

EXHIBIT NN

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15 UNITED STATES DISTRICT COURT
16 NORTHERN DISTRICT OF CALIFORNIA
17 OAKLAND DIVISION

18 MATTHEW CAMPBELL, MICHAEL
19 HURLEY, and DAVID SHADPOUR,

20 Plaintiffs,

21 v.

22 FACEBOOK, INC.,

23 Defendant.

Case No. C 13-05996 PJH

PUTATIVE CLASS ACTION

**DEFENDANT FACEBOOK, INC.'S
SUPPLEMENTAL RESPONSES AND
OBJECTIONS TO PLAINTIFFS' FIRST
SET OF INTERROGATORIES**

24
25 **HIGHLY CONFIDENTIAL—ATTORNEYS' EYES ONLY**
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1 Defendant Facebook, Inc. (“Defendant” or “Facebook”), by and through its attorneys, and
2 pursuant to Rules 26 and 33 of the Federal Rules of Civil Procedure, the Local Civil Rules of the U.S.
3 District Court for the Northern District of California, the Court orders in this action, and the parties’
4 agreements, provides the following supplemental responses and objections to Plaintiffs’ First Set of
5 Interrogatories (the “Interrogatories”).

6 These responses are designated Highly Confidential – Attorney’s Eyes Only under the
7 Amended Stipulated Protective Order entered by the Court on July 1, 2015.

8 **PRELIMINARY STATEMENT**

9 1. Facebook’s responses to the Interrogatories are made to the best of Facebook’s current
10 knowledge, information and belief. Facebook reserves the right to supplement or amend any of its
11 responses should future investigation indicate that such supplementation or amendment is necessary.

12 2. Facebook’s responses to the Interrogatories are made solely for the purpose of and in
13 relation to this action. Each response is given subject to all appropriate objections (including, but not
14 limited to, objections concerning privilege, competency, relevancy, materiality, propriety and
15 admissibility). All objections are reserved and may be interposed at any time.

16 3. Facebook’s responses are based on its understanding that Plaintiffs seek only that
17 information that is within Facebook’s possession, custody, and control.

18 4. Facebook incorporates by reference each and every general objection set forth into
19 each and every specific response. From time to time, a specific response may repeat a general
20 objection for emphasis or some other reason. The failure to include any general objection in any
21 specific response shall not be interpreted as a waiver of any general objection to that response.

22 5. Nothing contained in these Responses and Objections or provided in response to the
23 Interrogatories consists of, or should be construed as, an admission relating to the accuracy,
24 relevance, existence, or nonexistence of any alleged facts or information referenced in any
25 Interrogatory.

1 **GENERAL OBJECTIONS**

2 1. Facebook objects to each Interrogatory, including the Definitions and Instructions, to
3 the extent that it purports to impose obligations beyond those imposed by the Federal Rules of Civil
4 Procedure, the Federal Rules of Evidence, the Local Civil Rules of the U.S. District Court for the
5 Northern District of California, and any agreements between the parties.

6 2. Facebook objects to each Interrogatory to the extent that it is not limited to the
7 relevant time period, thus making the Interrogatory overly broad, unduly burdensome, and not
8 relevant to the claims or defenses in this action. Unless otherwise specified in its responses,
9 Facebook's response will be limited to information generated between December 30, 2011 and
10 December 20, 2012.

11 3. Facebook objects to each Interrogatory to the extent that it seeks information unrelated
12 and irrelevant to the claims or defenses in this litigation and not reasonably calculated to lead to the
13 discovery of admissible evidence.

14 4. Facebook objects to each Interrogatory as overly broad and unduly burdensome,
15 particularly in view of Facebook's disproportionate cost necessary to investigate as weighed against
16 Plaintiffs' need for the information. For example, many of the Interrogatories seek broad and
17 vaguely defined categories of materials that are not reasonably tailored to the subject matter of this
18 action.

19 5. Facebook objects to each Interrogatory to the extent that it purports to request the
20 identification and disclosure of information or documents that were prepared in anticipation of
21 litigation, constitute attorney work product, reveal privileged attorney-client communications, or are
22 otherwise protected from disclosure under any applicable privileges, laws, or rules. Facebook hereby
23 asserts all such applicable privileges and protections, and excludes privileged and protected
24 information from its responses to each Interrogatory. *See generally* Fed. R. Evid. 502; Cal. Code
25 Evid. § 954. Inadvertent production of any information or documents that are privileged or otherwise
26 immune from discovery shall not constitute a waiver of any privilege or of any other ground for
27 objecting to the discovery with respect to such information or documents or the subject matter

1 thereof, or the right of Facebook to object to the use of any such information or documents or the
2 subject matter thereof during these or any other proceedings. In the event of inadvertent disclosure
3 of any information or inadvertent production or identification of documents or communications that
4 are privileged or otherwise immune from discovery, Plaintiffs will return the information and
5 documents to Facebook and will be precluded from disclosing or relying upon such information or
6 documents in any way.

7 6. Facebook objects to each and every Interrogatory to the extent that the information
8 sought by the Interrogatory is more appropriately pursued through another means of discovery, such
9 as a request for production or deposition.

10 7. Facebook objects to each and every Interrogatory, Definition, and Instruction to the
11 extent that it seeks information outside of Facebook's possession, custody, and control.

12 8. Facebook objects to each Interrogatory to the extent that it requests information
13 protected by the right of privacy of Facebook and/or third parties, or information that is confidential,
14 proprietary, or competitively sensitive.

15 9. Facebook objects to each Interrogatory to the extent that it seeks documents or
16 information already in Plaintiffs' possession or available in the public domain. Such information is
17 equally available to Plaintiffs.

18 **OBJECTIONS TO DEFINITIONS**

19 1. Facebook objects to Plaintiffs' definition of "Active Likes" as vague, ambiguous,
20 overly broad, and unduly burdensome. Facebook further objects to the definition to the extent that
21 Plaintiffs purport to use this defined term to seek materials that are not relevant to the claims and
22 defenses in this action, particularly as a result of its reference to the undefined term, "Social Plugin."
23 Facebook construes the term "Social Plugin" to have the meaning attributed to that term in the
24 operative versions of Facebook's Data Use Policy.

25 2. Facebook objects to Plaintiffs' definition of "Architecture" as vague, ambiguous,
26 overly broad, and unduly burdensome. Facebook further objects to the definition to the extent that
27 Plaintiffs purport to use this defined term to seek materials that are not relevant to the claims and
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1 defenses in this action, particularly as a result of its use of the phrase “including but not limited to”
2 and the undefined term “Your services.”

3 3. Facebook generally objects to Plaintiffs’ definitions of “Communication,”
4 “Document(s),” “Electronic Media,” “ESI,” “Electronically Stored Information,” “Identify,” and
5 “Metadata” to the extent that Plaintiffs purport to use these defined terms to request the identification
6 and disclosure of documents that: (a) were prepared in anticipation of litigation; (b) constitute
7 attorney work product; (c) reveal privileged attorney-client communications; or (d) are otherwise
8 protected from disclosure under any applicable privileges, laws, and/or rules. Facebook further
9 objects to the extent that these definitions purport to impose obligations that go beyond the
10 requirements of the Federal and Local Rules.

11 4. Facebook objects to Plaintiffs’ definition of “Facebook User Data Profile(s)” as vague,
12 ambiguous, overly broad, and unduly burdensome. Facebook further objects to the definition to the
13 extent that Plaintiffs purport to use this defined term to seek materials that are not relevant to the
14 claims and defenses in this action.

15 5. Facebook objects to Plaintiffs’ definition of “Passive Likes” as vague, ambiguous,
16 overly broad, and unduly burdensome. Facebook further objects to the definition to the extent that
17 Plaintiffs purport to use this defined term to seek materials that are not relevant to the claims and
18 defenses in this action. Facebook construes the term “Passive Likes” as it relates to the practice
19 challenged in this action (the alleged increase in the Facebook “Like” count on a website when the
20 URL for that website was contained in a message transmitted through Facebook’s Messages product
21 during the class period (December 30, 2011 to approximately December 20, 2012)). Specifically,
22 Facebook construes “Passive Likes” to refer to an increase in the “Like” count on a third-party
23 website resulting from inclusion of that website’s URL in a Facebook message during the class
24 period.

25 6. Facebook objects to Plaintiffs’ definition and use of the term “Person” as vague,
26 ambiguous, overly broad, and unduly burdensome to the extent that Plaintiffs intend to use this term

1 to include “any natural person or any business, legal or governmental entity or association” over
2 which Facebook exercises no control.

3 7. Facebook objects to Plaintiffs’ definition of “Private Message(s)” to the extent that it
4 is vague, ambiguous, overly broad, and unduly burdensome. Facebook further objects to the
5 definition to the extent that Plaintiffs purport to use this defined term to seek materials that are not
6 relevant to the claims and defenses in this action.

7 8. Facebook objects to Plaintiffs’ definition of “Private Message Content” to the extent
8 that it is vague, ambiguous, overly broad, and unduly burdensome. Facebook further objects to the
9 definition to the extent that Plaintiffs purport to use this defined term to seek materials that are not
10 relevant to the claims and defenses in this action. Facebook further objects to this definition on the
11 ground and to the extent it is inconsistent with applicable law.

12 9. Facebook objects to Plaintiffs’ definition of “Private Message Transmission” as vague,
13 ambiguous, overly broad, and unduly burdensome. Facebook further objects to the definition to the
14 extent that Plaintiffs purport to use this defined term to seek materials that are not relevant to the
15 claims and defenses in this action. Facebook further objects to this definition on the ground and to
16 the extent it is inconsistent with relevant law.

17 10. Facebook objects to Plaintiffs’ definitions of “Relate(s) to,” “Related to” and
18 “Relating to” on the ground that the definitions make the Interrogatories overly broad and unduly
19 burdensome and impose obligations that go beyond the requirements of the Federal and Local Rules.
20 Facebook shall construe these terms as commonly and ordinarily understood.

