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

INTERNATIONAL BUSINESS MACHINES CORPORATION,	)))	
Plaintiff,	))	C.A. No. _____
v.	))	**JURY TRIAL DEMANDED**
	)	
TAKE-TWO INTERACTIVE SOFTWARE, INC.,	)))	
Defendant.	))	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff International Business Machines Corporation ("IBM"), for its Complaint for Patent Infringement against Take-Two Interactive Software, Inc. ("Take-Two" or "Defendant"), demands a trial by jury on all issues so triable and alleges as follows:

INTRODUCTION

1.   IBM brings this action against Take-Two for infringement of IBM's United States Patent Nos. 7,072,849 (the "'849 patent"), 7,356,704 (the "'704 patent"), and 8,458,209 (the "'209 patent") (collectively the "Patents-In-Suit").

2.   IBM is in the innovation business. Every year, IBM spends billions of dollars on research and development to invent, market, and sell new technology. IBM also believes in the protection of its proprietary technologies, which result from IBM's extensive investments in research and development and the hard work of IBM's inventors. When other companies seek to build new businesses on the foundation set by IBM's patented technology, IBM believes that those companies should agree to a license and pay a fair royalty. When a company is using IBM's patents without authorization, IBM seeks to negotiate an agreement whereby IBM and the other company cross license their respective patent portfolios, enabling each to receive a license to the

other's patent portfolio. That way, each company can avoid litigation, be fairly compensated for the use of all of their patents, and maintain the freedom to operate in their respective markets.

3.   Take-Two was founded in 1993 and develops, publishes, and distributes interactive software games (including mobile games) through its various video game publishing labels, including Rockstar Games and 2K.   Take-Two has launched several popular video game franchises, including the *Grand Theft Auto* series, the *Red Dead* series, and the *NBA 2K* series, as well as a rapidly expanding portfolio of free-to-play mobile games that Take-Two touts as having been downloaded more than 6 billion times. Take-Two has also launched standalone video games for console, PC, and mobile platforms, which Take-Two sells and distributes through various storefronts, including digital storefronts offered by Take-Two's publishing labels. In addition to Take-Two's revenue from initial sales of its games, Take-Two generates revenue through the sale of in-game virtual currency, items, and content, and through advertising services such as in-game advertising. Take-Two now has billions of dollars of revenue per year.

4.   Take-Two began selling video games through digital storefronts in the 2000s, after e-commerce was already established, and in doing so Take-Two used prior innovations made by IBM to create and run its business. As its business has developed, Take-Two has continued to incorporate additional innovations pioneered by IBM. But unlike dozens of Take-Two's peers in the industry, Take-Two has never taken a license to use IBM's patents and has never paid a fair royalty for that use.

5.   Take-Two's success relies on the misappropriation of IBM technology and the inventions of the Patents-In-Suit. Take-Two's digital storefronts and websites, as well as the games Take-Two publishes and distributes, use the technology claimed by the Patents-In-Suit to provide convenient, efficient, and secure access of Take-Two content and features to its users and

developers, including advertisements and game play options. Accordingly, IBM's technology is a key driver of Take-Two's success.

6.   For over three years, IBM has tried to negotiate with Take-Two regarding Take-Two's unlicensed use of IBM's patents, only to be met with increasing periods of delay and non-responsiveness. Unfortunately, to this day, Take-Two has chosen to willfully infringe IBM's patents and has even expanded its infringing activity instead of taking a license.

7.   In May 2021, IBM informed Take-Two it was infringing IBM's patents through operation of its Rockstar Games Launcher, its Rockstar Games Social Club website (www.socialclub.rockstargames.com), its *NBA 2K Mobile Basketball* mobile game, its *Grand Theft Auto Online* game, and its *Red Dead Redemption 2* game. IBM offered to meet with Take-Two to discuss the issue and possible approaches to resolution.

8.   Later in July 2021, IBM reiterated its offer to meet to discuss Take-Two's infringement and possible resolution. It was not until November 2021 that Take-Two finally responded to IBM's offer for a meeting to discuss the May 2021 notice of infringement. IBM promptly responded to set a date in December 2021 for the meeting.

9.   At a December 17, 2021 meeting, IBM provided Take-Two with detailed evidence showing how Take-Two infringed several IBM patents, including the '849 patent and the '704 patent.

10.   Take-Two indicated it would analyze the information provided by IBM at the December 2021 meeting and consider IBM's offer to discuss possible resolutions.

11.   IBM followed up with Take-Two after the December 2021 meeting to inquire regarding the status of Take-Two's analysis and any response.

12.   Rather than engage IBM in productive discussions, Take-Two decided to continue running its business on the back of IBM's patented technology, acquiring another company that was willfully infringing IBM's patents—Zynga, Inc. ("Zynga").

13.   In January 2022, Take-Two publicly announced its anticipated acquisition of mobile game developer and provider Zynga.

14.   Prior to its acquisition by Take-Two, Zynga had been on notice of its infringement of IBM's patents.

15.   In February 2022, IBM noted the anticipated Zynga acquisition in correspondence with Take-Two, and again offered to work together with Take-Two to expedite a business resolution.

16.   The parties subsequently met again on November 7, 2022, after Take-Two had completed its acquisition of Zynga and after IBM had filed a complaint against Zynga for patent infringement in May 2022. During the November 7, 2022 meeting, IBM presented an overview of IBM's patent portfolio that highlighted additional IBM patents relevant to Take-Two's products, including the '209 patent.

17.   IBM followed up with Take-Two in January 2023 asking for a response to IBM's November 2022 presentation, and IBM offered to meet during the week of January 30, 2023. Take-Two did not respond to IBM's offer for a follow-up meeting.

18.   On May 17, 2024 IBM again contacted Take-Two and provided additional details regarding IBM's infringement claims, including additional detailed evidence showing Take-Two's infringement of the '209 patent. IBM again invited Take-Two to engage in meaningful discussions towards a licensing resolution. The parties exchanged letters, and on June 6, 2024 IBM confirmed IBM's availability and interest to continue discussions.

