.Jeffrey F. Craft (SBN 147186)
jcraft@devlinlawfirm.com
DEVLIN LAW FIRM
2069 Cold Canyon Road,
Calabasas, CA 91302-2369
Tel: (302) 449-9010
Fax: (302) 449-4251

George I. Lee (*pro hac vice*)
lee@ls3ip.com
Sean M. Sullivan (*pro hac vice*)
sullivan@ls3ip.com
Michael P. Boyea (*pro hac vice*)
boyea@ls3ip.com
Cole B. Richter (*pro hac vice*)
richter@ls3ip.com
Jae Y. Pak (*pro hac vice*)
pak@ls3ip.com
LEE SULLIVAN SHEA & SMITH LLP
224 North Desplaines Street, Suite 250
Chicago, IL 60661
Tel: (312) 754-0002
Fax: (312) 754-0003

Attorneys for Plaintiff,
Corrino Holdings LLC

UNITED STATES DISTRICT COURT

FOR THE CENTRAL DISTRICT OF CALIFORNIA

CORRINO HOLDINGS LLC,

Plaintiff,

v.

SNAP INC.,

Defendant.

Case No. 2:18-cv-8548

COMPLAINT FOR PATENT INFRINGEMENT

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

1. Plaintiff Corrino Holdings LLC ("Corrino" or "Plaintiff") hereby asserts the following claims for patent infringement against Defendant Snap Inc. ("Snap" or "Defendant"), and alleges as follows:

SUMMARY

2. Corrino owns United States Patent Nos. 6,353,398, 7,843,331, 7,982,599, 7,525,450, 7,716,149, and 7,958,104 (collectively, the "Patents-in-Suit").

3. Snap infringes the Corrino Patents-in-Suit by implementing, without authorization, Corrino's proprietary technologies in a number of its commercial products and services, including, *inter alia*, the Snapchat mobile application and www.snap.com and www.snapchat.com websites, which are marketed, offered and distributed to users of mobile and other devices throughout the United States, including in this District.

4. By this action, Corrino seeks to obtain compensation for the harm Corrino has suffered as a result of Snap's unauthorized implementation of Corrino's patented technologies.

NATURE OF THE ACTION

5. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*.

6. Snap has infringed and continues to infringe, has induced and continues to induce infringement of, and has contributed to and continues to contribute to infringement of at least one or more claims of Corrino's Patents-in-Suit at least by making, using, selling, and/or offering to sell its products and services for mobile and other devices in the United States, including in this District.

7. Corrino is the legal owner by assignment of the Patents-in-Suit, which were duly and legally issued by the United States Patent and Trademark Office ("USPTO"). Corrino seeks monetary damages for Snap's infringement of the

Patents-in-Suit.

THE PARTIES

8. Plaintiff Corrino Holdings LLC is a Texas limited liability company with its principal place of business at 17330 Preston Road, Suite 200, Dallas, Texas 75252. Corrino is the owner of intellectual property rights at issue in this action.

9. On information and belief, Defendant Snap Inc. is a Delaware corporation with a principal place of business at 63 Market Street, Venice, California 90291. On information and belief, Snap maintains offices in Los Angeles, California, operates and owns the websites located at www.snap.com and www.snapchat.com, and markets, offers, and distributes its website services and applications such as the Snapchat application throughout the United States, including in this District.

10. On information and belief, Snap directly and/or indirectly develops, designs, manufactures, distributes, markets, offers to sell and/or sells infringing products and services in the United States, including in the Central District of California, and otherwise purposefully directs infringing activities to this District in connection with its products and services.

JURISDICTION AND VENUE

11. As this is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*., this Court has subject matter jurisdiction over the matters asserted herein under 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has personal jurisdiction over Snap, in part because Snap does continuous and systematic business in this District, including by providing infringing products and services to the residents of the Central District of California that Snap knew would be used within this District, and by soliciting business from the residents of the Central District of California. For example, Snap is subject to personal jurisdiction in this Court because, *inter alia*, and on information and belief, Snap has a regular and established place of business at its offices in the Central

District of California (and elsewhere in the State of California), and directly and through agents regularly does, solicits, and transacts business in the Central District of California (and elsewhere in the State of California), including, for example, through the www.snap.com and www.snapchat.com websites and the Snapchat application, which are marketed, offered, and distributed to and utilized by users of mobile and other devices in this District and throughout the State of California.

13. In particular, Snap has committed and continues to commit acts of infringement in violation of 35 U.S.C. § 271, and has made, used, marketed, distributed, offered for sale, sold, and/or imported infringing products in the State of California, including in this District, and engaged in infringing conduct within and directed at or from this District. For example, Snap has purposefully and voluntarily placed its website and mobile applications into the stream of commerce with the expectation that such an infringing website and mobile applications will be used in this District. Snap's infringing website and mobile applications have been and continue to be distributed to and used in this District. Snap's acts cause and have caused injury to Corrino, including within this District.

14. Venue is proper in this District under the provisions of 28 U.S.C. §§ 1391 and 1400(b) at least because a substantial part of the events or omissions giving rise to the claims occurred in this District, and because Snap has committed acts of infringement in this District and has a regular and established place of business in this District.

PATENTS-IN-SUIT

The '398 Patent

15. U.S. Patent No. 6,353,398 ("the '398 Patent") is entitled "System for dynamically pushing information to a user utilizing global positioning system," and was issued on March 5, 2002. A true and correct copy of the '398 Patent is attached as Exhibit A.

16. The '398 Patent was filed on October 22, 1999 as U.S. Patent

Application No. 09/426,065.

17. Corrino is the owner of all rights, title, and interest in and to the '398 Patent, with the full and exclusive right to bring suit to enforce the '398 Patent, including the right to recover for past infringement.

18. The '398 Patent is valid and enforceable under United States Patent Laws.

19. The '398 Patent recognized problems with conventional global positioning system ("GPS") technology. For instance, the '398 Patent recognized that, while conventional GPS technology could provide users with "location and directional information, more specific and detailed information related to the location is often needed." Exhibit A at 1:21-24.

20. In this regard, the '398 Patent discloses, among other things, that "[a] more powerful system is therefore necessary to provide mobile users with specific information relating to the point in time the user is at a specific location." *Id.* at 1:34-37. In other words, the '398 Patent recognized that, because of the shortcomings of conventional GPS technology, "it would be desirable for a system which can provide relevant information to location-specific users at relevant points in time." *Id.* at 1:39-41. The claimed inventions of the '398 Patent involve such a system. The '398 Patent also discloses that "[t]his type of system is currently not provided for with conventional systems." *Id*. at 1:37-38.

The Inventions Claimed in the '398 Patent Improved Technology & Were Not Well-Understood, Routine, or Conventional

21. Given the state of the art at the time of the inventions of the '398 Patent, including the deficiencies in global positioning systems of the time, the inventive concepts of the '398 Patent cannot be considered to be conventional, well-understood, or routine. *See, e.g.*, Exhibit A at 1:15-41. The '398 Patent discloses, among other things, an unconventional solution to problems arising in the context of GPS-based information delivery systems, namely, that such systems did not

provide specific and detailed information relating to the point in time that a user was at a particular geographic location. *See, e.g.*, *id.* at 1:34-41 ("A more powerful system is . . . necessary to provide mobile users with specific information relating to the point in time the user is at a specific location. This type of system is currently not provided for with conventional systems.").

22. The '398 Patent offered an unconventional, technological solution to such problems resulting in a more powerful location-based information delivery system than existing GPS-based information delivery systems. *See, e.g.*, *id.* In particular, the '398 Patent provided an unconventional architecture comprising an information delivery system located remotely from users' hand-held mobile devices, in which the information delivery system comprised a system for monitoring the geographic position of such mobile devices and a directed information system for linking relevant information to mobile devices associated with a particular geographic region and facilitating the delivery of the relevant information to devices when located in the particular geographic region. *See, e.g.*, Exhibit A at 2:53-3:33; Claims 1, 7, 8.

23. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '398 Patent to have a "directed information system" configured to (i) link information related to specific location of users' mobile devices, (ii) access a database comprising region-specific information, and (iii) employ push technology to deliver region-specific information to users' mobile devices. *See* Claims 1, 7, 8. Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '398 Patent to have a "directed information system" configured to employ push technology to deliver information at points in time when users' mobile devices are located within a specific region related to that information. *See* Claims 7, 8. Further yet, it was not well-understood, routine, or conventional at the time of the invention of the '398 Patent to have a system configured to (i) detect movement of users' mobile devices and

(ii) employ push technology to deliver information to users' mobile devices, such that (a) information is pushed to a user's mobile device in a first geographical region associated with a first storage data section as the user moves within a predetermined distance of the first geographical region, and (b) information is pushed to the user's mobile device in a second geographical region associated with a second storage data section as the user moves from the first geographical region to within a predetermined distance of the second geographical region. *See* Claim 10. These are just exemplary reasons why the inventions claimed in the '398 Patent were not well-understood, routine, or conventional at the time of the invention of the '398 Patent.

24. Additionally, the '398 Patent's more powerful location-based information delivery system improved the user interface of electronics devices (*e.g.*, mobile devices) in that a user would be presented with "relevant visual information related to a particular region at a particular point in time." Exhibit A at 3:20-22. In other words, the '398 Patent's specific improvement over existing technology resulted in a user's electronics device displaying particular information that is most relevant to a user at a given point in time.

25. Consistent with the problems addressed being rooted in GPS-based information delivery systems, the '398 Patent's solutions naturally are also rooted in that same technology that cannot be performed solely with pen and paper or in the human mind. Indeed, using pen and paper or a human mind would ignore the stated purpose of the '398 Patent and the problem it was specifically designed to address. Doing so would also run counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility. Likewise, at least because the '398 Patent's claimed solutions address problems rooted in GPS-based information delivery systems, these solutions are not merely drawn to longstanding human activities.

The '331 Patent

26. U.S. Patent No. 7,843,331 ("the '331 Patent") is entitled "System for dynamically pushing information to a user utilizing global positioning system," and was issued on November 30, 2010. A true and correct copy of the '331 Patent is attached as Exhibit B.

27. The '331 Patent was filed on April 15, 2004 as U.S. Patent Application No. 10/824,962, which is a continuation of U.S. Patent Application No. 09/523,022, filed on March 10, 2000, and now U.S. Patent No. 6,741,188, which is a continuation-in-part of U.S. Patent Application No. 09/426,065, filed October 22, 1999, and now the '398 Patent.

28. Corrino is the owner of all rights, title, and interest in and to the '331 Patent, with the full and exclusive right to bring suit to enforce the '331 Patent, including the right to recover for past infringement.

29. The '331 Patent is valid and enforceable under United States Patent Laws.

30. Corrino incorporates by reference and re-alleges the foregoing paragraph numbers 19-25 of this Complaint as if fully set forth herein.

31. Like the inventions claimed in the '398 Patent—a parent to the '331 Patent—the inventions claimed in the '331 Patent were not well-understood, routine, or conventional.

32. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '331 Patent to have a system configured to initiate the transmission of information to a user's communications device if the communications device's indicated geographic position changes from a first position that is greater than a predefined distance from a geographic region associated with an information source to a second position that is within a predefined distance from a geographic region associated with the information source. *See* Claims 1, 11, 21. Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '331 Patent to have a system

configured to (i) maintain an index of information sources, each of which is associated with at least one geographic region and a demographic code, and (ii) initiate the transmission of the information to the user's communications device in which the source of that information is associated with a demographic code associated with the communications device. *See* Claims 7, 17. Further yet, it was not well-understood, routine, or conventional at the time of the invention of the '331 Patent to have a system configured to initiate the transmission of the information to the user's communications device in which the information is based on the day and time that the communications device's geographic position changes from the first position to the second position. *See* Claims 9, 19. These are just exemplary reasons why the inventions claimed in the '331 Patent were not well-understood, routine, or conventional at the time of the invention of the '331 Patent.

The '599 Patent

33. U.S. Patent No. 7,982,599 ("the '599 Patent") is entitled "System for dynamically pushing information to a user utilizing global positioning system," and was issued on July 19, 2011. A true and correct copy of the '599 Patent is attached as Exhibit C.

34. The '599 Patent was filed on March 10, 2008 as U.S. Patent Application No. 12/045,601, which is a continuation of U.S. Patent Application No. 10/824,962, filed on April 15, 2004, and now the '331 Patent, which is a continuation of U.S. Patent Application No. 09/523,022, filed on March 10, 2000, and now U.S. Patent No. 6,741,188, which is a continuation-in-part of U.S. Patent Application No. 09/426,065, filed October 22, 1999, and now the '398 Patent.

35. Corrino is the owner of all rights, title, and interest in and to the '599 Patent, with the full and exclusive right to bring suit to enforce the '599 Patent, including the right to recover for past infringement.

36. The '599 Patent is valid and enforceable under United States Patent Laws.

37. Corrino incorporates by reference and re-alleges the foregoing paragraph numbers 19-25 of this Complaint as if fully set forth herein.

38. Like the inventions claimed in the '398 and '331 Patents—parents to the '599 Patent—the inventions claimed in the '599 Patent were not well-understood, routine, or conventional.

39. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '599 Patent to have an apparatus configured to initiate transmission of digital content to a user's wireless communications device in response to determining that the geographic position of the wireless communications device has changed to be within a predefined distance of a geographic area associated with the digital content during a predefined timeframe associated with the digital content. *See* Claims 1, 10, 19. Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '599 Patent (i) for a user's wireless communications device to be associated with one or more demographic criteria and (ii) to have an apparatus configured to initiate the transmission of the digital content to the user's wireless communications device in which the digital content is associated with at least one demographic criterion of the one or more demographic criteria associated with the wireless communications device. *See* Claims 2, 11, 20. Further yet, it was not well-understood, routine, or conventional at the time of the invention of the '599 Patent to have an apparatus that is further configured to determine whether a received geographic position of a user's wireless communications device is within a predetermined distance from one or more physical commercial establishments associated with digital content. *See* Claim 8, 17, 26. These are just exemplary reasons why the inventions claimed in the '599 Patent were not well-understood, routine, or conventional at the time of the invention of the '599 Patent.

The '450 Patent

40. U.S. Patent No. 7,525,450 ("the '450 Patent") is entitled "System for

dynamically pushing information to a user utilizing global positioning system," and was issued on April 28, 2009. A true and correct copy of the '450 Patent is attached as Exhibit D.

41. The '450 Patent was filed on August 3, 2005 as U.S. Patent Application No. 11/196,206, which is a continuation of U.S. Patent Application No. 10/824,962, filed on April 15, 2004, and now the '331 Patent, which is a continuation of U.S. Patent Application No. 09/523,022, filed on March 10, 2000, and now U.S. Patent No. 6,741,188, which is a continuation-in-part of U.S. Patent Application No. 09/426,065, filed October 22, 1999, and now the '398 Patent.

42. Corrino is the owner of all rights, title, and interest in and to the '450 Patent, with the full and exclusive right to bring suit to enforce the '450 Patent, including the right to recover for past infringement.

43. The '450 Patent is valid and enforceable under United States Patent Laws.

44. Corrino incorporates by reference and re-alleges the foregoing paragraph numbers 19-25 of this Complaint as if fully set forth herein.

45. Like the inventions claimed in the '398 and '331 Patents—parents to the '450 Patent—the inventions claimed in the '450 Patent were not well-understood, routine, or conventional.

46. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '450 Patent to have a system configured to maintain (i) an index of information sources, each of which is associated with (a) a demographic code and (b) one or more location codes, each corresponding to a geographic region and (ii) an index of users' communications devices, each communications device being associated with a demographic code. *See* Claims 1, 11, 21. Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '450 Patent to have a system configured to initiate the transmission of relevant information to a user's communications device in response to receiving (i) an

identifier corresponding to the communications device and (ii) an indication of the geographic position of the communications device, where the relevant information originates from an information source that is associated with both (i) a location code corresponding to a geographic region within a defined distance from the geographic position specified in the received indication, and (ii) a demographic code associated with the communications device specified in the received indication. *See* Claims 1, 11, 21. Further yet, it was not well-understood, routine, or conventional at the time of the invention of the '450 Patent to have a system configured to initiate the transmission of the relevant information to the user's communications device in which the relevant information is based on the time and day that the indication of the geographic position of the communications device is received. *See* Claims 2, 12. These are just exemplary reasons why the inventions claimed in the '450 Patent were not well-understood, routine, or conventional at the time of the invention of the '450 Patent.

The '149 Patent

47. U.S. Patent No. 7,716,149 ("the '149 Patent") is entitled "Method, device, and program product for a social dashboard associated with a persistent virtual environment," and was issued on May 11, 2010. A true and correct copy of the '149 Patent is attached as Exhibit E.

48. The '149 Patent was filed on April 11, 2006 as U.S. Patent Application No. 11/402,399.

49. Corrino is the owner of all rights, title, and interest in and to the '149 Patent, with the full and exclusive right to bring suit to enforce the '149 Patent, including the right to recover for past infringement.

50. The '149 Patent is valid and enforceable under United States Patent Laws.

51. The '149 Patent discloses, among other things, "a user interface for monitoring the social health of a persistent virtual environment." Exhibit E at

Abstract. The '149 Patent also states that "no diagnostic tools are available to timely measure the social aspects of player interactions in [a] persistent virtual environment or to measure or monitor the health of the online player community in a persistent virtual environment." *Id*. at 1:48-52. In other words, as described in the '149 Patent, the conventional "analysis results only reflect the state of the persistent virtual environment at the time the data was collected," and therefore, "the analysis is not timely, has no capability to forecast problems, and only operates from single source of information." *Id*. at 1:58-61.

52. In discussing the shortcomings of the prior art, the '149 Patent recognizes that "it would be advantageous to provide a way to timely monitor persistent virtual environments and to measure, monitor, and treat the health of online player communities within persistent virtual environments." Exhibit E at 2:19-22. The claimed invention of the '149 Patent provides such a mechanism.

The Inventions Claimed in the '149 Patent Improved Technology & Were Not Well-Understood, Routine, or Conventional

53. Given the state of the art at the time of the inventions of the '149 Patent, including the deficiencies in monitoring technology for virtual persistent environments, the inventive concepts of the '149 Patent cannot be considered to be conventional, well-understood, or routine. *See, e.g.*, Exhibit E at 1:48-52, 1:58-61, 2:19-22. The '149 Patent discloses, among other things, an unconventional solution to problems arising in the context of monitoring virtual persistent environments, namely, that existing monitoring tools were untimely, only monitoring certain aspects, and operating on a narrow source of information. *See, e.g.*, *id.* at 1:48-52, 1:58-61.

54. The '149 Patent offered a technological solution to such problems resulting in monitoring technology for virtual persistent environments that addressed these problems and also facilitated providing an improved user interface for electronics devices. In particular, the '149 Patent provided a specific,

unconventional solution for monitoring a state of a virtual persistent environment and displaying a limited set of information related to that monitoring to the user which involved "displaying, at a computer system, a visualization that represents a social aspect of said persistent virtual environment," the "visualization responsive to a metric" and "represents an overall interactivity level," and "displaying, at the computer system, responsive to [a] selection command, a second visualization that represents drill-down information associated with said metric." *See, e.g.*, Exhibit E at Claims 1, 8, 15.

55. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '149 Patent for a computer system to display a visualization that represents a social aspect of a persistent virtual environment, where the visualization is responsive to a metric and represents an overall interactivity level within the persistent virtual environment. *See* Claims 1, 8, 15. Moreover, it was not well-understood, routine, or conventional at the time of the invention of the '149 Patent for a computer system to (i) display the visualization that represents the social aspect of the persistent virtual environment and (ii) responsive to a selection command, display a second visualization that represents drill-down information associated with the metric. *See* Claims 1, 8, 15. These are just exemplary reasons why the inventions claimed in the '149 Patent were not well-understood, routine, or conventional at the time of the invention of the '149 Patent.

56. Indeed, the '149 Patent's virtual persistent environment monitoring system improved the user interface of electronics devices by allowing the user to see the most relevant information related to a particular metric representing an interactivity level within the virtual environment. In this respect, the '149 Patent claims recite a particular manner of summarizing and presenting specific, virtual-environment metric related information in electronic devices.

57. Consistent with the problems addressed being rooted in monitoring technology for virtual persistent environments – that, by virtue of the monitored

environment being virtual, requires computer network technology – the '149 Patent's solutions naturally are also rooted in that same technology that cannot be performed solely with pen and paper or in the human mind. Indeed, using pen and paper or a human mind would ignore the stated purpose of the '149 Patent and the problem it was specifically designed to address. As such, using pen and paper or a human mind would not provide a solution to the problem addressed by the '149 Patent and run counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility. Likewise, at least because the '149 Patent's claimed solutions address problems rooted in monitoring technology for virtual persistent environments, these solutions are not merely drawn to longstanding human activities.

The '104 Patent

58. U.S. Patent No. 7,958,104 ("the '104 Patent") is entitled "Context based data searching," and was issued on June 7, 2011. A true and correct copy of the '104 Patent is attached as Exhibit F.

59. The '104 Patent was filed on March 6, 2008 as U.S. Patent Application No. 12/043,889 and claims priority to Provisional Application No. 60/893,831, which was filed on March 8, 2007.

60. Corrino is the owner of all rights, title, and interest in and to the '104 Patent, with the full and exclusive right to bring suit to enforce the '104 Patent, including the right to recover for past infringement.

61. The '104 Patent is valid and enforceable under United States Patent Laws.

62. The '104 Patent recognized problems with conventional approaches to processing search requests over communication networks. In particular, the '104 Patent explains that, at the time of the invention of the '104 Patent, "information and knowledge have been digitally aggregated on a large scale in electronic based repositories." Exhibit F at 1:20-22. Such repositories were typically "globally

made available to the human populous via communications networks, such as the Internet," and included collections of electronic documents, such as web pages. *Id.* at 22-25. The '104 Patent explains that although these networks employed some basic level of organization, such as by categorizing web pages by "keywords, subjects, and other relationships," the conventional searching process was insufficient. *Id.* at 24-30. Indeed, as the '104 Patent explains, "[c]onventional search" techniques "often fail[ed] to properly interpret or understand the particular information desired by users," and as a result, were "tedious and inconvenient." *Id.* at 26-32.

63. In this regard, the inventors of the '104 Patent recognized the deficiencies with the conventional technological approaches to conducting searches of information repositories across communications networks and sought to "to improve the information search techniques" used in certain technological environments, such as "network environments." *Id.* at 30-34. Accordingly, the '104 Patent discloses, among other things, an improvement to the "organizational and computational technique" for carrying out searches across communications networks. *Id.* at 2:50-61. The '104 Patent explains that "[i]n various implementations, a context based search engine in accordance with the present disclosure" can conduct searches that make "more efficient" use of the communication network by first associating specific kinds of data objects with both the information available in the communications network and the network devices in the communications network, and then by combining the data objects into collective data objects. *Id.* at 2:59 – 3:5.

64. As the '104 Patent further explains, a "server device may include one or more context based search engines, which may be configured to interact with the user device over the network to facilitate context based network searches by the user . . . . the context based search engine works with an account database, a context processing application, a context database, and external databases to provide

information to the user and generate responses . . . the context processing application may select contextual information, parameters, and characteristics from the context database to be provided in search results to user. In various implementations, the context processing application may select appropriate contexts for network searches requested by user based on, for example, user identifier, account database, [and] account information." *Id.* at 4:44-52, 5:4-11 (reference numerals omitted).

65. Still further, the '104 Patent explains that, based on the arrangement set forth above, the context based search engine can process a more efficient search by identifying a chain of contexts and then examining one or more contexts in that chain on order to obtain a relevant search result. *Id.* at 18:30-33 (Disclosing that a "server device builds or modifies the context chain related to the user . . . the user's context chain is an array of contexts that may grow or shrink . . . ."); 18:40-43 ("During the processing of a subsequent query the query processing module may examine each context on the context chain . . . ."); 18:62-63 ("The context based search engine processes one or more queries using the chorus.") (reference numerals omitted).

66. For example, "[r]esponses published to a context may be grouped based on their method of evaluation . . . and evaluated together." *Id.* at 28:33-39. The '104 Patent recognizes that because "[s]ome evaluation methods are computationally-intensive," the disclosed technique is advantageous because evaluation and processing "may not be performed for all responses from all Publishers depending on the system and/or context configuration." *Id.* at 28:42-45. As explained, "a context may only evaluate computationally-intensive and/or other responses if the publisher is in a chorus of [the] user (or context chain, depending on the system and/or context configuration) associated with the query." *Id.* at 28:49-52 (reference numerals omitted).

The Inventions Claimed in the '104 Patent Improved Technology & Were Not Well-Understood, Routine, or Conventional

67. Given the state of the art at the time of the inventions of the '104 Patent, including the deficiencies recognized by the inventors with "conventional searching process[es]," the inventive concepts of the '104 Patent cannot be considered to have been conventional, well-understood, or routine, at the time of the invention of the '104 Patent. *See, e.g.*, Exhibit F at 1:26-32. The '104 Patent discloses, among other things, an unconventional solution to problems arising in the context of data searching across communications networks, namely, that such systems did not "properly interpret or understand the particular information desired by users." *See*, *e.g.*, *id*.

68. The '104 Patent offered an unconventional, technological solution to such problems resulting in an approach to conducting searches across communications networks that makes "more efficient and convenient use of the communication network." *See, e.g.*, *id.* at 2:50-61. In particular, the '104 Patent provides, among other things, an unconventional technological approach to conducting searches across data networks that includes associating specific kinds of data objects with both the information available in the communications network and the network devices in the communications network, and then by combining the data objects into collective data objects, *see, e.g.*, *id.* at 2:59-3:5, using "a context based search engine[], which may be configured to interact with the user device over the network to facilitate context based network searches by the user . . . [and] select[ing] contextual information, parameters, and characteristics from the context database to be provided in search results to user, select[ing] appropriate contexts for network searches requested by user based on, for example, user identifier, account database, [and] account information," *id.* at 4:44-52, 5:4-11 (reference numerals omitted), identifying a chain of contexts, and then examining

one or more contexts in that chain on order to obtain a relevant search result, *id.* at 18:30-33, 18:40-43, 18:62-63.

69. Indeed, it was not well-understood, routine, or conventional at the time of the invention of the '104 Patent to (i) receive, from a user device, a search request that includes information related to the user and/or the user device, (ii) process that search request by identifying a context chain related to the user and/or the user device based on the information passed with the search request—where the context chain includes multiple contexts, with each context being a private context, in which content is controlled by a publisher, or a public context, in which content is not controlled by a publisher, and (iii) responding to the search request by (a) obtaining a search result from at least one context in the context chain, and (b) providing the search result to the user device. *See* Exhibit F at Claims 1, 15, 23. These are just exemplary reasons why the inventions claimed in the '104 Patent were not well-understood, routine, or conventional at the time of the invention of the '104 Patent.

