IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

STERLING COMPUTERS CORPORATION, Plaintiff, v. META PLATFORMS, INC., Defendant.	CASE NO. 1:24-cv-00551 JURY TRIAL DEMANDED

COMPLAINT

Plaintiff Sterling Computers Corporation ("Plaintiff" or "Sterling"), for its Complaint against Defendant Meta Platforms Inc. ("Defendant" or "Meta"), states and alleges as follows:

I. THE PARTIES

1. Plaintiff Sterling is a corporation organized under the laws of the State of California, with its principal place of business in North Sioux City, South Dakota.

2. Upon information and belief, Meta is a corporation organized under the laws of the state of Delaware with its headquarters in Menlo Park, California. Meta may be served with process through its registered agent Corporation Service Company d/b/a CSC Lawyers Incorporating Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

II. JURISDICTION AND VENUE

3. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a), as this is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*

4. This Court has personal jurisdiction over Meta because Meta has a regular and established place of business in Austin, Texas, such that Meta is essentially "at home" in this

District. Meta also has regular and established places of business elsewhere in Texas, including offices in Fort Worth, Garland, Houston, and Temple. Further, Meta has caused tortious injury to Sterling through its acts of patent infringement in this District, and, on information and belief, regularly does or solicits business, or engages in a persistent course of conduct in this District or derives substantial revenue from things used or consumed in this District.

5. Venue is proper in this District under 28 U.S.C. §§ 1391(b)(1) and 1400(b), because Meta has committed acts of infringement in this District and has an established and regular place of business in this District.

III. FACTUAL ALLEGATIONS

6. Sterling owns U.S. Patent No. 7,716,217 ("the '217 Patent"), entitled "Determining Relevance of Electronic Content," which issued on May 11, 2010. A copy of the '217 Patent is attached as Exhibit A.

7. The '217 Patent claims priority to provisional application no. 60/758,828, filed on January 13, 2006.

8. The inventors of the '217 Patent are Justin Marston and Paul Marston.

9. When they came up with the inventions in the '217 Patent, the Marstons were trying to solve the problem of e-mail users receiving unwieldly volumes of e-mail messages (e.g., 200 e-mail messages per day), and the e-mail overload was unmanageable. '217 Patent, at 1:23-34. Prior to the invention, the only way to limit the number of e-mails received was through the use of spam filters, but spam filters in email were just looking at general content of a message to determine whether the message was spam to all recipients. *Id*.

10. This method of filtering email messages prior to the inventions of the '217 Patent were inefficient. One problem with the prior method was that it only filtered out messages that

were true spam (e.g., marketing emails from unknown third parties), whereas users were looking for a way to figure out which of their many emails were most important to the user.

11. The Marstons wanted to come up with a more efficient solution for filtering email messages based upon relevancy to the user. The solution that the Marstons came up with focused on having the system learn what is relevant to each specific user based upon actions each user takes.

12. The Marstons came up with the idea of looking at the actions of individual users to determine what content was relevant to the particular user.

13. The inventions in the ’217 Patent had multiple benefits, including making sure that a user sees the messages that are most important to that particular user and saving the user time by indicating that other messages are less important or relevant to that particular user.

14. The ’217 patent is directed to determining the relevance of electronic content.

15. Meta makes, uses, offers for sale, and sells computer-implemented systems – i.e., the social media platforms known as Facebook and Instagram.

16. Meta has infringed the ’217 patent through conduct including, but not limited to, making, using, offering for sale, and selling Facebook and Instagram.

17. Facebook is a computer-implemented system.

18. Facebook’s computer-implemented system can determine a relevance score of a piece of electronic content sent from a sender to a user.

19. Facebook’s computer-implemented system determines the relevance score with respect to the user.

20. Facebook’s computer-implemented system includes a computer processor.

21. Facebook's computer-implemented system includes a computer-readable storage medium storing computer program modules configured to execute on the computer processor.

22. Facebook's computer program modules include a monitoring module configured to track actions by a plurality of users associated with an application for managing electronic content.

23. Facebook's computer program modules include a first relevance measurement module coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content.

24. Facebook's computer program modules include a second relevance measurement module coupled to the monitoring module.

25. The second relevance measurement module in Facebook's computer program modules is configured to identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.

26. The second relevance measurement module in Facebook's computer program modules is configured to determine a second measure of relevance of the piece of electronic content based at least in part from one or more of the following:

a. a local importance describing an importance of the sender to the user;

b. a global importance describing an importance of the sender within an organization with which the plurality of users are associated;

c. a content relevance determined responsive to content of the piece of electronic content; and

d. one or more actions on the piece of electronic content of the at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.

27. Facebook's computer program modules include a relevance analysis module configured to determine the relevance score of the piece of electronic content sent from the sender

to the user, the relevance score being determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance.

28. Instagram is a computer-implemented system.

29. Instagram's computer-implemented system can determine a relevance score of a piece of electronic content sent from a sender to a user.

30. Instagram's computer-implemented system determines the relevance score with respect to the user.

31. Instagram's computer-implemented system includes a computer processor.

32. Instagram's computer-implemented system includes a computer-readable storage medium storing computer program modules configured to execute on the computer processor.

33. Instagram's computer program modules include a monitoring module configured to track actions by a plurality of users associated with an application for managing electronic content.

34. Instagram's computer program modules include a first relevance measurement module coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content.

35. Instagram's computer program modules include a second relevance measurement module coupled to the monitoring module.

36. The second relevance measurement module in Instagram's computer program modules is configured to identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.

37. The second relevance measurement module in Instagram's computer program modules is configured to determine a second measure of relevance of the piece of electronic content based at least in part from one or more of the following:

a. a local importance describing an importance of the sender to the user;

b. a global importance describing an importance of the sender within an organization with which the plurality of users are associated;

c. a content relevance determined responsive to content of the piece of electronic content; and

d. one or more actions on the piece of electronic content of the at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user.