21 11. Facebook objects to Plaintiffs’ definition of “Targeted Advertising” as vague,
22 ambiguous, overly broad, and unduly burdensome. Facebook further objects to the definition to the
23 extent that Plaintiffs purport to use this defined term to seek materials that are not relevant to the
24 claims and defenses in this action. Facebook construes the term “Targeted Advertising” to refer to
25 the service described under the heading “Personalized ads” on page 5 of Facebook’s Data Use Policy,
26 dated September 7, 2011, and page 11 of Facebook’s Data Use Policy, dated June 8, 2012 (*see*
27 FB000000015; FB000000027).

1 12. Facebook objects to Plaintiffs’ definition of “Transmission,” “Transmit,” and
2 “Transmitting” as vague, ambiguous, overly broad, and unduly burdensome. Facebook further
3 objects to the definition to the extent that Plaintiffs purport to use these terms to seek materials that
4 are not relevant to the claims and defenses in this action.

5 13. Facebook objects to Plaintiffs’ definition and use of the terms “You” or “Your” as
6 vague, ambiguous, overly broad, and unduly burdensome to the extent the terms are meant to include
7 “directors, officers, employees, partners, members, representatives, agents (including attorneys,
8 accountants, consultants, investment advisors or bankers), and any other person purporting to act on
9 [Facebook, Inc.’s] behalf. . . . parents, subsidiaries, affiliates, predecessor entities, successor entities,
10 divisions, departments, groups, acquired entities and/or related entities or any other entity acting or
11 purporting to act on its behalf” over which Facebook exercises no control, and to the extent that
12 Plaintiffs purport to use these terms to impose obligations that go beyond the requirements of the
13 Federal and Local Rules.

14 **OBJECTIONS TO “RULES OF CONSTRUCTION” AND INSTRUCTIONS**

15 1. Facebook objects to Plaintiffs’ “Rules of Construction” and “Instructions” to the
16 extent they impose obligations that go beyond the requirements of the Federal and Local Rules.

17 2. Facebook objects to Plaintiffs’ Instruction No. 2 to the extent that it is not limited to
18 the relevant time period, thus making the Instruction overly broad, unduly burdensome, and not
19 relevant to the claims or defenses in this action. Unless otherwise specified in its responses,
20 Facebook’s response will be limited to information generated between December 30, 2011 and
21 December 20, 2012.

22 3. Facebook objects to Plaintiffs’ Instruction No. 6 as ambiguous and unduly
23 burdensome. Facebook further objects to the instruction to the extent it exceeds the requirements of
24 the Federal and Local Rules.

25 **OBJECTION TO PURPORTED “RELEVANT TIME PERIOD”**

26 Facebook objects to Plaintiffs’ proposed “Relevant Time Period” (September 26, 2006
27 through the present) because it substantially exceeds the proposed class period identified in Plaintiffs’
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1 Consolidated Amended Complaint, does not reflect the time period that is relevant to Plaintiffs'
2 claims in this action, and renders the Interrogatories overly broad, unduly burdensome, and irrelevant.
3 Unless otherwise specified, Facebook's Responses to these Interrogatories will be limited to
4 information generated between December 30, 2011 and December 20, 2012, which is the proposed
5 class period defined in Plaintiffs' Consolidated Amended Complaint. (See Pls.' Consol. Am. Compl.
6 [Dkt. 25] ¶ 59 & n.3.) Facebook otherwise objects to the remainder of Plaintiffs' statement regarding
7 the "Relevant Time Period" to the extent that it purports to impose obligations beyond those imposed
8 by the Federal and Local Rules.

9 **SPECIFIC RESPONSES AND OBJECTIONS**

10 **INTERROGATORY NO. 1:**

11 Identify all persons, including Third Parties and Your current and former employees, known
12 by You to have personal knowledge of any facts or issues involved in this lawsuit, and for each
13 person please identify

14 (A) the party's first and last name;

15 (B) the party's employer, if not You;

16 (C) the party's job title(s); and

17 (D) the nature of the party's personal knowledge of the facts or issues involved in this
18 lawsuit.

19 **RESPONSE TO INTERROGATORY NO. 1:**

20 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
21 to "Rules of Construction," Instructions, and Purported "Relevant Time Period" as though fully set
22 forth in this Response. Facebook further objects to this Interrogatory on the following additional
23 grounds:

24 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases "Third
25 Parties"; "any facts or issues involved in this lawsuit"; and "nature of the party's personal knowledge
26 of the facts or issues involved in this lawsuit."

27 (B) The Interrogatory is compound.

1 (C) The Interrogatory is overly broad in that it purports to seek information regarding each
2 Facebook employee's "personal knowledge" of "facts or issues involved in this lawsuit," over an
3 extended time period. Facebook will respond to the best of its ability and based on the information
4 known and identified to date.

5 (D) The Interrogatory purports to request employment information that is not relevant to the
6 claims or defenses in this action.

7 Subject to and without waiving the foregoing general and specific objections, and subject to
8 the ongoing nature of discovery in this action, Facebook responds as follows:

- 9 a. [REDACTED] has been an engineer at Facebook during the relevant time period.
10 Among other topics, [REDACTED] may have information relating to the operation and
11 security of Facebook's Messages product.
- 12 b. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
13 other topics, [REDACTED] may have information relating to Facebook's "Like" social plugin.
- 14 c. [REDACTED] has been an engineer at Facebook during the relevant time period. Among other
15 topics, [REDACTED] may have information relating to Facebook's "Like" social plugin.
- 16 d. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
17 other topics, [REDACTED] may have information relating to Facebook's security-related
18 efforts.
- 19 e. [REDACTED] has been a product marketing manager at Facebook during the
20 relevant time period. Among other topics, [REDACTED] may have information relating
21 to Facebook's targeted advertising feature.
- 22 f. [REDACTED] has been an engineer at Facebook during the relevant time period. Among other
23 topics, [REDACTED] may have information relating to Facebook's targeted advertising feature.

24 Facebook reserves the right to supplement its response to this Interrogatory as its investigation
25 continues.

1 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 1:**

2 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
3 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
4 forth in this Response. Facebook further objects to this Interrogatory on the following additional
5 grounds:

6 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases “Third
7 Parties”; “any facts or issues involved in this lawsuit”; and “nature of the party’s personal knowledge
8 of the facts or issues involved in this lawsuit.”

9 (B) The Interrogatory is compound.

10 (C) The Interrogatory is overly broad in that it purports to seek information regarding each
11 Facebook employee’s “personal knowledge” of “facts or issues involved in this lawsuit,” over an
12 extended time period. Facebook will respond to the best of its ability and based on the information
13 known and identified to date.

14 (D) The Interrogatory purports to request employment information that is not relevant to the
15 claims or defenses in this action.

16 Subject to and without waiving the foregoing general and specific objections, and subject to
17 the ongoing nature of discovery in this action, Facebook responds as follows:

- 18 a. [REDACTED] has been an engineer at Facebook during the relevant time period.
19 Among other topics, [REDACTED] may have information relating to the operation and
20 security of Facebook’s Messages product.
- 21 b. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
22 other topics, [REDACTED] may have information relating to Facebook’s “Like” social plugin.
- 23 c. [REDACTED] has been an engineer at Facebook during the relevant time period. Among other
24 topics, [REDACTED] may have information relating to Facebook’s “Like” social plugin.
- 25 d. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
26 other topics, [REDACTED] may have information relating to Facebook’s security-related
27 efforts.

- 1 e. [REDACTED] has been a product marketing manager at Facebook during the
2 relevant time period. Among other topics, [REDACTED] may have information relating
3 to Facebook’s targeted advertising feature.
- 4 f. [REDACTED] has been an engineer at Facebook during the relevant time period. Among other
5 topics, [REDACTED] may have information relating to Facebook’s targeted advertising feature.
- 6 g. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
7 other topics, [REDACTED] may have information relating to Facebook’s “Like” social
8 plugin.
- 9 h. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
10 other topics, [REDACTED] may have information relating to Facebook’s “Like” social plugin.
- 11 i. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
12 other topics, [REDACTED] may have information relating to Facebook’s “Like” social
13 plugin.
- 14 j. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
15 other topics, [REDACTED] may have information relating to the operation and security of
16 Facebook’s Messages product.
- 17 k. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
18 other topics, [REDACTED] may have information relating to the operation and security of
19 Facebook’s Messages product.
- 20 l. [REDACTED] has been a public relations manager at Facebook during the relevant time
21 period. Among other topics, [REDACTED] may have information relating to the media
22 coverage of the practice challenged in this action.
- 23 m. [REDACTED] has been a vice president of technology communications at Facebook
24 during the relevant time period. Among other topics, [REDACTED] may have
25 information relating to the media coverage of the practice challenged in this action.
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- 1 n. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
2 other topics, [REDACTED] may have information relating to Facebook’s security-related
3 efforts.
- 4 o. [REDACTED] has been an engineer at Facebook during the relevant time period.
5 Among other topics, [REDACTED] may have information relating to Facebook’s security-
6 related efforts.
- 7 p. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
8 other topics, [REDACTED] may have information relating to Facebook’s targeted
9 advertising feature.
- 10 q. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
11 other topics, [REDACTED] may have information relating to Facebook’s “Like” social
12 plugin.
- 13 r. [REDACTED] has been the deputy chief privacy officer at Facebook during the relevant
14 time period. Among other topics, [REDACTED] may have information relating to the
15 media coverage of the practice challenged in this action.
- 16 s. [REDACTED] has been a project manager at Facebook during the relevant time
17 period. Among other topics, [REDACTED] may have information relating to Facebook’s
18 targeted advertising feature.
- 19 t. [REDACTED] has been an engineer at Facebook during the relevant time period. Among
20 other topics, [REDACTED] may have information relating to Facebook’s “Like” social
21 plugin.
- 22 u. [REDACTED] has been a public policy manager at Facebook during the relevant time
23 period. Among other topics, [REDACTED] may have information relating to the media
24 coverage of the practice challenged in this action.

