SPENCER HOSIE (CA Bar No. 101777)
shosie@hosielaw.com
DIANE S. RICE (CA Bar No. 118303)
drice@hosielaw.com
DARRELL R. ATKINSON (CA Bar No. 280564)
datkinson@hosielaw.com
HOSIE RICE LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111
(415) 247-6000 Tel.
(415) 247-6001 Fax

LESLIE V. PAYNE (admitted *pro hac vice*)
lpayne@hpcllp.com
ALDEN G. HARRIS (admitted *pro hac vice*)
aharris@hpcllp.com
HEIM, PAYNE & CHORUSH, LLP
1111 Bagby St., Ste. 2100
Houston, Texas 77002
(713) 221-2000 Tel.
(713) 221-2021 Fax

Attorneys for Plaintiff
MASTEROBJECTS, INC.

REDACTED VERSION OF SEALED DOCUMENT PURSUANT TO ORDER RE MOTION TO SEAL (ECF 299)

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

MASTEROBJECTS, INC.,

Plaintiff,

v.

AMAZON.COM, INC.,

Defendant.

Case No. 5:20-cv-08103-WHA (KAW)

SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Judge: Hon. William Alsup
Complaint Filed: May 5, 2020
Trial Date: May 9, 2022

JURY TRIAL DEMANDED

MasterObjects, Inc. ("MasterObjects" or "Plaintiff") hereby files its second amended complaint against Amazon.com, Inc. ("Amazon" or "Defendant"). For its complaint, MasterObjects alleges on personal knowledge as to its own acts and on information and belief as to all other matters, as follows:

I. NATURE OF THE ACTION.

1. This complaint asserts causes of action for patent infringement under the Patent Act, 35 U.S.C. §§ 1 et. seq., including § 271.

II. PARTIES.

2. MasterObjects is a corporation organized under the laws of the State of Delaware, with its principal place of business in the Netherlands.

3. Amazon.com, Inc. is a corporation organized under the laws of the State of Delaware, with its principal place of business in Seattle, Washington.

III. JURISDICTION AND VENUE.

4. This Court has subject matter jurisdiction over this matter by virtue of 28 U.S.C. § 1338(a).

5. This action was transferred to this District at Amazon's request. *See* ECF 82. Amazon consented to personal jurisdiction and venue in this District through its motion to transfer this action to this District. *See* ECF 63, 66 & 71; *see also* ECF 109 ("The Parties do not dispute personal jurisdiction").

IV. BACKGROUND.

A. The Plaintiff MasterObjects and its Search Technology.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

6. From the earliest days of Internet search, the search process has been hampered by what is known as the "request-response loop." The user would type a query into a static input field, click a "submit" or "search" button, wait for the query to be sent to a remote database, wait for the result set to be returned to the server, wait for the server to build an HTML page, wait for the page to load into the browser, and then wait for the client window to be redrawn so that the result set could be viewed. Inherent in the "request-response loop" is the pragmatic reality that, if the result set did not match user expectations, the entire process had to be repeated, iteratively, until the results satisfied the user.

7. Plaintiff MasterObjects is a software company founded by Mark Smit. Mr. Smit is a named inventor of each of the patents asserted here. In 1999 and 2000, Mr. Smit was a young computer scientist working on relational databases and complex document search and retrieval issues for a technology company near Amsterdam. He found the technology frustrating and slow, and thought he could do better. Accordingly, he left his job and put his life savings in a new company founded to develop better computer search technology. He called the company MasterObjects.

8. By the early Fall of 2000, Mr. Smit had conceived of a new computer search paradigm. He created a way to have instant search results provided as the user typed in characters in a search request. Mr. Smit's technique uses asynchronous communications between the user's computer and the server performing the search. In the old search model, the communication was "synchronous," *i.e.*, the server would sit idle until the user hit submit, whereupon the server would do its work, and then return the information to the client. As the client worked, the server waited; as the server communicated, the client waited.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

9. To break this "request-response loop," Mr. Smit understood that he needed a new way to communicate that was asynchronous, *i.e.*, the client and the server could talk to each other within a session in a non-blocking way. In other words, the server and the client could communicate at the same time rather than the server waiting until the client finished and vice versa.

10. Mr. Smit also envisioned that the servers would store common prior search queries and related results. Storing this information, along with the asynchronous communication, allowed the computer system to quickly associate a few characters of a new request with a pre-existing model of the same request and results thereto, and provide suggested results right away. For example, as a user searching for information about an indoor arena in Manhattan types, "mad" becomes "madi," then later "madison sq," and then out pops search results for "madison square garden." As the user types in a query, the server provides increasingly relevant and responsive information (*e.g.*, information relating to Mad Magazine, then James Madison, then Madison Square Garden). These inventive techniques provide useful search results much faster and more efficiently than prior computer systems, improving computer system functionality, and thereby providing a sophisticated digital search platform.

11. The patents asserted in this lawsuit embody Mr. Smit's inventions. The claimed features are not merely well-understood, routine, and conventional computer functions; rather they are novel and distinct improvements on the prior approaches known in the art. These novel claimed features improve the functioning of the computer system that implements them. For example, the asynchronous communication feature improves the operation of both the client computer and the server by allowing the two to communicate at the same time, thereby reducing latency and improving the timeliness of results. As another example, storing prior search queries and related results improves the operation of both the client computer and the server system by

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

enabling common search requests and results to be retrieved quickly while utilizing fewer system resources to accomplish this task. As another example, displaying relevant search results in real time (*e.g.*, while the user is entering the query) improves the operation of the client computer by enabling it to provide more accurate and timely results to users while bypassing the slow and frustrating "request-response loop" common in prior systems.

B. The Patents-In-Suit.

12. The patents asserted here are MasterObjects': (1) U.S. Patent No. 8,539,024 (the "'024 Patent"), entitled "System and Method for Asynchronous Client Server Session Communication;" (2) United States Patent No. 9,760,628 (the "'628 Patent"), entitled "System and Method for Asynchronous Client Server Session Communication;" (3) United States Patent No. 10,311,073 (the "'073 Patent"), entitled "System and Method for Asynchronous Retrieval of Information From a Server to a Client Based On Incremental User Input;" and (4) United States Patent No. 10,394,866 (the "'866 Patent"), entitled "System and Method for Asynchronous Client Server Session Communication," collectively, the "Patents-in-Suit."

13. Each of the Patents-in-Suit have been assigned to MasterObjects. Plaintiff MasterObjects is the sole legal and rightful owner of each of the Patents-in-Suit.

14. The '024 Patent was duly and legally issued on September 17, 2013. A true and correct copy of the '024 Patent is attached as Exhibit A. The '024 Patent covers sending a full input string. Under Claim 1, for example, a client object sends query messages to the server system, with the term "query messages" representing the lengthening string of characters. *See* Claim 1, '024 Patent ("a server system, including one or more computers, which is configured to receive query messages from a client object . . . whereby the query messages represent the lengthening string …").

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

15. The '024 Patent has been the subject of other proceedings, including *MasterObjects, Inc. v. Google Inc*., No. 4:15-cv-01775-PJH (N.D. Cal.), *MasterObjects, Inc. v. Yahoo! Inc*., No. 3:13-cv-04326-JSW (N.D. Cal.), *MasterObjects, Inc. v. eBay Inc*., No. 4:16-cv-06824-JSW (N.D. Cal.), *MasterObjects, Inc. v. Facebook, Inc*., No. 6:20-cv-00087 (W.D. Tex.) (the "*Facebook* matter"), and *eBay Inc. v. MasterObjects, Inc*., IPR2017-00740 (Pat. Trial & App. Board) (the "*eBay IPR*").

16. The *eBay IPR* was an *inter partes* review involving '024 Patent claims 1-3, 6-7, 9, 12, 15-17, 21, 24-26, and 32-37. All of the '024 Patent's independent claims were involved claims. The Patent Trial and Appeal Board ("PTAB") issued a Final Written Decision finding all of the involved claims patentable. A true and correct copy of the Final Written Decision is attached as Exhibit B. The PTAB found that Kravets (U.S. Patent No. 6,704,727) did not anticipate the involved claims; that the involved claims were non-obvious over Kravets; and that the involved claims were non-obvious over the combination of Kravets and Bauer (U.S. Patent No. 6,751,603). The PTAB found that the '024 Patent's independent claims recite specific "usability test[s]," and that Kravets does not disclose or teach the claimed tests.

17. eBay Inc. appealed the Final Written Decision to the Federal Circuit. The parties to the *eBay IPR* jointly moved to voluntarily dismiss the appeal. The Federal Circuit dismissed the appeal. An *inter partes* review certificate issued on June 11, 2019. The IPR certificate confirmed the patentability of the involved '024 Patent claims

18. The '628 Patent was duly and legally issued on September 12, 2017. A true and correct copy of the '628 Patent is attached as Exhibit C.

19. The '073 Patent was duly and legally issued on June 4, 2019. A true and correct copy of the '073 Patent is attached as Exhibit D. On December 6, 2019, MasterObjects filed a

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

Petition to Correct Priority Under 37 CFR § 1.78(e) relating to the '073 Patent. *See* Exhibit E. On February 14, 2020, MasterObjects filed a Petition Under 37 CFR §1.1182 for Expedited Handling of its 37 CFR § 1.78(e) Petition. The Patent and Trademark Office ("P.T.O.") granted both petitions on February 25, 2020. *See* Exhibit F.

20. After the initiation of this action, a petition for *inter partes* review of claims 1, 2 and 4-12 of the '073 Patent was filed by Unified Patents, LLC. This *inter partes* review proceeding was styled *United Patents, LLC v. MasterObjects, Inc*., IPR2020-01201 (Pat. Trial & App. Board) (the "*Unified IPR*"). On January 11, 2021, the PTAB denied institution of the *Unified IPR*. *See* Exhibit G ("*Unified IPR* Decision").

