

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

|                                      |   |                                   |
|--------------------------------------|---|-----------------------------------|
| PREFERENTIAL NETWORKS IP, LLC,       | § |                                   |
|                                      | § |                                   |
| Plaintiff,                           | § |                                   |
|                                      | § | Civil Action No. 2:17-cv-00530    |
| V.                                   | § |                                   |
|                                      | § |                                   |
| COMCAST CABLE COMMUNICATIONS,<br>LLC | § | <b><u>JURY TRIAL DEMANDED</u></b> |
|                                      | § |                                   |
| Defendant.                           | § |                                   |

**SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff, Preferential Networks IP, LLC (“PrefNet” or “Plaintiff”), by and through its undersigned counsel, submits this Second Amended Complaint<sup>1</sup> against the below named Defendant, as follows:

**NATURE OF THE ACTION**

1. This is a patent infringement action to stop Defendants’ infringement of United States Patent No. 8,577,994 (the “994 patent” or “patent-in-suit”).

**THE PARTIES**

2. Plaintiff, Preferential Networks IP, LLC, is a Texas Limited Liability Company with an office and place business at 1400 Preston Road, Suite 482, Plano, TX 75093.

3. Upon information and belief, Defendant, Comcast Cable Communications, LLC d/b/a Xfinity (“Comcast”), is a corporation established under the laws of the State of Delaware, with its principal place of business at One Comcast Center, 1701 JFK Boulevard, Philadelphia,

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<sup>1</sup> Pursuant to Fed. R. Civ. P. 15(a)(2), the remaining defendant, Comcast Cable Communications, LLC, has consented in writing to Plaintiff filing this Second Amended Complaint, which is being filed for the purpose of dropping the Comcast parties identified in the parties’ stipulation at Doc 26.

Pennsylvania 19103.

### **JURISDICTION AND VENUE**

4. This action arises under the patent laws of the United States, 35 U.S.C. § 1 et seq., including 35 U.S.C. §§ 271, 281, 283, 284, and 285. This Court has subject matter jurisdiction over this case for patent infringement pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. The Court has personal jurisdiction over Defendant, including because Defendant has minimum contacts within the State of Texas; Defendant has purposefully availed itself of the privileges of conducting business in the State of Texas; Defendant regularly conducts business within the State of Texas; and Plaintiff's cause of action arises directly from Defendant's business contacts and other activities in the State of Texas, including at least by virtue of Defendant's infringing methods and systems, which are at least sold, practiced and/or used in the State of Texas. Further, this Court has general jurisdiction over Defendant, including due to its continuous and systematic contacts with the State of Texas. Further, on information and belief, Defendant is subject to the Court's jurisdiction, including because Defendant has committed patent infringement in the State of Texas.

6. Venue is proper in the Eastern District of Texas pursuant to 28 U.S.C. §§ 1391 and 1400(b), including because Defendant has committed patent infringement in this District. Pursuant to 35 U.S.C. § 271, Defendant infringes the patent-in-suit by, without authority, its practicing the accused methods and at least using the accused devices described herein in this District. Further, on information and belief, Defendant has customers/users who are residents of this District and who purchase, practice, and/or use Defendant's infringing products in this District. Further, on information and belief, Defendant has places of business in this District.

### **INTRODUCTION**

7. The technologies owned by PrefNet include those related to bandwidth allocation in

network servers, including methods, computer-readable media, and systems for management of bandwidth allocation in a network server.

8. PrefNet is the current assignee of the patent-in-suit and has standing to bring this lawsuit, including the right to recover damages for past, present, and future infringement of the patent.

9. The '994 patent is one of many patents developed and patented by the named inventor, Gary Schuster, involving computer and network technologies. Mr. Schuster and the other inventors filed provisional patent application 60/198,491 with the United States Patent and Trademark Office ("USPTO") on April 18, 2000. The '994 Patent was filed as application No. 13/457,279 on April 26, 2012 and issued on November 5, 2013. The '994 Patent is a continuation of application No. 13/161,063, filed on June 15, 2011, now U.S. Patent No. 8,171,113, which is a continuation of application No. 12/881,082, filed on September 13, 2010, now U.S. Patent No. 7,966,416, which is a continuation of application No. 12/114,215, filed on May 2, 2008, now U.S. Patent No. 7,797,408, which is a continuation of application No. 09/837,319, filed on April 18, 2001, now U.S. Patent No. 7,370,110.