38. Instagram's computer program modules include a relevance analysis module configured to determine the relevance score of the piece of electronic content sent from the sender to the user, the relevance score being determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance.

IV. PATENT INFRINGEMENT
COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,716,217

39. Sterling incorporates by reference the above paragraphs as if stated herein.

40. The '217 patent is valid, enforceable, subsisting, and in full force and effect.

41. Meta has directly infringed and continues to infringe the '217 patent, including but not limited to at least claim 1 of the '217 patent, by making, using, offering for sale, and selling Facebook and Instagram, all to the harm and detriment of Sterling, and to the benefit and profit of Meta.

42. Meta has infringed and continues to infringe at least claim 1 of the '217 patent by making, using, offering for sale, and selling Facebook, as set forth in the claim chart below:

'217 Patent Claim Limitation	**Facebook**
1. A computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user,	Facebook is a computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user. The electronic content includes, for example, posts, stories, and other messages that are sent by a sender to one or more user(s). **"Ranking posts by score** Next, **the system calculates a 'relevance score'**[1] for each post and puts the posts in order based on this score. Generally, posts the system predicts will provide more value for you are shown higher up in your Feed. The system also tries to ensure your Feed has a balanced mix of content types. That means, for example, you are less likely to see multiple posts from the same Groups or from the same Page in a row; rather, you'll see a range of posts from different sources." https://transparency.fb.com/en-gb/features/ranking-and-content/ **"Our Approach to Facebook Feed Ranking** Facebook's goal is to make sure you see posts from the people, interests, and ideas **that you find valuable**, whether that content comes from people you're already connected to or from those you may not yet know. When you open Facebook and see Feed in your Home tab, you experience a mix of 'connected content' (e.g., content from the people you're friends with or are following, Groups you've joined, and Pages you've liked) as well as 'recommended content' (e.g., content we think you'll be interested in from those you may want to know). We also show you ads that are tailored to you." https://transparency.fb.com/en-gb/features/ranking-and-content/ **"Why We Use Personalized Ranking** We personalize each Feed for our more than 2 billion users by using state-of-the-art machine learning **systems to rank content**. Because most people have more content in their Feed than they could possibly browse in one session, these **ranking systems**

[1] Throughout this chart, and the chart below, all bolded/underlined emphasis has been added. The bolded headings/subheadings appear in the original.

’217 Patent Claim Limitation	Facebook
	help ensure that people see **the content that is most valuable to them**. While many different factors affect the ordering of content in Feed, the information below will give you more insight into the types of predictions and signals that generally have the biggest impact on how our systems determine what you see.” https://transparency.fb.com/en-gb/features/ranking-and-content/ **“Prediction Models Used in Ranking Connected Content** The Feed ranking system has over 100 different prediction models. Generally, these prediction models fall into four categories: 1. Predictions about actions you’ll take on the post 2. Predictions about how you’ll spend time viewing the post 3. Predictions about your interest in the post or person, Page or Group that shared the post 4. Predictions about how others will interact with the post if you take a certain action, such as commenting or sharing a post Each prediction is a potential indicator of **how valuable a person might find certain content**. For example, sharing a post with other people can be an indication that you found that post to be valuable, so predicting whether you’ll share a post is a good signal of value for us to use to show certain posts higher in Feed versus other posts. As you might imagine, no one prediction is a perfect gauge of whether a post is valuable to you, which is why we use multiple prediction models in combination with the overall goal of making the Facebook app valuable for people in the long-term, not just in the specific moment when they're seeing this content.” https://transparency.fb.com/en-gb/features/ranking-and-content/ **“Types of Prediction Models** *Within each group, models are listed alphabetically and are not in a ranked order. Some of these predictions are only used if the post is relevant to the model, for example predictions about posts*

’217 Patent Claim Limitation	Facebook
	from Groups would only apply if the post being ranked is a Group post. **Used Most Frequently** • How likely you are to be interested in content from your friends • How likely you are to be interested in the Group that shared the post or content from the Group, as measured by engagement with the Group or its content • How likely you are to be interested in the Page that shared the post or content from the Page, as measured by engagement with the Page or its content • How likely you are to click on some part of the post • How likely you are to interact with a post in some way by liking, reacting or commenting on it • How likely you are to meaningfully interact with the post, through some combination of commenting/liking/reacting/sharing to messenger/resharing and/or spending time viewing it • How likely you are to share the post • How likely you are to spend time viewing comments on the post • How likely you are to spend time viewing the post or content in the post (as opposed to just scrolling past it) • How likely you are to visit a Page after seeing a post from that Page • How likely you are to want to see more or see less content from the person or Page who shared the post • How likely you are to watch a video contained in the post and the predicted amount of time you'll spend watching it

