Cisco Borderless Mobility
Partner Update Sept 15

Peter Jerhamre
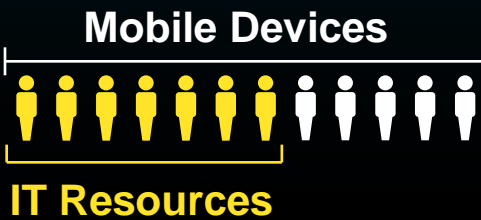
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Market Transitions

Mobility

Workplace Experience

Video

1.3 Billion new Networked Mobile Devices in the Next Three Years

Blurring the Borders:

Consumer ↔ Workforce
Employee ↔ Partner

50% of all Cisco Network Traffic Today Is Video

Mobile Devices

IT Resources

Anyone, Anything, Anywhere, Anytime

Influx of Mobile Devices Creates IT Challenge
IT Consumerization: Now a Reality

Smartphone adoption is growing at 50%+ annually

A Smartphone can use as much bandwidth as 200 legacy phones

ENTERPRISE

TIME

Meet Challenges with a Mobility Strategy
Connect, Extend and Secure Any Device

Enabling Connectivity

Extending Applications

Maintaining Security

1 From **ANY** Device

2 To **ANY** Device

3 Across **ANY** Device

Questions to Consider When Defining a Mobility Strategy

Consider This Checklist

- ✓ **Does my wireless network provide pervasive, reliable and scalable coverage to support new mobile devices?**
- ✓ **Can my wireless network proactively mitigate the impact of wireless interference?**
- ✓ **Can I support complete lifecycle management of user and device connectivity?**
- ✓ **Can I deliver seamless collaboration across any network?**
- ✓ **Can I ensure the integrity of information to any mobile device?**
- ✓ **Can my users maintain a consistent identity across any network?**
- ✓ **Is my access network flexible to adapt to business change?**

Select the Right Partner that Supports Your Growth

Borderless Network Architecture

Architecture for Agile Delivery of the Borderless Experience

Borderless End-Point/User Services

Mobility   Workplace Experience   Video

Securely, Reliably, Seamlessly: **AnyConnect**

Borderless Network Services

Borderless Policy, Management and Smart Services

Mobility:
Motion

Green:
EnergyWise

Security:
TrustSec

Application
Performance:
AppVelocity

Voice/Video:
Medianet

Infrastructure

Switching

Routing

Wireless

Security

WAAS

PROFESSIONAL SERVICES:
Realize the Value of Borderless Networks Faster

Cisco Aironet 802.11n Access Point Portfolio
Enterprise-Class Performance

Business Wireless	Rich Media	Mission-Critical

- **Small to medium enterprises, branches**
- **Ideal for standard wireless access**
- **Entry-level solution with opportunity to scale as you grow**
- **Enterprise-class 802.11n coverage and performance**

- **Medium to large enterprises**
- **Ideal for rich media business applications**
- **Low TCO with flexible scalable architecture**
- **Enhanced 802.11n for high-performance and coverage**

- **Medium to large enterprises**
- **Ideal for mission critical applications**
- **Low OpEx with built in interference avoidance**
- **Highest performance 802.11n with CleanAir technology for self-healing, self-optimizing wireless**

 Cisco Confidential

Cisco Aironet 802.11n Access Point Portfolio

Enterprise-Class Performance

Business Wireless	Rich Media	Mission-Critical

New

Business Wireless

- **1040 Series**
- **2x2 MIMO**
- **Controller or Standalone***
  *Q4 2010
- **Cisco RF excellence:**

  Better 802.11n coverage than APs using off-the-shelf silicon

  Optimized antennas and radios for reliable and seamless connectivity

  RRM with automated self healing reduces dead spots

Rich Media

- **1260 or 1140 Series**
- **2x3 MIMO**
- **Controller or Standalone***
  * 1260 standalone Q4 2010
- **RF excellence with:**

  ClientLink improves reliability and coverage for legacy clients
  BandSelect improves 5 GHz client connections in mixed client environments
  VideoStream uses multicast to improve multimedia applications

Mission-Critical

- **3500 Series**
- **2x3 MIMO**
- **Controller based**
- **RF excellence with ClientLink BandSelect and VideoStream**
- **CleanAir technology for automatic interference avoidance, simplified troubleshooting, policy enforcement and RF visibility and management**

Cisco Aironet 802.11n Access Point Portfolio
Enterprise-Class Performance

Business Wireless	Rich Media	Mission-Critical
	1260 Series	**3500e with CleanAir**
	$1195	$1495
1040 Series *New*	**1140 Series**	**3500i with CleanAir**
$495 single band, $795 dual band	$995	$1295

Carpeted Ruggedized

Cisco Aironet 1040 Series Access Point

New

Entry-level Enterprise-class 802.11n Wireless

- **6x performance of 802.11a/g**
- **2x2 MIMO**
- **802.3af PoE**
- **DFS support**
- **Single and dual band**
- **Controller-based or standalone Q4 2010**

- **Ideal for small and medium business**
- **Branch offices**
- **Small retail locations**
- **Health clinics**
- **Hospitality**
- **Law, insurance or accounting firms**

RF excellence for industry-leading performance and secure, reliable

Cisco Business Ready Wireless Solutions

Enterprise-class 802.11n for Small and Medium Enterprises

Enhances the productivity of a growing mobile workforce without the need for a large IT department.

Topology

- Small-scale in small or medium offices
- Distributed in branch offices or satellite locations

Features & Benefits

- 802.11n enterprise-class wireless for data, voice and video
- Standalone access points for small deployments or cost-conscious customers
- Controller-based solution offers enhanced functionality, flexibility, and scalability.

Products

- Cisco Aironet 1040 Series Access Point
- Cisco 2100 Wireless LAN Controller

Customer Scenario

- Increase employee productivity with laptops, PDAs and mobile devices
- Secure guest access for customers and vendors
- Enterprise-class security
- Casual hotspot

Cisco Rich Media Wireless Solutions
Enterprise-class 802.11n for Medium to Large Enterprises

Distributed or centralized WLAN with high scalability for all industries, business types and topologies

Topology

- **Holistic business mobility solution that includes applications and devices**

- **1-1000+ access points at local, remote, campus, national or international locations**

Features & Benefits

- **ClientLink for investment protection with increased throughput and channel capacity for legacy devices**

- **VideoStream offers stream prioritization for high performance, scalable multicast video over WLAN**

- **Mobility Services: voice, guest access, and location**

Products

- **1140 or 1260 Series Access Points**

- **5500 Controller, Wireless Integrated Service Module (WiSM), or Integrated Services Router (ISR)**

- **Wireless Control System (WCS)**

- **Mobility Services Engine (MSE)**

Customer Scenario

- **Standard 802.11n security protocol (Enterprise-class security)**

- **Rich media deployment scenarios:**

    – **Retail – inventory management**

    – **Healthcare – asset tracking**

    – **Education – dorms, classrooms**

    – **Manufacturing – asset tracking**

Cisco Mission-Critical Wireless Solutions
802.11n with CleanAir technology for Medium to Large Enterprises

Topology

- 1-1000+ APs at local, remote, campus, or international sites
- CleanAir technology offers systemwide spectrum-intelligence to mitigate wireless interference

Features & Benefits

- Self-healing, self optimizing WLAN for better reliability and performance
- Remote troubleshooting for fast problem resolution and less downtime
- Detect non-Wi-Fi security threats and resolve issues in real time
- Historical reports for back-in-time analysis and faster problem-solving
- Set and enforce policy with intelligent identification of wireless devices

Products

- 3500 Series Access Points
- 5500 Controller, Wireless Integrated Service Module (WiSM), or Integrated Services Router (ISR)
- Wireless Control System (WCS)
- Mobility Services Engine (MSE)

Customer Scenario

- Highest security (Layer 1 with wIPS)
- Real-time applications (voice / video)
- Mission-Critical deployment scenarios:
  - Retail – wireless credit card transactions
  - Healthcare – confidential patient records, mission critical applications and wireless devices, many sources of interference
  - Education – reliability during wireless exams, visibility into rogue devices, voice for campus security
  - Manufacturing – production line optimization
  - Financial – trading floors
  - Government – FIPS certified

802.11n AP Product Portfolio Positioning

	Business Wireless	Rich Media	Mission-Critical
Cisco 802.11n Access Points	**1040 Series AP**	**1140, 1250, 1260 Series AP**	**3500 Series AP**
Value Proposition	Business Ready AP for Wireless Connectivity	Best in Class Performance AP for Enterprise Applications	Best in Class Performance AP for Mission Critical Enterprise Applications
Targeted for	Commercial, Small to Medium Enterprise, Branch	Medium to Large Enterprise	Medium to Large Enterprise
Optimized for			
Dense endpoint clients	■	■	■
Extended coverage		■	■
Rich media applications (Voice/Video)		■	■
Performance Protection in Congested RF Environments			■

