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

INTERNATIONAL BUSINESS MACHINES CORPORATION, Plaintiff, v. EXPEDIA, INC., EXPEDIA, INC., HOMEAWAY.COM, INC., HOTELS.COM L.P., HOTWIRE, INC., ORBITZ WORLDWIDE, INC., ORBITZ, LLC, AND TRAVELSCAPE LLC Defendants.	Civil Action No. _____ **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff International Business Machines Corporation ("IBM"), for its Complaint for Patent Infringement against Expedia, Inc., Expedia, Inc., Homeaway.com, Inc., Hotels.com L.P., Hotwire, Inc., Orbitz Worldwide, Inc., Orbitz, LLC, and Travelscape LLC (collectively "Defendants") 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. Defendants have built their business model on the use of IBM's patents. Moreover, despite IBM's repeated attempts to negotiate, Defendants refuse to negotiate a license. This lawsuit seeks to stop Defendants 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 Defendants' 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 Expedia, Inc. is a Delaware corporation ("Expedia-DE") with a principal place of business at 333 108th Avenue NE, Bellevue, Washington 98004. Expedia-DE may be served through its registered agent for service, National Registered Agents, Inc., 160 Greentree Dr. Suite 101, Dover, DE 19904. Expedia-DE provides online travel reservation and related services to consumers and local partners directly through the websites at www.expedia.com and through the Expedia mobile applications.

5. Expedia-DE also provides online travel reservation and related services to consumers through its subsidiaries: Expedia, Inc., Homeaway.com, Inc., Hotels.com L.P., Hotwire, Inc., Orbitz Worldwide, Inc., Orbitz, LLC, and Travelscape LLC (collectively, the "Expedia Subsidiaries"). Expedia, Inc., Homeaway.com, Inc., Hotels.com L.P., Hotwire, Inc., Orbitz Worldwide, Inc., Orbitz, LLC, and Travelscape LLC are wholly owned and controlled subsidiaries of Expedia-DE. According to the Form S-4 filed by Expedia-DE on November 16, 2017, Expedia-DE has at least eighteen subsidiaries that are incorporated or organized in Delaware, including Homeaway.com, Inc., Hotwire, Inc., Orbitz Worldwide, Inc., and Orbitz, LLC. A copy of Expedia-DE's November 16, 2017 S-4 is attached as Exhibit A.

6. Expedia-DE and the Expedia Subsidiaries belong to a corporate family that is

comprised of affiliated companies that offer travel-related services in this District. Expedia-DE

and four of the Expedia Subsidiaries are incorporated in Delaware.

7. Defendant Expedia, Inc. is a Washington corporation ("Expedia-WA") with a

principal place of business at 333 108th Avenue NE, Bellevue, Washington 98004. Expedia-WA

may be served through its registered agent for service, National Registered Agents, Inc., 711

Capitol Way South Suite 204, Olympia, WA, 98501. Expedia-WA is a wholly-owned subsidiary

of Expedia-DE, is controlled by Expedia-DE, and is an agent of Expedia-DE.

8. Expedia-DE and Expedia-WA (collectively "Expedia") operate as single entity.

Expedia® is one of Expedia-DE's "travel brands."[1] According to Expedia-DE's 2016 Form 10-K

filed with the SEC, Expedia-DE's "technology platforms" support Expedia-DE brands, including

expedia.com. A copy of Expedia-DE's 2016 Form 10-K has been attached as Exhibit B. The

webpage https://www.expedia.com lists "Expedia, Inc." on its landing page without

distinguishing between Expedia-DE and Expedia-WA. A copy of the landing page for

expedia.com has been attached as Exhibit C. Expedia provides online travel reservation and

related services to consumers and local partners directly through the websites at

www.expedia.com and through the Expedia mobile applications.

9. Expedia-DE and Expedia-WA share the same business headquarters address,

principal executive office address, and certain directors and executive officers. Expedia-DE and

Expedia-WA are identified on promotional material as a single entity, Expedia, Inc. Expedia-DE

and Expedia-WA operate as a single company during litigation and identify the single entity

Expedia, Inc. as both a Delaware corporation and a Washington corporation.[2]

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[1] *See* Expedia-DE's 2016 Form 10-K at 1.
[2] *See* Defendant Expedia Inc.'s Answer, Affirmative Defenses, and Counterclaims to Plaintiff's
First Amended Complaint for Patent Infringement and Demand for Jury Trial ¶ 2, ¶ 121,

10. Defendant Homeaway.com, Inc. is a Delaware corporation ("Homeaway") with a principal place of business at 1011 West 5th Street, Suite 300, Austin, Texas 78703. Homeaway may be served through its registered agent for service National Registered Agents, Inc., 160 Greentree Dr. Suite 101, Dover, DE 19904. Homeaway provides listings for Home rentals, reservations, and related services to consumers and local partners through the website www.homeaway.com and through the Homeaway mobile applications. Homeaway is a wholly-owned subsidiary of Expedia-DE and, on information and belief, is controlled by Expedia-DE and is an agent of Expedia-DE.

11. On information and belief, Expedia-DE offers the website located at http://www.homeaway.com. Homeaway is one of Expedia-DE's "travel brands."[3] According to Expedia-DE's 2016 Form 10-K filed with the SEC, Expedia-DE's "technology platforms" support its brands, including Homeaway. On information and belief, Homeaway and Expedia-DE operate as a single entity.

12. Defendant Hotels.com L.P. is a Texas limited partnership ("Hotels.com") with a principal place of business at 5400 Lyndon B Johnson Freeway #500, Dallas, TX, 75240. Hotels.com may be served through its registered agent for service, National Registered Agents, Inc., 1999 Bryan Street, Suite 900, Dallas, Texas 75201. Hotels.com provides online hotel reservation and related services to consumers and local partners through the website www.hotels.com and through the Hotels.com mobile applications. Hotels.com is a wholly-owned subsidiary of Expedia-DE and, on information and belief, is controlled by Expedia-DE,

Ameranth, Inc. v. Expedia, Inc., Case No. 3:12-cv-01654-DMS-WVG (S.D. Cal. Oct. 4, 2013) (D.I. 38) ("Expedia admits that it is a Washington corporation . . . .") ("Expedia is a Delaware corporation."). A copy of the Answer to the First Amended Complaint has been attached as Exhibit D.