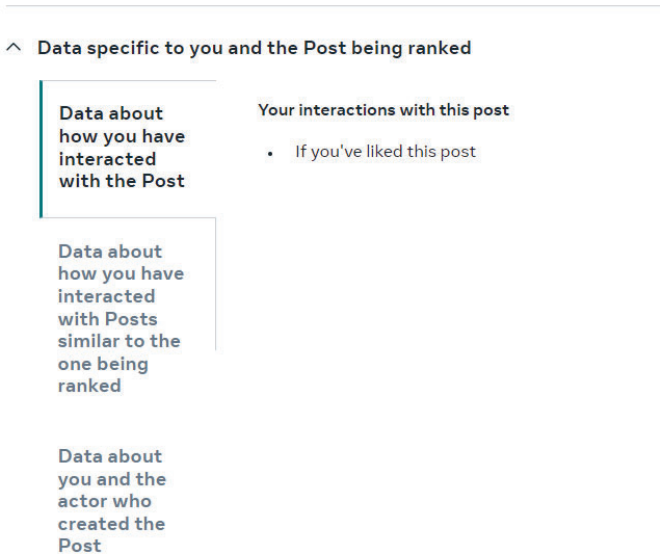
'217 Patent Claim Limitation	**Facebook**
	• How likely your interactions on the post from a Page will encourage the admin of that Page to share more content in the future that is valuable to you • The predicted amount of additional comments or replies a post will get if you comment or share the post" https://transparency.meta.com/en-gb/features/ranking-and-content/
the relevance score determined with respect to the user,	In Facebook, the relevance score is determined with respect to the user: **"Ranking posts by score** Next, **the system calculates a 'relevance score'** for each post and puts the posts in order based on this score. Generally, posts the system predicts will provide more value **for you** are shown higher up in your Feed. The system also tries to ensure your Feed has a balanced mix of content types. That means, for example, you are less likely to see multiple posts from the same Groups or from the same Page in a row; rather, you'll see a range of posts from different sources." https://transparency.fb.com/en-gb/features/ranking-and-content/
the computer-implemented system comprising: a computer processor; and	The computer-implemented system includes a computer processor. "**How Facebook keeps its large-scale infrastructure hardware up and running** Facebook's services rely on fleets of servers in data centers all over the globe — all running applications and delivering the performance our services need. This is why we need to make sure our server hardware is reliable and that we can manage server hardware failures at our scale with as little disruption to our services as possible." https://engineering.fb.com/2020/12/09/data-center-engineering/how-facebook-keeps-its-large-scale-infrastructure-hardware-up-and-running/

’217 Patent Claim Limitation	Facebook
	“Facebook’s new front-end server design delivers on performance without sucking up power One thing that has remained constant in our data centers is the use of **two-processor servers with progressively more powerful Intel CPUs [central processing units]**. About every two years, Intel provided a new generation of more powerful chips that came with a steady rate of improvement in performance over the previous generation. But the thirst for higher performance across the industry pushed Intel’s CPUs to operate at an increasing power limit, which became a more difficult problem with every generation and ultimately would stop being scalable. Rather than leave this problem solely in Intel’s hands and accept the fact that our performance improvement trajectory would flatten over time, we approached Intel about working together to come up with a solution. We worked closely with them on the design of **a new processor**, and in parallel redesigned our server infrastructure to create a system that would meet our needs and be widely adoptable by the rest of the industry.” https://engineering.fb.com/2016/03/09/data-center-engineering/facebook-s-new-front-end-server-design-delivers-on-performance-without-sucking-up-power/
a computer-readable storage medium storing computer program modules configured to execute on the computer processor, the computer program modules comprising:	Facebook includes a computer-readable storage medium for storing computer program modules configured to execute on the computer processor. The computer program modules include those set forth below. **“Why We Use Personalized Ranking** We personalize each Feed for our more than 2 billion users by using state-of-the-art **machine learning systems** to rank content. Because most people have more content in their Feed than they could possibly browse in one session, these ranking systems help ensure that people see the content that is most valuable to them. While many different factors affect the ordering of content in Feed, the information below will give you more insight into the types of predictions and signals that generally have the biggest impact on how our systems determine what you see.” https://transparency.fb.com/en-gb/features/ranking-and-content/

’217 Patent Claim Limitation	Facebook
	“Prediction Models Used in Ranking Connected Content The Feed ranking system has over 100 different prediction models. Generally, these prediction models fall into four categories: 1. Predictions about actions you’ll take on the post 2. Predictions about how you’ll spend time viewing the post 3. Predictions about your interest in the post or person, Page or Group that shared the post 4. Predictions about how others will interact with the post if you take a certain action, such as commenting or sharing a post Each prediction is a potential indicator of how valuable a person might find certain content. For example, sharing a post with other people can be an indication that you found that post to be valuable, so predicting whether you’ll share a post is a good signal of value for us to use to show certain posts higher in Feed versus other posts. As you might imagine, no one prediction is a perfect gauge of whether a post is valuable to you, which is why we use multiple prediction models in combination with the overall goal of making the Facebook app valuable for people in the long-term, not just in the specific moment when they're seeing this content.” https://transparency.fb.com/en-gb/features/ranking-and-content/ **“How Facebook keeps its large-scale infrastructure hardware up and running** Facebook’s services rely on fleets of servers in data centers all over the globe — all running applications and delivering the performance our services need. This is why we need to make sure our server hardware is reliable and that we can manage server hardware failures at our scale with as little disruption to our services as possible.” https://engineering.fb.com/2020/12/09/data-center-engineering/how-facebook-keeps-its-large-scale-infrastructure-hardware-up-and-running/

’217 Patent Claim Limitation	Facebook
	“Facebook’s new front-end server design delivers on performance without sucking up power One thing that has remained constant in our data centers is the use of two-processor servers with progressively more powerful Intel CPUs. About every two years, Intel provided a new generation of more powerful chips that came with a steady rate of improvement in performance over the previous generation. But the thirst for higher performance across the industry pushed Intel’s CPUs to operate at an increasing power limit, which became a more difficult problem with every generation and ultimately would stop being scalable. Rather than leave this problem solely in Intel’s hands and accept the fact that our performance improvement trajectory would flatten over time, we approached Intel about working together to come up with a solution. We worked closely with them on the design of a new processor, and in parallel redesigned our server infrastructure to create a system that would meet our needs and be widely adoptable by the rest of the industry.” https://engineering.fb.com/2016/03/09/data-center-engineering/facebook-s-new-front-end-server-design-delivers-on-performance-without-sucking-up-power/
a monitoring module configured to track actions by a plurality of users associated with an application for managing electronic content;	Facebook has a monitoring module configured to track actions by multiple users associated with an application for managing electronic content. **“Prediction Models Used in Ranking Connected Content** The Feed ranking system has over 100 different prediction models. Generally, these prediction models fall into four categories: 1. Predictions about actions you’ll take on the post 2. Predictions about how you’ll spend time viewing the post 3. Predictions about your interest in the post or person, Page or Group that shared the post 4. Predictions about how others will interact with the post if you take a certain action, such as commenting or sharing a post