802.11n AP Feature Comparison

	Business Wireless	Rich Media	Mission-Critical
Cisco 802.11n Access Points	**1040 Series AP**	**1140, 1250, 1260 Series AP**	**3500 Series AP**
Wireless Clients maximum w/dual radios	400	400	400
802.11n	■	■	■
OfficeExtend	■	■ (1140 Only)	■
RRM	■	■	■
ClientLink		■	■
BandSelect		■	■
VideoStream		■	■
CleanAir technology			■
Rogue AP Detection	■	■	■
Adaptive WIPS	■	■	■
External Antenna Option		■	■
Limited Lifetime Warranty	■	■	■

Access Point (inside view)
Never open the AP as it will compromise shielding
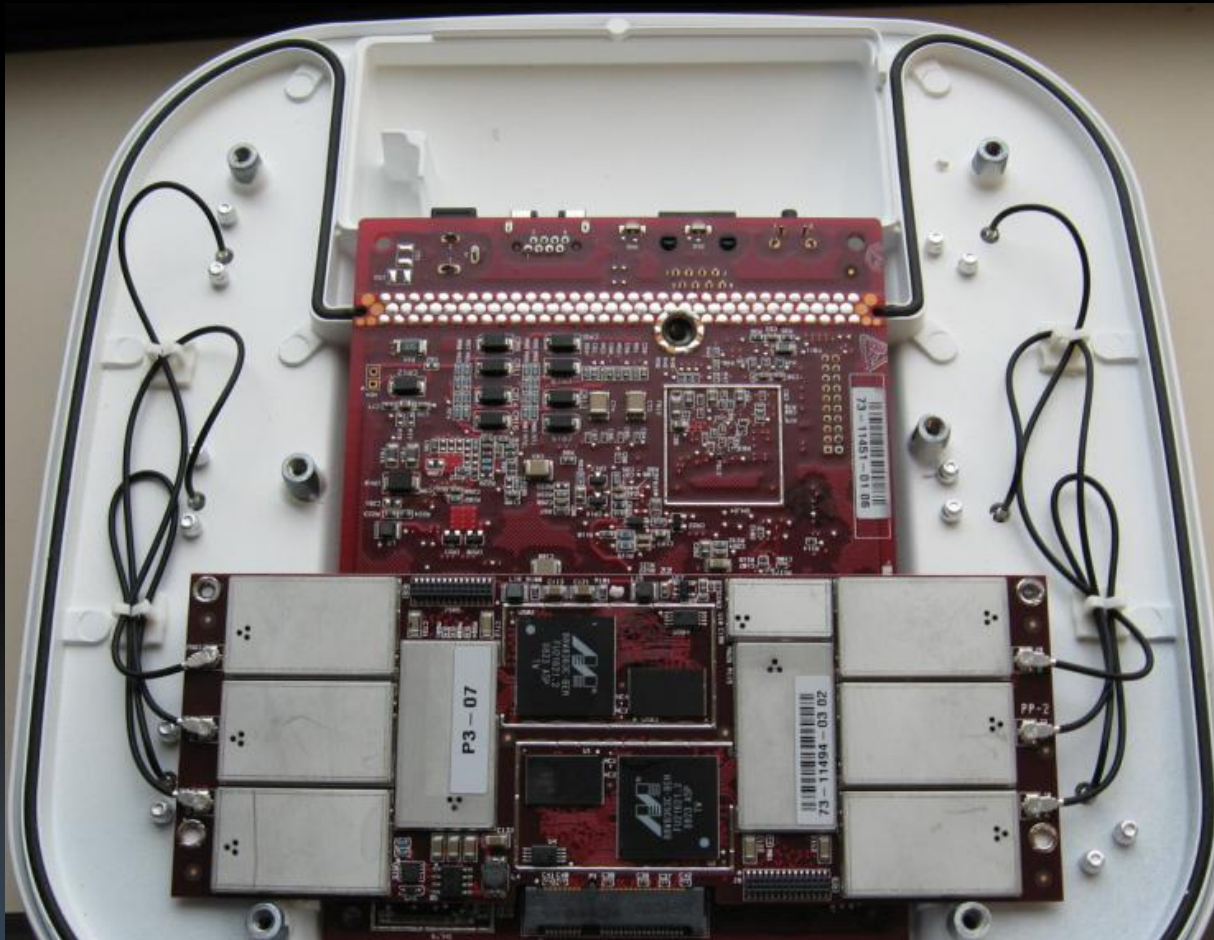
Access Point inside view

If you have an AP that is 2.4 GHz only the 5 GHz radio module won't be present.

Also note the conductive RF Gasket in black around unit.

It is factory torque fitted so this gasket seals properly

Predicted MTBF's for AP1040:
1040 Single band radio : 475,775
1040 Duel Band radio   : 328,826

Access Point Connections
Ports are on the back
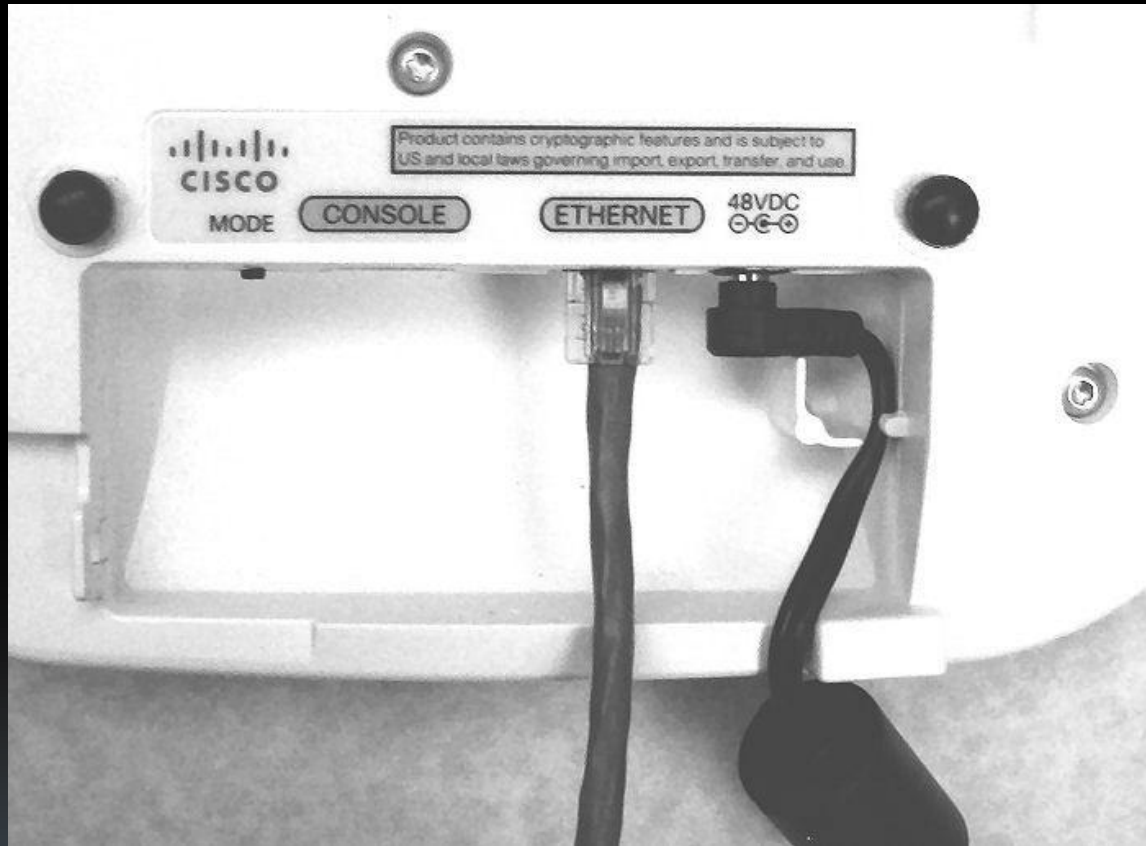
**Access Point
has the following:**

**Mode button
Console Port
Ethernet Port
Local Power**

**Note: This device has full 802.11n functionality
using IEEE 802.3af (15.4 Watt) power sourcing**

Access Point mounting
Security Options

Access Point can be secured using a Kensington style locking cable, or secured in the bracket using a common padlock

Limited Lifetime Warranty

Warranty change from 90 days to Limited Lifetime on:
- **1140, 1250(Shipped from Apr 27th). Grace period extends to products sold on or after Jan 27th**
- **3500,1260 and 1040 from FCS**

Up to 5 years from announcement of product discontinuation

Attributes:
1. **10 day advanced replacement prior to receipt of damaged product**
2. **No software updates**
3. **No TAC support**

Reason for LLW:
- **LLW is a checkbox item (to match competition)**
- **Continue to upsell to smartnet, smartcare benefits**

Note: No TAC support (attribute #3) means "normal support" via Smartnet and conventional means – in other words, there is "no lifetime TAC support"