[3] Expedia-DE's 2016 Form 10-K at 1.

and is an agent of Expedia-DE.

13. Expedia-DE offers the websites located at http://www.hotels.com and http://www.hotels.com/mobile.[4] Hotels.com is one of Expedia-DE's "travel brands."[5] According to Expedia-DE's 2016 Form 10-K filed with the SEC, Expedia-DE's "technology platforms" support its brands, including Hotels.com. On information and belief, Hotels.com and Expedia-DE operate as a single entity.

14. Defendant Hotwire, Inc. is a Delaware corporation ("Hotwire") with a principal place of business at 655 Montgomery Street Suite 600, San Francisco, California 94111. Hotwire may be served through its registered agent for service, National Registered Agents, Inc., 160 Greentree Drive Suite 101, Dover Delaware 19904. Hotwire provides online travel reservation and related services to consumers and local partners through the website www.hotwire.com and through its Hotwire mobile applications. Hotwire is a wholly-owned subsidiary of Expedia-DE and, on information and belief, is an agent of Expedia-DE and is controlled by Expedia-DE.

15. On information and belief, Expedia-DE offers the website located at http://www.hotwire.com. Hotwire is one of Expedia-DE's "travel brands."[6] According to Expedia-DE's 2016 Form 10-K filed with the SEC, Expedia-DE's "technology platforms" support its brands, including Hotwire. On information and belief, Hotwire and Expedia-DE operate as a single entity.

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[4] *See* Expedia, Inc.'s Answer, Defenses, and Counterclaims ¶ 6, *EMG Technology, LLC v. Expedia, Inc.*, C.A. 6:12-cv-505 (E.D. Tex Oct. 8, 2012) (D.I. 11). A copy of the Expedia, Inc.'s Answer, Defenses, and Counterclaims has been attached as Exhibit E.

[5] *See* Defendant Expedia, Inc.'s Answer and Defenses ¶ 12, *Metasearch Systems, LLC v. Expedia, Inc. et al.*, No. 1:12-cv-01188-LPS (D. Del Dec. 7, 2012) (D.I. 12). A copy of Expedia, Inc.'s Answer and Defenses has been attached as Exhibit F.

[6] Expedia-DE's 2016 Form 10-K at 1.

16. Defendant Orbitz Worldwide, Inc. is a Delaware corporation with a principal place of business at 500 W Madison Street, Suite 1000, Chicago, Illinois 60661. Orbitz Worldwide, Inc. may be served through its registered agent for service, National Registered Agents, Inc., 160 Greentree Drive Suite 101, Dover, Delaware 19904. Orbitz Worldwide, Inc. provides online travel reservation and related services to consumers and local partners through the website www.orbitz.com and through the Orbitz mobile applications. Orbitz Worldwide, Inc. is a wholly-owned subsidiary of Expedia-DE and, on information and belief, is an agent of Expedia-DE and is controlled by Expedia-DE.

17. Defendant Orbitz, LLC is a Delaware limited liability company with a principal place of business at 500 W Madison Street, Suite 1000, Chicago, Illinois 60661. Orbitz, LLC may be served through its registered agent for service, National Registered Agents, Inc., 160 Greentree Drive Suite 101, Dover, Delaware 19904. Orbitz, LLC provides online travel reservation and related services to consumers and local partners through the website www.orbitz.com and through the Orbitz mobile applications. Orbitz, LLC is a wholly-owned subsidiary of Expedia-DE and, on information and belief, is an agent of Expedia-DE, and is controlled by Expedia-DE.

18. On information and belief, Expedia-DE offers the website located at http://www.orbitz.com. Orbitz, LLC and Orbitz Worldwide, Inc. (collectively "Orbitz") form one of Expedia-DE's "travel brands."[7] According to Expedia-DE's 2016 Form 10-K filed with the SEC, Expedia-DE's "technology platforms" support its brands, including Orbitz. On information and belief Orbitz and Expedia-DE operate as a single entity.

19. Defendant Travelscape LLC is a Nevada limited liability company ("Travelocity")

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[7] Expedia-DE's 2016 Form 10-K at 1.

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with a principal place of business at 10190 Covington Cross Drive # 200, Las Vegas, NV 89144. Travelocity may be served through its registered agent for service, National Registered Agents, Inc. of NV, 701 South Carson Street Suite. 200, Carson City, NV 89701. Travelocity provides online travel reservation and related services to consumers and local partners directly through its website www.travelocity.com and through the Travelocity mobile application. Travelocity is a wholly-owned subsidiary of Expedia-DE and, on information and belief, is an agent of Expedia-DE, and is controlled by Expedia-DE.

20. On information and belief, Expedia-DE offers the website located at http://www.travelocity.com. Travelocity is one of Expedia-DE's "travel brands."[8] According to Expedia-DE's 2016 Form 10-K filed with the SEC, Expedia-DE's "technology platforms" support its brands, including Travelocity. On information and belief, Travelocity and Expedia-DE operate as a single entity.

21. On information and belief, Expedia-DE, Expedia-WA, Travelocity, Hotels.com, Orbitz, Homeaway, and Hotwire share certain directors and executive officers.

22. According to Expedia-DE's 2016 Form 10-K filed with the SEC, Expedia-DE's travel brands include: Expedia.com®; Hotels.com®; Orbitz Worldwide; HomeAway®; Travelocity®; and Hotwire®. Expedia-DE "operate[s] several technology platforms that support [its] brands." "The Brand Expedia technology platform supports [its] full-service and multi-product brands, including Brand Expedia, Orbitz, Travelocity . . . as well as certain parts of the Hotwire brand." "The Hotels.com technology platform supports [its] hotel-only offering, including Hotels.com Worldwide . . . ." "In addition, [Expedia-DE] operate[s] . . . HomeAway, [its] vacation rentals platform . . . ." Through Expedia-DE's control of the various technology

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[8] Expedia-DE's 2016 Form 10-K at 1.

