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Attorneys for Plaintiff
International Business Machines Corporation

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

International Business Machines
Corporation, a New York corporation,

Plaintiff,

vs.

Expedia, Inc., a Washington corporation;
Hotels.com, L.P., a Texas limited
partnership; Hotwire, Inc., a Delaware
corporation; and Orbitz, LLC, a
Delaware limited liability company,

Defendants.

No.

**COMPLAINT FOR PATENT
INFRINGEMENT**

JURY TRIAL DEMANDED

Plaintiff International Business Machines Corporation (“IBM”), for its Complaint
for Patent Infringement against Expedia, Inc., Hotels.com L.P., Hotwire, Inc., and
Orbitz, 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 110,000 patents worldwide. Patents enjoy the same fundamental

1 protections as real property. IBM, like any property owner, is entitled to insist that others
2 respect its property and to demand payment from those who take it for their own use.
3 Defendants have built their business model on the use of IBM's patents. Moreover,
4 despite IBM's repeated attempts to reach a business resolution, Defendants refuse to
5 negotiate a license to IBM's patent portfolio. This lawsuit seeks to stop Defendants from
6 continuing to use IBM's intellectual property without authorization.

7 **NATURE OF THE CASE**

8 2. This action arises under 35 U.S.C. § 271 for Defendants' infringement of
9 IBM's United States Patent Nos. RE41,440 (the "440 patent"), 6,778,193 (the "193
10 patent"), and 7,543,234 (the "234 patent") (collectively the "Patents-In-Suit").

11 **THE PARTIES**

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

14 4. Defendant Expedia, Inc. is a Washington corporation ("Expedia") with a
15 principal place of business at 333 108th Avenue NE, Bellevue, Washington 98004.
16 Expedia may be served through its registered agent for service, National Registered
17 Agents, Inc., 3800 N Central Ave Suite 460, Phoenix, Arizona 85012. Expedia provides
18 online travel reservation and related services to consumers and local partners directly
19 through the websites at www.expedia.com and through the Expedia mobile applications.

20 5. Expedia also provides online travel reservation and related services to
21 consumers through its subsidiaries: Hotels.com L.P., Hotwire, Inc., and Orbitz, LLC
22 (collectively, the "Expedia Subsidiaries"). Hotels.com L.P., Hotwire, Inc., and Orbitz,
23 LLC are wholly-owned and controlled subsidiaries of Expedia.

24 6. Expedia and the Expedia Subsidiaries belong to a corporate family that is
25 comprised of affiliated companies that offer travel-related services in this District.
26 Expedia Group, Inc. ("Expedia Group") is the parent corporation of Expedia and owns
27 Defendants Hotels.com L.P., Hotwire, Inc., Orbitz Worldwide LLC, Orbitz Worldwide,
28 Inc., and Orbitz, LLC through its ownership and control of Expedia. Expedia Group is a

Delaware corporation with a principal place of business at 333 108th Avenue NE, Bellevue, Washington 98004.

7. According to Expedia Group’s 10-K, Brand Expedia® is one of Expedia Group’s “travel brands.”¹ Expedia’s “technology platforms” support several of the Expedia Group’s brands, including expedia.com, travelocity.com, and orbitz.com.²

8. Expedia operates the website located at <http://www.travelocity.com>. Travelocity is one of Expedia Group’s “travel brands.”³ Expedia’s “technology platforms” support several of the Expedia Group’s brands, including Travelocity.⁴ Expedia provides online travel reservation and related services to consumers and local partners directly through the websites at www.travelocity.com and through the Travelocity mobile applications.

9. 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, Texas, 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 operates the website located at <http://www.hotels.com> and the Hotels.com mobile applications. 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.

10. Hotels.com is one of Expedia Group’s “travel brands.”⁵ The Hotels.com technology platform supports [Expedia Group’s] hotel-only offering, including Hotels.com”⁶

11. Defendant Hotwire, Inc. is a Delaware corporation (“Hotwire”) with a principal place of business at 655 Montgomery Street Suite 600, San Francisco, California

¹ Expedia Group’s 2018 Form 10-K at 1, *available at* <https://ir.expediagroup.com/sec-filings/sec-filing/10-k/0001324424-19-000006>.

² *Id.* at 7.

³ *Id.* at 1.

⁴ *Id.* at 7.

⁵ *Id.* at 1, 3.

⁶ *Id.* at 7.

94111. Hotwire may be served through its registered agent for service, National Registered Agents, Inc., 3800 N Central Ave Suite 460, Phoenix, Arizona 85012. 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.

12. Hotwire is one of Expedia Group’s “travel brands.”⁷ “The Brand Expedia technology platform supports [Expedia Group’s] full-service and multi-product brands, including . . . certain parts of the Hotwire brand.”⁸

13. Defendant Orbitz, LLC is a Delaware limited liability company (“Orbitz”) 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., 208 S. LaSalle Street, Suite 814, Chicago, IL 60604. 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.⁹

14. Orbitz is one of Expedia Group’s “travel brands.”¹⁰ Expedia’s “technology platforms” support several of the Expedia Group’s brands, including Orbitz.¹¹

15. According to Expedia, its servers related to expedia.com and the associated mobile applications are located in Chandler, AZ, along with the servers for the websites and mobile applications operated by Hotels.com, Orbitz, and Hotwire.¹²

⁷ *Id.* at 1.

⁸ *Id.* at 7.

⁹ Orbitz, LLC is wholly-owned by Orbitz Inc. (a Delaware corporation), which is wholly-owned by Orbitz Worldwide, LLC (a Delaware corporation), which is wholly-owned by Orbitz Worldwide, Inc. (a Delaware corporation), which is wholly-owned by Expedia. See Declaration of Michael Marron In Support of Defendants’ Motion To Dismiss Under Rule 12(b)(3) and Rule 12(b)(6) ¶ 5, *Int’l Business Machines Corp. v. Expedia, Inc.*, Case No. 1:17-cv-01875-LPS-CJB (D. Del. May 29, 2018) (D.I. 25).

¹⁰ Expedia Group’s 2018 Form 10-K at 1.

¹¹ *Id.* at 7.

¹² See Declaration of Michael Marron In Support of Defendants’ Motion To Dismiss Under Rule 12(b)(3) and Rule 12(b)(6) ¶¶ 8, 10, 13, 14, *Int’l Business Machines Corp. v. Expedia, Inc.*, Case No. 1:17-cv-01875-LPS-CJB (D. Del. May 29, 2018) (D.I. 25).

FACTUAL BACKGROUND

A. IBM Is A Recognized Innovator.

16. 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, six Turing awards, five National Medal of Science recipients, and at least fourteen inventors in the National Inventors Hall of Fame.

17. 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.

18. IBM's research and development operations differentiate IBM from many other companies. IBM annually spends billions of dollars on research and development, yielding inventions that have literally changed the way the world works. 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.

19. 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

1 patent system provides patent owners with the exclusive right to prevent others from
2 practicing the claimed invention for a limited period of time.

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

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

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

19 **D. IBM Invented Methods For Obtaining Enriched Web Server Activity Data**
20 **Of Cached Web Content.**

21 22. The inventors of the '440 patent developed the patented technology as part of
22 IBM's efforts to allow tracking of critical performance data related to information access
23 requests to a web site server. At the time of the invention of the '440 patent, data networks
24 were struggling under the weight of soaring bandwidth demand due to the explosive
25 growth in users seeking web access. One way in which engineers sought to address this
26 challenge was by implementing web caching, which is the process of maintaining
27 frequently accessed web content locally in a location close to the requester, so that
28 redundant user requests for web content do not require sending the individual requests and

1 returned content over the wide area network. However, web caching can result in
2 significant downsides to web content publishers, including an inability to accurately track
3 web traffic as a result of visitors accessing web content from caching servers, as well as
4 users receiving outdated or stale content from infrequently or slowly-updated caching
5 servers.

6 23. In light of the above considerations, the inventors of the '440 patent developed
7 novel systems and methods for gathering enriched web server activity data for purposes
8 of tracking critical performance data. In particular, the inventors of the '440 patent
9 disclose and claim the use of an enriched request to the origin server, which may be a
10 small image request such as a request for a single pixel clear Graphic Interchange Format
11 ("GIF"), as a "surrogate" for the complete set of web log records. The small image is non-
12 cacheable, ensuring that the origin server will receive the enriched request even if the
13 requested page, or portions of the page, are retrieved from one or more caches not located
14 at the origin server. Accordingly, the '440 patent allows web providers to track critical
15 performance data, while utilizing web caching to simultaneously benefit from faster and
16 more efficient decentralized delivery networks, avoiding the tradeoff required in the prior
17 art between faster rendering of web pages and control over data tracking.