Cisco Business Ready Wireless Solutions

New

Enterprise-class 802.11n Wireless

- **2106 Controller Price Reduction**
  $3250 ➡ $2495

- **Limited time bundle: 22% discount**
  —1, 2106 controller*
  —3, 1040 APs (dual-band)
  $4375

1140 Series Permanent Price Reductions

- **Single Unit:**
  $1,295 ➡ $995

- **Controller-based Eco-Pack (10 qty APs)**
  $12,950 ➡ $9,950

- **Standalone Eco-Pack (5 qty APs)**

- $6,475 ➡ $4,975

Deals to Target Small and Medium Enterprises

AP Competitive Pricing Landscape

	Business Wireless	Rich Media	Mission-Critical
Cisco	AP1040 Dual $795 _(New)_ AP1040 Single $495	AP1140 Dual $995 _(Updated)_ *AP1260 Dual $1195*	*AP3500i Dual $1295* *AP3500e Dual $1495*
Aruba	AP105 Dual $695 AP92/93 Single $395	AP125 Dual $995	
HP	MSM3XX Single $499	MSM410 Single $649 MSM422 Single $749	
Motorola	AP650 Dual $685 AP650 Single $495 AP6511 Single (Q4CY10)	AP7131 Dual $1099	

Proliferation of entry-level products and solutions

Cisco Mobility Innovations

ClientLink

- Beam forming in 802.11n chipset
- 65% throughput increase for a/g clients
- 27% increase in channel capacity

CleanAir

- ASIC based spectrum intelligence
- Simultaneous mitigation and traffic forwarding
- System wide integration

VideoStream

- High performance, scalable multicast video over WLAN
- Efficient network utilization
- Stream prioritization

"The integration of spectrum analysis and building this intelligence into the infrastructure itself is a significant game changer…A self-healing WLAN able to work around the various sources of interference is fast becoming a requirement…"

Mike Brandenburg, Network Computing

"Video Stream is a "great step in the right direction…and it's only a matter of time before video becomes our primary form of communication. Cisco's strategy seems to be to drive the business by providing customers with high-bandwidth/video applications. Not a bad thing at all."

Craig Mathias, Farpoint Group

Existing 802.11n Solutions
Beam Strength Not Directed to Client

802.11a/g

Beam Strength
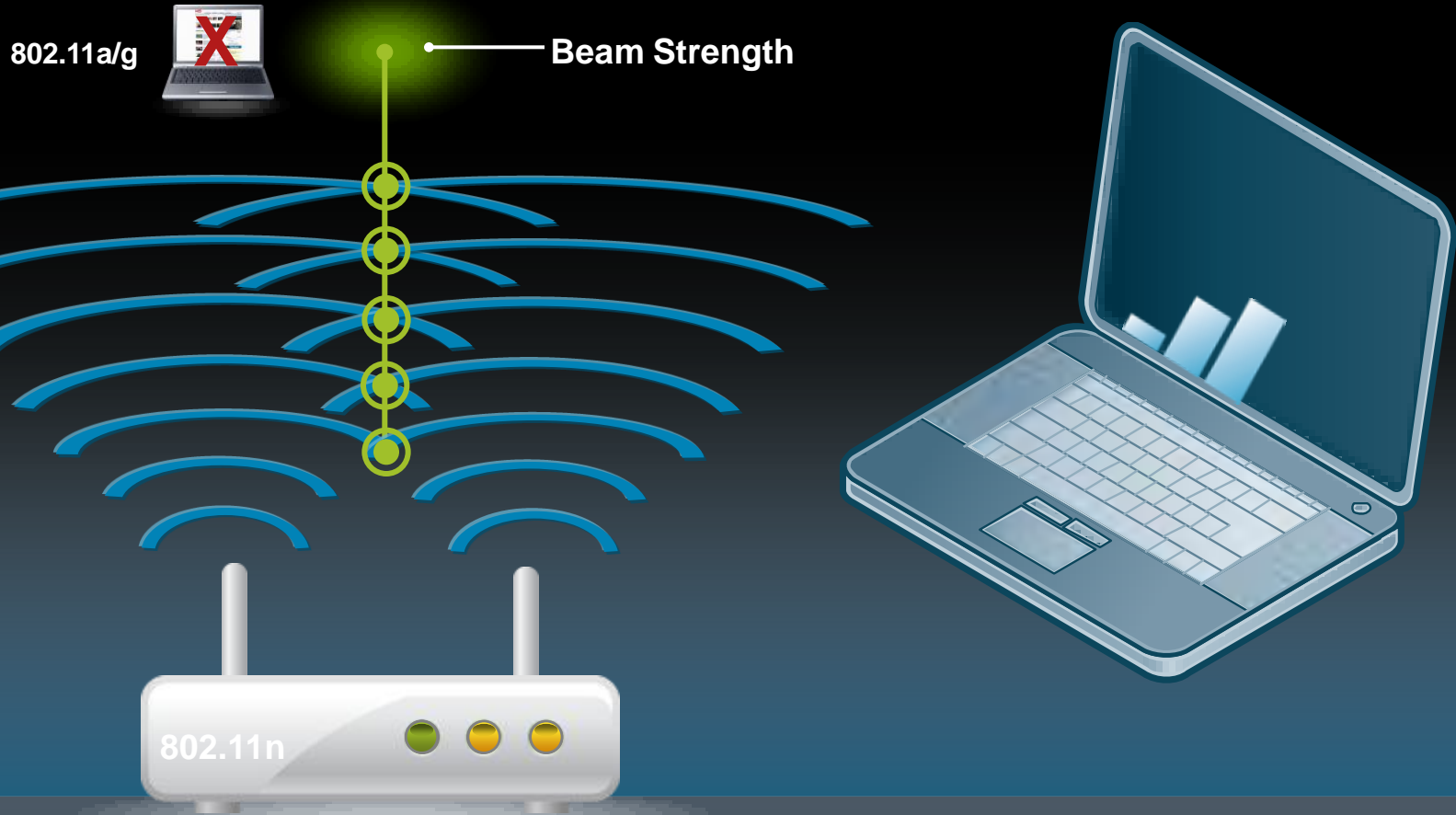
802.11n

802.11a/g Client Connection Not Optimized,
Creates Coverage Hole

Cisco ClientLink
Cisco Innovation: Beam Forming Intelligence

802.11a/g

Beam Forming

802.11n

http://www.miercom.com/?url=reports/&v=16
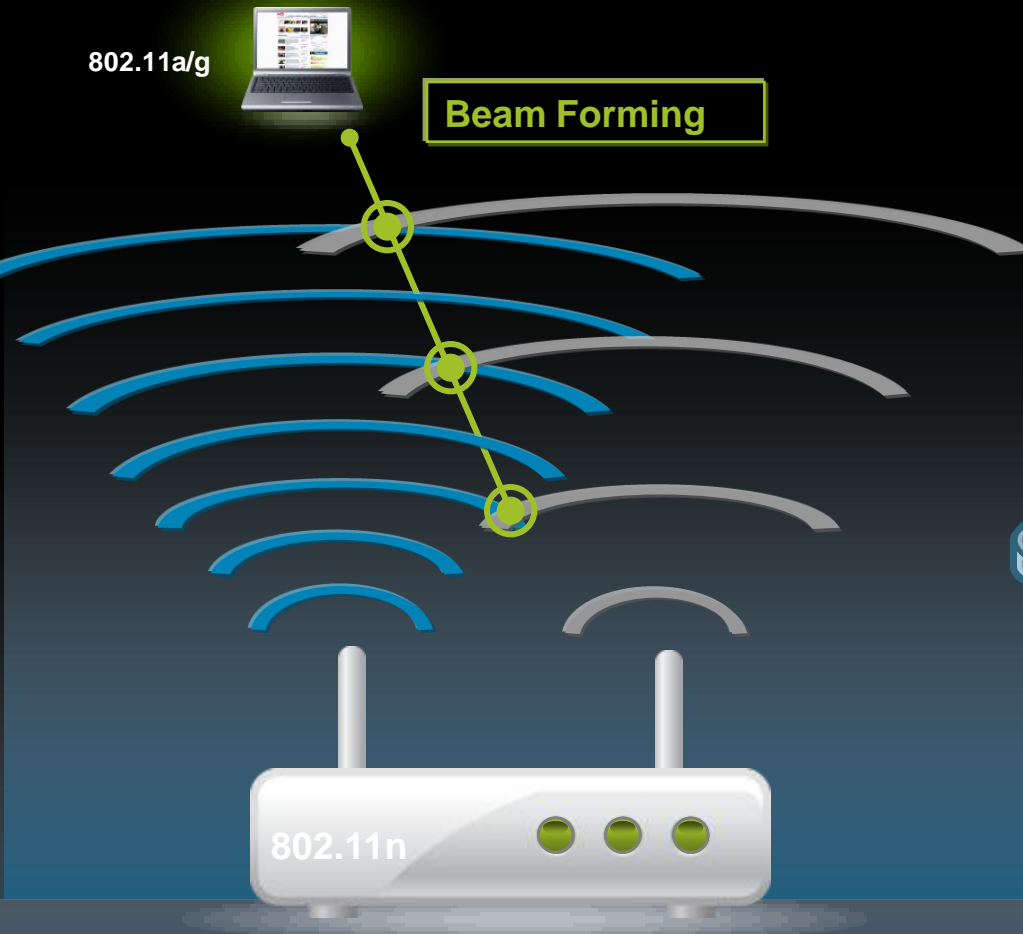
http://www.cisco.com/en/US/prod/collateral/wireless/ps5678/ps10092/white_paper_c11-516389.html

