

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

INTERNATIONAL BUSINESS MACHINES CORPORATION,)	
)	
)	
Plaintiff,)	C.A. No. _____
)	
v.)	JURY TRIAL DEMANDED
)	
GROUPON, INC.)	
)	
Defendant.)	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff International Business Machines Corporation (“IBM”), for its Complaint for Patent Infringement against Groupon, Inc. (“Groupon”) alleges as follows:

INTRODUCTION

1. IBM is a world leader in technology and innovation. IBM spends billions of dollars each year on research and development, and those efforts have resulted in the issuance of more than 60,000 patents worldwide. Patents enjoy the same fundamental protections as real property. IBM, like any property owner, is entitled to insist that others respect its property and to demand payment from those who take it for their own use. Groupon has built its business model on the use of IBM’s patents. Moreover, despite IBM’s repeated attempts to negotiate, Groupon refuses to take a license, but continues to use IBM’s property. This lawsuit seeks to stop Groupon from continuing to use IBM’s intellectual property without authorization.

NATURE OF THE CASE

2. This action arises under 35 U.S.C. § 271 for Groupon’s infringement of IBM’s United States Patent Nos. 5,796,967 (the “’967 patent”), 7,072,849 (the “’849 patent”), 5,961,601 (the “’601 patent”), and 7,631,346 (the “’346 patent”) (collectively the “Patents-In-Suit”).

THE PARTIES

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

4. Defendant Groupon, Inc. is a Delaware corporation with a principle place of business at 600 West Chicago Avenue, Suite 400, Chicago, Illinois 60654. Groupon may be served through its registered agent for service, The Corporation Trust Company, Corporation Trust Center 1209 Orange Street, Wilmington, Delaware 19801.

5. Groupon operates online local commerce marketplaces to connect merchants to consumers by offering goods and services at a discount through the website www.groupon.com and through Groupon mobile applications.

JURISDICTION AND VENUE

6. 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).

7. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

8. Personal jurisdiction exists over Groupon because Groupon conducts business in Delaware, by at least offering for sale and selling products and services through its websites and mobile applications, which are accessible in Delaware, and because infringement has occurred and continues to occur in Delaware. Personal jurisdiction also exists over Groupon because Groupon is a corporation organized under the laws of Delaware.

FACTUAL BACKGROUND

A. IBM Is A Recognized Innovator.

9. IBM is recognized throughout the world as a pioneer in many aspects of science and technology. On eight occasions, more times than any other company or organization, IBM has been awarded the U.S. National Medal of Technology, the nation's highest award for technological innovation. During IBM's over 100-year history, IBM's employees have included six Nobel laureates, five National Medal of Science recipients, and at least fourteen inventors in the National Inventors Hall of Fame.

10. These and other IBM employees have introduced the world to technology that the global community takes for granted today, including the dynamic random access memory—DRAMs—found in nearly all modern computers; magnetic disk storage—hard disk drives—found in computers and portable music players; and some of the world's most powerful supercomputers, including Deep Blue, the first computer to beat a reigning chess champion and which is on display at the Smithsonian's National Museum of American History in Washington, D.C. IBM's commitment to developing these types of advanced computing technologies has helped to usher in the information age.

B. IBM Is Committed To Protecting Its Innovations Through The Patent System.

11. IBM's research and development operations differentiate IBM from many other companies. IBM annually spends billions of dollars for research and development. In addition to yielding inventions that have literally changed the way in which the world works, IBM's research and development efforts have resulted in more than 60,000 patents worldwide. For over two decades the United States Patent and Trademark Office ("USPTO") has issued more patents to IBM than to any other company in the world.

12. Like the research upon which the patents are based, IBM's patents also benefit society. Indeed, the Supreme Court has recognized that the patent system encourages both the creation and the disclosure of new and useful advances in technology. Such disclosure, in turn, permits society to innovate further. And, as the Court has further recognized, as a reward for committing resources to innovation and for disclosing that innovation, the patent system provides patent owners with the exclusive right to prevent others from practicing the claimed invention for a limited period of time.

C. **IBM Routinely Licenses Its Patents In Many Fields, But Will Enforce Its Rights Against Those Who Take Its Intellectual Property Unlawfully.**

13. IBM's commitment to creating a large patent portfolio underscores the value that IBM places in the exchange of innovation, and disclosure of that innovation, in return for limited exclusivity. Indeed, IBM has used its patent portfolio to generate revenue and other significant value for the company by executing patent cross-license agreements. The revenue generated through patent licensing enables IBM to continue to commit resources to innovation. Cross licensing, in turn, provides IBM with the freedom to innovate and operate in a manner that respects the technology of others.