25 Facebook reserves the right to supplement its response to this Interrogatory as its investigation
26 continues.

1 **INTERROGATORY NO. 2:**

2 Identify by name, purpose, sequence, function and physical location each Process and/or piece
3 of Architecture involved in Private Message Transmission.

4 **RESPONSE TO INTERROGATORY NO. 2:**

5 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
6 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
7 forth in this Response. Facebook further objects to this Interrogatory on the following additional
8 grounds:

9 (A) The Interrogatory is vague and ambiguous in its use of the phrases “Process and/or
10 piece of Architecture” and “Private Message Transmission.”

11 (B) The Interrogatory is compound.

12 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
13 this action to the extent it concerns practices other than those challenged in this action (the alleged
14 increase in the Facebook “Like” count on a website when the URL for that website was contained in
15 a message transmitted through Facebook’s Messages product during the Class Period (December 30,
16 2011 to October 31, 2012)).

17 (D) The Interrogatory is overly broad in that it purports to seek information regarding each
18 “Process and/or piece of Architecture involved in” the transmission of Facebook messages over an
19 extended time period. Facebook will respond to the best of its ability and based on the information
20 known and identified to date, and as limited by the practice challenged in this action (as defined
21 above).

22 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
23 proprietary company information.

24 Subject to and without waiving the foregoing general and specific objections, and subject to
25 the ongoing nature of discovery in this action, Facebook responds as follows:

26 During the relevant period (December 30, 2011 to October 31, 2012), if a user typed a URL
27 into the text field in the Facebook Messages product, and the user had JavaScript enabled in her

1 browser, the JavaScript code running in the user’s browser may have detected the existence of a
2 URL.

3 The JavaScript code may then have requested information from a Facebook server in order to
4 provide a preview of the typed URL (“URL preview”)—including a brief description of the URL
5 and, if available, a relevant image from the website. At the time the request was sent to Facebook for
6 a preview, Facebook assessed whether the URL was in its library of known malicious URLs. If it
7 was, Facebook would not return a preview. If it was not, Facebook may have returned information
8 already on a Facebook server to generate a preview. Or, if information to generate the URL preview
9 was not available already on a Facebook server, a Facebook server may have sent a request to the
10 website, generated an image and description if available, and delivered those components to the
11 user’s browser to generate a URL preview. There was variability in the type of preview that may
12 have been rendered. For example, if the URL a user wanted to send required a viewer to log into the
13 destination website, the preview may have been blank, the user may have received an “HTTP 404” or
14 “Not Found” error message, or the preview may have shown the default page for the website.
15 Similarly, some websites may have provided Facebook with a specific image or description for the
16 preview, while others did not. Additionally, sometimes, depending on a number of factors (as
17 discussed above and below), a URL preview was not available despite these steps.

18 Where available, URL previews helped users verify the URL they were sharing before
19 sending. When the URL preview was generated, it was displayed for the message sender before
20 sending the message, so the sender could first verify and gain a sense of the information located at the
21 URL. This feature also allowed message recipients to preview a transmitted URL before clicking on
22 the URL. Under certain circumstances, a URL preview may not have been generated, such as if the
23 user did not have JavaScript enabled in her browser, or if a user sent the message before the preview
24 could be generated, or if the URL was known to be malicious. Additionally, if generated, URL
25 previews were only created for the first URL typed into a draft message, meaning that subsequent
26 URLs typed into the draft message did not generate a URL preview. Accordingly, whether or not a
27 URL preview was generated depended on myriad factors, such as the configuration of the user’s

1 browser, the type of URL entered, the number of URLs entered, and the speed of send, among other
2 individualized factors.

3 A URL preview is an attachment to the draft message. In other words, while a URL preview
4 may have been generated based on a URL typed into the text field of a draft message, the URL
5 preview is an attachment to the message that is separate and distinct from the message itself
6 (including the characters in the text field). Thus, once the URL attachment was created, changes to
7 the characters in the text field of the draft message did not impact the URL attachment. For example,
8 deleting the characters in the text field would not have impacted an existing URL attachment.
9 However, the user could delete the URL attachment by clicking the “X” in the corner of the preview.

10 If a user proceeded to send a message, the message (including the text of the message, certain
11 information about the message, e.g., date and time sent, sender, recipient, text formatting) as well as
12 any attachments (including URLs), would have been sent to a Facebook server. After receiving the
13 message on a Facebook server, Facebook software processed the message and any attachments while
14 they were in electronic storage, and sent certain data through Facebook’s abuse- and security-related
15 platform, which runs the data through certain filters. Depending on the specific data transmitted,
16 certain data about the message may have been assessed in various ways and against criteria intended
17 to detect large-scale automated abuse (e.g., spam, malware, phishing, and other abuse). For example,
18 one filter compares URL text in a message and in any attachments against a library of hundreds of
19 millions of URLs known to be dangerous. If a URL typed into a message appeared in the malicious
20 URL library, it may have been blocked and the author of the message may have received a message
21 from Facebook indicating that the URL was unsafe. By way of further example, once a message
22 reached a Facebook server and was in electronic storage, the security platform may have taken a
23 string of the text in the message and determined whether the occurring numbers and letters were
24 similar (in a statistically significant way) to other messages that appeared to be spam that were being
25 sent around the same time.

26 In general, if a message was determined to be dangerous for any one of these many different
27 reasons, it may have been treated in a number of different ways. For example, it may have been
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1 blocked in whole or in part from being routed by Facebook to the recipient mailbox, or a user may
2 have had to pass a CAPTCHA (“Completely Automated Public Turing test to tell Computers and
3 Humans Apart”) test before Facebook would deliver the message.

4 Once on a Facebook server, the message and attachments were also processed in various ways
5 to ultimately render the message as the user intended. For example, emoticons—specific series of
6 keyboard characters used to represent facial expressions—in the text of a message received and
7 stored on a Facebook server were processed in order to be translated into the images intended by the
8 sender. Messages were also processed for other reasons related to language rendering and
9 formatting.

10 If a URL attachment was successfully created (and not deleted by the user) prior to the
11 message being sent, then, after the message was sent and the message and components were received
12 and stored on a Facebook server, and if the message was not blocked in the course of abuse- and
13 security-related processing, the message event was logged in a number of ways, and several records
14 (“share objects”) were created reflecting the fact that the message had a URL as an attachment (a
15 “URL share”). In other words, each share object was created based on the receipt of a URL
16 attachment on a Facebook server; it was not generated based on the text of the message, which may
17 or may not have included a URL when sent. If a URL preview was not created before the message
18 was sent or was deleted by the user before sending, no share object was created. Similarly, if a
19 malicious message or URL was successfully “blocked,” no share object was created. As explained
20 below in response to Interrogatory No. 4, during the relevant time period (December 30, 2011 to
21 October 31, 2012), the software that generated and displayed the anonymous, aggregate “Like” count
22 on a third-party website that contained the “Like” button social plugin obtained the data regarding
23 URL attachments to messages from the stored repository of share object records—the global share
24 object record. If a user shared a URL through a message but no share object was created (for any of
25 the reasons noted above), the sharing of that URL did not increment the “Like” count social plugin on
26 the destination website. Similarly, if the destination website associated with the URL did not have a
27 Facebook “Like” button social plugin, the sharing of that URL did not increment the “Like” count on
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1 the website (even if a share object was created). Additionally, messages containing URLs sent from
2 outside of Facebook to a Facebook user (and vice versa) did not create attachments and therefore did
3 not create share objects.

4 The share data derived from the message data received on the Facebook server was stored in
5 three formats: user-specific message information, a user-specific share object, and a “global” share
6 object. The global share object recorded the instances of sharing the same root URL across the
7 Facebook platform. The user-specific message information was routed through the remainder of the
8 Facebook infrastructure, to the sender’s mailbox and to the recipient’s mailbox. If the recipient
9 called the message from her mailbox, the message and URL attachment were processed again
10 through a subset of Facebook’s abuse- and security-related filters. If the message and attachment
11 were not partially or completely blocked, the message and attachment were sent to the recipient client
12 for display. Messages were also processed to the extent necessary to display intended features and
13 render the appropriate language, and were then displayed to the intended recipient.

14 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 2:**

15 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
16 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
17 forth in this Response. Facebook further objects to this Interrogatory on the following additional
18 grounds:

19 (A) The Interrogatory is vague and ambiguous in its use of the phrases “Process and/or
20 piece of Architecture” and “Private Message Transmission.”

21 (B) The Interrogatory is compound.

22 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
23 this action to the extent it concerns practices other than those challenged in this action (the alleged
24 increase in the Facebook “Like” count on a website when the URL for that website was contained in
25 a message transmitted through Facebook’s Messages product during the Class Period (December 30,
26 2011 to approximately December 20, 2012)).

27 (D) The Interrogatory is overly broad in that it purports to seek information regarding each
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1 “Process and/or piece of Architecture involved in” the transmission of Facebook messages over an
2 extended time period. Facebook will respond to the best of its ability and based on the information
3 known and identified to date, and as limited by the practice challenged in this action (as defined
4 above).

5 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
6 proprietary company information.

7 Subject to and without waiving the foregoing general and specific objections, and subject to
8 the ongoing nature of discovery in this action, Facebook responds as follows:

9 During the relevant period (December 30, 2011 to approximately December 20, 2012), if a
10 user typed a URL into the text field in the Facebook Messages product, and the user had JavaScript
11 enabled in her browser, the JavaScript code running in the user’s browser may have detected the
12 existence of a URL.