70. Additionally, the '104 Patent's unique and more efficient search technique improved the operational efficiency of computer systems that issue search requests across communications networks and computer systems that process search requests received across communications networks. Specifically, these techniques allowed for computing systems to conserve processing resources by selectively evaluating responses that are in an identified context chain, rather than all responses, without requiring the user to submit computationally excessive queries; in fact, the disclosed techniques allowed for more efficient use of the communication network while simultaneously allowing users to submit relatively simple common-language queries. *See, e.g.*, *id* at 2:50-61, 28:33-39, 28:42-45, 28:49-52. In other words, the '104 Patent's specific improvement over existing technology resulted in improved computing systems that processed search requests across communication networks.

71. Consistent with the problems addressed being rooted in communication network searching technology, the '104 Patent's solutions naturally are also rooted in that same technology that cannot be performed solely with pen and paper or in the human mind. Indeed, using pen and paper or a human mind would ignore the stated purpose of the '104 Patent and the problem it was specifically designed to address. Doing so would also run counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility. Likewise, at least because the '104 Patent's claimed solutions address problems rooted in communication network searching technology, these solutions are not merely drawn to longstanding human activities.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,353,398

72. Corrino incorporates by reference and re-alleges all the foregoing paragraphs of this Complaint as if fully set forth herein.

73. Defendant Snap has infringed and is infringing, either literally or under the doctrine of equivalents, the '398 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products and services that direct location-based information to location-specific users, including the www.snap.com and www.snapchat.com websites and Snap mobile application (hereinafter "the Accused Products"), that infringe at least one or more claims of the '398 Patent.

74. As just one non-limiting example, set forth below (with claim language in bold and italics) is a description of infringement of exemplary claim 1 of the '398 Patent in connection with the Accused Products. This description is based on publicly available information. Corrino reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

1(a): A system for directing region-specific information; comprising—

Snapchat is a social networking platform that provides services by which certain Snapchat users (*e.g.*, Snapchat advertisers) can target other Snapchat users such that those users' communications devices receive the advertisers' advertisements (*e.g.*, "Snap Ads," "Filters," "Geofilters," "Lenses," etc.) when certain predefined conditions are met. An example of such a service is Snapchat's Location Targeting service. Snapchat at least makes and uses a system in accordance with claim 1 to facilitate providing the Location Targeting service for one or more Snapchat advertisers.

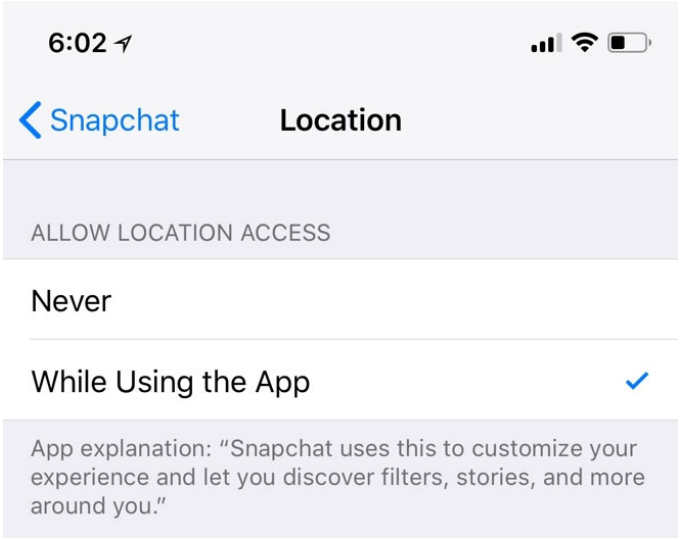
Indeed, as explained by Snap, "[t]he launch of location categories and radius targeting brings Snapchat advertisers new tools to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. For instance, Snapchat's "radius targeting" feature "allows advertisers around the globe to add or exclude a radius around an address, city center, pin, or point of interest (like Yankee Stadium or UCLA). This new feature is great for businesses big and small, such as brick and mortar retailers, to travel apps like Hopper." *Id*. Snap's servers provided this location targeting service to Hopper that allowed it to "cut its cost per install in half by using radius targeting around airports to reach those likely to fly from that hub with a specific flight deal. This combination of smart radius targeting and geographically-relevant creative gave the highest-intent Snapchatters a sense of urgency to act." *Id*.

1(b): a system for locating and transmitting information to location-specific users; and—Snap at least makes and uses a system (*e.g.*, one or more servers) that comprises a system for locating and transmitting information to location-specific users.

For instance, on information and belief, when a Snapchat user's wireless communications device has Snapchat's location services enabled, Snap's servers comprise one or more processors configured to monitor (*i.e.*,

locate) the geographic position of the wireless communications device and transmit information (*e.g.*, advertisements) to the user's wireless communications device to facilitate Snapchat's Location Targeting service. In this respect, the one or more servers are configured to receive geographic position data for the wireless communications devices of Snapchat users that have not opted out of allowing Snapchat to use location services. *See, e.g.*, https://forbusiness.snapchat.com/blog/location/ ("We don't share any location information that can identify specific Snapchatters to advertisers, and all Snapchatters can choose whether to allow use of location services.").

To illustrate, a Snapchat user's iPhone that has the Snapchat app installed provides an option for the user to disable the iPhone from sending geographic position data for use by Snap:



Indeed, Snap touts that its "location categories and radius targeting" allows Snapchat advertisers "to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. Snap emphasizes that its Location Targeting service "presents businesses and brands with a unique opportunity to reach an incredibly engaged audience

based on where they are and what they're doing in the real world." https://forbusiness.snapchat.com/blog/location/.

1(c): a directed information system for linking information related to the location specific users, the directed information system having access to a regionally defined data base for directing region-specific information to location-specific users, and employing push technology to push information to the location-specific users.— Snap at least makes and uses a system (*e.g.*, one or more servers) that comprises a directed information system for linking information related to the location specific users, the directed information system having access to a regionally defined data base for directing region-specific information to location-specific users, and employing push technology to push information to the location-specific users.

For instance, the one or more servers that are configured to facilitate providing Snap's Location Targeting services enable a Snapchat advertiser's information (*e.g.*, an advertisement) to be provided to a particular "audience" (*i.e.*, wireless communications devices of particular Snapchat users). Snap allows a Snapchat advertiser to define the particular "audience" based on a variety of factors (*e.g.*, geographic regions), and by doing so, associates the advertiser (and its information) with the factors that define its particular audience. In this respect, the one or more servers maintain and have access to a database of Snapchat advertisers and their respective associations (*e.g.*, geographic-region associations) that facilitates directing region-specific information (*e.g.*, advertisements) to certain Snapchat users' wireless communications devices.

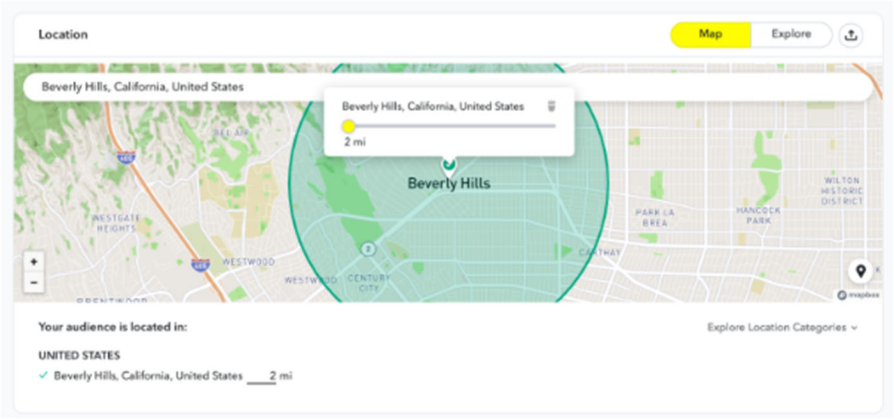
An example of a factor by which a Snapchat advertiser can define its "audience" is one or more geographic regions. https://www.snapchat.com/business/products/ads/ad-targeting ("Reach people in areas where you want

to do business. You can even create a radius around a store to help create more walk-ins."). A Snapchat advertiser (and its information) can be associated with one or more geographic regions in a variety of manners.

As one possibility, any Snapchat advertiser that utilizes Snapchat's radius targeting feature is associated with at least one geographic area and defines a corresponding predefined distance around that at least one geographic area. For example, Snap touts that "Radius targeting" allows advertisers to "[r]each Snapchatters within a radius of any . . . city[.]" https://forbusiness.snapchat.com/blog/location/. As explained by Snap, through the radius targeting feature "you can choose a location radius by selecting how many miles (in the United States) . . . you'd like to target around . . . places (cities/municipalities)," as one example. https://businesshelp.snapchat.com/en-US/article/location-targeting.

Snapchat explains and illustrates how a Snapchat advertiser becomes associated with at least one geographic area (*e.g.*, Beverly Hills, California) and how the advertiser defines a corresponding predefined distance around that area:

Upon dropping your pin, you can choose how many miles (in the United States) or kilometers (rest of the world) you'd like that pin's radius to expand to by clicking the yellow pin.



https://businesshelp.snapchat.com/en-US/article/location-targeting.

In any case, to facilitate providing Snap's Location Targeting services, the one or more servers are configured to employ push technology to push

information (*e.g.*, advertisements) to Snapchat users' wireless communications devices that the one or more servers have matched (*i.e.*, linked) to the information of one or more Snapchat advertisers. *See, e.g.*, https://www.snap.com/en-US/privacy/privacy-policy/ ("When you use our services we may collect information about your location. . . . What do we do with the information we collect? . . . . The short answer is: Provide you with an amazing set of products and services that we relentlessly improve. Here are the ways we do that: . . . personalize our services by, among other things . . . customizing the content we show you, including ads[and] . . . provide and improve ad targeting and measurement, including through the use of your precise location information (again, if you've given us permission to collect that information), both on and off our services.")

As one example, when the one or more servers are monitoring the geographic position of a particular communications device of a Snapchat user, the one or more servers will link and then push to the particular communications device a Snapchat advertiser's advertisement that is associated with the particular geographic region in which the particular communications device is located. *See, e.g.*, https://forbusiness.snapchat.com/blog/location/ ("Today, we're excited to introduce two new location-based targeting features that allow advertisers to reach Snapchatters who are in the right context to consider taking action. . . . Radius targeting: Reach Snapchatters within a radius of any address, pin, city, or location of interest"); https://www.snap.com/en-US/privacy/privacy-policy/ ("We try to show you ads that we think will be relevant to your interests. If you would like to modify the information we and our advertising partners use to select these ads, you can do so in the app.").

75. Additionally, Defendant Snap has been, and currently is, an active inducer of infringement of the '398 Patent under 35 U.S.C. § 271(b) and

contributory infringer of the '398 Patent under 35 U.S.C. § 271(c).

76. Snap knew of the '398 Patent, or at least should have known of the '398 Patent, but was willfully blind to its existence. On information and belief, Snap has had actual knowledge of the '398 Patent since at least as early as the filing and/or service of this Complaint.

77. Snap has provided the Accused Products to its customers and, on information and belief, instructions to use the Accused Products in an infringing manner while being on notice of (or willfully blind to) the '398 Patent and Snap's infringement. Therefore, on information and belief, Snap knew or should have known of the '398 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

78. Snap knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '398 Patent.

79. On information and belief, Snap provides the Accused Products to customers through various third-party application stores (*e.g.*, the Apple iTunes App Store) and instructions to end-user customers so that such customers will use the Accused Products in an infringing manner.

80. Snap's end-user customers directly infringe at least one or more claims of the '398 Patent by using the Accused Products in their intended manner to infringe. Snap induces such infringement by providing the Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '398 Patent. On information and belief, Snap specifically intends that its actions will result in infringement of one or more claims of the '398 Patent, or subjectively believe that their actions will result in infringement of the '398 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

81. Additionally, Snap contributorily infringes at least one or more claims of the '398 Patent by providing the Accused Products and/or software components

thereof, that embody a material part of the claimed inventions of the '398 Patent, that are known by Snap to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused Products are specially designed to infringe at least one or more claims of the '398 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

82. Snap's infringement of the '398 Patent was and continues to be willful and deliberate, entitling Corrino to enhanced damages.

83. Additional allegations regarding Snap's knowledge of the '398 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

84. Snap's infringement of the '398 Patent is exceptional and entitles Corrino to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

85. Corrino is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '398 Patent.

86. Corrino is entitled to recover from Snap all damages that Corrino has sustained as a result of Snap's infringement of the '398 Patent, including, without limitation, a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,843,331

87. Corrino incorporates by reference and re-alleges all the foregoing paragraphs of this Complaint as if fully set forth herein.

88. Defendant Snap has infringed and is infringing, either literally or under the doctrine of equivalents, the '331 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the

United States, and/or importing into the United States without authority or license, products and services that direct location-based information to location-specific users, including the Accused Products, that infringe at least one or more claims of the '331 Patent.