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platforms underlying the operations of Defendants' websites and mobile applications, Expedia-WA, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelocity are controlled and directed by Expedia-DE.

23. Expedia-WA, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelocity are subsidiary guarantors for various notes of Expedia-DE, including but not limited to the notes referenced in the Form S-4 filed by Expedia-DE on November 16, 2017.

24. In the Form S-4 filed by Expedia-DE on November 16, 2017, the same person, Robert J. Dzielak, signed on behalf of all of the subsidiary guarantors, including Expedia-WA, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelscape, as well as for Expedia-DE.

25. According to the Form S-4 filed by Expedia-DE on November 16, 2017, Robert J. Dzielak is the Executive Vice President, General Counsel, and Secretary of Expedia-DE, Expedia-WA, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelocity.

26. On information and belief, Expedia-DE is the majority stock holder or controlling member for all of the additional Defendants identified in this lawsuit.

27. On information and belief, Expedia-DE dominates, controls, and receives all financial benefits from Expedia-WA, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelocity.

JURISDICTION AND VENUE

28. IBM incorporates by reference paragraphs 1-27.

29. 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).

30. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b). Defendants conduct business in Delaware, by at least offering for sale and selling products and services through their websites and mobile applications, which are accessible in Delaware, and

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because infringement has occurred and continues to occur in Delaware.

31. Venue is proper because Expedia-DE, Homeaway, Hotwire, and Orbitz are entities organized under the laws of Delaware and reside in Delaware for purposes of venue under 28 U.S.C. §1400(b).

32. Venue is proper because Expedia-WA, Travelocity, and Hotels.com are agents and alter-egos of Expedia-DE, are completely controlled and dominated by Expedia-DE, and are subsidiaries of Expedia-DE. Expedia-DE and subsidiaries of Expedia-DE, including Expedia-WA, Travelocity, and Hotels.com are part of a corporate family that offers travel-related services in this District, and they operate as a single company. For example, Expedia-DE and Expedia-WA operate as a single company during litigation and identify the single entity, "Expedia, Inc.," as both a Delaware corporation and a Washington corporation. Expedia-DE or subsidiaries of Expedia-DE control or otherwise direct and authorize the activities and operations of Expedia-WA, Travelocity, and Hotels.com. For those reasons and because of the circumstances set forth in paragraphs 1-27, venue is proper as to Expedia-WA, Travelocity, and Hotels.com.

33. Venue is also proper as to Expedia-WA because Expedia-WA has committed acts of infringement in the District and has a regular and established place of business in the state of Delaware, at least through Expedia-WA's wholly owned subsidiary CruiseShipCenters International Inc. ("Expedia CSC").

34. Expedia CSC is a company organized under the laws of Canada.[9] Expedia CSC is a wholly owned subsidiary of CSC Holdings Inc., a company organized under the laws of Canada,

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[9] CruiseShipCenters Inc.'s Corporate Disclosure Statement, *Global Equity Management (SA) Pty. v. Expedia, Inc., et. al.,* C.A. 16-cv-00095-RWS-RSP, (E.D. Tex., May 5, 2016) (D.I. 42). A copy of CruiseShipCenters Inc.'s Corporate Disclosure Statement has been attached as Exhibit G.

which is a wholly owned subsidiary of Expedia-WA.[10]

35. On information and belief, Expedia CSC owns and operates an Expedia CruiseShipCenter located at 126 Fox Hunt Drive, Bear, DE 19701 (the "Expedia CruiseShipCenter"). The Expedia CruiseShipCenter is a physical place:

36. The Expedia CruiseShipCenter is a regular and established place of business in Delaware. The Expedia CruiseShipCenter is a continued physical presence in Delaware. The Expedia CruiseShipCenter is open Monday through Friday from 9:30 am to 7 pm.[11] The Expedia CruiseShipCenter is advertised as being an "Expedia" branded business. The store's sign identifies the location as being an "Expedia" company. Customers are able to make and purchase travel arrangements by visiting the Expedia CruiseShipCenter.

37. Upon information and belief, Expedia CSC is controlled, directed by, and an agent of Expedia-WA. Expedia-WA and Expedia CSC operate as a single entity and Expedia CSC is an alter-ego of Expedia-WA. Expedia-WA and Expedia CSC operate as a single company. The Expedia CruiseShipCenter is thus Expedia-WA's place of business.

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[10] *Id.*

[11] https://www.cruiseshipcenters.com/en-US/900099/Contact. A copy of www.cruiseshipcenters.com/en-US/900099/Contact has been attached as Exhibit H.

38. Expedia-WA, through Expedia CSC, provides online and in-person travel reservations related to cruises as well as other travel-related services to consumers and local partners directly through the website, www.cruiseshipcenters.com, and through the store located at 126 Fox Hunt Drive, Bear DE 19701.

39. Personal jurisdiction exists over Defendants because each Defendant 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 Expedia-DE, Homeaway, Hotwire, and Orbitz because they are entities organized under the laws of Delaware.

FACTUAL BACKGROUND

A.   IBM Is A Recognized Innovator.

40. 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.

41. 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.**

42. 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.

43. 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 Use Its Intellectual Property Unlawfully.**

44. 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.

45. 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.**

46. 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.

47. 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.

48. The service that would eventually be called Prodigy embodied inventions from the '967 and '849 patents 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. 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 Conversation Between A Client And Server Networked Via A Stateless Protocol.**

49. 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.

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50. 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.**

51. 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.

52. 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.   Defendants Have Built Their Business By Infringing IBM's Patents.

53. Expedia and its subsidiaries connect consumers wishing to make travel or related reservations with providers of those services. Expedia has grown rapidly and is now a Fortune 500 company with billions of dollars of revenue per year.

54. Rather than build their business on their own technologies, Expedia and its subsidiaries have appropriated the inventions of the Patents-In-Suit. Websites under Expedia's and its subsidiaries' control, including at least www.expedia.com, www.homeaway.com, www.hotels.com, www.hotwire.com, www.orbitz.com, and www.travelocity.com, use the technology claimed by the Patents-In-Suit to provide travel and reservation services to their users. Mobile applications under Expedia's and its subsidiaries' control, including the Expedia, Homeaway, Hotels.com, Hotwire, Orbitz and Travelocity mobile applications running on, for example, Apple iOS and Google Android operating systems, use the technology claimed by the Patents-In-Suit to provide travel and reservation services to their users.