14. Given the investment IBM makes in the development of new technologies and the management of its patent portfolio, IBM and its shareholders expect companies to act responsibly with respect to IBM's patents. IBM facilitates this by routinely licensing its patents in many fields and by working with companies that wish to use IBM's technology in those fields in which IBM grants licenses. When a company appropriates IBM's intellectual property but refuses to negotiate a license, IBM has no choice but to seek judicial assistance.

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

15. The inventors of the '967 and '849 patents developed the patented technology as part of the 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.

16. 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 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.

17. Prodigy embodied inventions from the '967 and '849 patents when it launched in the late 1980s, before the existence of the World Wide Web. The efficiencies derived from the use of the patented technology permitted the implementation of one 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. The technological innovations embodied in these patents persist to this day and are fundamental to the efficient communication of Internet content.

E. IBM Invented Methods Of Preserving State Information In A Continuing Conservation Between A Client And Server Networked Via A Stateless Protocol.

18. The inventor of the '601 patent, Arun K. Iyengar, developed the patented technology as part of IBM's efforts to discover a better technique of preserving state information in Internet communications. State information allows clients and servers to keep track of prior communications during a conversation. For example, online merchants can use state information to keep track of a client's product and service selections while the client is shopping and then use that information when the client decides to make a purchase. However, typical Internet communication protocols, such as HTTP, are stateless, in other words, they do not have a built-in mechanism to keep track of state information. At the time of the invention, engineers attempted to solve this problem by passing state information as hidden variables within forms or by using "Cookies." Both of those methods had significant drawbacks and limited the types of interactions that could preserve state information.

19. The inventor recognized the need for techniques to preserve state information that supported a wide variety of network interactions. He thus developed novel methods of recursively embedding state information into communications between clients and servers. For example, the specification of the '601 patent discloses program modules that modify hypertext links in HTML pages in a way that preserves state information for the duration of a conversation. By transforming Internet communications in this way, the patented technology of the '601 patent provides an efficient mechanism to build on previous communications between a server and a client, such as between an online merchant and a customer.

F. IBM Invented Methods For A Runtime User Account Creation Operation Using A Single-Sign-On Process In A Federated Computer Environment.

20. The inventors of the '346 patent developed the patented technology as part of IBM's efforts to improve single-sign-on technology. To access a protected resource at a service provider on the Internet, a user typically has to authenticate him or herself with the service provider. Single-sign-on technology facilitates a user's connection to resources by requiring only one authorization operation during a particular user session. However, conventional technology at the time of the invention required that the user already have an account with the service provider to use single-sign-on technology.

21. The inventors of the '346 patent sought to develop single-sign-on technology that would permit a new user of a service provider to access protected resources. They developed novel methods for systems interacting within a federated computing environment to trigger a single-sign-on operation on behalf of a user that would obtain access to a protected resource and create an account for the user. The specification discloses how to structure a federated computing environment and the sequence and content of interactions between different systems that can support the patented methods. The '346 patent thus extends the benefits of single-sign-on technology.

G. Groupon Has Built Its Business By Infringing IBM's Patents.

22. Groupon is a well-known company that operates online local commerce marketplaces to connect merchants to consumers by offering goods and services at a discount through its websites, including www.groupon.com, and through the Groupon mobile applications, including those running on the Apple iOS, Microsoft Windows, BlackBerry, and Google Android operating systems. Groupon has grown rapidly and now generates billions of dollars of revenue per year.

23. Rather than build its business on its own technologies, Groupon has appropriated the inventions of the Patents-In-Suit. Websites under Groupon's control, including at least www.groupon.com, use the technology claimed by the Patents-In-Suit to implement online local commerce marketplaces to connect merchants to consumers by offering goods and services at a discount. Groupon's mobile applications, including those running on the Apple iOS, Microsoft Windows, BlackBerry, and Google Android operating systems, use the technology claimed by the Patents-In-Suit to implement online local commerce marketplaces to connect merchants to consumers by offering goods and services at a discount.

24. On November 1, 2011, IBM sent an email to inform Groupon that Groupon was practicing the inventions of the '967 and '849 patents, among other patents. Since 2011, IBM has tried to work with Groupon in an effort to negotiate a license agreement. On August 11, 2014, IBM sent a letter to inform Groupon that Groupon was practicing the inventions of additional patents, including the '346 patent. IBM has presented detailed examples of Groupon's infringement of the '967, '849, and '346 patents.

25. On information and belief, Groupon received notice of the '601 patent from the complaint IBM filed on February 9, 2015 in this district, in the action of *International Business Machines Corporation v. Priceline Group Inc. et al*, No. 1:15-cv-137-LPS-CJB ("*Priceline* complaint"). Groupon knew or should have known that it infringed the '601 patent based on the allegations in the *Priceline* complaint.

