

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

JUNIPER NETWORKS INC.,  
RUCKUS WIRELESS, INC.,  
BROCADE COMMUNICATION SYSTEMS, INC.,  
and NETGEAR, INC.,  
Petitioners,

v.

CHRIMAR SYSTEMS, INC.,  
Patent Owner.

---

Case IPR2016-01389<sup>1</sup>  
U.S. Patent No. 8,155,012 B2

---

**DECLARATION OF DR. VIJAY K. MADISETTI IN SUPPORT OF  
PATENT OWNER'S RESPONSE UNDER 37 C.F.R. § 42.220**

---

<sup>1</sup> Ruckus Wireless, Inc., Brocade Communication Systems, Inc. and Netgear, Inc. ("Ruckus et al.") filed a petition in (now terminated) IPR2017-00790, and Ruckus et al. has been joined to the instant proceeding.

## TABLE OF CONTENTS

List of Exhibits.....	6
I. Qualifications and Professional Experience.....	11
II. Relevant Legal Standards.....	14
III. Qualifications of one of ordinary skill in the art.....	16
IV. Background.....	17
A. Background of the relevant technology.....	17
1. Telephone Technology.....	17
2. Ethernet technology differs substantially from telephony.....	19
B. Overview of Prior Art.....	21
V. Obviousness Combinations Proposed By Petitioners.....	22
A. [GROUNDS 1 AND 2] HUNTER-BULAN and BLOCH - HUIZINGA- IEEE: At the Time of the Invention of the Chrimar Patents, an Ordinary Artisan Would Not Have Had a Reason to Apply Telephone-Based Operating Power To Ethernet Terminal Equipment.....	22
1. Applying operating power to pre-existing Ethernet terminal devices would have destroyed Bob Smith terminations and degraded the flow of Ethernet data.....	22
2. When an unused pair of contacts is available – as in Ethernet – an ordinary artisan would supply power over the unused pairs, not the data pairs as Petitioners assert.....	25
B. [GROUND 1] HUNTER-BULAN: The Combination Does Not Disclose Phantom-Powering An Ethernet Terminal Device.....	33
1. Petitioners have failed to show that Hunter’s discussion of “Ethernet®” is relevant to the claimed invention.....	33
2. Hunter’s phantom-power circuit connects a hub to other hubs – not to Ethernet terminal equipment.....	33
3. Hunter’s specification confirms that Figure 2 does not apply to Ethernet communications.....	38
C. [GROUND 1] HUNTER-BULAN: Petitioners have not shown why an ordinary artisan would have replaced the “preferable” protective device described in Hunter with the unnecessarily complicated current limiting circuit of Bulan.....	40

D.	[GROUND 2] BLOCH –HUIZINGA-IEEE: The combination would not have been obvious to an ordinary artisan because it would have disrupted and degraded the Ethernet data signal .....	43
VI.	U.S. Patent No. 8,942,107 .....	45
A.	Overview of the ‘107 Patent.....	45
B.	Claim Construction.....	49
1.	"powered off"; "powered-off Ethernet terminal equipment"; "powered-off end device" (Claims 103, 104, 111, 123, and 125).....	49
2.	“protocol” (Claims 72 and 123).....	50
	Ground 1: Hunter in view of Bulan .....	51
C.	The Hunter-Bulan combination does not teach the various claim limitations requiring “a piece of Ethernet terminal equipment” or “end device” that draws different magnitudes of DC current to “convey information” about itself.....	51
1.	All challenged claims: The Hunter-Bulan combination does not teach an Ethernet terminal/end device that draws different DC currents to convey information about itself.....	51
2.	Claims 43, 103 and 111: The Hunter-Bulan combination does not teach the “information to distinguish” limitations.....	56
3.	All Challenged claims: The portion of Hunter’s Figure 2 circuit Petitioners identify as the “TE” is not the claimed “Ethernet terminal equipment”/“end device” .....	58
D.	Claims 74 and 75: The Hunter-Bulan combination does not teach that “at least one path comprises an electrical component,” which is a “resistor” .....	62
E.	Claim 5: The Hunter-Bulan combination does not teach “BaseT Ethernet communication signals” .....	64
F.	Claims 72 and 123: The Hunter-Bulan combination does not teach a “detection protocol” .....	65
G.	Claims 103, 104, 111, 123, and 125: The Hunter-Bulan combination does not teach the “powered-off” limitations .....	66
	Ground 2: Bloch in view of Huizinga and IEEE 802.3 .....	70
H.	Claims 103, 104, 111, 123, and 125: The Bloch-Huizinga-IEEE Combination does not teach the “powered-off Ethernet terminal equipment” limitations .....	70

