Cisco Legal Summary
March 8th 2016

Claim Summary

ARISTA

1) Arista Networks filed complaint against Cisco Systems for Antitrust and Unfair Competition (February 24, 2016)

2) Arista brings this action against Cisco under Section 2 of the Sherman Act, 15 U.S.C. § 2, and California's Unfair Competition Law, Cal. Bus. & Prof. Code § 17200 et seq.

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

ARISTA NETWORKS, INC.,

Plaintiff,

v.

CISCO SYSTEMS, INC.,

Defendant.

Case No. 5:16-cv-00923

COMPLAINT FOR ANTITRUST AND UNFAIR COMPETITION

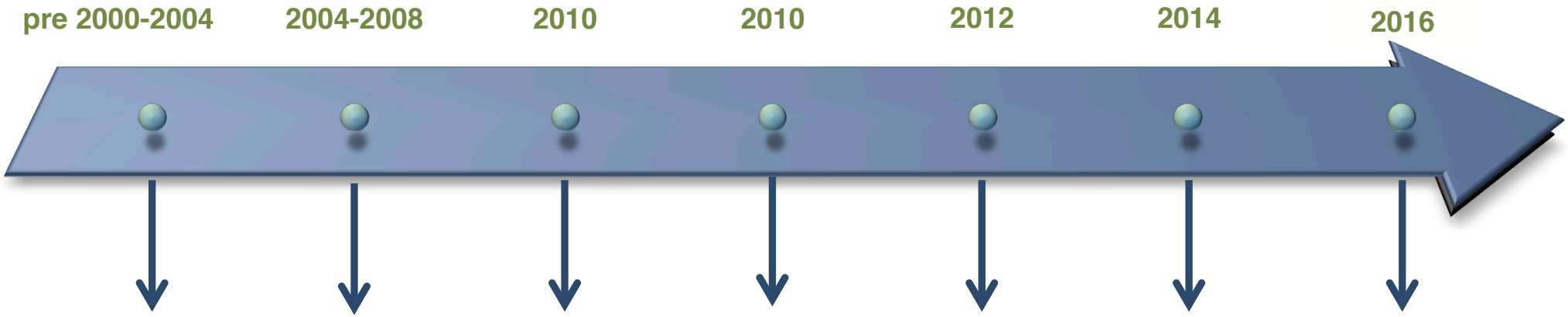
DEMAND FOR JURY TRIAL

Date Filed: February 24, 2016

Trial Date: Not Set.

Timeline of Events

ARISTA



Cisco ~80% Market Share

Only one other competitor has > 4% share. Cisco represents its CLI as Industry-standard.

Arista Founded

Arista ships first products

Arista wins Network World Shootout

Cisco places 5th

Arista wins Best of Interop

Flagship 7500 Series

Cisco forms Insieme Spin-in

To develop an "Arista Killer" line of products

Cisco share drops to 66%

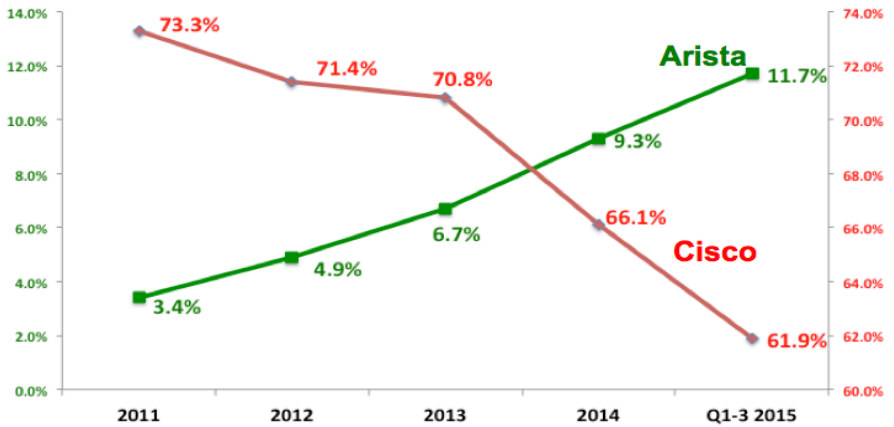
After "Arista Killer" efforts failed, Cisco reverses position and claims CLI as proprietary

Arista files Antitrust

Industry-standard CLI SMARTnet

Arista Market Share vs Cisco

High Speed Data Center Switching Market Share in Ports (10/40/100GbE)



Source: Crehan Research Datacenter Switch Market Share Report Q3'2015. Arista 2011 ports based on management estimates.

