

**IN THE UNITED STATES DISTRICT COURT
FOR NORTHERN DISTRICT OF CALIFORNIA**

Xiaohua Huang *Pro Se*,

Plaintiff,

v.

Trifecta Networks LLC

Defendant.

Civil Action No.:3:21-cv-04721-TSH

**Mr. Xiaohua Huang’s revised complaint
against Trifecta Networks, LLC. For
Patent Infringement**

TRIAL BY JURY DEMANDED

COMPLAINT FOR INFRINGEMENT OF PATENT

This is a civil action. Plaintiff, Xiaohua Huang (“Plaintiff” or “Huang”), hereby files its Complaint for Patent Infringement against Defendant, THAT’S Trifecta Networks LLC (“Trifecta Networks” or “Defendant”) and respectfully alleges as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement under the Patent Laws of the United States, 35 U.S.C. §101, et seq., to prevent and enjoin Defendant Trifecta Networks (hereinafter “Trifecta Networks” or “Defendant”) from infringing and profiting, in an illegal and unauthorized manner and without authorization and/or consent from Plaintiff, from U.S. Patent No. RE45259 (the ‘RE259patent” or the “Patent”), which are attached hereto as Exhibit A and incorporated herein by reference, and pursuant to 35 U.S.C. §271, and to recover damages and costs.

THE PARTIES

2. Xiaohua Huang is an individual, his current residential address is at Los Gatos, CA95030. Huang has developed the state of the art high speed and low power U.S. patented TCAM designs to build IC chips used inside of Internet IP Routers(“Routers”), Wireless routers, Ethernet Switches(“Switches”) and Data Center Switches etc. since the year of 2000.

3. Trifecta Networks is or purports to be a Florida company having its office address in 4027 Tampa Rd, Ste 3900, Oldsmar, Florida, 34677, United States with its website: <https://www.trifectanetworks.com/> and telephone number: (866) 771-9785.

JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, 35 U.S.C. § 101, et seq. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a). Venue is proper in this District pursuant to 28 U.S.C. §§1391(b) - (c) and 1400(b) in that Defendant has done business on the products which are made in this District. The potential witness and evidence are also in this District.

BACKGROUND FACTUAL ALLEGATION

5. A true and correct copy of the 'RE259 patent is attached hereto as Exhibit C and A. The 'RE259 patent is valid and owned by Plaintiff Mr. Huang as the inventor.

6. In Nov. 2000 "Huang" found CMOS Micro Device Inc. "CMOS") to develop Ternary Content Addressable Memory (TCAM). "Huang" is the owner of "CMOS", "CMOS" is a California corporation and having its office in Campbell, California. TCAM are used to perform the search function in internet networking router, switches and Data Center Switches.

7. From November, 2000 to October, 2002, Huang finished the design of ternary content addressable memory (TCAM) with 0.18um and 90nm TSMC technology which are covered by the 'RE259 patent. The TCAM designed by Huang is tens to hundreds of times faster in speed and consume much less power than the same products in Market at that time.

8. From 2011 to 2018 Plaintiff reversed numerous TCAM chips of NetlogicMicrosystem and TCAM chips of Renesas Electronics. With the help of Cellixsoft Corporation and Wuxi Hengyu Micro Electronics Ltd. Plaintiff obtained the evidence that the TCAM chips of Netlogic Microsystems and TCAM chips of Renesas Electronics, Inc. used the content of US patent RE45259. The TCAM chips of Netlogic Microsystems and Renesas Electronics infringed the claim 29 of US patent RE45259. Most switches and Routers have used the TCAM chips of NetlogicMicrosystems Inc. and Renesas.

9. In 2003 Plaintiff found that a company called Silicon Design Solution Inc.(SDS) selling TCAM design same as the TCAM designed by CMOS Micro Device Inc.. Recently Plaintiff found that the some IC circuit and TCAM used in the Router and Switches read the claim 29 of ‘RE259 patent.

10. The patented TCAM developed by Huang has been recognized by the industry. In 2003 Huang was an invited speaker to present his TCAM design at networking symposium at Boston organized by the Industry Authority Linley Group. In 2015 Huang was also a presenter of MEMCON 2015 in Santa Clara convention center to present his patented TCAM design.

