

Guest Networking

Cisco on Cisco Technology Seminar



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Agenda

- Business objective
- Architecture & design
- Deployment
- Adoption & benefits
- Future

Objectives & Constraints

Build a policy and architecture in which:

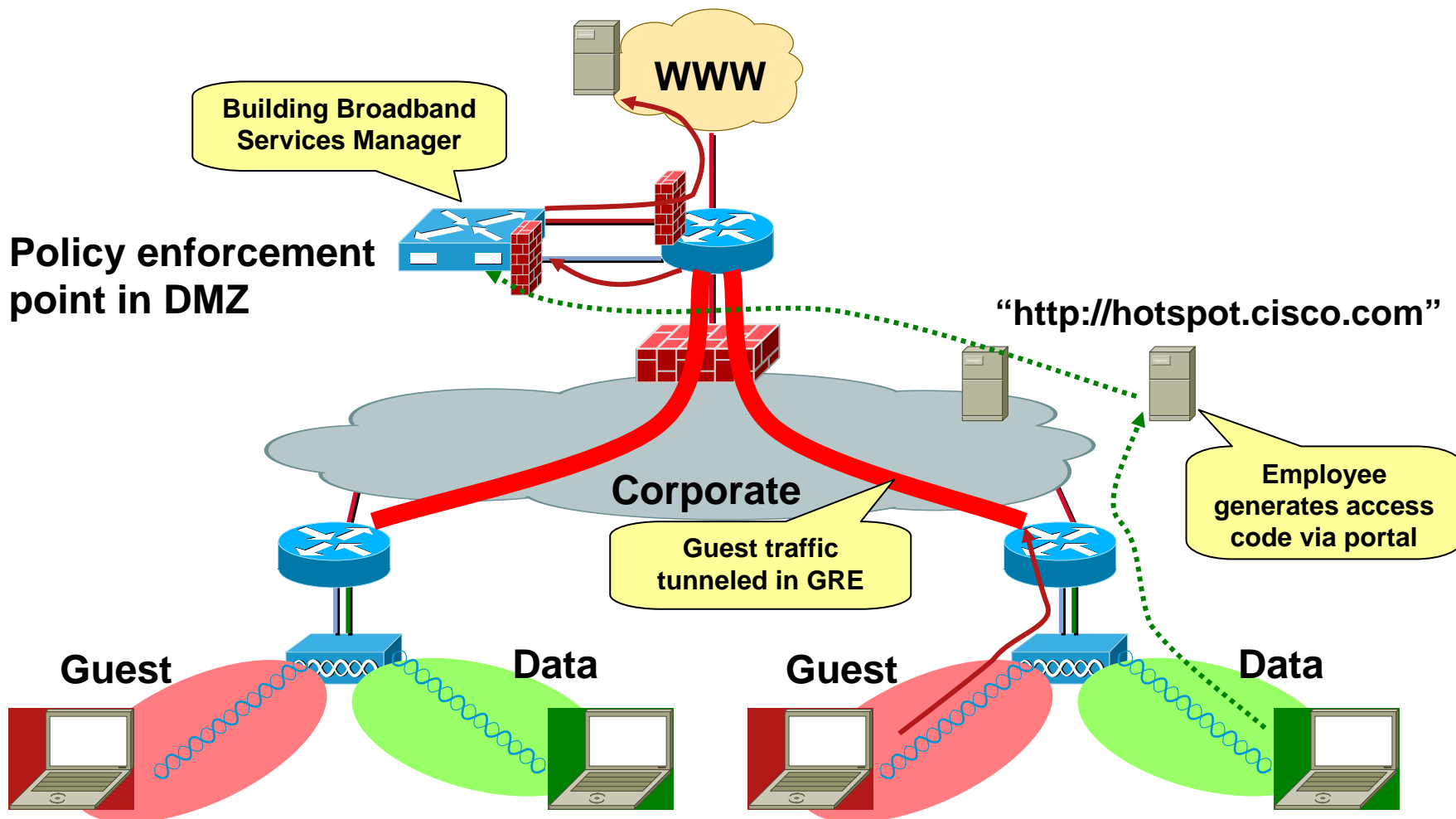
Non-Cisco visitors can access the Internet