Cisco Litigation Re-Cap

ARISTA

- Patents
  - ITC – Broken up into two cases – 1/27/16 & 4/26/16 Initial Determination
  - District Court (California) – Stayed pending ITC
- CLI Copyright – District Court (California). Begins Nov 21, 2016.
- Patents Asserted Against:
  - Arista advantages (ZTP, SSU, etc.)
  - Industry standard features – ACLs, PVLAN, Loop guard, MLAG
  - Assertion against SysDB is not Arista core - but "external management"
- IPRs Filed

Inter	IPR Filing	Filing Date	Date Institution	Hearing	Final Decision (latest)
7,340,597	2015-00978	Apr. 1, 2015	Oct. 6, 2015	June 30, 2016	Oct. 6, 2016
8,051,211	2015-00975	Apr. 1, 2015	Oct. 6, 2015	June 30, 2016	Oct. 6, 2016
	2016-00018	Oct. 6, 2015	*Apr. 2016*	*Jan. 2017*	*Apr. 19, 2017*
7,224,668	2015-01710	Aug. 11, 2015	*Feb. 2016*	*Nov. 2016*	*Feb. 18, 2017*
	2016-00309	Dec. 9, 2015	*June 2016*	*Mar. 2017*	*June 15, 2017*
7,047,526	2016-00119	Nov. 4, 2015	*May 2016*	*Feb. 2017*	*May 4, 2017*
7,953,886	2016-00244	Nov. 24, 2015	*May 2016*	*Feb. 2017*	*May 24, 2017*
6,377,577	2016-00301	Dec. 9, 2015	*June 2016*	*Mar. 2017*	*June 14, 2017*
	2016-00303	Dec. 9, 2015	*June 2016*	*Mar. 2017*	*June 14, 2017*
7,023,853	2016-00304	Dec. 9, 2015	*June 2016*	*Mar. 2017*	*June 14, 2017*
	2016-00306	Dec. 9, 2015	*June 2016*	*Mar. 2017*	*June 14, 2017*
7,162,537	2016-00308	Dec. 9, 2015	*June 2016*	*Mar. 2017*	*June 15, 2017*

  - ** Dates in italics are estimated
- EOS developed on a clean slate
  - Cisco never alleges that EOS uses Cisco source code.

Cisco Changed their Position when Threatened

ARISTA

"[p]atent litigation stifles innovation and causes companies to waste millions of dollars."

"[t]he uncertainty about what is actually covered by a patent allows….[a plaintiff] to opportunistically target technologies that in reality have little to do with what was invented."

"It slows down the industry. It is a mess. It is unacceptable."

Mark Chandler

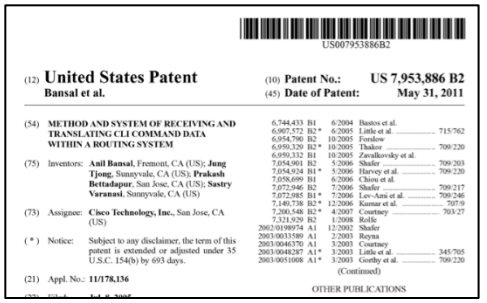
John Chambers

Industry Standard CLI: The Bait….

ARISTA

2005 – Cisco Patent

Patent No. 7,953,886 (filed July 8, 2005).
"many companies now strive to support some variation of IOS CLI in their routing systems."



US007953886B2

(12) **United States Patent**
Bansal et al.

(10) **Patent No.: US 7,953,886 B2**
(45) **Date of Patent: May 31, 2011**

(54) **METHOD AND SYSTEM OF RECEIVING AND TRANSLATING CLI COMMAND DATA WITHIN A ROUTING SYSTEM**

(75) Inventors: **Anil Bansal**, Fremont, CA (US); **Jung Tjong**, Sunnyvale, CA (US); **Prakash Bettadapur**, San Jose, CA (US); **Sastry Varanasi**, Sunnyvale, CA (US)

(73) Assignee: **Cisco Technology, Inc.**, San Jose, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 693 days.