10. The Abstract of the '994 Patent states the following:

A server is configured to transfer information to a plurality of client devices in accordance with bandwidth-limiting and bandwidth-adjustment techniques. Bandwidth may be reduced based on an amount of data previously transferred to a client device (e.g., within a prior time period). Bandwidth may also be reduced based on variable input parameters such as file size, data type, server load, network response time, and number of transfer requests from a client device within a prior period of time. In some embodiments, bandwidth may be reduced by inserting delays between portions of data being transmitted. A length of a delay period may be determined based on the various factors above (amount of previous data transfer(s), file size, etc.). Bandwidth to a client device may also be adjusted dynamically. In some embodiments, bandwidth may be increased (rather than decreased).

11. As of the priority date of the '994 Patent, publicly accessible servers, particular servers that provide storage space for no charge, such as servers on free web hosts, were often used inappropriately in violation of agreed terms of service for the distribution of media files such as

large software, music, and video files. '994/1:28-32. Such media files tended to be, and still are, much larger than the files that the host service is intended for. '994/1:32-34.

12. Consequently, the storage and exchange of these inappropriate files demands greater bandwidth than more appropriate uses, thereby choking and discouraging the uses that the web server is intended to serve. '994/1:35-37. Additionally, these types of media files often contain illegally copied content that may lend an undesirable taint to operators of web hosting services who do not wish to be perceived as encouraging copyright violations. '994/1:37-40. Another injury caused by such inappropriate use was, and still is, disproportionately heavy use of the server by relatively few users, thereby reducing the number of subscribers that the hosting service attracts. '994/1:41-44. A related problem is the devaluation of advertising space as a result of people downloading such files, and the potential for alienating advertisers who have purchased advertising space on the servers serving such files. '994/1:44-47.

13. In view of these issues and others, a method and system was needed to discourage inappropriate use of publicly available, network-connected server space, without adversely affecting intended uses of the server space or restricting public access, wherein the method and system integrate seamlessly and cost-effectively with existing network protocols and server software and hardware. '994/1:48-52.

14. The recited technology provides a method and system for operating a network server, whereby the rate at which files are served from the server storage device to public users on the network depends primarily on the file size, and secondarily on other parameters, such as server load and file type. '994/1:57-61. In particular, the transfer rate of each requested file is controlled and varied during transfer of the file. '994/1:61-63. The method is particularly suitable for application to every file transferred from the server. '994/1:63-64.

15. Additionally, the method may be applied only to selected files or types of files. '994/1:64-

66. The transfer rate may be progressively slowed (decelerated) as each file is transferred from or to the network. '994/1:66-2:1. Consequently, relatively small files are not noticeably delayed, while very large files may be very substantially delayed relative to the rate at which they would be transferred without implementation of the invention. '994/2:1-5. The delaying action serves to preserve system bandwidth for transfer of smaller files, and further discourages users from requesting the transfer of large files, thereby preserving system bandwidth to an even greater degree. '994/2:5-8. The response of the server to appropriate uses can be greatly improved at the same time system performance is deliberately degraded for inappropriate uses. '994/2:8-11. Furthermore, the method is easy to implement in a variety of different systems while adding minimal system overhead. '994/2:11-14.

16. The server may be connected through a network, such as the Internet, to a plurality of client devices, and configured to transfer information between any selected one of the client devices and a memory for static storage of information. '994/2:14-18. Additionally, the method may increase the defined delay period after each execution of a packet transfer cycle (or after a selected number of cycles), thereby discouraging the transfer of unacceptably large files. '994/2:26-29. The delay period may be initiated, and the amount of increase or other adjustment to the delay period during the transfer cycle may be controlled, by selected a predetermined value from a table, or by calculating a value based on variable input parameters such as the file size, server load, network response time, and number of transfer requests from the client device within a defined prior period. '994/2:29-36. The number of information bits in the packet-that is, the packet size-may have a value that is similarly initiated and adjusted during the transfer cycle. '994/2:36-38.