89. As just one non-limiting example, set forth below is a description of infringement of exemplary claim 1 of the '331 Patent in connection with the Accused Products. This description is based on publicly available information. Corrino reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

1(a): A method comprising—As noted above, Snapchat is a social networking platform that provides services by which certain Snapchat users (*e.g.*, Snapchat advertisers) can target other Snapchat users such that those users' communications devices receive the advertisers' advertisements (*e.g.*, "Snap Ads," "Filters," "Geofilters," "Lenses," etc.) when certain predefined conditions are met. An example of such a service is Snapchat's Location Targeting service. Snap's servers practice the method of claim 1 when providing the Location Targeting service for one or more Snapchat advertisers.

Indeed, as explained by Snap, "[t]he launch of location categories and radius targeting brings Snapchat advertisers new tools to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. For instance, Snapchat's "radius targeting" feature "allows advertisers around the globe to add or exclude a radius around an address, city center, pin, or point of interest (like Yankee Stadium or UCLA). This new feature is great for businesses big and small, such as brick and mortar retailers, to travel apps like Hopper." *Id*. Snap's servers provided this location targeting service to Hopper that allowed it to "cut its cost per install in half by using radius targeting around airports to reach those likely

to fly from that hub with a specific flight deal. This combination of smart radius targeting and geographically-relevant creative gave the highest-intent Snapchatters a sense of urgency to act." *Id*.

1(b): maintaining an index of information sources, wherein each information source is associated with at least one geographic region; and—Snap's servers maintain an index of information sources, wherein each information source is associated with at least one geographic region.

For instance, Snap's servers are configured to facilitate providing Snapchat's Location Targeting services that enable a Snapchat advertiser's data (*e.g.*, an advertisement) to be provided to a particular "audience" (*i.e.*, communications devices of particular Snapchat users). Snap allows a Snapchat advertiser to define the particular "audience" based on a variety of factors (*e.g.*, geographic regions), and by doing so, associates the advertiser with the factors that define its particular audience. In this respect, Snap's servers maintain an index of Snapchat advertisers and their respective associations.

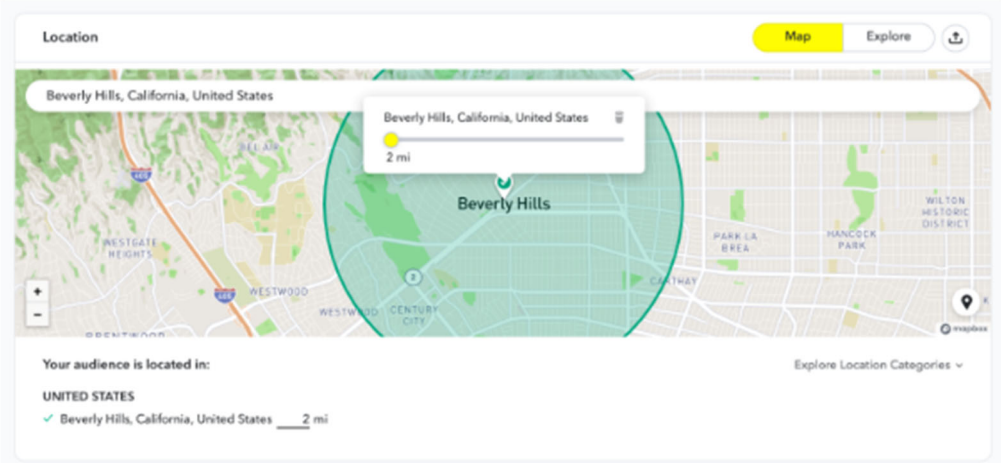
An example of a factor by which a Snapchat advertiser can define its "audience" is one or more geographic regions. A Snapchat advertiser can be associated with one or more geographic regions in a variety of manners.

As one possibility, any Snapchat advertiser that utilizes Snapchat's radius targeting feature is associated with at least one geographic region and defines a corresponding distance around that at least one geographic region. Indeed, as on example, Snap touts that "Radius targeting" allows advertisers to "[r]each Snapchatters within a radius of any . . . city[.]" https://forbusiness.snapchat.com/blog/location/. As explained by Snap, through the radius targeting feature "you can choose a location radius by selecting how many miles (in the United States) . . . you'd like to target around . . . places (cities/municipalities)," as one example. https://business

help.snapchat.com/en-US/article/location-targeting.

Snapchat explains and illustrates how a Snapchat advertiser becomes associated with at least one geographic area (*e.g.*, Beverly Hills, California) and how the advertiser defines a corresponding predefined distance around that area:

Upon dropping your pin, you can choose how many miles (in the United States) or kilometers (rest of the world) you'd like that pin's radius to expand to by clicking the yellow pin.

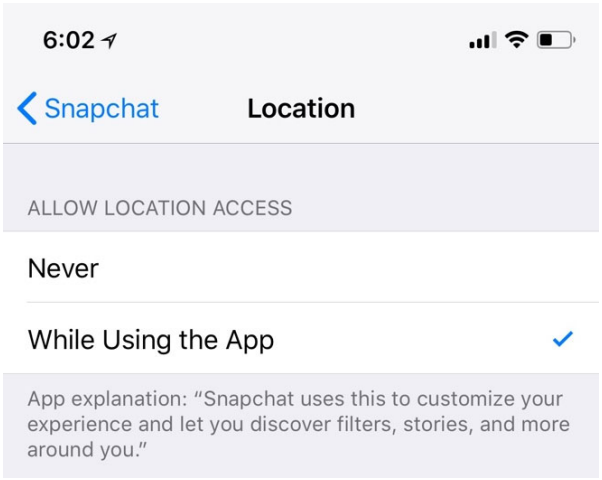


https://businesshelp.snapchat.com/en-US/article/location-targeting.

1(c): initiating the transmission of data from at least one of the information sources to a communications device if the communications device's indicated geographic position changes from a first position that is greater than a predefined distance from a geographic region associated with the at least one information source to a second position that is within a predefined distance from a geographic region associated with the at least one information source.—Snap's servers initiate the transmission of data from at least one of the information sources to a communications device if the communications device's indicated geographic position changes from a first position that is greater than a predefined distance from a geographic region associated with the at least one information source to a second position that is within a predefined distance from a geographic region associated with the at least one information source.

For example, Snap's servers initiate the transmission of an advertiser's advertisement that utilizes Snapchat's Location Targeting service to a Snapchat user's communication device if the communication device's indicated geographic position changes from being outside of the predefined radius around one of the advertiser's associated geographic regions to being inside of the predefined radius.

For instance, on information and belief, when a Snapchat user's communications device has Snapchat's location services enabled, Snap's servers monitor the geographic position of the communications device to facilitate Snapchat's Location Targeting service. In this respect, Snap's servers are configured to receive geographic position data for the communication devices of Snapchat users for users that have not opted out of allowing Snap to use location services. *See, e.g.*, https://forbusiness.snapchat.com/blog/location/ ("We don't share any location information that can identify specific Snapchatters to advertisers, and all Snapchatters can choose whether to allow use of location services."). To illustrate, a Snapchat user's iPhone that has the Snapchat application installed provides an option for the user to disable the iPhone from sending geographic position data for use by Snapchat servers:



Thus, as one example, when Snapchat's servers are monitoring the geographic position of a particular communications device of a Snapchat user, the servers will initiate the transmission of an advertisement for a Snapchat advertiser to the particular communications device if the particular communication device's geographic position changes from being outside of the predefined radius around one of the advertiser's associated geographic regions to being inside of the predefined radius. *See, e.g.*, https://forbusiness.snapchat.com/blog/location/ ("Today, we're excited to introduce two new location-based targeting features that allow advertisers to reach Snapchatters who are in the right context to consider taking action. . . . Radius targeting: Reach Snapchatters within a radius of any address, pin, city, or location of interest").

Indeed, Snap touts that its "location categories and radius targeting" allows Snapchat advertisers "to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. Snap emphasizes that its Location Targeting service "presents businesses and brands with a unique opportunity to reach an incredibly engaged audience based on where they are and what they're doing in the real world." https://forbusiness.snapchat.com/blog/location/.

90. Additionally, Defendant Snap has been, and currently is, an active inducer of infringement of the '331 Patent under 35 U.S.C. § 271(b) and contributory infringer of the '331 Patent under 35 U.S.C. § 271(c).

91. Snap knew of the '331 Patent, or at least should have known of the '331 Patent, but was willfully blind to its existence. On information and belief, Snap has had actual knowledge of the '331 Patent since at least as early as the filing and/or service of this Complaint.

92. Snap has provided the Accused Products to its customers and, on information and belief, instructions to use the Accused Products in an infringing

manner while being on notice of (or willfully blind to) the '331 Patent and Snap's infringement. Therefore, on information and belief, Snap knew or should have known of the '331 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

93. Snap knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '331 Patent.

94. On information and belief, Snap provides the Accused Products to customers through various third-party application stores (*e.g.*, the Apple iTunes App Store) and instructions to end-user customers so that such customers will use the Accused Products in an infringing manner.

95. Snap's end-user customers directly infringe at least one or more claims of the '331 Patent by using the Accused Products in their intended manner to infringe. Snap induces such infringement by providing the Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '331 Patent. On information and belief, Snap specifically intends that its actions will result in infringement of at least one or more claims of the '331 Patent, or subjectively believe that their actions will result in infringement of the '331 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

96. Additionally, Snap contributorily infringes at least one or more claims of the '331 Patent by providing the Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '331 Patent, that are known by Snap to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused Products are specially designed to infringe at least one or more claims of the '331 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially

made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

97. Snap's infringement of the '331 Patent was and continues to be willful and deliberate, entitling Corrino to enhanced damages.

98. Additional allegations regarding Snap's knowledge of the '331 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

99. Snap's infringement of the '331 Patent is exceptional and entitles Corrino to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

100. Corrino is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '331 Patent.

101. Corrino is entitled to recover from Snap all damages that Corrino has sustained as a result of Snap's infringement of the '331 Patent, including, without limitation, a reasonable royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,982,599

102. Corrino incorporates by reference and re-alleges all the foregoing paragraphs of this Complaint as if fully set forth herein.

103. Defendant Snap has infringed and is infringing, either literally or under the doctrine of equivalents, the '599 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products and services that direct location-based information to location-specific users, including the Accused Products, that infringe at least one or more claims of the '599 Patent.

104. As just one non-limiting example, set forth below is a description of infringement of exemplary claim 10 of the '599 Patent in connection with the Accused Products. This description is based on publicly available information.

Corrino reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

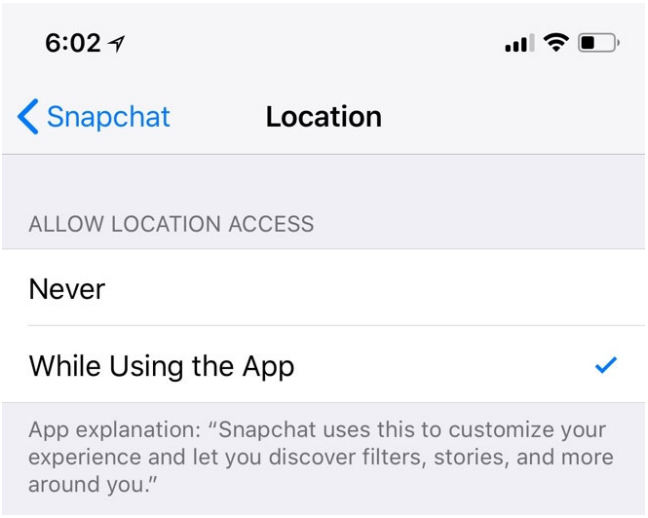
10(a): An apparatus comprising:—As noted above, Snapchat is a social networking platform that provides services by which certain Snapchat users (*e.g.*, Snapchat advertisers) can target other Snapchat users such that those users' communications devices receive the advertisers' advertisements (*e.g.*, "Snap Ads," "Filters," "Geofilters," "Lenses," etc.) when certain predefined conditions are met. An example of such a service is Snapchat's Location Targeting service. Snap at least makes and uses an apparatus (*e.g.*, a server) configured in accordance with claim 10 to facilitate providing the Location Targeting service for one or more Snapchat advertisers.

Indeed, as explained by Snap, "[t]he launch of location categories and radius targeting brings Snapchat advertisers new tools to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. For instance, Snapchat's "radius targeting" feature "allows advertisers around the globe to add or exclude a radius around an address, city center, pin, or point of interest (like Yankee Stadium or UCLA). This new feature is great for businesses big and small, such as brick and mortar retailers, to travel apps like Hopper." *Id*. Snap's servers provided this location targeting service to Hopper that allowed it to "cut its cost per install in half by using radius targeting around airports to reach those likely to fly from that hub with a specific flight deal. This combination of smart radius targeting and geographically-relevant creative gave the highest-intent Snapchatters a sense of urgency to act." *Id*.

10(b): one or more processors configured to receive geographic position data associated with a wireless communications device, and—Snap at least makes and uses an apparatus (*e.g.*, a server) that comprises one or more

processors configured to receive geographic position data associated with a wireless communications device.

For example, on information and belief, when a Snapchat user's communications device has Snapchat's location services enabled, a server monitors the geographic position of the communications device to facilitate Snapchat's Location Targeting service. In this respect, the server is configured to receive geographic position data for the communication devices of Snapchat users for users that have not opted out of allowing Snap to use location services. *See, e.g.*, https://forbusiness.snapchat.com/blog/location/ ("We don't share any location information that can identify specific Snapchatters to advertisers, and all Snapchatters can choose whether to allow use of location services."). To illustrate, a Snapchat user's iPhone that has the Snapchat application installed provides an option for the user to disable the iPhone from sending geographic position data for use by Snap:



Indeed, Snap touts that its "location categories and radius targeting" allows Snapchat advertisers "to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. Snap emphasizes that its Location Targeting service "presents businesses and brands with a unique opportunity to reach an incredibly engaged audience

based on where they are and what they're doing in the real world." https://forbusiness.snapchat.com/blog/location/.