19.   On information and belief, Take-Two's in-house counsel and management teams were involved in assisting Zynga with its litigation against IBM.

20.   Rather than engaging IBM in productive business discussions, Take-Two instead chose to continue to support Zynga's efforts to avoid culpability for its willful infringement.

21.   On information and belief, Take-Two's in-house counsel assisted with, and attended, IBM's trial against Take-Two subsidiary Zynga in September 2024 in *IBM v. Zynga, Inc.*, C.A. No. 1:22-cv-00590 (D. Del.).

22.   During the course of the litigation and at trial, Zynga asserted that IBM's '849 patent was invalid.

23.   On September 13, 2024, following a five-day trial, a jury returned a verdict finding that Zynga, now a subsidiary of Take-Two following its acquisition in May 2022, had infringed IBM patents, including willfully infringing the '849 patent.

24.   The jury's verdict found that Zynga failed to prove that the '849 patent was invalid.

25.   Despite the jury's findings, just like Zynga did in the past, Take-Two continues to use IBM's patents and continues to refuse to take responsibility and pay a reasonable royalty for its use.

26.   Like Zynga, Take-Two's infringement of IBM's patents has been, and continues to be, willful. For over three years, IBM has repeatedly attempted to engage with Take-Two to find a business solution to resolve these disputes. Over that time, Take-Two became increasingly non-responsive, while unlawfully reaping the benefits of IBM's innovations.

27.   After over three years without meaningful progress toward a resolution, IBM has brought this lawsuit to address Take-Two's unauthorized use of IBM's patented technology.

NATURE OF THE CASE

28.   This action arises under 35 U.S.C. § 271 for Take-Two, Inc.'s infringement of the '849 patent, the '704 patent, and the '209 patent.

THE PARTIES

29.   Plaintiff IBM is a New York corporation, with its principal place of business at 1 New Orchard Road, Armonk, New York 10504.

30.   Defendant Take-Two Interactive Software, Inc. is a Delaware corporation, with its principal place of business at 110 W 44th Street, New York, New York 10036.

JURISDICTION AND VENUE

31.   IBM incorporates by reference paragraphs 1–30.

32.   This action arises under the patent laws of the United States, including 35 U.S.C. § 271 *et seq.* The jurisdiction of this Court over the subject matter of this action is proper under 28 U.S.C. §§ 1331 and 1338(a).

33.   Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b). Take-Two Interactive Software, Inc. is an entity organized under the laws of Delaware and resides in Delaware for purposes of venue under 28 U.S.C. § 1400(b). Additionally, Take-Two Interactive Software, Inc. conducts business in Delaware, at least by offering for sale and selling products and services in Delaware, and offering for sale and selling products and services through its websites and mobile applications, which are accessible in Delaware. Infringement by Take-Two Interactive Software, Inc. has occurred and continues to occur in Delaware.

34.   Personal jurisdiction exists over Take-Two Interactive Software, Inc. because this entity conducts business in Delaware, at least by offering for sale and selling products and services in Delaware, and by offering for sale and selling products and services through its websites and mobile games, which are accessible in Delaware, and because infringement has occurred and

continues to occur in Delaware. Personal jurisdiction also exists over Take-Two Interactive Software, Inc. because it is an entity organized under the laws of Delaware.

FACTUAL BACKGROUND

A.   IBM Invented Methods For Presenting Applications And Advertisements In An Interactive Service While Developing The PRODIGY Online Service.

35.   The inventors of the '849 patent developed the patented technologies as part of IBM's efforts to launch the PRODIGY online service ("Prodigy"), a forerunner to today's Internet, in the late 1980s. The inventors believed that to be commercially viable, Prodigy would have to provide interactive applications to millions of users with minimal response times. The inventors believed that the "dumb" terminal approach that had been commonly used in conventional systems, which heavily relied on host servers' processing and storage resources for performance, would not be suitable. As a result, the inventors sought to develop more efficient methods of communication that would improve the speed and functionality of interactive applications and reduce equipment capital and operating costs.

36.   In light of the above considerations, the inventors developed novel methods for presenting applications and advertisements in an interactive service that would take advantage of the computing power of each user's personal computer (PC) and thereby reduce demand on host servers, such as those used by Prodigy. The inventors recognized that if applications were structured to be comprised of "objects" of data and program code capable of being processed by a user's PC, the Prodigy system would be more efficient than conventional systems. By harnessing the processing and storage capabilities of the user's PC, applications could then be composed on the fly from objects stored locally on the PC, reducing reliance on Prodigy's server and network resources.

37.   The service that would eventually be called Prodigy embodied inventions from the '849 patent when it launched in late 1988, before the existence of the World Wide Web. The efficiencies derived from the use of the patented technology permitted the implementation of one of the first graphical user interfaces for online services. The efficiencies also allowed Prodigy to quickly grow its user base. By 1990, Prodigy had become one of the largest online service providers with hundreds of thousands of users. Prodigy was widely praised in the industry and is still held up as an example of innovation in computer networks that predated even the advent of the World Wide Web. The technological innovations embodied in this patent persist to this day and are fundamental to the efficient communication of Internet content.

38.   Today, it is easy to take the World Wide Web, powerful computers, and high-speed network connectivity for granted. Not so in 1988, when the first application in the '849 patent's priority chain was filed. The World Wide Web had not even been conceived yet. Typical PCs at the time had "512K RAM"—not 512 megabytes or gigabytes of RAM, but 512 kilobytes. '849 patent at 9:16–18. The '849 patent also describes the use of 1,200 to 2,400 bps (bits per second) modems to access a network—a far cry from today's high-speed internet. *Id.* at 9:18–20.

