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8 **UNITED STATES DISTRICT COURT**
9 **NORTHERN DISTRICT OF CALIFORNIA**

10 **SAN FRANCISCO DIVISION**

11 **OROSTREAM LLC,**
12 Plaintiff,
13 v.
14 **ACTIONTEC ELECTRONICS, INC.,**
15 Defendant.

PATENT

Case No. _____

**ORIGINAL COMPLAINT FOR
PATENT INFRINGEMENT
AGAINST ACTIONTEC
ELECTRONICS, INC.**

DEMAND FOR JURY TRIAL

16 Plaintiff Orostream LLC files this Original Complaint for Patent Infringement against
17 Actiontec Electronics, Inc., and would respectfully show the Court as follows:

18 **I. THE PARTIES**

19 1. Plaintiff Orostream LLC (“Orostream” or “Plaintiff”) is a Texas limited liability
20 company with its principal place of business at 3401 Custer Road, Suite 125-B, Plano, Texas
21 75023.

22 2. On information and belief, defendant Actiontec Electronics, Inc. (“Defendant”), is
23 a corporation organized and existing under the laws of the State of California. Defendant has a
24 place of business at 3301 Olcott St, Santa Clara, CA 95054.
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II. JURISDICTION AND VENUE

3. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction of such action under 28 U.S.C. §§ 1331 and 1338(a).

4. On information and belief, Defendant is subject to this Court’s specific and general personal jurisdiction, pursuant to due process and the California Long-Arm Statute, due at least to its business in this forum, including at least a portion of the infringements alleged herein. Furthermore, Defendant is subject to this Court’s specific and general personal jurisdiction because Defendant is a California corporation.

5. Without limitation, on information and belief, within this State and this District, Defendant has used the patented inventions thereby committing, and continuing to commit, acts of patent infringement alleged herein. In addition, on information and belief, Defendant has derived revenues from its infringing acts occurring within California and the Northern District of California. Further, on information and belief, Defendant is subject to the Court’s general jurisdiction, including from regularly doing or soliciting business, engaging in other persistent courses of conduct, and deriving substantial revenue from goods and services provided to persons or entities in California and the Northern District of California. Further, on information and belief, Defendant is subject to the Court’s personal jurisdiction at least due to its sale of products and/or services within California and the Northern District of California. Defendant has committed such purposeful acts and/or transactions in California and the Northern District of California such that it reasonably should know and expect that it could be haled into this Court as a consequence of such activity.

6. Venue is proper in this district under 28 U.S.C. § 1400(b). On information and belief, Defendant is incorporated in California, and it has a place of business within this District.

1 On information and belief, from and within this District Defendant has committed at least a
2 portion of the infringements at issue in this case.

3 7. For these reasons, personal jurisdiction exists and venue is proper in this Court
4 under 28 U.S.C. § 1400(b).

5
6 **III. COUNT I**
(PATENT INFRINGEMENT OF UNITED STATES PATENT NO. 5,768,508)

7 8. Plaintiff incorporates the above paragraphs herein by reference.

8 9. On June 16, 1998, United States Patent No. 5,768,508 (“the ‘508 Patent”) was
9 duly and legally issued by the United States Patent and Trademark Office. The ‘508 Patent is
10 titled “Computer Network System and Method for Efficient Information Transfer.” A true and
11 correct copy of the ‘508 Patent is attached hereto as Exhibit A and incorporated herein by
12 reference.
13

14 10. Orostream is the assignee of all right, title and interest in the ‘508 patent,
15 including all rights to enforce and prosecute actions for infringement and to collect damages for
16 all relevant times against infringers of the ‘508 Patent. Accordingly, Plaintiff possesses the
17 exclusive right and standing to prosecute the present action for infringement of the ‘508 Patent
18 by Defendant.
19

20 11. The ‘508 patent has been cited as prior art during the prosecution history of over
21 100 subsequently-issued United States patents, including patents assigned to IBM, Intel,
22 Facebook, Gateway, Hitachi, Microsoft, Nokia, Oracle, and Veritas Software.