10(c): configured to initiate transmission of digital content to the wireless communications device in response to determining that the geographic position of the wireless communications device has changed to be within a predefined distance of a geographic area associated with the digital content during a predefined timeframe associated with the digital content.—Snap at least makes and uses an apparatus (*e.g.*, a server) that comprises one or more processors configured to initiate transmission of digital content to the wireless communications device in response to determining that the geographic position of the wireless communications device has changed to be within a predefined distance of a geographic area associated with the digital content during a predefined timeframe associated with the digital content.

For instance, a server that is configured to facilitate providing Snapchat's Location Targeting services enables a Snapchat advertiser's digital content (*e.g.*, an advertisement) to be provided to a particular "audience" (*i.e.*, wireless communications devices of particular Snapchat users). Snapchat allows a Snapchat advertiser to define the particular "audience" based on a variety of factors (*e.g.*, geographic areas), and by doing so, associates the advertiser (and its digital content) with the factors that define its particular audience. In this respect, the server maintains an index of Snapchat advertisers and their respective associations.

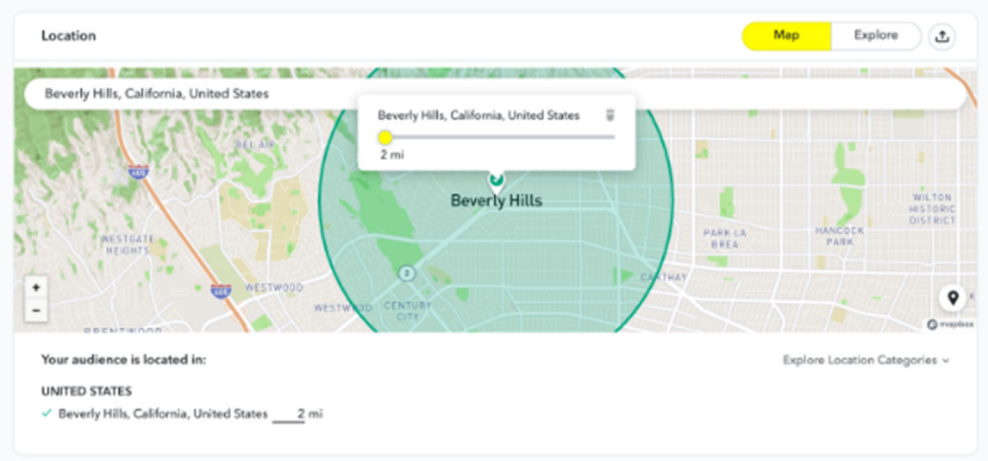
An example of a factor by which a Snapchat advertiser can define its "audience" is one or more geographic areas. A Snapchat advertiser (and its digital content) can be associated with one or more geographic areas in a variety of manners.

As one possibility, any Snapchat advertiser that utilizes Snapchat's

radius targeting feature is associated with at least one geographic region and defines a corresponding distance around that at least one geographic region. Indeed, as one example, Snap touts that "Radius targeting" allows advertisers to "[r]each Snapchatters within a radius of any . . . city[.]" https://forbusiness.snapchat.com/blog/location/. As explained by Snap, through the radius targeting feature "you can choose a location radius by selecting how many miles (in the United States) or kilometers (rest of world) you'd like to target around . . . places (cities/municipalities)," as one example. https://businesshelp.snapchat.com/en-US/article/location-targeting.

Snap explains and illustrates how a Snapchat advertiser becomes associated with at least one geographic area (*e.g.*, Beverly Hills, California) and how the advertiser defines a corresponding predefined distance around that area:

Upon dropping your pin, you can choose how many miles (in the United States) or kilometers (rest of the world) you'd like that pin's radius to expand to by clicking the yellow pin.



https://businesshelp.snapchat.com/en-US/article/location-targeting.

In addition to targeting a particular "audience," Snapchat allows a Snapchat advertiser to define a particular timeframe during which the advertiser's digital content is to be provided to the particular "audience" (*i.e.*, wireless communications devices of particular Snapchat users).

For instance, a Snapchat advertiser can select particular days and times during which the server is to transmit advertisements to the advertiser's particular "audience," assuming all other conditions are satisfied. https://developers.snapchat.com/api/docs/#ad-scheduling ("With ad_scheduling_config, you can explicitly set which days of the week and, to what hours within each day your ads should run."):

Usage

This would describe an ad running on Monday from 1am - 3am && 8am - 10am and Tuesday from 11am - 1pm. The possible values for the keys are: monday, tuesday, wednesday, thursday, friday, saturday, sunday

Attribute	Description	Type	Possible Values
hour_of_day	array of integers specifying the times of day	array of integers	0-23

See also, e.g., https://support.snapchat.com/en-US/a/on-demand-geofilter-faq ("Filters and Lenses can be active for as long as 30 days or as little as one hour"); https://support.snapchat.com/en-US/article/how-to-purchase-annual-odg ("[C]lick the dates and times in the top right corner, then check the box that says 'Run indefinitely, renewing annually' Select the date and hour of day you'd like your Annual Filter to begin").

Thus, as one example, the server that facilitates providing Snapchat's Location Targeting service is configured to initiate transmission of a Snapchat advertiser's digital content to the wireless communications device of one of the advertiser's "audience" members in response to determining that the geographic position of the wireless communications device has changed to be within a predefined distance (*e.g.*, "location radius") of a geographic area associated with the digital content during a predefined timeframe associated with the digital content, in accordance with the Snapchat Location Targeting service.

105. Additionally, Defendant Snap has been, and currently is, an active inducer of infringement of the '599 Patent under 35 U.S.C. § 271(b) and contributory infringer of the '599 Patent under 35 U.S.C. § 271(c).

106. Snap knew of the '599 Patent, or at least should have known of the '599 Patent, but was willfully blind to its existence. On information and belief, Snap has had actual knowledge of the '599 Patent since at least as early as the filing and/or service of this Complaint.

107. Snap has provided the Accused Products to its customers and, on information and belief, instructions to use the Accused Products in an infringing manner while being on notice of (or willfully blind to) the '599 Patent and Snap's infringement. Therefore, on information and belief, Snap knew or should have known of the '599 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

108. Snap knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '599 Patent.

109. On information and belief, Snap provides the Accused Products to customers through various third-party application stores (*e.g.*, the Apple iTunes App Store) and instructions to end-user customers so that such customers will use the Accused Products in an infringing manner.

110. Snap's end-user customers directly infringe at least one or more claims of the '599 Patent by using the Accused Products in their intended manner to infringe. Snap induces such infringement by providing the Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '599 Patent. On information and belief, Snap specifically intends that its actions will result in infringement of at least one or more claims of the '599 Patent, or subjectively believe that their actions will result in infringement of the '599 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

111. Additionally, Snap contributorily infringes at least one or more claims of the '599 Patent by providing the Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '599 Patent, that are known by Snap to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused Products are specially designed to infringe at least one or more claims of the '599 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

112. Snap's infringement of the '599 Patent was and continues to be willful and deliberate, entitling Corrino to enhanced damages.

113. Additional allegations regarding Snap's knowledge of the '599 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

114. Snap's infringement of the '599 Patent is exceptional and entitles Corrino to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

115. Corrino is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '599 Patent.

116. Corrino is entitled to recover from Snap all damages that Corrino has sustained as a result of Snap's infringement of the '599 Patent, including, without limitation, a reasonable royalty.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 7,525,450

117. Corrino incorporates by reference and re-alleges all the foregoing paragraphs of this Complaint as if fully set forth herein.

118. Defendant Snap has infringed and is infringing, either literally or under

the doctrine of equivalents, the '450 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products and services that direct location-based information to location-specific users, including the Accused Products, that infringe at least one or more claims of the '450 Patent.

119. As just one non-limiting example, set forth below is a description of infringement of exemplary claim 11 of the '450 Patent in connection with the Accused Products. This description is based on publicly available information. Corrino reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

11(a): A system comprising:—As noted above, Snapchat is a social networking platform that provides services by which certain Snapchat users (*e.g.*, Snapchat advertisers) can target other Snapchat users such that those users' communications devices receive the advertisers' advertisements (*e.g.*, "Snap Ads," "Filters," "Geofilters," "Lenses," etc.) when certain predefined conditions are met. An example of such a service is Snapchat's Location Targeting service. Snap at least makes and uses a system configured in accordance with claim 11 to facilitate providing the Location Targeting service for one or more Snapchat advertisers.

Indeed, as explained by Snap, "[t]he launch of location categories and radius targeting brings Snapchat advertisers new tools to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. For instance, Snapchat's "radius targeting" feature "allows advertisers around the globe to add or exclude a radius around an address, city center, pin, or point of interest (like Yankee Stadium or UCLA). This new feature is great for businesses big and small, such as brick and mortar retailers, to travel apps like Hopper." *Id*. Snap's servers provided

this location targeting service to Hopper that allowed it to "cut its cost per install in half by using radius targeting around airports to reach those likely to fly from that hub with a specific flight deal. This combination of smart radius targeting and geographically-relevant creative gave the highest-intent Snapchatters a sense of urgency to act." *Id*.

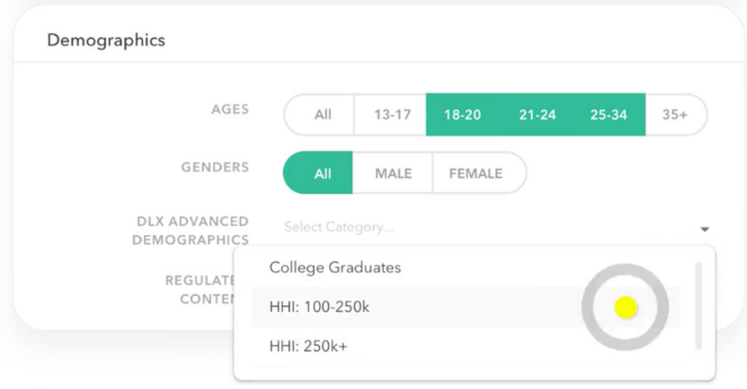
11(b): an information source database comprising an index of information sources, wherein each information source is associated with (i) a demographic code and (ii) one or more location codes, wherein each location code corresponds to a geographic region;—Snap at least makes and uses a system (*e.g.*, one or more servers) that comprises an information source database comprising an index of information sources, wherein each information source is associated with (i) a demographic code and (ii) one or more location codes, wherein each location code corresponds to a geographic region.

For instance, the one or more servers are configured to facilitate providing Snapchat's Location Targeting services that enable a Snapchat advertiser's relevant data (*e.g.*, an advertisement) to be provided to a particular "audience" (*i.e.*, communications devices of particular Snapchat users). Snapchat allows a Snapchat advertiser to define the particular "audience" based on a variety of factors (*e.g.*, geographic regions and demographics), and by doing so, associates the advertiser with the factors that define its particular audience. In this respect, the one or more servers are configured to maintain an index of Snapchat advertisers and their respective associations.

An example of a factor by which a Snapchat advertiser can define its "audience" is one or more demographic criterion. For instance, a Snapchat advertiser can be associated with one or more of Snapchat's "over 300 [predefined] audiences [that are] based on what Snapchatters care about,

what they buy, what they watch, and where they go." https://forbusiness.snapchat.com/audiences/. Furthermore, a Snapchat advertiser can be associated with one or more Snapchat "Demographics," which allow the advertiser to "[g]et specific with age, location, device type, and advanced demographics like household income and parental status." *Id*.

On information and belief, each of Snapchat's demographic criterion correspond to a respective demographic code that is utilized to associate the particular demographic criteria with a given Snapchat advertiser. For example, an example GUI through which a Snapchat advertiser is associated with Snapchat's demographic criterion is shown below. On information and belief, each of the selectable demographic criterion illustrated below (*e.g.*, "All," "13-17," "18-20," etc.) has a corresponding demographic code that becomes associated with the Snapchat advertiser when selected. *See, e.g.*, https://developers.snapchat.com/api/docs/#demographics (providing example identifiers for a variety of demographics criteria by which an advertiser can target users, including identifier "13" for users in the age group "13-17," identifier "zh" for users whose language is Chineses, and identifier "DLXD_100" for users that are college graduates).



https://forbusiness.snapchat.com/audiences/.

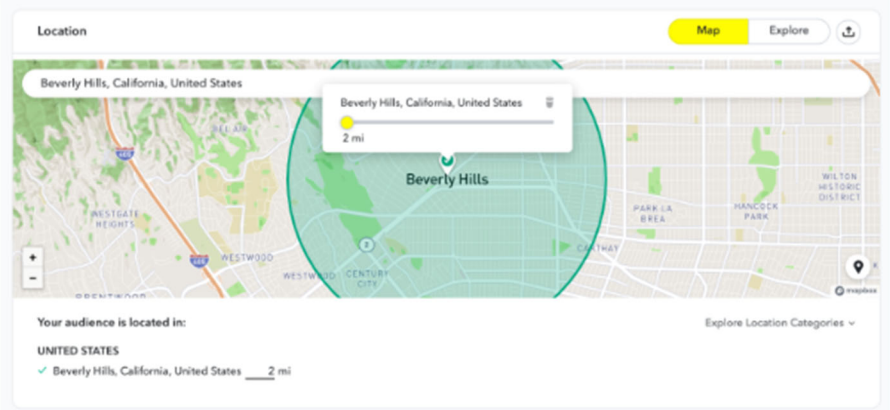
Another example of a factor by which a Snapchat advertiser can define its "audience" is one or more geographic regions. A Snapchat advertiser (and

its digital content) can be associated with one or more geographic regions in a variety of manners.