39.   The limited processing power and network bandwidth available in 1988 posed significant technical obstacles to the development and adoption of network-based interactive services, in which many users may access interactive services provided by a host. *Id.* at 1:34–58. Accordingly, the '849 patent specifically identifies slowdowns in network response time caused by processing bottlenecks at the host as a problem to be solved:

> [I]n conventional time-sharing computer networks, the data and program instructions necessary to support user sessions are maintained at a central host computer. However, that approach has been found to create processing bottlenecks as greater numbers of users are connected to the network; bottlenecks which require increases in processing power and complexity; e.g., multiple hosts of greater computing capability, if the network is to meet demand. Further, such bottlenecks

have been found to also slow response time as more users are connected to the network and seek to have their requests for data processing answered. *Id.* at 10:42–53; *see also id.* at 1:43–52, 10:54–57.

40.   As the '849 patent also explains, simply increasing computing capacity to the hosts is not enough to fix the bottleneck problem. "[E]ven in the case where additional computing power is added, and where response time is allowed to increase, eventually the host becomes user saturated as more and more users are sought to be served by the network." *Id.* at 10:58–61. In other words, even a host with additional computing capacity would still have limits on how many users it could support in conventional approaches.

41.   Conventional approaches to providing advertising in interactive services exacerbated the bottleneck problem, as advertising had to compete with service application data for limited network bandwidth. *Id.* at 2:20–30. That competition between advertising and service application data had "the undesirable effect of diminishing service response time." *Id.* at 2:25–26.

42.   The bottleneck problem arises from the limitations of networks that rely exclusively on central hosts to satisfy users' data processing requests and the limited network bandwidth available at the time of the invention. Accordingly, the bottleneck problem addressed by the '849 patent is a "technical problem."

43.   Before this suit, the '849 patent had been challenged four times on grounds of alleged patent ineligibility. Those challenges were all unsuccessful. In the matter of *IBM v. The Priceline Grp., Inc.*, C.A. No. 1:15-cv-00137 (D. Del.), the defendants (collectively "Priceline") filed a motion to dismiss, alleging that the '849 patent was directed to unpatentable subject matter. The Delaware court denied Priceline's motion, finding that "Defendants have failed to meet their burden of demonstrating that . . . claim 1 of the '849 patent [is] devoid of inventive concepts." *IBM v. The Priceline Grp., Inc.*, 2016 WL 626495, at *24 (D. Del. Feb. 16, 2016).

44.   In the matter of *Kayak Software Corp. v. IBM.*, CBM2016-00075, Priceline again challenged the '849 patent on alleged patent eligibility grounds, this time before the Patent Trial and Appeal Board ("PTAB").   Just like in the district court, the PTAB rejected Priceline's challenge. The PTAB "agree[d] with Patent Owner the disclosure of the '849 patent itself is almost exclusively directed to solving a problem arising in computer technology (i.e., bandwidth) with a computerized solution (i.e., local storage)." *Kayak Software Corp. v. IBM.*, CBM2016-00075, Paper 16 (PTAB Dec. 15, 2016) at 19. The PTAB thus concluded, "Petitioner has not shown sufficiently that independent claims 1 and 21 are directed to an unpatentable 'abstract idea' . . . ." *Id.* at 20.

45.   Although the parties filed other summary judgment motions in the Priceline case, Priceline chose not to file a summary judgment motion to challenge the patent eligibility of the '849 patent.

46.   In the matter of *IBM v. Groupon, Inc.*, C.A. No. 1:16-cv-00122 (D. Del.), Groupon, Inc. ("Groupon") moved for judgment on the pleadings that the '849 patent was directed to ineligible subject matter. The court denied Groupon's motion, finding that "the asserted claims for the Filepp patents [including the '849 patent] are not directed to an abstract idea and are directed to patent-eligible subject matter." *IBM v. Groupon, Inc.*, 289 F. Supp. 3d 596, 607 (D. Del. 2017).

47.   In the matter of *IBM v. Zynga, Inc.*, C.A. No. 1:22-cv-00590 (D. Del.), Zynga, Inc. ("Zynga") moved for judgment on the pleadings that the '849 patent was directed to ineligible subject matter. The court denied Zynga's motion, finding that the '849 patent is "directed to patent-eligible software at Alice step one" as the '849 patent's "claims as a whole are directed at using smart user terminals to improve the functional capacity of prior art interactive computer

systems." *Int'l Bus. Machines Corp. v. Zynga Inc.*, Case No. 1:22-cv-00590-GBW, 2024 WL 3967402, at *5 (D. Del. Aug. 28, 2024).

B. **IBM Invented Methods For Aggregating Authentication Identities.**

48. The inventors of the '704 patent developed the patented technology to improve access authorization by addressing complications and inconveniences associated with user logons and logouts. Many applications and operating systems support security mechanisms that include some form of user authentication. '704 patent at 1:13–15. Typically, when a user logs on to an application or operating system and is authenticated, the application or operating system will create a "security context" that represents the user's identity as well as any associated authorization information. *Id.* at 1:15–22, Fig. 1. The application or operating system then uses this security context information to determine whether the user has the proper authority to access a requested resource or take a particular action—if so, the request to access a resource or take a particular action is then satisfied. *Id.* at 1:22–26, 32–46.

49. A user can be associated with multiple user identities (*e.g.* user ID values), which in turn are each associated with their own unique security contexts. '704 patent at 1:50-60. An individual user can therefore be associated with multiple security contexts that can each provide different access authorities. *Id.* When a user—who is already logged on using a first identity associated with a first security context—seeks to log on and authenticate for access to another resource using a second user identity associated with a second security context, an application or operating system could either (1) destroy the pre-existing security context and create and apply the new security context associated with the second identity, or (2) temporarily save the pre-existing first security context (*e.g.*, pushing it into a stack) so it can be automatically re-applied if the second security context is destroyed as a result of a user logging off the second identity, and the newly-created second security context is then applied in place of the first security context. *Id.* at 1:61–

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2:22. In both mechanisms, the individual user's access at a given time is determined solely based on the single current-applicable security context. *Id.* As a result, if the user needs access that requires authority not associated with the user's current security context, then the user is forced to log on with a different user identity associated with the requisite security context. *Id.* at 2:22–27.