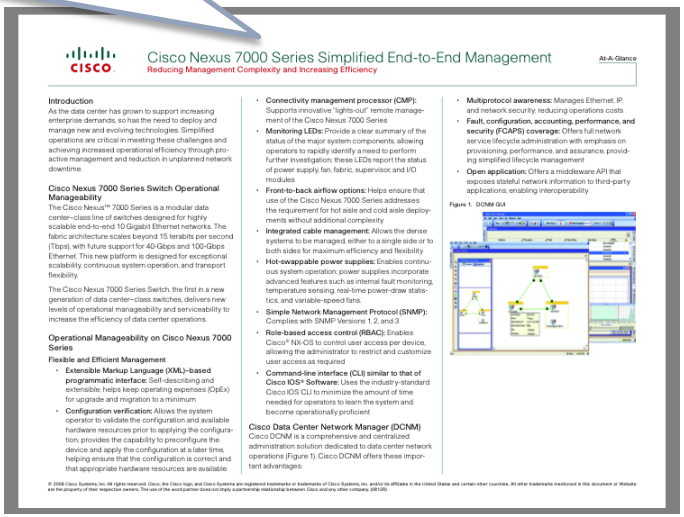
(21) Appl. No.: **11/178,136**

6,744,433	B1	6/2004	Bastos et al.	
6,907,572	B2 *	6/2005	Little et al.	715/762
6,954,790	B2	10/2005	Forslow	
6,959,329	B2 *	10/2005	Thakor	709/220
6,959,332	B1	10/2005	Zavalkovsky et al.	
7,054,901	B2	5/2006	Shafer	709/203
7,054,924	B1 *	5/2006	Harvey et al.	709/220
7,058,699	B1	6/2006	Chiou et al.	
7,072,946	B2	7/2006	Shafer	709/217
7,072,985	B1 *	7/2006	Lev-Ami et al.	709/246
7,140,738	B2 *	12/2006	Kumar et al.	707/9
7,200,548	B2 *	4/2007	Courtney	703/27
7,321,929	B2	1/2008	Rolfe	
2002/0198974	A1	12/2002	Shafer	
2003/0033589	A1	2/2003	Reyna	
2003/0046370	A1	3/2003	Courtney	
2003/0048287	A1 *	3/2003	Little et al.	345/705
2003/0051008	A1 *	3/2003	Gorthy et al.	709/220

(Continued)

OTHER PUBLICATIONS

"Uses the industry-standard Cisco IOS CLI to minimize the amount of time needed for operators to learn the system and become operationally proficient."



Cisco Nexus 7000 Series Simplified End-to-End Management
Reducing Management Complexity and Increasing Efficiency

At-A-Glance

Introduction

As the data center has grown to support increasing enterprise demands, so has the need to deploy and manage new and evolving technologies. Simplified operations are critical in meeting these challenges and achieving increased operational efficiency through pro-active management and reduction in unplanned network downtime.

Cisco Nexus 7000 Series Switch Operational Manageability

The Cisco Nexus™ 7000 Series is a modular data center–class line of switches designed for highly scalable end-to-end 10 Gigabit Ethernet networks. The fabric architecture scales beyond 15 terabits per second (Tbps), with future support for 40-Gbps and 100-Gbps Ethernet. This new platform is designed for exceptional scalability, continuous system operation, and transport flexibility.

The Cisco Nexus 7000 Series Switch, the first in a new generation of data center–class switches, delivers new levels of operational manageability and serviceability to increase the efficiency of data center operations.

Operational Manageability on Cisco Nexus 7000 Series

Flexible and Efficient Management

- **Extensible Markup Language (XML)–based programmatic interface:** Self-describing and extensible, helps keep operating expenses (OpEx) for upgrade and migration to a minimum
- **Configuration verification:** Allows the system operator to validate the configuration and available hardware resources prior to applying the configuration, provides the capability to preconfigure the device and apply the configuration at a later time, helping ensure that the configuration is correct and that appropriate hardware resources are available
- **Connectivity management processor (CMP):** Supports innovative "lights-out" remote management of the Cisco Nexus 7000 Series
- **Monitoring LEDs:** Provide a clear summary of the status of the major system components, allowing operators to rapidly identify a need to perform further investigation; these LEDs report the status of power supply, fan, fabric, supervisor, and I/O modules
- **Front-to-back airflow options:** Helps ensure that use of the Cisco Nexus 7000 Series addresses the requirement for hot aisle and cold aisle deployments without additional complexity
- **Integrated cable management:** Allows the dense systems to be managed, either to a single side or to both sides for maximum efficiency and flexibility
- **Hot-swappable power supplies:** Enables continuous system operation; power supplies incorporate advanced features such as internal fault monitoring, temperature sensing, real-time power-draw statistics, and variable-speed fans.
- **Simple Network Management Protocol (SNMP):** Complies with SNMP Versions 1, 2, and 3
- **Role-based access control (RBAC):** Enables Cisco® NX-OS to control user access per device, allowing the administrator to restrict and customize user access as required
- **Command-line interface (CLI) similar to that of Cisco IOS® Software:** Uses the industry-standard Cisco IOS CLI to minimize the amount of time needed for operators to learn the system and become operationally proficient