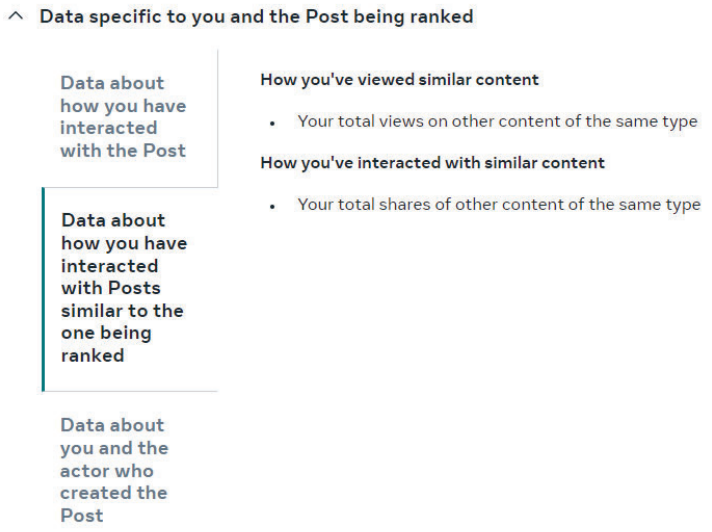
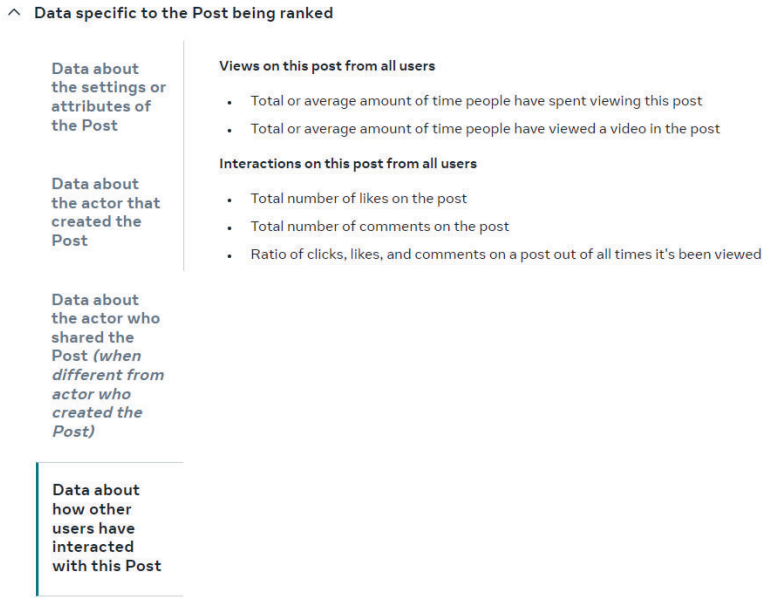
’217 Patent Claim Limitation	Facebook
	Each prediction is a potential indicator of how valuable a person might find certain content. For example, sharing a post with other people can be an indication that you found that post to be valuable, so predicting **whether you’ll share a post is a good signal of value for us to use** to show certain posts higher in Feed versus other posts. As you might imagine, no one prediction is a perfect gauge of whether a post is valuable to you, which is why we use multiple prediction models in combination with the overall goal of making the Facebook app valuable for people in the long-term, not just in the specific moment when they're seeing this content.” https://transparency.fb.com/en-gb/features/ranking-and-content/
a first relevance measurement module coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content;	Facebook has a first relevance measurement module that is coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content. **Signals Used in Ranking Connected Content** We use thousands of different signals to make predictions about whether you'll find something more or less valuable. The categories of signals listed below represent the vast majority of the signals currently used in Feed ranking for connected content to make these personalized predictions. By drilling down into each category, you can learn more about the types of data we leverage in our models and some examples of individual signals. To note, we have included categories and examples of signals specifically used for identifying problematic content, which we demote (or show lower in Feed). The information we're sharing here around this subset of signals is purposefully more limited to guard against bad actors abusing our systems. Additionally, this information is subject to change. **Data specific to you** Data about your basic account information Data about how you're accessing Facebook **Data about your activity on Facebook** Data about your connections (friends. **How you've shared different content** • The number of different posts you've shared, for example videos, photos, Reels, etc. **How you've interacted with different content** • Types of content you've interacted with and how you've interacted with them, for example the total number of times you've clicked on photo posts or how many times you've commented on video posts **How you've viewed different content** • Types of content you view and how long you view them for, for example how long you spend looking at photos, how much time you spend reading comments or how much time you spend watching video https://transparency.fb.com/en-gb/features/ranking-and-content/

’217 Patent Claim Limitation	Facebook
	 https://transparency.fb.com/en-gb/features/ranking-and-content/ **“Giving People More Control Over What They See in Feed** **When you engage with content in Feed, you give us a combination of explicit signals (e.g., liking, commenting, or resharing content, etc.), and implicit signals (e.g., viewing posts) that help us predict what’s meaningful to you**. And because we believe it’s important you have even more control over your Feed experience, we’ve built tools to help you further customize what you see. These controls include: Feed Preferences: provides options to fine-tune the way content is ranked in your Feed, including the ability to prioritize posts from your Favorites; Snooze or Unfollow people, Pages, and Groups to stop seeing their posts; and Reconnect with anyone you may have unfollowed. Show More and Show Less: lets you directly tell us what you want to see more or less of by selecting “Show more” or “Show less” on the posts you see. Selecting “Show more” will temporarily increase the ranking score for that post and posts like it, and selecting “Show less” will temporarily decrease its ranking score. Reduce: allows users to adjust the degree to which we demote problematic or low quality content in their Feed. (Our Content Distribution Guidelines outline some of the most significant

