

▶ December 2005

# Crown Castle International **Mobile Media**

# Mobile Media Introduction

## Crown Castle Mobile Media at a Glance

- **Service Offering**

Planned nationwide DVB-H mobile media network delivering subscription-based video and audio services to wireless handsets

- **Wholesale Carrier Model**

Enables wireless service providers to grow ARPU, reduce churn, and generate substantial gross margin without additional investment or spectrum usage

- **Unique Assets**

US spectrum rights (5MHz nationwide), broadcast know-how, and 11,000+ towers in the US will allow us to quickly and economically deploy a high-quality network featuring 10+ video channels and 24+ audio channels

- **Committed Partners**

Nokia, Motorola and Samsung have a strong commitment to our chosen technology (DVB-H) and plan to deliver handsets to support our roll-out

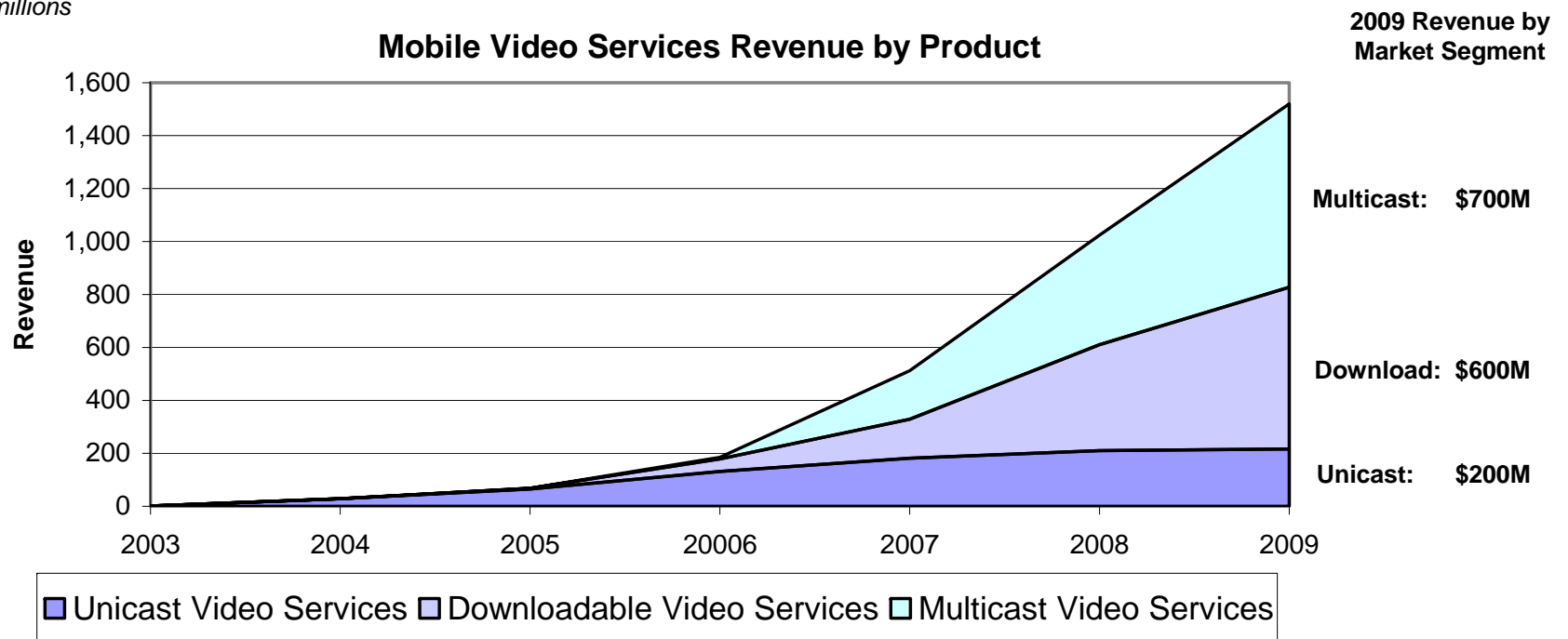
# Mobile Media **Market Opportunity**

# Mobile Media Market Opportunity

## A Large and Rapidly Growing Market for Mobile Video

Mobile video is expected to be a \$1.5 billion (Frost & Sullivan) to \$3.0 billion (IDC) market by 2009, with multicast services like DVB-H, the largest and fastest growing segment

*in millions*



Note: Unicasting is the point-to-point distribution of streaming video. Multicasting is point-to-multi-point broadcasting (DVB-H).

Source: Frost & Sullivan.