ClientLink uses Beam Forming to Direct Signal to Improve Performance and Coverage for 802.11a/g Devices

Enterprise Wireless Evolution
From Best Effort to Mission Critical

Hotspot

System Management

Scalable Performance

Self Healing & Optimizing
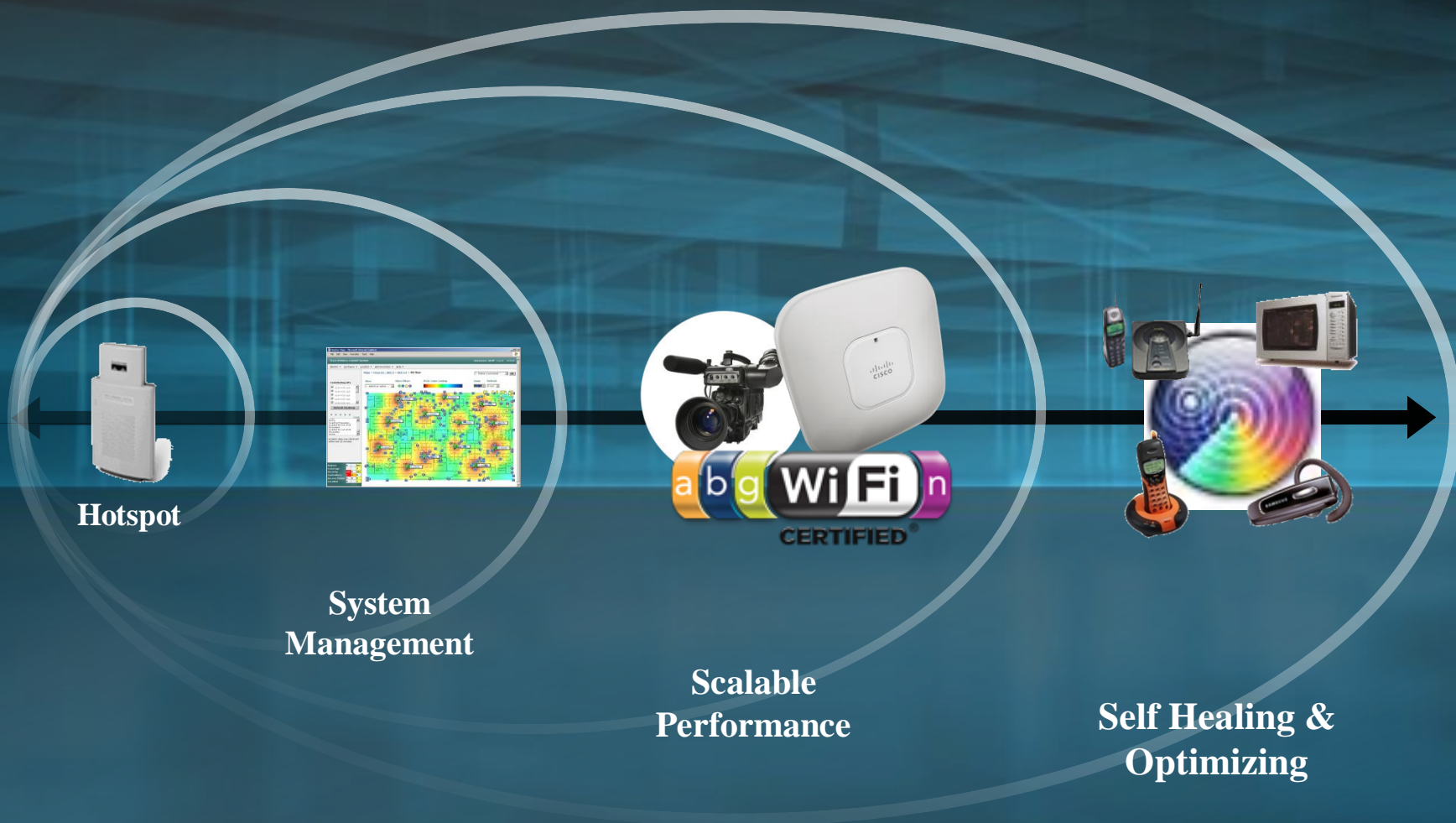
Challenges with Spectrum

Limited Spectrum

Performance

SYSTEM OVERLOAD!

802.11n Performance Decrease

Support Cost

$ $ $ $

Increase in Support Cost
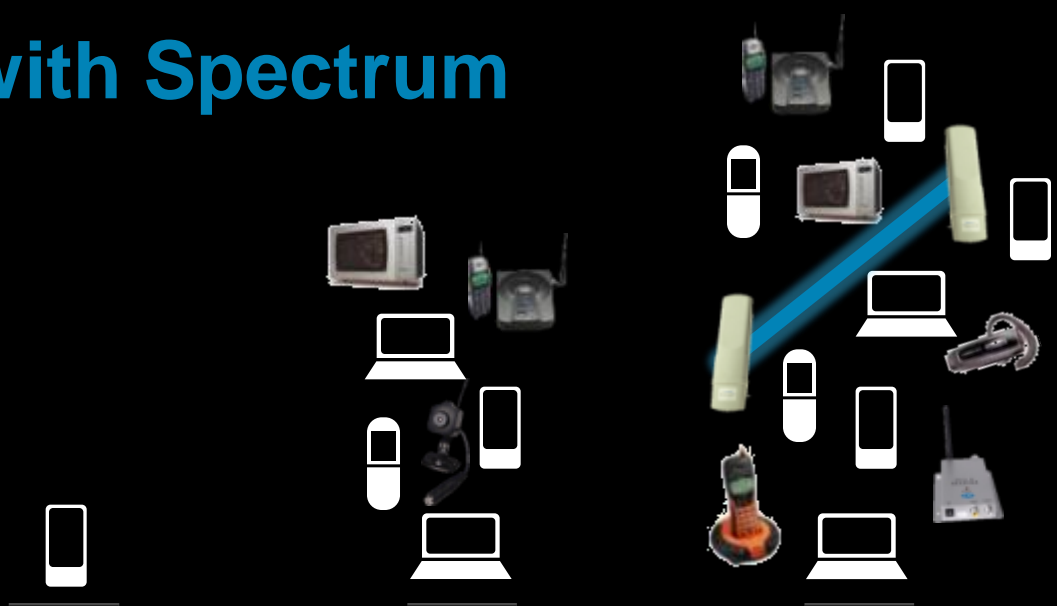
The Impact of a Crowded Spectrum

End User Impact

- Reduced network capacity and coverage

- Poor quality voice and video

- Potential complete link failure

IT Manager Impact

- Potential security breaches

- Support calls

- Increased cost of operation

Interference Type		Throughput Reduction	
		Near (25 ft)	Far (75 ft)
2.4 or 5 GHz Cordless Phones		100%	100%
Video Camera		100%	57%
Wi-Fi (busy neighbor)		90%	75%
Microwave Oven		63%	53%
Bluetooth Headset		20%	17%
DECT Phone		18%	10%

Source: FarPoint Group

How does Interference impact Wi-Fi?
Separating the FUD from the Fact's

- 802.11a/b/g/n - CSMA/CA or LBT (listen Before Talk)
- Collision Avoidance – 802.11 very very polite – by design
    - CCA
    - Collisions
    - SNR
- CCA – Clear Channel Assessment
    - ED – quick – low power - prone to false positives
    - Preamble – takes time – power – less prone to false
- CCA threshold for 802.11b/g is -65 dBm
- CCA for 802.11a is different -65 dBm ED, if true then 20 dB more for Preamble interrogation needs to be processed -85 dBm

How does Interference impact Wi-Fi?
Separating the FUD from the Fact's

- Collisions - Non Wi-Fi devices do not participate in our CA mechanism – they have their own

- No respect for Wi-Fi – results in:

  Corrupted packets

  Increased retransmissions

  Increased Duty Cycle

  Less available bandwidth
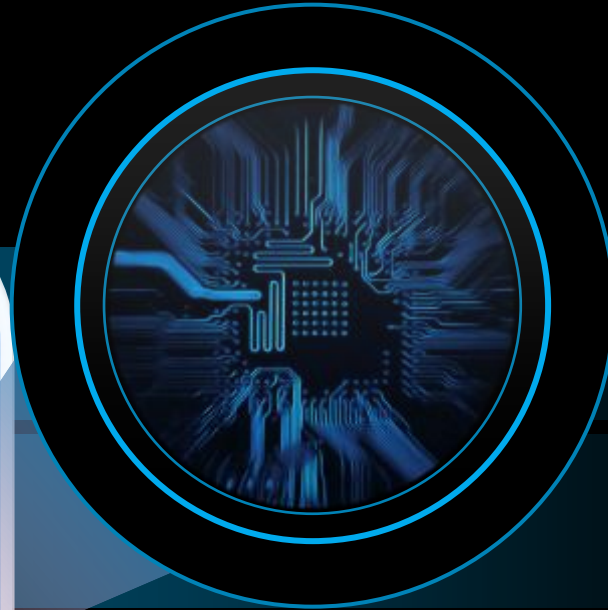
- SNR – Signal to Noise ratio

High SNR
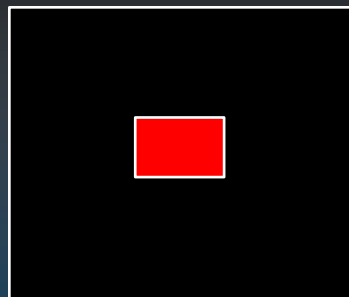
Low SNR
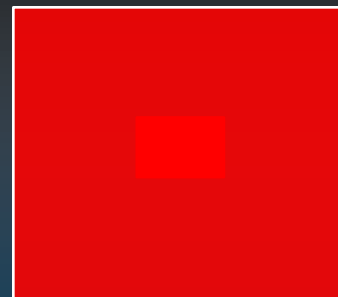
802.11B/G/A and Duty Cycle

DSSS	Beacon Size				
	100	**200**	**250**	**300**	**350**
1	896	1696	2096	2496	2896
2	496	896	1096	1296	1496
5.5	241	387	460	532	605
11	169	241	278	314	351
OFDM					
6	153	287	353	420	487
12	87	153	187	220	253
24	53	87	103	120	137
54	35	50	57	64	72
130	26	32	35	38	42
300	23	25	27	28	29

Time µS

Introducing CleanAir

New!

Mitigate

Cisco CleanAir

A system-wide feature that uses silicon-level intelligence to automatically mitigate the impact of wireless interference, optimize network performance and reduce troubleshooting costs

Wi-Fi and Spectrum Knowledge – Why is silicon important?

- A Wi-Fi chip is a communications processor – a MODEM

- It only knows

    Energy that can be demodulated = Wi-Fi

    Energy that can not be demodulated = Noise

- Noise is complicated –

    Collisions, fragments, corruption

    Wi-Fi that is below sensitivity threshold of the receiver

- Peaks in Wi-Fi activity can cause all of the above to occure

High Resolution Spectral Advantage

The Industry's ONLY in-line high-resolution spectrum analyzer

**Typical Wi-Fi chipset
Spectral Resolution at 5 MHz**
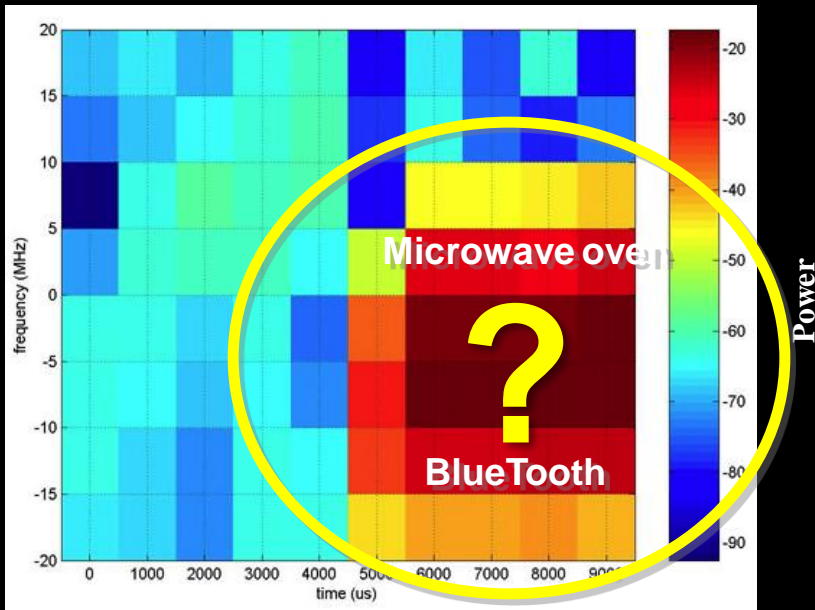
**Cisco CleanAir Wi-Fi chipset
Spectral Resolution at 78 to 156 KHz**
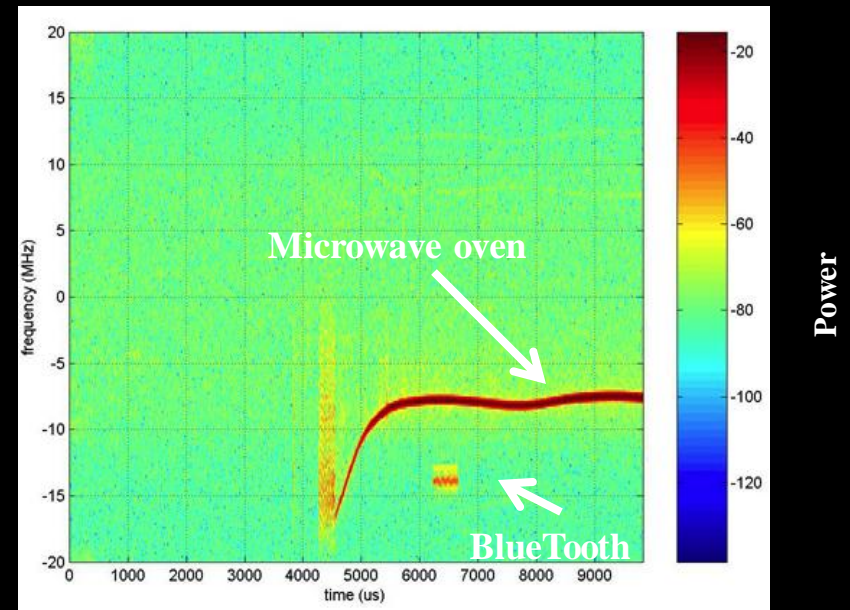
'Chip View Visualization' of Microwave oven and BlueTooth Interference

Spectrum Analysis Granularity Comparison

- Spectrum Analysis using a WiFi Chip:

2.50 GHz	
2.45 GHz	**Poor Scan Resolution (5MHz at Best)**
2.40 GHz	

- Spectrum Analysis on purpose-built CleanAir silicon:

Fine Scan Resolution (78KHz)

Start: 2.400 GHz   Stop: 2.500 GHz
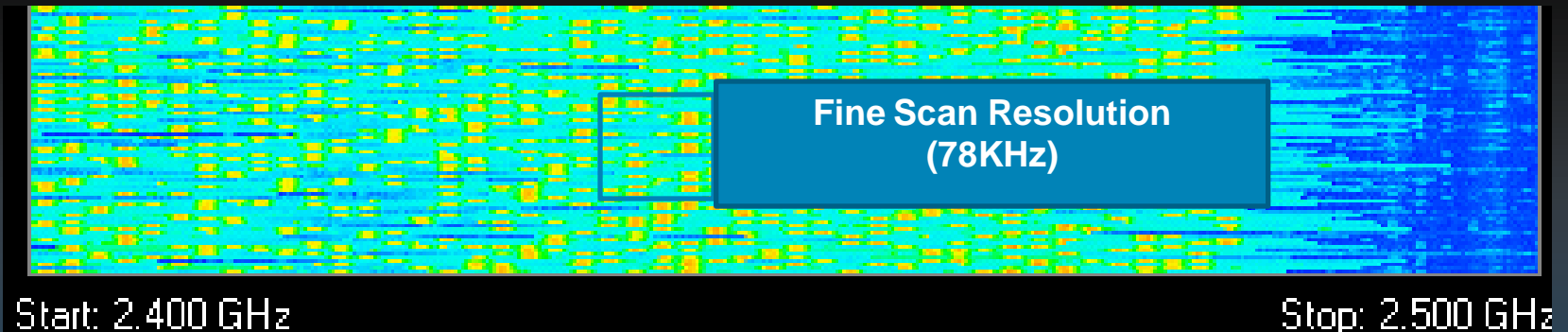
Cisco Aironet 3500 Series: A Game Changer

NEW

CleanAir, VideoStream, ClientLink, BandSelect

Full 802.11n with 802.3af PoE

Design Excellence

Industry Leading Performance

What is CleanAir Technology?