21. The '866 Patent was duly and legally issued on August 27, 2019. A true and correct copy of the '866 Patent is attached as Exhibit H. On December 6, 2019, MasterObjects filed a 37 CFR § 1.78(e) Petition to Correct Priority Under 37 CFR § 1.78(e) relating to the '866 Patent. *See* Exhibit I. On February 14, 2020, MasterObjects filed a Petition Under 37 CFR §1.1182 for Expedited Handling of its 37 CFR § 1.78(e) Petition. The P.T.O. granted the 37 CFR §1.1182 Petition and dismissed the 37 CFR § 1.78(e) Petition. *See* Exhibit J. The P.T.O. decided that MasterObjects had "timely made a claim for benefit of priority by submitting within the time period set forth at 37 CFR 1.78(d) an application data sheet identifying the applications for which the benefit of priority was sought by application number (series code and serial number) and relationship …. As the application data sheet properly identified the applications for which priority was sought by application number and relationship, a filing receipt reflective of the acceptance of the claim was issued." *Id.* "In view thereof, a petition under 37 CFR 1.78" was deemed "not necessary" by the P.T.O. *See id*.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

22. The '866 Patent is a continuation of the '628 Patent, and the '628 Patent is a continuation of the '024 Patent. The '024 Patent is a continuation of MasterObjects' U.S. Patent 8,112,529 (the "'529 Patent"). (MasterObjects does not assert the '529 Patent here). The '073 Patent is related to the '866 Patent's great-grandparent, the '529 Patent. All asserted claims, including all asserted '073 Patent claims, are entitled to the benefit of the '529 Patent's filing date.

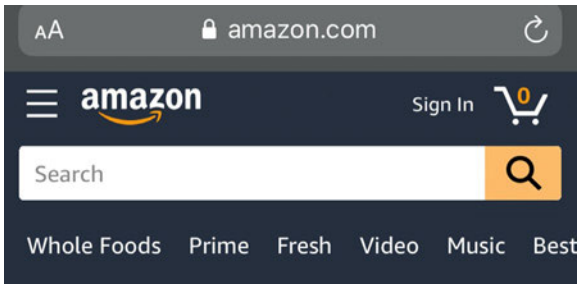
C. The Infringing Amazon Instrumentalities.

23. Amazon is the top United States company ranked by retail e-commerce sales. *See* http://emarketer.com/content/digital-investments-pay-off-for-walmart-in-ecommerce-race. Not surprisingly, Amazon lists a staggering number of products on its U.S. Amazon.com website, 564 million as of January 2018 to be exact. *See* http://www.scrapehero.com/how-many-products-amazon-sell-worldwide-january-2018/. With this many listings, Amazon's predictive search function is paramount to an Amazon customer's ability to find products, and thus search is critical to Amazon. As a CNN journalist put it with respect to his search for socks on Amazon: "[n]o one could possibly scroll through them all, especially while staring at a smartphone. It's critical that Amazon shows customers what they truly want." https://www.cnn.com/2018/10/05/tech/amazon-artificial-intelligence/index.html.

24. The fact is, Amazon is a retail giant powered by intelligent search algorithms. It is a search company running a search engine that provides predictive search results.

25. Amazon's premier search offering is its product search. This is the search feature an Amazon customer uses in the Amazon apps for iOS and Android operating systems and on Amazon.com:

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111



26. Amazon's product search feature is critical to its core business with "[a]lmost 90 percent of all product views on Amazon result[ing] from Amazon's product search and not merchandising, ads or product aggregators." *See* https://www.marketwatch.com/press-release/the-race-is-on-jumpshot-releases-the-competitive-state-of-ecommerce-marketplaces-data-report-2018-09-06.

27. Amazon leads the search product field. In 2018, "Amazon overtook Google in product search with about 54 percent of product searches being on Amazon …." https://www.marketwatch.com/press-release/the-race-is-on-jumpshot-releases-the-competitive-state-of-ecommerce-marketplaces-data-report-2018-09-06).[1] "Among weekly [Amazon] Prime users, 79% start their product searches on Amazon, and 65% of other Prime members start on Amazon as well." https://www.fool.com/investing/2019/12/26/is-google-amazon-biggest-competitor.asp.

28. In 2014, then Google executive chairman Eric Schmidt identified Amazon as Google's main search competitor:

[1] *See also* https://www.cnn.com/2018/09/30/tech/amazon-digital-ads-google-facebook-microsoft-oath/index.html ("More people are starting their searches for products on Amazon instead of Google or another search engine …."); http://www.emarketeer.com/content/more-product-searches-start-on-amazon ("A number of consumer surveys have shown that more US digital shoppers now start their searches on Amazon. Nearly half (46.7%) of US internet users started product searches on Amazon compared with 34.6% who went to Google first … And the leading method among digital shoppers in the US surveyed … in February 2018 was searching and buying on Amazon (41%) followed by searching on Google then buying on Amazon (28%)").

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

> Many people think our main competition is Bing or Yahoo … But, really, **our biggest search competitor is Amazon**. People don't think of Amazon as search, but if you are looking for something to buy, you are more often than not looking for it on Amazon.

https://www.cnet.com/news/googles-biggest-search-competitor-is-amazon-says-former-ceo/ (emphasis added).

29. Amazon's search prowess makes it not just an e-commerce juggernaut, but a search ad powerhouse. In this area, still led by Alphabet's Google, Amazon has moved into second place, passing Microsoft in 2018 to "become the second-largest ad platform for search in the U.S." *See* https://www.cnbc.com/2019/10/15/amazon-is-eating-into-googles-dominance-in-search-ads.html. Amazon's share of the search ad market by revenue was expected to grow to 15.9% by 2021. *See id.*

30. Amazon has a dedicated search technology entity known as "A9." *See* https://web.archive.org/web/20190812003716/https://a9.com/what-we-do/product-search.html ("If you've done a search on Amazon, you've used our search engine;" "Within Search we have the Search Operations team which builds and runs the world's largest e-commerce product search"). A9 is "responsible for thousands of servers handling hundreds of millions of customer searches daily." *Id.* "**Search** and several related services [A9] support[s] **are at the core of the Amazon business**: they help customers find the items they want to buy." *Id.* (emphasis added).

31. One of Amazon's goals in providing predictive search results is to do so while minimizing latency. That is, Amazon tries to provide predictive search results as quickly as possible.

32. As Amazon once explained, "[a]s soon as [it] see[s] the first keystroke, [Amazon is] ready with instant suggestions and a comprehensive set of search results." *See* https://web.archive.org/web/20190812003716/https://a9.com/what-we-do/product-search.html.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

Amazon "start[s] the search experience by giving customers suggestions on how to formulate their queries ***as soon*** as they start typing." *Id.* (emphasis added).

33. As a prominent journalist recently chronicled of his use of Amazon's search:

> I get no further than typing "s" [in the search bar] and Amazon's AI is already offering suggestions. SD card. Spiderman PS4. Shower curtain. To hone this suggestion list, Amazon taps historical data from billions of searches, and the results evolve constantly to reflect how people who start a query with "s" typically complete it. Queries that have been most likely to lead to a sale top the list.

See https://www.cnn.com/2018/10/05/tech/amazon-artificial-intelligence/index.html.

34. Amazon's predictive search for its Amazon websites ("Amazon Predictive Search"), including both for its Amazon.com desktop and mobile websites, infringes claims of the Patents-in-Suit.

35. In addition, Amazon's predictive search for client applications and platforms it makes, sells, and/or distributes ("Amazon Applications"), including the Amazon applications for the iOS and Android mobile phone platforms for Amazon.com, infringes claims of the Patents-in-Suit.

36. Amazon Predictive Search and Amazon Applications (collectively the "Accused Instrumentalities") meet all the elements of claims of the Patents-in-Suit. Amazon infringes the Patents-in-Suit.

37. Amazon is well-known for being extraordinarily secretive. As one technology journalist wrote, "[i]t's incredibly rare to get a comment from the company on any story, even if the news is very positive or controversial, and the only time we really hear from the company on the record is when it issues a press release." *See*, *e.g.*, https://www.businessinsider.com/amazon-secrecy-2013-8. Despite the fact that search is at the core of Amazon's business, it publishes limited information about how its search works. Nevertheless, some basic aspects of Amazon's search can be understood by trying Amazon's search and by inspecting the network traffic that is

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

generated. This Complaint attaches as Exhibit K, MasterObjects' Supplemental Disclosure of Asserted Claims and Infringement Contentions, which includes representative infringement charts, which include some non-public information based on the limited discovery provided by Amazon, and MasterObjects' ongoing investigation, to date.

V. NOTICE AND WILLFULNESS.

38. The allegations of each foregoing paragraph are incorporated by reference as if fully set forth herein.

39. Amazon has been on constructive notice of the Patents-in-Suit. MasterObjects ceased product sales by at least January 2013. The Patents-in-Suit all issued after January 2013. More, MasterObjects' website states that its technology is protected by the '024 Patent. MasterObjects has complied with, and/or MasterObjects need not comply with, 35 U.S.C. § 287(a).

A. Pre-Suit Knowledge of Infringement:

40. Amazon has known about MasterObjects, MasterObjects' products, and MasterObjects' patent portfolio since at least 2011.

41. In 2011, MasterObjects filed suit against Amazon for patent infringement. That suit was styled *MasterObjects, Inc. v. Amazon.com, Inc*., No. 3:11-cv-01055-CRB, N.D. Cal (*Amazon I*). The *Amazon I* complaint asserted MasterObjects' U.S. Patent No. 7,752,326 (the "'326 Patent"), explained that that patent was a continuation-in-part of MasterObjects' 2001 application (the '529 Patent's application), and attached the '326 Patent as an exhibit. (The '326 Patent lists the '529 Patent's application number on its face; the '529 Patent issued on February 7, 2012.) The *Amazon I* complaint described the '326 Patent as an "instant search patent."

42. The *Amazon I complaint* also explained that:

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

> In 2000, Mark Smit, the founder of Plaintiff MasterObjects, invented a novel approach to search, an approach that solved the 'request-response loop' problem. Smit envisioned a system where dynamic and intelligent search field would immediately begin submitting a search query as the user began typing characters into the query filed. Using asynchronous communications technology, as the user typed more characters, the results in the drop-down box would change dynamically, becoming increasingly relevant as the string of characters lengthened.
>
> ***
>
> MasterObjects' products practice the '326 patent, and MasterObjects has been selling these products from 2004 froward. MasterObjects remains a going concern today, selling products that practice its patented technology.