50. Methods of structuring security contexts in a hierarchy were attempted but proved problematic because they required that users be granted additional authorizations that were not necessary to perform the task at hand, which creates ripe opportunities for security breaches. *Id.* at 2:52–67.

51. The inventors of the '704 patent developed methods to permit finer granularity in what access authorizations are granted to a user, while simultaneously addressing the complications and risks associated with multiple user logons. '704 patent at 2:63–67. They developed novel methods for aggregating security contexts to consolidate the user's access authorizations if a user logs on using multiple identities. This invention leveraged unconventional authentication methodology that could dynamically combine the authorization access information in existing security contexts to create a new "aggregate" security context based on the existing security contexts associated with the multiple identities. *Id.* at 5:41–6:21, Figs. 3, 4. The specification describes the structure of the novel "aggregate" security context, and further discloses the ordered combination of technical steps necessary to implement the claimed embodiments. *See, e.g.*, *id.*

52. Using the novel authentication methods and aggregate security context structure, the inventors of the '704 patent were able to permit a user to selectively log on with additional identities—and thereby be authenticated and granted the access authorized by the security contexts associated with those additional identities—without having to give up already-established access

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from prior logon(s). *Id.* at 6:47–49. As a result, more flexible and granular authorizations, such as limiting authorization to, for example, specific resources/actions/organizations, can be used without introducing the inconvenience of having to repeatedly logon and logoff to enable the needed access authorization. *Id.* at 6:52–7:10. The '704 patent thereby extends the benefits of access authorization structures involving multiple security contexts per user by mitigating the inconvenience of multiple logons/logoffs previously associated with such multi-security-context access authorization structures while simultaneously reducing the risk of security breach that hampered prior attempts to address this issue.

C. **IBM Invented Methods For Querying And Selecting Servers Hosting Virtual Environments.**

53.   The inventors of the '209 patent developed the patented technologies to improve systems hosting virtual worlds. Virtual worlds are computer-based simulated environments hosted on servers over the Internet, and can typically be accessed by a multitude of users. '209 patent at 1:15–24. When the server hosting a particular virtual world becomes too busy due to the number of users accessing the virtual world, a copy of that virtual world (a "shard") can be spawned on a second server so that users can be transferred to reduce the load on the first server. *Id.* at 1:24–33. Users can further navigate between virtual worlds through, for example, "entry point" locations within the destination virtual world. *Id.* at 6:38–64, 7:16–18, 9:65–10:21.

54.   At the time of the inventions of the '209 patent, systems hosting virtual worlds faced several limitations. For example, systems required users to leave the immersion of a virtual world to identify and navigate to an entry point of a second virtual world, preventing a seamless immersive experience. '209 patent at 6:38–46. As another example, systems lacked methods of searching for other virtual worlds (and their entry point(s)) having content of interest to the user, resulting in a user being limited to navigating to specific virtual worlds whose information (*e.g.*, a

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specific entry point or "address") was already known to the user—hampering the user's ability to access virtual worlds of interest. *Id.* at 6:47–55. As a further example, users were unable to navigate to other virtual worlds as a group within an immersive environment. *Id.* at 6:56–64.

55.   Recognizing these limitations, the inventors of the '209 patent developed improved methods for (1) providing a database containing information about available virtual worlds, including entry point(s)/address information and descriptive data; (2) querying the virtual world database for virtual worlds of potential interest to the user; and/or (3) generating and returning a custom virtual world shard containing content (*e.g.* portals) reflecting the responsive virtual worlds and associated entry points.

56.   The inventions of the '209 patent further provide a database of custom shards generated in response to users' queries for virtual worlds (and remaining free shards). '209 patent at 11:30–55. This custom shard database can include information such as virtual world information, tags, connected users, etc. *Id.* at 7:65–8:21. The query server of the '209 patent's novel methods can use this database of custom shards to determine whether a user query matches and/or can be satisfied by an existing custom shard, rather than needing a new custom shard— thereby conserving resources and improving efficiency. *Id.* at 11:65–12:53, 16:56–67. The query server can also use a database of custom shards to identify a custom shard that overlaps with a current query, and proceed to update the overlapping custom shard with the additional responsive content rather than generate a new custom shard—thereby conserving resources and improving efficiency. *Id.* at 14:53–15:58. A query server can also generate "focused" shards in anticipation of certain sets of common, overlapping queries so as to further streamline the process of sending users to existing responsive shards rather than creating new shards. *Id.* at 16:7–67. The innovative mechanism for sending users to the same custom shard based on similar queries (for example,

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queries for certain virtual world content or a specific user) has the further advantage of allowing users to travel together as a group. *Id.* at 16:56–69, 23:13–49.

57.   The inventions of the '209 patent leveraged an unconventional virtual world/shard database and accompanying query mechanism to provide the user with the ability to search for and obtain entry points to virtual worlds whose existence, content, and/or entry point information would otherwise be unknown—and as a result not readily accessible—to the user. *See, e.g.*, '209 patent at 6:65–7:54, 11:12–24, Figs. 3–5.   The inventions of the '209 patent further leveraged innovative custom shards generated for the query-responsive virtual worlds, thereby enabling the user (or groups of users) to navigate to different virtual worlds of interest without the prior issues caused by leaving the immersion of the virtual world. *See, e.g.*, *id.* at 7:35–64, 23:13–26.

COUNT ONE

TAKE-TWO'S INFRINGEMENT OF THE '849 PATENT

58.   IBM incorporates by reference paragraphs 1–57.

59.   IBM is the owner of all right, title and interest in the '849 patent. The '849 patent was duly and properly issued by the USPTO on July 4, 2006. The '849 patent was duly assigned to IBM. A copy of the '849 patent is attached hereto as Exhibit A.