NEW

Locate
WCS, MSE

Visualize and Troubleshoot

Mitigate
Wireless LAN Controller

POOR .... **GOOD**

Maintain Air Quality

CH 1   CH 11

- **Classification processed on Access Point**
- **Interference impact and data sent to WLC for real-time action**
- **WCS and MSE store data for location, history, and troubleshooting**
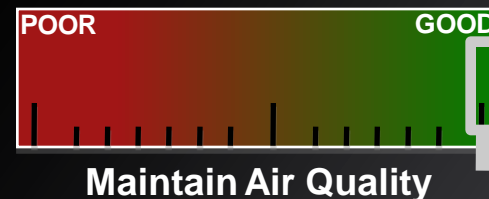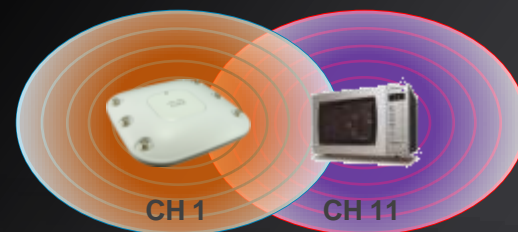
Cisco CleanAir

Cisco CleanAir Technology integrates interference information from the AP into the entire system.

Benefits of Cisco CleanAir technology

NEW

Features	Benefits
▪ AirQuality Aware RRM ▪ Event Driven RRM ▪ Persistent Device Avoidance	**Self Healing and Optimizing** *Reduces Downtime, Maximizes Resilience*
▪ Remote Client Troubleshooting ▪ Spectrum Expert Connect ▪ Location, Impact Analysis and History Playback	**Troubleshooting Forensics** *Lowers Problem Resolution Time/Cost*
▪ New Rogue Threats Detection (off-channel, inverted) ▪ DOS Jammer Detection	**Wireless Security** *Improves Visibility to New Threats*
▪ Unwanted Device Notification ▪ Unwanted Device Location	**Policy Enforcement** *Enables Enforceable Rules*

Aironet AP3500 Series Ordering & Pricing

Dual Band	List Price	Deployment	Antenna
AIR-CAP3502I-x-K9	$1,295	Carpeted Office	Internal
AIR-CAP3502E-x-K9	$1,495	Ruggedized	External
Single Band			
AIR-CAP3501I-x-K9	$1,095	Carpeted Office	Internal
ARI-CAP3501E-x-K9	$1,295	Ruggedized	External

- x = Regulatory Domain (A,C,E,I,K,N,Q,S,T)
- MSE will automatically provide 100 interferers at no cost when 3500 is present (5 per AP, additive)

Dual Band Bundles (10 APs)	List Price	Deployment	Antenna
AIR-CAP3502I-xK910	$12,950	Carpeted Office	Internal
AIR-CAP3502E-xK910	$14,950	Ruggedized	External

- Eco Packs for reduced packaging, lighter for cost effective shipping
- Ruggedized AP bundle (3502E) will have popular dipole antenna as order option. Alternate antennas available as spares
- Includes WCS PLUS Upgrade (software license key) for 100 Access Points (additive)

* No Standalone AP Versions

CleanAir Technology in Cisco Unified Wireless Networks

Cisco Aironet 3500 Series and Wireless LAN Controller

- Multi-interferer Detection & Classification
- Radio Troubleshooting and Automatic Interference Mitigation
- Air Quality by Access Point
- Air Quality Alarm Threshold
- SNMP Interference Traps
- 3rd Party MIB
- Spectrum Expert Connect Mode

Cisco Wireless Control System (WCS)

- Historical Trending of AQ and Policy enforcement
- Visibility into the performance and security of the wireless network
- Locate Physical DOS Attacks and Hidden Rogues
- Monitor and Alarm when Unwanted Devices are present

Mobility Services Engine (MSE)

- Location tracking of interferer and Zone of Impact
- Merges and Correlates Interference Data at a System Level
- Historical Reporting and Trending allows Proactive Interference Management

Cisco CleanAir Features by Device

		3500 WLC	WCS	MSE
Radio Troubleshooting Interference Mitigation	Air Quality for a single AP on WLC UI and CLI interfaces	X		
	AQ Threshold trap (per radio) from WLC	X		
	Device-Type trap (per radio) from WLC	X		
	Rapid Update mode with current AQ charts & interferers for radio	X		
	Spectrum Expert connect mode	X		
	Spectrum MIB on WLC, open to 3rd Parties	X		
	Event Driven RRM, Persistent Device Avoidance	X		
Network Air Quality	WCS CleanAir Dashboard showing APs with worst AQ		X	
	AQ history tracking and reports		X	
	AQ Heatmap & aggregated AQ (per floor) on WCS floor map		X	
	Top N devices for AP shown as hover option on WCS floor map		X	
	CleanAir-enabled WCS RRM Dashboard		X	
	CleanAir-enabled WCS Security Dashboard and reports		X	
	CleanAir-enabled WCS Client Troubleshooting Tool		X	
Location	WCS CleanAir Dashboard with Top N devices with severity			X
	Merging interference devices across APs			X
	Interference device history tracking with reports			X
	Location of interferers including zone of impact			X

CleanAir Deployment Recommendations

Pervasive	Overlay	Mixed
Pervasive 3500 (local mode)	**Pervasive 1140, 1250, 1260 (local mode or non-Cisco)**	~~**Pervasive 1140, 1250, 1260 (local mode or non-Cisco)**~~
Adding to existing AP deployment	**Overlay 3500 (monitor mode 5:1 ratio)**	~~**Inlay 3500 (local mode 5:1 ratio)**~~

Pervasive
- Self Healing
- Troubleshooting
- Location

Recommended for:
- New or Upgrading to 802.11n
- New areas for ongoing 802.11n deployments
- Networks severely impacted by non-WiFi interference

Overlay
- Self Healing
- Troubleshooting
- Location

○ CleanAir Technology required in AP for Self Healing (local mode)

Recommended for:
- Existing 802.11n deployments
- Competitive Installed 802.11n deployments

Mixed
- Self Healing
- Troubleshooting
- Location

○ CleanAir Technology required in AP for Self Healing (local mode)
- Limited spectrum visibility and location capabilities because local mode 3500 spectrum scans only data serving channel.

Not Recommended

Support for Cisco CleanAir Technology

Features

- Customizable Cisco CleanAir dashboard displays current and historical information about:

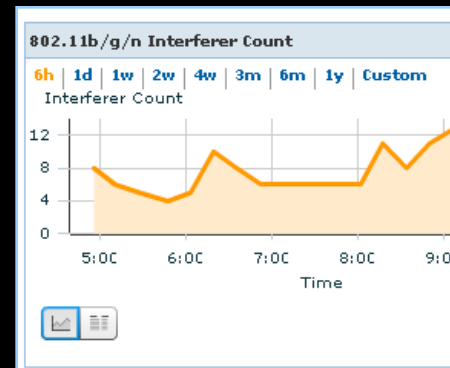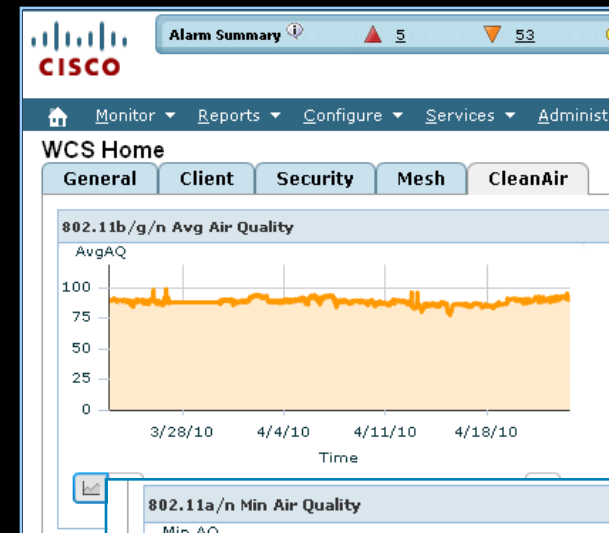 Air Quality

  Network areas with the worst RF conditions

  Recent security risk interferers

  Threshold alarms

  Interferer counts

Benefits

- Easy-to-use Cisco CleanAir dashboard assists with viewing, prioritizing, and managing RF interference issues that occur anywhere on the wireless network.

Support for Cisco CleanAir Technology

Features

- A variety of existing tools are enhanced to include Cisco CleanAir

Benefits

- Heat Maps - Air Quality tools, heat map options, and device detail information including:

  Display real-time network air quality and zone of impact by access point, floor, building, or campus

  Adjustable display for average and minimum air quality for each location

  Mouse-over details about each interferer, including type of interferer, active or inactive status, detected and reported dates, zone of impact, and 10 top interferers.