17. As noted in the '994 patent, the technologies of the '994 patent solve all or some of the above problems by at least the following:

- a. Reducing or eliminating the choking and discouragement of uses that the web server is intended to serve because the greater bandwidth demands

required for the storage and exchange of inappropriate files compared to more appropriate uses. '994/1:35-37.

- b. Reducing or eliminating the amount of media files containing illegally copied content, that may lend an undesirable taint to operators of web hosting services who do not wish to be perceived as encouraging copyright violations. '994/1:37-40.
- c. Reducing or eliminating disproportionately heavy use of the server by relatively few users which may reduce the number of subscribers that the hosting service attracts. '994/1:41-44.
- d. Reducing or eliminating the devaluation of advertising space as a result of people downloading such files, and the potential for alienating advertisers who have purchased advertising space on the servers serving such files. '994/1:44-47.
- e. Preserving system bandwidth for transfer of smaller files, and further discouraging users from requesting the transfer of large files, thereby preserving system bandwidth to an even greater degree. '994/2:5-8.
- f. Greatly improving the response of the server to appropriate uses while at the same time deliberately degrading system performance for inappropriate uses. '994/2:8-11.
- g. Increasing the defined delay period after each execution of a packet transfer cycle (or after a selected number of cycles), thereby discouraging the transfer of unacceptably large files, wherein the delay period may be initiated, and the amount of increase or other adjustment to the delay period during the transfer cycle may be controlled, by selected a predetermined value from a table, or by calculating a value based on variable input parameters such as the file size, server load, network response time, and number of transfer requests from the client device within a defined prior period. '994/2:26-36.

18. The technology recited in the claims of the '994 Patent provides an inventive concept and does not claim an abstract idea. The inventive concept greatly enhances and facilitates technological methods, computer-readable media, and systems which comprise receiving, at a first computer system, information indicating a request to transfer data to a second computer system; wherein the first computer system determines a quantity of other data previously transferred to the second computer system; and in response to said determining, the first computer system throttling transfer of the data to the second computer system, wherein the throttling is based at least in part

on the determined quantity of other data previously transferred to the second computer system and comprises transmitting, to the second computer system, a first portion of the requested data at a first effective rate; and determining to delay a transmission of a second, subsequent portion of the requested data to the second computer system in order to cause the second portion to be transmitted to the second computer system at a second effective rate that is slower than the first effective rate.

19. The technology recited in the claims of the '994 patent improves the functioning of computers, it improves computer capabilities, and it improves over existing technological processes, including with respect to network access and bandwidth management and allocation, wherein a server or other computer hardware is configured to transfer information to a plurality of client devices in accordance with bandwidth-limiting and bandwidth-adjustment techniques, including reducing bandwidth based on an amount of data previously transferred to a client device, based on variable input parameters such as file size, data type, server load, network response time, and number of transfer requests from a client device within a prior period of time, by inserting delays between portions of data being transmitted determined based on the various factors above, or adjusted dynamically.

20. One inventive component of the '994 patent is improving network access and bandwidth management and allocation in ways that are necessarily rooted in computer, specifically network, technology to overcome problems specifically arising in the realm of computer networks. The claims recite an invention that was not merely a routine or conventional use of conventional devices and technologies. The claimed invention was not practiced by others prior to the '994 invention, nor was it a well-known, fundamental economic or conventional business practice, nor was it a practice to which general-purpose computer components were added after the fact.

21. Claim 1 of the '994 Patent covers the following:

A method, comprising:  
receiving, at a first computer system, information indicating a request to transfer

data to a second computer system;  
the first computer system determining a quantity of other data previously transferred to the second computer system; and  
in response to said determining, the first computer system throttling transfer of the data to the second computer system, wherein the throttling is based at least in part on the determined quantity of other data previously transferred to the second computer system and comprises:  
transmitting, to the second computer system, a first portion of the requested data at a first effective rate; and  
determining to delay a transmission of a second, subsequent portion of the requested data to the second computer system in order to cause the second portion to be transmitted to the second computer system at a second effective rate that is slower than the first effective rate.