13 The JavaScript code may then have requested information from a Facebook server in order to
14 provide a preview of the typed URL (“URL preview”)—including a brief description of the URL
15 and, if available, a relevant image from the website. At the time the request was sent to Facebook for
16 a preview, Facebook assessed whether the URL was in its library of known malicious URLs. If it
17 was, Facebook would not return a preview. If it was not, Facebook may have returned information
18 already on a Facebook server to generate a preview. Or, if information to generate the URL preview
19 was not available already on a Facebook server, a Facebook server may have sent a request to the
20 website, generated an image and description if available, and delivered those components to the
21 user’s browser to generate a URL preview. There was variability in the type of preview that may
22 have been rendered. For example, if the URL a user wanted to send required a viewer to log into the
23 destination website, the preview may have been blank, the user may have received an “HTTP 404” or
24 “Not Found” error message, or the preview may have shown the default page for the website.
25 Similarly, some websites may have provided Facebook with a specific image or description for the
26 preview, while others did not. Additionally, sometimes, depending on a number of factors (as
27 discussed above and below), a URL preview was not available despite these steps.

1 Where available, URL previews helped users verify the URL they were sharing before
2 sending. When the URL preview was generated, it was displayed for the message sender before
3 sending the message, so the sender could first verify and gain a sense of the information located at the
4 URL. This feature also allowed message recipients to preview a transmitted URL before clicking on
5 the URL. Under certain circumstances, a URL preview may not have been generated, such as if the
6 user did not have JavaScript enabled in her browser, or if a user sent the message before the preview
7 could be generated, or if the URL was known to be malicious. Additionally, if generated, URL
8 previews were only created for the first URL typed into a draft message, meaning that subsequent
9 URLs typed into the draft message did not generate a URL preview. Accordingly, whether or not a
10 URL preview was generated depended on myriad factors, such as the configuration of the user's
11 browser, the type of URL entered, the number of URLs entered, and the speed of send, among other
12 individualized factors.

13 A URL preview is an attachment to the draft message. In other words, while a URL preview
14 may have been generated based on a URL typed into the text field of a draft message, the URL
15 preview is an attachment to the message that is separate and distinct from the message itself
16 (including the characters in the text field). Thus, once the URL attachment was created, changes to
17 the characters in the text field of the draft message did not impact the URL attachment. For example,
18 deleting the characters in the text field would not have impacted an existing URL attachment.
19 However, the user could delete the URL attachment by clicking the "X" in the corner of the preview.

20 If a user proceeded to send a message, the message (including the text of the message, certain
21 information about the message, e.g., date and time sent, sender, recipient, text formatting) as well as
22 any attachments (including URLs), would have been sent to a Facebook server. After receiving the
23 message on a Facebook server, Facebook software processed the message and any attachments while
24 they were in electronic storage, and sent certain data through Facebook's abuse- and security-related
25 platform, which runs the data through certain filters. Depending on the specific data transmitted,
26 certain data about the message may have been assessed in various ways and against criteria intended
27 to detect large-scale automated abuse (e.g., spam, malware, phishing, and other abuse). For example,

1 one filter compares URL text in a message and in any attachments against a library of hundreds of
2 millions of URLs known to be dangerous. If a URL typed into a message appeared in the malicious
3 URL library, it may have been blocked and the author of the message may have received a message
4 from Facebook indicating that the URL was unsafe. By way of further example, once a message
5 reached a Facebook server and was in electronic storage, the security platform may have taken a
6 string of the text in the message and determined whether the occurring numbers and letters were
7 similar (in a statistically significant way) to other messages that appeared to be spam that were being
8 sent around the same time.

9 In general, if a message was determined to be dangerous for any one of these many different
10 reasons, it may have been treated in a number of different ways. For example, it may have been
11 blocked in whole or in part from being routed by Facebook to the recipient mailbox, or a user may
12 have had to pass a CAPTCHA (“Completely Automated Public Turing test to tell Computers and
13 Humans Apart”) test before Facebook would deliver the message.

14 Once on a Facebook server, the message and attachments were also processed in various ways
15 to ultimately render the message as the user intended. For example, emoticons—specific series of
16 keyboard characters used to represent facial expressions—in the text of a message received and
17 stored on a Facebook server were processed in order to be translated into the images intended by the
18 sender. Messages were also processed for other reasons related to language rendering and
19 formatting.

20 If a URL attachment was successfully created (and not deleted by the user) prior to the
21 message being sent, then, after the message was sent and the message and components were received
22 and stored on a Facebook server, and if the message was not blocked in the course of abuse- and
23 security-related processing, the message event was logged in a number of ways, and several records
24 (“share objects”) were created reflecting the fact that the message had a URL as an attachment (a
25 “URL share”). In other words, each share object was created based on the receipt of a URL
26 attachment on a Facebook server; it was not generated based on the text of the message, which may
27 or may not have included a URL when sent. If a URL preview was not created before the message
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1 was sent or was deleted by the user before sending, no share object was created. Similarly, if a
2 malicious message or URL was successfully “blocked,” no share object was created. As explained
3 below in response to Interrogatory No. 4, during the relevant time period (December 30, 2011 to
4 approximately December 20, 2012), the software that generated and displayed the anonymous,
5 aggregate “Like” count on a third-party website that contained the “Like” button social plugin
6 obtained the data regarding URL attachments to messages from the stored repository of share object
7 records—the global share object record. If a user shared a URL through a message but no share
8 object was created (for any of the reasons noted above), the sharing of that URL did not increment
9 the “Like” count social plugin on the destination website. Similarly, if the destination website
10 associated with the URL did not have a Facebook “Like” button social plugin, or if one of a number
11 of other conditions was present, the sharing of that URL did not increment the “Like” count on the
12 website (even if a share object was created). Additionally, messages containing URLs sent from
13 outside of Facebook to a Facebook user (and vice versa) did not create attachments and therefore did
14 not create share objects.

15 The share data derived from the message data received on the Facebook server was stored in
16 three formats: user-specific message information, a user-specific share object, and a “global” share
17 object. The global share object recorded the instances of sharing the same root URL across the
18 Facebook platform. The user-specific message information was routed through the remainder of the
19 Facebook infrastructure, to the sender’s mailbox and to the recipient’s mailbox. If the recipient
20 called the message from her mailbox, the message and URL attachment were processed again
21 through a subset of Facebook’s abuse- and security-related filters. If the message and attachment
22 were not partially or completely blocked, the message and attachment were sent to the recipient client
23 for display. Messages were also processed to the extent necessary to display intended features and
24 render the appropriate language, and were then displayed to the intended recipient.

25 **INTERROGATORY NO. 3:**

26 For each Process and/or piece of Architecture identified in Interrogatory No. 2, identify
27 whether – and the manner in which – such Process and/or piece of Architecture scans, analyzes, or
28

1 extracts Private Message Content.

2 **RESPONSE TO INTERROGATORY NO. 3:**

3 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
4 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
5 forth in this Response. Facebook further objects to this Interrogatory on the following additional
6 grounds:

7 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases “Process
8 and/or piece of Architecture,” “Private Message Content,” “scans,” “analyzes,” and “extracts.”

9 (B) The Interrogatory is compound.

10 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
11 this action to the extent it concerns practices other than those challenged (the alleged increase in the
12 Facebook “Like” count on a website when the URL for that website was contained in a message
13 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
14 October 31, 2012)).

15 (D) The Interrogatory is overly broad in that it purports to seek additional information
16 regarding each “Process and/or piece of Architecture involved in” the transmission of Facebook
17 messages over an extended time period. Facebook will respond to the best of its ability and based on
18 the information known and identified to date, and as limited by the practice challenged in this action
19 (as defined above).

20 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
21 proprietary company information.

22 Subject to and without waiving the foregoing general and specific objections, and subject to
23 the ongoing nature of discovery in this action, Facebook responds as follows:

24 During the relevant period (December 30, 2011 to October 31, 2012), if a user typed a URL
25 into the text field in the Facebook Messages product, and the user had JavaScript enabled in her
26 browser, the JavaScript code running in the user’s browser may have detected the existence of a
27 URL.

1 The JavaScript code may then have requested information from a Facebook server in order to
2 provide a preview of the typed URL (“URL preview”)—including a brief description of the URL
3 and, if available, a relevant image from the website. At the time the request was sent to Facebook for
4 a preview, Facebook assessed whether the URL was in its library of known malicious URLs. If it
5 was, Facebook would not return a preview. If it was not, Facebook may have returned information
6 already on a Facebook server to generate a preview. Or, if information to generate the URL preview
7 was not available already on a Facebook server, a Facebook server may have sent a request to the
8 website, generated an image and description if available, and delivered those components to the
9 user’s browser to generate a URL preview. There was variability in the type of preview that may
10 have been rendered. For example, if the URL a user wanted to send required a viewer to log into the
11 destination website, the preview may have been blank, the user may have received an “HTTP 404” or
12 “Not Found” error message, or the preview may have shown the default page for the website.
13 Similarly, some websites may have provided Facebook with a specific image or description for the
14 preview, while others did not. Additionally, sometimes, depending on a number of factors (as
15 discussed above and below), a URL preview was not available despite these steps.

16 Where available, URL previews helped users verify the URL they were sharing before
17 sending. When the URL preview was generated, it was displayed for the message sender before
18 sending the message, so the sender could first verify and gain a sense of the information located at the
19 URL. This feature also allowed message recipients to preview a transmitted URL before clicking on
20 the URL. Under certain circumstances, a URL preview may not have been generated, such as if the
21 user did not have JavaScript enabled in her browser, or if a user sent the message before the preview
22 could be generated, or if the URL was known to be malicious. Additionally, if generated, URL
23 previews were only created for the first URL typed into a draft message, meaning that subsequent
24 URLs typed into the draft message did not generate a URL preview. Accordingly, whether or not a
25 URL preview was generated depended on myriad factors, such as the configuration of the user’s
26 browser, the type of URL entered, the number of URLs entered, and the speed of send, among other
27 individualized factors.

