



# EdgePoint™ PRO: FemtoCells In The Enterprise

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AirWalk Proprietary & Confidential



# Corporate Profile

Mission: To provide high-quality, high-performance and cost-effective CDMA IP Radio Access Network (IP-RAN) solutions for wireless service providers and manufacturers

## Founded

- January 2002 in Richardson, Texas;
- A Delaware Corporation

## Board of Advisors

- Bo Hedfors
- Dr. Yossi Zilberfarb

## Employees

- Engineers have an average of 10 years of CDMA wireless and IP expertise
- Major CDMA vendor experience: Alcatel-Lucent, Motorola, Nortel, Samsung
- Diverse management team with average 25+ years experience

## Investors

- Series B in 2007



altaberkeley

## Technology

- Qualcomm Licencee

NEDELCO



## Global Customer Base

- Americas, Asia, E Europe, Middle East
- EVDO Rev A first deployed 2007

## Memberships

- Femto Forum
- CDG



# Full Line of IP-RAN products



Femto



- Residential
- Home office
- Business
- Enterprise

Pico



- Small enterprise
- Public hot spots
- Aeronautical
- Tunnels
- Cafes

Micro



- Medium enterprise
- Public hot spots
- Convention centers
- Campuses
- Marine

Mini



- Rural towns
- Rural highways
- Suburban

Macro



## CDMA Technologies

- 1xRTT
- EVDO Rev A

## Integrated Flat All-IP Architecture

- Integrated BSC/ANC and BTS
- Distributed architecture for soft handoffs



# Emergence of Two Femtocell Markets




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## Home and Home Office (SOHO)

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<b>Key Drivers</b>	Provide better coverage or capacity in the homes of some subscribers
<b>Market Characteristics</b>	High volume, low cost devices with mass scale management
<b>Simultaneous Calls</b>	Up to 6
<b>Technology</b>	1xRTT and 1xEV-DO Rev. A
<b>Handoff</b>	Stand-alone; No Clustering
<b>Interface</b>	Primarily SIP interfaces for scaling
<b>RF Power</b>	5-20 mW




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## Enterprise & Business

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	Provide better Enterprise coverage and capacity to support business applications
	Low to mid volume; High quality, reliability and value for business users
	25 to 30 per FemtoCell
	1xRTT and 1xEV-DO Rev. A
	Clustering with soft handoff
	IOS or SIP interfaces
	200 mW

# Enterprise Femtocell Opportunities

## Basic Enterprise User Market Is Proven

- End-to-end secured solutions for corporate & government users
- Stickiness of current users is very significant
- Generally Enterprise users are high revenue users



## Popular Enterprise Devices

- Blackberry devices
- Smart phones
- Data cards



## New Enterprise Opportunities

- Extend integration of wireless solution to additional applications
- Increase dependency on the wireless devices inside the office
- Differentiated services offerings within the office coverage area
- Secured access that meets corporate IT security requirements
- New markets: *Institutions; Medical; Public Safety; Education*



***All these opportunities require improved indoor coverage & capacity***

# Enterprise FemtoCell Benefits

## For End Users

- Better indoor coverage throughout the enterprise
- Maximum EVDO data rates available at the enterprise
- Transparent access to business applications everywhere



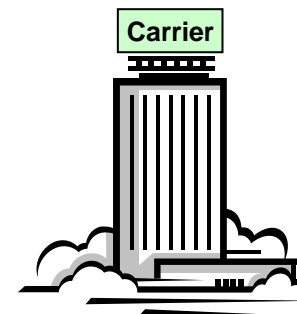
## For Companies

- Better service offering to enterprise user groups
- Greater productivity through increased information access
- Comprehensive & secure solution for IT managers



## For Carriers

- Reduce hot spot loading problems
- Less impact on macro carriers (less expansion needed)
- No backhaul costs for improved network coverage
- Higher overall data network throughput & revenue



# EdgePoint™ PRO Characteristics

## Key EdgePoint™ Features

- Integrated self contained BSC/BTS/PCF/O&M
- Automatic self discovery and configuration
- Connected to public internet or private intranet
- Hand-in & hand-out to macro network
- Clustering feature for soft handoff
- Closed or open user groups
- Full EVDO Rev A data rate support



*Desk Mount  
Package*

## Key EdgePoint™ Specifications

- 1xRTT or EVDO Rev A models
- Single carrier with micro-pilot beacon
- Available in all popular bands
- 200 mW RF power output
- Support for 25-30 simultaneous users
- High sensitivity indoor GPS system
- AC power supply; 10/100 Ethernet connection
- Desktop or wall mount packages



*Wall Mount  
Package*

# Core Network Options

## A1P/A2P (IOS) Core Network

- Conventional IOS 4.x/5.x implementation
- Soft switch or legacy network systems