22. Independent claims 1, 8, and 16 of the '994 Patent have many similarities with each other, and are each valid for at least the same reasons. Claim 8 comprises computer-readable memory having instructions stored thereon that are executable by a first computer system to cause the first computer system to perform operations comprising the method described in claim 1. Claim 16 comprises a computer comprising a processor and storage device having instructions stored thereon that are executable by the processor to cause the computer system to perform operations comprising the method described in claim 1.

23. Neither claim 1 nor any other claims of the '994 Patent is directed to an abstract idea. Neither claim 1 nor any other claims of the '994 Patent preempt any abstract idea or otherwise preempt anything that would render them unpatentable. For example, one is free to practice the prior art of record and the prior art referenced in the specification. The '994 claims do not improperly inhibit further discovery by tying up any building blocks of human ingenuity or technological work.

24. The '994 Patent claims cannot be practiced by a human alone and there exists no human analogue to the methods, computer-readable media, or systems claimed in the '994 Patent. The claims are specifically directed to, *inter alia*, network access and bandwidth management and allocation, wherein a server or other computer hardware is configured to transfer information to a

plurality of client devices in accordance with bandwidth-limiting and bandwidth-adjustment techniques, including reducing bandwidth based on an amount of data previously transferred to a client device, based on variable input parameters such as file size, data type, server load, network response time, and number of transfer requests from a client device within a prior period of time, by inserting delays between portions of data being transmitted determined based on the various factors above, or adjusted dynamically. These things exist only in the context of computers, and specifically computer networks.

25. The claims of the '994 Patent cover, among other things, specific applications of specific methods, specific computer-readable media, and computer systems for transferring information to a plurality of client devices in accordance with bandwidth-limiting and bandwidth-adjustment techniques, including reducing bandwidth based on an amount of data previously transferred to a client device, based on variable input parameters such as file size, data type, server load, network response time, and number of transfer requests from a client device within a prior period of time, by inserting delays between portions of data being transmitted determined based on the various factors above, or adjusted dynamically, including in order to achieve the aims of the invention as stated above, and to overcome the shortcomings in the prior art, including prior art network access and bandwidth management and allocation methods, computer-readable media, and systems, as noted above. The claims comprise, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing network access and bandwidth management and allocation methods, computer-readable media, and systems. Properly understood, the claimed technology constitutes the application of certain ideas, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions.

26. Further, including when claim 1 is viewed as a whole at the time of the invention, there are

sufficient unconventional, non-routine, novel, meaningful, and inventive claim limitations to claim 1 that are sufficient to ensure that the claim in practice amounts to significantly more than merely a patent on any abstract idea or patent ineligible concept. Those unconventional, non-routine, novel, meaningful, and inventive claim limitations comprise the following: receiving, at a first computer system, information indicating a request to transfer data to a second computer system; wherein the first computer system determines a quantity of other data previously transferred to the second computer system; and in response to said determining, the first computer system throttling transfer of the data to the second computer system, wherein the throttling is based at least in part on the determined quantity of other data previously transferred to the second computer system and comprises transmitting, to the second computer system, a first portion of the requested data at a first effective rate; and determining to delay a transmission of a second, subsequent portion of the requested data to the second computer system in order to cause the second portion to be transmitted to the second computer system at a second effective rate that is slower than the first effective rate.

27. The invention of claim 1 uses computer technology to overcome the shortcomings of prior art overcome the shortcomings of prior art methods, computer-readable media, and systems, as noted above, including state of the art network access and bandwidth management and allocation methods, computer-readable media, and systems, which lacked, among other things, the ability to perform the foregoing steps. As such, claim 1 overcomes a technical problem and effects an improvement to a specific technology or technical field, namely computer networks and networking. One such inventive component of the '994 Patent is improving network access and bandwidth management and allocation in ways that are necessarily rooted in computer technology to overcome problems specifically arising in the realm of computer networks, including the Internet. The claims recite an invention that was not merely a routine or conventional use of the Internet.

28. Claim 1 is not directed to a longstanding commercial practice nor does it merely apply generic or general purpose computers to prior art methods, computer-readable media, or systems. Including as noted above, prior art methods, computer-readable media, and systems were incapable of the functionality of the method of claim 1. The technology claimed in the '994 Patent does not preempt all types of network access and bandwidth management and allocation or anything else. For example, the prior art cited on the face of the '994 Patent remains available for practice by Defendants, and the '994 Patent claims do not preempt practice of those prior art methods, computer-readable media, or systems.