- a) Where and when Cisco deems appropriate
- b) With Cisco's permission
- c) From Cisco's infrastructure
- d) Secure, Authenticated, Recorded
- e) Minimal administrative burden

Architecture highlights

- Redundant policy enforcement points
 - Dual Building Broadband Services Manager
 - NAC Appliance to replace BBSM
- Globally distributed egress points
 - Guest traffic routed to geographically appropriate DMZ
- Internal guest networking portal for access code creation
 - Employees create access codes for their own visitors via “hotspot.cisco.com”
- “guestnet” SSID available on all access points worldwide
 - Every Cisco building has guest networking services
- Wired guest networking at selected sites
 - Training rooms, briefing centers etc.

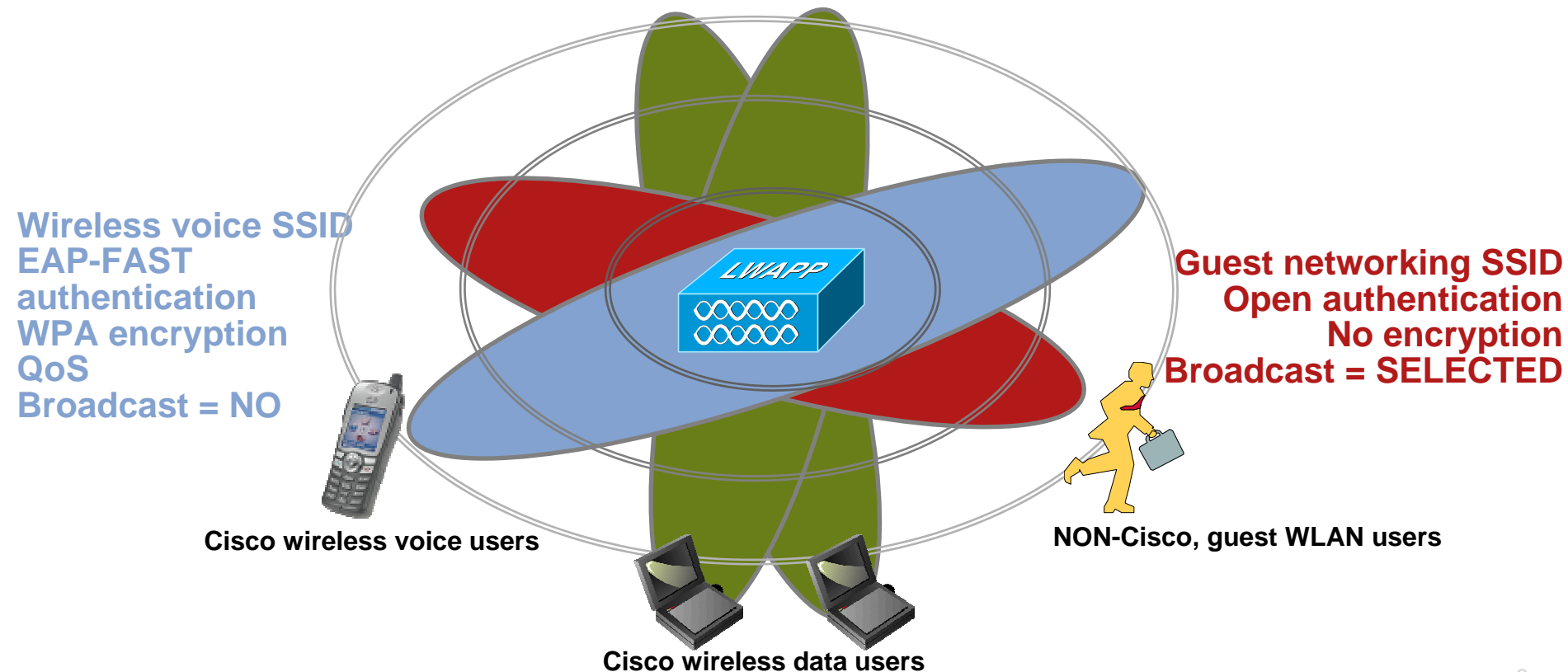
Current wireless hotspot architecture



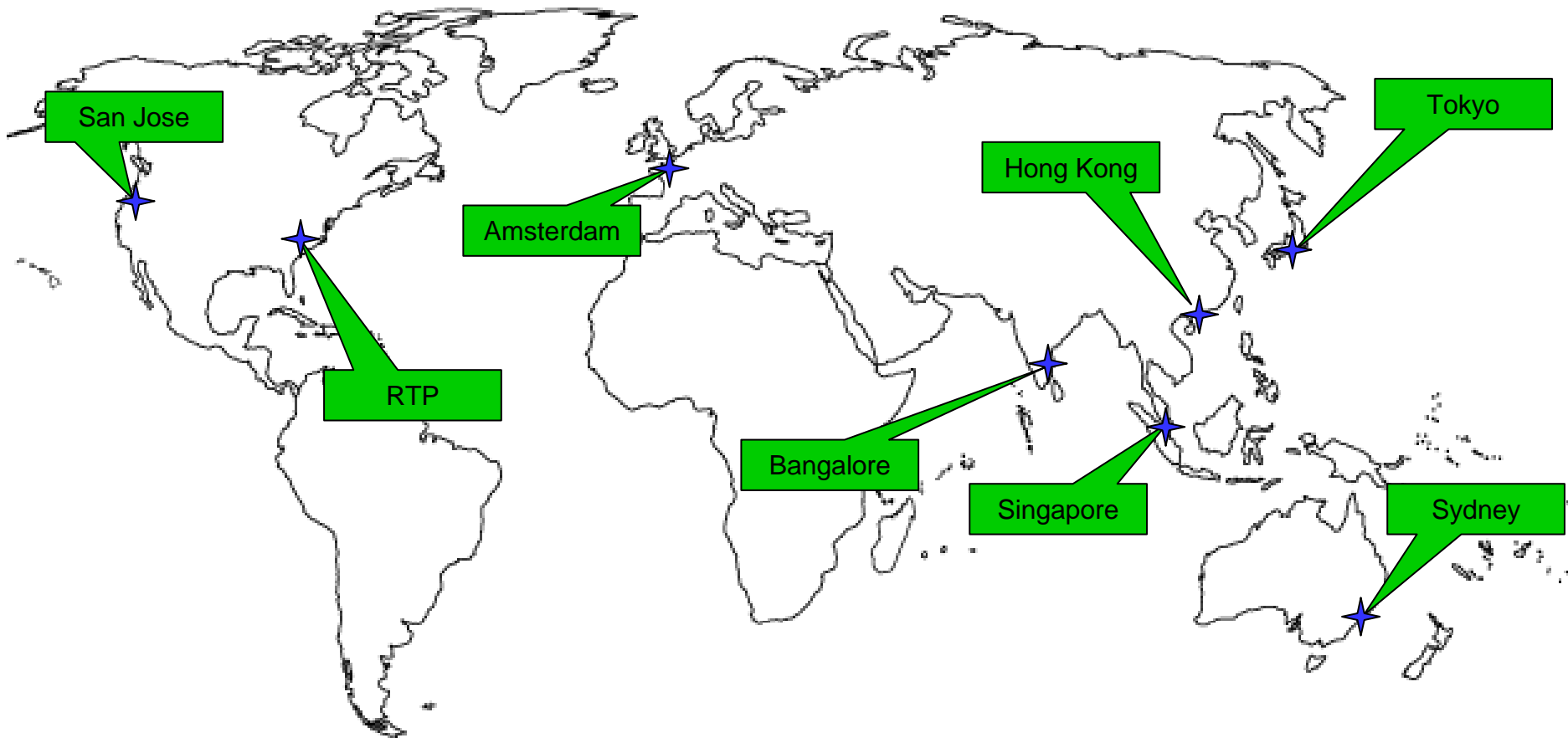
Wireless SSID Architecture

Common SSID configuration for all access points

Two production data SSIDs
EAP-FAST authentication
CKIP encryption on one
WPA encryption on the other
Broadcast = NO