THE INFRINGING PRODUCTS WHICH DEFENDNAT MAY HAVE SOLD

11. Based on the information obtained that the products sold by Defendant, including but not limited to Network Switches ICX 6450/6430 etc., contains the IC with the function schematic in Figure4 in the below..

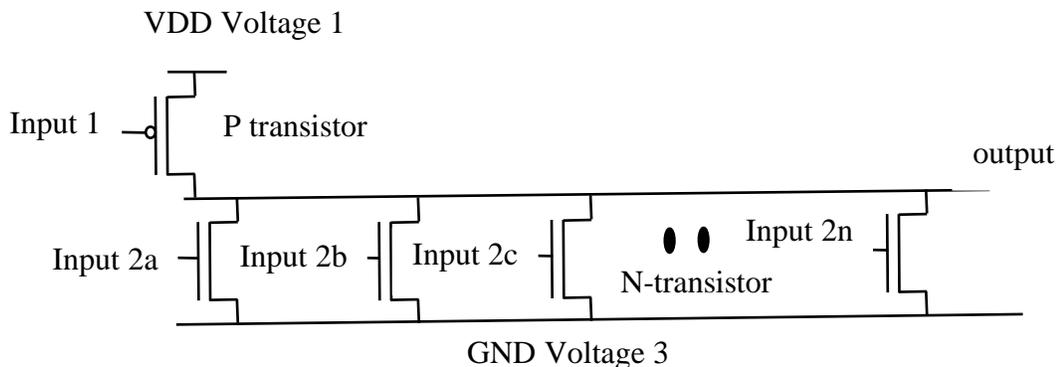


Figure 4. the IC circuit in CAM and other function

The circuit in the above Figure read on the claim 29 of ‘RE259patent.

claim	The circuit in Figure4 are used in accused instrument ICX6450/6430 etc.
Claim 29 of US patent	This claim 29 reads on the schematics of

RE45259	Figure 4
A content addressable memory (CAM) system, comprising:	This is preamble
(1) a circuit segment configured to generate a circuit segment output based on whether at least one of a plurality of circuit segment inputs received by the circuit segment corresponds to a first logic level,	<p>(1) First we explain how the circuit in Figure 4 works: the circuit in Figure 4 is a dynamic circuit, it has two phase, first phase is pre-charge phase: set all the input of N transistor(input 2a,input2b... input 2n) at low voltage level GND (voltage3),all the N-transistors are OFF and do not conduct current, then through Input1 enable(Switch on) the P-transistor, P-transistor is ON and conduct current and connect the output node to VDD (Voltage 1), and output node are pre-charged through P-transistor to VDD (voltage 1), finished the first phase.</p> <p>Second phase is evaluate phase: after the output node is pre-charged to VDD, the P-transistor is OFF through Input 1, then all the input signals are connected to Input2a, Input2b ... Input 2n; if all the input signals input2a,input2b and input2n are in low voltage level GND(voltage3), all the N-transistor are OFF, then the output node keep the pre-charged voltage VDD (voltage1), if any one of Input 2a,Input 2b .. Input 2n are in high voltage level VDD(voltage1), then the corresponding N-transistor is ON and conduct</p>

	current to connect output node to GND (voltage 3), then the output node voltage will become GND (voltage 3). which is read by this claim.
(2) the circuit segment configured to set a node to a second logic level in response to an input signal, and	(2) during the pre-charge phase, the output nodes in the of Figure 4 is set to high logical level VDD (voltage1) through Input1 to switch P-transistor ON and connect output node to VDD through P-transistor and output node are pre-charged to voltage VDD(Voltage 1), which is read by the corresponding section of the claim.
(3) to subsequently change the node to a third logic level in response to the plurality of circuit segment inputs, the circuit segment output corresponding to said third logic level.	(3)In the evaluate phase the logic level of output nodes in Figure 4 will change after being set to high logic level, whether change or not rely on the logic level of the input signals to the N transistors(Input2a,input2b....input2n), the logic level change of output node follow the arrival of the input signals to the N transistors signals to the N transistors (Input2a, input2binput2n) are in low logic level GND(voltage 3) , then all the N-transistor are OFF and conduct no current, the output node stay at the logical level (voltage) which was pre-charged, otherwise if one or more input signals are in high logic level VDD (voltage 1), then the corresponding N transistor are ON and conduct current and the output node will become GND (voltage 3). which is read by the corresponding section of the claim.