'217 Patent Claim Limitation	**Facebook**
	reasons why problematic or low quality content may receive reduced distribution in Feed.) Feeds tab: allows you to see the newest posts first; content is sorted in reverse chronological order (alongside ads)." https://transparency.fb.com/en-gb/features/ranking-and-content/
a second relevance measurement module coupled to the monitoring module and configured to: identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user, and determine a second measure of relevance of the piece of electronic content as based at least in part on one or more measures derived from the group consisting of:	Facebook has a second relevance measurement module which is connected to the monitoring module. "When you open Facebook and see Feed in your Home tab, you experience a mix of **'connected content' (e.g., content from the people you're friends with or are following**, Groups you've joined, and Pages you've liked) as well as 'recommended content' (e.g., content we think you'll be interested in from those you may want to know)." https://transparency.fb.com/en-gb/features/ranking-and-content/
a local importance describing an importance of the sender to the user,	In Facebook, the second measure of relevance may include a local importance describing an importance of the sender to the user. "When you open Facebook and see Feed in your Home tab, you experience a mix of **"connected content" (e.g., content from the people you're friends with or are following**, Groups you've joined, and Pages you've liked) as well as "recommended content" (e.g., content we think you'll be interested in from those you may want to know)." https://transparency.fb.com/en-gb/features/ranking-and-content/ **How Does News Feed Predict What You Want to See?** January 26, 2021 By Akos Lada, Data Science Manager, Meihong Wang, Engineering Director, and Tak Yan, Product Management Director

'217 Patent Claim Limitation	**Facebook**
	"How Does it Work? Put simply, the system determines which posts show up in your News Feed, and in what order, by predicting what you're most likely to be interested in or engage with. These predictions are based on a variety of factors, including **what and whom you've followed, liked, or engaged with recently**." https://about.fb.com/news/2021/01/how-does-news-feed-predict-what-you-want-to-see/
a global importance describing an importance of the sender within an organization with which the plurality of users are associated,	In Facebook, the second measure of relevance may be a global importance describing the importance of the sender in the organization as a whole. **"Overview** Welcome to Facebook for Business **Influencers**! Here, you can explore Meta's products, tools, and services built with business influencers in mind. Facebook is the single best place for business influencers to connect authentically with people and reach new audiences. Hundreds of **global business leaders** across industries, regions, and enterprise size use Facebook, with more signing up every day. Facebook gives these leaders the opportunity for direct communication with complete control over their message, precision targeting, and a flexible set of publishing tools including text, photos, videos, live video and more." https://www.facebook.com/formedia/blog/businessinfluencers

’217 Patent Claim Limitation	Facebook
	Facebook for Business Influencers Facebook is the single best place for business influencers to connect authentically with people and reach new audiences. Facebook gives you the opportunity to directly communicate with target audiences, with complete control over your message and precision targeting. With a global community of more than **2 billion** people on Facebook, you can reach existing and new audiences with a flexible set of publishing tools to share your stories in text, photos, videos, and more. https://scontent.ffcm1-1.fna.fbcdn.net/v/t39.2365-6/28418721_1247066728763390_7515790239370051584_n.pdf?_nc_cat=109&ccb=1-7&_nc_sid=e280be&_nc_ohc=-FIgjKE7uiYAb7njOxw&_nc_ht=scontent.ffcm1-1.fna&oh=00_AfBgNV9lNmst31RQXOjOSVcwIl-Tx4VzknxBPk-aQ5A3AQ&oe=662E76B6 4 FACEBOOK FOR BUSINESS INFLUENCERS FACEBOOK IS A LEADERSHIP PLATFORM **Earn trust** Build trust by allowing employees, customers, and stakeholders to get to know you, not just as a figurehead, but as a real person with passions and interests. People will trust your company more if they know and trust you. **Be heard** Shape your industry’s agenda by directly communicating insights about your company and industry, making important announcements, and highlighting social causes. https://scontent.ffcm1-1.fna.fbcdn.net/v/t39.2365-6/28418721_1247066728763390_7515790239370051584_n.pdf?_nc_cat=109&ccb=1-7&_nc_sid=e280be&_nc_ohc=-FIgjKE7uiYAb7njOxw&_nc_ht=scontent.ffcm1-1.fna&oh=00_AfBgNV9lNmst31RQXOjOSVcwIl-Tx4VzknxBPk-aQ5A3AQ&oe=662E76B6

'217 Patent Claim Limitation	**Facebook**
a content relevance determined responsive to content of the piece of electronic content, and	In Facebook, the second measure of relevance may be a content relevance.  https://transparency.fb.com/en-gb/features/ranking-and-content/#why-we-use-personalized-ranking
one or more actions on the piece of electronic content of the at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user; and	In Facebook, the second relevance measure may be one or more actions on the piece of electronic content by other users/recipients who are cognate to the user.  https://transparency.fb.com/en-gb/features/ranking-and-content/#why-we-use-personalized-ranking