Globally distributed guest networks



Baseline User Experience for Enterprise Guest Access

1. Authorized employee registers the guest via an intranet portal

2. One-time login is generated and distributed to the Guest User

3. Guest User connects to WLAN and opens Web browser

4. Redirected to login screen



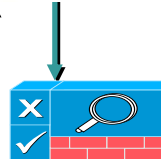
Access Network



hotspot.cisco.com



Login Screen



**Enforcement Point
(Building Broadband
Services Manager)**

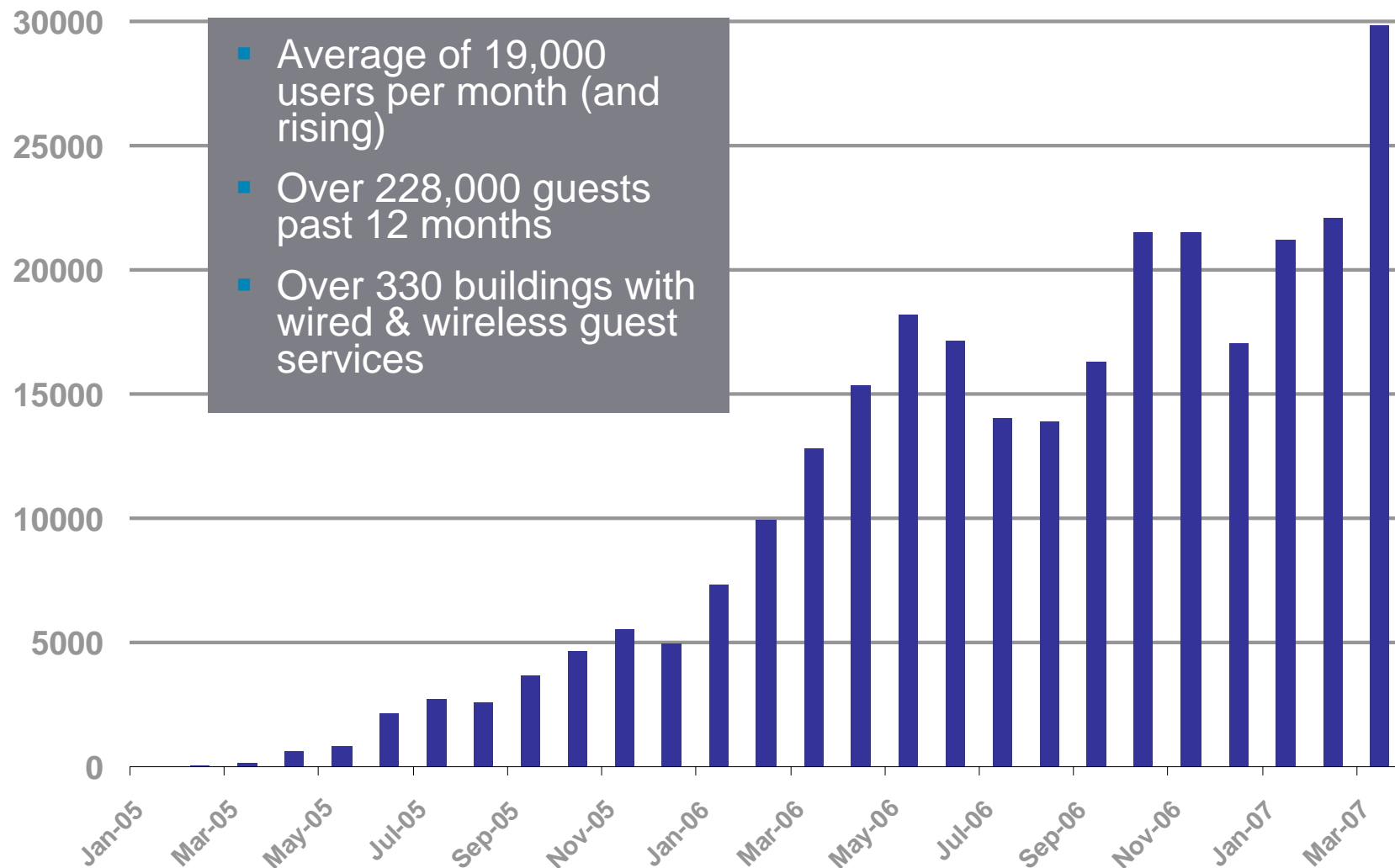
**Internet,
E-mail, VPN, etc.**

5. To access the Internet, the guest user must login to the service

6. User then free to pass traffic to the Internet, Web, E-mail, VPN...

Guest Usage Trends - Global

Guest Users



Support Cost Analysis – FY 2007

Support Cost of hotspot.cisco.com	FY 2007
Number of Guest Codes (Annual)	228,048
# IT Support Cases (Annual)	578
Support Case Cost (\$25 per case)	\$14,450
Tier 2/3 Support (Est. 1 FTE)	\$144,000
Total Support Cost	\$158,450 or \$0.69 per guest

Support Cost pre-hotspot.cisco.com	FY 2007
# of helpdesk calls required (without guest service)	228,048
Total cost of support (\$25 x 228,048)	\$5,701,200
Cost of "Hotspot.cisco.com" (see above)	\$158,450
Cost Avoidance	\$5,542,750

Guest network benefits

Cost Avoidance	<ul style="list-style-type: none">▪ Over \$5M in potential support/administrative overhead avoided
Improved Security	<ul style="list-style-type: none">▪ Controlled network access▪ Uncontrolled, non-corporate clients segmented from enterprise network
Improved Turnaround	<ul style="list-style-type: none">▪ Access codes can be generated within 15 seconds▪ Batch codes can be generated for large groups▪ IT administrative overhead avoided
Staff Empowerment	<ul style="list-style-type: none">▪ Visitor sponsors responsible for generating code – no IT support needed