60.   In violation of 35 U.S.C. § 271(a), Take-Two has directly infringed one or more of the claims of the '849 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its digital storefronts and websites (including the Rockstar Games Launcher and www.store.rockstargames.com (the "Rockstar Store")). Alternatively, Take-Two has contributed to the infringement of one or more of the claims of the '849 patent in violation of 35 U.S.C. § 271(c) by selling, offering to sell, and/or supplying components, materials, or apparatuses for use in practicing the patented methods of the '849 patent by end users and consumers, as described below. Alternatively, Take-Two has induced others, including end users

and customers, to infringe one or more of the claims of the '849 patent in violation of 35 U.S.C. § 271(b), as described below.

61.   For example, Take-Two directly infringes at least claim 1 of the '849 patent through the Rockstar Games Launcher at least by:

a.   presenting advertising obtained from a computer network (such as the Internet), the network including a multiplicity of user reception systems (such as the computer devices of Take-Two's users) at which respective users can request applications (such as applications on the Rockstar Games Launcher), from the network, that include interactive services (such as the interactive features and elements of the Rockstar Games Launcher), the respective reception systems including a monitor (such as a computer monitor of a Take-Two user's computer device) at which at least the visual portion of the applications can be presented as one or more screens of display, the method comprising the steps of:

b.   structuring applications (such as applications on the Rockstar Games Launcher) so that they may be presented, through the network, at a first portion (such as the portion in which the interactive features and elements of the Rockstar Games Launcher are presented) of one or more screens of display; and

c.   structuring advertising (such as products or microtransaction offers) in a manner compatible to that of the applications so that it may be presented, through the network, at a second portion (such as the portion in which the products or microtransaction offers are presented) of one or more screens of display concurrently with applications (such as applications on the Rockstar Games Launcher), wherein structuring the advertising includes configuring the advertising as objects (such as objects comprising advertising image data stored in the .jpg file format) that include advertising data and;

d.   selectively storing (such as by using caching parameters and/or code) advertising objects at a store (such as a local cache) established at the reception system.

62.   Alternatively, to the extent the "structuring" step is performed by a third party (in addition to and/or separate from Take-Two's performance), such as an operating system, that performance is attributable to Take-Two at least because Take-Two has an agency or contractual relationship with said third party, or Take-Two directs or controls the performance of said third party. For example, Take-Two directs or controls the performance of the "structuring" steps by operating systems because Take-Two, for example, establishes the manner or timing of the performance by, for example, designing and generating the computer code (such as HTML, Java, JavaScript, JSON, ActionScript, Objective-C, and Swift), which comprise the Rockstar Games Launcher. That computer code contains instructions that direct the operating system to structure the Rockstar Games Launcher in a particular manner. As another example, Take-Two directs or controls the performance of the "structuring" steps by operating systems because Take-Two profits from such performance by, for example, increasing use and user interactions with in-game offers for sale by designing its applications in a user-friendly manner. Take-Two has the right to stop or limit infringement by, for example, redesigning the computer code of Take-Two's Rockstar Games Launcher to function in a non-infringing manner.

63.   Alternatively, to the extent that the "selectively storing" step is performed by a third party (in addition to and/or separate from Take-Two's performance), that performance is attributable to Take-Two at least because Take-Two has an agency or contractual relationship with said third party, or Take-Two directs or controls the performance of said third party. For example, Take-Two directs or controls the performance of the "selectively storing" step by operating systems because Take-Two, for example, conditions receipt of a benefit, such as reduced latency,

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on the performance of the claimed steps, and establishes the manner or timing of the performance by, for example, determining which image and other data is cached. As another example, Take-Two directs or controls the performance of the "selectively storing" step by operating systems because Take-Two profits from such performance by, for example, increasing use and user interactions with offers for sale through reduced latency. Take-Two has the right to stop or limit infringement by, for example, determining that image and other data should not be cached.

64.   Alternatively, to the extent that the "selectively storing" step is performed by a third party (in addition to and/or separate from Take-Two's performance), such as a Content Delivery Network ("CDN") or other server, that performance is attributable to Take-Two at least because Take-Two has an agency or contractual relationship with said third party, or Take-Two directs or controls the performance of said third party. For example, Take-Two directs or controls the performance of the "selectively storing" step by any CDNs because Take-Two, for example, conditions receipt of a benefit, such as payment for services, on the performance of the claimed steps, and establishes the manner or timing of the performance by, for example, determining which image and other data is cached. As another example, Take-Two directs or controls the performance of the "selectively storing" step by operating systems because Take-Two profits from the performance by, for example, increasing use and user interactions with offers for sale through reduced latency. Take-Two has the right to stop or limit infringement by, for example, determining that image and other data should not be cached.

65.   As a further example, Take-Two directly infringes at least claim 1 of the '849 patent through the Rockstar Store website at least by:

a.   presenting advertising obtained from a computer network (such as the Internet), the network including a multiplicity of user reception systems (such as the computer

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devices of Take-Two's users) at which respective users can request applications (such as applications on the Rockstar Store website), from the network, that include interactive services (such as the interactive features and elements of the Rockstar Store website), the respective reception systems including a monitor (such as a computer monitor of a Take-Two user's computer device) at which at least the visual portion of the applications can be presented as one or more screens of display, the method comprising the steps of:

b.   structuring applications (such as applications on the Rockstar Store website) so that they may be presented, through the network, at a first portion (such as the portion in which the interactive features and elements of the Rockstar Store website are presented) of one or more screens of display; and

c.   structuring advertising (such as product or microtransaction offers) in a manner compatible to that of the applications so that it may be presented, through the network, at a second portion (such as the portion in which the product or microtransaction offers are presented) of one or more screens of display concurrently with applications (such as applications on the Rockstar Store website), wherein structuring the advertising includes configuring the advertising as objects (such as objects comprising advertising image data stored in the .jpg file format) that include advertising data and;

d.   selectively storing (such as by using caching parameters and/or code) advertising objects at a store (such as a local cache) established at the reception system.

66.   Take-Two has had knowledge of the '849 patent and its direct and indirect infringement since at least May 18, 2021.

