Introduction
Wireless Quality meets Wired

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In a Nutshell

- 7signal provides Wireless Quality Assurance (WQA) solutions for enterprise WLAN networks
- Focus on business critical WLAN applications
  - Logistics operations, warehouses, seaports, airports, healthcare, retail, manufacturing, enterprise VoIP over WLAN
- Established in Feb 2006
- Sapphire product launched in April 2008
- RedHerring Global TOP100 Award 2008 winner
Unreliability, choppy experience and lack of any control on service quality are considered acceptable features for WLAN…

Still airports, seaports, healthcare, warehouses, retail,…operations depend 100% on it
Lack of Quality in WLAN Services Cause Significant Financial Losses

- Networks need to be managed relying on sporadic end user feedback
- Fault detection and correction are reactive
- No end-to-end quality and performance management
- Service Level Agreement (SLA) based business models are not available
- Remote monitoring and troubleshooting are limited
- Robustness added by multiplying AP count
- Challenges becoming greater with real-time applications such as VoIP
The Wired Domain has a Range of Solutions

LAN/WAN domain

Quality
Availability
Configuration
Security
Basic needs

Cisco
Alcatel-Lucent
Brocade
Netscout
Entuity
Shunra
Stonesoft
CheckPoint
Juniper
Brocade
Cisco
Alcatel-Lucent
Netscout
Entuity
Shunra
Stonesoft
CheckPoint
Juniper

Uptime

Entuity
Shunra
Stonesoft
CheckPoint
Juniper
Brocade
Cisco
Alcatel-Lucent
Netscout

5
Not the Case for WLAN…

LAN/WAN domain

- Quality
- Availability
- Configuration
- Security
- Basic needs

WLAN domain

- 7signal

- Cisco
- Alcatel-Lucent
- Entuity
- Shunra
- Uptime
- Netscout

- StoneSoft
- CheckPoint
- Juniper
- Brocade

- Airwave
- AirDefence
- AirMagnet
- AirTight
- AdventNet
The 7signal Sapphire Solution

Sapphire Eye Appliance
- WLAN monitoring unit
- 6+1 sectored antennas, special RF
- Patented technology

Carat & Loupe Software
- Management (Carat) and reporting (Loupe) functions
- Controls and manages the Eye network
- Stores statistics
- Reporting and alarms

Sonar Software
- Test server software
- Enables end-to-end testing of VoIP, FTP, HTTP, and other protocols
7signal Sapphire System Overview

**Sonar software**
- Test end-point
- Supports end-user Applications

**Carat software (remote)**
- Management system interface for service providers
- Reporting and quality monitoring

![Diagram](remote_carat)

Remote or local Carat, only one needed

**Carat software (local)**
- Management system in enterprise
- Enterprise reporting and quality monitoring

**Sapphire Eye Appliance**
- Monitors 6-12 access points
7signal Sapphire Takes Enterprise WLAN to a Completely New Level

- **Proactive and automated** monitoring of wireless network performance and service levels
- **Continuous** network performance and quality management available
- **Measurement of end-to-end** network connectivity and end-user experience
- **Service level capability** enabling differentiated SLA business models, more ROI
- **Remote** troubleshooting capability
- **Complements** controller-based WLAN products
ROI, New Revenue for Service Providers

- **Multiply revenue opportunity, old and new customers**
  - "7signal Sapphire does the same for WLAN services as SLAs did for servers business"
  - Current revenue per AP about ~50-70€/month, no meaningful SLA
  - Add revenue, multiply by up to 5x depending on the criticality

- **Double gross margin from business WLAN networks**
  - Add a fully automated automatic SLA reporting service
  - Basic WLAN AP gives about 10-15€/month gross margin
  - SLA reporting gives another 10-15€/month for each AP

- **Lower operating expenses**
  - Manage wireless networks truly centrally and remotely
  - No need to runs around with laptop analyzers

- **Competitive advantage, SLA is a prerequisite**
  - Tenders without service levels not accepted
## Competitive Landscape

<table>
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<th>Enterprise WLAN Network</th>
<th>Cisco Enterprise WLAN</th>
<th>Motorola Enterprise WLAN</th>
<th>Aruba Enterprise WLAN</th>
<th>3Com Enterprise WLAN</th>
<th>Trapeze (Belden) Enterprise WLAN</th>
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![Competitive Landscape Diagram](image-url)