43. The *Amazon I* complaint went on to identify, in a section titled "Amazon Search Suggestions," the enhanced search capabilities of the Amazon.com website, Amazon browser toolbars and add-ins, and mobile applications for iPhone and Android platforms, as infringing the '326 Patent.

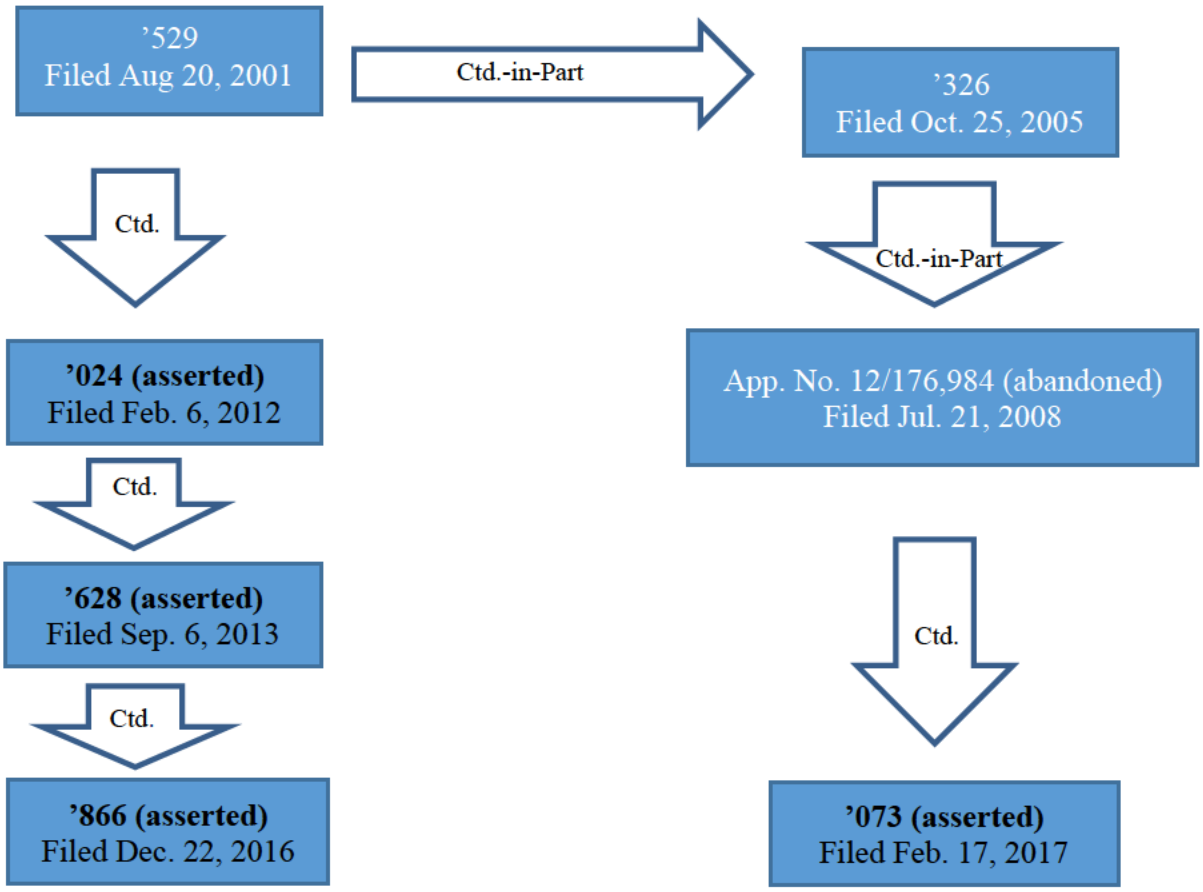
44. The instrumentalities accused of infringing the '024, '628, '866, and '073 Patents in this case include the instant search features for the Amazon.com websites, the Amazon applications for the iOS and Android phone platforms for Amazon.com, the Amazon.com extended browser toolbars and add-ins, and the feature referred to by Amazon as "Inline Search Suggestions." *See* ¶¶ 35-36 above & Ex. K, § II.

45. The '024, '628 and '866 Patents are related to the '326 Patent through the '529 Patent, i.e., the 2001 application referenced in the *Amazon I* complaint. The '326 Patent is a continuation-in-part of the '529 Patent. The '073 Patent is a continuation of MasterObjects' U.S. Application 12/176,984 (the '984 Application), which is in turn a continuation-in-part of the '326 Patent:

///

///

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111



46. Amazon's pre-suit knowledge of the MasterObjects patent family is not limited to 2011; rather, Amazon's experience with the MasterObjects patent portfolio is extensive and long running. Amazon cited or had cited to it by the P.T.O. MasterObjects' patents or patent applications over various Amazon patent prosecutions over many years. These Amazon prosecutions involved senior Amazon executives, including executives that would have been aware of the *Amazon I* complaint, and Amazon search engineers, including an engineer identified in Amazon's Fed. R. Civ. P. 26(a)(1) Disclosure as having information relevant to this case. The MasterObjects patents, including the here asserted '024 Patent, were the center piece of Amazon Information Disclosure Statements ("IDS"), and MasterObjects' patents were the primary references discussed by Amazon, examiners, and even the PTAB in relation to examiner rejections of Amazon instant search patent applications. Amazon was aware of the '024 Patent long prior to

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

this suit being filed, and would have also been aware of the '628, '073, and '866 Patents prior to this suit being initiated. Prior to this suit being filed, Amazon understood that it infringed the Patents-in-Suit. It certainly knew there was a high risk of infringing the Patents-in-Suit. At the very least, here, where Amazon was accused prior of infringing a related patent, knew of MasterObjects' patented technology, was on notice of the Patents-in-Suit, and was immersed in years of back-and-forth with the P.T.O. over MasterObjects-based rejections, the risk of infringing the Patents-in-Suit was so obvious it should have been known to Amazon. Amazon willfully infringed the Patents-in-Suit pre-suit.

47. On July 2, 2010, Amazon filed its application for U.S. Patent No. 8,639,715, titled "Auctionable Rich Media Search Suggestions" ("Brinck I"). The face of Brinck I identifies the assignee as "A9.com, Inc." A9 is an Amazon entity devoted to internet search. *See* ¶ 30 above. The first named inventor on Brinck I, Thomas G. Brinck, worked on Amazon search instrumentalities, as demonstrated by his LinkedIn resume: "led UX for search and advertising at A9.com (Amazon);" "A9.com[,] Creative Director … Generated advanced search UI concepts …". The same is true of the third named inventor, Ryan M. White: "Amazon … Amazon Search : Queries and Results … Search Queries and Results builds the core data driven algorithms, enabling millions of customers everyday to search, discover and purchase items on Amazon … Search Analytics & Search Assistance … Search Assistance delivers Inline Search Suggestions …". And of the fourth named inventor, Bryce Erwin: "A9.com -Amazon.com … Developed next generation search … across Amazon's storefront and peripheral product line …". The same is also true of the second named inventor, Matthew W. Amacker: "Principal Engineer at Amazon – Created hundreds of new user-facing protypes and services directly resulting in Billions of additive sales and ad revenue per year …. A9.com[,] Principal Engineer – Amazon.com … search and browser

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

technology … Built search completion feature for Amazon.com – made them a billion in one year." Amazon, in its Fed. R. Civ. P. 26(a)(1) Disclosure, identified Mr. Amacker as a relevant witness with information on "[t]he development, structure and functionality of Amazon's inline search suggestions technology." The named Brinck I inventors worked on the Amazon search instrumentalities accused of infringing the Patents-in-Suit.

48. Amazon replaced its Brinck I prosecution counsel, Townsend and Townsend and Crew, LLP, with Novak Druce + Quigg LLP. The relevant "Revocation and General Power of Attorney" was signed by William F. Stasior and was submitted by Amazon to the P.T.O. on February 23, 2012. As demonstrated by his LinkedIn resume, Mr. Stasior was both the C.E.O. of A9.com and the Amazon.com, Inc., Vice President for Amazon Search. He "[l]ed Search at Amazon while serving as President of … A9.com." Mr. Stasior "[a]lso served as [a] member of [Amazon C.E.O.] Jeff Bezos' senior executive committee, the S-team, overseeing all of Amazon's operations."

49. On December 12, 2012, the P.T.O. mailed Amazon an Office Action with respect to Brinck I's application. This Office Action rejected Amazon's pending claims as anticipated by the '326 Patent. In response, on February 12, 2013, Amazon amended its claims and argued that they were patentable over the '326 Patent. The examiner responded on June 21, 2013, rejecting Amazon's claims as obvious. The examiner's primary reference was the '326 Patent. Amazon responded to this second rejection on September 23, 2013, by again amending its claims and arguing that they were patentable over MasterObjects' '326 Patent. By this time MasterObjects' '024 Patent had issued. The '024 Patent issued on September 17, 2013; its issuance fees were paid on August 8, 2013; it received a Notice of Allowance ("NOA") on July 31, 2013; and its application was published on November 8, 2012.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

50. On March 29, 2012, Amazon filed its application for U.S. Patent No. 8,918,392, tiled "Data Storage Mapping and Management ("Brooker I"). The face of Brooker I identifies the assignee as "Amazon Technologies, Inc." Kilpatrick Townsend & Stockton LLP, the successor to Townsend and Townsend and Crew LLP (Townsend and Kilpatrick merged in 2011), represented Amazon during its prosecution of Brooker I's application.