67.   Take-Two also indirectly infringes one or more claims of the '849 patent through its digital storefronts and websites (including the Rockstar Games Launcher and the Rockstar

Store). On information and belief, in certain circumstances, client devices and software (e.g., devices and software used by end users and customers of Take-Two's digital storefronts and websites) directly infringe the '849 patent through the use of the digital storefronts and websites. In particular, to the extent Take-Two does not perform the method steps, in certain circumstances, client devices and software (e.g., devices and software used by end users, customers, and potential customers of Take-Two's digital storefronts and websites) perform at least the method of presenting advertising recited by claim 1 of the '849 patent.

68.   On information and belief, despite knowledge of the infringement of the '849 patent, Take-Two intended and continues to intend to contribute to patent infringement by third parties by selling, offering to sell, and/or supplying components, materials, or apparatuses for use in practicing the patented methods of the '849 patent by end users and consumers, as described in this section.

69.   For example, Take-Two provides computer code (such as HTML, Java, JavaScript, JSON, ActionScript, Objective-C, Swift, and image files) underlying the Take-Two digital storefronts and websites that is sent to customers and end users for use in infringing the '849 patent, and such computer code does not have substantial non-infringing uses. Such computer code is especially made and/or especially adapted for use in infringing the '849 patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use. The only substantial use of such computer code is for the claimed subject matter involving presenting applications along with advertising as described in the '849 patent.

70.   Further, as a part of providing said computer code, Take-Two enters into binding contracts with end users and customers to use Take-Two's digital storefronts and websites,

including in an infringing manner, including by binding the users to a terms of service governing access to and use of the accused website and mobile applications.

71.   Take-Two receives valuable consideration from customers and end users located in this judicial district, including information provided by customers and end users, information automatically collected from customers and end users, and monetary consideration from customers and end users who purchase products, in-game currency, and items and/or make use of services through Take-Two's digital storefronts and websites. When customers and end users in this judicial district use the accused digital storefronts and/or websites, Take-Two collects information about the customers and end users, their devices, and their interaction with the accused website and the associated mobile games. Take-Two works with service providers and advertising networks to track and manage activities of customers and end users across different websites and devices. Third parties use information collected by Take-Two to deliver advertisements to end users and customers based on their use of the accused digital storefronts and websites. Take-Two's business is funded in part through advertising. The applications and website are especially made and/or especially adapted for use in infringing the '849 patent, at least as detailed above, and are not a staple article or commodity of commerce suitable for substantial non-infringing uses because, among other things, the components sent to users are uniquely designed only to access the infringing aspects of Take-Two's digital storefronts and websites.

72.   On information and belief, despite its knowledge of the infringement of the '849 patent, Take-Two has intended and continues to intend to induce patent infringement by third parties, including at least the direct infringement by end users and customers, as described in this section. Take-Two has and continues to encourage and instruct customers and end users to use Take-Two's digital storefronts and websites in a manner that infringes the '849 patent by

advertising the digital storefronts and websites, providing customer support, and designing its digital storefronts and websites in such a way that the use of the digital storefronts and websites by an end user or customer infringes the '849 patent.

73.   On information and belief, to the extent Take-Two was not aware that it was encouraging its customers and end users to infringe the '849 patent, its lack of knowledge was based on being willfully blind to the possibility that its acts would cause infringement.

74.   IBM has been damaged by the infringement of its '849 patent by Take-Two and will continue to be damaged by such infringement. IBM is entitled to recover from Take-Two the damages sustained by IBM as a result of Take-Two's wrongful acts.

75.   Take-Two's infringement of the '849 patent was deliberate and willful, entitling IBM to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

COUNT TWO

TAKE-TWO'S INFRINGEMENT OF THE '704 PATENT

76.   IBM incorporates by reference paragraphs 1–75.

77.   IBM is the owner of all right, title and interest in the '704 patent. The '704 patent was duly and properly issued by the USPTO on April 8, 2008. The '704 patent was duly assigned to IBM. A copy of the '704 patent is attached hereto as Exhibit B.

78.   In violation of 35 U.S.C. § 271(a), Take-Two has directly infringed one or more of the claims of the '704 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its games (including *NBA 2K Mobile Basketball*) and its websites (including socialclub.rockstargames.com ("Rockstar Social Club")). Take-Two's infringement is continuing.

79.   For example, Take-Two directly infringes at least claim 1 of the '704 patent through

the *NBA 2K Mobile Basketball* game, including through the mobile games for iOS and Android,

at least by performing an authentication method comprising the steps of:

a.   generating a first security context (such as for a Facebook access

authorization) in response to a first user authentication (such as a user logging in using their

Facebook account);

b.   generating a second security context (such as for both a Facebook access

authorization and a Games Center access authorization) in response to a second user authentication

(such as a user logging in using their Games Center account), wherein said second security context

is an aggregate of said first security context (such as for a Facebook access authorization) and a

security context (such as for a Games Center access authorization) corresponding to an identity

(such as the user's Games Center user ID) in said second user authentication.

80.   As a further example, Take-Two directly infringes at least claim 1 of the '704 patent

through the Rockstar Social Club website at least by:

a.   generating a first security context (such as for an Epic Games access

authorization) in response to a first user authentication (such as a user logging in using their Epic

Games account);

b.   generating a second security context (such as for both an Epic Games access

authorization and a Google access authorization) in response to a second user authentication (such

as a user logging in using their Google account), wherein said second security context is an

aggregate of said first security context (such as for an Epic Games access authorization) and a

security context (such as for a Google access authorization) corresponding to an identity (such as

the user's Google user ID) in said second user authentication.