*IOS 5.x Capable Soft switch*



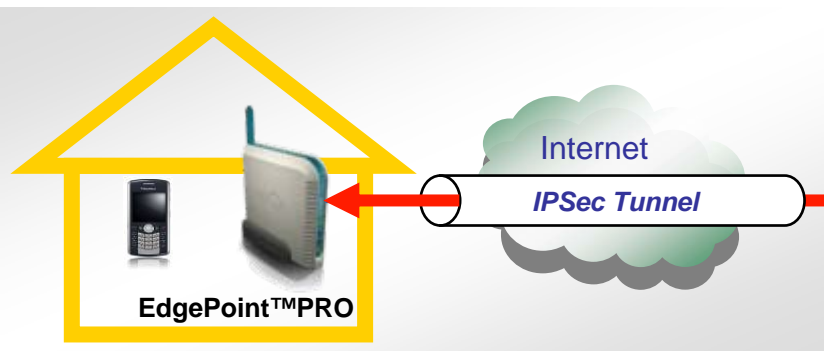
*Legacy Switch*

## SIP Based Core Network

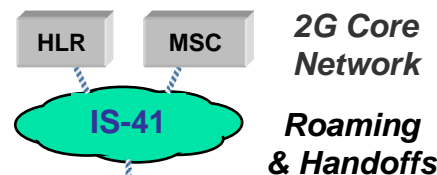
- SIP-Switch call server processes 1xRTT voice calls
- Also compatible with IMS core network implementations

## Femto Gateway (IPSec)

- Provides secured tunnel through public internet
- Applicable to A1P/A2P or SIP implementations



**Femto Gateway**



**2G Core Network**

*Roaming & Handoffs*



**1xRTT SIP-Switch**



**HA/AAA/PDSN**



**BSM-F O&M**



**O&M Client**

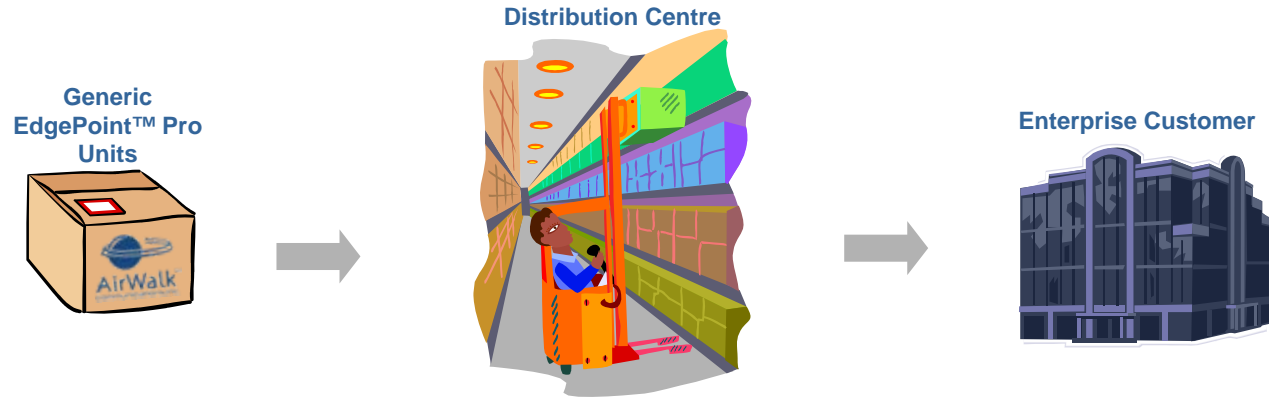
## FemtoCell Management System (O&M)

- Shared macro/enterprise scale implementation
- Large scale consumer/enterprise implementation