51. On August 22, 2014, the Brooker I examiner cited MasterObjects' "US-2012/0284329" and "US-2003/0041147" applications to Amazon. These are the patent application publication numbers for the '024 and '529 Patent respectively. The '024 had issued approximately a year prior to this cite. These cites came on a ten item Notice of References Cited that list the two MasterObjects patents first and second:

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2012/0284329	11-2012	van den Oord et al.	709/203
*	B	US-2003/0041147	02-2003	van den Oord et al.	709/227
*	C	US-2009/0089409	04-2009	Pasko et al.	709/223
*	D	US-2010/0333116	12-2010	Prahlad et al.	709/216
*	E	US-2010/0174731	07-2010	Vermeulen et al.	707/758
*	F	US-2006/0059253	03-2006	Goodman et al.	709/223
*	G	US-8,756,375	06-2014	Flynn, David	711/128
*	H	US-8,578,127	11-2013	Thatcher et al.	711/202
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	W Wong, P Nikander - 2010 - conferences.npl.co.uk - "Towards Secure Information-centric Naming" OCT. 2010 pages: 1-8
	V	Kun Wang; Qiang Guo; and Jindong Wang - "Research on Security Function Component Model of Intelligent Security Defense Scheme" - Artificial Intelligence and Computational Intelligence (AICI), 2010 International Conference on (Volume:1) Date of Conference: 23-24 Oct. 2010 - Page(s): 129 - 133

52. On March 29, 2012, Amazon filed its application for U.S. Patent No. 8,935,203, tiled "Environment-Sensitive Distributed Management ("Brooker II"). The face of Brooker II

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

identifies the assignee as "Amazon Technologies, Inc." Kilpatrick Townsend & Stockton LLP represented Amazon during its prosecution of Brooker II's application. While Brooker I and Brooker II cross-reference each other's applications, they are not related by priority.

53. On October 21, 2014—two months after the examiner's cite to the '024 Patent's application in the Brooker I prosecution—Amazon filed a post-NOA IDS for Brooker II that identified the '024 and '529 Patents by publication number. Clearly Amazon had taken note of the examiner's prior citations.

54. On March 29, 2012, Amazon filed its application for U.S. Patent No. 8,930,364, tiled "Intelligent Data Integration" ("Brooker III"). The face of Brooker III identifies the assignee as "Amazon Technologies, Inc." Kilpatrick Townsend & Stockton LLP represented Amazon during its prosecution of Brooker III's application. While Brooker I, II and III cross-reference each other's applications, they are not related by priority.

55. On November 14, 2014, Amazon filed a post-NOA IDS for Brooker III that identified the '024 and '529 Patents by publication number. The MasterObjects applications were two of only eight references listed:

U.S. PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	8,756,375		06-17-2014	Flynn	
	2.	8,578,127		11-05-2013	Thatcher	

U.S. PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	3.	2012/0284329		11-08-2012	van den Oord et al.	
	4.	2003/0041147		02-27-2003	van den Oord et al.	
	5.	2009/0089409		04-02-2009	Pasko et al.	
	6.	2010/0333116		12-30-2010	Prahlad et al.	
	7.	2010/0174731		07-08-2010	Vermeulen et al.	
	8.	2006/0059253		03-16-2006	Goodman et al.	

56. On August 11, 2014, Amazon filed its application for U.S. Patent No. 9,531,809, tiled "Distributed Data Storage Controller" ("Brooker IV"). The face of Brooker IV identifies the assignee as "Amazon Technologies, Inc." Kilpatrick Townsend & Stockton LLP represented

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

Amazon during its prosecution of Brooker IV's application. While Brooker IV cross-references Brooker I, II, III's applications, Brooker IV is not related to Brooker I, II or III by priority.

57. When Amazon filed the application for Brooker IV, it filed a "Power of Attorney to Prosecute Applications Before the USPTO." This power of attorney lists "Amazon Technologies, Inc." as the assignee and is signed by Scott Hayden as "Vice President." According to Mr. Hayden's Linked resume, he is Amazon.com, Inc.'s "Vice President and Chief Intellectual Property Counsel." Mr. Hayden "[l]ead[s] [the] team responsible for all aspects of [Amazon's] Intellectual Property (IP)." Mr. Hayden's tenure as Amazon's "VP Intellectual Property" began in April 2006, and continues to this day.

58. Amazon filed, on November, 25, 2014, yet another IDS that identified the '024 and '529 Patents by publication number. This IDS was filed during Amazon's prosecution of its Brooker IV's application.

59. Amazon was on notice of the '024 Patent by at least the second half of 2014. By the end of 2014, Amazon had thrice cited to the already issued '024 Patent's publication number and its parent's ('529 Patent) publication number. Amazon would not have merely incorporated these application numbers into its IDSs without doing minimal due diligence and thereby discovering the long-issued patents.

60. On March 25, 2010, Amazon filed its application for U.S. Patent No. 9,589,032, titled "Updating Content Pages With Suggested Search Terms and Search Results" ("Brinck II"). The face of Brinck II identifies the assignee as "A9.com, Inc." Brinck II lists Tom Brinck and Matthew Amacker as its inventors. As explained above, Mr. Brinck and Mr. Amacker worked on the accused instrumentalities. While Brinck II and Brinck I share inventors, the two patents are not related. Brinck II's abstract describes:

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

> Asynchronous updating of content pages with suggested search terms and search results is performed by receiving at least on character form a search term user interface element is received and suggested search terms are generated. At least one search result associated with the at least one suggested search term is retrieved from an electronic repository, and the content page is asynchronously updated with additional data about the search result retrieved from the electronic repository.

Brinck II is an instant search patent.

61. Amazon was represented by Thomas Horstemeyer, LLP during Brinck II's prosecution. Owing in no small part to the application for MasterObjects' '326 Patent, Brinck II's prosecution history is lengthy, with Brinck II receiving an Issue Notification on February 15, 2017, seven years after its application was filed.

62. The Brinck II examiner rejected Brinck II's claims as anticipated by "2006/0075120," which is the publication number for the then already issued '326 Patent, in a January 17, 2012 Office Action. In response, on April 13, 2012, Amazon amended its claims and argued that they were patentable over the '326 Patent's application. The examiner responded on December 5, 2012, rejecting Amazon's claims as obvious. The examiner's primary reference was the '326 Patent's application. Amazon responded in July 2013, filing an Appeal Brief in which it presented extensive arguments as to the alleged patentability of Brinck II over MasterObjects' '326 Patent's application. The examiner filed an Answer on August 29, 2013, and a subsequent Answer on September 11, 2013. Amazon filed its Reply Brief on October 28, 2013, in which it again argued for the patentability of Brinck II over the '326 Patent's application. By this time the '024 Patent had issued.

63. On March 4, 2016, the PTAB issued its Decision on Appeal, affirming the examiner's rejection of Brinck II then pending claims in light of the '326 Patent's application. The PTAB concurred with the examiner that the '326 Patent's application "teaches that the user interface does not make use of a submit (or similar) button, and instead asynchronously responds

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

to the user's input." In response, on May 2, 2016, Amazon again amended its claims and argued that they were patentable over the '326 Patent's application. By this time, not only had the '024 Patent issued, but Amazon had filed three IDSs citing its publication number. Amazon knew about the '024 Patent and understood that its instant search technology read on the '024 Patent's claims.

64. On July 6, 2016, the Brinck II examiner again rejected Brinck II claims as obvious in light of the '326 Patent's application. In response, on October 3, 2016, Amazon once again amended its instant search claims and argued that they were patentable over the '326 Patent's application. On October 21, 2016, the examiner issued a Notice of Allowance, which discussed the '326 Patent's application.

65. On November 17, 2016, Amazon filed its application for U.S. Patent No. 9,906,598, titled "Distributed Data Storage Controller" ("Brooker V"). The face of Brooker V identifies the assignee and applicant as "Amazon Technologies, Inc." Kilpatrick Townsend & Stockton LLP represented Amazon during its prosecution of Brooker V's application. Brooker V is a continuation of Brooker IV. When Amazon filed the application for Brooker V, it filed a "Power of Attorney by Applicant." This power of attorney lists "Amazon Technologies, Inc." as the assignee, and is signed by Amazon.com, Inc.'s Chief Intellectual Property Counsel, Mr. Hayden, as "Vice President."

66. On December 1, 2016, with respect to its prosecution of Brooker V, Amazon filed yet another IDS that identified the published applications for MasterObjects' '024 and '529 Patents. The '024 Patent's issuance date pre-dates this December 2016 IDS by more than three years. More, by this time, the '024 Patent's immediate child, the '628 Patent, had received an NOA.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

67. MasterObjects' '628 Patent's application published on April 3, 2014. The P.T.O. issued an NOA for the '628 Patent on November 18, 2016. By the time Amazon was religiously citing the '024 and '529 Patent's published applications, the '628 Patent's application was publicly available. By the time Amazon was responding to the PTAB's affirmation that Brinck II claims were not patentable in light of the '326 Patent's application, the '628 Patent's application was publicly available. By the time Amazon cited the '024 Patent's application, the immediate parent of the '628 Patent, in its prosecution of Brooker V, the P.T.O. had allowed the '628 Patent's claims. Amazon was aware of the '628 Patent when it issued, and Amazon knew it infringed. The only way Amazon could not be so aware, is if it were willfully blind to the '628 Patent and its infringement.

68. On February 1, 2017, Amazon filed its application for U.S. Patent No. 10,497,041, titled "Updating Content Pages With Suggested Search Terms and Search Results" ("Brinck III"). The face of Brinck III identifies the applicant as "A9.com, Inc." and the assignee as "Amazon Technologies, Inc." Brinck III is a continuation of Brinck II. Tom Brinck and Matthew Amacker are listed as inventors on the face of Brinck III. As explained above, Mr. Brinck and Mr. Amacker worked on the accused instrumentalities. Amazon was represented by Thomas Horstemeyer, LLP during Brinck III's prosecution.

69. By way of a June 26, 2018 Office Action, the P.T.O. rejected Brinck III's claims as anticipated by "Smit (US PUB 2009/0006543 A1)." "US PUB 2009/0006543 A1" is the publication number for MasterObjects' '984 Application. Then rejected Brinck III claim 21 read:

> A method comprising:
> generating, in at least one computing device, a content page having a search term user interface element;
> receiving, in at least one computing device, at least one character from the search term user interface element, the at least one character corresponding to a search for an item in an electronic repository;

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

> generating, in the at least one computing device, at least one suggested search term corresponding to the at least one character;
>
> retrieving, from the electronic repository, at least one search result associated with the at least one suggested search term; and
>
> asynchronously updating the content page, by the at least one computing device, with a suggested search term user interface element, the suggested search term user interface element displaying the at least one suggested search term and at least one image corresponding to the at least one search result.