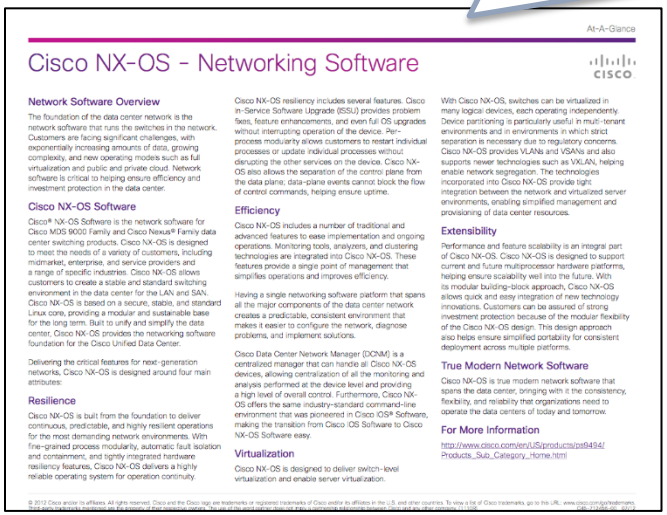
Cisco Data Center Network Manager (DCNM)

Cisco DCNM is a comprehensive and centralized administration solution dedicated to data center network operations (Figure 1). Cisco DCNM offers these important advantages:

- **Multiprotocol awareness:** Manages Ethernet, IP, and network security, reducing operations costs
- **Fault, configuration, accounting, performance, and security (FCAPS) coverage:** Offers full network service lifecycle administration with emphasis on provisioning, performance, and assurance, providing simplified lifecycle management
- **Open application:** Offers a middleware API that exposes stateful network information to third-party applications, enabling interoperability

Figure 1. DCNM GUI

"Cisco NX-OS offers the same industry-standard command-line environment that was pioneered in Cisco IOS® Software, making the transition from Cisco IOS Software to Cisco NX-OS Software easy"



At-A-Glance

Cisco NX-OS – Networking Software

Network Software Overview

The foundation of the data center network is the network software that runs the switches in the network. Customers are facing significant challenges, with exponentially increasing amounts of data, growing complexity, and new operating models such as full virtualization and public and private cloud. Network software is critical to helping ensure efficiency and investment protection in the data center.

Cisco NX-OS Software

Cisco® NX-OS Software is the network software for Cisco MDS 9000 Family and Cisco Nexus® Family data center switching products. Cisco NX-OS is designed to meet the needs of a variety of customers, including midmarket, enterprise, and service providers and a range of specific industries. Cisco NX-OS allows customers to create a stable and standard switching environment in the data center for the LAN and SAN. Cisco NX-OS is based on a secure, stable, and standard Linux core, providing a modular and sustainable base for the long term. Built to unify and simplify the data center, Cisco NX-OS provides the networking software foundation for the Cisco Unified Data Center.

Delivering the critical features for next-generation networks, Cisco NX-OS is designed around four main attributes:

Resilience

Cisco NX-OS is built from the foundation to deliver continuous, predictable, and highly resilient operations for the most demanding network environments. With fine-grained process modularity, automatic fault isolation and containment, and tightly integrated hardware resiliency features, Cisco NX-OS delivers a highly reliable operating system for operation continuity.

Cisco NX-OS resiliency includes several features. Cisco In-Service Software Upgrade (ISSU) provides problem fixes, feature enhancements, and even full OS upgrades without interrupting operation of the device. Per-process modularity allows customers to restart individual processes or update individual processes without disrupting the other services on the device. Cisco NX-OS also allows the separation of the control plane from the data plane; data-plane events cannot block the flow of control commands, helping ensure uptime.