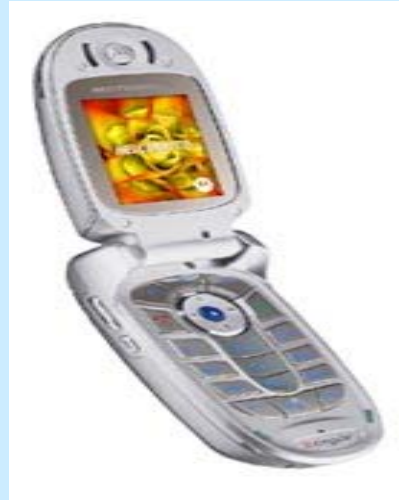
# Mobile Media Market Opportunity

## Market Research Highlights

Up to **46%** of mobile users are **likely to purchase**.  
(without price mention)

Acceptors willing to pay about **\$30 to \$50 premium** for handset

Most important **handset features** are: ease of use, reception quality, and battery life



Acceptors willing to pay about **\$17 per month** for service

**30%** of the target market is interested in buying in the **immediate future**

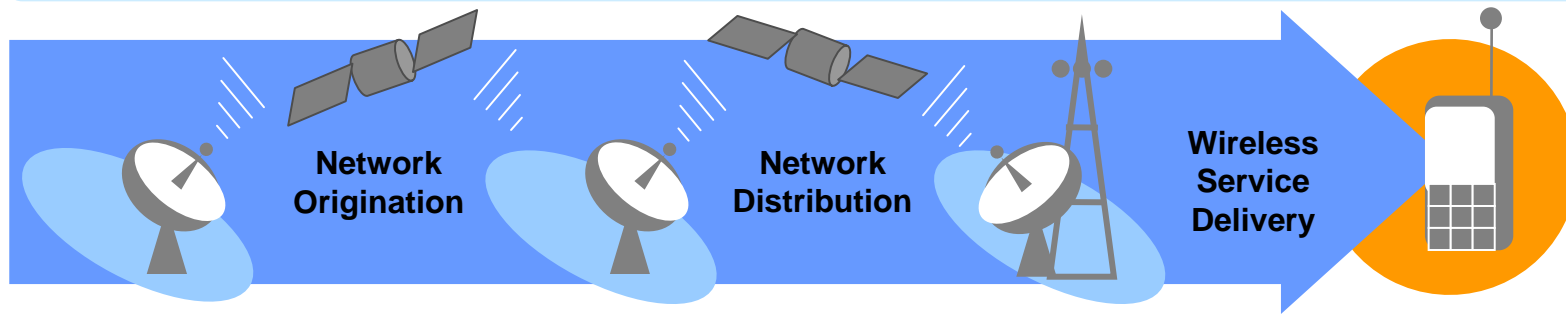
Most interesting **content** is News, Sports, Music and Comedy

*Source: HPI survey for Crown Castle (1,000 responses); Omnibus survey (500 responses); Gartner focus groups for Crown Castle*

# Mobile Media Market Opportunity

## Delivering Audio and Video to Cell Phones

Crown Castle's planned nationwide DVB-H network will enable high-quality video and audio content to be delivered at low cost wherever a mobile device can be used



Network Origination	Crown Castle Operations Center	Crown Castle Transmitters	Wireless Service Subscribers
<p>Programmer supplies network feed via existing methods</p> <ul style="list-style-type: none"> <li>• Video feeds</li> <li>• Audio feeds</li> </ul>	<p>Crown Castle retrieves feed and reformats for wireless network</p> <ul style="list-style-type: none"> <li>• Encoding</li> <li>• Encryption</li> </ul>	<p>Tower networks deliver signal to wireless devices</p>	<p>Subscriber receives mobile media service</p> <ul style="list-style-type: none"> <li>• Up to 30 fps</li> <li>• Fluid video / audio</li> <li>• Localizable content</li> </ul>

# Mobile Media Market Opportunity



## Handsets

### Nokia N92

World's first commercial DVB-H device

GSM/DVB-H

QVGA

Available in 2006

# Mobile Media Market Opportunity

## DVB-H can reach beyond mobile phones to other devices

In addition to cell phones, any electronic device outfitted with an inexpensive DVB-H capable receiver chipset can receive broadcasts, growing the addressable market





# Mobile Media Market Opportunity

## Mobile Computing

### Microsoft Relationship

- The Crown Castle DVB-H mobile media network will use Windows Media Format for delivery of audio and video services.

The Microsoft logo, consisting of the word "Microsoft" in white, italicized, sans-serif font, set against a solid blue rectangular background.

### Intel Relationship

- Intel has made significant investments in the development and commercialization of DVB-H technology.
- Crown Castle is working closely with both Intel and Microsoft, and we are deploying transmitter systems to cover their main campuses. We believe these relationships uniquely position DVB-H to dominate the market for mobile media delivery to laptop PCs and other mobile computing devices

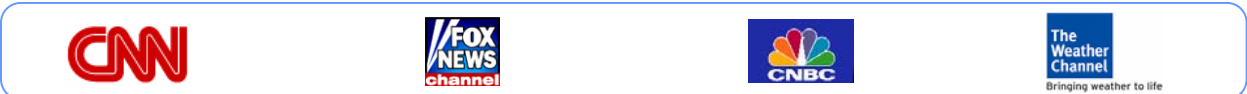
The Intel logo, featuring the word "intel" in a lowercase, blue, sans-serif font with a period at the end, set against a white background.