18 **E. IBM Invented Methods of Improving Contextual Searching Using Visual**
19 **Workspaces.**

20 24. The inventors of the '193 patent developed the patented technology as part of
21 IBM's efforts to improve graphical user interfaces ("GUIs") for customer self-service
22 search and retrieval systems. Customer search and retrieval systems may include
23 knowledge management systems, information portals, search engines, and data miners.
24 Providing efficient and satisfactory search results using such systems requires that users
25 provide relevant contextual information in conjunction with a search query. At the time
26 of the invention, engineers attempted to solve this problem through the use of GUIs, which
27 represented available applications and data sets via icons. However, these prior art GUIs
28 failed to address the full range of relevant contextual variables for user queries, and also

1 did not provide a graphical method for fine tuning the relevant context variables.

2 25. The inventors of the '193 patent thus recognized a need to provide an improved
3 GUI for customer search and retrieval functions capable of facilitating the efficient
4 location of relevant resources in response to a query by enabling the expression of a user's
5 context as part of the query and indicating the relevance of returned results in that context.
6 The inventors of the '193 patent developed systems and methods of using user context
7 attributes and graphical user interfaces to allow users to search for content and
8 subsequently narrow the results based on user context to obtain increased specificity and
9 accuracy in search results. The patented technology of the '193 patent provides for more
10 efficient search and retrieval in part through a novel iconic graphical user interface that
11 enables the expression of a user's context as part of the user query, which has the benefit
12 of minimizing user time and resource intensive system processes.

13 **F. IBM Invented Methods Of Stacking Portlets In Portal Pages.**

14 26. The inventors of the '234 patent developed the patented technology as part of
15 IBM's efforts to improve customizable portal pages. Unlike traditional off-line media,
16 portal pages allow for the display of dynamically updated information aggregated from
17 different sources on computer screens, tablets, mobile devices, and other media, based on
18 user preferences. A portal page may be comprised of individual portlets, which access
19 hardware and software to gather data and offer information to portal pages. Portals and
20 portlets can be associated with preferences selected by the user and thus can provide an
21 effective mechanism to view information of interest from a variety of sources at the same
22 time. However, as the number of portlets increase, portal pages can become overcrowded
23 and disorganized. In the prior art, overcrowding often resulted in cluttered portal pages
24 that would inhibit the user from effectively viewing and interacting with all of the
25 available portlets. That problem was unique to computer systems, because unlike
26 traditional media, such as newspapers, magazines, and books, portals and portlets are not
27 limited to predetermined content, limited information sources, or static areas of display.

28 27. The inventors of the '234 patent recognized a need to improve the

1 customization of portal pages. They developed a novel approach for organizing and
2 displaying stackable portlets on a portal page, which includes determining whether a
3 subset of portlets is stackable and providing a control means for the user to select between
4 subsets of portlets not currently presented to the user. By developing a method for
5 stacking subsets of portlets and allowing users to select which subset to display, the
6 inventors resolved the issue of the cluttered portal page with a new and improved way of
7 organizing and displaying the portlets comprising portal pages. The '234 patent thus
8 extends the benefits of portal pages by allowing users to interact effectively with portal
9 pages and generate as many portlets as they would like, based on their preferences, without
10 overcrowding their device screen. Specifically, the '234 patent discloses and claims novel
11 methods of organizing portlets not only as "stacks" but as "stacks of stacks," such that
12 only a subset of portlets may be presented at any given time, based on characteristics such
13 as common hardware, software, content type, markup, user profiles, and user preference.

14 **G. Defendants Have Built Their Business By Infringing IBM's Patents.**

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

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

27 30. IBM began informing Defendants that they infringe IBM's patents in October
28 of 2011. Since then, IBM has written several follow up letters to Orbitz, Expedia, and

1 HomeAway¹³ to inform them that they were infringing additional patents, as the scope of
2 their infringement became clear. On October 1, 2015, IBM sent a letter to inform Expedia
3 that it was infringing the '440 patent.

4 31. Since at least 2003, Expedia, Hotels.com, and Hotwire have been part of the
5 same company. Since at least 2015, Expedia and Orbitz have been part of the same
6 company. On information and belief, Hotels.com, Hotwire, and Orbitz were aware or
7 should have been aware that they were infringing at least the '440 patent based at least on
8 the correspondence sent to Expedia in October 2015.

9 32. IBM has repeatedly attempted to engage with Expedia and its subsidiaries, and
10 presented detailed examples of their infringement of numerous IBM patents. But Expedia
11 and its subsidiaries have continued to willfully infringe IBM's patents so as to obtain the
12 significant benefits of IBM's innovations without paying any compensation to IBM.

13 33. Because IBM's multi-year struggle to negotiate a license agreement that
14 remedies Expedia and its subsidiaries' unlawful conduct in the form of infringement of
15 the Patents-In-Suit and other IBM patents has failed, IBM has been forced to seek relief
16 through litigation. Among other relief sought, IBM seeks royalties on the billions of
17 dollars in revenue that Defendants have received based on their infringement of IBM's
18 patented technology.

19 **JURISDICTION AND VENUE**

20 34. IBM incorporates by reference paragraphs 1-33.

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

24
25 ¹³ HomeAway.com, Inc. is a Delaware corporation ("HomeAway") and is a
26 wholly-owned subsidiary of Expedia. See Declaration of Michael Marron In Support of
27 Defendants' Motion To Dismiss Under Rule 12(b)(3) and Rule 12(b)(6) ¶ 5, *Int'l Business*
28 *Machines Corp. v. Expedia, Inc.*, Case No. 1:17-cv-01875-LPS-CJB (D. Del. May 29,
2018) (D.I. 25). Homeaway is one of Expedia Group's "travel brands." Expedia Group's
2018 Form 10-K at 1. 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.

36. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b). Defendants conduct business in Arizona, by at least offering for sale and selling products and services through their websites (www.expedia.com, www.travelocity.com, www.hotels.com, www.hotwire.com, www.orbitz.com) and mobile applications, which are accessible in Arizona, and because infringement has occurred and continues to occur in Arizona.

37. Venue is also proper as to Expedia because Expedia has committed acts of infringement in the District and has a regular and established place of business in the state of Arizona, at least through Expedia's servers related to expedia.com, travelocity.com, and the associated mobile applications located in Chandler, AZ.¹⁴

38. On information and belief, Expedia operates an Expedia data center at 2121 S. Price Rd. #011, Chandler, Arizona 85286 (the "Chandler Data Center"). The Chandler Data Center is a physical place in the District, is operated in a steady, uniform, orderly, and methodical manner. The Chandler Data Center is an established, continued physical presence in Arizona. The Chandler Data Center is an established place of business of Expedia.



¹⁴ See Declaration of Michael Marron In Support of Defendants' Motion To Dismiss Under Rule 12(b)(3) and Rule 12(b)(6) ¶ 8, *Int'l Business Machines Corp. v. Expedia, Inc.*, Case No. 1:17-cv-01875-LPS-CJB (D. Del. May 29, 2018) (D.I. 25).



39. The Maricopa County Treasurer's Office lists Expedia on tax records associated with the Chandler Data Center, and those tax records reflect that Expedia has paid the taxes due on the Chandler Data Center property from 2009 to 2017. A copy of the Maricopa County Treasurer's Office 2018 tax details for Expedia for the Chandler Data Center can be found at <http://treasurer.maricopa.gov/parcel/TaxDetails.aspx?taxyear=2018>.

40. On information and belief, Expedia owns and operates Brand Expedia® and Travelocity® servers in the District at the Chandler Data Center. For instance, Expedia has had server cabinets and racks installed at the Chandler Data Center at least in 2008 and 2016.

Devservices/commercial/tenant improvement/regular

2121 S Price Rd., Chandler, AZ, 85286

2008-01-17

Expedia - suite c106 c4.01 cabinet and rack install

Valuation:

\$29,284

Permit #:

TNT08-0055

Status:

Closed

Fee:

\$655

Permit Type:

N/A

Building Type:

N/A

BUILDZOOM, Federal Communications Group,

<https://www.buildzoom.com/contractor/federal-communications-group-inc-tempe-az>

(last visited April 4, 2019).



INSTAGRAM, BPG Technologies¹⁵ (@bpgtech),

https://www.instagram.com/p/BOQQeC1Dho9/?utm_source=ig_share_sheet&igshid=1rurpiucy52nh (last visited April 4, 2019).