Guest Experience	<ul style="list-style-type: none">▪ Branded network experience – Cisco viewed as technology leader▪ “No hassle” network access
Legal Protection	<ul style="list-style-type: none">▪ Users must digitally sign acceptable use policy with legal disclaimer

Future of guest networking in Cisco

- Adopting Advanced Services GuestNet Manager Turnkey solution
- BBSM to be replaced by NAC Appliance
- Additional features to Web front-end (<http://hotspot.cisco.com>)
 - Intelligent Access Code Allocation (limit access codes to sites with bandwidth constraints)
 - Proxy access code generation and other features.
- Improved redundancy for Hotspots (component of NexGen WLAN program)
- More End User & Administration enhancements
 - GuestNet Manager look and feel
 - Management software, improved admin, reporting, logging, etc.

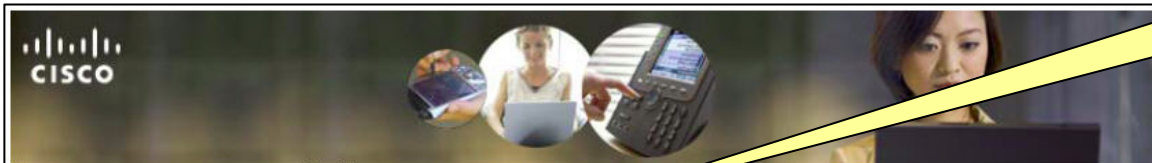
Screen shots



Guest access code instructions

Printed and/or emailed to visitor

Guest name
& location



Name John Doe
Company Acme Enterprises
Site of Visit San Jose, CA - Bldg 10
Start Valid Time 2007-APR-02, 7:00 am
End Valid Time 2007-APR-03, 7:00 pm
Access Code PN7F889X
SSID guestnet
WEP none

NOTE: In your access code, there are no vowels. Any 0's are zeros, versus the letter O.

Requirements

- A laptop or PDA with WLAN capabilities (802.11b). This functionality may be built into your device, or is supplemented with a wireless PCMCIA card.
- Latest wireless card drivers loaded to avoid association issues with Cisco's advanced network.
- After enabling your wireless device, you may need to set your SSID to guestnet with no WEP (WindowsXP and Pocket PC should autodetect this setting).
- Your wireless device must be configured to obtain an IP address automatically (DHCP).
- Web Browser software. You can use any standard internet browser such as Netscape or Internet Explorer, on any operating system.