55. On July 23, 2014, IBM sent a letter to inform Expedia-DE, Expedia-WA, and Hotels.com that they were infringing the Patents-In-Suit. Since July 23, 2014, IBM has tried to work with Expedia in an effort to negotiate a licensing agreement.

56. In October of 2011, IBM sent a letter to inform Orbitz that they were infringing at least the '967 and '849 patents. On September 15, 2014, IBM informed Orbitz that they were infringing at least the '346 and '601 patents. On February 12, 2015, Expedia announced that it had entered into an agreement to acquire Orbitz and on September 17, 2015, Expedia announced that it had completed the acquisition. After Expedia completed the acquisition, IBM informed Expedia that Orbitz was infringing the Patents-In-Suit. Since 2011, IBM has tried to work with Orbitz in an effort to negotiate a licensing agreement.

57. In November of 2015, Expedia announced that it was acquiring Homeaway and completed its acquisition in December of 2015. On January 19, 2016, IBM sent Expedia and Homeaway a letter to inform Expedia and Homeaway that they were infringing the '849, '601, and '346 patents.

58. Since at least 2003, Expedia, Hotels.com, and Hotwire have been part of the same company. On information and belief, Hotwire was aware or should have been aware that it was infringing the Patents-In-Suit based at least on the correspondence sent to Expedia and Hotels.com in July 2014.

59. In January 2015, Expedia acquired Travelocity. On information and belief, Travelocity was aware or should have been aware that it was infringing the Patents-In-Suit after it was acquired by Expedia based at least on the correspondence sent to Expedia and Hotels.com in July 2014.

60. IBM has repeatedly attempted to engage with Orbitz and Expedia, and presented detailed examples of their infringement of each of the Patents-In-Suit. Expedia and Orbitz have refused to engage in any meaningful discussions about reaching a license agreement to end their infringement of IBM's patents. Instead, Defendants have continued to willfully infringe IBM's patents so as to obtain the significant benefits of IBM's innovations without paying any compensation to IBM.

61. Because IBM's over six-year struggle to negotiate a license agreement that remedies Defendants' 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 Defendants have received based on their infringement of IBM's patented technology.

<center>**COUNT ONE**</center>

<center>**INFRINGEMENT OF THE '967 PATENT**</center>

62. IBM incorporates by reference paragraphs 1-61.

63. 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 I.

64. In violation of 35 U.S.C. § 271, Expedia and the subsidiaries it controls and are its alter-egos have 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 their websites, including www.expedia.com, www.homeaway.com, www.hotels.com, www.hotwire.com, www.orbitz.com, and www.travelocity.com and the Expedia, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelocity mobile applications running on, for example, Apple iOS and Google Android operating systems.

65. Expedia-DE directs and controls the other Defendants' infringement of the '967 patent. Expedia-DE "operate[s] several technology platforms that support [its] brands." "The Brand Expedia technology platform supports [its] full-service and multi-product brands, including Brand Expedia, Orbitz, Travelocity . . . as well as certain parts of the Hotwire brand."[12] "The Hotels.com technology platform supports [its] hotel-only offering, including Hotels.com Worldwide . . . ."[13] "In addition, [Expedia-DE] operate[s] . . . HomeAway, [its] vacation rentals platform . . . ."[14] Through Expedia-DE's control of the technological platforms used in the other Defendants' websites and mobile applications, Expedia-DE directs, controls, and causes the

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[12] Expedia-DE's 2016 Form 10-K
[13] *Id.*
[14] *Id.*

infringement of the '967 patent.

66. For example, www.expedia.com and its mobile applications infringed at least claim 1 of the '967 patent at least by:

a.   presenting interactive applications (such as Hotels, Cars, Flights, 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 www.expedia.com's customers) at which respective users may request a multiplicity of available applications (such as Hotels, Cars, Flights, etc.), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a www.expedia.com customer's computer or mobile device) at which the applications requested can be presented as one or more screens of display (such as a display region of Hotels, Cars, Flights, etc.).

b.   generating a screen display at a respective reception system for a requested application (such as Hotels, Cars, Flights, etc.), the screen display being generated by the respective reception system from data objects having a prescribed data structure (such as HTTP Responses containing png 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 www.expedia.com customer), the screen display including a plurality of partitions (such as the webpage, the menu bar, and/or the content for Hotels, Cars, Flights, 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 www.expedia.com 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 Hotels, Cars, Flights, etc.).

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c. generating at least a first partition (such as the webpage and/or the content for Hotels, Cars, Flights, etc.) for presenting applications (such as Hotels, Cars, Flights, 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 Hotels, Cars, Flights, etc.).

67. For example, www.homeaway.com and its mobile applications infringed at least claim 1 of the '967 patent at least by:

a. presenting interactive applications (such as Traveler, Owner, 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 www.homeaway.com's customers) at which respective users may request a multiplicity of available applications (such as Traveler, Owner, etc.), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a www.homeaway.com customer's computer or mobile device) at which the applications requested can be presented as one or more screens of display (such as a display region of Traveler, Owner, etc.).

b. generating a screen display at a respective reception system for a requested application (such as Traveler, Owner, etc.), the screen display being generated by the respective reception system from data objects having a prescribed data structure (such as HTTP Responses containing png 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 www.homeaway.com customer), the screen display including a plurality of partitions (such as the webpage, the menu bar, and/or the content for Traveler, Owner, 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 www.homeaway.com 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 Traveler, Owner, etc.).