Efficiency

Cisco NX-OS includes a number of traditional and advanced features to ease implementation and ongoing operations. Monitoring tools, analyzers, and clustering technologies are integrated into Cisco NX-OS. These features provide a single point of management that simplifies operations and improves efficiency.

Having a single networking software platform that spans all the major components of the data center network creates a predictable, consistent environment that makes it easier to configure the network, diagnose problems, and implement solutions.

Cisco Data Center Network Manager (DCNM) is a centralized manager that can handle all Cisco NX-OS devices, allowing centralization of all the monitoring and analysis performed at the device level and providing a high level of overall control. Furthermore, Cisco NX-OS offers the same industry-standard command-line environment that was pioneered in Cisco IOS® Software, making the transition from Cisco IOS Software to Cisco NX-OS Software easy.

Virtualization

Cisco NX-OS is designed to deliver switch-level virtualization and enable server virtualization.

With Cisco NX-OS, switches can be virtualized in many logical devices, each operating independently. Device partitioning is particularly useful in multi-tenant environments and in environments in which strict separation is necessary due to regulatory concerns. Cisco NX-OS provides VLANs and VSANs and also supports newer technologies such as VXLAN, helping enable network segregation. The technologies incorporated into Cisco NX-OS provide tight integration between the network and virtualized server environments, enabling simplified management and provisioning of data center resources.

Extensibility

Performance and feature scalability is an integral part of Cisco NX-OS. Cisco NX-OS is designed to support current and future multiprocessor hardware platforms, helping ensure scalability well into the future. With its modular building-block approach, Cisco NX-OS allows quick and easy integration of new technology innovations. Customers can be assured of strong investment protection because of the modular flexibility of the Cisco NX-OS design. This design approach also helps ensure simplified portability for consistent deployment across multiple platforms.

True Modern Network Software

Cisco NX-OS is true modern network software that spans the data center, bringing with it the consistency, flexibility, and reliability that organizations need to operate the data centers of today and tomorrow.

For More Information

http://www.cisco.com/en/US/products/ps9494/Products_Sub_Category_Home.html

Industry Standard CLI:
…And the Switch Ambush to the Entire Industry

ARISTA

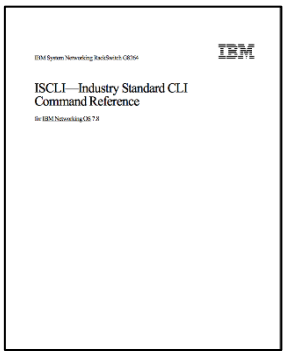
2014 – Cisco reverses long-standing position

"copyrighted features and implementations [of CLI] being used by Arista are not industry standards."

"Industry-Standard Command Line Interface"

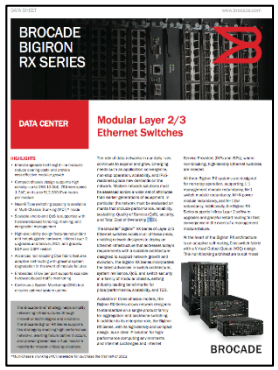
Dell

"ISCLI - Industry Standard CLI"



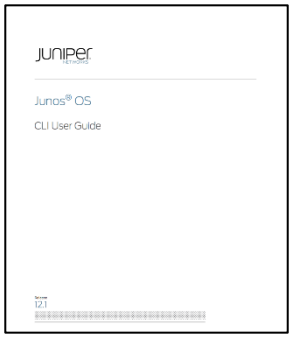
IBM

"Industry-Standard Configuration Interface"



Brocade

"Industry-Standard tools and utilities, the CLI.."



Juniper

"Industry Standard CLI"

HP

Cisco Support
Anti-Competitive Bundling of SMARTnet Renewals

- SMARTnet renewal is at normal prices for all-Cisco
- SMARTnet “Tax” - Penalty for going multi-vendor
- SMARTnet lock-in for Cisco customers

Summary

Arista believes in fair and open competition
Many of Cisco's legal claims relate to standard features and CLI
Cisco changed their position once threatened
This is not just an Arista issue, but a network industry-wide issue

Our Mission:

To deliver the best cloud networking solutions to address the needs of private, public and hybrid cloud customers