41. On information and belief, to the extent that Expedia does not own the Chandler Data Center, Expedia leases the space from Digital Realty Trust, Inc. For instance, the Chandler Data Center at 2121 S. Price Rd. #011, Chandler, Arizona 85286 is branded as “Digital Realty Data Center Solutions.”

¹⁵ “BPG Technologies, LLC specializes in the design and installation of structured cabling systems” such as those required for the installation of new servers. See <http://bpgtech.com/index.php/about> (last visited April 3, 2019).



42. On information and belief, Expedia leases/rents the Chandler Data Center space from Digital Realty Trust, Inc. and exercises complete control of the space that it leases/rents. For instance, Expedia hires contractors to perform work on their servers that are stored in the Chandler Data Center.

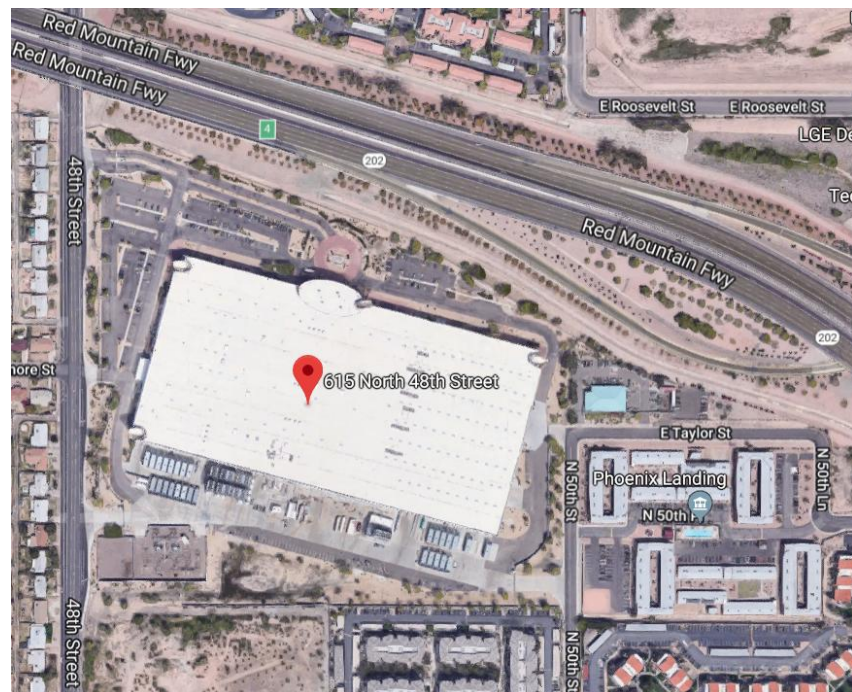


INSTAGRAM, BPG Technologies (@bpgtech),

https://www.instagram.com/p/BOQQeC1Dho9/?utm_source=ig_share_sheet&igshid=1rurpiucy52nh (last visited April 4, 2019).

43. Venue is also proper as to Expedia because Expedia has committed acts of infringement in the District and has a regular and established place of business in the state of Arizona, at least through Expedia's servers related to expedia.com and travelocity.com and the associated mobile applications located in Phoenix, AZ.

44. On information and belief, Expedia operates an Expedia data center at 615 N 48th St, Phoenix AZ 85008 (the "Phoenix Data Center"). The Phoenix Data Center is a physical place in the District, is operated in a steady, uniform, orderly, and methodical manner. The Phoenix Data Center is an established, continued physical presence in Arizona. The Phoenix Data Center is an established place of business of Expedia.



45. The Maricopa County Treasurer's Office lists Expedia on tax records associated with the Phoenix Data Center, and those tax records reflect that Expedia has paid the taxes due on the Phoenix Data Center property from 2013 to 2017. A copy of the Maricopa County Treasurer's Office 2018 tax details for Expedia for the Phoenix Data Center can be found at <http://treasurer.maricopa.gov/parcel/TaxDetails.aspx?taxyear=2018>.

46. On information and belief, to the extent that Expedia does not own the Phoenix Data Center, Expedia leases the space from Iron Mountain. For instance, the Phoenix Data

Center at 615 N 48th St, Phoenix AZ 85008 is marked as an Iron Mountain Data Center.¹⁶ On information and belief, Expedia leases/rents the Phoenix Data Center space from Iron Mountain and exercises complete control of the space that it leases/rents.



47. On information and belief, Expedia owns and operates Brand Expedia® and Travelocity® servers in the District at the Phoenix Data Center.

48. On information and belief, in addition to maintaining a physical place in the District, Expedia has employees who work at the Chandler Data Center and Phoenix Data Center. For example, several individuals on the professional social networking website LinkedIn hold themselves out on their profiles as current employees of Expedia, Inc. in Chandler and Phoenix, Arizona. The job titles in these LinkedIn profiles include: inventory coordinator, storage administrator, principal data center engineer, data center engineer, senior service transition manager, manager of data center operations, global manager of infrastructure operational support, project manager II data center services, and system administrator. The job duties of these Expedia employees include oversight of “all the hardware inventory required to run the [Expedia] websites for the two data centers in Arizona.”

49. Venue is proper as to Hotels.com because Hotels.com has committed acts of

¹⁶ See <https://www.ironmountain.com/digital-transformation/data-centers/locations/phoenix-data-center>.

1 infringement in the District and has a regular and established place of business in the state
 2 of Arizona, at least through Hotels.com's servers related to www.hotels.com and the
 3 associated mobile applications located in Chandler, Arizona at the Chandler Data Center
 4 and in Phoenix, AZ at the Phoenix Data Center.¹⁷ On information and belief, Hotels.com
 5 owns and operates the servers related to www.hotels.com and the associated mobile
 6 applications located in the Chandler Data Center and the Phoenix Data Center. The
 7 Chandler Data Center and the Phoenix Data Center are established places of business of
 8 Hotels.com.

9 50. The Maricopa County Treasurer's Office lists Hotels.com on tax records
 10 associated with the Chandler Data Center, and those tax records reflect that Hotels.com or
 11 has paid the taxes due on the Chandler Data Center property from 2014 to 2017. A copy
 12 of the Maricopa County Treasurer's Office tax history for Hotels.com for the Chandler
 13 Data Center (from 2013 through 2018) can be found at
 14 <http://treasurer.maricopa.gov/parcel/Summary.aspx?List=All>.

15 51. On information and belief, Hotels.com leases the Chandler Data Center space
 16 from Digital Realty Trust, Inc. For instance, the Chandler Data Center at 2121 S. Price
 17 Rd. #011, Chandler, Arizona 85286 is branded as "Digital Realty Data Center Solutions."
 18 On information and belief, Hotels.com leases/rents the Chandler Data Center space from
 19 Digital Realty Trust, Inc. and exercises complete control of the space that it leases/rents.
 20 On information and belief, to the extent that Hotels.com does not lease the Chandler Data
 21 Center space from Digital Realty Trust, Inc., Hotels.com leases, rents, or obtains space in
 22 the Chandler Data Center from Expedia and exercises complete control of the space that
 23 it leases or rents.

24 52. On information and belief, Hotels.com leases the Phoenix Data Center space
 25 from Iron Mountain. For instance, the Phoenix Data Center at 615 N 48th St, Phoenix AZ
 26 85008 is marked as an Iron Mountain Data Center. On information and belief, Hotels.com

27 ¹⁷ See Declaration of Michael Marron In Support of Defendants' Motion To
 28 Dismiss Under Rule 12(b)(3) and Rule 12(b)(6) ¶ 10, *Int'l Business Machines Corp. v. Expedia, Inc.*, Case No. 1:17-cv-01875-LPS-CJB (D. Del. May 29, 2018) (D.I. 25).

1 leases/rents the Phoenix Data Center space from Iron Mountain and exercises complete
2 control of the space that it leases/rents. On information and belief, to the extent that
3 Hotels.com does not lease the Phoenix Data Center space from Iron Mountain, Hotels.com
4 leases, rents, or obtains space in the Phoenix Data center from Expedia and exercises
5 complete control of the space that it leases or rents.

6 53. Employees of Hotels.com operate and offer the website www.hotels.com and
7 the associated mobile applications through the servers at the Chandler Data Center and
8 Phoenix Data Center. Further, on information and belief, employees of Hotels.com,
9 together with Expedia, run, operate, and maintain the servers at the Chandler Data Center
10 and Phoenix Data Center.