Map – Air Quality View
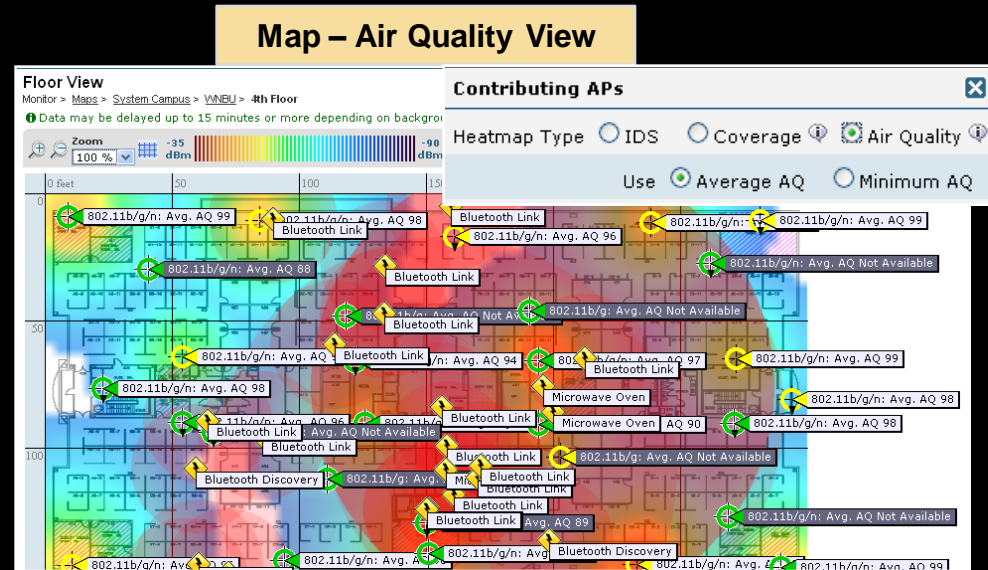
Zone of Impact

Interferer Details

Interference Location Provides Quick Mitigation
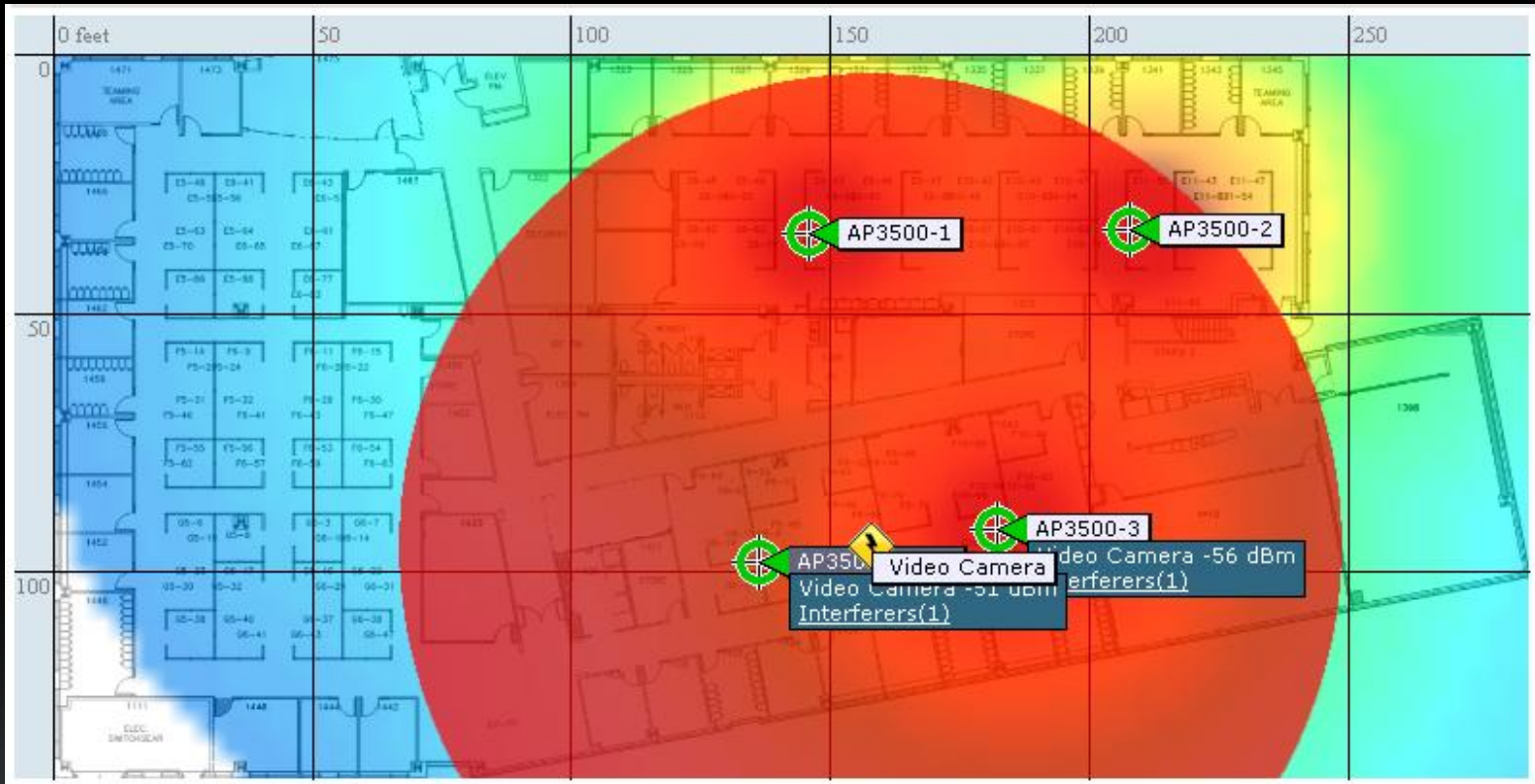
- Beyond providing actionable information regarding the type of interference – the location is also provided to track down the actual source.

Support for Cisco CleanAir Technology

Features

- A variety of existing tools are enhanced to include Cisco CleanAir

Benefits

- Security Dashboard – Display of RF interferers that are potential security risks. In combination with other Cisco WCS security features including wIPS, Cisco CleanAir helps create the industry's only integrated security solution with immediate visibility of security issues at both the logical and physical layer of the WLAN.

- Reports - View and report on current or stored information about RF interference and air quality.

Security Dashboard

Reports

Support for Cisco CleanAir Technology

Features

- A variety of existing tools are enhanced to include Cisco CleanAir

Benefits

- <u>RRM</u> – Display of current and historical actions taken by Cisco RRM in support of RF interference alerts and CleanAir

- <u>Advanced Search</u> - Quickly and easily search for RF interferers across the entire WLAN

- <u>Client Troubleshooting</u> – Client troubleshooting tool is enhanced to include identification of interferers that may be affecting client devices
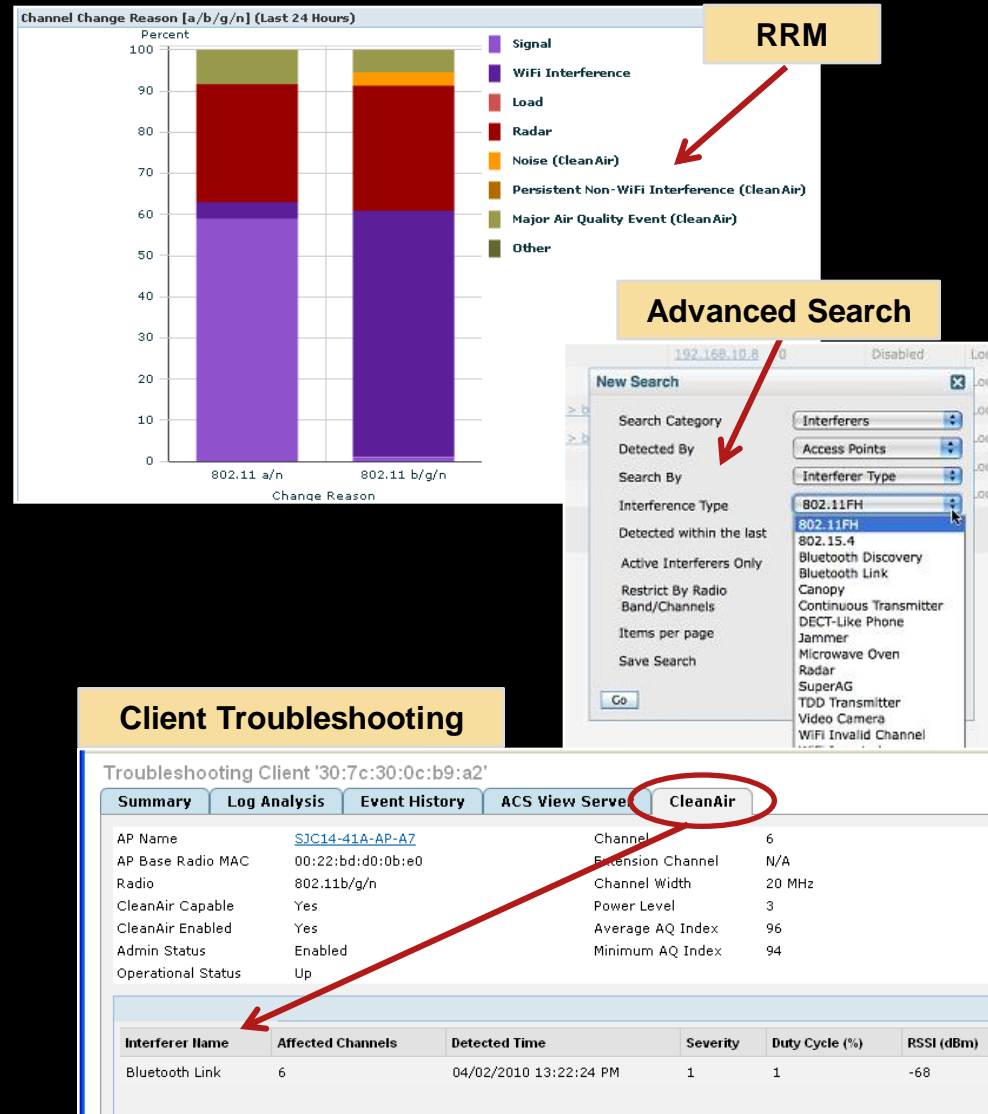