As one possibility, any Snapchat advertiser that utilizes Snapchat's radius targeting feature is associated with at least one geographic region and defines a corresponding distance around that at least one geographic region. Indeed, as one example, Snap touts that "Radius targeting" allows advertisers to "[r]each Snapchatters within a radius of any . . . city[.]" https://forbusiness.snapchat.com/blog/location/. As explained by Snap, through the radius targeting feature "you can choose a location radius by selecting how many miles (in the United States) . . . you'd like to target around . . . places (cities/municipalities)," as one example. https://business help.snapchat.com/en-US/article/location-targeting.

Snapchat explains and illustrates how a Snapchat advertiser becomes associated with at least one geographic region (*e.g.*, Beverly Hills, California) and how the advertiser defines a corresponding predefined distance around that region:

Upon dropping your pin, you can choose how many miles (in the United States) or kilometers (rest of the world) you'd like that pin's radius to expand to by clicking the yellow pin.



https://businesshelp.snapchat.com/en-US/article/location-targeting.

On information and belief, Snapchat's geographic regions (discussed above) correspond to respective location codes that are utilized to associate particular geographic regions with Snapchat advertisers. *See, e.g.*, https://

developers.snapchat.com/api/docs/#geolocation (providing examples of various location codes utilized by Snapchat, including numerical identifiers and multiple alphabetic codes for countries, numerical identifiers and alphabetic codes for regions and states, numerical identifiers for metros, etc.).

11(c): a communications device database comprising an index of communications devices, wherein each communications device is associated with a demographic code; and—Snap at least makes and uses a system (*e.g.*, one or more servers) that comprises a communications device database comprising an index of communications devices, wherein each communications device is associated with a demographic code.

For example, Snap associates users and their respective communications devices with a variety of demographic information, which it uses to personalize Snap's services for the users, such as by customizing the advertisements provided to the users' communications devices. *See, e.g.*, https://www.snap.com/en-US/privacy/privacy-policy/ ("What do we do with the information we collect? . . . The short answer is: Provide you with an amazing set of products and services that we relentlessly improve. Here are the ways we do that: . . . personalize our services by, among other things, . . . customizing the content we show you, including ads."); https://www.snap.com/en-US/privacy/your-information/ ("We think ads are best when they're relevant—advertisers prefer them and we think you'll like them more too. So, we use some of the information we learn about you to try and select the right ads at the right time.").

To facilitate this personalization, Snap associates with each user and its communication device a "User Profile" that "includes information [Snap] use[s] to personalize content and ads for you — including demographic information and information about the way you use [Snap] services."

https://support.snapchat.com/en-US/a/download-my-data. As another example, Snap associates with each user and its communication device "Purchase History" that "includes basic information about any purchases you've made through our services, like in-app purchases or custom Filters and Lenses. This info includes things like what product you purchased, and when you purchased it." https://support.snapchat.com/en-US/a/download-my-data.

On information and belief, the various demographic information collected by Snap correspond to respective demographic codes that are utilized to associate particular demographic information with Snapchat users and their respective communications devices. *See, e.g.*, https://developers.snapchat.com/api/docs/#demographics (providing example identifiers for a variety of demographics criteria by which an advertiser can target users, including identifier "13" for users in the age group "13-17," identifier "zh" for users whose language is Chineses, and identifier "DLXD_100" for users that are college graduates). In this respect, the one or more servers maintain an index of Snapchat users' communications devices and their respective associations.

11(d): a processor for initiating the transmission of relevant data to a communications device in response to receiving (i) an identifier corresponding to the communications device and (ii) an indication of the geographic position of the communications device, wherein the relevant data originates from at least one information source that is associated with both (i) a location code corresponding to a geographic region within a defined distance from the geographic position specified in the received indication, and (ii) a demographic code associated with the communications device specified in the received indication.—Snap at least makes and uses a system (*e.g.*, one or more servers) that comprises a

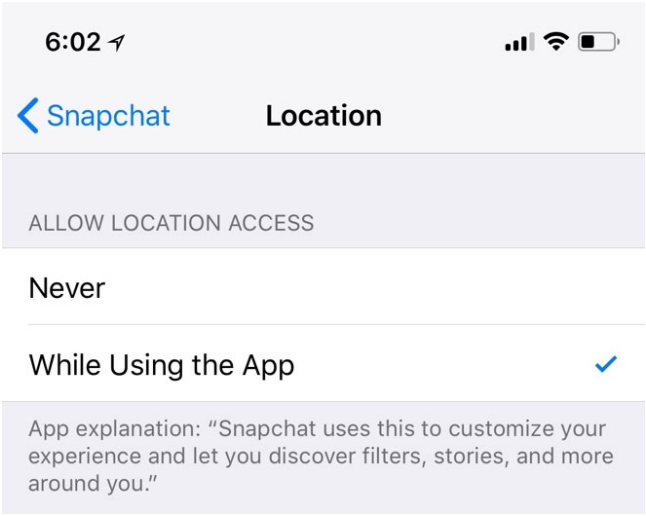
processor for initiating the transmission of relevant data to a communications device in response to receiving (i) an identifier corresponding to the communications device and (ii) an indication of the geographic position of the communications device, wherein the relevant data originates from at least one information source that is associated with both (i) a location code corresponding to a geographic region within a defined distance from the geographic position specified in the received indication, and (ii) a demographic code associated with the communications device specified in the received indication.

For example, on information and belief, the one or more servers that facilitate Snapchat's Location Targeting service comprise a processor configured to initiate the transmission of relevant data (*e.g.*, an advertisement) to a communications device in response to receiving (i) an identifier corresponding to the communications device and (ii) an indication of the geographic position of the communications device.

For instance, on information and belief, when a Snapchat user's communications device has Snapchat's location services enabled, the one or more servers receive an identifier corresponding to the communications devices. *See, e.g.*, https://www.snap.com/en-US/privacy/privacy-policy/ ("When you use our services, we collect information about which of those services you've used and how you've used them. . . . We collect information from and about the devices you use. For example, we collect: information about your hardware and software, such as the hardware model, operating system version, device memory, advertising identifiers, unique application identifiers, apps installed, unique device identifiers, browser type, language, battery level, and time zone . . . . We also collect log information when you use our website. That information includes, among other things: . . . identifiers associated with cookies or other technologies that may uniquely

identify your device or browser.").

Moreover, when a Snapchat user's communications device has Snapchat's location services enabled, the one or more servers monitor the geographic position of the communications device to facilitate Snapchat's Location Targeting service. In this respect, the one or more servers are configured to receive geographic position data for the communication devices of Snapchat users for users that have not opted out of allowing Snapchat to use location services. *See, e.g.*, https://forbusiness.snapchat.com/blog/location/ ("We don't share any location information that can identify specific Snapchatters to advertisers, and all Snapchatters can choose whether to allow use of location services."). To illustrate, a Snapchat user's iPhone that has the Snapchat application installed provides an option for the user to disable the iPhone from sending geographic position data for use by Snapchat servers:



Thus, in response to receiving the device identifier and geographic position indication, the one or more servers are configured to initiate the transmission of a relevant advertisement to the communications device, where the relevant advertisement originates from a Snapchat advertiser that is associated with both (i) a location code corresponding to a geographic region within a defined distance from the geographic position specified in

the received indication and (ii) a demographic code associated with the communications device specified in the received indication.

For instance, as discussed above, a Snapchat advertiser can define its particular "audience" based on a variety of factors, including one or more geographic regions and one or more demographics. In line with the above discussion, along with being associated with one or more geographic regions, the Snapchat advertiser can set respective defined distances for the one or more geographic regions. The one or more servers are configured to transmit the Snapchat advertiser's advertisement to the communications device when (i) the communications device's geographic position is within any of the advertiser's defined distances corresponding to any of its geographic regions and (ii) a demographic code associated with the communications device corresponds to one or more demographics associated with the advertiser. Indeed, Snap touts that its "location categories and radius targeting" allows Snapchat advertisers "to reach the right audience, in the right place, at the right time." https://forbusiness.snapchat.com/blog/location/. Snap emphasizes that its Location Targeting service "presents businesses and brands with a unique opportunity to reach an incredibly engaged audience based on where they are and what they're doing in the real world." https://forbusiness.snapchat.com/blog/location/.

120. Additionally, Defendant Snap has been, and currently is, an active inducer of infringement of the '450 Patent under 35 U.S.C. § 271(b) and contributory infringer of the '450 Patent under 35 U.S.C. § 271(c).

121. Snap knew of the '450 Patent, or at least should have known of the '450 Patent, but was willfully blind to its existence. On information and belief, Snap has had actual knowledge of the '450 Patent since at least as early as the filing and/or service of this Complaint.

122. Snap has provided the Accused Products to its customers and, on

information and belief, instructions to use the Accused Products in an infringing manner while being on notice of (or willfully blind to) the '450 Patent and Snap's infringement. Therefore, on information and belief, Snap knew or should have known of the '450 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

123. Snap knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '450 Patent.

124. On information and belief, Snap provides the Accused Products to customers through various third-party application stores (*e.g.*, the Apple iTunes App Store) and instructions to end-user customers so that such customers will use the Accused Products in an infringing manner.

125. Snap's end-user customers directly infringe at least one or more claims of the '450 Patent by using the Accused Products in their intended manner to infringe. Snap induces such infringement by providing the Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '450 Patent. On information and belief, Snap specifically intends that its actions will result in infringement of at least one or more claims of the '450 Patent, or subjectively believe that their actions will result in infringement of the '450 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

126. Additionally, Snap contributorily infringes at least one or more claims of the '450 Patent by providing the Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '450 Patent, that are known by Snap to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused Products are specially designed to infringe at least one or more claims of the '450 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that

implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

127. Snap's infringement of the '450 Patent was and continues to be willful and deliberate, entitling Corrino to enhanced damages.

128. Additional allegations regarding Snap's knowledge of the '450 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

129. Snap's infringement of the '450 Patent is exceptional and entitles Corrino to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

130. Corrino is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '450 Patent.

131. Corrino is entitled to recover from Snap all damages that Corrino has sustained as a result of Snap's infringement of the '450 Patent, including, without limitation, a reasonable royalty.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 7,716,149

132. Corrino incorporates by reference and re-alleges all the foregoing paragraphs of this Complaint as if fully set forth herein.

133. Defendant Snap has infringed and is infringing, either literally or under the doctrine of equivalents, the '149 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products and services that direct location-based information to location-specific users, including the Accused Products, that infringe at least one or more claims of the '149 Patent.

134. As just one non-limiting example, set forth below is a description of infringement of exemplary claim 1 of the '149 Patent in connection with the

Accused Products. This description is based on publicly available information. Corrino reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

1(a): A computer controlled method for monitoring a persistent virtual environment comprising:—Snap provides a persistent virtual environment that takes the form of a social online world. For instance, a user subscribes to Snap's social online world by creating an online entity via a Snapchat user account through which the user accesses Snap's social networking platform via a computing device running a native Snapchat app or web browser. Within Snapchat's social networking platform, a Snapchat user through his/her online entity can virtually experience new sights and activities, as well as virtually develop social relationships with other registered Snapchat users through their respective online entities.

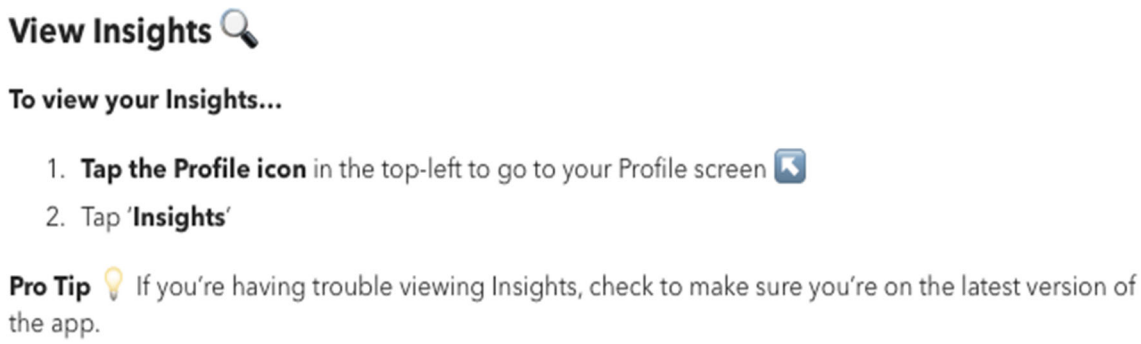
On information and belief, Snap, through its employees (*e.g.*, software developers, user support staff, etc.), has utilized and/or continues utilizing a computer system (*e.g.*, desktop or laptop computers, mobile phones, tablets, etc.) to perform the computer-controlled method of claim 1, such as (i) during development of Snap's "Insights," (ii) while developing updates and/or revisions to Insights, and/or (iii) while providing customer support related to Insights.