11 54. To the extent employees of Hotels.com do not operate and offer the website
12 www.hotels.com and the associated mobile applications through the shared servers at the
13 Chandler Data Center and Phoenix Data Center, then on information and belief Expedia
14 and its employees act as agents of Hotels.com to offer and operate the website
15 www.hotels.com and the associated mobile applications through the shared servers at the
16 Chandler Data Center and Phoenix Data Center. For example, individuals on the
17 professional social networking website LinkedIn hold themselves out on their profiles as
18 current employees of Expedia, Inc. in Phoenix, Arizona, with job titles such as system
19 administrator. The job duties of these Expedia employees include maintaining “a multi-
20 billion dollar infrastructure for one of the world’s leading travel companies including
21 **Hotels.com**, Expedia.com, Hotwire.com . . . and more.”

22 55. Venue is proper as to Hotwire because Hotwire has committed acts of
23 infringement in the District and has a regular and established place of business in the state
24 of Arizona, at least through Hotwire’s servers related to www.hotwire.com and the
25 associated mobile applications located in Chandler, Arizona at the Chandler Data Center
26 and in Phoenix, AZ at the Phoenix Data Center.¹⁸ On information and belief, Hotwire
27 owns and operates the servers related to www.hotwire.com and the associated mobile

28 ¹⁸ *Id.* at ¶ 14.

1 applications located in the Chandler Data Center and the Phoenix Data Center. The
2 Chandler Data Center and the Phoenix Data Center are established places of business of
3 Hotwire.

4 56. On information and belief, Hotwire leases the Chandler Data Center space
5 from Digital Realty Trust, Inc. For instance, the Chandler Data Center at 2121 S. Price
6 Rd. #011, Chandler, Arizona 85286 is branded as “Digital Realty Data Center Solutions.”
7 On information and belief, Hotwire leases/rents the Chandler Data Center space from
8 Digital Realty Trust, Inc. and exercises complete control of the space that it leases/rents.
9 On information and belief, to the extent that Hotwire does not lease the Chandler Data
10 Center space from Digital Realty Trust, Inc., Hotwire leases, rents, or obtains space in the
11 Chandler Data Center from Expedia and exercises complete control of the space that it
12 leases or rents.

13 57. On information and belief, Hotwire leases the Phoenix Data Center space from
14 Iron Mountain. For instance, the Phoenix Data Center at 615 N 48th St, Phoenix AZ
15 85008 is marked as an Iron Mountain Data Center. On information and belief, Hotwire
16 leases/rents the Phoenix Data Center space from Iron Mountain and exercises complete
17 control of the space that it leases/rents. On information and belief, to the extent that
18 Hotwire does not lease the Phoenix Data Center space from Iron Mountain, Hotwire
19 leases, rents, or obtains space in the Phoenix Data center from Expedia and exercises
20 complete control of the space that it leases or rents.

21 58. On information and belief, employees of Hotwire operate and offer the website
22 www.hotwire.com and the associated mobile applications through the servers at the
23 Chandler Data Center and Phoenix Data Center. Further, on information and belief,
24 employees of Hotwire, together with Expedia, run, operate, and maintain the servers at
25 the Chandler Data Center and Phoenix Data Center.

26 59. To the extent employees of Hotwire do not operate and offer the website
27 www.hotels.com and the associated mobile applications through the shared servers at the
28 Chandler Data Center and Phoenix Data Center, then on information and belief,

1 employees of Expedia act as agents of Hotwire to offer and operate the website
2 www.hotwire.com and the associated mobile applications through the shared servers at
3 the Chandler Data Center and Phoenix Data Center. For example, individuals on the
4 professional social networking website LinkedIn hold themselves out on their profiles as
5 current employees of Expedia, Inc. Phoenix, Arizona, with job titles such as system
6 administrator. The job duties of these Expedia employees include maintaining “a multi-
7 billion dollar infrastructure for one of the world’s leading travel companies including
8 Hotels.com, Expedia.com, *Hotwire.com* . . . and more.”

9 60. Venue is proper as to Orbitz because Orbitz has committed acts of
10 infringement in the District and has a regular and established place of business in the state
11 of Arizona, at least through Orbitz’s servers related to www.orbitz.com and the associated
12 mobile applications located in Chandler, Arizona at the Chandler Data Center and in
13 Phoenix, AZ at the Phoenix Data Center.¹⁹ On information and belief, Orbitz owns and
14 operates the servers related to www.orbitz.com and the associated mobile applications
15 located in the Chandler Data Center and the Phoenix Data Center. The Chandler Data
16 Center and the Phoenix Data Center are established places of business of Orbitz.

17 61. The Maricopa County Treasurer’s Office lists Orbitz Worldwide as the
18 recipient of a tax records associated with the Phoenix Data Center. On information and
19 belief, the Maricopa County Treasurer’s Office tax records for the Phoenix Data Center
20 identifying Orbitz Worldwide as a recipient of tax records associated with the Phoenix
21 Data Center are a result of Orbitz, LLC’s ownership and operation of the servers related
22 to www.orbitz.com and the associated mobile applications located in the Phoenix Data
23 Center. On information and belief, Orbitz Worldwide acts as an agent of Orbitz, LLC in
24 filing and paying any applicable taxes on behalf of Orbitz, LLC as a result of Orbitz,
25 LLC’s ownership and operation of the servers related to www.orbitz.com and the
26 associated mobile applications located in the Phoenix Data Center. A copy of the
27 Maricopa County Treasurer’s Office tax history for Orbitz for the Phoenix Data Center

28 ¹⁹ *Id.* at ¶ 13.

1 can be found at <http://treasurer.maricopa.gov/parcel/Summary.aspx?List=All>. A copy of
2 the Maricopa County Treasurer's Office 2018 tax details for Orbitz for the Phoenix Data
3 Center can be found at
4 <http://treasurer.maricopa.gov/parcel/TaxDetails.aspx?taxyear=2018>.

5 62. On information and belief, Orbitz (or its parent company on behalf of Orbitz)
6 leases the Chandler Data Center space from Digital Realty Trust, Inc. For instance, the
7 Chandler Data Center at 2121 S. Price Rd. #011, Chandler, Arizona 85286 is branded as
8 "Digital Realty Data Center Solutions." On information and belief, Orbitz (or its parent
9 company on behalf of Orbitz) leases/rents the Chandler Data Center space from Digital
10 Realty Trust, Inc. and exercises complete control of the space that it leases/rents. On
11 information and belief, to the extent that Orbitz (or its parent company on behalf of Orbitz)
12 does not lease the Chandler Data Center space from Digital Realty Trust, Inc., Orbitz (or
13 its parent company on behalf of Orbitz) leases, rents, or obtains space in the Chandler
14 Data Center from Expedia and exercises complete control of the space that it leases or
15 rents.

16 63. On information and belief, Orbitz (or its parent company on behalf of Orbitz)
17 leases the Phoenix Data Center space from Iron Mountain. For instance, the Phoenix Data
18 Center at 615 N 48th St, Phoenix AZ 85008 is marked as an Iron Mountain Data Center.
19 On information and belief, Orbitz (or its parent company on behalf of Orbitz) leases/rents
20 the Phoenix Data Center space from Iron Mountain and exercises complete control of the
21 space that it leases/rents. To the extent Orbitz does not own or lease the space from Iron
22 Mountain, then on information and belief, Orbitz's parent company acts as an agent on
23 behalf of Orbitz, on instructions from Orbitz, and allows Orbitz to use the space from Iron
24 Mountain as if Orbitz owned, leased, or rented the space itself. On information and belief,
25 to the extent that Orbitz (or its parent company on behalf of Orbitz) does not lease the
26 Phoenix Data Center space from Iron Mountain, Orbitz (or its parent company on behalf
27 of Orbitz) leases, rents, or obtains space in the Phoenix Data center from Expedia and
28 exercises complete control of the space that it leases or rents.

64. On information and belief, employees of Orbitz operate and offer the website www.orbitz.com and the associated mobile applications through the servers at the Chandler Data Center and Phoenix Data Center. Further, on information and belief, employees of Orbitz, together with Expedia, run, operate, and maintain the servers at the Chandler Data Center and Phoenix Data Center.

65. To the extent employees of Orbitz do not operate and offer the website www.hotels.com and the associated mobile applications through the shared servers at the Chandler Data Center and Phoenix Data Center, on information and belief, employees of Expedia act as agents of Orbitz to offer and operate the website www.orbitz.com and the associated mobile applications through the shared servers at the Chandler Data Center and Phoenix Data Center.