29. Dependent claim 4 of the '994 Patent has many similarities with claim 1, and it is valid for at least the same reasons. Claim 4 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise the request to transfer data specifying a particular data file.

30. Dependent claim 6 of the '994 Patent has many similarities with claim 1, and it is valid for at least the same reasons. Claim 6 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise the data packets being used to transfer the data to the second computer system; and wherein determining the quantity of other data previously transferred to the second computer system is based, at least in part, on data transferred during a defined prior period of time.

31. Independent claim 8 of the '994 Patent has many similarities with claims 1 and 16, and is valid for at least the same reasons. Claim 8 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise computer-readable memory having instructions stored thereon that are executable by a first computer system to cause the first computer system to perform operations comprising receiving, at the first computer system, information indicating a request to transfer data to a second

computer system; determining a quantity of other data previously transferred to the second computer system; and in response to said determining, causing transfer of the data to the second computer system to be throttled, wherein the throttling is based at least in part on the determined quantity of other data previously transferred to the second computer system and comprises transmitting a first portion of the requested data to the second computer system at a first effective rate; and determining to delay transmission of a second, subsequent portion of the requested data to the second.

32. Claim 8 of the '994 Patent covers, among other things, non-transitory computer-readable media executed on a data processing system comprising specific applications of specific methods by a specialized computer of for transferring information to a plurality of client devices in accordance with bandwidth-limiting and bandwidth-adjustment techniques, including reducing bandwidth based on an amount of data previously transferred to a client device, based on variable input parameters such as file size, data type, server load, network response time, and number of transfer requests from a client device within a prior period of time, by inserting delays between portions of data being transmitted determined based on the various factors above, or adjusted dynamically, including in order to achieve the aims of the invention as stated above, and to overcome the shortcomings in the prior art, including prior art network access and bandwidth management and allocation methods, computer-readable media, and systems, as noted above. The claims comprise, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing network access and bandwidth management and allocation methods, computer-readable media, and systems. Properly understood, the claimed technology constitutes the application of certain ideas, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions, including in order to achieve the aims of the

invention as stated above, and to overcome the shortcomings in the prior art, including prior art network access and bandwidth management and allocation methods, computer-readable media, and systems, as noted above. Claim 8 comprises, among other things, specific applications or improvements to technologies in the marketplace, including improvements to the existing network access and bandwidth management and allocation methods, computer-readable media, and systems. Properly understood, the claimed technology constitutes the application of certain ideas, and it necessitates the use of discrete computer hardware and software components configured and programmed in a particular way that enable performance of the specified functions, including through non-transitory computer-readable media having instructions stored thereon.

33. Further, including when claim 8 is viewed as a whole, there are sufficient unconventional, non-routine, novel, meaningful, and inventive claim limitations to claim 8 that are sufficient to ensure that the claim in practice amounts to significantly more than merely a patent on any abstract idea or patent ineligible concept. Those unconventional, non-routine, novel, meaningful, and inventive claim limitations comprise the following: computer-readable memory having instructions stored thereon that are executable by a first computer system to cause the first computer system to perform operations comprising receiving, at the first computer system, information indicating a request to transfer data to a second computer system; determining a quantity of other data previously transferred to the second computer system; and in response to said determining, causing transfer of the data to the second computer system to be throttled, wherein the throttling is based at least in part on the determined quantity of other data previously transferred to the second computer system and comprises transmitting a first portion of the requested data to the second computer system at a first effective rate; and determining to delay transmission of a second, subsequent portion of the requested data to the second.

34. In addition to what has been stated above, the invention of claim 8 uses computer

technology to overcome the shortcomings of prior art methods, computer-readable media, and systems, including state of the art network access and bandwidth management and allocation methods, computer-readable media, and systems, which lacked, among other things, the ability to perform the foregoing steps. As such, claim 8 overcomes a technical problem and effects an improvement to a specific technology or technical field, namely computer networks and networking. One such inventive component of the '994 Patent is improving network access and bandwidth management and allocation in ways that are necessarily rooted in computer technology to overcome problems specifically arising in the realm of computer networks, including the Internet. The claims recite an invention that was not merely a routine or conventional use of the Internet.