Brinck III is an instant search patent.

70. On September 25, 2018, Amazon amended its Brinck III claims and argued that they were patentable over MasterObjects' '984 Application. MasterObjects' '628 Patent issued on September 12, 2017, more than a year prior to Amazon's September 2018 Brinck III response. Amazon knew about the '628 Patent and understood that its instant search technology read on the '628 Patent's claims.

71. On October 19, 2018, the examiner, relying on the '984 Application as the primary reference, rejected Brinck III claims as obvious. On February 5, 2019, Amazon responded with amendments and arguments. On February 26, 2019, the examiner again rejected Brinck III claims as obvious in light of MasterObjects' '984 Application. On May 22, 2019, Amazon responded again amending its claims and arguing that they were patentable over the '984 Application. By the time of this late May 2019 response, MasterObjects' '073 Patent had received an issue notification (which listed its June 4, 2019 issue date).

72. The '073 Patent is the immediate child of the '984 Application, the reference at the heart of Amazon's instant search patent Brinck III's prosecution. The '073 Patent's application published on August 10, 2017; the '073 Patent received an NOA on April 1, 2019; and the '073 Patent received an issue notification on May 15, 2019. Amazon would have discovered the already allowed '073 Patent claims during its Brinck III prosecution and understood it would infringe those claims on their issuance by no later than May 2019.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

73. On July 9, 2019, the P.T.O. issued an NOA for Brinck III. The examiner stated that:

> The amended feature asynchronously updating the suggested search term to reflect the at least one navigation input, wherein asynchronous updating the suggested search term user interface element comprises highlighting at least one of the at least two of the plurality of images as a selected image in response to the at least on navigation input and asynchronously updating the search term user in interface element to reflect the at least one navigation input by enlarging the selected image as recited in claims 21, 26, 28, and 34, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record.

74. Amazon received an issue notification for Brinck III on November 13, 2019. By this time both MasterObjects' '073 and '866 Patents had issued. The '073 Patent issued on June 4, 2019. The '866 Patent's application published on July 6, 2017; the '866 Patent received an NOA on June 26, 2019; the '866 Patent's issue fees were paid on July 9, 2019; and the '866 Patent issued on August 27, 2019.

75. Amazon knew, or should have obviously known, that it infringed each Patent-in-Suit prior to this suit being initiated in May 2020:

- Amazon knew it had been accused of infringing a related MasterObjects instant search patent, the '326 Patent.
- Amazon was engaged in lengthy and sustained debates with the P.T.O. with respect to its own instant search patents, given the P.T.O.'s view that MasterObjects' instant search patent applications—the '326 Patent's application and the '984 Application—constituted prior art to Amazon's claims.
- The Amazon instant search patents in question name an inventor, Matt Amacker, that Amazon itself identified as a relevant witness. Mr. Amacker was a principal engineer for Amazon's search technology, and describes himself as having "[b]uilt [the] search completion feature for Amazon.com [] ma[king Amazon] a billion in one year."

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

- Amazon disclosed the here asserted '024 Patent's application during the prosecution of its own patent applications post-'024 Patent issuance four times.
- Amazon's then and now Chief Intellectual Property Counsel, Mr. Hayden, an Amazon Vice President, was directly involved in the prosecution of Amazon applications that cited the '024 Patent's application. As Chief Intellectual Property Counsel, Mr. Hayden: oversaw Amazon's patent prosecution due diligence; knew of the *Amazon I* complaint against Amazon instant search instrumentalities; was familiar with the accused instrumentalities; knew Amazon was citing the '024 Patent application to the P.T.O.; and knew Amazon, post-'024 Patent issuance, repeatedly argued that Amazon instant search patent applications were patentable over MasterObjects' disclosures.

76. Amazon, through its prosecution activities, discovered each Patent-in-Suit and its infringement or likely infringement of the same prior to receiving notice of this suit and understood the Patents-in-Suit to be valid and enforceable or likely valid and enforceable. Yet, Amazon continued to infringe and continues to infringe to this day. At a minimum, Amazon made a deliberate decision not to be diligent despite what it knew about MasterObjects as a result of its prosecution activities and the prior lawsuit, so as to avoid finding the issued Patents-in-Suit and/or concluding that it infringed or likely infringed the valid and enforceable or likely valid and enforceable Patents-in-Suit. Put differently, at minimum, Amazon was willfully blind to its pre-suit infringement. Amazon willfully infringed pre-suit, and Amazon continues to willfully infringe to this day.

B. <u>Post-Suit Knowledge of Infringement:</u>

77. To the extent Amazon was not already on notice of each Patent-in-Suit and its infringement of those patents, the Original Complaint filed in this action put Amazon on notice of

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

each Patent-in-Suit and its infringement, as did the First Amended Complaint, and MasterObjects' infringement contentions.

78. MasterObjects filed its Original Complaint on May 4, 2020 (and refiled it on May 5, 2020). *See* ECF 1 & 9. Amazon was served with the Original Complaint by May 7, 2020. *See* ECF 21. The Original Complaint attached each Patent-in-Suit in addition to the *eBay IPR* Final Written Decision, and described Amazon's infringing activities.

79. Amazon was also served with MasterObjects' Disclosure of Asserted Claims and Infringement Contentions on July 10, 2020. These disclosures included claim charts for each asserted claim based on publicly available information.

80. Amazon was served with MasterObjects' supplemental infringement contentions on April 8, 2021, and received a copy of the First Amended Complaint that same day, as an attachment to MasterObjects' Motion for Leave to file that complaint. *See* ECF 120 & 121. MasterObjects' supplemental infringement contentions contained claim charts for each asserted claim. These charts include cites to internal, confidential Amazon documents and confidential source code files. The First Amended Complaint included MasterObjects' supplemental infringement contentions and the *Unified IPR* Decision as exhibits.

81. Despite the notice provided by the prior complaints and two sets of infringement contentions, Amazon continued, and continues to infringe, such that Amazon has willfully infringed each Patent-in-Suit at least post-suit initiation. Not only does Amazon continue to infringe despite notice of its infringement, but Amazon's reliance on MasterObjects' patented technology has and will continue to increase. For example, according to eMarketer, "Amazon's US ad revenues last year grew to $15.73 billion, increasing its market share from 7.8% in 2019 to 10.3% in 2020[with g]rowth … driven by search revenues from Sponsored Products and

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

Sponsored Brands …". *See* eMarketer Editors, *Amazon's share of the US digital ad market surpassed 10% in 2020*, Apr. 6, 2021, available at https://www.emarketer.com/content/amazon-s-share-of-us-digital-ad-market-surpassed-10-2020. According to the eMarketer article, "Amazon is stealing share from Google within search, as it continues to better monetize the channel. Amazon's search ad business will grow to $14.53 billion in 2021, boosting its share of US search ad spending to 19.0%, up from 13.3% in 2019." *See id.*

82. Amazon's post-suit initiation conduct further proves that Amazon believes that it infringes the Patents-in-Suit. Amazon has stated, including at the March 25, 2021 Case Management Conference, that its "two best non-infringement arguments are related to two claim limitations" it refers to as "the usability limitation and the caching limitation." However, Amazon refuses to articulate these supposed best arguments. For example, with respect to an interrogatory request that asked Amazon to "state in detail every reason why You contend that ACCUSED INSTRUMENTALITIES does not infringe that limitation, and IDENTIFY every fact and every DOCUMENT You contend supports Your contention," Amazon responded, as follows, with nothing more than conclusory assertions that at most parroted claim language:

> Amazon's accused search functionality does not practice claims/claim limitations 1[F], 17, 19, 27, 28, 32[F], 35[F], 36[F], or 37[F] of the '024 Patent, claims/claim limitations 1[C], 14, 15, or 25[C] of the '628 Patent, claims/claim limitations 1[G] or 3 of the '073 Patent, or the claims that depend on these claims, all of which recite some form of testing the "usability of the results in the return message." Nor do MasterObjects' infringement contentions show that they do. In Amazon's accused search functionality, there is no usability test that "check[s] that the return message corresponds to the latest query," or that "checks the usability of the results of the one of the return messages using a more recent version of the input," or that "tests the usability of the results in the return message by comparing the return message to the then-current input or matching it with a request identification maintained on the client object," or that "tests the usability of the results in the return message by matching an ID associated with the input sent to the server system with an ID maintained in the client object," or that "tests the usability of the results of the one of the return messages using a latest version of the input," or that "tests the usability of the results in the return message by checking that the return message corresponds

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

> to a latest query," or any similar claim language. Pursuant to Rule 33(d) of the Federal Rules of Civil Procedure, Amazon identifies the source code that it has made available to MasterObjects for inspection.
>
> Amazon's accused search functionality does not practice Claim 7 of the '024 Patent, claim limitation 13[F] of the '628 Patent, claim limitation 1[E] of the '866 Patent, or claims/claim limitations 1[E] or 7 of the '073 Patent, or the claims that depend on those claims. Amazon's accused search functionality does make use of any caching as described by those claims/claim limitations. Pursuant to Rule 33(d) of the Federal Rules of Civil Procedure, Amazon identifies the source code that it has made available to MasterObjects for inspection.

83. Amazon also punted when the Court, at the March 25, 2021 Case Management Conference, invited Amazon to provide the Court with "a three-page statement of a single claim that is so clear[]cut that you don't infringe and why, or is so invalid and here is why, that [the Court] can say, 'Okay. We're going to do – I can see now that the showdown is going to lead to something productive.'" In response to the Court's invitation, Amazon said this case is not about inequitable conduct: "First, I did want to respond to Mr. Hosie's claim that this case is about inequitable conduct. It's not." Amazon then said that it has "substantial, excellent non-infringement arguments." Amazon then told the Court that Amazon was not going to articulate what those arguments were: "our two best non-infringement arguments are related to two claim limitations; and I'm not going to explain them, but they are the usability limitation and the caching limitation."

84. Amazon's refusal to set forth its "two best non-infringement arguments" with any level of detail evidences Amazon's lack of faith in its non-infringement defense. Amazon understood that it infringed the Patents-in-Suit pre-suit, and it continues to believe that it infringes to this day.