66. Personal jurisdiction exists over Defendants because each Defendant conducts business in Arizona, by at least offering for sale and selling products and services through its websites and mobile applications, which are accessible in Arizona, and because infringement has occurred and continues to occur in Arizona.

COUNT ONE

INFRINGEMENT OF THE '440 PATENT

67. IBM incorporates by reference paragraphs 1-66.

68. IBM is the owner of all right, title and interest in the '440 patent. The '440 patent was duly and properly issued by the USPTO on July 13, 2010. The '440 patent is a reissue application of U.S. Patent No. 7,216,149, which was duly and properly issued by the USPTO on May 8, 2007. The '440 patent was duly assigned to IBM. A copy of the '440 patent is attached hereto as **Exhibit A**.

69. In violation of 35 U.S.C. § 271, Expedia and the subsidiaries it controls have infringed, contributed to the infringement of, and/or induced others to infringe one or more of the claims of the '440 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported their websites, including www.expedia.com, www.travelocity.com, www.hotels.com, www.hotwire.com, and www.orbitz.com and the

1 Expedia, Travelocity, Hotels.com, Hotwire, and Orbitz mobile applications running on,
2 for example, Apple iOS and Google Android operating systems. Defendants'
3 infringement is continuing.

4 70. As outlined below, on information and belief, Expedia, Hotels.com, Hotwire,
5 and Orbitz, infringe the '440 patent.

6 71. Furthermore, Expedia directs and controls the other Defendants' infringement
7 of the '440 patent. Expedia "operate[s] several technology platforms that support
8 [Expedia's] brands. Expedia's technology platform supports [Expedia's] full-service and
9 multi-product brands, including Brand Expedia, Orbitz . . . as well as certain parts of the
10 Hotwire brand. The Hotels.com technology platform supports [Expedia's] hotel-only
11 offering, including Hotels.com" ²⁰ Through Expedia's control of the technological
12 platforms used in the other Defendants' websites and mobile applications, Expedia directs,
13 controls, and causes the infringement of the '440 patent for each of the identified websites
14 and associated mobile applications below.

15 72. For example, Expedia infringes because www.expedia.com and the associated
16 mobile applications infringed at least claim 1 of the '440 patent at least by:

17 a. Presenting a system (such as the Expedia travel web site) for
18 obtaining enriched activity data in a client-server communications network (such as data
19 contained in a HTTP request) wherein information requested by a network element (such
20 as information in a web page) is cached at one or more other network elements (such as a
21 remote server), comprising:

22 b. a server network element including server software and a database
23 for generating and storing a plurality of information files that are accessible to a requesting
24 network element (such as pages or a directory of the Expedia web site), the information
25 files (such as web pages) including text files (such as HTML files) and key words (such
26 as header, metadata, link, and anchor tags in the HTML file) that are interpreted by the
27 requesting network element to display the information requested (such as a web page), the

28 ²⁰ Expedia Group's 2018 Form 10-K at 7.

1 information file (such as the web page) further including an uncacheable single pixel
2 Graphics Image Format (GIF) request (such as a single pixel GIF indicated by a “1x1.gif”
3 in a request with a cache-control header in the response indicating “no-cache, no-store”);

4 c. wherein upon interpreting the information file, the single pixel GIF
5 request is transmitted from the requesting element (such as a request for the “1x1.gif” file)
6 over the communications network to the server network element (such as an Expedia
7 server) which reads and stores enriched data contained therein (such as data contained in
8 the single pixel GIF request).

9 73. For example, Expedia infringes because www.travelocity.com and the
10 associated mobile applications infringed at least claim 1 of the ’440 patent at least by:

11 a. Presenting a system (such as the Travelocity travel web site) for
12 obtaining enriched activity data in a client-server communications network (such as data
13 contained in a HTTP request) wherein information requested by a network element (such
14 as information in a web page) is cached at one or more other network elements (such as a
15 remote server), comprising:

16 b. a server network element including server software and a database
17 for generating and storing a plurality of information files that are accessible to a requesting
18 network element (such as pages or a directory of the Travelocity web site), the information
19 files (such as web pages) including text files (such as HTML files) and key words (such
20 as header, metadata, link, and anchor tags in the HTML file) that are interpreted by the
21 requesting network element to display the information requested (such as a web page), the
22 information file (such as the web page) further including an uncacheable single pixel
23 Graphics Image Format (GIF) request (such as a single pixel GIF indicated by a “1x1.gif”
24 in a request with a cache-control header in the response indicating “no-cache, no-store”);

25 c. wherein upon interpreting the information file, the single pixel GIF
26 request is transmitted from the requesting element (such as a request for the “1x1.gif” file)
27 over the communications network to the server network element (such as a Travelocity
28 server) which reads and stores enriched data contained therein (such as data contained in

1 the single pixel GIF request).

2 74. For example, Hotels.com infringes because www.hotels.com and the
3 associated mobile applications infringed at least claim 1 of the '440 patent at least by:

4 a. Presenting a system (such as the Hotels.com travel web site) for
5 obtaining enriched activity data in a client-server communications network (such as data
6 contained in a HTTP request) wherein information requested by a network element (such
7 as information in a web page) is cached at one or more other network elements (such as a
8 remote server), comprising:

9 b. a server network element including server software and a database
10 for generating and storing a plurality of information files that are accessible to a requesting
11 network element (such as pages or a directory of the Hotels.com web site), the information
12 files (such as web pages) including text files (such as HTML files) and key words (such
13 as header, metadata, link, and anchor tags in the HTML file) that are interpreted by the
14 requesting network element to display the information requested (such as a web page), the
15 information file (such as the web page) further including an uncacheable single pixel
16 Graphics Image Format (GIF) request (such as a single pixel GIF indicated by a "1x1.gif"
17 in a request with a cache-control header in the response indicating "no-cache, no-store");

18 c. wherein upon interpreting the information file, the single pixel GIF
19 request is transmitted from the requesting element (such as a request for the "1x1.gif" file)
20 over the communications network to the server network element (such as a Hotels.com
21 server) which reads and stores enriched data contained therein (such as data contained in
22 the single pixel GIF request).

23 75. For example, Hotwire infringes because www.hotwire.com and the associated
24 mobile applications infringed at least claim 1 of the '440 patent at least by:

25 a. Presenting a system (such as the Hotwire travel web site) for
26 obtaining enriched activity data in a client-server communications network (such as data
27 contained in a HTTP request) wherein information requested by a network element (such
28 as information in a web page) is cached at one or more other network elements (such as a

1 remote server), comprising:

2 b. a server network element including server software and a database
3 for generating and storing (such as the homepage URL) a plurality of information files
4 that are accessible to a requesting network element (such as pages or a directory of the
5 Hotwire web site), the information files (such as web pages) including text files (such as
6 HTML files) and key words (such as header, metadata, link, and anchor tags in the HTML
7 file) that are interpreted by the requesting network element to display the information
8 requested (such as a web page), the information file (such as the web page) further
9 including an uncacheable single pixel Graphics Image Format (GIF) request (such as a
10 single pixel GIF indicated by a “1x1.gif” in a request with a cache-control header in the
11 response indicating “no-cache, no-store”);

12 c. wherein upon interpreting the information file, the single pixel GIF
13 request is transmitted from the requesting element (such as a request for the “1x1.gif” file)
14 over the communications network to the server network element (such as a Hotwire
15 server) which reads and stores enriched data contained therein (such as data contained in
16 the single pixel GIF request).

17 76. For example, Orbitz infringes because www.orbitz.com and the associated
18 mobile applications infringed at least claim 1 of the ’440 patent at least by:

19 a. Presenting a system (such as the Orbitz travel web site) for obtaining
20 enriched activity data in a client-server communications network (such as data contained
21 in a HTTP request) wherein information requested by a network element (such as
22 information in a web page) is cached at one or more other network elements (such as a
23 remote server), comprising:

24 b. a server network element including server software and a database
25 for generating and storing a plurality of information files that are accessible to a requesting
26 network element (such as pages or a directory of the Orbitz web site), the information files
27 (such as web pages) including text files (such as HTML files) and key words (such as
28 header, metadata, link, and anchor tags in the HTML file) that are interpreted by the

1 requesting network element to display the information requested (such as a web page), the
2 information file (such as the web pages) further including an uncacheable single pixel
3 Graphics Image Format (GIF) request (such as a single pixel GIF indicated by a “1x1.gif”
4 in a request with a cache-control header in the response indicating “no-cache, no-store”);

5 c. wherein upon interpreting the information file, the single pixel GIF
6 request is transmitted from the requesting element (such as a request for the “1x1.gif” file)
7 over the communications network to the server network element (such as an Orbitz server)
8 which reads and stores enriched data contained therein (such as data contained in the
9 single pixel GIF request).