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

68. For example, www.hotels.com and its mobile applications infringed at least claim 1 of the '967 patent at least by:

      a.   presenting interactive applications (such as Hotel Deals, Packages, 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 www.hotels.com's customers) at which respective users may request a multiplicity of available applications (such as Hotel Deals, Packages, etc.), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a www.hotels.com customer's computer or mobile device) at which the applications requested can be presented as one or more screens of display (such as a display region of Hotel Deals, Packages, etc.).

      b.   generating a screen display at a respective reception system for a requested application (such as Hotel Deals, Packages, etc.), the screen display being generated

by the respective reception system from data objects having a prescribed data structure (such as HTTP Responses containing png 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 www.hotels.com customer), the screen display including a plurality of partitions (such as the webpage, the menu bar, and/or the content for Hotel Deals, Packages, 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 www.hotels.com 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 Hotel Deals, Packages, etc.).

        c.   generating at least a first partition (such as the webpage and/or the content for Hotel Deals, Packages, etc.) for presenting applications (such as Hotel Deals, Packages, 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 Hotel Deals, Packages, etc.).

69. For example, www.hotwire.com and its mobile applications infringed at least claim 1 of the '967 patent at least by:

        a.   presenting interactive applications (such as Hotels, Cars, Flights, 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 www.hotwire.com's customers) at which respective users may request a multiplicity of available applications (such as Hotels, Cars, Flights, etc.), the respective reception systems including a monitor (such as a computer monitor

or mobile screen of a www.hotwire.com customer's computer or mobile device) at which the applications requested can be presented as one or more screens of display (such as a display region of Hotels, Cars, Flights, etc.).

b. generating a screen display at a respective reception system for a requested application (such as Hotels, Cars, Flights, etc.), the screen display being generated by the respective reception system from data objects having a prescribed data structure (such as HTTP Responses containing png 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 www.hotwire.com customer), the screen display including a plurality of partitions (such as the webpage, the menu bar, and/or the content for Hotels, Cars, Flights, 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 www.hotwire.com 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 Hotels, Cars, Flights, etc.).

c. generating at least a first partition (such as the webpage and/or the content for Hotels, Cars, Flights, etc.) for presenting applications (such as Hotels, Cars, Flights, 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 Hotels, Cars, Flights, etc.).

70. For example, www.orbitz.com and its mobile applications infringed at least claim 1 of the '967 patent at least by:

a. presenting interactive applications (such as Hotels, Flights, Cars, 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 www.orbitz.com's customers) at which respective users may request a multiplicity of available applications (such as Hotels, Flights, Cars, etc.), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a www.orbitz.com customer's computer or mobile device) at which the applications requested can be presented as one or more screens of display (such as a display region of Hotels, Flights, Cars, etc.).

b. generating a screen display at a respective reception system for a requested application (such as Hotels, Flights, Cars, etc.), the screen display being generated by the respective reception system from data objects having a prescribed data structure (such as HTTP Responses containing png 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 www.orbitz.com customer), the screen display including a plurality of partitions (such as the webpage, the menu bar, and/or the content for Hotels, Flights, Cars, 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 www.orbitz.com 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 Hotels, Flights, Cars, etc.).

c. generating at least a first partition (such as the webpage and/or the content for Hotels, Flights, Cars, etc.) for presenting applications (such as Hotels, Flights, Cars, etc.).

d. generating concurrently with the first partition at least a second partition

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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 Hotels, Flights, Cars, etc.).

71. For example, www.travelocity.com and its mobile applications infringed at least claim 1 of the '967 patent at least by:

a. presenting interactive applications (such as Hotels, Flights, Cars, 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 www.travelocity.com's customers) at which respective users may request a multiplicity of available applications (such as Hotels, Flights, Cars, etc.), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a www.travelocity.com customer's computer or mobile device) at which the applications requested can be presented as one or more screens of display (such as a display region of Hotels, Flights, Cars, etc.).

b. generating a screen display at a respective reception system for a requested application (such as Hotels, Flights, Cars, etc.), the screen display being generated by the respective reception system from data objects having a prescribed data structure (such as png 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 www.travelocity.com customer), the screen display including a plurality of partitions (such as the webpage, the menu bar, and/or the content for Hotels, Flights, Cars, 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 www.travelocity.com 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 Hotels, Flights, Cars, etc.).

c.   generating at least a first partition (such as the webpage and/or the content for Hotels, Flights, Cars, etc.) for presenting applications (such as Hotels, Flights, Cars, 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 Hotels, Flights, Cars, etc.).

72. IBM has been damaged by the infringement of its '967 patent by Expedia and Defendants. IBM is entitled to recover from Expedia and Defendants the damages sustained by IBM as a result of Expedia and Defendants' wrongful acts.

73. The infringement by Expedia and Defendants 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

74. IBM incorporates by reference paragraphs 1-73.

75. 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 J.

76. In violation of 35 U.S.C. § 271, Expedia and the subsidiaries it controls and are its alter-egos have 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 their websites, including www.expedia.com,

www.homeaway.com, www.hotels.com, www.hotwire.com, www.orbitz.com, and www.travelocity.com and its mobile applications, including the Expedia, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelocity applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems. Expedia's and Defendants' infringement is continuing.

77. Expedia-DE directs and controls the other Defendants' infringement of the '849 patent. Expedia-DE "operate[s] several technology platforms that support [its] brands." "The Brand Expedia technology platform supports [its] full-service and multi-product brands, including Brand Expedia, Orbitz, Travelocity . . . as well as certain parts of the Hotwire brand."[15] "The Hotels.com technology platform supports [its] hotel-only offering, including Hotels.com Worldwide . . . ."[16] "In addition, [Expedia-DE] operate[s] . . . HomeAway, [its] vacation rentals platform . . . ."[17] Through Expedia-DE's control of the technological platforms used in the other Defendants' websites and mobile applications, Expedia-DE directs, controls, and causes the infringement of the '849 patent.