35. In addition to what has been stated above, claim 8 is not directed to a longstanding commercial practice nor does it merely apply generic or general purposes computers to prior art methods, computer-readable media, or systems. Including as noted above, prior art methods, computer-readable media, or systems were incapable of the functionality of the method, and computer-readable media performing said method, of claim 8. The technology claimed in the '994 Patent does not preempt all types of network access and bandwidth management and allocation or anything else. For example, the prior art cited on the face of the '994 Patent remains available for practice by Defendants, and the '994 Patent claims do not preempt practice of those prior art methods, computer-readable media, or systems.

36. Dependent claim 13 of the '994 Patent has many similarities with claim 8, and it is valid for at least the same reasons. Claim 13 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise the request to transfer data to the second computer system being a request for a file hosted by a server running on the first computer system.

37. Dependent claim 14 of the '994 Patent has many similarities with claim 8, and it is valid for at least the same reasons. Claim 14 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise determining the quantity of other data previously transmitted to the second computer system is based, at least in part, on network identification information associated with the second computer system.

38. Dependent claim 15 of the '994 Patent has many similarities with claim 8, and it is valid for at least the same reasons. Claim 15 also contains additional unconventional, non-routine, novel, meaningful, and inventive claim limitations, including when the claim is viewed as a whole, which comprise causing the transfer of the data to the second computer system to be throttled is based, at least in part, on the quantity of other data previously transmitted to the second computer system being greater than a threshold amount of data.

#### **COUNT I – INFRINGEMENT OF U.S. PATENT NO. 8,577,994**

39. Plaintiff refers to and incorporates herein the allegations in the above paragraphs.

40. The '994 Patent, entitled "Management of Bandwidth Allocation in a Network Server," was duly and legally issued by the USPTO on November 5, 2013 after full and fair examination.

41. The claims of the '994 Patent cover, *inter alia*, methods, computer-readable media, and systems, including associated with computers and computer networks, for receiving, at a first computer system, information indicating a request to transfer data to a second computer system; wherein the first computer system determines a quantity of other data previously transferred to the second computer system; and in response to said determining, the first computer system throttling transfer of the data to the second computer system, wherein the throttling is based at least in part on the determined quantity of other data previously transferred to the second computer system and comprises transmitting, to the second computer system, a first portion of the requested data at a

first effective rate; and determining to delay a transmission of a second, subsequent portion of the requested data to the second computer system in order to cause the second portion to be transmitted to the second computer system at a second effective rate that is slower than the first effective rate.

42. Comcast has infringed and is now infringing, including literally, jointly, and/or equivalently, the '994 patent, including at least claims 1, 4, 6, 8, 13, 14, & 15 in this judicial district, the State of Texas, and elsewhere in the United States, in violation of 35 U.S.C. § 271 through actions comprising the practicing, making, using, offering for sale, and/or selling, without authority from Plaintiff, methods, computer-readable media, and systems, including associated with computers and computer networks, for receiving, at a first computer system, information indicating a request to transfer data to a second computer system; wherein the first computer system determines a quantity of other data previously transferred to the second computer system; and in response to said determining, the first computer system throttling transfer of the data to the second computer system, wherein the throttling is based at least in part on the determined quantity of other data previously transferred to the second computer system and comprises transmitting, to the second computer system, a first portion of the requested data at a first effective rate; and determining to delay a transmission of a second, subsequent portion of the requested data to the second computer system in order to cause the second portion to be transmitted to the second computer system at a second effective rate that is slower than the first effective rate.

43. Comcast infringes the '994 Patent by and through at least its throttling of the networks of its customers and/or end users, including by delaying transmissions of files on its network based, at least in part, on the end user's prior data usage. Specifically, Comcast infringes by and through at least its practicing of the patented method, making and/or using computers, including computers comprising computer-readable media specifically made and/or used for performing the patented method, and/or making and/or using computer systems specifically made and/or used for

performing the patented method, including by providing and throttling Internet and other network services, including at least the Comcast services comprising Comcast Xfinity Internet and Comcast Business Internet, and Comcast Mobile Internet.