’217 Patent Claim Limitation	Facebook
	Help Center Using Facebook › Your Home Page **What influences the order of posts in your Facebook Feed** Facebook Lite App Help To help connect people to the posts that matter to them most, we use a process called ranking. Feed ranking creates a personalized and diverse stream of posts from the people, news sources, businesses a **What influences ranking** Some things influence ranking more than others, and some of the most important factors include: • How often you interact with posts from friends, groups or Pages (friends and family are prioritized). • If the type of post is something you often interact with (example: photo, video, link). • The number of comments, likes, reactions and shares a post receives from the people and Pages that see it. Keep in mind that these posts are shared by the friends, groups or Pages you follow. • How recently something was posted. “What influences ranking * * * The number of comments, likes, reactions, and shares a post receives from the people and Pages that see it. Keep in mind that these posts are shared by the friends, groups or Pages you follow.” https://m.facebook.com/help/fblite/520348825116417
a relevance analysis module configured to determine the relevance score of the piece of electronic content sent from the sender to the user, the relevance score being determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance.	Facebook includes a relevance analysis module configured to determine the relevance score of the piece of electronic content, based at least in part on the first and second measures of relevance. **“Ranking posts by score** Next, the system **calculates a ‘relevance score’ for each post** and puts the posts in order based on this score. Generally, posts the system predicts will provide more value for you are shown higher up in your Feed. The system also tries to ensure your Feed has a balanced mix of content types. That means, for example, you are less likely to see multiple posts from the same Groups or from the same Page in a row; rather, you’ll see a range of posts from different sources.” https://transparency.fb.com/en-gb/features/ranking-and-content/#why-we-use-personalized-ranking **“Prediction Models Used in Ranking Connected Content** The Feed ranking system has over 100 different prediction models. Generally, these prediction models fall into four categories:

’217 Patent Claim Limitation	Facebook
	1. Predictions about actions you’ll take on the post 2. Predictions about how you’ll spend time viewing the post 3. Predictions about your interest in the post or person, Page or Group that shared the post 4. Predictions about how others will interact with the post if you take a certain action, such as commenting or sharing a post Each prediction is a potential indicator of how valuable a person might find certain content. * * * Because Feed ranking is personalized, the relative impact of each prediction model on Feed will vary depending on the person and the content, since everyone has different preferences about what they like and how they want to interact with content. For example, predictions about how long you might spend watching a video may be a stronger indicator of value for a video post than whether or not you will click on the video, while the opposite may be true for a post containing a link to an article. Another example is that for some people, ‘liking’ a post is a strong indicator that they found that post valuable, whereas for others (such as people who don’t use the ‘Like’ button), spending time reading the post may be a more useful prediction.” https://transparency.fb.com/en-gb/features/ranking-and-content/#why-we-use-personalized-ranking

43. Meta has infringed and continues to infringe at least claim 1 of the ’217 patent by making, using, offering for sale, and/or selling Instagram, as set forth in the claim chart below:

’217 Patent Claim Limitation	Instagram
1. A computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user,	Instagram is a computer-implemented system for determining a relevance score of a piece of electronic content sent from a sender to a user. The electronic content includes, for example, posts, stories, reels, and other messages that are sent by a sender to one or more user(s).

’217 Patent Claim Limitation	Instagram
	“How we rank Feed Feed is your personalized home base within Instagram to help you catch up with friends, family, and interests. This means your feed will have a mix of content from the accounts you’ve chosen to follow, recommended content from accounts we think you’ll enjoy and ads. You’ll also see a mixture of videos, photos and carousels. With any **ranking algorithm**, how it works can be broken down into steps. We start by defining the set of things we plan to rank in the first place. With Feed we consider recent posts shared by the people you follow, as well as posts from accounts you don’t already follow that we think you might be interested in. **We determine what you might be interested in** based on a variety of factors, including what and whom you’ve followed, liked or engaged with recently. We personalize the experience for you to try to strike a balance between content from accounts you follow with content from accounts you don’t follow but might be interested in. Next we take all the information we have about what was posted, the people who made those posts, and your preferences. We’ve also started considering other factors like format, so if we notice you prefer photos, we’ll show you more photos. We call these “signals,” and there are thousands of them. They include everything from when a post was shared to whether you’re using a phone or the web to how often you like videos. The most important signals across Feed, roughly in order of importance, are: • **Your activity.** Posts you’ve liked, shared, saved or commented on help us understand what you might be interested in. • **Information about the post.** These are signals both about how popular a post is – think how many people have liked it and how quickly people are liking, commenting, sharing and saving a post – and more mundane information about the content itself, like when it was posted, and what location, if any, was attached to it.

’217 Patent Claim Limitation	Instagram
	• **Information about the person who posted.** This helps us get a sense for how interesting the person might be to you, and includes signals like how many times people have interacted with that person in the past few weeks. • **Your history of interacting with someone.** This gives us a sense of how interested you are generally in seeing posts from a particular person. An example is whether or not you comment on each other’s posts.” https://about.instagram.com/blog/announcements/instagram-ranking-explained
the relevance score determined with respect to the user,	In Instagram, the relevance score is determined with respect to the user. **“How we rank Feed** Feed is your personalized home base within Instagram to help you catch up with friends, family, and interests. This means your feed will have a mix of content from the accounts you’ve chosen to follow, recommended content from accounts we think you’ll enjoy and ads. You’ll also see a mixture of videos, photos and carousels. With any **ranking algorithm**, how it works can be broken down into steps. We start by defining the set of things we plan to rank in the first place. With Feed we consider recent posts shared by the people you follow, as well as posts from accounts you don’t already follow that we think you might be interested in. **We determine what you might be interested in** based on a variety of factors, including what and whom you’ve followed, liked or engaged with recently. **We personalize the experience for you** to try to strike a balance between content from accounts you follow with content from accounts you don’t follow but might be interested in.” https://about.instagram.com/blog/announcements/instagram-ranking-explained