1 A URL preview is an attachment to the draft message. In other words, while a URL preview
2 may have been generated based on a URL typed into the text field of a draft message, the URL
3 preview is an attachment to the message that is separate and distinct from the message itself
4 (including the characters in the text field). Thus, once the URL attachment was created, changes to
5 the characters in the text field of the draft message did not impact the URL attachment. For example,
6 deleting the characters in the text field would not have impacted an existing URL attachment.
7 However, the user could delete the URL attachment by clicking the “X” in the corner of the preview.

8 If a user proceeded to send a message, the message (including the text of the message, certain
9 information about the message, e.g., date and time sent, sender, recipient, text formatting) as well as
10 any attachments (including URLs), would have been sent to a Facebook server. After receiving the
11 message on a Facebook server, Facebook software processed the message and any attachments while
12 they were in electronic storage, and sent certain data through Facebook’s abuse- and security-related
13 platform, which runs the data through certain filters. Depending on the specific data transmitted,
14 certain data about the message may have been assessed in various ways and against criteria intended
15 to detect large-scale automated abuse (e.g., spam, malware, phishing, and other abuse). For example,
16 one filter compares URL text in a message and in any attachments against a library of hundreds of
17 millions of URLs known to be dangerous. If a URL typed into a message appeared in the malicious
18 URL library, it may have been blocked and the author of the message may have received a message
19 from Facebook indicating that the URL was unsafe. By way of further example, once a message
20 reached a Facebook server and was in electronic storage, the security platform may have taken a
21 string of the text in the message and determined whether the occurring numbers and letters were
22 similar (in a statistically significant way) to other messages that appeared to be spam that were being
23 sent around the same time.

24 In general, if a message was determined to be dangerous for any one of these many different
25 reasons, it may have been treated in a number of different ways. For example, it may have been
26 blocked in whole or in part from being routed by Facebook to the recipient mailbox, or a user may
27 have had to pass a CAPTCHA (“Completely Automated Public Turing test to tell Computers and
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1 Humans Apart”) test before Facebook would deliver the message.

2 Once on a Facebook server, the message and attachments were also processed in various ways
3 to ultimately render the message as the user intended. For example, emoticons—specific series of
4 keyboard characters used to represent facial expressions—in the text of a message received and
5 stored on a Facebook server were processed in order to be translated into the images intended by the
6 sender. Messages were also processed for other reasons related to language rendering and
7 formatting.

8 If a URL attachment was successfully created (and not deleted by the user) prior to the
9 message being sent, then, after the message was sent and the message and components were received
10 and stored on a Facebook server, and if the message was not blocked in the course of abuse- and
11 security-related processing, the message event was logged in a number of ways, and several records
12 (“share objects”) were created reflecting the fact that the message had a URL as an attachment (a
13 “URL share”). In other words, each share object was created based on the receipt of a URL
14 attachment on a Facebook server; it was not generated based on the text of the message, which may
15 or may not have included a URL when sent. If a URL preview was not created before the message
16 was sent or was deleted by the user before sending, no share object was created. Similarly, if a
17 malicious message or URL was successfully “blocked,” no share object was created. As explained
18 below in response to Interrogatory No. 4, during the relevant time period (December 30, 2011 to
19 October 31, 2012), the software that generated and displayed the anonymous, aggregate “Like” count
20 on a third-party website that contained the “Like” button social plugin obtained the data regarding
21 URL attachments to messages from the stored repository of share object records—the global share
22 object record. If a user shared a URL through a message but no share object was created (for any of
23 the reasons noted above), the sharing of that URL did not increment the “Like” count social plugin on
24 the destination website. Similarly, if the destination website associated with the URL did not have a
25 Facebook “Like” button social plugin, the sharing of that URL did not increment the “Like” count on
26 the website (even if a share object was created). Additionally, messages containing URLs sent from
27 outside of Facebook to a Facebook user (and vice versa) did not create attachments and therefore did
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1 not create share objects.

2 The share data derived from the message data received on the Facebook server was stored in
3 three formats: user-specific message information, a user-specific share object, and a “global” share
4 object. The global share object recorded the instances of sharing the same root URL across the
5 Facebook platform. The user-specific message information was routed through the remainder of the
6 Facebook infrastructure, to the sender’s mailbox and to the recipient’s mailbox. If the recipient
7 called the message from her mailbox, the message and URL attachment were processed again
8 through a subset of Facebook’s abuse- and security-related filters. If the message and attachment
9 were not partially or completely blocked, the message and attachment were sent to the recipient client
10 for display. Messages were also processed to the extent necessary to display intended features and
11 render the appropriate language, and were then displayed to the intended recipient.

12 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 3:**

13 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
14 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
15 forth in this Response. Facebook further objects to this Interrogatory on the following additional
16 grounds:

17 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases “Process
18 and/or piece of Architecture,” “Private Message Content,” “scans,” “analyzes,” and “extracts.”

19 (B) The Interrogatory is compound.

20 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
21 this action to the extent it concerns practices other than those challenged (the alleged increase in the
22 Facebook “Like” count on a website when the URL for that website was contained in a message
23 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
24 approximately December 20, 2012).

25 (D) The Interrogatory is overly broad in that it purports to seek additional information
26 regarding each “Process and/or piece of Architecture involved in” the transmission of Facebook
27 messages over an extended time period. Facebook will respond to the best of its ability and based on
28

1 the information known and identified to date, and as limited by the practice challenged in this action
2 (as defined above).

3 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
4 proprietary company information.

5 Subject to and without waiving the foregoing general and specific objections, and subject to
6 the ongoing nature of discovery in this action, Facebook responds as follows:

7 During the relevant period (December 30, 2011 to approximately December 20, 2012), if a
8 user typed a URL into the text field in the Facebook Messages product, and the user had JavaScript
9 enabled in her browser, the JavaScript code running in the user's browser may have detected the
10 existence of a URL.

11 The JavaScript code may then have requested information from a Facebook server in order to
12 provide a preview of the typed URL ("URL preview")—including a brief description of the URL
13 and, if available, a relevant image from the website. At the time the request was sent to Facebook for
14 a preview, Facebook assessed whether the URL was in its library of known malicious URLs. If it
15 was, Facebook would not return a preview. If it was not, Facebook may have returned information
16 already on a Facebook server to generate a preview. Or, if information to generate the URL preview
17 was not available already on a Facebook server, a Facebook server may have sent a request to the
18 website, generated an image and description if available, and delivered those components to the
19 user's browser to generate a URL preview. There was variability in the type of preview that may
20 have been rendered. For example, if the URL a user wanted to send required a viewer to log into the
21 destination website, the preview may have been blank, the user may have received an "HTTP 404" or
22 "Not Found" error message, or the preview may have shown the default page for the website.
23 Similarly, some websites may have provided Facebook with a specific image or description for the
24 preview, while others did not. Additionally, sometimes, depending on a number of factors (as
25 discussed above and below), a URL preview was not available despite these steps.

26 Where available, URL previews helped users verify the URL they were sharing before
27 sending. When the URL preview was generated, it was displayed for the message sender before
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1 sending the message, so the sender could first verify and gain a sense of the information located at the
2 URL. This feature also allowed message recipients to preview a transmitted URL before clicking on
3 the URL. Under certain circumstances, a URL preview may not have been generated, such as if the
4 user did not have JavaScript enabled in her browser, or if a user sent the message before the preview
5 could be generated, or if the URL was known to be malicious. Additionally, if generated, URL
6 previews were only created for the first URL typed into a draft message, meaning that subsequent
7 URLs typed into the draft message did not generate a URL preview. Accordingly, whether or not a
8 URL preview was generated depended on myriad factors, such as the configuration of the user's
9 browser, the type of URL entered, the number of URLs entered, and the speed of send, among other
10 individualized factors.

11 A URL preview is an attachment to the draft message. In other words, while a URL preview
12 may have been generated based on a URL typed into the text field of a draft message, the URL
13 preview is an attachment to the message that is separate and distinct from the message itself
14 (including the characters in the text field). Thus, once the URL attachment was created, changes to
15 the characters in the text field of the draft message did not impact the URL attachment. For example,
16 deleting the characters in the text field would not have impacted an existing URL attachment.
17 However, the user could delete the URL attachment by clicking the "X" in the corner of the preview.

18 If a user proceeded to send a message, the message (including the text of the message, certain
19 information about the message, e.g., date and time sent, sender, recipient, text formatting) as well as
20 any attachments (including URLs), would have been sent to a Facebook server. After receiving the
21 message on a Facebook server, Facebook software processed the message and any attachments while
22 they were in electronic storage, and sent certain data through Facebook's abuse- and security-related
23 platform, which runs the data through certain filters. Depending on the specific data transmitted,
24 certain data about the message may have been assessed in various ways and against criteria intended
25 to detect large-scale automated abuse (e.g., spam, malware, phishing, and other abuse). For example,
26 one filter compares URL text in a message and in any attachments against a library of hundreds of
27 millions of URLs known to be dangerous. If a URL typed into a message appeared in the malicious
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1 URL library, it may have been blocked and the author of the message may have received a message
2 from Facebook indicating that the URL was unsafe. By way of further example, once a message
3 reached a Facebook server and was in electronic storage, the security platform may have taken a
4 string of the text in the message and determined whether the occurring numbers and letters were
5 similar (in a statistically significant way) to other messages that appeared to be spam that were being
6 sent around the same time.

7 In general, if a message was determined to be dangerous for any one of these many different
8 reasons, it may have been treated in a number of different ways. For example, it may have been
9 blocked in whole or in part from being routed by Facebook to the recipient mailbox, or a user may
10 have had to pass a CAPTCHA (“Completely Automated Public Turing test to tell Computers and
11 Humans Apart”) test before Facebook would deliver the message.

12 Once on a Facebook server, the message and attachments were also processed in various ways
13 to ultimately render the message as the user intended. For example, emoticons—specific series of
14 keyboard characters used to represent facial expressions—in the text of a message received and
15 stored on a Facebook server were processed in order to be translated into the images intended by the
16 sender. Messages were also processed for other reasons related to language rendering and
17 formatting.