78. For example, www.expedia.com and Expedia mobile applications infringe at least claim 1 of the '849 patent 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 computers or mobile devices of Expedia's customers) at which respective users can request applications (such as Hotels, Cars, Flights, etc.), from the network, that include interactive services (such as offering hotel reservations), the respective reception systems including a monitor (such as a

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[15] Expedia-DE's 2016 Form 10-K
[16] *Id.*
[17] *Id.*

computer monitor or mobile screen of a Expedia customer's computer or mobile 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 Hotels, Cars, Flights, etc.) so that they may be presented, through the network, at a first portion (such as the portion of the webpage in which the content for Hotels, Cars, Flights, etc. is presented) of one or more screens of display; and

c.   structuring advertising (such as advertising for hotels) 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 of the webpage in which the advertising for hotels is presented) of one or more screens of display concurrently with applications (such as Hotels, Cars, Flights, etc.), wherein structuring the advertising includes configuring the advertising as objects (such as HTTP Responses containing png or jpeg files) that include advertising data and;

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

79. For example, www.homeaway.com and Homeaway mobile applications infringe at least claim 1 of the '849 patent 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 computers or mobile devices of Homeaway.com's customers) at which respective users can request applications (such as Traveler, Owner, etc.), from the network, that include interactive services (such as offering home rental reservations), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a Homeaway.com customer's computer or

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mobile 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 Traveler, Owner, etc.) so that they may be presented, through the network, at a first portion (such as the portion of the webpage in which the content for Traveler, Owner, etc. is presented) of one or more screens of display; and

c.   structuring advertising (such as advertising for homes) 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 of the webpage in which the advertising for homes is presented) of one or more screens of display concurrently with applications (such as Traveler, Owner, etc.), wherein structuring the advertising includes configuring the advertising as objects (such as HTTP Responses containing png or jpeg files) that include advertising data and;

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

80. For example, www.hotels.com and Hotels.com mobile applications infringe at least claim 1 of the '849 patent 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 computers or mobile devices of Hotels.com's customers) at which respective users can request applications (such as Hotel Deals, Packages, etc.), from the network, that include interactive services (such as offering hotel reservations), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a Hotels.com customer's computer or mobile 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:

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b.   structuring applications (such as Hotel Deals, Packages, etc.) so that they may be presented, through the network, at a first portion (such as the portion of the webpage in which the content for Hotel Deals, Packages, etc. is presented) of one or more screens of display; and

c.   structuring advertising (such as advertising for hotels) 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 of the webpage in which the advertising for hotels is presented) of one or more screens of display concurrently with applications (such as Hotel Deals, Packages, etc.), wherein structuring the advertising includes configuring the advertising as objects (such as HTTP Responses containing png or jpeg files) that include advertising data and;

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

81.   For example, www.hotwire.com and Hotwire mobile applications infringe at least claim 1 of the '849 patent 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 computers or mobile devices of Hotwire's customers) at which respective users can request applications (such as Hotels, Cars, Flights, etc.), from the network, that include interactive services (such as offering hotel reservations), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a Hotwire customer's computer and mobile 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 Hotels, Cars, Flights, etc.) so that they

may be presented, through the network, at a first portion (such as the portion of the webpage in which the content for Hotels, Cars, Flights, etc. is presented) of one or more screens of display; and

c.   structuring advertising (such as advertising for hotels) 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 of the webpage in which the advertising for hotels is presented) of one or more screens of display concurrently with applications (such as Hotels, Cars, Flights, etc.), wherein structuring the advertising includes configuring the advertising as objects (such as HTTP Responses containing png or jpeg files) that include advertising data and;

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

82.   For example, www.orbitz.com and Orbitz mobile applications infringe at least claim 1 of the '849 patent 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 computers or mobile devices of Orbitz's customers) at which respective users can request applications (such as Hotels, Flights, Cars, etc.), from the network, that include interactive services (such as offering hotel reservations), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a Orbitz customer's computer or mobile 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 Hotels, Flights, Cars, etc.) so that they may be presented, through the network, at a first portion (such as the portion of the webpage in

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which the content for Hotels, Flights, Cars, etc. is presented) of one or more screens of display; and

c.   structuring advertising (such as advertising for hotels) 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 of the webpage in which the advertising for hotels is presented) of one or more screens of display concurrently with applications (such as Hotels, Flights, Cars, etc.), wherein structuring the advertising includes configuring the advertising as objects (such as HTTP Responses containing png or jpeg files) that include advertising data and;

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

83. For example, www.travelocity.com and Travelocity mobile applications infringe at least claim 1 of the '849 patent 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 computers or mobile devices of travelocity.com's customers) at which respective users can request applications (such as Hotels, Flights, Cars, etc.), from the network, that include interactive services (such as offering hotel reservations), the respective reception systems including a monitor (such as a computer monitor or mobile screen of a travelocity.com customer's computer or mobile 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 Hotels, Flights, Cars, etc.) so that they may be presented, through the network, at a first portion (such as the portion of the webpage in which the content for Hotels, Flights, Cars, etc. is presented) of one or more screens of display;

and

c. structuring advertising (such as advertising for hotels) 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 of the webpage in which the advertising for hotels is presented) of one or more screens of display concurrently with applications (such as Hotels, Flights, Cars, etc.), wherein structuring the advertising includes configuring the advertising as objects (such as HTTP Responses containing png or jpeg files) that include advertising data and;

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

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

85. The continued infringement by Expedia and Defendants 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.

86. 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 Expedia and Defendants are enjoined therefrom by this Court.

COUNT THREE

INFRINGEMENT OF THE '601 PATENT

87. IBM incorporates by reference paragraphs 1-86.

88. 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 K.

89. In violation of 35 U.S.C. § 271, Expedia and the subsidiaries it controls and are its alter-egos have 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 their websites, including www.expedia.com, www.homeaway.com, www.hotels.com, www.hotwire.com, www.orbitz.com, and www.travelocity.com, and its mobile applications, including the Expedia, Homeaway, Hotels.com, Hotwire, Orbitz, and Travelocity applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems.

90. Expedia-DE directs and controls the other Defendants' infringement of the '601 patent. Expedia-DE "operate[s] several technology platforms that support [its] brands." "The Brand Expedia technology platform supports [its] full-service and multi-product brands, including Brand Expedia, Orbitz, Travelocity . . . as well as certain parts of the Hotwire brand."[18] "The Hotels.com technology platform supports [its] hotel-only offering, including Hotels.com Worldwide . . . ."[19] "In addition, [Expedia-DE] operate[s] . . . HomeAway, [its] vacation rentals platform . . . ."[20] Through Expedia-DE's control of the technological platforms used in the other Defendants' websites and mobile applications, Expedia-DE directs, controls, and causes the infringement of the '601 patent.