10 77. IBM has been damaged by the infringement of its ’440 patent by Defendants.
11 IBM is entitled to recover from Defendants the damages sustained by IBM as a result of
12 Defendants’ wrongful acts.

13 78. IBM has suffered and continues to suffer irreparable harm, for which there is
14 no adequate remedy at law, and will continue to do so unless Defendants are enjoined
15 therefrom by this Court.

16 79. The infringement by Defendants of the ’440 patent was deliberate and willful,
17 entitling IBM to increased damages under 35 U.S.C. § 284 and to attorney fees and costs
18 incurred in prosecuting this action under 35 U.S.C. § 285. In committing these acts of
19 infringement, Defendants actually knew or should have known that their actions
20 constituted an unjustifiably high risk of infringement of a valid and enforceable patent.

21 COUNT TWO

22 INFRINGEMENT OF THE ’193 PATENT

23 80. IBM incorporates by reference paragraphs 1-79.

24 81. IBM is the owner of all right, title and interest in the ’193 patent. The ’193
25 patent was duly and properly issued by the USPTO on August 17, 2004. The ’193 patent
26 was duly assigned to IBM. A copy of the ’193 patent is attached hereto as **Exhibit B**.

27 82. In violation of 35 U.S.C. § 271, Expedia and the subsidiaries it controls have
28

1 infringed, contributed to the infringement of, and/or induced others to infringe one or more
2 of the claims of the '193 patent by having made, designed, offered for sale, sold, provided,
3 used, maintained, and/or supported their websites, including www.expedia.com,
4 www.travelocity.com, www.hotels.com, www.hotwire.com, and www.orbitz.com and the
5 associated mobile applications, including the Expedia, Travelocity, Hotels.com, Hotwire,
6 and Orbitz applications for mobile devices running on, for example, the Apple iOS and
7 Google Android operating systems. Defendants' infringement is continuing.

8 83. As outlined below, on information and belief, Expedia, Hotels.com, Hotwire,
9 and Orbitz infringe the '193 patent.

10 84. Furthermore, Expedia directs and controls the other Defendants' infringement
11 of the '193 patent. Expedia "operate[s] several technology platforms that support
12 [Expedia's] brands. Expedia's technology platform supports [Expedia's] full-service and
13 multi-product brands, including Brand Expedia, Orbitz . . . as well as certain parts of the
14 Hotwire brand. The Hotels.com technology platform supports [Expedia's] hotel-only
15 offering, including Hotels.com" ²¹ Through Expedia's control of the technological
16 platforms used in the other Defendants' websites and mobile applications, Expedia directs,
17 controls, and causes the infringement of the '193 patent for each of the identified websites
18 and associated mobile applications below.

19 85. For example, Expedia infringes because www.expedia.com and Expedia
20 mobile applications infringe at least claim 1 of the '193 patent at least by:

21 a. Providing a graphical user interface (such as the Expedia GUI) for a
22 customer self service system (such as the Expedia travel web site) that performs resource
23 search and selection (such as allowing travelers to select vacation packages, flights, hotels,
24 rental cars, rail, cruises, activities, attractions, and services) comprising:

25 b. a first visual workspace (such as the initial Expedia search/query
26 screen) comprising entry field enabling entry of a query for a resource (such as the query
27 fields on the initial Expedia search/query screen) and, one or more selectable graphical

28 ²¹ Expedia Group's 2018 Form 10-K at 7.

1 user context elements (such as the search type icons on the initial Expedia search/query
2 screen), each element representing a context associated with the current user state (such
3 as the user contexts represented by the search type icons on the initial Expedia
4 search/query screen) and having context attributes (such as the mode of transportation,
5 mode of housing, preferred travel class, number of travelers, and number of rooms) and
6 attribute values (such as the values associated with the aforementioned context attributes
7 (e.g., flight, hotel, car, number of adults, number of rooms, economy/coach) associated
8 therewith;

9 c. a second visual workspace for visualizing (such as the Expedia
10 search results screen) the set of resources that the customer self service system has
11 determined to match the user's query (such as each search result displayed on the search
12 results page), said system indicating a degree of fit of said determined resources with said
13 query (such as the sort order of the search results displayed on the search results page);

14 d. a third visual workspace (such as the "Change search" window
15 accessed from the Expedia search results screen) for enabling said user to select and
16 modify context attribute values to enable increased specificity and accuracy of a query's
17 search parameters (such as the dropdown fields for the number of adults and/or children
18 in each room and the seating class), said third visual workspace further enabling said user
19 to specify resource selection parameters and relevant resource evaluation criteria utilized
20 by (such as checkboxes for the duration of a traveler's hotel stay and/or to indicate a
21 preference for direct flights only) a search mechanism in said system (such as the search
22 button in the "Change search" window), said degree of fit indication based on said user's
23 context, and said associated resource selection parameters and relevant resource
24 evaluation criteria (such as the sort order of the search results displayed on the search
25 results page); and,

26 e. a mechanism enabling said user to navigate among said first, second
27 and third visual workspaces to thereby identify and improve selection logic and response
28 sets fitted to said query (such as the search button on the initial Expedia search/query

1 screen and/or the “Change search” link in the Expedia search results screen).

2 86. For example, Expedia infringes because www.travelocity.com and Travelocity
3 mobile applications infringe at least claim 1 of the ’193 patent at least by:

4 a. Providing a graphical user interface (such as the Travelocity GUI)
5 for a customer self service system (such as the Travelocity travel web site) that performs
6 resource search and selection (such as allowing travelers to select vacation packages,
7 flights, hotels, rental cars, rail, cruises, activities, attractions, and services) comprising:

8 b. a first visual workspace (such as the initial Travelocity search/query
9 screen) comprising entry field enabling entry of a query for a resource (such as the query
10 fields on the initial Travelocity search/query screen) and, one or more selectable graphical
11 user context elements (such as the search type icons on the initial Travelocity search/query
12 screen), each element representing a context associated with the current user state (such
13 as the user contexts represented by the search type icons on the initial Travelocity
14 search/query screen) and having context attributes (such as the mode of transportation,
15 mode of housing, preferred travel class, number of travelers, and number of rooms) and
16 attribute values (such as the values associated with the aforementioned context attributes
17 (e.g., flight, hotel, car, number of adults, number of rooms, economy/coach)) associated
18 therewith;

19 c. a second visual workspace for visualizing (such as the Travelocity
20 search results screen) the set of resources that the customer self service system has
21 determined to match the user's query (such as each search result displayed on the search
22 results page), said system indicating a degree of fit of said determined resources with said
23 query (such as the sort order of the search results displayed on the search results page);

24 d. a third visual workspace (such as the “Change search” window
25 accessed from the Expedia search results screen) for enabling said user to select and
26 modify context attribute values to enable increased specificity and accuracy of a query's
27 search parameters (such as the dropdown fields for the number of adults and/or children
28 in each room and the seating class), said third visual workspace further enabling said user

1 to specify resource selection parameters and relevant resource evaluation criteria utilized
2 by (such as checkboxes for the duration of a traveler's hotel stay and/or to indicate a
3 preference for direct flights only) a search mechanism in said system (such as the search
4 button in the "Change search" window), said degree of fit indication based on said user's
5 context, and said associated resource selection parameters and relevant resource
6 evaluation criteria (such as the sort order of the search results displayed on the search
7 results page); and,

8 e. a mechanism enabling said user to navigate among said first, second
9 and third visual workspaces to thereby identify and improve selection logic and response
10 sets fitted to said query (such as the search button on the initial Travelocity search/query
11 screen and/or the "Change search" link in the Travelocity search results screen).

