WiFi: Platform for Business Innovation and Revenue Generation

Yasir Qureshi
Business Development Manager | Emerging Service Providers

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It’s not Just About Offload: Transforming Experience & Growing Revenues

Wi-Fi as a hotspot technology: a wireline service

Wi-Fi as a mobile offload technology: a cellular network optimization tool

Wi-Fi as a platform for:
- Service innovation
- Revenue growth
- Experience transformation
Wi-Fi is a User-Driven Trend

80% of the time users are within Wi-Fi coverage

Mostly nomadic use

19 out of 20 smartphones support Wi-Fi

50% of smartphone usage is already on Wi-Fi

Sources: Cisco Visual Networking Index, 2011; Bango Inc., February 2011; North Carolina State University, Cisco IBSG 2011
Wi-Fi Complements Mobile Services Enhancing Speeds & User Experience

- Focus on coverage
- City or country-wide
- Voice & basic data

- Provide spot capacity
- High-density areas
- Video & High-speed data
Wi-Fi Incorporates a Number of Key Benefits for Service Providers

3G-like experience
Extend the mobile service in a transparent manner

New revenues
Generate new revenue streams via innovative wireless services

High-speed access
Provide higher speeds for smartphone users cost-effectively

Brand enhancement
Associate service provider brand with innovation & consumer experience

Reduce churn
Increase customer loyalty & stickiness offering a complementary service
Most Important: Making Money from Wi-Fi
New Business Opportunities for Service Providers

Traditional hotspot

- Guest Access
  - $5-$9 /month

Hotspot Wi-Fi Connectivity

Next-generation hotspot

- Location Analytics
  - $200-500 /month
- Mobile 3G Offload
  - $2-5/GB
- Managed Wireless LAN
  - $10 / AP / month
- Hotzone / Hotspot Wi-Fi Connectivity
  - $5-$9 /month

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Business Models & Value Creation Sources

**B** Internal value to Service Provider
- Cost Savings
- Indirect
  - Retention
  - Market share
  - Up-sell
- Data offload

**B2C** Service Provider selling to Consumers
- End-user Access
- Services
  - Voice & Video
  - Premium hot-spot
- Guest access

**B2SP** Service Provider selling to other Providers
- Federation
- Offload
  - Roaming
  - Offload wholesale

**B2B** Service Provider selling through other businesses
- 3rd Party
  - M2M
  - Concierge Advertising
- Venue Owners
  - University
  - Stadium
  - Municipality

* Based on Cisco IBSG study by Stuart Taylor

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Mobile Offload & Service Bundling Generate Significant Internal Value

**Internal value to Service Provider**

- **Cost Savings**
- **Indirect**
  - Retention
  - Market share
  - Up-sell

**Bundled Wi-Fi**

- Bundling Wi-Fi service to another service
- Example: mobile data package, broadband
- Typically free of charge
- Reduced customer churn
- Increased market share for core services through differentiation

**Offload mobile data traffic using Wi-Fi**

- Serve huge growth in mobile data traffic
- Reduce 3G/4G CapEx and operating costs
- Estimated savings: $2 - $5 /GB

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Wi-Fi Deployment – Transportation
Churn Reduction at Cablevision

- Continuous coverage for NY metro area with more than 25,000 APs (indoor and out)
- Now installed on ferry and commuter trains
- Large convention coverage in Madison Square Garden and Radio City Music Hall
- Increases customer “stickiness” with differentiated Wi-Fi service for reduced churn
Combining Hotspot & Premium Services to Increase Consumer ARPU

**Guest Access**
- Hotspot access for Internet connectivity
- Direct subscription
- Daily / hourly fees
- $5-15/user/month

**B2C**
- Service Provider selling to Consumers
  - End-user Access
    - Guest access
  - Services
    - Premium hotspot
    - Business-anywhere

**Premium Hotspot**
- More capabilities: quality, security, content access
- Additional fees or bundling
- $3-5/user/month

