agent for outputting the selected portion of the electronic data source to the user, wherein a facilitator manages data flow among multiple agents and maintains a registration of each of said agents' capabilities. For example, a segment of the interview video featuring Hugo Barra showed a Google Now-enabled products invoking a user interface agent for outputting the selected portion of the electronic data source to the user, wherein the Android operating system and Google Now manages data flow among multiple apps on the device and maintains a registration

⁴³ See, *e.g.*, Dieter Bohn, *Google Now: behind the predictive future of search*, Vox Media, Inc. (Oct. 29, 2012), <http://www.theverge.com/2012/10/29/3569684/google-now-android-4-2-knowledge-graph-neural-networks>.

of each of said agents' capabilities, as shown previously. Further, Google advertised various websites and apps that are integrated with Google Now, as shown below.⁴⁴



Google also published examples of ways in which products and services work with Google Now, as shown below.⁴⁵

⁴⁴ See, e.g., <https://web.archive.org/web/20160904040129/http://www.google.com/landing/now/integrations.html>.

⁴⁵ See, e.g., <https://web.archive.org/web/20160916060246/https://developers.google.com/schemas/now/cards#close> (last updated May 28, 2015).

Google Schemas Search

HOME GUIDES REFERENCE SUPPORT

Cross-Google Experience
[Google Now](#)
 Gmail Actions
 Answers in Search

Tutorials
 Embed Schemas in Emails
 Send Test Emails Using Apps Script
 Trigger Google Now Cards by Email

Schema Formatting
 JSON-LD
 Microdata
 DateTime Formatting
 Schema.org Proposals

Test Your Schemas
 Overview
 Markup Helper
 Markup Tester

Google Now

Google Now brings users the right information at just the right time. For example, Google Now already provides updates to restaurant and hotel reservations or flight information received in Gmail. By marking up email notifications to your users, you can use Google Now to bring them similar updates about your services and products.

After an email confirming...

A flight

Virgin America
flight 25

Status: Delayed / Mon, 29 Oct 2012

Depart New York
JFK 12:30 PM (12:00 PM)
Terminal 2, Gate 54B

Arrive San Francisco
SFO 1:56 PM (1:31 PM)
Terminal 4


[Navigate to JFK / 32 min](#)

[View email](#)

A hotel reservation

Le Gavroche
43 Upper Brook Street, London, W1K 7QR

Reservation in 1 hour
Journey time walking 45 minutes



[Get directions](#)

[View email](#)

59. There are at least several types of direct infringers of the '061 Patent under 35 U.S.C. § 271(a). For example, employees of the Defendant TCT Mobile (US), Inc. use Google Now digital assistant to demonstrate the capabilities of Alcatel Google Now-enabled products in the course of employees' sales, marketing, and distribution efforts. Employees of the Defendant TCT Mobile (US), Inc. use Google Now digital assistant to perform speech-based navigation of electronic data sources in the course of their employment, directly infringing the '061 Patent.

60. On information and belief, consumers, for example, use Google Now digital assistant and to directly infringe the '061 Patent.

61. Defendants have also infringed indirectly and continues to infringe indirectly the '061 Patent by active inducement under 35 U.S.C. § 271(b).

62. On information and belief, Defendants gained knowledge of the '061 Patent no later than the filing of this complaint or shortly thereafter.

63. On information and belief, Defendants have intended, and continue to intend, to induce patent infringement by their users and have had knowledge that the inducing acts would cause infringement or have been willfully blind to the possibility that their inducing acts would cause infringement. For example, Defendants encourage and instruct end users to perform speech-based navigation of an electronic data source using a method as claimed in claim 1 of the '061 Patent through the very nature of the products. On information and belief, Defendants also encourage and instruct users to use the infringing products to perform speech-based navigation of an electronic data source using a method as claimed in claim 1 of the '061 Patent through materials and information made available to users, including product manuals and technical information.⁴⁶ By using the infringing products to perform speech-based navigation of an electronic data source, users directly infringe at least claim 1 of the '061 Patent. By continuing to provide instructions to users on how to use the infringing products to perform speech-based navigation of an electronic data source using a method as claimed in claim 1 of the '061 Patent, and by continuing to encourage such use, Defendants have and continue to specifically intend to induce infringement of the '061 Patent.

⁴⁶ See also, e.g., Alcatel Onetouch Launches Two Affordable Smartphones With T-Mobile, 8/27/2014, available at <http://www.alcatelonetouch.us/press-aot-launches-affordable-smartphones-tmobile/> (Alcatel phones “allow[] users to do more including voice commands through Google Now.”).

64. To the extent that facts learned in discovery show that Defendants' infringement of the '061 Patent is or has been willful, Plaintiff reserves the right to request such a finding at the time of trial.

65. To the extent applicable, the requirements of 35 U.S.C. § 287(a) have been met with respect to the '061 Patent.

66. As a result of Defendants' infringement of the '061 Patent, Plaintiff has suffered monetary damages in an amount adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendants, together with interest and costs as fixed by the Court, and Plaintiff will continue to suffer damages in the future unless Defendants' infringing activities are enjoined by this Court.

67. Unless a permanent injunction is issued enjoining Defendants and their agents, servants, employees, representatives, affiliates, and all others acting or in active concert therewith from infringing the '061 Patent, Plaintiff will be greatly and irreparably harmed.

PRAYER FOR RELIEF

Plaintiff prays for the following relief:

A. A judgment that Defendants have infringed one or more claims of the '021 and '061 Patents;

B. A permanent injunction enjoining Defendants and their officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or participation with Defendants, from infringing the '021 and '061 Patents;

C. An award of damages resulting from Defendants' acts of infringement in accordance with 35 U.S.C. § 284;

D. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against Defendants.

E. A judgment and order requiring Defendant to provide accountings and to pay supplemental damages to Plaintiff, including, without limitation, prejudgment and post-judgment interest; and

F. Any and all other relief to which Plaintiff may show itself to be entitled.

JURY TRIAL DEMANDED

Plaintiff hereby demands a trial by jury of all issues so triable.

Dated: May 4, 2017

BAYARD, P.A.

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