Claim 29 of 'RE259 patent reads on the circuit used in the accused instruments ICX6450/6430

COUNT I: INFRINGEMENT OF U.S. PATENT NO. RE45259

12. Plaintiff refers to and incorporates herein the allegations of Paragraphs 1-11 above.

13. On November 25, 2014 U.S. Patent No. RE45259 (the "RE259 Patent") was duly and legally issued for a "Hit ahead hierarchical scalable priority encoding logic and circuits." A true and correct copy of the 'RE259 patent is attached hereto as Exhibit A. Xiaohua Huang as inventor is the owner of all rights, title, and interest in and to the 'RE259 patent.

14. On information and belief, Defendant has infringed and continue to infringe directly, indirectly, literally, on Doctrine of Equivalent one or more of the claims of the 'RE259 patent through buying /selling the Network Switches ICX6430/6450 etc., those devices containing "TCAM" related circuit which have infringed at least claim 29 of the 'RE259 patent as analyzed in paragraph 11 under 35 U.S.C. § 271(a), (b) and (c).

15. On information and belief, Defendant has induced its Customers to have infringed and continue to infringe directly, indirectly, literally, on Doctrine of Equivalent the claim 29 of the 'RE259 patent by transferring data through TCAM used in Networking Routers, Switches and Servers of Internet and Data centers. Those "TCAM" have infringed at least claim 29 of the 'RE259 patent as analyzed in paragraph 11 under 35 U.S.C. § 271(a), (b) and (c).

16. On information and belief, Defendant has made contributory infringement directly, indirectly, literally, on Doctrine of Equivalent to the claim 29 of 'RE259 patent by its customers adding its Switches, Routers and Servers to Internet System and transferring data through the TCAM for its basic ACL, QoS function which

have infringed at least claim 29 of the 'RE259 patent as analyzed in paragraph 11 under 35 U.S.C. § 271(a), (b) and(c). The using of TCAM to achieve ACL, QoS function of routers and switches accused are completely not a staple article or commodity of commerce suitable for substantial non-infringing use.

17. Defendant 's acts of infringement, inducing infringement and contributory infringement have caused damage to Xiaohua Huang, and Xiaohua Huang is entitled to recover from Defendant for the damages sustained by Xiaohua Huang as a result of Defendant's wrongful acts in an amount subject to proof at trial. Defendant's infringement of Xiaohua Huang exclusive rights under the 'RE259 patent will continue to damage Xiaohua Huang, causing irreparable harm for which there is no adequate remedy at law, unless enjoined by this Court. Defendant's infringement entitle Xiaohua Huang to recover damages under 35 U.S.C. §284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

JURY DEMAND

18. Pursuant to Fed. R. Civ. P. 38(b), Plaintiff Xiaohua Huang requests a trial by jury on all issues.

PRAYER FOR RELIEF

WHEREFORE, Xiaohua Huang prays for the following relief:

- (a). A judgment in favor of Xiaohua Huang that Defendant has infringed and is infringing U.S. Patent No RE45259;
- (b). A judgment that the 'RE259 patent is valid and enforceable;
- (c). An order preliminarily and permanently enjoining Defendant and its subsidiaries, parents, officers, directors, agents, servants, employees, affiliates,

attorneys and all others in active concert or participation with any of the foregoing, from further acts of infringement of the 'RE259;

(d). An accounting for damages resulting from Defendant's infringement of the 'RE259 patent under 35 U.S.C. § 284;

(e). An assessment of interest on damages;

(f). A judgment awarding damages to Xiaohua Huang for its costs, disbursements, expert witness fees, and attorneys' fees and costs incurred in prosecuting this action, with interest pursuant to 35 U.S.C. § 285 and as otherwise provided by law;

(g). Such other and further relief as this Court may deem just and equitable.

Dated: June 28, 2021

Respectfully Submitted,



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Exhibit A US patent RE45259