RRM

Advanced Search

Client Troubleshooting

Support for Cisco CleanAir Technology
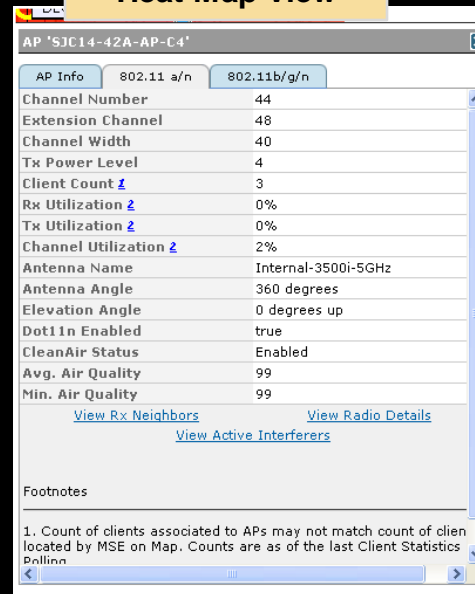
Features

- A variety of existing tools are enhanced to include Cisco CleanAir

Benefits

- <u>Access Point Radio Details</u> – Display of RF information about each CleanAir access point's radios including Air Quality Index, interference power, non-Wi-Fi channel utilization and a listing of active interferers

Heat Map View

Radio Details View

Display Active Interferers
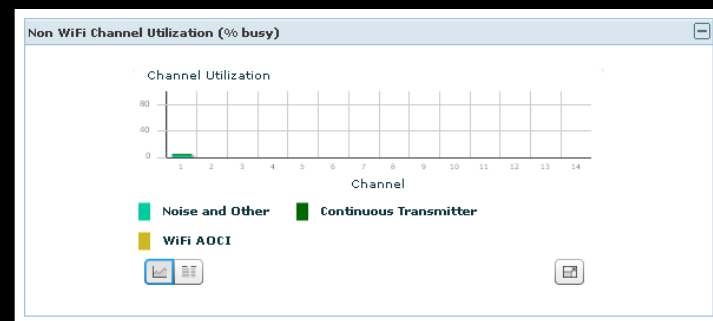
Cisco Medianet: Transform Video Experiences

No Resource Reservation, Degraded Video

Context-Aware, Prioritized, High Quality Video

CEO Meeting

M&A Negotiation

Sports Event

Global Business, WW Offices

CEO Meeting

M&A Negotiation

Sports Event

Can my Network Deliver Real-time Collaboration Experiences?

Medianet VideoStream Technology

NEW

- Cisco **VideoStream** Technology is a new system-wide set of features that enable reliable and consistent delivery of quality video over the wireless network

Multicast Direct Or Reliable Multicast

+

Stream Prioritization

+

Resource Reservation Control

MULTICAST STREAM

AP

UNICAST STREAMS

Training Program
Priority = 6

COMPANY ALL HANDS
Priority = 8

Live Sporting Event
Priority = 1

WLC   AP

VIDEO NOT AVAILABLE

AP

Wireless Promotions

Cisco Trade in Migration Program

The installed base migration program (CTMP) will be revised on a few fronts to incent 11n migrations to Cisco (Cisco to Cisco and competitive to Cisco). Three main changes:

·   Up to $100 trade-in credit for any competitor's AP
·   Up to 30% trade-in credit for EOS WLAN Cisco APs
·   Enhanced trade-to credit of 15% for 11n Aps

PROMOTIONS: New Promo:

Eco Pack: Listprice:
AIR-CAP3502I-x-K910 $12.950
AIR-CAP3502E-x-K910 $14.950

·   Eco Packs for reduced packaging, lighter for cost effective shipping.
·   Ruggedized AP Bundle (3502 E) will have a popular dipole antenna as order option.
Alternate antennas available as spares.
·   Includes WCS PLUS Upgrade (software license key) for 100 Access Points (additive)

Wireless Promotions - links

Wireless Promotions
Wireless Product Promotions
802.11n AP1142 Eco-Pack Promotion – 23% discount on the 5-pack and 10-pack AP1140 Eco-Packs ($995 per AP) – with the price reduction of the regular Product IDs to the promotional price, the Promotional Product IDs will expire on 31 Oct 2010.
802.11n Catalyst Switch + AP1140 Bundles – 10% discount on Catalyst 3560G/3750G + 4 Cisco 1140 APs (expires 30 Sep 2010)
802.11n Smart Business Architecture Bundles – 10% discount on 11n solutions in the SBA Deployment Guide (no expiration)
CleanAir WCS Promotion - AP3500 10 AP Eco Packs include WCS Base to Plus Upgrade License for 100 APs (expires 31 Jul 2011)
2x 5508-500 Bundle – 20% discount on two WLC5508-500 controllers (expires 31 Jul 2011)
Wireless Trade-In Programs
CleanAir AP Enhanced CTMP – trade-in any Cisco or competitive AP to receive a credit up to $224 towards the purchase of a Cisco Aironet 3500 Series AP (expires 27 Apr 2011). End customer information may be found here
802.11n AP Enhanced CTMP – trade-in any Cisco 802.11abg AP to receive up to an additional 15% discount off the purchase of 802.11n APs (expires 27 Apr 2011)
Wireless CTMP – trade in Cisco WLAN products to receive credit towards the purchase of new WLAN products (no expiration)
      End of Sale Products = credit up to 30% of the original list price
      Current Products = credit up to 10% of the original list price
Wireless Competitive Equipment Exchange Program – recently simplified! Up to $100 trade-in credit for <u>any</u> competitor's AP, and up to $8,000 trade-in credit for <u>any</u> competitor's WLAN Controllers (expires 31 Dec 2010)
Wireless Channel Partner Programs
Mobility Network Assessment Program – Cisco Partners with AdvWLAN specialization can get £1000 in the UK, and €1000 in the rest of Europe, for conducting Mobility Network Assessments
General Promotion Websites
European Markets Programs & Promotions: http://www.cisco.com/global/EMEA/promotions/1_tier/current/index.shtml
Europe Channel Incentive Programs: http://www.cisco.com/web/partners/pr11/incentive/euro/index.html
Global Promotions: http://www.cisco.com/web/partners/sell/promotions/index.html

Implementing Cisco Unified Wireless Networking Essentials (IUWNE)

- **Trådlösa nätverk och topologier**

- **Trådlösa Lan: Principer för Radio Frekvenser och dess mattematik.**

- **Konkurrensanalys**

- **Grunderna i Cisco Unified wireless Network architecture.**

- **Roaming**

- **Konfigurera Controllers och access points**

- **Configuring och migrera stand-alone access points**

- **Mobility Express Wireless architecture**

- **Trådlös säkerhet**

- **Grundläggande IEEE säkerhet**

Grundkursen *Implementing Cisco Unified Wireless Networking Essentials (IUWNE)* går i Stockholm den 18-22 oktober. Pris 24.900SEK eller 38CLC

Cisco Wireless LAN Advanced Topics (CWLAT)

- The course focuses on advanced WLAN design, integrating Cisco wireless components into a wired infrastructure.
- Deployment topics include managing the WLAN by using the Cisco Wireless Control System (WCS) to manage the advanced feature set and using the CiscoWorks Wireless LAN Solutions Engine (WLSE) to manage the core feature set.
- Security topics focus on integrating WLAN security using the WLAN controllers and lightweight access points as well as the autonomous access points in conjunction with the Cisco Secure ACS, and Network Access Controller (NAC).
- Security also includes Cisco WCS and CiscoWorks WLSE Intrusion Detection Systems.
- Troubleshooting the WLAN is also included.

Cisco Wireless LAN Advanced Topics (CWLAT) **är en kurs som kommer att tas bort ur vårt sortiment inom kort så behöver man denna kurs så är det dags nu!! Går den 14-17/12 och kostar 21.900SEK eller 34CLC**

CCNP Wireless

Cisco Certified Network Professional Wireless

CUWSS, Conducting Unified Wireless site Survey

IUWMS, Implementing Unified Wireless Mobility Services

IAUWS, Implementing Advanced Unified Wireless Security

IUWVN, Implementing Unified Wireless Voice Networks

inkl 4 tester

82.900SEK eller 126CLC