12 87. For example, Hotels.com infringes because www.hotels.com and associated
13 mobile applications infringe at least claim 1 of the '193 patent at least by:

14 a. Providing a graphical user interface (such as the Hotels.com GUI) for
15 a customer self service system (such as the Hotels.com travel web site) that performs
16 resource search and selection (such as allowing travelers to select lodging
17 accommodations) comprising:

18 b. a first visual workspace (such as the initial Hotels.com "Packages"
19 search/query screen) comprising entry field enabling entry of a query for a resource (such
20 as the query fields on the initial "Packages" Hotels.com search/query screen) and, one or
21 more selectable graphical user context elements (such as the search type icons on the
22 initial Hotels.com "Packages" search/query screen), each element representing a context
23 associated with the current user state (such as the user contexts represented by the search
24 type icons on the initial Hotels.com "Packages" search/query screen) and having context
25 attributes (such as the mode of transportation, mode of housing, preferred travel class,
26 number of travelers, and number of rooms) and attribute values (such as the values
27 associated with the aforementioned context attributes (e.g., flight, hotel, number of adults,
28 number of rooms, economy/coach)) associated therewith;

1 c. a second visual workspace for visualizing (such as the Hotels.com
2 search results screen) the set of resources that the customer self service system has
3 determined to match the user's query (such as each search result displayed on the search
4 results page), said system indicating a degree of fit of said determined resources with said
5 query (such as the sort order of the search results displayed on the search results page);

6 d. a third visual workspace (such as the "Change search" window
7 accessed from the Hotels.com search results screen) for enabling said user to select and
8 modify context attribute values to enable increased specificity and accuracy of a query's
9 search parameters (such as the dropdown fields for the number of adults and/or children
10 in each room and the seating class), said third visual workspace further enabling said user
11 to specify resource selection parameters and relevant resource evaluation criteria utilized
12 by (such as checkboxes for the duration of a traveler's hotel stay and/or to indicate a
13 preference for direct flights only) a search mechanism in said system (such as the search
14 button in the "Change search" window), said degree of fit indication based on said user's
15 context, and said associated resource selection parameters and relevant resource
16 evaluation criteria (such as the sort order of the search results displayed on the search
17 results page); and,

18 e. a mechanism enabling said user to navigate among said first, second
19 and third visual workspaces to thereby identify and improve selection logic and response
20 sets fitted to said query (such as the search button on the initial Hotels.com "Packages"
21 search/query screen and/or the "Change search" link in the Hotels.com search results
22 screen).

23 88. For example, Hotwire infringes because www.hotwire.com and associated
24 mobile applications infringe at least claim 1 of the '193 patent at least by:

25 a. Providing a graphical user interface (such as the Hotwire GUI) for a
26 customer self service system (such as the Hotwire travel web site) that performs resource
27 search and selection (such as allowing travelers to select excess seats, rooms, and cars)
28 comprising:

1 b. a first visual workspace (such as the initial Hotwire search/query
2 screen) comprising entry field enabling entry of a query for a resource (such as the query
3 fields on the initial Hotwire search/query screen) and, one or more selectable graphical
4 user context elements (such as the search type icons on the initial Hotwire search/query
5 screen), each element representing a context associated with the current user state (such
6 as the user contexts represented by the search type icons on the initial Hotwire”
7 search/query screen) and having context attributes (such as the mode of transportation,
8 mode of housing, number of travelers, and number of rooms) and attribute values (such
9 as the values associated with the aforementioned context attributes (e.g., flight, hotel, car,
10 number of adults, number of rooms, number of children)) associated therewith;

11 c. a second visual workspace for visualizing (such as the Hotwire
12 search results screen) the set of resources that the customer self service system has
13 determined to match the user's query (such as each search result displayed on the search
14 results page), said system indicating a degree of fit of said determined resources with said
15 query (such as the sort order of the search results displayed on the search results page);

16 d. a third visual workspace (such as the “Change search” window
17 accessed from the Hotwire search results screen) for enabling said user to select and
18 modify context attribute values to enable increased specificity and accuracy of a query's
19 search parameters (such as the dropdown fields for the number of adults and/or children
20 in each room and the seating class), said third visual workspace further enabling said user
21 to specify resource selection parameters and relevant resource evaluation criteria utilized
22 by (such as checkboxes for the duration of a traveler’s hotel stay and/or to indicate a
23 preference for direct flights only) a search mechanism in said system (such as the search
24 button in the “Change search” window), said degree of fit indication based on said user's
25 context, and said associated resource selection parameters and relevant resource
26 evaluation criteria (such as the sort order of the search results displayed on the search
27 results page); and,

28 e. a mechanism enabling said user to navigate among said first, second

1 and third visual workspaces to thereby identify and improve selection logic and response
2 sets fitted to said query (such as the search button on the initial Hotwire search/query
3 screen and/or the “Change search” link in the Hotwire search results screen).

4 89. For example, Orbitz infringes because www.orbitz.com and associated mobile
5 applications infringe at least claim 1 of the ’193 patent at least by:

6 a. Providing a graphical user interface (such as the Orbitz GUI) for a
7 customer self service system (such as the Orbitz travel web site) that performs resource
8 search and selection (such as allowing travelers to select flights, hotels, and packages)
9 comprising:

10 b. a first visual workspace (such as the initial Orbitz search/query
11 screen) comprising entry field enabling entry of a query for a resource (such as the query
12 fields on the initial Orbitz search/query screen) and, one or more selectable graphical user
13 context elements (such as the search type icons on the initial Orbitz search/query screen),
14 each element representing a context associated with the current user state (such as the user
15 contexts represented by the search type icons on the initial Orbitz search/query screen)
16 and having context attributes (such as the mode of transportation, mode of housing,
17 preferred travel class, number of travelers, and number of rooms) and attribute values
18 (such as the values associated with the aforementioned context attributes (e.g., flight,
19 hotel, number of adults, number of rooms, number of children, economy/coach))
20 associated therewith;

21 c. a second visual workspace for visualizing (such as the Orbitz search
22 results screen) the set of resources that the customer self service system has determined to
23 match the user's query (such as each search result displayed on the search results page),
24 said system indicating a degree of fit of said determined resources with said query (such
25 as the sort order of the search results displayed on the search results page);

26 d. a third visual workspace (such as the “Change search” window
27 accessed from the Orbitz search results screen) for enabling said user to select and modify
28 context attribute values to enable increased specificity and accuracy of a query's search

parameters (such as the dropdown fields for the number of adults and/or children in each room and the seating class), said third visual workspace further enabling said user to specify resource selection parameters and relevant resource evaluation criteria utilized by (such as checkboxes for the duration of a traveler's hotel stay and/or to indicate a preference for direct flights only) a search mechanism in said system (such as the search button in the "Change search" window), said degree of fit indication based on said user's context, and said associated resource selection parameters and relevant resource evaluation criteria (such as the sort order of the search results displayed on the search results page); and,

e. a mechanism enabling said user to navigate among said first, second and third visual workspaces to thereby identify and improve selection logic and response sets fitted to said query (such as the search button on the initial Orbitz search/query screen and/or the "Change search" link in the Orbitz search results screen).

90. On information and belief, end users and customers of www.expedia.com, www.travelocity.com, www.hotels.com, www.hotwire.com, and www.orbitz.com and the associated mobile applications directly infringe the '193 patent through the use of the websites and the mobile applications to make at least airplane, rental car, and hotel reservations. Expedia Group's 2018 Form 10-K lists \$99,727,000,000 of gross bookings in 2018, indicating that numerous end users and customers used www.expedia.com, www.travelocity.com, www.hotels.com, www.hotwire.com, and www.orbitz.com in order to make a purchase and thereby infringe the '193 patent.

91. On information and belief, Defendants have intended and continue to intend to induce patent infringement by third parties. For example, Defendants have and continue to encourage and instruct customers and end users to use www.expedia.com, www.travelocity.com, www.hotels.com, www.hotwire.com, and www.orbitz.com and the associated mobile applications in a manner that infringes the '193 patent by advertising the websites and the associated mobile applications, by providing customer support, and by designing their websites and the associated mobile applications in such a way that the

1 use of the websites and the associated mobile applications by an end user or customer
2 infringes the '193 patent. For example, <https://www.expedia.com/service/> provides
3 direction and support for expedia.com, <https://www.travelocity.com/service/> provides
4 direction and support for travelocity.com, <https://service.hotels.com/en-us/> provides
5 direction and support for hotels.com, <http://helpcenter.hotwire.com> provides direction and
6 support for hotwire.com, and <https://www.orbitz.com/service> provides direction and
7 support for orbitz.com. On information and belief, to the extent that Defendants were not
8 aware that they were encouraging their customers and end users to infringe the '193 patent,
9 their lack of knowledge was based on being willfully blind to the possibility that their acts
10 would cause infringement.

11 92. On information and belief, Defendants have intended and continue to intend to
12 contribute to patent infringement by third parties. For example, Defendants provide a
13 graphical user interface for a customer self-selection system that performs resource search
14 and selection using visual workspaces in a manner that infringes the '193 patent and does
15 not have substantial non-infringing uses.

16 93. IBM has been damaged by the infringement of its '193 patent by Defendants
17 and will continue to be damaged by such infringement. IBM is entitled to recover from
18 Defendants the damages sustained by IBM as a result of Defendants' wrongful acts.