85. In addition to its supposed usability and caching non-infringement positions, Amazon relies on articulated non-infringement positions that rest on claim constructions that were

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

roundly rejected by other courts and/or the PTAB. Amazon knows about these past matters, and [redacted]. Amazon is aware of these past decisions.

86. Amazon contends that the "limitations of the asserted claims that govern what query messages are sent to the server should be construed to make clear that each query consists of only the changes to the input string that were not sent in any previous consecutive query," that Amazon "does not infringe because it does not send such queries," and that "as shown by MasterObjects' own infringement contentions, to the extent Amazon's accused search functionality sends query messages to the server, those query messages incorporate letters from query messages that were previously sent."

87. Facebook advanced the query messages claims construction argument now copied by Amazon in the *Facebook* matter and lost. Facebook asked Judge Albright to construe the query message group of terms to mean "[e]ach query consists of only the changes to the input string that were not sent in any previous consecutive query." MasterObjects proposed that these terms be given their "[p]lain and ordinary meaning" and that "[t]hese terms are not limited to a message/string comprising only the changes to an input string, and may include the entire input string. On November 30, 2020, Judge Albright construed these terms as MasterObjects requested. The *Facebook* matter involved the same patents asserted here.

88. eBay, Inc. also advanced this "only the changes" argument in the *eBay IPR* and lost. eBay argued that the term "query message" must be "limited to messages whose search strings consist only of the changes to an input string rather than an entire input string." The PTAB, in its July 27, 2017 Decision Instituting *Inter Partes* Review ("*eBay IPR* Institution Decision"), disagreed. The PTAB gave the term "query message" "its ordinary and customary meaning." The

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

PTAB found that [n]othing in the terms 'query,' 'message,' or 'query message' indicates sending only changes." The *eBay IPR* involved the '024 Patent, which is asserted here. MasterObjects produced the relevant *eBay IPR* decision to Amazon on April 8, 2021. MasterObjects discussed this decision in its public claim construction briefing in the *Facebook* matter; this briefing was completed on October 23, 2020. And, through the Original Complaint in this action, Amazon has been on notice of the *eBay IPR* since at least May 2020.

89. Amazon contends that the "limitations of the asserted claims that recite 'asynchronous[] communications between a client computer/client object and a server system' should be construed to make clear that both the client computer/client object and the server system can initiate communications at any moment in time," and that "Amazon's accused search functionality does not infringe these claims or their dependent claims because it does not involve any communications initiated by the server system."

90. Facebook also advanced an asynchronous construction argument and lost. Facebook proposed that the terms "asynchronously" and "asynchronous" be construed to mean "[b]oth the client and the server can initiate communications at any moment in time." Judge Albright rejected Facebook's proposal, and instead adopted a construction advanced by MasterObjects: "[e]ach side of the communication is free to communicate without waiting for the other side."

91. MasterObjects produced to Amazon the claims construction orders from *MasterObjects, Inc. v. eBay, Inc*., No. 3:12-cv-00680-JSC (N.D. Cal.) ("*eBay I*), *MasterObjects, Inc. v. Yahoo!, Inc*., No. 3:11-cv-02539-JSW (N.D. Cal.) ("*Yahoo! I*"), and *MasterObjects, Inc. v. Google, Inc*., No. 4:11-cv-01054-PJH (N.D. Cal.) ("*Google I*") on April 8, 2021. MasterObjects also discussed these decisions in its public claim construction briefing in the *Facebook* matter, and

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

Amazon itself cited to these prior matters in its June 18, 2020 Answer. *See* ECF 32. While *eBay I*, *Yahoo! I*, and *Google I* involved MasterObjects' patents other than the Patents-in-Suit, these prior defendants did try to read "initiate, any moment in time" limitations into those claims.

92. In *eBay I*, eBay argued that the term "asynchronous connection" means "[a] connection that allows one side of the communication to initiate communications at the same time as the other side at any moment in time within a session." Judge Corley rejected eBay's construction, holding that "the 'initiate communication' function is one possible embodiment of the patents rather than a limitation on the claims." Judge Corley construed "asynchronous connection" to mean "a connection that allows one side of the communication to communicate at the same time the other side is also communicating within a session."

93. In *Yahoo! I*, Yahoo! argued that "asynchronous connection" means "a connection that allows either side of the communication to initiate communications at any moment in time within a session." Judge White rejected Yahoo!'s construction, finding: "the language cited by Yahoo! only to refer to a limitation of a specific embodiment, the QuestObjects system. … [¶¶] MasterObjects does not argue that their invention is distinguishable because the server can initiate a communication with the client. Rather, MasterObjects makes clear that an asynchronous connection *can* have a server initiate communications." (Emphasis in original.) Judge White construed "asynchronous connection" to mean "[a] connection the allows one side of the communication to communicate at the same time the other side is also communicating within a session."

94. In *Google I*, Google argued that "asynchronous connection" means "a connection that allows both the client and the server to initiate communications at any moment in time within a session." While Judge Hamilton adopted Google's construction, she denied Google the

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

limitation it sought to read in through its construction, remarking that "the claimed invention covers both client-initiated and server-initiated communications."

95. During the *eBay IPR*, the parties to the IPR disputed the meaning of "asynchronous[ly]," but neither party argued that the server is required to initiate the communication. In the *eBay IPR* Institution Decision, the PTAB remarked that "'asynchronous' refers to the capability of initiating communications at any moment in time" and stated that "we determine that the term 'asynchronous' encompasses communications that are initiated 'at any moment in time.'" Although the PTAB used the word "initiating" in this description, it did not hold that the server is required to be able to initiate the communication. Rather, the PTAB placed no requirements on who initiates the communication, and specifically included an example in which the client initiates the communication ("a server receives queries") and the server responds.

96. In short, the *Facebook* claims construction ruling, the *eBay I*, *Yahoo I*, and *Google I* claim construction orders, and the *eBay IPR* Institution Decision are all inconsistent with Amazon's position that requires server-initiated communication.

97. Given the litany of decisions that contradict Amazon's query message and asynchronous non-infringement positions, Amazon's positions are untenable (for at least this reason), and this untenability evidences Amazon's subjective belief that it in fact infringes the asserted claims.

C. <u>Pre- and Post-Suit Knowledge of Validity:</u>

98. Not only did Amazon know (or should have known) that the Accused Instrumentalities infringed the Patents-in-Suit, Amazon knew (or should have known) that the Patents-in-Suit are valid.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

99. Amazon's belief that the Patents-in-Suit are novel, non-obvious, and otherwise patentable is evidenced by Amazon's prosecution of its own instant search patents. For example, in this litigation Amazon contends that the asserted claims are non-novel and obvious, because "asynchronous communication predates the Patents-in-Suit" and the "prior art identified in the Invalidity Contentions shows that these concepts are not new." Yet, Amazon extolled the novelty of asynchronous applications for instant search in its Brinck II and III applications, which post-date MasterObjects' 2001 application by over eight years. For example, in its Brinck II and III applications, Amazon says that the "embodiments of [its] disclosure allow a user to interact with a search result associated with a suggested search term without having to cause a search term user interface element to execute a search and display a second content page containing one or more search results." Amazon goes onto explain that:

> Upon selection of a different suggested search term by a user, the search application 111 can asynchronously update the content page 114 or search term user interface 200 to reflect the selection. In the depicted example, the search application 111 asynchronously updates the search term user interface 200 by retrieving data from the electronic repository 105 (FIG. 1) that is associated with the new selection 501. In this way, the search application 111 can allow a user to receive suggested search terms as well as view data associated with an item or search result corresponding to the suggested search term (e.g., representative imagery, item details, etc.), without having to cause the search term user interface element 201 to submit a form to the search application 111 and render a new search results page that contains a list of search results.

100. Amazon made similar statements during the prosecution of Brinck III. Amazon, for example, in responding to a 35 U.S.C. § 101 rejection, identified "generating an interface that allows a user to have quick access to searchable information without requiring the user to submit a search term in a search interface" as an "inventive concept." Amazon "submit[ed] … that the claims of the [Brinck III] application solve a technology problem of generating an interface that

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

allows a user to have a quick access to searchable information without requiring the user to submit a search term in a search interface."

101. Amazon's view with respect to the patentability of its own patent applications is squarely at odds with its reliance on a reference known as Clinick in this case. Clinick describes the completion of an online form, where a user completely fills in one field (e.g., an airport departure filed) and can then move on to fill in the next field (e.g., an airport arrival field). Amazon argues that Clinick anticipates MasterObjects' claims, or in the alternative, renders them obvious.

102. During the prosecution of Amazon's Brinck II patent, the PTAB found that MasterObjects' disclosure "teaches that the user interface does not make use of a submit (or similar) button, and instead asynchronously responds to the user's input," and that combing "this teaching with [another reference's] teaching of enlarging an image to be nothing more that combining known elements …". Amazon later amended its Brinck II claims and argued that its claims were patentable, because MasterObjects' disclosure does not describe:

> [T]he content page is asynchronously updated with a search term user interface element with a dropdown box displayed proximate to the search result user interface element with a list of the suggested search terms. Each of the suggested search terms is associated with at least two of the plurality of search results and the at least two of the plurality of search results are displayed horizontally offset from a respective one of the suggested search terms, and wherein each of the plurality of search results is displayed using the representative image associated with the search result.

The P.T.O. then allowed Brinck II's claims, stating that the MasterObjects' disclosure:

> [D]oes not explicitly disclose at least two of the plurality of search results are displayed horizontally offset from a representative one of the suggested search term, and each of the plurality of search results is displayed using the representative image.

In short, Amazon told the P.T.O. that its claims were non-obvious owing to the way it displays its asynchronously delivered results. Yet, Amazon now contends that a reference that discloses

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

sending a complete entry once a user finishes typing into a field, teaches asynchronously sending results as a user types in a partial query. Amazon does not believe its made for litigation position. As evidenced by Amazon's own instant search patent prosecution statements, Amazon understands MasterObjects' claims to be patentable over Clinick.