Instructions

- Launch your web browser in any of our wireless enabled areas and you will be redirected to the Cisco Wireless Guest Access webpage.
- Simply enter the required information, scroll down and click 'Agree' to accept the terms and conditions. On the next page, enter your Access Code and click submit.
- You're Connected!

NOTE: Please note that the Cisco Guest Hotspot service provides unencrypted access to the public Internet. You may wish to use VPN or encryption software for sensitive traffic and/or remote connectivity to your own enterprise network.

Access to the Cisco Guest Wireless Local Area Network (WLAN) service is provided for the use of authorized users only. If Cisco has not authorized you to access this service, you must logout immediately. Authorized users must read, agree with and accept all of the terms and conditions contained in this notice before using the WLAN

1. Cisco is providing you access to our Guest WLAN as a complimentary service for your convenience during your visit at Cisco. You acknowledge that (i) the WLAN service provides unencrypted wireless access to the Internet, and agree you are responsible for the security of your system and any transmissions you make or receive; and (ii) that you understand the risks of unencrypted access to the Internet, and will take any necessary security precautions, including encrypting confidential transmissions, backing up any data and protecting your system with a firewall and robust user authentication.
2. You agree that your activities on the WLAN shall not:
 - a) introduce any viruses, Trojan horses, worms, time bombs, cancelbots, other computer programming routines that may damage, detrimentally interfere with, surreptitiously intercept or expropriate any system, data or personal information;
 - b) create any liability for us or cause us to lose (in whole or in part) the services of our suppliers;
 - c) violate any law, statute, ordinance or regulation (including, but not limited to, those governing export control, consumer protection, unfair competition, antidiscrimination or false advertising);
 - d) be defamatory, trade libelous, unlawfully threatening or harassing;
 - e) be obscene or contain child pornography;
 - f) infringe any third party's copyright, patent, trademark, trade secret or other proprietary rights; or
 - g) involve any attempt to access any data or system which you are not authorized to access.
3. Cisco routinely monitors and logs communications over its networks for security, performance, and other purposes. Thus, you acknowledge and agree that Cisco may access, monitor, audit, intercept and disclose any such communications, data or information.
4. You agree that Cisco may not make certain Internet services available, and may revoke your access to this WLAN at any time for any reason with or without notice.
5. AS A COMPLIMENTARY SERVICE, THIS WLAN IS PROVIDED "AS-IS" AND "WHERE-IS," WITHOUT ANY WARRANTIES, EXPRESS OR IMPLIED.
6. OUR LIABILITY, AND THE LIABILITY OF OUR SUBSIDIARIES, OFFICERS, DIRECTORS, EMPLOYEES, AND SUPPLIERS, TO YOU IS LIMITED TO U.S. \$100.00.

Access
Code

Instructions

Legal
disclaimer

Guest picks up Broadcast SSID "guestnet"

Guest launches browser

Cisco Wireless Guest Internet Access

Welcome to Cisco's High Speed Internet Access

This service allows you to access the Internet and you can use your VPN client to access your home office.