'217 Patent Claim Limitation	**Instagram**
the computer-implemented system comprising: a computer processor; and	Instagram is a computer-implemented system that includes a computer processor. **"What Powers Instagram: Hundreds of Instances, Dozens of Technologies** **Instagram Engineering** Dec 2, 2011 **Application Servers** Next up comes the application servers that handle our requests. **We run Djangoon Amazon High-CPU [Central Processing Unit] Extra-Large machines**, and as our usage grows we've gone from just a few of these machines to over 25 of them (luckily, this is one area that's easy to horizontally scale as they are stateless). We've found that our particular work-load is very CPU-bound rather than memory-bound, so the High-CPU Extra-Large instance type provides the right balance of memory and CPU. We use http://gunicorn.org/ as our WSGI server; we used to use mod_wsgi and Apache, but found Gunicorn was much easier to configure, and less CPU-intensive. To run commands on many instances at once (like deploying code), we use Fabric, which recently added a useful parallel mode so that deploys take a matter of seconds." https://instagram-engineering.com/what-powers-instagram-hundreds-of-instances-dozens-of-technologies-adf2e22da2ad
a computer-readable storage medium storing computer program modules configured to execute on the computer processor,	Instagram is a computer-implemented software application that includes a computer-readable storage medium for storing computer program modules configured to execute on the computer processor. The computer program modules include those set forth below. "Instagram is **a free photo and video sharing app** available on iPhone and Android. People can upload photos or videos to our service and share them with their followers or with a select group of friends. They can also view, comment and like posts shared by their friends on Instagram." https://help.instagram.com/424737657584573

’217 Patent Claim Limitation	Instagram
	“Ranking on Instagram We want to share more on how ranking works across Instagram to help people maximize their experience and help creators understand how their content might be surfaced. Instagram doesn’t have a singular algorithm that oversees what people do and don’t see on the app. We use **a variety of algorithms, classifiers, and processes**, each with its own purpose. We want to make the most of people’s time, and we believe that using technology to personalize everyone’s experience is the best way to do that. Each part of the app – Feed, Stories, Explore, Reels, Search and more – uses its own algorithm tailored to how people use it.” https://about.instagram.com/blog/announcements/instagram-ranking-explained
the computer program modules comprising: a monitoring module configured to track actions by a plurality of users associated with an application for managing electronic content;	Instagram has computer program modules that include a monitoring module configured to track actions by multiple users associated with an application for managing electronic content. “The most important signals across Feed, roughly in order of importance, are: • **Your activity.** Posts you’ve liked, shared, saved or commented on help us understand what you might be interested in. • **Information about the post.** These are signals both about how popular a post is – think **how many people have liked it and how quickly people are liking, commenting, sharing and saving a post** – and more mundane information about the content itself, like when it was posted, and what location, if any, was attached to it. • **Information about the person who posted.** This helps us get a sense for how interesting the person might be to you, and includes signals like how many times people have interacted with that person in the past few weeks. • **Your history of interacting with someone.** This gives us a sense of how interested you are generally in seeing posts from a particular person. An example is whether or not you comment on each other’s posts.”

'217 Patent Claim Limitation	**Instagram**
	https://about.instagram.com/blog/announcements/instagram-ranking-explained
a first relevance measurement module coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content;	Instagram has computer program modules that include a first relevance measurement module that is coupled to the monitoring module and configured to determine a first measure of relevance of the piece of electronic content based at least in part on one or more actions of the user on the piece of electronic content. "The most important signals across Feed, roughly in order of importance, are: **Your activity.** Posts **you've** liked, shared, saved or commented on help us understand what you might be interested in." https://about.instagram.com/blog/announcements/instagram-ranking-explained
a second relevance measurement module coupled to the monitoring module and configured to: identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user, and determine a second measure of relevance of the piece of electronic content as based at least in part on one or more measures derived from the group consisting of:	Instagram has computer program modules that include a second relevance measurement module which is coupled to the monitoring module. The second relevance measurement module is configured to identify at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user. "The most important signals across Feed, roughly in order of importance, are: • **Your activity.** Posts you've liked, shared, saved or commented on help us understand what you might be interested in. • **Information about the post.** These are signals both about how popular a post is – think **how many people have liked it and how quickly people are liking, commenting, sharing and saving a post** – and more mundane information about the content itself, like when it was posted, and what location, if any, was attached to it. • **Information about the person who posted.** This helps us get a sense for how interesting the person might be to you, and includes signals like how many times people have interacted with that person in the past few weeks. • **Your history of interacting with someone.** This gives us a sense of how interested you are generally in seeing

'217 Patent Claim Limitation	**Instagram**
	posts from a particular person. An example is whether or not you comment on each other's posts." https://about.instagram.com/blog/announcements/instagram-ranking-explained "We start by defining the set of things we plan to rank in the first place. **With Feed we consider recent posts shared by the people you follow**, as well as posts from accounts you don't already follow that we think you might be interested in. We determine what you might be interested in based on a variety of factors, including what and whom you've followed, liked or engaged with recently. We personalize the experience for you to try to strike **a balance between content from accounts you follow** with content from accounts you don't follow but might be interested in." https://about.instagram.com/blog/announcements/instagram-ranking-explained The second relevance measurement module is configured to determine a second measure of relevance of the piece of electronic content as based at least in part on one or more measures derived from the group set forth below.
a local importance describing an importance of the sender to the user,	In Instagram, the second relevance measurement is configured to determine a second measure of relevance of the piece of electronic content as based at least in part on a measure of relevance that may include a local importance describing an importance of the sender to the user. "The most important signals across Feed, roughly in order of importance, are: - **...** - **Your history of interacting with someone.** ***This gives us a sense of how interested you are*** generally in seeing posts from a particular person. ***An example is whether or not you comment on each other's posts***." https://about.instagram.com/blog/announcements/instagram-ranking-explained

'217 Patent Claim Limitation	**Instagram**
a global importance describing an importance of the sender within an organization with which the plurality of users are associated,	In Instagram, the second relevance measurement is configured to determine a second measure of relevance of the piece of electronic content as based at least in part on a measure of relevance that may be a global importance describing the importance of the sender within the organization with which the plurality of users are associated. ""The most important signals across Feed, roughly in order of importance, are: - **...** - Information about the person who posted. ***This helps us get a sense for how interesting the person might be to you***, and includes signals like ***how many times people have interacted with that person in the past few weeks***." https://about.instagram.com/blog/announcements/instagram-ranking-explained "Explore what's possible with Instagram Ads Advertise your business and reach your next customers with precise targeting and actionable insights. **Boost your posts with a tap** **Turn any of your posts into an ad instantly**. Inspire new audiences Decide who matters most to your business, then reach them with adjustable targeting options." https://business.instagram.com/advertising
a content relevance determined responsive to content of the piece of electronic content, and	In Instagram, the second relevance measurement is configured to determine a second measure of relevance of the piece of electronic content as based at least in part on a measure of relevance that may be a content relevance determined responsive to content of the piece of electronic content. "We determine what you might be interested in based on a variety of factors, including **what** and whom **you've followed, liked or engaged with recently**.