44. Specifically, Comcast infringes the '994 Patent by offering internet services to its customers that employ throttling practices in its current congestion management system, which, *inter alia*, delay transmissions of files on Defendants' networks based, at least in part, on the prior data usage of Defendants' customers and/or end users, for example:

#### Comcast's Current Congestion Management Technique

If a certain area of the network nears a state of congestion, our congestion management technique will ensure that all customers have a fair share of network access. This technique will identify which customer accounts are using the greatest amounts of bandwidth, and their Internet traffic will be temporarily managed until the congestion period passes. Customers will still be able to do anything they want online, but they could experience longer times to download or upload files or slower web surfing.

Our technique does **not** manage congestion based on specific online activities, protocols or applications that a customer uses. Rather, it only focuses on the heaviest users in real time, so that congestion periods tend to be fleeting and sporadic.

It is important to note that the effect of this technique is temporary and has nothing to do with a customer's aggregate monthly data usage. Rather, it's dynamic and based on prevailing network conditions as well as a customer's data usage over a very recent period of time.

Comcast will periodically update the congestion management system configuration to improve the efficacy of the platform but this will not impact specific online activities, protocols or applications that a customer uses.

Our [congestion management system](#) was disclosed in detail in 2008 to the Federal Communications Commission and this filing has since been disclosed in an [Internet Engineering Task Force](#) (IETF) document in [RFC 6057](#).

*See, e.g.*, XFINITY support page on Network Management Congestion at <https://www.xfinity.com/support/internet/network-management-information/>. As detailed in the Congestion Management System ("CMS") disclosure to the FCC in 2008 (*see, e.g.*, [http://downloads.comcast.net/docs/Attachment\\_B\\_Future\\_Practices.pdf](http://downloads.comcast.net/docs/Attachment_B_Future_Practices.pdf)) and discussed in the Internet Engineering Task Force ("IETF") publication RFC 6057 on "Comcast's Protocol-Agnostic Congestion Management System" (*see, e.g.*, <https://tools.ietf.org/html/rfc6057>), Comcast manages its network by throttling traffic coming from a cable modem in an Extended High Consumption

State when the CMTS port is in a Near Congestion State. Throttling occurs by deprioritizing the traffic coming from a cable modem that is in an Extended High Consumption State. CMTS ports have what is commonly called a “scheduler,” which always gives prioritized traffic priority, and deprioritized traffic is processed on a space-available basis. This practice results in some subscribers experiencing lower internet speeds, including based on the subscriber’s prior data usage as claimed in independent claims 1 and 8 of the ‘994 Patent.

45. Comcast’s Internet services and CMS, as detailed in the CMS disclosure to the FCC in 2008 (*see, e.g.*, [http://downloads.comcast.net/docs/Attachment\\_B\\_Future\\_Practices.pdf](http://downloads.comcast.net/docs/Attachment_B_Future_Practices.pdf)) and discussed in IETF publication RFC 6057 (*see, e.g.*, <https://tools.ietf.org/html/rfc6057>), further infringe dependent claims 4, 6, 13, 14, and 15 of the ‘994 Patent. Comcast’s Internet services and CMS include features such as the subscriber’s cable modem specifically requesting a particular data file; determining bandwidth usage data for a subscriber (amount of data sent and received by a cable modem over a period of time); a subscriber’s cable modem requesting a file hosted by Comcast, such as Comcast’s website; network identification information of the cable modem sent to the network in determining a subscriber’s bandwidth usage data; and throttling based on a subscriber’s overall upstream or downstream usage reaching a pre-determined threshold amount.

46. Comcast has had actual notice of the ‘994 patent at least since July 18, 2017, which is the date that Comcast and its affiliates were served with process in this case. Plaintiff’s Original Complaint (Doc. 1) notified Comcast that it had been infringing, and have been accused of infringing, the ‘994 patent. It also recites facts which state a valid and plausible claim of infringement. Yet despite being put on such notice, Comcast has not ceased its infringing activities. Without limitation, Comcast continues to throttle unlimited data customers, including by deprioritizing their data, and it continues to throttle other customers who exceed their monthly data allotment, including by throttling their bandwidth. On information and belief, Comcast has a

significant need to continue its infringing throttling activities which are infringing the '994 patent, including in order to stay competitive and to avoid losing customers. At a minimum, with so much is at stake, Comcast is willfully and deliberately continuing to infringe the '994 patent post-suit despite being notified of the patent and their infringement thereof. Plaintiff believes and contends that Comcast's continuance of their clear and inexcusable infringement of the '994 patent post suit is willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, and/or characteristic of a pirate.