26. Groupon has refused to engage in any meaningful discussions about reaching a license agreement to end its infringement of IBM's patents. Instead, Groupon has continued to willfully infringe IBM's patents so as to obtain the significant benefits of IBM's innovations without paying any compensation to IBM.

27. Because IBM's over three-year struggle to negotiate a license agreement that remedies Groupon's unlawful conduct has failed, IBM has been forced to seek relief through litigation. Among other relief sought, IBM seeks royalties on the billions of dollars in revenue that Groupon has received based on its unlawful infringement of IBM's patented technology.

COUNT ONE

INFRINGEMENT OF THE '967 PATENT

28. IBM is the owner of all right, title and interest in the '967 patent. The '967 patent was duly and properly issued by the USPTO on August 18, 1998. The '967 patent was duly assigned to IBM. A copy of the '967 patent is attached hereto as Exhibit A.

29. In violation of 35 U.S.C. § 271, Groupon has infringed, contributed to the infringement of, and/or induced others to infringe one or more of the claims of the '967 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its websites, including www.groupon.com, and its mobile applications, including the Groupon applications running on, for example, the Apple iOS, Microsoft Windows, BlackBerry, and Google Android operating systems.

30. For example, Groupon infringes at least claim 1 of the '967 patent by, for example:

a. presenting interactive applications (such as home, local, goods, etc.) on a computer network (such as the Internet), the network including a multiplicity of user reception systems (such as the computers or mobile devices of Groupon's customers) at which respective users may request a multiplicity of available applications (such as home, local, goods, etc.), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a Groupon customer) at which the applications requested can be presented as one or more screens of display (such as a display region of home, local, goods, etc.).

b. generating a screen display at a respective reception system for a requested application (such as home, local, goods, etc.), the screen display being generated by the respective reception system from data objects having a prescribed data structure (such as woff and/or jpeg files), at least some of which objects may be stored at the respective reception system (such as the computer or mobile device of a Groupon customer), the screen display including a plurality of partitions (such as the webpage, the menu bar, and/or the content for home, local, goods, etc.), the partitions being constructed from objects, the objects being retrieved from the objects stored at the respective reception system (such as the computer or mobile device of a Groupon customer), or if unavailable from the objects stored at the respective reception system, then from the network (such as the Internet), such that at least some of the objects may be used in more than one application (such as home, local, goods, etc.).

c. generating at least a first partition (such as the webpage and/or the content for home, local, goods, etc.) for presenting applications (such as home, local, goods, etc.).

d. generating concurrently with the first partition at least a second partition for presenting a plurality of command functions (such as the menu bar), the command functions including at least a first group which are selectable to permit movement between applications (such as home, local, goods, etc.).

31. IBM has been damaged by the infringement of its '967 patent by Groupon. IBM is entitled to recover from Groupon the damages sustained by IBM as a result of Groupon's wrongful acts.

32. The infringement by Groupon of the '967 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

INFRINGEMENT OF THE '849 PATENT

33. 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 B.

34. In violation of 35 U.S.C. § 271, Groupon has infringed, contributed to the infringement of, and/or induced others to infringe 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 websites, including www.groupon.com, and its mobile applications, including the Groupon applications running on, for example, the Apple iOS, Microsoft Windows, BlackBerry, and Google Android operating systems. Groupon's infringement is ongoing.

35. For example, Groupon infringes at least claim 1 of the '849 patent by, for example:

a. presenting advertising obtained from a computer network (such as the Internet), the network including a multiplicity of user reception systems (such as the computers or mobile devices of Groupon's customers) at which respective users can request applications (such as home, local, goods, etc.), from the network, that include interactive services (such as offering goods and services at a discount), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a Groupon customer) 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 home, local, goods, etc.) so that they may be presented, through the network, at a first portion (such as the webpage and/or the content for home, local, goods, etc.) of one or more screens of display; and

c. structuring advertising (such as advertising for coupon codes) in a manner compatible to that of the applications so that it may be presented, through the network, at a second portion (such as a banner) of one or more screens of display concurrently with applications (such as home, local, goods, etc.), wherein structuring the advertising includes configuring the advertising as objects (such as woff or jpeg files) that include advertising data and;

d. selectively storing (such as by embedding a cache control parameter) advertising objects at a store (such as the browser cache) established at the reception system.

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

37. The continued infringement by Groupon of the '849 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.

38. 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 Groupon is enjoined therefrom by this Court.

COUNT THREE

INFRINGEMENT OF THE '601 PATENT

39. IBM is the owner of all right, title and interest in the '601 patent. The '601 patent was duly and properly issued by the USPTO on October 5, 1999. The '601 patent was duly assigned to IBM. A copy of the '601 patent is attached hereto as Exhibit C.