# Deployment Model

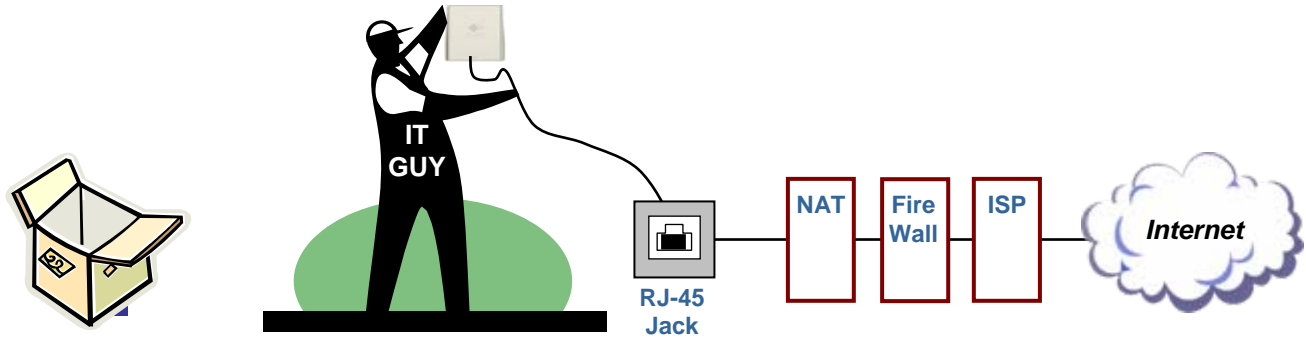
## One

Distribution Of Sold Units To Enterprise Customers



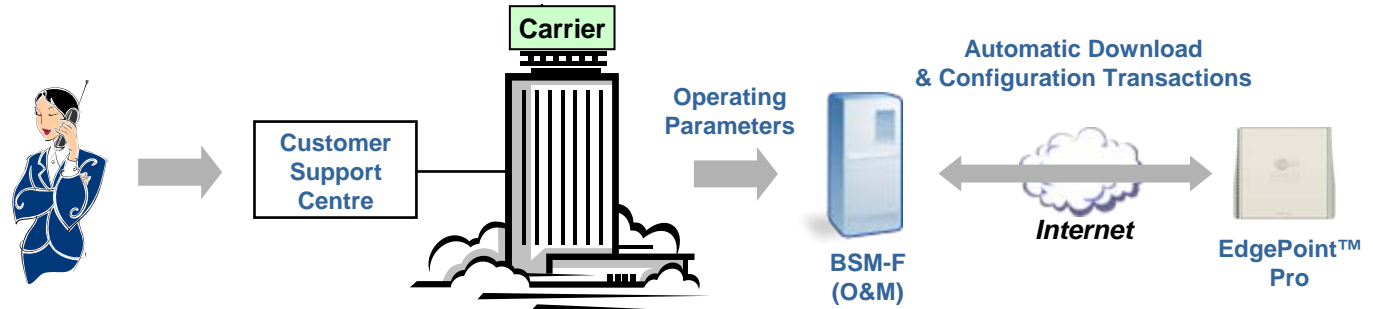
## Two

Installation Of Units By User or IT Staff (similar to WiFi install)



## Three

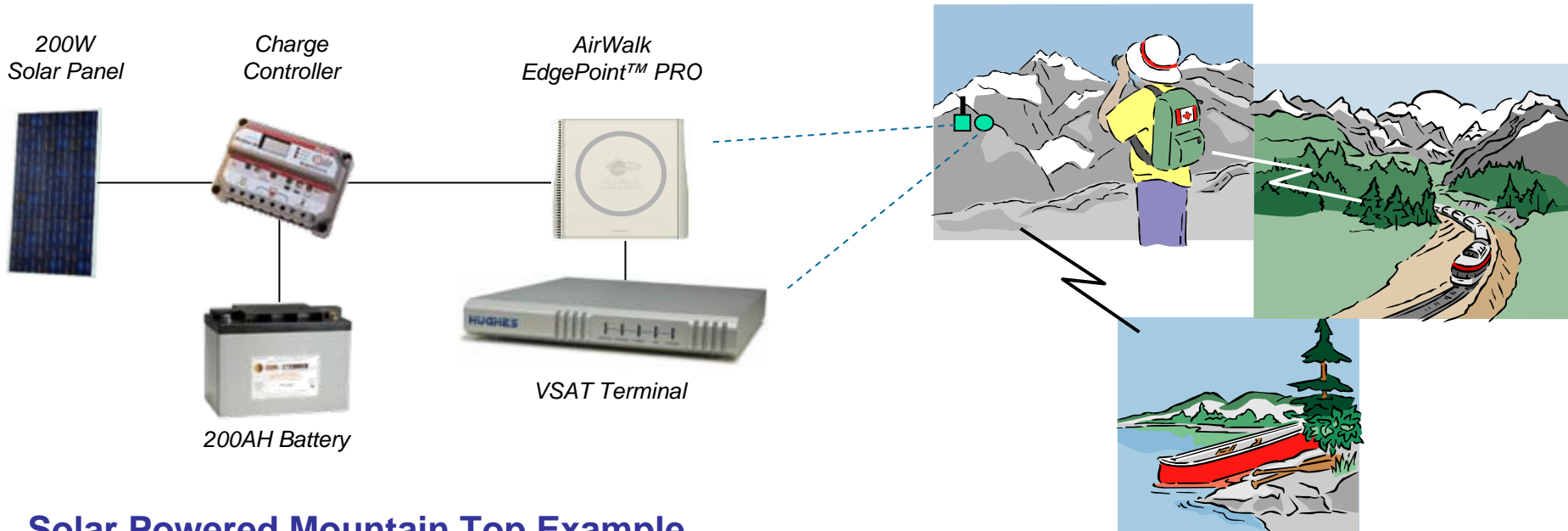
Activation Of Units Through Carrier Support Centre



# Remote Rural RAN Configuration

## EdgePoint™PRO For Remote Rural Area Coverage

- Leverage enterprise solutions for rural coverage
- Provide coverage and capacity for remote villages or towns
- Cover valleys and mountainous terrain from mountain tops



## Solar Powered Mountain Top Example

- Low power covers wide areas from mountain tops
- Unattended solar powered package w/ VSAT or other wireless backhaul
- Sizing example based on 8 sun-hr day with 8hr backup+3 day cloud  
(sizing varies by local insolation conditions)



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