18 If a URL attachment was successfully created (and not deleted by the user) prior to the
19 message being sent, then, after the message was sent and the message and components were received
20 and stored on a Facebook server, and if the message was not blocked in the course of abuse- and
21 security-related processing, the message event was logged in a number of ways, and several records
22 (“share objects”) were created reflecting the fact that the message had a URL as an attachment (a
23 “URL share”). In other words, each share object was created based on the receipt of a URL
24 attachment on a Facebook server; it was not generated based on the text of the message, which may
25 or may not have included a URL when sent. If a URL preview was not created before the message
26 was sent or was deleted by the user before sending, no share object was created. Similarly, if a
27 malicious message or URL was successfully “blocked,” no share object was created. As explained

1 below in response to Interrogatory No. 4, during the relevant time period (December 30, 2011 to
2 approximately December 20, 2012), the software that generated and displayed the anonymous,
3 aggregate “Like” count on a third-party website that contained the “Like” button social plugin
4 obtained the data regarding URL attachments to messages from the stored repository of share object
5 records—the global share object record. If a user shared a URL through a message but no share
6 object was created (for any of the reasons noted above), the sharing of that URL did not increment
7 the “Like” count social plugin on the destination website. Similarly, if the destination website
8 associated with the URL did not have a Facebook “Like” button social plugin, or if one of a number
9 of other conditions was present, the sharing of that URL did not increment the “Like” count on the
10 website (even if a share object was created). Additionally, messages containing URLs sent from
11 outside of Facebook to a Facebook user (and vice versa) did not create attachments and therefore did
12 not create share objects.

13 The share data derived from the message data received on the Facebook server was stored in
14 three formats: user-specific message information, a user-specific share object, and a “global” share
15 object. The global share object recorded the instances of sharing the same root URL across the
16 Facebook platform. The user-specific message information was routed through the remainder of the
17 Facebook infrastructure, to the sender’s mailbox and to the recipient’s mailbox. If the recipient
18 called the message from her mailbox, the message and URL attachment were processed again
19 through a subset of Facebook’s abuse- and security-related filters. If the message and attachment
20 were not partially or completely blocked, the message and attachment were sent to the recipient client
21 for display. Messages were also processed to the extent necessary to display intended features and
22 render the appropriate language, and were then displayed to the intended recipient.

23 **INTERROGATORY NO. 4:**

24 For each Process and/or piece of Architecture identified in Interrogatory No. 3, identify all
25 uses to which the scanned/analyzed/extracted Private Message Content – as well as any additional
26 data, metadata or other content generated therefrom – are put.

1 **RESPONSE TO INTERROGATORY NO. 4:**

2 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
3 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
4 forth in this Response. Facebook further objects to this Interrogatory on the following additional
5 grounds:

6 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases “Process
7 and/or piece of Architecture,” “Private Message Content,” “scanned,” “analyzed,” and “extracted.”

8 (B) The Interrogatory is compound.

9 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
10 this action to the extent it concerns practices other than those challenged (the alleged increase in the
11 Facebook “Like” count on a website when the URL for that website was contained in a message
12 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
13 October 31, 2012)).

14 (D) The Interrogatory is overly broad in that it purports to seek additional information
15 regarding each “Process and/or piece of Architecture involved in” the transmission of Facebook
16 messages over an extended time period. Facebook will respond to the best of its ability and based on
17 the information known and identified to date, and as limited by the practice challenged in this action
18 (as defined above).

19 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
20 proprietary company information.

21 Subject to and without waiving the foregoing general and specific objections, and subject to
22 the ongoing nature of discovery in this action, Facebook responds as follows:

23 Among other ways to share information on Facebook’s platform, Facebook users may share
24 information by sending a Facebook message to one or more selected Facebook users, which can be
25 viewed in the recipient user’s Messages folder on the Facebook website. All shared information,
26 including messages, is received by Facebook and stored on Facebook servers. Facebook must
27 receive and host all information shared on the site to provide its service. By joining Facebook, and

1 agreeing to Facebook’s Data Use Policy, all users acknowledge that they understand and agree that
2 Facebook will receive and employ user data—including information Facebook receives whenever a
3 user sends or receives a message—for a variety of routine business purposes, including, among other
4 things, “efforts to keep Facebook products, services and integrations safe and secure,” “to measure or
5 understand the effectiveness of ads [users] and others see, including to deliver relevant ads to [the
6 user],” and “for internal operations” such as “data analysis” or “service improvement.” Users also
7 acknowledge that Facebook may share information, including with “developers that build the . . .
8 websites [users] use,” where Facebook “has removed your name and any other personally identifying
9 information from it.”

10 Facebook must process and store messages so that users have an accessible repository of their
11 messages—a vital component of its Messages product. Facebook also must process messages to
12 render the basic features of the Messages product (such as language and format) and to facilitate
13 information sharing. Facebook also generates URL preview functionality. This feature reduces the
14 transmission of unintended content, and recipients can preview a transmitted URL before visiting the
15 destination website.

16 Facebook also processes messages to filter spam; detect and block malicious messages,
17 URLs, and photos; detect conversations that could be related to criminal behavior; and protect the site
18 from threats to its stability and integrity. Facebook’s anti-abuse efforts continually process data from
19 across the Facebook service to evolve and enhance Facebook’s ability to protect users and the site.

20 During the proposed class period (December 30, 2011 to October 31, 2012), Facebook offered
21 websites “social plugins,” or units of embeddable code that allow people to share information using
22 Facebook directly from third-party websites. For example, a third-party website may embed code for
23 the Facebook “Like” button plugin on its website, enabling Facebook users to directly “Like” the
24 website and to share that action with their Facebook connections (without having to return to
25 <https://www.facebook.com> or the Facebook mobile app to share the content). The “Like” button
26 plugin also may display an anonymous and aggregate count of all “Likes” for that particular website.

27 During the relevant time period (December 30, 2011 to October 31, 2012), this aggregate count of
28

1 “Likes” may have included URLs (1) shared (in the NewsFeed), (2) commented on, (3) liked, and (4)
2 sent as an attachment to a message (and recorded as a share object). The software that generated and
3 displayed the Like count during this period obtained the data regarding URL attachments to messages
4 from the stored repository of share object records—the global share object record. If a user shared a
5 URL through a message but no share object was created (for any of the reasons noted in responses to
6 Interrogatories Nos. 2-3), the sharing of that URL did not increment the “Like” count social plugin on
7 the destination website. Similarly, if the destination website associated with the URL did not have a
8 Facebook “Like” button plugin, the sharing of that URL did not increment the “Like” count social
9 plugin on the website (even if a share object was created). Additionally, in some cases, even if a
10 share object was created and the destination website associated with the URL had a Facebook “Like”
11 button plugin, the “Like” count on the destination website may not have been incremented (for
12 example, if the URL a user included in a message was not exactly the same as the URL the developer
13 passed to the plugin).

14 During the relevant period, the generation of a URL attachment (if it occurred) and the
15 increase in the “Like” count on the associated third-party website (if it occurred) were part of
16 Facebook’s routine and ordinary course of business and were documented in Facebook’s publicly-
17 available developer guidance. (Pls.’ Compl. [Dkt. 1] at p. 16 n.40.) On or about October 16, 2012,
18 Facebook discontinued its practice of including URL attachments to messages in the “Like” count on
19 associated third-party websites. Following the change in practice, a share object may still have been
20 created for a successful URL attachment, but the code generating the “Like” count on associated
21 third-party websites did not include URL attachments to messages. As detailed above, during the
22 relevant period, whether a URL included in the text of a given message triggered an increase in the
23 anonymous, aggregate “Like” count on an associated third-party website is a highly individualized
24 inquiry that depends on myriad variables.

25 Additionally, various message statistics, including all three formats for storing URL share
26 data—message-specific information, user-specific share objects, and the global share object—were
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1 part of the universe of data available to the site integrity and abuse- and security-related platforms for
2 URL classification and other continuing security efforts.

3 During the relevant period, Facebook did not use URL share data nor any message content to
4 serve targeted advertisements.

5 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 4:**

6 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
7 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
8 forth in this Response. Facebook further objects to this Interrogatory on the following additional
9 grounds:

10 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases “Process
11 and/or piece of Architecture,” “Private Message Content,” “scanned,” “analyzed,” and “extracted.”

12 (B) The Interrogatory is compound.

13 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
14 this action to the extent it concerns practices other than those challenged (the alleged increase in the
15 Facebook “Like” count on a website when the URL for that website was contained in a message
16 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
17 approximately December 20, 2012)).

18 (D) The Interrogatory is overly broad in that it purports to seek additional information
19 regarding each “Process and/or piece of Architecture involved in” the transmission of Facebook
20 messages over an extended time period. Facebook will respond to the best of its ability and based on
21 the information known and identified to date, and as limited by the practice challenged in this action
22 (as defined above).

23 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
24 proprietary company information.

25 Subject to and without waiving the foregoing general and specific objections, and subject to
26 the ongoing nature of discovery in this action, Facebook responds as follows:

27 Among other ways to share information on Facebook’s platform, Facebook users may share
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1 information by sending a Facebook message to one or more selected Facebook users, which can be
2 viewed in the recipient user’s Messages folder on the Facebook website. All shared information,
3 including messages, is received by Facebook and stored on Facebook servers. Facebook must
4 receive and host all information shared on the site to provide its service. By joining Facebook, and
5 agreeing to Facebook’s Data Use Policy, all users acknowledge that they understand and agree that
6 Facebook will receive and employ user data—including information Facebook receives whenever a
7 user sends or receives a message—for a variety of routine business purposes, including, among other
8 things, “efforts to keep Facebook products, services and integrations safe and secure,” “to measure or
9 understand the effectiveness of ads [users] and others see, including to deliver relevant ads to [the
10 user],” and “for internal operations” such as “data analysis” or “service improvement.” Users also
11 acknowledge that Facebook may share information, including with “developers that build the . . .
12 websites [users] use,” where Facebook “has removed your name and any other personally identifying
13 information from it.”