103. Amazon's knowledge that the Patents-in-Suit are valid is further evidenced by a comparison of the '024 and '628 Patent's prosecution histories with Amazon's invalidity contentions. (Amazon served its original invalidity contentions on September 4, 2020, a supplement on October 21, 2020, and a second supplement on May 24, 2021.) Amazon's invalidity contentions assert that Kravets and Trower (U.S. Patent No. 6,922,810) are anticipatory. Amazon conceded in briefing filed in this action that Kravets is paramount to its invalidity defense. *See* ECF 79 at 18 ("[A]rguably the most important prior art reference, Kravets ….") & 21 ("Kravets, a key piece of prior art …"). The Patents-in-Suit's prosecution history shows Amazon's reliance on these references, include its "important" and "key" Kravets reference, to be untenable and in bad faith.

104. With respect to Kravets, as explained above, every independent '024 Patent claim was involved in an IPR where the petitioner asserted that Kravets was anticipatory. *See* ¶ 16 above. As further explained above, the PTAB rejected the petitioner's assertion in a Final Written Decision. *See* ¶ 16 above; *see also* Ex. B. The P.T.O. then issued an inter partes review certificate, certifying that: "as a result of the inter partes review proceeding, it has been determined that: Claims 1-3, 6-7, 9, 12, 15-17, 21, 24-26 and 32-37 are found patentable." *See* Ex. A; *see also* ¶ 17 above. The Final Written Decision is dated July 25, 2018, and the inter partes review certificate June 11, 2019. Both are publicly available documents, and both were attached to MasterObjects'

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

Original and First Amended Complaints. Yet, Amazon's infringement continued and continues unabated, and Amazon maintains its litigation position that Kravets is anticipatory.

105. With respect to Trower, a P.T.O. examiner, during the '628 Patent's ex partes prosecution, rejected every then pending claim of the '628 Patent's application as anticipated by Trower. MasterObjects then traversed this rejection, and the '628 Patent went on to issue. The P.T.O. specifically evaluated Trower and determined it was not anticipatory. The relevant office action and reply are publicly available, and MasterObjects produced these documents in this action on July 22, 2020. Yet, Amazon's infringement continued and continues unabated, and Amazon maintains its litigation position that Trower is anticipatory.

106. As explained above, all asserted claims, including all asserted '073 Patent claims, are entitled to the benefit of the '529 Patent's August 20, 2001 filing date. Amazon's knowledge that the Patents-in-Suit are valid is further evidenced by its bad faith and untenable allegation that each Patent-in-Suit's priority date is its filing date. For example, Amazon contends that the following '073 Patent claim language is unsupported by MasterObjects' 2001 application: "a cache of query strings and search results based on content queries received from multiple users." Amazon goes on to contend that MasterObjects' own 2001 application is prior art to the '073 Patent.

107. But, in its January 11, 2021 *Unified IPR* Decision, the PTAB addressed and rejected the contention "that '[t]he claims of the '073 Patent are not entitled to the…priority date of the 2001 ['493] application' because it 'does not provide support for 'a cache of query strings and search results based on content queries received from multiple users,' as recited by claim 1 of the '073 Patent, on which all other claims depend." *See* Ex. G at 10; *see also id*. at 11 ("We find Patent Owner's evidence shows sufficiently that the claim limitation 'a cache of query strings and

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

search results based on content queries received from multiple users' is supported by the '493 Application").

108. Amazon is aware of the *Unified IPR* Decision. First, it was an exhibit to the First Amended Compliant in this case. Second, as evidenced by Amazon remarks at the March 25, 2021 Case Management Conference in this case, Amazon was aware of the *Unified IPR* Decision prior to Amazon receiving the First Amended Complaint: "And the IPR on the '073 was largely based on an argument that the '073 patent was not entitled to the priority date it claimed;" "And they [(the PTAB)] tend to deny third IPRs on patent families, because they think they've already delt with this issue." Amazon knows that the '073 Patent is entitled to the benefit of the '529 Patent's application's filing date and that MasterObjects' own '529 Patent's application is not invalidating. Amazon's arguments to the contrary, including those asserted in its May 24, 2021 second supplemental invalidity contentions, evidence Amazon's egregious conduct in this case.

D. Other Egregious Conduct.

109. Amazon's conduct is egregious, and its egregious behavior permeates its defense of this action.

110. One example is Amazon's anticipatory reference assertions. Amazon's invalidity contentions chart 13 references for the '024 Patent, 14 for the '628 Patent, 17 for the '073 Patent, and 12 for the '866 Patent. Amazon contends that each charted reference anticipates the respective Patent-in-Suit.

111. The Patents-in-Suit are asserted in the *Facebook* matter, which was filed on February 5, 2020, and remains pending. Facebook, like Amazon, cited MasterObjects' patent applications, including, post-issuance, the '024 Patent's application, to the P.T.O. during its prosecution of its Internet search related patents. Facebook, like Amazon, also had an Internet

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

search related patent rejected as anticipated by a MasterObjects' application. And, Facebook, like Amazon, has served invalidity contentions on MasterObjects. Unlike Amazon, however, Facebook contends that only two references: Kravets and Trower, are anticipatory.

112. Amazon is aware of Facebook's invalidity contentions. [redacted]. And, Amazon's invalidity contentions discuss Facebook's invalidity contentions. For example, Amazon's invalidity contentions state that: "Facebook's Invalidity Contentions, submitted recently in a matter asserting the same four Patents-in-Suit, include a useful discussion of this topic [specific motivation to combine]. Amazon largely reproduces that discussion below …".

113. Amazon's assertion of large numbers of references as anticipatory is evidence of its bad faith litigation tactics. Amazon does not harbor a good faith belief that the many references it charted are in fact anticipatory, as evidenced by Facebook's—[redacted] and whose invalidity contentions it praised—restraint. Amazon's invalidity defense is pure gamesmanship; a tactic designed to waste MasterObjects' resources, not a good faith defense.

114. Amazon's bad faith inequitable conduct defenses, defenses it originally copied from the defendant in the *Facebook* matter, provide another example of Amazon's egregious conduct. Amazon has pursued these defenses in a manner meant to generate unnecessary work for MasterObjects. For example, Amazon alleges inequitable conduct during prosecution of the '073 Patent based on the alleged non-disclosure of references cited in certain invalidity contentions. Amazon does not, and refuses to, identify which specific references out of a set of fifty-three are its alleged material and non-cumulative references that it predicates its allegations on. Amazon's black-box tactics as to this defense show its lack of belief in this defense's tenability.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

115. Another example of Amazon's bad faith tactics comes in the form of its assertion that the Patents-in-Suit are unenforceable for lack of common ownership. Amazon contends, including in its May 24, 2021 second supplemental invalidity contentions, that "all claims of each of the Patents-in-Suit are unenforceable because MasterObjects does not own prior patents to which terminal disclaimers of the Patents-in-Suit are directed." Amazon argues that:

> Each of the asserted patents nominally lists the plaintiff, "MasterObjects, Inc." as the assignee, but no formal assignment of the asserted patents to MasterObjects, Inc. was ever recorded with the USPTO. Rather, the only patent in the family with any formally recorded assignment is U.S. Patent No. 8,112,529. That assignment was recorded on January 16, 2002 and names "MasterObjects," a Netherlands entity, as the assignee.

116. But, MasterObjects, pre-suit, owned the Patents-in-Suit and the patents and/or patent applications to which any Patent-in-Suit is terminally disclaimed, and continues to own the Patents-in-Suit and the patents and/or patent applications to which any Patent-in-Suit is terminally disclaimed. And, on December 22, 2020, MasterObjects served Amazon with an interrogatory response detailing, over approximately six pages, MasterObjects' ownership of the Patents-in-Suit, the other patents in the MasterObjects family, and the '984 Application. MasterObjects' response cited, by Bates number, other assignments recorded with the P.T.O. years before this suit was filed, assignments that are publicly available through the P.T.O.'s website. Amazon does not maintain its lack of common ownership unenforceability contention in good faith. Indeed, Facebook did not pursue this defense at all.

117. Another example of Amazon's bad faith litigation conduct is its boilerplate 35 U.S.C. § 101 invalidity contention. Amazon is over a year and three invalidity contentions into this case, yet, as of Amazon's May 24, 2021 second supplemental invalidity contentions, its Section 101 contentions comprise a single, nine-line paragraph, which it closes with the statement that: "[t]o the extent that MasterObjects argues the claims are patent eligible, Amazon reserves the

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

right to disclose new, amended, or supplemental invalidity contentions." MasterObjects obviously contends that its claims are patent eligible and otherwise valid and enforceable, as is evident from its Original and First Amended Complaint (and now this Complaint). Amazon does not believe the asserted claims are patent ineligible; its continued assertions to the contrary are nothing more than more gamesmanship.

118. Another example of Amazon's egregious conduct comes in the form of its discovery evasions with respect to its prosecution histories that discuss MasterObjects patents and applications.

119. On June 25, 2020, MasterObjects requested that Amazon produce: (1) "[a]ll DOCUMENTs referring or relating to MASTEROBJECTS, including, without limitation, all DOCUMENTs CONCERNING … MASTEROBJECTS … patents or other intellectual property …"; and (2) "[a]ll DOCUMENTs CONCERNING the MASTEROBJECTS PATENTS-IN-SUIT, including, without limitation, all DOCUMENTs CONCERNING … Your knowledge of the MASTEROBJECTS PATENTS-IN-SUIT …". Amazon responded as to both requests on July 27, 2020. As to the first request, Amazon stated that it "will produce … documents concerning MasterObjects's technology, intellectual property and product offerings …". As to the second request, Amazon stated that it "will produce … documents concerning the PATENTS-IN-SUIT …". Yet, Amazon did not produce to MasterObjects the Amazon patents discussed in Section V.A above.

120. On June 25, 2020, MasterObjects served its First Set of Interrogatories to Amazon. The very first request asked Amazon to "IDENTIFY all COMMUNICATIONS and DOCUMENTS in AMAZON's possession or control CONCERNING MASTEROBJECTS, MASTEROBJECTS' patents, its technology, or its products." Amazon responded to this request

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

on July 27, 2020. Amazon's response did not identify the prosecution histories described in Section V.A above. Instead, Amazon responded that "it has in its possession, custody, or control documents and communications relating to and arising out of MasterObjects's prior litigation against Amazon, *MasterObjects, Inc. v. Amazon.com, Inc*., Case No. 3:11-cv-01055 (N.D. Cal.) …. Amazon is not currently aware of any other documents or communications in its possession, custody, or control that concern MasterObjects or its patents, technology, or products."