VII. U.S. Patent No. 8,155,012 .....	73
A. Overview of the ‘012 Patent.....	73
B. Claim Construction.....	76
Ground 1: Hunter in view of Bulan .....	76
C. All Claims: The Hunter-Bulan combination does not teach the “distinguishing information” limitation .....	77
D. All claims: The portion of Hunter’s Figure 2 circuit Petitioners identify as the “TE” is not the claimed “Ethernet data terminal equipment” .....	79
E. Claims 31, 40 and 52: The Hunter-Bulan combination does not teach that the claimed “path” includes “impedance,” a “resistor,” or impedance as “a function of voltage across the selected contacts” .....	82
1. Hunter-Bulan does not teach “impedance within the at least one path” .....	82
2. Hunter-Bulan does not teach that “the at least one path comprises at least one resistor” .....	84
3. Hunter-Bulan does not teach that the impedance is “a function of voltage across the selected contacts” .....	85
F. Claim 35: The Hunter-Bulan combination does not teach “detection protocol” .....	87
G. Claim 36: The Hunter-Bulan combination does not teach “BaseT Ethernet terminal equipment” .....	87
VIII. U.S. Patent No. 8,902,760 .....	89
A. Overview of the ‘760 Patent.....	89
B. Claim Construction.....	94
Ground 1: Hunter in view of Bulan .....	95
C. All asserted claims: The Hunter-Bulan combination does not teach “a BaseT Ethernet system” .....	95
D. All asserted claims: Hunter-Bulan does not have a “path” for DC current flow “between a piece of BaseT Ethernet terminal equipment and a piece of central network equipment” .....	97
E. Claims 37 and 112: The Hunter-Bulan combination does not teach that “magnitudes of the current flow through the loop represent information about the piece of BaseT Ethernet terminal equipment” .....	101

F.	Claims 59 and 134: The Hunter-Bulan combination does not teach a “detection protocol” .....	103
G.	Claims 69 and 142: The Hunter-Bulan combination does not teach the “to distinguish” limitations .....	103
H.	Claims 72 and 145: The Hunter-Bulan combination does not teach the “powered-off” limitations .....	104
	Ground 2: Bloch in view of Huizinga and IEEE 802.3 .....	107
I.	Claims 72 and 145: The Bloch-Huizinga-IEEE combination does not teach the “powered-off” limitations.....	107
IX.	U.S. Patent No. 9,019,838 .....	110
A.	Overview of the ‘838 Patent.....	110
B.	Claim Construction.....	112
	Ground 1: Hunter in view of Bulan .....	113
C.	All challenged claims: The Hunter-Bulan combination does not teach the claimed “ <i>Ethernet connector . . . contacts</i> ” that both (1) are “ <i>used to carry BaseT Ethernet communication signals,</i> ” and (2) via which “ <i>different magnitudes of DC current flow.</i> ” .....	113
1.	Petitioners have failed to show that Hunter’s discussion of “Ethernet®” discloses the claimed “ <i>contacts used to carry BaseT Ethernet communication signals</i> ” .....	115
2.	Petitioners have proven their assertion that Hunter teaches hub 170 providing phantom power to Ethernet terminal devices; on the contrary, Hunter’s phantom-power circuit connects one hub to <i>other hubs</i> .....	116
3.	Hunter’s specification confirms that Figure 2 does not apply to Ethernet communications .....	121
D.	Claim 2: The Hunter-Bulan combination does not teach a “detection protocol” .....	123
E.	Claims 26 and 29: The Hunter-Bulan combination does not teach a central piece of network equipment configured to “distinguish” one “end device”/“network object” from another “end device”/“network object” .....	124
X.	Conclusion .....	125

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.