47. On account of the foregoing, Plaintiff contends such post-suit activities by Comcast qualify this as an egregious case of misconduct beyond typical infringement, entitling Plaintiff to enhanced damages. Thus, Plaintiff requests an award of enhanced damages, including treble damages, pursuant to 35 U.S.C. § 284. Plaintiff reserves the right to take discovery regarding Comcast's first actual notice of the '994 Patent, to the extent it preceded this suit being filed.

48. Each of Comcast's aforesaid activities have been without authority and/or license from Plaintiff.

49. By way of its infringing activities, Comcast has caused and continue to cause Plaintiff to suffer damages, and Plaintiff is entitled to recover from Comcast the damages sustained by Plaintiff as a result of Comcast's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

50. Comcast's infringement of Plaintiff's rights under the patent-in-suit will continue to damage Plaintiff, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court.

51. Plaintiff also requests that the Court make a finding that this is an exceptional case entitling Plaintiff to recover its attorneys' fees and costs pursuant to 35 U.S.C. § 285.

### **JURY DEMAND**

52. Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure on all issues so triable.

### **PRAYER FOR RELIEF**

53. Plaintiff respectfully requests that the Court find in their favor and against Comcast, and that the Court grant Plaintiff the following relief:

- A. An adjudication that one or more claims of the patent-in-suit has been directly and/or indirectly infringed, either literally and/or under the doctrine of equivalents, by Comcast;
- B. An award to Plaintiff of damages adequate to compensate Plaintiff for Comcast's past infringement, together with pre-judgment and post-judgment interest, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses, and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;
- C. A grant of preliminary and permanent injunction pursuant to 35 U.S.C. § 283, enjoining Comcast and all persons, including its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or participation therewith, from making, using, offering to sell, or selling in the United States or importing into the United States any methods, systems, or computer readable media that infringe any claim of the patent-in-suit, or contributing to or inducing the same by others from further acts of infringement with respect to the claims of the patent-in-suit;
- D. That this Court declare that Comcast's post-suit infringement has been, and continues to be, willful, and, accordingly, award enhanced damages, including treble damages, pursuant to 35 U.S.C. § 284;
- E. That this Court declare this to be an exceptional case and award Plaintiff reasonable

attorneys' fees and costs in accordance with 35 U.S.C. § 285; and

- F. A judgment and order requiring Comcast to pay Plaintiff its damages, costs, expenses, fees, and prejudgment and post-judgment interest for Comcast's infringement of the patent-in-suit as provided under 35 U.S.C. §§ 284 and/or 285; and
- G. Any and all further relief for which Plaintiff may show itself justly entitled that this Court deems just and proper.

October 19, 2017

Respectfully submitted,

/s/ John J. Edmonds  
John J. Edmonds – Lead Counsel  
jedmonds@ip-lit.com  
Texas Bar No. 789758  
Stephen F. Schlather  
sschlather@ip-lit.com  
Texas Bar No. 24007993  
Shea N. Palavan  
spalavan@ip-lit.com  
Texas Bar No. 24083616  
Brandon G. Moore  
bmoore@ip-lit.com  
Texas Bar No. 24082372  
Eric R. Carr  
ecarr@ip-lit.com  
Texas Bar No. 24091261  
**COLLINS, EDMONDS,  
SCHLATHER & TOWER, PLLC**  
1616 South Voss Road, Suite 125  
Houston, Texas 77057  
Telephone: (281) 501-3425  
Facsimile: (832) 415-2535

*Attorneys for Plaintiff,  
Preferential Networks IP, LLC*

**CERTIFICATE OF SERVICE**

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3). Any other counsel of record will be served by electronic mail, facsimile transmission and/or first class mail on this same date.

October 19, 2017

/s/ John J. Edmonds  
John J. Edmonds