14 Facebook must process and store messages so that users have an accessible repository of their
15 messages—a vital component of its Messages product. Facebook also must process messages to
16 render the basic features of the Messages product (such as language and format) and to facilitate
17 information sharing. Facebook also generates URL preview functionality. This feature reduces the
18 transmission of unintended content, and recipients can preview a transmitted URL before visiting the
19 destination website.

20 Facebook also processes messages to filter spam; detect and block malicious messages,
21 URLs, and photos; detect conversations that could be related to criminal behavior; and protect the site
22 from threats to its stability and integrity. Facebook’s anti-abuse efforts continually process data from
23 across the Facebook service to evolve and enhance Facebook’s ability to protect users and the site.

24 During the proposed class period (December 30, 2011 to approximately December 20, 2012),
25 Facebook offered websites “social plugins,” or units of embeddable code that allow people to share
26 information using Facebook directly from third-party websites. For example, a third-party website
27 may embed code for the Facebook “Like” button plugin on its website, enabling Facebook users to
28

1 directly “Like” the website and to share that action with their Facebook connections (without having
2 to return to <https://www.facebook.com> or the Facebook mobile app to share the content). The “Like”
3 button plugin also may display an anonymous and aggregate count of all “Likes” for that particular
4 website. During the relevant time period (December 30, 2011 to approximately December 20, 2012),
5 this aggregate count of “Likes” may have included URLs (1) shared (in the NewsFeed), (2)
6 commented on, (3) liked, and (4) sent as an attachment to a message (and recorded as a share object).
7 The software that generated and displayed the Like count during this period obtained the data
8 regarding URL attachments to messages from the stored repository of share object records—the
9 global share object record. If a user shared a URL through a message but no share object was created
10 (for any of the reasons noted in responses to Interrogatories Nos. 2-3), the sharing of that URL did
11 not increment the “Like” count social plugin on the destination website. Similarly, if the destination
12 website associated with the URL did not have a Facebook “Like” button plugin, the sharing of that
13 URL did not increment the “Like” count social plugin on the website (even if a share object was
14 created). Additionally, in some cases, even if a share object was created and the destination website
15 associated with the URL had a Facebook “Like” button plugin, the “Like” count on the destination
16 website may not have been incremented. For example, if the URL a user included in a message was
17 not exactly the same as the URL the developer passed to the plugin, the “Like” count on the
18 destination website may not have been incremented. Other examples of circumstances that could
19 have led to no incrementing of the “Like” count on a destination website, even if a share object was
20 created, included race conditions and database failures and contention. Race conditions occur when
21 multiple people share the same URL at the same time and Facebook only processes one increment to
22 the count; this happens more frequently when many people try to share at once. Database failure or
23 contention can occur for many reasons, including the interplay between different databases stored in
24 different locations contributing to a single count.

25 During the relevant period, the generation of a URL attachment (if it occurred) and the
26 increase in the “Like” count on the associated third-party website (if it occurred) were part of
27 Facebook’s routine and ordinary course of business and were documented in Facebook’s publicly-
28

1 available developer guidance. (Pls.’ Compl. [Dkt. 1] at p. 16 n.40.) On or about October 16, 2012
2 and December 20, 2012 (as explained in the June 1, 2015 Declaration of Alex Himel), Facebook
3 discontinued its practice of including URL attachments to messages in the “Like” count on associated
4 third-party websites. Following the change in practice, a share object may still have been created for
5 a successful URL attachment, but the code generating the “Like” count on associated third-party
6 websites did not include URL attachments to messages. As detailed above, during the relevant
7 period, whether a URL included in the text of a given message triggered an increase in the
8 anonymous, aggregate “Like” count on an associated third-party website is a highly individualized
9 inquiry that depends on myriad variables.

10 Additionally, various message statistics, including all three formats for storing URL share
11 data—message-specific information, user-specific share objects, and the global share object—were
12 part of the universe of data available to the site integrity and abuse- and security-related platforms for
13 URL classification and other continuing security efforts.

14 During the relevant period, Facebook did not use URL share data nor any message content to
15 serve targeted advertisements.

16 **INTERROGATORY NO. 5:**

17 Identify by name, purpose, sequence, function and physical location each Process and/or piece
18 of Architecture involved in the creation, development, or maintenance of Facebook User Profiles.

19 **RESPONSE TO INTERROGATORY NO. 5:**

20 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
21 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
22 forth in this Response. Facebook further objects to this Interrogatory on the following additional
23 grounds:

24 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases “Process
25 and/or piece of Architecture,” “Facebook User Profiles,” “purpose,” “sequence,” “function,” and
26 “physical location.”

27 (B) The Interrogatory is compound.

1 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
2 this action to the extent it concerns practices other than those challenged (the alleged increase in the
3 Facebook “Like” count on a website when the URL for that website was contained in a message
4 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
5 October 31, 2012)).

6 (D) The Interrogatory is overly broad in that it purports to seek information regarding each
7 “Process and/or piece of Architecture involved in the creation, development, or maintenance of
8 Facebook User Profiles” over an extended time period. Facebook will respond to the best of its
9 ability and based on the information known and identified to date, and as limited by the practice
10 challenged in this action (as defined above).

11 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
12 proprietary company information.

13 Subject to and without waiving the foregoing general and specific objections, and subject to
14 the ongoing nature of discovery in this action, Facebook responds as follows:

15 Facebook does not create individual “User Profiles” to serve targeted advertisements to its
16 users. Rather, Facebook offers advertisers a range of audience targeting options, and advertisers can
17 choose from one or a combination of these options. To create an ad set, advertisers define the
18 Facebook audience that will be eligible to see ads in their ad set, and ads are then only shown (if they
19 are shown) to users who match the criteria advertisers select. During the relevant time period
20 (December 30, 2011 to October 31, 2012), advertisers could choose from one or a combination of
21 these options:

22 a. Location: Advertisers could enter the name of one or more states, cities, and zip codes to
23 show their ads in those locations.

24 b. Demographic Targeting Options:

25 i. Age & Gender: Advertisers could select the minimum and maximum age of the
26 people who would find their ad relevant. Under “Gender,” advertisers could choose
27 “All” unless they only wanted to target either men or women. Some people don’t

1 specify their gender on Facebook, so the only way to reach everyone was to select
2 “All.”

3 ii. More Demographic Targeting Options: Advertisers could use demographic targeting
4 options to select audience segments related to categories such as relationships,
5 education, work, and life events.

6 c. Interests Targeting Options: Advertisers could reach their audience based on their interests.
7 This could have included interests shared on their profile, apps they used while logged into
8 Facebook, and Facebook Pages they affirmatively “liked.”

9 d. Connections: Advertisers could control whether or not their ad was served to people who had
10 already connected with them on Facebook.

11 e. Custom Audience: Starting in September 2012, a small percentage of U.S. advertisers could
12 create or select a Custom Audience that they could use with their other targeting options. A
13 Custom Audience would let advertisers find their offline audience among people who use
14 Facebook. This feature became available to all U.S. advertisers in November 2012.

15 During the relevant time period (December 30, 2011 to October 31, 2012), data or
16 information derived from messages (including URLs shared in messages) was not a criterion
17 available to advertisers in choosing the audience for their ads, and Facebook did not use data or
18 information derived from messages (including URLs shared in messages) to match ads to users.

19 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 5:**

20 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
21 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
22 forth in this Response. Facebook further objects to this Interrogatory on the following additional
23 grounds:

24 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases “Process
25 and/or piece of Architecture,” “Facebook User Profiles,” “purpose,” “sequence,” “function,” and
26 “physical location.”

27 (B) The Interrogatory is compound.

1 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
2 this action to the extent it concerns practices other than those challenged (the alleged increase in the
3 Facebook “Like” count on a website when the URL for that website was contained in a message
4 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
5 approximately December 20, 2012)).

6 (D) The Interrogatory is overly broad in that it purports to seek information regarding each
7 “Process and/or piece of Architecture involved in the creation, development, or maintenance of
8 Facebook User Profiles” over an extended time period. Facebook will respond to the best of its
9 ability and based on the information known and identified to date, and as limited by the practice
10 challenged in this action (as defined above).

11 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
12 proprietary company information.

13 Subject to and without waiving the foregoing general and specific objections, and subject to
14 the ongoing nature of discovery in this action, Facebook responds as follows:

15 Facebook does not create individual “User Profiles” to serve targeted advertisements to its
16 users. Rather, Facebook offers advertisers a range of audience targeting options, and advertisers can
17 choose from one or a combination of these options. To create an ad set, advertisers define the
18 Facebook audience that will be eligible to see ads in their ad set, and ads are then only shown (if they
19 are shown) to users who match the criteria advertisers select. During the relevant time period
20 (December 30, 2011 to approximately December 20, 2012), advertisers could choose from one or a
21 combination of these options:

22 a. Location: Advertisers could enter the name of one or more states, cities, and zip codes to
23 show their ads in those locations.

24 b. Demographic Targeting Options:

25 i. Age & Gender: Advertisers could select the minimum and maximum age of the
26 people who would find their ad relevant. Under “Gender,” advertisers could choose
27 “All” unless they only wanted to target either men or women. Some people don’t

1 specify their gender on Facebook, so the only way to reach everyone was to select
2 “All.”

3 ii. More Demographic Targeting Options: Advertisers could use demographic targeting
4 options to select audience segments related to categories such as relationships,
5 education, work, and life events.

6 c. Interests Targeting Options: Advertisers could reach their audience based on their interests.
7 This could have included interests shared on their profile, apps they used while logged into
8 Facebook, and Facebook Pages they affirmatively “liked.”