81.   Alternatively, to the extent the "generating" steps are performed by a third party (in addition to and/or separate from Take-Two's performance), such as a user, browser, or operating system, that performance is attributable to Take-Two at least because Take-Two has an agency or contractual relationship with said third party, or Take-Two controls or directs the performance of said third party. For example, Take-Two controls or directs the performance of the "generating" step by users, browsers, and operating systems because Take-Two, for example, conditions receipt of a benefit, such as access to certain applications on Take-Two's games and websites, on the performance of the claimed steps, and establishes the manner or timing of the performance by, for example, performing the "generating" steps using its underlying computer code. As another example, Take-Two controls or directs the performance of the "generating" step by users, browsers, and operating systems because Take-Two profits from the performance by, for example, increasing the number of signed-in users accessing Take-Two's games and websites. Take-Two has the right to stop or limit infringement, by, for example, not enabling the use of multiple logon and aggregated security contexts.

82.   Take-Two has had knowledge of the '704 patent and its alleged direct and indirect infringement since at least May 18, 2021.

83.   Take-Two also indirectly infringes one or more claims of the '704 patent through its games (including *NBA 2K Mobile Basketball*) and its websites (including socialclub.rockstargames.com ("Rockstar Social Club")). On information and belief, in certain circumstances, client devices and software (e.g., devices and software used by end users and customers of Take-Two's games and websites) directly infringe the '704 patent through the use of the games and websites. In particular, to the extent Take-Two does not perform the method steps, in certain circumstances, client devices and software (e.g., devices and software used by end users,

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customers, and potential customers of Take-Two's games and websites) perform at least the method for generating aggregated security contexts in response to multiple logons recited by claim 1 of the '704 patent.

84.   On information and belief, despite knowledge of the infringement of the '704 patent, Take-Two has intended and continues to intend to contribute to patent infringement by third parties by selling, offering to sell, and/or supplying components, materials, or apparatuses for use in practicing the patented methods of the '704 patent by end users and consumers, as described in this section.

85.   For example, Take-Two provides computer code (such as HTML, Java, JavaScript, JSON, ActionScript, Objective-C, Swift, and image files) underlying the Take-Two games and websites to customers and end users for use in infringing the '704 patent, and such computer code does not have substantial non-infringing uses. Such computer code is especially made and/or especially adapted for use in infringing the '704 patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use. The only substantial use of Take-Two's computer code responses is for the claimed subject matter involving generating aggregated security contexts in response to multiple logons as described in the '704 patent.

86.   Further, as a part of providing said computer code, Take-Two enters into binding contracts with end users and customers to use Take-Two's games and websites, including in an infringing manner, including by binding the users to a terms of service governing access to and use of the accused games and websites.

87.   Take-Two receives valuable consideration from customers and end users located in this judicial district, including information provided by customers and end users, information automatically collected from customers and end users, and monetary consideration from customers

and end users who purchase products, in-game currency, and items and/or make use of services through Take-Two's games and websites. When customers and end users in this judicial district use the accused games and/or websites, Take-Two collects information about the customers and end users, their devices, and their interaction with the accused games and/or websites. Take-Two works with service providers and advertising networks to track and manage activities of customers and end users across different websites and devices. Third parties use information collected by Take-Two to deliver advertisements to end users and customers based on their use of the accused games and websites. Take-Two's business is funded in part through advertising. The accused games and websites are especially made and/or especially adapted for use in infringing the '704 patent, at least as detailed above, and are not a staple article or commodity of commerce suitable for substantial non-infringing uses because, among other things, the components sent to users are uniquely designed only to access the infringing aspects of Take-Two's games and websites.

88. On information and belief, despite its knowledge of the infringement of the '704 patent, Take-Two has intended and continues to intend to induce patent infringement by third parties, including at least the direct infringement by end users and customers, as described in this section. Take-Two has and continues to encourage and instruct customers and end users to use Take-Two's games and websites in a manner that infringes the '704 patent by advertising the games and websites, providing customer support, and designing its games and websites in such a way that the use of the games and websites by an end user or customer infringes the '704 patent.

89. On information and belief, to the extent Take-Two was not aware that it was encouraging its customers and end users to infringe the '704 patent, its lack of knowledge was based on being willfully blind to the possibility that its acts would cause infringement.

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90.   IBM has been damaged by the infringement of its '704 patent by Take-Two and will continue to be damaged by such infringement. IBM is entitled to recover from Take-Two the damages sustained by IBM as a result of Take-Two's wrongful acts.

91.   The continued infringement by Take-Two of the '704 patent is deliberate and willful, entitling IBM to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

92.   IBM has suffered and continues to suffer irreparable harm, for which there is no adequate remedy at law, and will continue to do so unless Take-Two is enjoined therefrom by this Court.

COUNT THREE

TAKE-TWO'S INFRINGEMENT OF THE '209 PATENT

93.   IBM incorporates by reference paragraphs 1–92.

94.   IBM is the owner of all right, title and interest in the '209 patent. The '209 patent was duly and properly issued by the USPTO on June 4, 2013. The '209 patent was duly assigned to IBM. A copy of the '209 patent is attached hereto as Exhibit C.

95.   In violation of 35 U.S.C. § 271(a), Take-Two has directly infringed one or more of the claims of the '209 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its games (including *Red Dead Redemption 2*'s online component *Red Dead Online*). Alternatively, Take-Two has contributed to the infringement of the claims of the '209 patent in violation of 35 U.S.C. § 271(c) by selling, offering to sell, and/or supplying components, materials or apparatuses for use in practicing the patented methods of the '209 patent by end users and consumers, as described in this section. Alternatively, Take-Two has induced others, including end users and customers, to infringe one or more of the claims of the '209 patent in violation of 35 U.S.C. § 271(b), as described below. Take-Two's infringement is continuing.

