Effective Deployment of Wireless Backhaul and base Station Systems

Premier Webinar Program

Inscape Data Corporation
July 20, 2005
Today’s Agenda

First 20 Minutes
- Advantages of outdoor wireless
- Challenges of outdoor wireless
- Popular outdoor wireless application scenarios
- Solutions to wireless data connectivity

Last 30 Minutes
- Q&A
Advantages of Outdoor Wireless

- Provides data connectivity solution once not possible
- Fast deployment times and added cost savings
- LOS advantage, Long Range and high data rate
- Wireless user mobility and portability for broad applications, e.g., VoIP and Video over IP
- High over the air data rates
- Low cost wireless broadband and proven ROI (Return on Investment), v.s. leased T1 line
Challenges of Outdoor Wireless

- Outdoor environmental consideration
- High Cost of reliable equipments
- Spectrum interference
- Non-line of site
Popular Application Scenarios

- Wireless Video Surveillance (Video over IP)
  - Traffic monitoring
  - Homeland Security
  - Remote infrastructure surveillance
- Wireless Internet Service
- Wireless Wide Area Network
- Wireless telemetry control
- Wireless VoIP
- Data connectivity
Carrier Class Outdoor Solutions

- Professional carrier class equipments
  - Inscape Data Ruggedized Lab Certified AirEther outdoor wireless system
    - RB11 Access Point/Router/Bridge
    - AP11 Access Point
    - CB11/11E/11S/11ES wireless client bridge
    - RB Series 1000/3000 Base Station Systems
- Outdoor harsh weather considerations
  - Lab certified equipment
    - Ingress Protection Rating 67 and 68 protecting your investment
- Interference Problems
  - Directional antenna system and frequency planning
- Non-line of site scenarios
  - Repeat or relay around obstacles
    - Point to point bridges/routers
    - Point to multipoint bridges/routers
Remote Wireless Video Surveillance

AirEther Rugged outdoor wireless radios establishes audio and video between remote critical infrastructure location to a centralized surveillance and monitoring location

- **System 1**: AirEther RB11 point-to-point bridge
- **System 2**: AirEther RB11 point-to-point bridge
- **System 3**: AirEther RB11 point-to-point bridge
Traffic Video Surveillance

AirEther RB11 point-to-multipoint Access Point

1

Surveillance Monitoring HQ

AirEther RB11 point-to-point bridge

3

AirEther Rugged outdoor wireless bridge establishes audio and video between traffic IP cameras to a remote surveillance monitoring HQ.

- **System 1**: AirEther RB11 Access Point
- **System 2**: AirEther CB11 cost effective wireless client bridge.
- **System 3**: AirEther RB11 point-to-point bridge
Wireless deployment for Data Mobility

WiFi Hot Zones using AirEther AP11 2.4 GHz outdoor Access Point

- Wi-Fi HotZone coverage enables mobile data users access to the internet.
- Accessibility to the internet allows for many possible network application.
- The AirEther AP11 access points may be hard wired to the internet or through an wireless Airther RB series point to point bridge.
Wireless Backhaul

AirEther RB-11

Wireless Distribution / Last Mile

AirEther CB-11

Subscriber Gateway

Internet
Wireless Campus
Routed Wireless Networks

- **W:** 192.168.1.2
  **E:** 192.168.210.254
  **G:** 192.168.1.1
  Static Routing Table:
  - 185.0.0.0 -> ..1.1
  - 220.0.0.0 -> ..1.3
- **W:** 192.168.1.1
  **E:** 192.168.220.254
  **G:** 192.168.1.1
  Static Routing Table:
  - 210,185.0.0 -+ ..1.2

**IP:** 195.229.185.97
Static Routing Table:
- 192.168.1.0/24/195.229.185.100
- 192.168.210.0/24/195.229.185.100
- 192.168.220.0/24/195.229.185.100
- 0.0.0.0/0.0.0.0/ISP-Gate-Way

**W:** 192.168.1.2
**E:** 192.168.210.254
**G:** 192.168.1.1
Static Routing Table:
- 185.0.0.0 -> ..1.1
- 220.0.0.0 -> ..1.3
AirEther™ Wireless System features & Advantages

• Ruggedized IP67/68 weatherproof Point to Point backhaul with static and NAT routing capability
• Enterprise Point to multipoint bridge/router
• Reliable cost effective point to multipoint bridge
  – Transparent bridge
  – Up to 8 remote bridges or clients
• High Power 2.4 & 5.x GHz 802.11b, 802.11b/g and 802.11a/b/g Access Points and Bridges
• Hardware (KIT) inclusive in-the-box package ready for immediate installation
  – Built-in lighting surge arrestors, PoE, RF Coax Cables (RB11), Antennas(AP11), 100 feet outdoor shielded CAT5
Summary

**Critical Outdoor Application Consideration**

- Weatherproof outdoor equipment reliability and dependability
- Features and operation
- Power accessibility
- Ease of installation

**Key Features of Inscape Data’s Solutions**

- Lab certified “IP” 67/68 rated ruggedized weatherproof outdoor wireless equipments protecting your investments
- Built in Bridge and Routing functions
- Long range capability with integrated 200mW and 400mW high power radio
- Versatile and cost effective for all deployment scenario
- Dependable and reliable hardware platform
- Scalable, easy to integrate, and cost effective solution to meet every project budget
Question & Answer
Company Info/ Website / Email

• Future webinars:
  – JULY, “Wireless Backhaul and Hotspot Base Station Systems”

• For more product details, please visit www.inscapedata.com

• For any additional product information and pricing, please contact your distributor

• Or send your questions to service@inscapedata.com