23 12. **Direct Infringement.** Upon information and belief, Defendant has been directly
24 infringing at least claim 26 of the ‘508 patent in California and the Northern District of
25 California and elsewhere in the United States, by using Wi-Fi routers that prioritize Internet
26 traffic, including Gigabit Wireless Router (“Accused Instrumentality”), to perform a method of
27 connecting an information provider and a user node of a computer network, performed by a
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1 master program. The Accused Instrumentality performs registering the user node (*e.g.*, an
2 Internet enabled user device such as a laptop, mobile phone) at a master node (*e.g.*, the Accused
3 Instrumentality). The user node (*e.g.*, an Internet enabled user device such as a laptop, mobile
4 phone) registers with the Accused Instrumentality by connecting (wired or wirelessly) with the
5 accused instrumentalities (with or without using a password).

6
7 13. The Accused Instrumentality performs receiving, through the master node (*e.g.*,
8 the Accused Instrumentality), a node ID (*e.g.*, MAC address) from the user node (*e.g.*, an
9 Internet enabled user device such as a laptop, mobile phone). (*See, e.g.*,
10 <https://www.actiontec.com/wp-content/uploads/2017/02/R3000-ProductSheet.pdf>;
11 <https://fccid.io/LNQR3000/User-Manual/Quick-Start-2541450.pdf>;
12 [https://data2.manualslib.com/pdf5/105/10460/1045927-
14 actiontec/r3000.pdf?e204003e021ca5bddfb945220f75e095](https://data2.manualslib.com/pdf5/105/10460/1045927-
13 actiontec/r3000.pdf?e204003e021ca5bddfb945220f75e095)). A MAC (Media Access Control)
15 address is a unique alpha-numeric identifier used to distinguish a device from others on a
16 network. (*See, e.g., id.*; [https://technet.microsoft.com/en-us/library/cc757419\(v=ws.10\).aspx](https://technet.microsoft.com/en-us/library/cc757419(v=ws.10).aspx)).

17 14. The Accused Instrumentality accesses a master database for profile information
18 corresponding to the node ID. For example, the Accused Instrumentality accesses an internal
19 table or a database for data to be appropriately transmitted to a particular user device that made
20 the request for the data. The internal table or database is accessed for profile information, for
21 example, a DHCP lease table is maintained in the Accused Instrumentality which stores profile
22 information available to the Accused Instrumentality such as a MAC address, IP address, or
23 device name corresponding to a user device. The Accused Instrumentality forms the internal
24 table/database with the available profile information corresponding to the node ID, such as the
25 MAC address. (*See, e.g.*, [https://www.actiontec.com/wp-content/uploads/2017/02/R3000-
27 ProductSheet.pdf](https://www.actiontec.com/wp-content/uploads/2017/02/R3000-
26 ProductSheet.pdf); <https://fccid.io/LNQR3000/User-Manual/Quick-Start-2541450.pdf>;
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1 <https://data2.manualslib.com/pdf5/105/10460/1045927->
2 [actiontec/r3000.pdf?e204003e021ca5bddfb945220f75e095](https://data2.manualslib.com/pdf5/105/10460/1045927-actiontec/r3000.pdf?e204003e021ca5bddfb945220f75e095)).

3 15. The Accused Instrumentality transmits to the user node (*e.g.*, an Internet enabled
4 user device such as a laptop, mobile phone), through the master node (*e.g.*, the Accused
5 Instrumentality), a target information reference (*e.g.*, address information for accessing a web
6 page of a file categorized in high priority group that a user requested) corresponding to the
7 accessed profile information (*e.g.*, requested content is tied to the IP address of the particular
8 user device that requested it). The target information reference (*e.g.*, address information
9 identifying a server or computer that a user will need to obtain information from in order to
10 access a web page or an FTP file) is a pointer to target information to be delivered to the user
11 node (*e.g.*, a web page or FTP file to be downloaded to an Internet enabled user device such as a
12 laptop, mobile phone, etc.) while transferring non-target information without additional
13 communication delay (*e.g.*, higher priority applications such as video conferencing (audio/video)
14 and IP phone access, which the accused instrumentality gives a higher priority class) will be
15 prioritized (*e.g.*, high priority group is “real-time” whereas low priority group is “non-real
16 time”).

17 16. For example, the Accused Instrumentality will receive address information
18 pointing to the server or computers delivering content (*e.g.*, data packets sent from other servers
19 or computers will contain the IP address of the server/computer in the data packet’s header).
20 These data packets are forwarded to the appropriate device (which requested access to the
21 Internet information) based upon a destination IP address belonging to a particular device
22 (corresponding to the accessed profile information for the particular device that requested access
23 to the Internet information, or the device seeking to receive data from a particular Internet
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1 address) that is also within the header. The Accused Instrumentality will reference its routing
2 table in order to forward data packets to an addressed device accordingly.