19 94. IBM has suffered and continues to suffer irreparable harm, for which there is
20 no adequate remedy at law, and will continue to do so unless Defendants are enjoined
21 therefrom by this Court.

22 **COUNT THREE**

23 **INFRINGEMENT OF THE '234 PATENT**

24 95. IBM incorporates by reference paragraphs 1-94.

25 96. IBM is the owner of all right, title and interest in the '234 patent. The '234
26 patent was duly and properly issued by the USPTO on June 2, 2009. The '234 patent was
27 duly assigned to IBM. A copy of the '234 patent is attached hereto as **Exhibit C**.

28 97. In violation of 35 U.S.C. § 271, Expedia and the subsidiaries it controls have

1 infringed, contributed to the infringement of, and/or induced others to infringe one or more
2 of the claims of the '234 patent by having made, designed, offered for sale, sold, provided,
3 used, maintained, and/or supported their websites, including www.expedia.com,
4 www.travelocity.com, www.hotwire.com, www.hotels.com, and www.orbitz.com and the
5 associated mobile applications, including the Expedia, Travelocity, Hotwire, Hotels.com,
6 and Orbitz applications for mobile devices running on, for example, the Apple iOS and
7 Google Android operating systems. Expedia and Defendants' infringement is continuing.

8 98. As outlined below, on information and belief, Expedia, Hotels.com, Hotwire,
9 and Orbitz infringe the '234 patent.

10 99. Furthermore, Expedia directs and controls the other Defendants' infringement
11 of the '234 patent. Expedia "operate[s] several technology platforms that support
12 [Expedia's] brands. Expedia's technology platform supports [Expedia's] full-service and
13 multi-product brands, including Brand Expedia, Orbitz . . . as well as certain parts of the
14 Hotwire brand. The Hotels.com technology platform supports [Expedia's] hotel-only
15 offering, including Hotels.com" ²² Through Expedia's control of the technological
16 platforms used in the other Defendants' websites and mobile applications, Expedia directs,
17 controls, and causes the infringement of the '234 patent for each of the identified websites
18 and associated mobile applications below.

19 100. For example, Expedia infringes because www.expedia.com and associated
20 mobile applications infringe claim 1 of the '234 patent by, for example:

21 a. Generating a portal page (such as the search results page on
22 www.expedia.com), wherein the portal page includes a plurality of portlets (such as each
23 search result displayed on the search results page), the method comprising;

24 b. Determining whether a subset of portlets is stackable (such as
25 organizing the individual search results based on featured results); and;

26 c. Responsive to the subset of portlets being stackable, identifying two
27 or more stacks of portlets that are stackable (such as featured results, price, guest rating,

28 ²² Expedia Group's 2018 Form 10-K at 7.

vacation rentals, or package discounts search results), and;

d. Generating the portal page (such as the search results page on www.expedia.com) such that the two or more stacks of portlets are generated as a stack of stacks, wherein the stack of stacks presents a first stack of portlets (such as the display of search results initially presented to the user) and a control for selecting a second stack of portlets from within the two or more stacks of portlets that is not currently presented (such as providing the means for the user to select other stacks of portlets not currently presented to the user, such as featured results, price, guest rating, vacation rentals, or package discounts search results).

101. For example, Expedia infringes because www.travelocity.com and associated mobile applications infringe claim 1 of the '234 patent by, for example:

a. Generating a portal page (such as the search results page on www.travelocity.com), wherein the portal page includes a plurality of portlets (such as each search result displayed on the search results page), the method comprising;

b. Determining whether a subset of portlets is stackable (such as organizing the individual search results based on featured results); and;

c. Responsive to the subset of portlets being stackable, identifying two or more stacks of portlets that are stackable (such as featured results, price, guest rating, vacation rentals, or package discounts search results), and;

d. Generating the portal page (such as the search results page on www.travelocity.com) such that the two or more stacks of portlets are generated as a stack of stacks, wherein the stack of stacks presents a first stack of portlets (such as the display of search results initially presented to the user) and a control for selecting a second stack of portlets from within the two or more stacks of portlets that is not currently presented (such as providing the means for the user to select other stacks of portlets not currently presented to the user, such as featured results, price, guest rating, vacation rentals, or package discounts search results).

102. For example, Hotels.com infringes because www.hotels.com and associated

1 mobile applications infringe claim 1 of the '234 patent by, for example:

2 a. Generating a portal page (such as the search results page on
3 www.hotels.com), wherein the portal page includes a plurality of portlets (such as each
4 search result displayed on the search results page), the method comprising;

5 b. Determining whether a subset of portlets is stackable (such as
6 organizing the individual search results based on featured results); and;

7 c. Responsive to the subset of portlets being stackable, identifying two
8 or more stacks of portlets that are stackable (such as featured results, star rating, distance,
9 guest rating, or price search results), and;

10 d. Generating the portal page (such as the search results page on
11 www.hotels.com) such that the two or more stacks of portlets are generated as a stack of
12 stacks, wherein the stack of stacks presents a first stack of portlets (such as the display of
13 search results initially presented to the user) and a control for selecting a second stack of
14 portlets from within the two or more stacks of portlets that is not currently presented (such
15 as providing the means for user to select other stacks of portlets not currently presented to
16 the user, such as featured results, star rating, distance, guest rating, or price search results).

17 103. For example, Hotwire infringes because www.hotwire.com and associated
18 mobile applications infringe claim 1 of the '234 patent by, for example:

19 a. Generating a portal page (such as the search results page on
20 www.hotwire.com), wherein the portal page includes a plurality of portlets (such as each
21 search result displayed on the search results page), the method comprising;

22 b. Determining whether a subset of portlets is stackable (such as
23 organizing the individual search results based on popularity); and;

24 c. Responsive to the subset of portlets being stackable, identifying two
25 or more stacks of portlets that are stackable (such as popularity, price, or hotel class search
26 results), and;

27 d. Generating the portal page (such as the search results page on
28 www.hotwire.com) such that the two or more stacks of portlets are generated as a stack of

1 stacks, wherein the stack of stacks presents a first stack of portlets (such as the display of
2 search results initially presented to the user) and a control for selecting a second stack of
3 portlets from within the two or more stacks of portlets that is not currently presented (such
4 as providing the means for the user to select other stacks of portlets not currently presented
5 to the user, such as popularity, price, or hotel class search results).

6 104. For example, Orbitz infringes because www.orbitz.com and associated mobile
7 applications infringe claim 1 of the '234 patent by, for example:

8 a. Generating a portal page (such as the search results page on
9 www.orbitz.com), wherein the portal page includes a plurality of portlets (such as each
10 search result displayed on the search results page), the method comprising;

11 b. Determining whether a subset of portlets is stackable (such as
12 organizing the individual search results based on featured results); and;

13 c. Responsive to the subset of portlets being stackable, identifying two
14 or more stacks of portlets that are stackable (such as featured results, price, guest rating,
15 vacation rentals, or package discount search results), and;

16 d. Generating the portal page (such as the search results page on
17 www.orbitz.com) such that the two or more stacks of portlets are generated as a stack of
18 stacks, wherein the stack of stacks presents a first stack of portlets (such as the display of
19 search results initially presented to the user) and a control for selecting a second stack of
20 portlets from within the two or more stacks of portlets that is not currently presented (such
21 as providing the means for the user to select other stacks of portlets not currently presented
22 to the user, such as featured results, price, guest rating, vacation rentals, or package
23 discount search results).

24 105. IBM has been damaged by the infringement of its '234 patent by Defendants
25 and will continue to be damaged by such infringement. IBM is entitled to recover from
26 Defendants the damages sustained by IBM as a result of Defendants' wrongful acts.

27 106. IBM has suffered and continues to suffer irreparable harm, for which there is
28 no adequate remedy at law, and will continue to do so unless 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 '440 patent has been and continues to be infringed by Defendants;
- B. That Defendants' infringement of the '440 patent has been willful;
- C. An injunction against further infringement of the '440 patent;
- D. That the '193 patent has been and continues to be infringed by Defendants;
- E. An injunction against further infringement of the '193 patent;
- F. That the '234 patent has been and continues to be infringed by Defendants;
- G. An injunction against further infringement of the '234 patent;
- H. An award of damages adequate to compensate IBM for the patent infringement that has occurred pre verdict and for damages that occur post-verdict, together with pre-judgment interest and costs;
- I. 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;
- J. 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
- K. 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.

1 DATED this 9th day of April, 2019.

2 OSBORN MALEDON, P.A.

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