**Business Anywhere**
- Additional service to business Wi-Fi
- Setup fees and enterprise join fee
- Per user fees
- $10-15/user/month

**Video over Wi-Fi**
- Bundle with unique video content
- Reduced churn for other services
- Monthly fees
- $2-5/user-month

**Managed Hotspot**
- Managed service
- Public locations wishing to provide hotspot services to their clients
- $50-250/AP/month

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Wi-Fi Could Generate a New Source of Wholesale Services

**Roaming Agreements**
- Sell access to roaming users
- Agreements with other operators
- User does not pay directly
- $0.5-1/GB

**B2SP** Service Provider selling to other Providers

- Federation
- Offload
- Roaming

**Mobile Offload Wholesale**
- Sell access to other mobile operators
- Allow other operators to offload
- Charge per MB, user or usage time
- $3-10/GB

**Managed Small Cells**
- Co-locating small cells for mobile operators
- Provide installation, management, support
- Charge installation fees
- Monthly recurring charge per node, backhaul
- Revenues per site hosted: $500-600/year
Value-Added Services
New Revenues & Increased Visibility

**M2M**
- Connecting meter reading, digital signage, sensors...
- Monthly fees per machine or usage
- $2-4/con. /month

**Subletting**
- Large venues access (malls, stadiums etc.)
- Revenues from managed Wi-Fi
  - $50/AP/month

**Advertising**
- Access to hotspots
- Subsidized by ads & sponsorships
- CPM-based charge
  - $0.5-1/user-month

**Embedded Connectivity**
- Devices sold with free Wi-Fi access
- E.g. Kindle model
- Charge content / device manufact.
- $0.5/download

**Retail Store Interactions**
- Targeted market offers
- Enhanced in-store experience
- Revenues from set-up, consulting, integration and monthly fees
- $100-150/store/month

**B2B** Service Provider selling through other businesses

**3rd Party**
- M2M
- Concierge Advertising

**Venue Owners**
- University
- Stadium
- Municipality

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Example: Stadium Beyond 3G Offload

- WiFi broadband connectivity free to 40,000 fans
- 3G offload for all smartphone and broadband devices through transparent authentication
- On-net video instant replay live during game or show
Example: Location Analytics
At Copenhagen Airport

Understand what your customers are doing to better target services:

Time spent & usage at any given point:
- Average time passengers spend in different airport parts

Common paths:
- The most common departure path through the airport

Heaviest use – crowded locations:
- Where the most crowded parts of the airport are

Month to month comparison, Trend analysis, norm setting:
- Data points from a single day (1M per day and growing)
Advanced Shopper Services

In-Store Mapping & Directions
- Store maps, locating departments & products based on location
- Improve service, loyalty & sales; refocus sales staff time

Shopping Experience
- Help customers optimize their store visit: in-store routing
- Improve service, loyalty; upsell: complete & additional purchases

Customer Assistance
- Customer to locate sales rep or speak to product specialist
- Increase sales, customer loyalty; refocus sales staff time

Mobile Cloud Services
- Product recommender, product scanning, list management...
- Improve customer service & loyalty; increase sales

Customer Connectivity
- Provide free Wi-Fi access to customers while in store
- Stay longer in store – increase sales & loyalty
High-Density Scenarios are Highly Visible, but Operators Must Look for Volume
Established Ecosystem Partnerships for Value-Added Mobility Services

- **Architecture ready** for deployment of value-added applications (location-based services, virtual expert, etc.)
- An opportunity to generate **new revenue streams** through innovative services, on top of offload savings
- Cisco offers a wide selection of **solution partners**:
Summary

• Wi-Fi is being used as a platform for revenue generation
• Not just about 3G Offload
• It's not Binary: WiFi or 3G/4G/LTE
• Make sure to Build a Service Catalog and Roadmap for WiFi Services
Thank you.