3 17. Furthermore, the Accused Instrumentality has QOS settings that allow
4 prioritization of certain Internet traffic while allowing other traffic to continue. For example, a
5 file download (e.g., target information such as basic internet access, FTP access, or Database
6 access that are in low priority group and therefore “non-real time”) will be delivered to the user
7 device while transferring non-target information without additional communication delay (video
8 conferencing (audio/video) and IP Phone access data (in high priority group)) is prioritized and
9 transferred without delay). The Accused Instrumentality can classify particular wireless data
10 packets as network traffic that is non-real time sensitive (e.g., target information) and place a
11 lower priority on the transfer of target information (e.g., background activity such as downloads)
12 so as not to delay the continued transfer of non-target information (e.g., foreground activity such
13 as a video conferencing (audio/video) and IP Phone access).
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- Interfaces**
 - One 10/100/1000 BaseT Ethernet WAN
 - Four 10/100/1000 BaseT Ethernet LAN
 - Two USB 3.0 Host Port
- Wireless**
 - 802.11ac 4x4 antenna configuration
 - 802.11n 3x3 antenna configuration
 - 802.11 b/g
 - Multiple SSID
 - WPS
 - Wireless Security
 - Wi-Fi Protected Access (WPA, WPA2 supporting AES and TKIP encryption)
 - WEP 64 and 128 bit encryption
 - Pre-Shared Key (PSK)
 - MAC Address Filtering
- Remote Management**
 - User-enable Remote Management
 - TR069 Carrier Remote Management
 - TR064 Local Management
- Advanced Security**
 - Firewall
 - Stateful Packet Inspection
 - NAT
 - Website Blocking
 - Web Service Blocking
 - Access Control
 - Denial of Service (DOS) Protection
 - Intrusion Detection
 - IP Protocol Filtering
- QoS Support**
 - DSCP prioritization
 - ToS prioritization

(See, e.g., <https://fccid.io/LNQR3000/User-Manual/Quick-Start-2541450.pdf>).

QoS Settings

The QoS Settings screens allow you to prioritize certain types of data traffic (video, for example) over other data traffic on the R3000's network. Both incoming data traffic (QoS Upstream) and outgoing data traffic (QoS Downstream) can be configured.

(See, e.g., <https://data2.manualslib.com/pdf5/105/10460/1045927-actiontec/r3000.pdf?e204003e021ca5bddfb945220f75e095>).

MDSU Aggregation

Enable/disable MDSU aggregation by clicking in the appropriate button.

MPDU Aggregation

Enable/disable MPDU aggregation by clicking in the appropriate button.

WMM
Enable/disable WMM by clicking in the appropriate button.

(See, e.g., *id.*).

Part 3 - User Priorities, Access Categories and Queues
The first QoS design change implemented as part of the 802.11e amendment and WMM certification, are User Priorities, Access Categories, and Queuing Structures.

The IEEE 802.11e amendment defines 8 user priorities (UP) for class of service (CoS) definition. These user priorities were established for layer 2 data link frame prioritization in alignment with earlier CoS standards including 802.1D (based on the work within the 802.1p task group).

These 8 user priorities are grouped into 4 access categories, containing two user priorities each. User priority 0 is placed into the Best Effort AC instead of the Background AC for backwards compatibility with non-QoS stations. This was done to preserve compatibility, as the IEEE deemed QoS functionality as an optional component for certification citing the lack of need for QoS by many legacy devices and applications. The mapping between 802.1D, 802.11e UP, and Access Category is show below.

Table 9-1—UP-to-AC mappings

Priority	UP (Same as 802.1D user priority)	802.1D designation	AC	Designation (informative)
Lowest ↓ Highest	1	BK	AC_BK	Background
	2	—	AC_BK	Background
	0	BE	AC_BE	Best Effort
	3	EE	AC_BE	Best Effort
	4	CL	AC_VI	Video
	5	VI	AC_VI	Video
	6	VO	AC_VO	Voice
	7	NC	AC_VO	Voice

(See, e.g., <http://revolutionwifi.blogspot.com/2010/08/wireless-qos-part-3-user-priorities.html>).