1(b): displaying, at a computer system, a visualization that represents a social aspect of said persistent virtual environment, said visualization responsive to a metric, wherein said visualization represents an overall interactivity level;—Snap causes computer systems to display a visualization that represents a social aspect of a persistent virtual environment (*i.e.*, Snap's social online world), said visualization responsive to a metric, wherein said visualization represents an overall interactivity level.

For example, as explained by Snap, "Snapchatters who are Official

Stories or creators who have cultivated a large audience on Snapchat have access to Insights! You can use Insights to learn more about your audience and how they engage with your content." https://support.snapchat.com/en-US/article/insights.

Snap instructs and encourages its users to utilize their computer systems to display Insights visualizations. For example, Snap instructs and encourages its users to access Insights as follows:



https://support.snapchat.com/en-US/article/insights.

Upon tapping the "Insights" icon, Snap's servers cause the user's computer system to display a variety of Insights visualizations that represent a social aspect of Snap's social online world. For example, Snap's servers cause a computer system to display Insights visualizations that are responsive to metrics and that represent an overall interactivity level, including "Views" visualizations, a "Reach" visualization, and an "Audience"/"Subscribers" visualization, among various other visualizations. https://support.snapchat.com/en-US/article/insights. An example Insights visualization is provided below:

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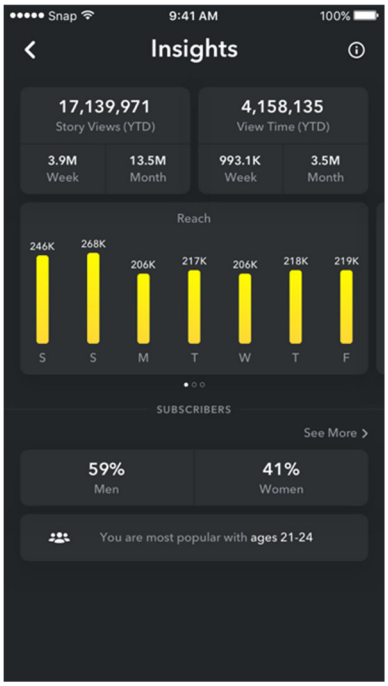

https://support.snapchat.com/en-US/article/insights.

On information and belief, Snap facilitates and/or has facilitated the performance of this method step, such as in connection with Snap's Insights, consistent with how Snap expects and encourages its users to facilitate the performance of this method step.

1(c): receiving a selection command at the computer system; and— Snap utilizes computer systems to receive a selection command at the computer systems.

Indeed, Snap instructs and encourages its users to interact with Insights such that the users' computer systems receive selection commands, which result in the users viewing additional Insights information. For instance, Snap encourages a user to cause a computer system to receive a selection command corresponding to, for example, a selection of the Audience Insights "See More" icon (identified by the red arrow below).

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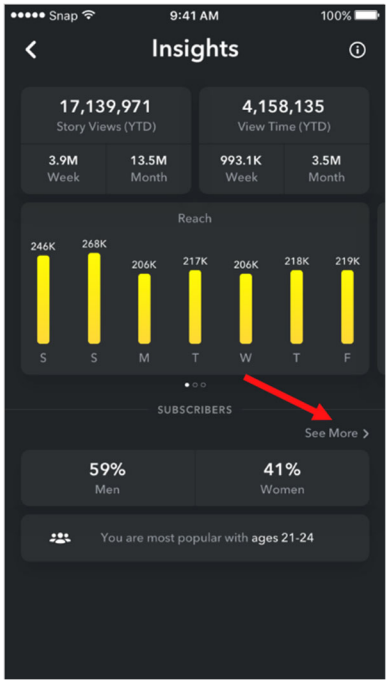

On information and belief, Snap facilitates and/or has facilitated the performance of this method step, such as in connection with Snap's Insights, consistent with how Snap expects and encourages its users to facilitate the performance of this method step.

1(d): displaying, at the computer system, responsive to said selection command, a second visualization that represents drill-down information associated with said metric.—Snap causes computer systems to display, responsive to said selection command, a second visualization that represents drill-down information associated with said metric.

For example, in response to a computer system receiving the selection command corresponding to the selection of the "See More" icon for the Audience Insight (illustrated above), Snap's servers cause the computer system to display a second visualization that represents drill-down information associated with the Audience Insights metric. An example of an Audience drill-down visualization is provided below.

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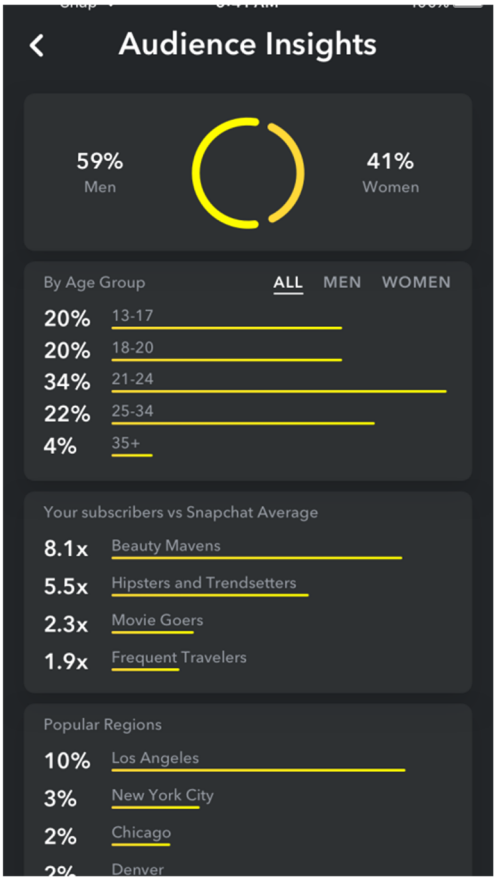

https://variety.com/2018/digital/news/snapchat-stats-creators-1202698318/.

Computer systems can receive additional selection commands within a displayed Insights visualization, such as the Audience Insights visualization shown above. In response to a computer system receiving such an additional selection command, Snap's servers cause the computer system to display a second visualization that represents drill-down information associated with the Audience Insights metric. For example, different Audience Insight visualizations are displayed when the "MEN" or "WOMEN" icon is selected (identified below by red arrows).

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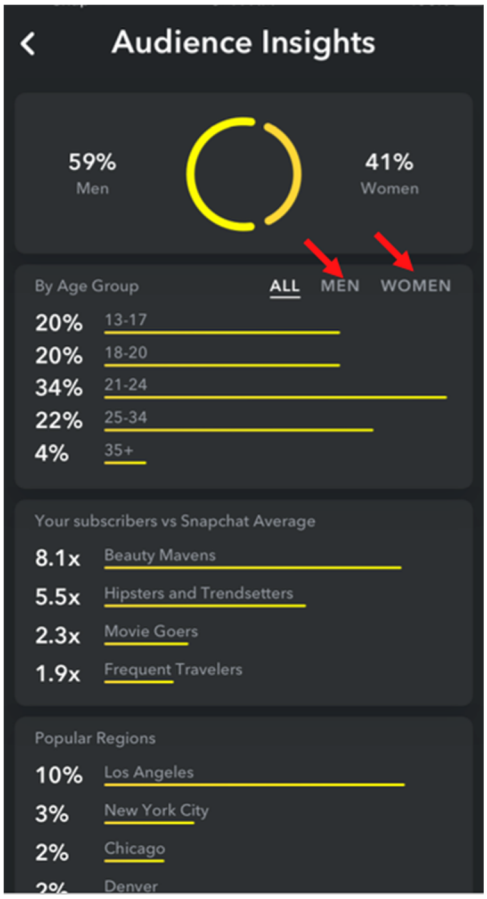

On information and belief, Snap facilitates and/or has facilitated the performance of this method step, such as in connection with Snap's Insights, consistent with how Snap expects and encourages its users to facilitate the performance of this method step.

135. Additionally, Defendant Snap has been, and currently is, an active inducer of infringement of the '149 Patent under 35 U.S.C. § 271(b) and contributory infringer of the '149 Patent under 35 U.S.C. § 271(c).

136. Snap knew of the '149 Patent, or at least should have known of the '149 Patent, but was willfully blind to its existence. On information and belief, Snap has had actual knowledge of the '149 Patent since at least as early as the filing and/or service of this Complaint.

137. Snap has provided the Accused Products to its customers and, on information and belief, instructions to (i) use the Accused Products in an infringing

manner and/or (ii) make an infringing device, while being on notice of (or willfully blind to) the '149 Patent and Snap's infringement. Therefore, on information and belief, Snap knew or should have known of the '149 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

138. Snap knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '149 Patent.

139. On information and belief, Snap provides the Accused Products to customers through various third-party application stores (*e.g.*, the Apple iTunes App Store) and instructions to end-user customers so that such customers will use the Accused Products in an infringing manner and/or make an infringing device comprising the Snap www.snap.com and www.snapchat.com websites and/or mobile application.

140. Snap's end-user customers directly infringe at least one or more claims of the '149 Patent by using the Accused Products in their intended manner to infringe and/or by making an infringing device via downloading the Snap www.snap.com and www.snapchat.com websites and/or mobile application. Snap induces such infringement by providing the Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '149 Patent. On information and belief, Snap specifically intends that its actions will result in infringement of at least one or more claims of the '149 Patent, or subjectively believe that their actions will result in infringement of the '149 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

141. Additionally, Snap contributorily infringes at least one or more claims of the '149 Patent by providing the Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '149 Patent, that are known by Snap to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The

Accused Products are specially designed to infringe at least one or more claims of the '149 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

142. Snap's infringement of the '149 Patent was and continues to be willful and deliberate, entitling Corrino to enhanced damages.

143. Additional allegations regarding Snap's knowledge of the '149 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

144. Snap's infringement of the '149 Patent is exceptional and entitles Corrino to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

145. Corrino is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '149 Patent.

146. Corrino is entitled to recover from Snap all damages that Corrino has sustained as a result of Snap's infringement of the '149 Patent, including, without limitation, a reasonable royalty.

COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 7,958,104

147. Corrino incorporates by reference and re-alleges all the foregoing paragraphs of this Complaint as if fully set forth herein.

148. Defendant Snap has infringed and is infringing, either literally or under the doctrine of equivalents, the '104 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, or selling in the United States, and/or importing into the United States without authority or license, products and services that engage in a contextual-based technique for processing

search requests across data networks, including the Accused Products, that infringe at least one or more claims of the '104 Patent.

149. As just one non-limiting example, set forth below (with claim language in bold and italics) is a description of infringement of exemplary claim 15 of the '104 Patent in connection with the Accused Products. This description is based on publicly available information. Corrino reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

15(a): A method for facilitating data searching over a network, the method comprising—Snap provides a social networking platform that allows users to perform searches and receive recommended stories from different publishers and creators. Snap, through operation of its mobile application (*i.e.*, Snapchat) and servers, performs the method of claim 15, and thereby facilitates data searching over a network (*e.g.*, the Internet).

15(b): receiving a search request from a user device via the network, the search request including information related to the user device—Snap's Snapchat app receives a search request, including information related to the user device, from a user device via the network.

For example, Snapchat provides a search bar at the top of the camera page and a search bar at the top of the Discover page. A user may operate a user device (*e.g.*, a mobile phone or tablet) to navigate to Snapchat and enter a search query into one of these search bars.

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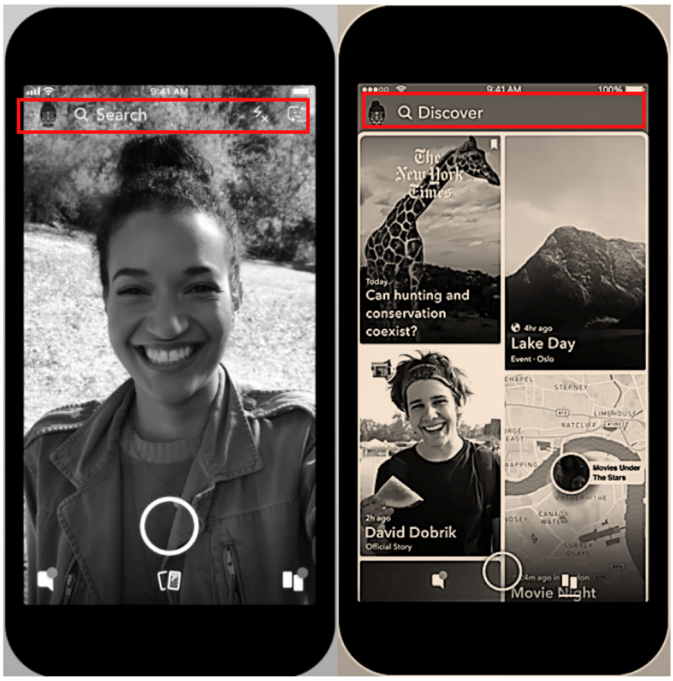

In particular, Snap explains:

> Just tap the button and start typing! Depending on what screen you're on, Search may show you different things to try and make sure you'll find what's most relevant to you.
> What You'll Find in Search
> Snap Map Sometimes you'll see a preview of the Map around you. Just tap it to open it!
> Friends You can search for friends, groups of friends, or search a new friends name to add them!
> Our Stories You may find relevant Our Stories about certain places or Special events.
> Publisher Stories You may find related Stories from publishers and creators.

https://support.snapchat.com/en-US/article/search.