9 d. Connections: Advertisers could control whether or not their ad was served to people who had
10 already connected with them on Facebook.

11 e. Custom Audience: Starting in September 2012, a small percentage of U.S. advertisers could
12 create or select a Custom Audience that they could use with their other targeting options. A
13 Custom Audience would let advertisers find their offline audience among people who use
14 Facebook. This feature became available to all U.S. advertisers in November 2012.

15 During the relevant time period (December 30, 2011 to approximately December 20, 2012),
16 data or information derived from messages (including URLs shared in messages) was not a criterion
17 available to advertisers in choosing the audience for their ads, and Facebook did not use data or
18 information derived from messages (including URLs shared in messages) to match ads to users.

19 **INTERROGATORY NO. 6:**

20 Identify all possible fields or data points that can comprise a Facebook User Profile.

21 **RESPONSE TO INTERROGATORY NO. 6:**

22 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
23 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
24 forth in this Response. Facebook further objects to this Interrogatory on the following additional
25 grounds:

26 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases
27 “Facebook User Profile” and “all possible fields or data points.”

1 (B) The Interrogatory is compound.

2 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
3 this action to the extent it concerns practices other than those challenged (the alleged increase in the
4 Facebook “Like” count on a website when the URL for that website was contained in a message
5 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
6 October 31, 2012)).

7 (D) The Interrogatory is overly broad in that it purports to seek information regarding “all
8 possible fields or data points that can comprise a Facebook User Profile” over an extended time
9 period. Facebook will respond to the best of its ability and based on the information known and
10 identified to date, and as limited by the practice challenged in this action (as defined above).

11 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
12 proprietary company information.

13 Subject to and without waiving the foregoing general and specific objections, and subject to
14 the ongoing nature of discovery in this action, Facebook responds as follows:

15 Facebook does not create individual “User Profiles” to serve targeted advertisements to its
16 users. Rather, Facebook offers advertisers a range of audience targeting options, and advertisers can
17 choose from one or a combination of these options. To create an ad set, advertisers define the
18 Facebook audience that will be eligible to see ads in their ad set, and ads are then only shown (if they
19 are shown) to users who match the criteria advertisers select. During the relevant time period
20 (December 30, 2011 to October 31, 2012), advertisers could choose from one or a combination of
21 these options:

22 a. Location: Advertisers could enter the name of one or more states, cities, and zip codes to
23 show their ads in those locations.

24 b. Demographic Targeting Options:

25 i. Age & Gender: Advertisers could select the minimum and maximum age of the
26 people who would find their ad relevant. Under “Gender,” advertisers could choose
27 “All” unless they only wanted to target either men or women. Some people don’t

1 specify their gender on Facebook, so the only way to reach everyone was to select
2 “All.”

3 ii. More Demographic Targeting Options: Advertisers could use demographic targeting
4 options to select audience segments related to categories such as relationships,
5 education, work, and life events.

6 c. Interests Targeting Options: Advertisers could reach their audience based on their interests.
7 This could have included interests shared on their profile, apps they used while logged into
8 Facebook, and Facebook Pages they affirmatively “liked.”

9 d. Connections: Advertisers could control whether or not their ad was served to people who had
10 already connected with them on Facebook.

11 e. Custom Audience: Starting in September 2012, a small percentage of U.S. advertisers could
12 create or select a Custom Audience that they could use with their other targeting options. A
13 Custom Audience would let advertisers find their offline audience among people who use
14 Facebook. This feature became available to all U.S. advertisers in November 2012.

15 During the relevant time period (December 30, 2011 to October 31, 2012), data or
16 information derived from messages (including URLs shared in messages) was not a criterion
17 available to advertisers in choosing the audience for their ads, and Facebook did not use data or
18 information derived from messages (including URLs shared in messages) to match ads to users.

19 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 6:**

20 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
21 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
22 forth in this Response. Facebook further objects to this Interrogatory on the following additional
23 grounds:

24 (A) The Interrogatory is vague and ambiguous in its use of the terms and phrases
25 “Facebook User Profile” and “all possible fields or data points.”

26 (B) The Interrogatory is compound.

27 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
28

1 this action to the extent it concerns practices other than those challenged (the alleged increase in the
2 Facebook “Like” count on a website when the URL for that website was contained in a message
3 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
4 approximately December 20, 2012)).

5 (D) The Interrogatory is overly broad in that it purports to seek information regarding “all
6 possible fields or data points that can comprise a Facebook User Profile” over an extended time
7 period. Facebook will respond to the best of its ability and based on the information known and
8 identified to date, and as limited by the practice challenged in this action (as defined above).

9 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
10 proprietary company information.

11 Subject to and without waiving the foregoing general and specific objections, and subject to
12 the ongoing nature of discovery in this action, Facebook responds as follows:

13 Facebook does not create individual “User Profiles” to serve targeted advertisements to its
14 users. Rather, Facebook offers advertisers a range of audience targeting options, and advertisers can
15 choose from one or a combination of these options. To create an ad set, advertisers define the
16 Facebook audience that will be eligible to see ads in their ad set, and ads are then only shown (if they
17 are shown) to users who match the criteria advertisers select. During the relevant time period
18 (December 30, 2011 to approximately December 20, 2012), advertisers could choose from one or a
19 combination of these options:

20 a. Location: Advertisers could enter the name of one or more states, cities, and zip codes to
21 show their ads in those locations.

22 b. Demographic Targeting Options:

23 i. Age & Gender: Advertisers could select the minimum and maximum age of the
24 people who would find their ad relevant. Under “Gender,” advertisers could choose
25 “All” unless they only wanted to target either men or women. Some people don’t
26 specify their gender on Facebook, so the only way to reach everyone was to select
27 “All.”

1 (B) The Interrogatory is compound.

2 (C) The Interrogatory seeks information that is not relevant to the claims or defenses in
3 this action to the extent it concerns practices other than those challenged (the alleged increase in the
4 Facebook “Like” count on a website when the URL for that website was contained in a message
5 transmitted through Facebook’s Messages product during the Class Period (December 30, 2011 to
6 October 31, 2012)). Facebook interprets this Interrogatory as limited to the practice challenged in
7 this action.

8 (D) The Interrogatory is overly broad in that it purports to seek information regarding
9 “each field or data point identified in Interrogatory No. 6” over an extended time period. Facebook
10 will respond to the best of its ability and based on the information known and identified to date, and
11 as limited by the practice challenged in this action (as defined above).

12 (E) The Interrogatory seeks information that reflects trade secrets, confidential, and/or
13 proprietary company information.

14 Subject to and without waiving the foregoing general and specific objections, and subject to
15 the ongoing nature of discovery in this action, Facebook responds as follows:

16 Information responsive to Interrogatory No. 7, subject to Facebook’s objections, is contained
17 in the following records produced by Facebook pursuant to Rule 33(d): FB000000011,
18 FB000000017. Additionally, during the relevant time period (December 30, 2011 to October 31,
19 2012), neither website developers nor owners nor advertisers were provided the identities of any
20 Facebook users who included a URL in a message, even if a share object was created and included in
21 the anonymous, aggregate “Like” count on the associated third-party website.

22 **SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 7:**

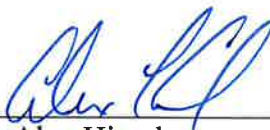
23 Facebook restates and incorporates its Preliminary Statement, General Objections, Objections
24 to “Rules of Construction,” Instructions, and Purported “Relevant Time Period” as though fully set
25 forth in this Response. Facebook further objects to this Interrogatory on the following additional
26 grounds:

VERIFICATION

I, Alex Himel, declare as follows:

I am an Engineering Director at Defendant Facebook, Inc. ("Facebook") and am authorized to execute this Verification on behalf of Facebook. I have read the foregoing DEFENDANT FACEBOOK, INC.'S SUPPLEMENTAL RESPONSES AND OBJECTIONS TO PLAINTIFFS' FIRST SET OF INTERROGATORIES. I understand that the facts stated in Facebook's Responses were assembled by authorized employees, agents, and/or legal representatives of Facebook and am informed and believed that, subject to any inadvertent errors or omissions, the information contained in those Responses is true and correct based on the records of Facebook and information reasonably available to its employees, agents, and/or legal representatives. Facebook reserves the right to correct any inadvertent errors or omissions in this document that may come to its attention.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct and that this Verification was executed on September __, 2015 in Menlo Park, California.



Alex Himel

1 **PROOF OF SERVICE**

2 I, Ashley M. Rogers, declare as follows:

3 I am employed in the County of Santa Clara, State of California, I am over the age of eighteen
4 years and am not a party to this action; my business address is 1881 Page Mill Road, Palo Alto, CA
94304-1211, in said County and State. On September 8, 2015, I served the following document(s):

5 **DEFENDANT FACEBOOK, INC.’S SUPPLEMENTAL RESPONSES AND**
6 **OBJECTIONS TO PLAINTIFFS’ FIRST SET OF INTERROGATORIES**

7 on the parties stated below, by the following means of service:

8 David F. Slade
9 dslade@cbplaw.com
10 James Allen Carney
11 acarney@cbplaw.com
12 Joseph Henry Bates, III
13 Carney Bates & Pulliam, PLLC
14 hbates@cbplaw.com

15 Melissa Ann Gardner
16 mgardner@lchb.com
17 Nicholas Diamand
18 ndiamand@lchb.com
19 Rachel Geman
20 rgeman@lchb.com
21 Michael W. Sobol
22 Loeff Cabraser Heimann & Bernstein, LLP
23 msobol@lchb.com

- 24 **BY ELECTRONIC SERVICE:** On the above-mentioned date based on an agreement of
25 the parties to accept service by electronic transmission, I caused the document to be sent to
26 the persons at the electronic notification addresses as shown above.
- 27 I am employed in the office of Joshua A. Jessen and am a member of the bar of this court.
- 28 I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 8, 2015.

_____/s/
Ashley M. Rogers