Please enter your name below, then click A

Guest enters
real user name

Full Name

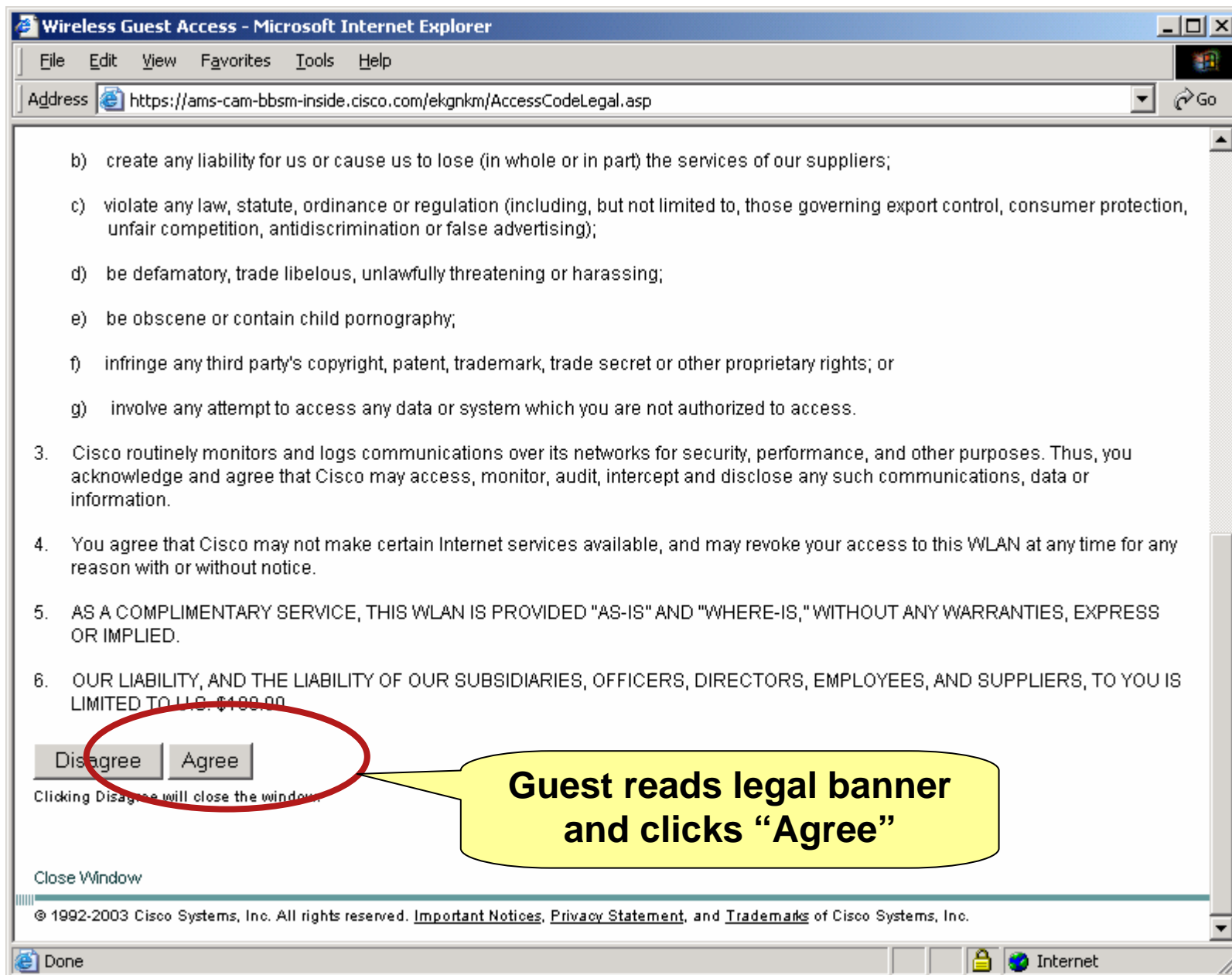
John Smith

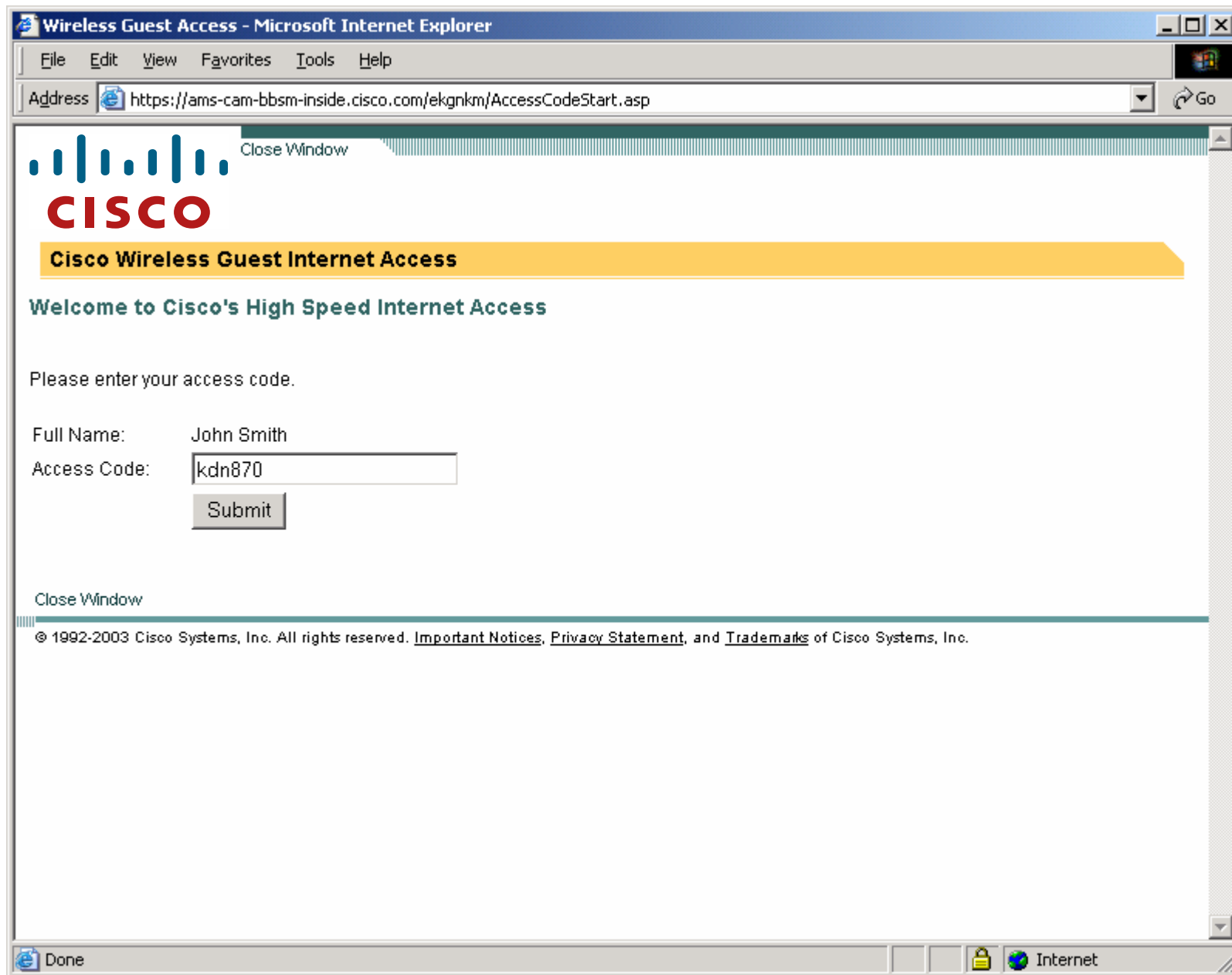
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2. You agree that your activities on the WLAN shall not:
 - a) introduce any viruses, Trojan horses, worms, time bombs, cancelbots, other computer programming routines that may damage, detrimentally interfere with, surreptitiously intercept or expropriate any system, data or personal information;





Guest is granted Internet access



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**No wireless encryption
Guest should use VPN**

www.hotspot.cisco screenshot




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INTERNAL USE ONLY

Guest Hotspot Access Codes Generator



WelcomeGenerate Single Access CodeGenerate Batch Access CodesView/EditSupportAdmin

NOTICES

*** SSID Broadcast**
In order to reduce DHCP issues, we have turned off the "guestnet" SSID broadcast at some sites and plan to turn off this off at all Field Sales Offices in the future. The Hotspot service is **still** available. Guests must hardcode "guestnet" in order to associate to our network.

*** Microsoft Windows Blue Screen of Death (BSOD)**
Some older wireless drivers are incompatible with our advanced wireless network. To resolve, download an updated driver from a different computer and copy the driver over to the "faulty" PC via a USB key (or similar), and upgrade the driver.

Note: You may need to disable the wireless device before boot up as some computers will automatically associate to our network when they boot up.

Site of Visit: Filter List:

Guest Information

*Required Field


* First Name

* Last Name


* Company

Email Address

Dates of Visit

Start Date  (YYYY-MM-DD)

Start Time time is local to visitor Site

End Date  (YYYY-MM-DD)

End Time time is local to visitor Site

NOTE: Maximum Date range is 7 days.

hotspot.cisco.com
Sponsor (Cisco employee) can
create access code for guest

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