96.   For example, Take-Two directly infringes at least claim 11 of the '209 patent through the *Red Dead Online* game at least by implementing a method for a virtual world query response system, the computer implemented method comprising:

a.   receiving a virtual world query from a client (such as a fast travel request to a particular session of a chosen location);

b.   searching a shard database (such as a database of shards hosting sessions for locations available via fast travel) for a custom shard (such as a shard hosting a particular session) having content responsive to the query (such as content associated with the requested session of a chosen location), wherein a shard is a virtual world hosted on a shard server (such as a Take-Two server), wherein the shard database comprises an entry for each custom shard in use, wherein the entry for the each custom shard in use comprises a description of content associated with the each custom shard (such as content associated with the requested session of a chosen location) and an identification of a set of clients connected to the each custom shard (such as a list of connected players in the custom shard session); and

c.   responsive to identifying the custom shard having content responsive to the query in the shard database (such as content associated with the requested session of a chosen location), returning an entry point of the custom shard to the client (such as an entry point for moving the user to the requested session of the chosen location).

97.   Alternatively, to the extent that the "searching" step is performed by a third party (in addition to and/or separate from Take-Two's performance), such as a user, browser, or operating system, that performance is attributable to Take-Two at least because Take-Two has an agency or contractual relationship with said third party, or Take-Two directs or controls the performance of said third party. For example, Take-Two directs or controls the performance of

the "searching" step by user, browsers, and operating systems because Take-Two, for example, conditions receipt of a benefit, such as use of navigation features in Take-Two's games, on the performance of the claimed steps, and establishes the manner or timing of the performance by, for example, triggering the navigation features using its underlying computer code. As another example, Take-Two directs or controls the performance of the "searching" step by users, browsers and operating systems because Take-Two profits from such performance by, for example, increasing the number of users and user interactions with Take-Two's applications by providing navigation features that improve the in-game user experience. Take-Two has the right to stop or limit infringement by, for example, not enabling navigation features.

98.   Take-Two has had knowledge of the '209 patent and its direct and indirect infringement since at least May 17, 2024.

99.   Take-Two also indirectly infringes one or more claims of the '209 patent through its games (including *Red Dead Redemption 2*'s online component *Red Dead Online*).   On information and belief, in certain circumstances, client devices and software (e.g., devices and software used by end users and customers of Take-Two's games) directly infringe the '209 patent through the use of the games. In particular, to the extent Take-Two does not perform the method steps, in certain circumstances, client devices and software (e.g., devices and software used by end users, customers, and potential customers of Take-Two's games) perform at least the method for a virtual world query response system recited by claim 11 of the '209 patent.

100.   On information and belief, despite knowledge of the infringement of the '209 patent, Take-Two has intended and continues to intend to contribute to patent infringement by third parties by selling, offering to sell, and/or supplying components, materials, or apparatuses

for use in practicing the patented methods of the '209 patent by end users and consumers, as described in this section.

101.   For example, Take-Two provides computer code (such as HTML, Java, JavaScript, JSON, ActionScript, Objective-C, Swift, and image files) underlying the Take-Two games to customers and end users for use in infringing the '209 patent, and such computer code does not have substantial non-infringing uses. Such computer code is especially made and/or especially adapted for use in infringing the '209 patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use. The only substantial use of Take-Two's computer code is for the claimed subject matter involving a method for a virtual world query response system as described in the '209 patent.

102.   Further, as a part of providing said computer code, Take-Two enters into binding contracts with end users and customers to use Take-Two's games, including in an infringing manner, including by binding the users to a terms of service governing access to and use of the accused games.

103.   Take-Two receives valuable consideration from customers and end users located in this judicial district, including information provided by customers and end users, information automatically collected from customers and end users, and monetary consideration from customers and end users who purchase Take-Two's games. When customers and end users in this judicial district use the accused games, Take-Two collects information about the customers and end users, their devices, and their interaction with the accused games. Take-Two works with service providers and advertising networks to track and manage information and activities of customers and end users across different devices. Third parties use information collected by Take-Two to deliver advertisements to end users and customers based on their use of the accused games. Take-

Two's business is funded in part through advertising. The games are especially made and/or especially adapted for use in infringing the '209 patent, at least as detailed above, and are not a staple article or commodity of commerce suitable for substantial non-infringing uses because, among other things, the components sent to users are uniquely designed only to access the infringing aspects of Take-Two's games.

104.   On information and belief, despite its knowledge of the infringement of the '209 patent, Take-Two has intended and continues to intend to induce patent infringement by third parties, including at least the direct infringement by end users and customers, as described in this section. Take-Two has and continues to encourage and instruct customers and end users to use Take-Two's games in a manner that infringes the '209 patent by advertising the games, providing customer support, and designing its games in such a way that the use of the games by an end user or customer infringes the '209 patent.

105.   On information and belief, to the extent Take-Two was not aware that it was encouraging its customers and end users to infringe the '209 patent, its lack of knowledge was based on being willfully blind to the possibility that its acts would cause infringement.

106.   IBM has been damaged by the infringement of its '209 patent by Take-Two and will continue to be damaged by such infringement. IBM is entitled to recover from Take-Two the damages sustained by IBM as a result of Take-Two's wrongful acts.

107.   The continued infringement by Take-Two of the '209 patent is deliberate and willful, entitling IBM to increased damages under 35 U.S.C. § 284 and to attorney fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

108.   IBM has suffered and continues to suffer irreparable harm, for which there is no adequate remedy at law, and will continue to do so unless Take-Two is enjoined therefrom by this Court.

RELIEF REQUESTED

Wherefore, IBM respectfully requests that this Court enter judgment against Take-Two as follows:

A.   That the '849 patent has been infringed by Take-Two;

B.   That Take-Two's infringement of the '849 patent has been willful;

C.   That the '704 patent has been and continues to be infringed by Take-Two;

D.   That Take-Two's infringement of the '704 patent has been and continues to be willful;

E.   That the '209 patent has been and continues to be infringed by Take-Two;

F.   That Take-Two's infringement of the '209 patent has been and continues to be willful;

G.   An award of damages adequate to compensate IBM for the patent infringement that has occurred, together with pre-judgment interest and costs;

H.   An award of all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages found;

I.   That this is an exceptional case and merits an award to IBM of its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285; and

J.   Such other relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

IBM hereby demands trial by jury on all claims and issues so triable.

Respectfully submitted,

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Dated: September 30, 2024
11768823/00311.00033

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