91. For example, www.expedia.com and Expedia mobile applications infringed claim 51 of the '601 patent at least by:

       a.   preserving state information (such as identification variables about the

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[18] Expedia-DE's 2016 Form 10-K
[19] *Id.*
[20] *Id.*

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 available reservations) from one or more servers (such as Expedia's website servers), the method comprising the steps of:

b.   receiving a service request (such as a request to search for available reservations, including for example "hotels") 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 making reservations, including reserving "hotels" or another HTTP request) and one of the continuations must be invoked to continue the conversation.

92. For example, www.homeaway.com and Homeaway mobile applications infringed claim 51 of the '601 patent at least by:

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 available reservations) from one or more servers (such as Homeaway's website servers), the method comprising the steps of:

b.   receiving a service request (such as a request to search for available reservations, including for example "homes") including state information, via the stateless protocol;

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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 making reservations, including reserving "homes" or another HTTP request) and one of the continuations must be invoked to continue the conversation.

93. For example, www.hotels.com and Hotels.com mobile applications infringed claim 51 of the '601 patent at least by:

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 available reservations) from one or more servers (such as Hotels.com's website servers), the method comprising the steps of:

b.   receiving a service request (such as a request to search for available reservations, including for example "hotels") 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

making reservations, including reserving "hotels" or another HTTP request) and one of the continuations must be invoked to continue the conversation.

94. For example, www.hotwire.com and Hotwire mobile applications infringed claim 51 of the '601 patent at least by:

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 available reservations) from one or more servers (such as Hotwire's website servers), the method comprising the steps of:

b.   receiving a service request (such as a request to search for available reservations, including for example "hotels") 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 making reservations, including reserving "hotels" or another HTTP request) and one of the continuations must be invoked to continue the conversation.

95. For example, www.orbitz.com and Orbitz mobile applications infringed claim 51 of the '601 patent at least by:

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 available reservations) from one or more servers (such as Orbitz's website servers), the method comprising the steps of:

b.   receiving a service request (such as a request to search for available reservations, including for example "hotels") 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 making reservations, including reserving "hotels" or another HTTP request) and one of the continuations must be invoked to continue the conversation.

96. For example, www.travelocity.com and Travelocity mobile applications infringed claim 51 of the '601 patent at least by:

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 available reservations) from one or more servers (such as Travelocity's website servers), the method comprising the steps of:

b.   receiving a service request (such as a request to search for available reservations, including for example "hotels") 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 making reservations, including reserving "hotels" or another HTTP request) and one of the continuations must be invoked to continue the conversation.

97. IBM has been damaged by the infringement of its '601 patent by Expedia and Defendants. IBM is entitled to recover from Expedia and Defendants the damages sustained by IBM as a result of Expedia and Defendants' wrongful acts.

98. The infringement by Expedia and Defendants of the '601 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.

<div align="center">

COUNT FOUR

INFRINGEMENT OF THE '346 PATENT

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99. IBM incorporates by reference paragraphs 1-98.

100. 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 L.

101. In violation of 35 U.S.C. § 271, Expedia and the subsidiaries it controls and are its alter-egos have 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 their websites, including www.expedia.com, www.homeaway.com, www.hotwire.com, www.hotels.com, www.orbitz.com, and

www.travelocity.com and its mobile applications, including the Expedia, Homeaway, Hotwire, Hotels.com, Orbitz, and Travelocity applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems. Expedia and Defendants' infringement is continuing.

102. Expedia-DE directs and controls the other Defendants' infringement of the '346 patent. Expedia-DE "operate[s] several technology platforms that support [its] brands." "The Brand Expedia technology platform supports [its] full-service and multi-product brands, including Brand Expedia, Orbitz, Travelocity . . . as well as certain parts of the Hotwire brand."[21] "The Hotels.com technology platform supports [its] hotel-only offering, including Hotels.com Worldwide . . . ."[22] "In addition, [Expedia-DE] operate[s] . . . HomeAway, [its] vacation rentals platform . . . ."[23] Through Expedia-DE's control of the technological platforms used in the other Defendants' websites and mobile applications, Expedia-DE directs, controls, and causes the infringement of the '346 patent.

103. For example, www.expedia.com and Expedia mobile applications infringe claim 5 of the '346 patent by, for example:

      a.   managing user authentication (such as verifying the identity of an Expedia 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 Expedia and its network) interact within a federated computing environment (such as a computer network; for example, the Internet, including Facebook and Expedia) and support single-sign-on operations ("Sign in" operations) in order to provide access to protected resources (such as the "My Trips"

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[21] Expedia-DE's 2016 Form 10-K

[22] *Id.*

[23] *Id.*

option on www.expedia.com or "Your Trips" on Expedia mobile applications), 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 an Expedia 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);

d.   creating a user account (such as an Expedia 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 "My Trips" option on www.expedia.com or "Your Trips" on Expedia mobile applications), wherein the created user account supports single-sign-on operations (such as "Sign In" operations at www.expedia.com using a Facebook account) between the first system and the second system on behalf of the user;

e.   in response to a determination at the second system that the second system does not have sufficient user attribute information (e.g., the user access token is insufficient) to complete creation of a user account for the user at the second system (such as Expedia and its network), sending a request message (e.g., calling an API) from the second system to the first system (such as Facebook and its network) to retrieve user attribute information; and

f.   receiving at the second system from the first system a response message (e.g., a response to the API call) that contains user attribute information that is employed by the

second system to complete creation of a user account for the user at the second system.

104. For example, www.homeaway.com and Homeaway mobile applications infringe claim 5 of the '346 patent by, for example:

a. managing user authentication (such as verifying the identity of a Homeaway 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 Homeaway and its network) interact within a federated computing environment (such as a computer network; for example, the Internet, including Facebook and Homeaway) and support single-sign-on operations ("Sign in" operations) in order to provide access to protected resources (such as the "My Trips" and "Inbox" option on www.homeaway.com or "Trips" or "Inbox" on Homeaway mobile applications), 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 Homeaway 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);

d. creating a user account (such as a Homeaway 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 "My Trips" and Inbox" options on

www.homeaway.com or "Trips" or "Inbox" on Homeaway mobile applications), wherein the created user account supports single-sign-on operations (such as "Sign In" operations at www.homeaway.com using a Facebook account) between the first system and the second system on behalf of the user;

e.   in response to a determination at the second system that the second system does not have sufficient user attribute information (e.g., the user access token is insufficient) to complete creation of a user account for the user at the second system (such as Homeaway and its network), sending a request message (e.g., calling an API) from the second system to the first system (such as Facebook and its network) to retrieve user attribute information; and

f.   receiving at the second system from the first system a response message (e.g., a response to the API call) that contains user attribute information that is employed by the second system to complete creation of a user account for the user at the second system.