121. On September 23, 2020, MasterObjects served its Second Set of Interrogatories to Amazon, in which MasterObjects requested that Amazon "IDENTIFY and describe with specificity the actions taken by [it] in response to [its] acquiring knowledge of the MASTEROBJECTS PATENTS-IN-SUIT …". Amazon responded to this request on December 7, 2020. Amazon's response, like its response before, failed to identify the prosecution histories described in Section V.A above. Instead, Amazon responded that "Amazon became aware of MasterObjects' patents-in-suit upon the filing of the above-captioned matter. Amazon has not changed or altered its source code in response to this lawsuit because that source code does not infringe MasterObjects' patents-in-suit."

122. Based on Amazon's discovery responses, it would seem that Amazon wanted to conceal its pre-suit knowledge of the Patents-in-Suit. Amazon's discovery failures—failures specific to MasterObjects' willful infringement allegations—further evidence Amazon's bad faith conduct and subjective belief that it infringes valid patent claims asserted in this action. Amazon's infringement is egregious.

VI. CLAIMS.

A. Infringement of United States Patent No. 8,539,024.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

123. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 122 above.

124. Amazon infringes claims of the '024 Patent. Amazon, without authority, makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '024 Patent. Amazon Predictive Search and/or Amazon Applications meet all of the elements of claims of the '024 Patent, including, all the elements of '024 Patent claims 1, 3, 5, 7, 8, 9, 10, 11, 17, 18, 19, 21, 23, 27, 28, 29, 32, 35, 36, and 37. *See* Ex. K. Amazon controls and benefits from each Amazon Predictive Search and/or Amazon Applications element that meets each limitation of at least '024 Patent claims 1, 3, 5, 7, 8, 9, 10, 11, 17, 18, 19, 21, 23, 27, 28, 29, 32, 35, 36, and 37. Amazon has been, is currently, and continues to, directly infringe at least claims 1, 3, 5, 7, 8, 9, 10, 11, 17, 18, 19, 21, 23, 27, 28, 29, 32, 35, 36, and 37 of the '024 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Amazon Predictive Search and/or Amazon Applications, that practice the inventions disclosed in the '024 Patent.

125. Amazon's infringement of the '024 Patent has been and continues to be willful and deliberate. Amazon's conduct with respect to its infringement and this suit has been egregious. *See* § V above.

126. As a result of Amazon's infringement, MasterObjects has been damaged, and will continue to be damaged, until Amazon is enjoined from further acts of infringement.

127. Amazon will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

B. <u>Infringement of United States Patent No. 9,760,628.</u>

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

128. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 122 above.

129. Amazon infringes claims of the '628 Patent. Amazon, without authority, makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '628 Patent. Amazon Predictive Search and/or Amazon Applications meet all of the elements of claims of the '628 Patent, including, all the elements of the '628 Patent claim 1, 4, 6, 13, 14, 15, 19, 21, 22, 24, 25, and 26. *See* Ex. K. Amazon controls and benefits from each Amazon Predictive Search and/or Amazon Applications element that meets each limitation of at least '628 Patent claim 1, 4, 6, 13, 14, 15, 19, 21, 22, 24, 25, and 26. Amazon has been, is currently, and continues to, directly infringe at least claims 1, 4, 6, 13, 14, 15, 19, 21, 22, 24, 25, and 26 of the '628 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Amazon Predictive Search and/or Amazon Applications, that practice the inventions disclosed in the '628 Patent.

130. Amazon's infringement of the '628 Patent has been and continues to be willful and deliberate. Amazon's conduct with respect to its infringement and this suit has been egregious. *See* § V above.

131. As a result of Amazon' infringement, MasterObjects has been damaged, and will continue to be damaged, until Amazon is enjoined from further acts of infringement.

132. Amazon will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

C. <u>Infringement of United States Patent No. 10,311,073.</u>

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

133. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 122 above.

134. Amazon infringes claims of the '073 Patent. Amazon, without authority, makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '073 Patent. Amazon Predictive Search and/or Amazon Applications meet all of the elements of claims of the '073 Patent, including, all the elements of the '073 Patent claims 1, 3, 4, 7, 8, and 9. *See* Ex. K. Amazon performs each Amazon Predictive Search and/or Amazon Applications step that meets each limitation of at least '073 Patent claims 1, 3, 4, 7, 8, and 9. Amazon has been, is currently, and continues to, directly infringe at least claims 1, 3, 4, 7, 8, and 9 of the '073 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Amazon Predictive Search and/or Amazon Applications, that practice the inventions disclosed in the '073 Patent.

135. Amazon's infringement of the '073 Patent has been and continues to be willful and deliberate. Amazon's conduct with respect to its infringement and this suit has been egregious. *See* § V above.

136. As a result of Amazon's infringement, MasterObjects has been damaged, and will continue to be damaged, until Amazon is enjoined from further acts of infringement.

137. Amazon will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

D. <u>Infringement of United States Patent No. 10,394,866.</u>

138. MasterObjects repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of paragraphs 1 to 122 above.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

139. Amazon infringes claims of the '866 Patent. Amazon, without authority, makes, uses, imports, offers to sell, and/or sells instrumentalities that practice inventions covered by claims of the '866 Patent. Amazon Predictive Search and/or Amazon Applications meet all of the elements of claims of the '866 Patent, including, all the elements of the '866 Patent claims 1, 4, 5, 6, 7 and 8. *See* Ex. K. Amazon performs each Amazon Predictive Search and/or Amazon Applications step that meets each limitation of at least '866 Patent claims 1, 4, 5, 6, 7 and 8. Amazon has been, is currently, and continues to, directly infringe at least claims 1, 4, 5, 6, 7 and 8 of the '866 Patent in violation of 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, through Amazon Predictive Search and/or Amazon Applications, that practice the inventions disclosed in the '866 Patent.

140. Amazon's infringement of the '866 Patent has been and continues to be willful and deliberate. Amazon's conduct with respect to its infringement and this suit has been egregious. *See* § V above.

141. As a result of Amazon's infringement, MasterObjects has been damaged, and will continue to be damaged, until Amazon is enjoined from further acts of infringement.

142. Amazon will continue to infringe unless enjoined by this Court. MasterObjects faces real, substantial and irreparable damage and injury of a continuing nature from infringement for which MasterObjects has no adequate remedy at law.

VII. PRAYER FOR RELIEF.

WHEREFORE, MasterObjects prays for entry of judgment as follows:

143. Judgment in MasterObjects's favor and against Amazon on all causes of action alleged herein;

144. That the Patents-in-Suit are valid and enforceable;

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

145. That Amazon has infringed one or more claims of each of the Patents-in-Suit;

146. That Amazon's infringement of the Patents-in-Suit was willful;

147. That Amazon account for and pay to MasterObjects all damages caused by the infringement of the Patents-in-Suit, which by statute can be no less than a reasonable royalty with respect to each Patent-in-Suit;

148. That the damages to MasterObjects with respect to each Patent-in-Suit be increased by three times the amount found or assessed pursuant to 35 U.S.C. § 284 and that Amazon account for and pay to MasterObjects the increased amounts;

149. That this be adjudicated an exceptional case and MasterObjects be awarded its attorneys' fees in this action pursuant to 35 U.S.C. § 285;

150. That this Court issue preliminary and final injunctions enjoining Amazon, its officers, agents, servants, employees and attorneys, and any other person in active concert or participation with them, from continuing the acts herein complained of with respect to infringement of the Patents-in-Suit, and more particularly, that Amazon and such other persons be permanently enjoined and restrained form further infringing the Patents-in-Suit;

151. That MasterObjects be granted pre-judgment and post-judgment interest on the damages caused to it by reason of Amazon's conduct at the maximum legal rates provided by statute or law;

152. That this Court award MasterObjects its costs and disbursements in this civil action, including reasonable attorneys' fees; and

153. That MasterObjects be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: June 18, 2021 */s/ Spencer Hosie*

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111

SPENCER HOSIE (CA Bar No. 101777)
shosie@hosielaw.com
DIANE S. RICE (CA Bar No. 118303)
drice@hosielaw.com
DARRELL R. ATKINSON (CA Bar No. 280564)
datkinson@hosielaw.com
HOSIE RICE LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111
(415) 247-6000 Tel.
(415) 247-6001 Fax

LESLIE V. PAYNE (admitted *pro hac vice*)
lpayne@hpcllp.com
ALDEN G. HARRIS (admitted *pro hac vice*)
aharris@hpcllp.com
HEIM, PAYNE & CHORUSH, LLP
1111 Bagby St., Ste. 2100
Houston, Texas 77002
(713) 221-2000 Tel.
(713) 221-2021 Fax

Attorneys for Plaintiff
MASTEROBJECTS, INC.

DEMAND FOR JURY TRIAL

MasterObjects demands a jury trial on all causes of action, claims, or issues in this action that are triable as a matter of right to a jury.

Dated: June 18, 2021

/s/ Spencer Hosie
SPENCER HOSIE (CA Bar No. 101777)
shosie@hosielaw.com
DIANE S. RICE (CA Bar No. 118303)
drice@hosielaw.com
DARRELL R. ATKINSON (CA Bar No. 280564)
datkinson@hosielaw.com
HOSIE RICE LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111
(415) 247-6000 Tel.
(415) 247-6001 Fax

LESLIE V. PAYNE (admitted *pro hac vice*)
lpayne@hpcllp.com
ALDEN G. HARRIS (admitted *pro hac vice*)
aharris@hpcllp.com
HEIM, PAYNE & CHORUSH, LLP
1111 Bagby St., Ste. 2100
Houston, Texas 77002
(713) 221-2000 Tel.
(713) 221-2021 Fax

Attorneys for Plaintiff
MASTEROBJECTS, INC.

Hosie Rice LLP
600 Montgomery Street, 34th Floor
San Francisco, CA 94111