40. In violation of 35 U.S.C. § 271, Groupon has infringed, contributed to the infringement of, and/or induced others to infringe one or more of the claims of the '601 patent by

having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its websites, including www.groupon.com, and its mobile applications, including the Groupon applications for mobile devices running on, for example, the Apple iOS, Microsoft Windows, BlackBerry, and Google Android operating systems. Groupon's infringement is continuing.

41. For example, Groupon infringes at least claim 51 of the '601 patent by, for example:

- a. preserving state information (such as identification variables about the user and/or the user's request) in a conversation via a stateless protocol (such as http or https) between a client adapted to request services (such as requesting goods and services) from one or more servers (such as Groupon's website servers), the method comprising the steps of:
 - b. receiving a service request (such as a request to search for goods and services, including for example "getaways") including state information, via the stateless protocol;
 - c. identifying all continuations (such as hyperlinks or other URL references) in an output from said service (such as webpage requests or search results) and recursively embedding the state information (such as inserting identification variables) in all identified continuations, in response to said request; and
 - d. communicating a response including the continuations and embedded state information, wherein the continuations enable another service request (such as the process of reserving goods or services, including "getaways" or another HTTP request) and one of the continuations must be invoked to continue the conversation.

42. IBM has been damaged by the infringement of its '601 patent by Groupon and will continue to be damaged by such infringement. IBM is entitled to recover from Groupon the damages sustained by IBM as a result of Groupon's wrongful acts.

43. 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 Groupon is enjoined therefrom by this Court.

COUNT FOUR

INFRINGEMENT OF THE '346 PATENT

44. IBM is the owner of all right, title and interest in the '346 patent. The '346 patent was duly and properly issued by the USPTO on December 8, 2009. The '346 patent was duly assigned to IBM. A copy of the '346 patent is attached hereto as Exhibit D.

45. In violation of 35 U.S.C. § 271, Groupon has infringed, contributed to the infringement of, and/or induced others to infringe one or more of the claims of the '346 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its websites, including www.groupon.com, and its mobile applications, including the Groupon applications for mobile devices running on, for example, the Apple iOS, Microsoft Windows, BlackBerry, and Google Android operating systems. Groupon's infringement is continuing.

46. For example, Groupon infringes at least claim 1 of the '346 patent by, for example:

a. managing user authentication (such as verifying the identity of a Groupon user) within a distributed data processing system (such as a computer network), wherein a first system (such as Facebook and its network) and a second system (such as Groupon and its network) interact within a federated computing environment (such as a computer network for example the Internet including Facebook and Groupon) and support single-sign-on operations

(“Sign In” operations) in order to provide access to protected resources (such as the “BUY!” option on Groupon), at least one of the first system and the second system comprising a processor, the method comprising;

b. triggering a single-sign-on operation (such as launching an operation to “Sign In” using Facebook) on behalf of the user in order to obtain access to a protected resource that is hosted by the second system, wherein the second system requires a user account for the user to complete the single-sign-on operation (such as requiring the user to have a Groupon account) prior to providing access to the protected resource;

c. receiving from the first system at the second system an identifier associated with the user (such as an email address, Facebook ID, or access token); and

d. creating a user account (such as a Groupon account) for the user at the second system based at least in part on the received identifier associated with the user after triggering the single-sign-on operation but before generating at the second system a response for accessing the protected resource (such as the “BUY!” option), wherein the created user account supports single-sign-on operations (such as “Sign In” operations at Groupon using a Facebook account) between the first system and the second system on behalf of the user.

47. IBM has been damaged by the infringement of its ’346 patent by Groupon and will continue to be damaged by such infringement. IBM is entitled to recover from Groupon the damages sustained by IBM as a result of Groupon’s wrongful acts.

48. The continued infringement by Groupon of the ’346 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.

49. 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 Groupon is enjoined therefrom by this Court.

RELIEF REQUESTED

Wherefore, IBM respectfully requests that this Court enter judgment against the Defendant as follows:

- A. That the '967 patent has been infringed by Groupon;
- B. That Groupon's infringement of the '967 patent has been willful;
- C. That the '849 patent has been infringed by Groupon;
- D. That Groupon's infringement of the '849 patent has been willful;
- E. An injunction against further infringement of the '849 patent;
- F. That the '601 patent has been infringed by Groupon;
- G. That Groupon's infringement of the '601 patent has been willful;
- H. An injunction against further infringement of the '601 patent;
- I. That the '346 patent has been infringed by Groupon;
- J. That Groupon's infringement of the '346 patent has been willful;
- K. An injunction against further infringement of the '346 patent;
- L. An award of damages adequate to compensate IBM for the patent infringement that has occurred, together with pre-judgment interest and costs;
- M. 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;
- N. That this is an exceptional case and an award to IBM of its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285; and
- O. 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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