105. For example, www.hotels.com and Hotels.com mobile applications infringe claim 5 of the '346 patent by, for example:

a.   managing user authentication (such as verifying the identity of a Hotels.com 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 Hotels.com and its network) interact within a federated computing environment (such as a computer network; for example, the Internet, including Facebook and Hotels.com) and support single-sign-on operations ("Sign in" operations) in order to provide access to protected resources (such as the "Your bookings" option on www.hotels.com or the "Find your bookings" option on Hotels.com mobile applications), at least one of the first system and the second system comprising a processor, the method comprising;

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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 Hotels.com 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);

d.   creating a user account (such as a Hotels.com 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 "Your bookings" option on www.hotels.com or the "Find your bookings" option on Hotels.com mobile applications), wherein the created user account supports single-sign-on operations (such as "Sign In" operations at Hotels.com using a Facebook account) between the first system and the second system on behalf of the user; and

e.   in response to a determination at the second system that the second system does not have sufficient user attribute information (e.g., the user access token is insufficient) to complete creation of a user account for the user at the second system (such as Hotels.com and its network), sending a request message (e.g., calling an API) from the second system to the first system (such as Facebook and its network) to retrieve user attribute information; and

f.   receiving at the second system from the first system a response message (e.g., a response to the API call) that contains user attribute information that is employed by the second system to complete creation of a user account for the user at the second system.

106. For example, www.hotwire.com and Hotwire mobile applications infringe claim 5 of

the '346 patent by, for example:

      a.   managing user authentication (such as verifying the identity of a Hotwire 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 Hotwire and its network) interact within a federated computing environment (such as a computer network; for example, the Internet, including Facebook and Hotwire) and support single-sign-on operations ("Sign in" operations) in order to provide access to protected resources (such as the "My Trips" option on www.hotwire or the My Trips option on the Hotwire mobile applications), 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 Hotwire 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);

      d.   creating a user account (such as a Hotwire 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 My Trips option on www.hotwire.com or the My Trips option on the Hotwire mobile applications), wherein the created user account supports single-sign-on operations (such as "Sign In" operations at hotwire.com using a Facebook account) between the first system and the second system on behalf of the user; and

e.   in response to a determination at the second system that the second system does not have sufficient user attribute information (e.g., the user access token is insufficient) to complete creation of a user account for the user at the second system (such as Hotwire and its network), sending a request message (e.g., calling an API) from the second system to the first system (such as Facebook and its network) to retrieve user attribute information; and

f.   receiving at the second system from the first system a response message (e.g., a response to the API call) that contains user attribute information that is employed by the second system to complete creation of a user account for the user at the second system.

107. For example, www.orbitz.com and Orbitz mobile applications infringe claim 5 of the '346 patent by, for example:

a.   managing user authentication (such as verifying the identity of an Orbitz 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 Orbitz and its network) interact within a federated computing environment (such as a computer network; for example, the Internet, including Facebook and Orbitz) and support single-sign-on operations ("Sign in" operations) in order to provide access to protected resources (such as the "My Trips" option), 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 an Orbitz 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);

d.   creating a user account (such as an Orbitz 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 "My Trips" option), wherein the created user account supports single-sign-on operations (such as "Sign In" operations Orbitz using a Facebook account) between the first system and the second system on behalf of the user;

e.   in response to a determination at the second system that the second system does not have sufficient user attribute information (e.g., the user access token is insufficient) to complete creation of a user account for the user at the second system (such as Orbitz and its network), sending a request message (e.g., calling an API) from the second system to the first system (such as Facebook and its network) to retrieve user attribute information; and

f.   receiving at the second system from the first system a response message (e.g., a response to the API call) that contains user attribute information that is employed by the second system to complete creation of a user account for the user at the second system.

108. For example, www.travelocity.com and Travelocity mobile applications infringe claim 5 of the '346 patent by, for example:

a.   managing user authentication (such as verifying the identity of a Travelocity 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 Travelocity and its network) interact within a federated computing environment (such as a computer network; for example, the Internet, including Facebook and Travelocity) and support

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single-sign-on operations ("Sign in" operations) in order to provide access to protected resources (such as the "My Trips" option), 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 Travelocity 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);

d.   creating a user account (such as a Travelocity 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 "My Trips" option), wherein the created user account supports single-sign-on operations (such as "Sign In" operations Travelocity using a Facebook account) between the first system and the second system on behalf of the user;

e.   in response to a determination at the second system that the second system does not have sufficient user attribute information (e.g., the user access token is insufficient) to complete creation of a user account for the user at the second system (such as Travelocity and its network), sending a request message (e.g., calling an API) from the second system to the first system (such as Facebook and its network) to retrieve user attribute information; and

f.   receiving at the second system from the first system a response message (e.g., a response to the API call) that contains user attribute information that is employed by the

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second system to complete creation of a user account for the user at the second system.

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

110. The continued infringement by Expedia and Defendants 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.

111. 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 Expedia and Defendants are enjoined therefrom by this Court.

RELIEF REQUESTED

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

A.   That the '967 patent has been infringed by Defendants;

B.   That Defendants' infringement of the '967 patent has been willful;

C.   That the '849 patent has been and continues to be infringed by Defendants;

D.   That Defendants' infringement of the '849 patent has been and continues to be willful;

E.   An injunction against further infringement of the '849 patent;

F.   That the '601 patent has been infringed by Defendants;

G.   That Defendants' infringement of the '601 patent has been willful;

H.   That the '346 patent has been and continues to be infringed by Defendants;

J.   That Defendants' infringement of the '346 patent has been and continues to be

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

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Dated: December 29, 2017