IP QoS Upstream Settings

Enabling the IP QoS feature, allows for the prioritization of certain types of traffic (such as VoIP) before standard data traffic. Traffic shaping your network with QoS can also increase application performance and prevent your network from becoming overloaded. Follow Steps 1-7 below to setup IP QoS.

1. Check the boxes below to enable QoS and to enable QoS in Trusted Mode. Then, name the Rule.

Upstream QoS: Enable Disable

2. Select Default QoS or Custom QoS Below.

QoS Type: Default QoS Custom QoS

3. Click "Apply" to save your settings.

QoS Rule List:

NAME	Priority	Protocol	Source IP/MAC Range	Source Port Range	Dest IP Range	Dest Port Range	Edit
No Entries Defined							

(See, e.g., <https://data2.manualslib.com/pdf5/105/10460/1045927-actiontec/r3000.pdf?e204003e021ca5bddfb945220f75e095>).

1. Click in the Enable radio button next to Upstream QoS to activate.
2. Select the type of QoS to enable. If selecting Custom QoS, you will have to enter a number of values: Name, Queue Priority, Reserved Bandwidth, Protocol, TOS Bit Value, Source IP or MAC address information, Destination IP Address, Netmask IP Address, and Port Range. Do not select Custom QoS unless you are an experienced network technician. For most wireless networks, the Default

(See, e.g., *id.*).

QoS Downstream

1. Click QoS Downstream from the menu on the left side of any Advanced Setup screen. The QoS Downstream screen appears.

IP QoS Upstream Settings

Enabling the IP QoS feature, allows for the prioritization of certain types of traffic (such as VoIP) before standard data traffic. Traffic shaping your network with QoS can also increase application performance and prevent your network from becoming overloaded. Follow Steps 1-7 below to setup IP QoS.

1. Check the boxes below to enable QoS and to enable QoS in Trusted Mode. Then, name the Rule.
Upstream QoS: Enable Disable
2. Select Default QoS or Custom QoS Below.
QoS Type: Default QoS Custom QoS
3. Click "Apply" to save your settings.

Apply

QoS Rule List:

NAME	Priority	Protocol	Source IP/MAC Range	Source Port Range	Dest IP Range	Dest Port Range	Edit
No Entries Defined							

(See, e.g., *id.*).

1. Click in the Enable radio button next to Downstream QoS to activate.
2. Select the type of QoS to enable. If selecting Custom QoS, you will have to enter a number of values: Name, Queue Priority, Reserved Bandwidth, Protocol, TOS Bit Value, Source IP or MAC address information, Destination IP Address, Netmask IP Address, and Port Range. Do not select Custom QoS unless you are an experienced network technician. For most wireless networks, the Default QoS option should be sufficient.

(See, e.g., *id.*).

18. Plaintiff has been damaged because of Defendant's infringing conduct. Defendant is thus liable to Plaintiff for damages in an amount that adequately compensates Plaintiff for such Defendant's infringement of the '508 patent, *i.e.*, in an amount that by law

1 cannot be less than would constitute a reasonable royalty for the use of the patented technology,
2 together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

3 **IV. JURY DEMAND**

4 Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of
5 any issues so triable by right.

6 **V. PRAYER FOR RELIEF**

7 WHEREFORE, Plaintiff respectfully requests that the Court find in its favor and against
8 Defendant, and that the Court grant Plaintiff the following relief:
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- 10 a. Judgment that one or more claims of United States Patent No. 5,768,508 have
- 11 been infringed, either literally and/or under the doctrine of equivalents, by
- 12 Defendant;
- 13 b. Judgment that Defendant account for and pay to Plaintiff all damages to and costs
- 14 incurred by Plaintiff because of Defendant’s infringing activities and other
- 15 conduct complained of herein;
- 16 c. That Plaintiff be granted pre-judgment and post-judgment interest on the damages
- 17 caused by Defendant’s infringing activities and other conduct complained of
- 18 herein; and
- 19 d. That Plaintiff be granted such other and further relief as the Court may deem just
- 20 and proper under the circumstances.

21 March 27, 2019

22 OF COUNSEL:

23 David R. Bennett

24 (Application for Admission *Pro Hac Vice* to

25 be filed)

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JURY DEMAND

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

March 27, 2019

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CERTIFICATE OF SERVICE

I hereby certify that on March 27, 2019, I electronically filed the above documents with the Clerk of Court using CM/ECF which will send electronic notification of such filings to all registered counsel.

/s/Steven A Nielsen
Steven A. Nielsen