'217 Patent Claim Limitation	**Instagram**
	Next we take all the information we have about what was posted, the people who made those posts, and your preferences. We've also started considering other factors like format, so if we notice you prefer photos, we'll show you more photos. We call these "signals," and there are thousands of them. The most important signals across Feed, roughly in order of importance, are: • Your activity. **Posts you've liked, shared, saved or commented on help us understand what you might be interested in**. • Information about the post. These are signals both about how popular a post is – think how many people have liked it and how quickly people are liking, commenting, sharing and saving a post – and more mundane information ***about the content itself***, like when it was posted, and what location, if any, was attached to it." https://about.instagram.com/blog/announcements/instagram-ranking-explained#:~:text=The%20most%20important%20signals%2C%20roughly,might%20be%20relevant%20to%20you.
one or more actions on the piece of electronic content of the at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user; and	In Instagram, the second relevance measurement is configured to determine a second measure of relevance of the piece of electronic content as based at least in part on a relevance measure that may be one or more actions on the piece of electronic content of the at least one other of the plurality of users that is a recipient of the piece of electronic content and that is cognate to the user. "The most important signals across Feed, roughly in order of importance, are: - … - Information about the post. These are signals both about how popular a post is – think **how many people have liked it and how quickly people are liking, commenting, sharing and saving a post** – and more mundane information about the content itself, like when it was posted, and what location, if any, was attached to it."

’217 Patent Claim Limitation	Instagram
	https://about.instagram.com/blog/announcements/instagram-ranking-explained “We start by defining the set of things we plan to rank in the first place. **With Feed we consider recent posts shared by the people you follow**, as well as posts from accounts you don’t already follow that we think you might be interested in. We determine what you might be interested in based on a variety of factors, including what and whom you’ve followed, liked or engaged with recently. We personalize the experience for you to try to strike **a balance between content from accounts you follow** with content from accounts you don’t follow but might be interested in.” https://about.instagram.com/blog/announcements/instagram-ranking-explained
a relevance analysis module configured to determine the relevance score of the piece of electronic content sent from the sender to the user, the relevance score being determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance.	Instagram includes a relevance analysis module configured to determine the relevance score of the piece of electronic content sent from the sender to the user, the relevance score being determined based at least in part on the first determined measure of relevance and on the second determined measure of relevance. “Next **we take all the information we have** about what was posted, the people who made those posts, and your preferences. We’ve also started considering other factors like format, so if we notice you prefer photos, we’ll show you more photos. We call these “signals,” and there are thousands of them. They include everything from when a post was shared to whether you’re using a phone or the web to how often you like videos. The most important signals across Feed, roughly in order of importance, are: • **Your activity.** Posts you’ve liked, shared, saved or commented on help us understand what you might be interested in. • **Information about the post.** These are signals both about how popular a post is – think how many people have liked it and how quickly people are liking, commenting, sharing and saving a post – and more mundane information about the content itself, like when it was posted, and what location, if any, was attached to it.

'217 Patent Claim Limitation	Instagram
	• **Information about the person who posted**. This helps us get a sense for how interesting the person might be to you, and includes signals like how many times people have interacted with that person in the past few weeks. • **Your history of interacting with someone.** This gives us a sense of how interested you are generally in seeing posts from a particular person. An example is whether or not you comment on each other's posts. **From there we make a set of predictions**. These are educated guesses at how likely you are to interact with a post in different ways. There are roughly a dozen of these. In Feed, the five interactions we look at most closely are how likely you are to spend a few seconds on a post, comment on it, like it, share it, and tap on the profile photo. The more likely you are to take an action, and the more heavily we weigh that action, the higher up in Feed you'll see the post. We add and remove signals and predictions over time, working to get better at surfacing what you're interested in." https://about.instagram.com/blog/announcements/instagram-ranking-explained

44. Meta's acts of direct infringement include, but are not limited to, making, using, offering for sale, and/or selling Facebook and Instagram in the United States.

45. Meta's infringement is irreparably harming Sterling.

46. Sterling is entitled to money damages in an amount to be determined at trial, and no less than a reasonable royalty, and to preliminary and permanent injunctive relief.

V. JURY DEMAND

47. Pursuant to Fed. R. Civ. P. 38, Sterling hereby demands a jury trial as to all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Sterling prays for relief as follows:

1. A judgment that, by making, using, offering for sale, and/or selling Facebook, Meta has infringed the ’217 patent;

2. A judgment that, by making, using, offering for sale, and/or selling Instagram, Meta has infringed the ’217 patent;

3. A judgment awarding Sterling damages in an amount to be determined at trial, but not less than a reasonable royalty, including all pre-judgment and post-judgment interest at the maximum rate allowed by law;

4. An order enjoining Meta preliminarily, and permanently thereafter, from infringing the ’217 Patent;

5. A judgment awarding Sterling its costs incurred herein, including attorneys’ fees for an exceptional case pursuant to 35 U.S.C. § 285; and

6. A judgment awarding Sterling such other and further relief as the Court may deem just and equitable.

Dated: May 22, 2024

Respectfully submitted,

By: *Devan V. Padmanabhan by Christopher V. Goodpastor with permission*

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