When a user enters a search query, Snapchat receives the query over the Internet in the form of a search request. The search request includes, inter alia, information related the user device (*e.g.*, user id, client id, location of the user device, etc.). Specifically, Snap explains:

> Device Information. We collect information from and about the devices you use. For example, we collect:

> • information about your hardware and software, such as the hardware model, operating system version, device memory, advertising identifiers, unique application identifiers, apps installed, unique device identifiers, browser type, language, battery level, and time zone;
> • information from device sensors, such as accelerometers, gyroscopes, compasses, microphones, and whether you have headphones connected; and
> • information about your wireless and mobile network connections, such as mobile phone number, service provider, and signal strength.

https://www.snap.com/en-US/privacy/privacy-policy/.

Snap also explains:

> When you use our services we may collect information about your location. With your permission, we may also collect information about your precise location using methods that include GPS, wireless networks, cell towers, Wi-Fi access points, and other sensors, such as gyroscopes, accelerometers, and compasses.

Id.

Snap further explains:

> Whenever you use Search, we store your search terms, your approximate location (usually between 200 and 390 square meters), and the current time (within an hour). After 7 days, we store a rougher estimate of your location (usually between 3,200 and 6,240 square meters) for 23 days. We use this information to improve your search results and our other services.

https://support.snapchat.com/en-US/a/download-my-data.

15(c): processing the search request by identifying a context chain related to the user device based on information passed with the search request,—Snap's Snapchat app processes the search request by identifying a context chain related to the user device based on information passed with the search request.

For example, Snapchat keeps track of the location history of the user's device in order to provide relevant content to the user. As Snap explains:

> Snapchat uses your device's GPS to offer certain location-based features. For example, we use your device's location to provide Geofilters based on where you're at or what's going on around you, or we can use your location to position the Map to show you what's nearby. We also use your location to figure out what you'd like to see — so people in France see content from French publishers, French ads, and so on.
>
> We store GPS locations for a while to help improve the Map and other features. For example, we may store some of the locations you visit the most so we can show you more relevant Search content or update your Bitmoji's activity on the Map. We may also store location information of the Snaps you save in Memories or submit to Our Story.
>
> You can still use Snapchat if you disable location permissions in your device's settings, but many of these features won't work right (or at all!) without it. Sometimes we can still infer an approximate location like a country or city, based on an IP address — but it's not perfect.

https://www.snap.com/en-US/privacy/privacy-by-product/.

> We also try to personalize the content you see by using what we call "Content Interest Tags." These tags are guesses about the content that you may be interested in based on activity, like things you search for, Stories you view, popular users you subscribe to, and types of locations you visit.

https://www.snap.com/en-US/privacy/privacy-by-product/.

> We store other information for longer periods of time. For example:
>
> • We store your basic account information—like your name, phone number, and email address—and list of friends until you ask us to delete them.
>
> • We store location information for different lengths of time based on how precise it is and which services you use. For

> example, if you use the Map, we store information about your favorite places for up to 40 days so we can show you Actionmoji and improve your experience. If location information is associated with a Snap—like those saved to Memories or posted to Our Story—we'll retain that location as long as we store the Snap.
>
> • We're constantly collecting and updating information about the things you might like and dislike, so we can provide you with more relevant content and advertisements.

https://www.snap.com/en-US/privacy/privacy-policy/.

> What is included in 'Location History?'
>
> We use your device's location to provide all kinds of features, like Geofilters and Snap Map, and to show you what's nearby in Search. In this section includes an overview of your Frequent Locations, Latest Location, Top Locations, and Locations You Have Visited.

https://support.snapchat.com/en-US/a/download-my-data.

Thus, when Snapchat receives a search request from the user's device, it processes the search request by identifying a context chain related to the user device (*e.g.*, location history for the user's device) based on information passed with the search request (*e.g.*, user id, client id, location of the user device, etc.). For example, Snapchat receives the information passed with the search request (*e.g.*, user id, client id, location of the user device, etc.) and uses it to retrieve from storage a context chain related to the user device (*e.g.*, location history for the user's device).

15(d): the context chain including a plurality of contexts, each context in the plurality of contexts being a private context in which content is controlled by a publisher, or a public context in which content is not controlled by a publisher——In Snap's Snapchat app, the context chain (identified as set forth above) includes a plurality of contexts, each context

in the plurality of contexts being a private context in which content is controlled by a publisher, or a public context in which content is not controlled by a publisher.

For example, as set forth above, Snap identifies a context chain related to the user device by obtaining the location history for the user's device. This context chain includes a plurality of contexts in that it includes a plurality of previous locations at which the user device visited. As Snap explains: "We also use your location to figure out what you'd like to see," and "we may store some of the locations you visit the most so we can show you more relevant Search content." https://www.snap.com/en-US/privacy/privacy-by-product/.

Each context (*e.g.*, location) in the plurality of contexts identified by Snapchat is a public context in which content is not controlled by a publisher. Particularly, in Snap's system, no publisher controls whether content can or cannot be associated with a particular context (*e.g.*, location).

15(e): responding to the search request by providing at least one search result to the user device, the search result being obtained from at least one context in the plurality of contexts.—Snap's Snapchat app responds to the search request by providing to the user device at least one search result obtained from at least one context in the plurality of contexts.

For example, Snapchat obtains search results that are based on at least one of the locations in the user's location history. Snap provides that search result to the user device in response to the search request.

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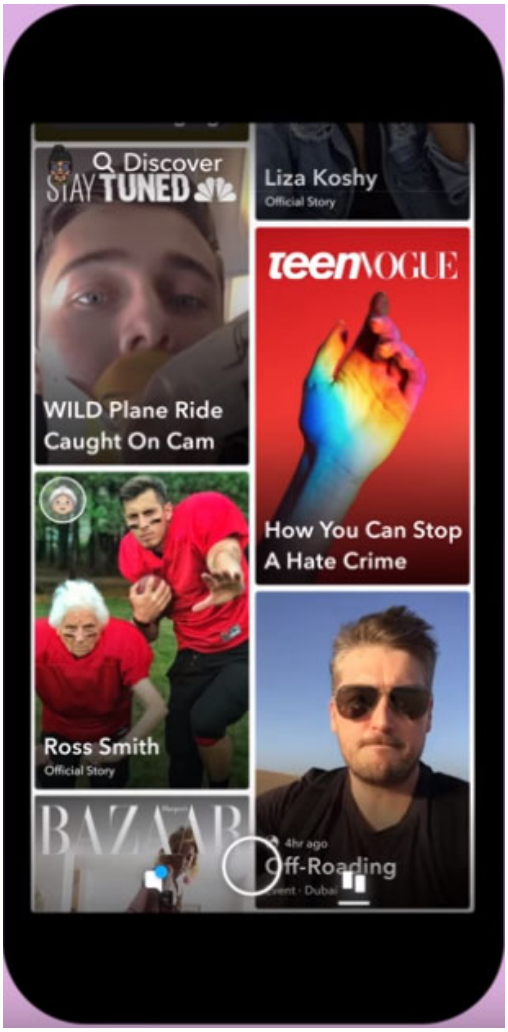


As Snapchat explains:

Snapchat uses your device's GPS to offer certain location-based features. For example, we use your device's location to provide Geofilters based on where you're at or what's going on around you, or we can use your location to position the Map to show you what's nearby. We also use your location to figure out what you'd like to see — so people in France see content from French publishers, French ads, and so on.

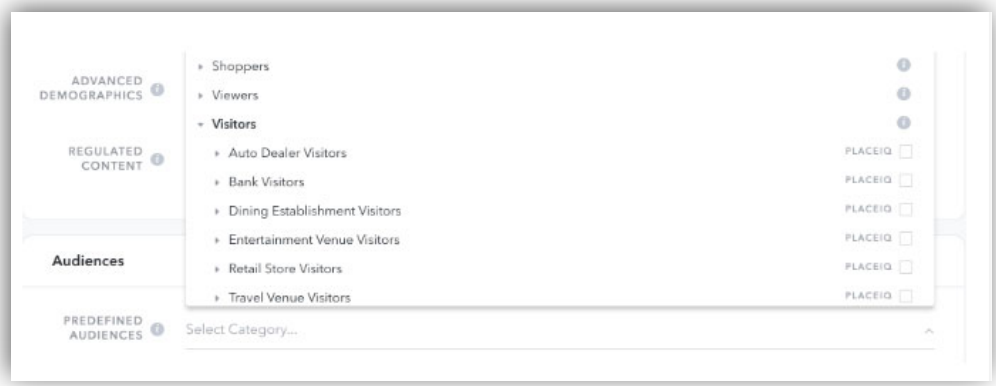
We store GPS locations for a while to help improve the Map and other features. For example, we may store some of the locations you visit the most so we can show you more relevant Search content or update your Bitmoji's activity on the Map. We may also store location information of the Snaps you save in Memories or submit to Our Story.

> You can still use Snapchat if you disable location permissions in your device's settings, but many of these features won't work right (or at all!) without it. Sometimes we can still infer an approximate location like a country or city, based on an IP address — but it's not perfect.
>
> We also try to personalize the content you see by using what we call "Content Interest Tags." These tags are guesses about the content that you may be interested in based on activity, like things you search for, Stories you view, popular users you subscribe to, and types of locations you visit.

https://www.snap.com/en-US/privacy/privacy-by-product/.

> What do we do with the information we collect? For the detailed answer, go here. The short answer is: Provide you with an amazing set of products and services that we relentlessly improve. Here are the ways we do that:
>
> - develop, operate, improve, deliver, maintain, and protect our products and services.
> - send you communications, including by email. For example, we may use email to respond to support inquiries or to share information about our products, services, and promotional offers that we think may interest you.
> - monitor and analyze trends and usage.
> - personalize our services by, among other things, suggesting friends or profile information, or customizing the content we show you, including ads.
> - contextualize your experience by, among other things, tagging your Memories content using your precise location information (if, of course, you've given us permission to collect that information) and applying other labels based on the content.
> - provide and improve ad targeting and measurement, including through the use of your precise location information (again, if you've given us permission to collect that information), both on and off our services. See the Control Over Your Information section below for more information about Snap Inc.'s advertising practices and your choices.

More specifically, Snap shows advertisements to users based on the following:



https://www.snap.com/en-US/privacy/privacy-by-product/.

150. Additionally, Defendant Snap has been, and currently is, an active inducer of infringement of the '104 Patent under 35 U.S.C. § 271(b) and contributory infringer of the '104 Patent under 35 U.S.C. § 271(c).

151. Snap knew of the '104 Patent, or at least should have known of the '104 Patent, but was willfully blind to its existence. On information and belief, Snap has had actual knowledge of the '104 Patent since at least as early as the filing and/or service of this Complaint.

152. Snap has provided the Accused Products to its customers and, on information and belief, instructions to use the Accused Products in an infringing manner while being on notice of (or willfully blind to) the '104 Patent and Snap's infringement. Therefore, on information and belief, Snap knew or should have known of the '104 Patent and of its own infringing acts, or deliberately took steps to avoid learning of those facts.

153. Snap knowingly and intentionally encourages and aids at least its end-user customers to directly infringe the '104 Patent.

154. On information and belief, Snap provides the Accused Products to customers through various third-party application stores (*e.g.*, the Apple iTunes

App Store) and instructions to end-user customers so that such customers will use the Accused Products in an infringing manner.

155. Snap's end-user customers directly infringe at least one or more claims of the '104 Patent by using the Accused Products in their intended manner to infringe. Snap induces such infringement by providing the Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '104 Patent. On information and belief, Snap specifically intends that its actions will result in infringement of at least one or more claims of the '104 Patent, or subjectively believe that their actions will result in infringement of the '104 Patent, but took deliberate actions to avoid learning of those facts, as set forth above.

156. Additionally, Snap contributorily infringes at least one or more claims of the '104 Patent by providing the Accused Products and/or software components thereof, that embody a material part of the claimed inventions of the '104 Patent, that are known by Snap to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The Accused Products are specially designed to infringe at least one or more claims of the '104 Patent, and their accused components have no substantial non-infringing uses. In particular, on information and belief, the software modules and code that implement and perform the infringing functionalities identified above are specially made and adapted to carry out said functionality and do not have any substantial non-infringing uses.

157. Snap's infringement of the '104 Patent was and continues to be willful and deliberate, entitling Corrino to enhanced damages.

158. Additional allegations regarding Snap's knowledge of the '104 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

159. Snap's infringement of the '104 Patent is exceptional and entitles Corrino to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

160. Corrino is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '104 Patent.

161. Corrino is entitled to recover from Snap all damages that Corrino has sustained as a result of Snap's infringement of the '104 Patent, including, without limitation, a reasonable royalty.

PRAYER FOR RELIEF

WHEREFORE, Corrino respectfully requests:

A. That Judgment be entered that Snap has infringed at least one or more claims of the Patents-in-Suit, directly and/or indirectly, literally and/or under the doctrine of equivalents;

B. An award of damages sufficient to compensate Corrino for Snap's infringement under 35 U.S.C. § 284, including an enhancement of damages on account of Snap's willful infringement;

C. That the case be found exceptional under 35 U.S.C. § 285 and that Corrino be awarded its reasonable attorneys' fees;

D. Costs and expenses in this action;

E. An award of prejudgment and post-judgment interest; and

F. Such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Corrino respectfully demands a trial by jury on all issues triable by jury.

Respectfully submitted,

Dated: October 4, 2018

LEE SULLIVAN SHEA & SMITH LLP
and
DEVLIN LAW FIRM

By: */s/ Jeffrey F. Craft*
George I. Lee
Jeffrey F. Craft

Attorneys for Plaintiff
Corrino Holdings LLC