# Mobile Media Market Opportunity

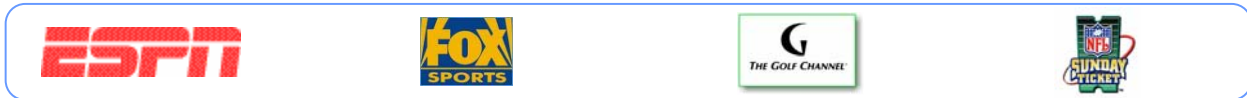
## Video Content

A wide selection of quality video content is available for distribution over mobile media networks

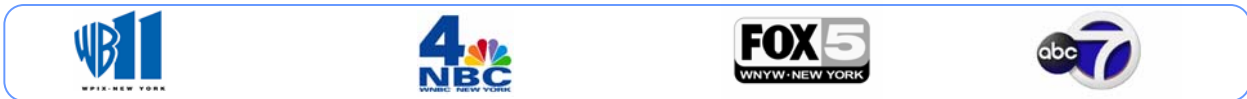
National News



Sports



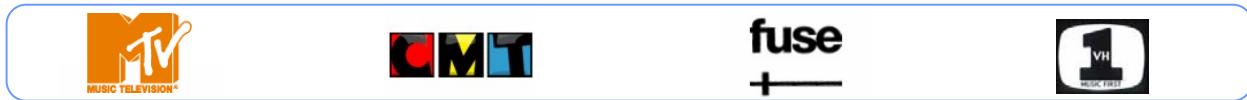
Local



Kids



Music



Learning



Entertainment



# Mobile Media Market Opportunity

## Audio Content

And several options exist for quality audio content

Basic Music Services

**MUSIC CHOICE**

Satellite Radio Partners

**SIRIUS**   **SATELLITE RADIO**

Internet Radio Partners

 **AOLmusic**  
 



# Mobile Media Market Opportunity

## Brings Attributes of Basic Cable to the Mobile Environment

- Multicasting can offer mobile subscribers the equivalent to basic cable packages
- Mobile operators can build off of this base to offer additional specialized content over their proprietary networks on a “pay-per-view” basis

Description	Cable / Satellite	Mobile Media
• National Coverage	Yes	Yes
• Subscriber Base	90 million HH	160 million subscribers
• Monthly Service Plan	Yes	Yes
• Conditional Access	Yes	Yes
• Quality Viewing Experience	Yes	Yes
• Program Line-up	Unlimited	10+ Video Networks
• Location	Home / Plugged-in	On-the-Go / Mobile
• Viewing Behavior (length)	Long-form (Any)	Short-form (:30 - <1hour)
• Screen Size	HD / Any	less than 6 inches

# Mobile Media **Technology**

# *Mobile Media Technology*

## **Digital Video Broadcasting – Handheld (DVB-H)**

- Formally approved as a DVB and ETSI standard in October 2004 (guarantee of fair and reasonable licensing terms)
- Technically superior solution for broadcast delivery of video to handheld devices:
  - Lowest power consumption
  - Best RF performance
  - Best spectrum efficiency
- Trials already underway in USA, Germany, Finland, UK, France, Italy, Spain, Australia, and Singapore

# Mobile Media Technology

## DVB-H Industry Support

DVB-H benefits from the support of a number of large manufacturers committed to bringing DVB-H products to market

### Chipset Providers



DiBcom  
Digital Broadband Communication



Launched by Motorola  
freescale  
semiconductor



TEXAS  
INSTRUMENTS



NOKIA  
CONNECTING PEOPLE

### Device Manufacturers



NOKIA  
CONNECTING PEOPLE



# *Mobile Media Technology*

## **Our Spectrum**

- Nationwide license for 5MHz of spectrum in the band 1670-1675MHz acquired in FCC auction in May 2003
- Quality spectrum (<2GHz) – propagation matches Crown Castle's engineered footprint
- No significant encumbrance – immediately usable to provide service to 99% of US population
- Liberal service rules (FCC Part 27)
  - Unique ability to broadcast terrestrially to national audiences while providing local content



# Mobile Media Technology

## Comparable Spectrum Valuations

Comparable / Source	\$ / MHz / POP	Implied Value (5 MHz / 280 million POPs)
PCS Spectrum Transactions	\$1.71	\$2.4 billion
QUALCOMM / Aloha Transaction	\$0.26	\$370 million
Intel Corporation Study <sup>(1)</sup>	\$1.31	\$1.8 billion
Motient Public Stock Price (11/17/05)	\$0.29	\$400 million

(1) Midpoint of \$20 - \$24 billion valuation of 700 MHz spectrum given to the House telecommunications subcommittee on May 26, 2005.

# *Mobile Media Technology*

## **DVB-H vs. FLO**



**You've heard the hype. What's the real story?**

# Mobile Media Technology

## QUALCOMM has proposed FLO as an alternative to DVB-H

- **Proprietary Technology**

Leading technology companies have indicated they see no technical advantage in Qualcomm's proprietary approach, and wireless carriers express concerns regarding non-standard systems

- **Encumbered Spectrum**

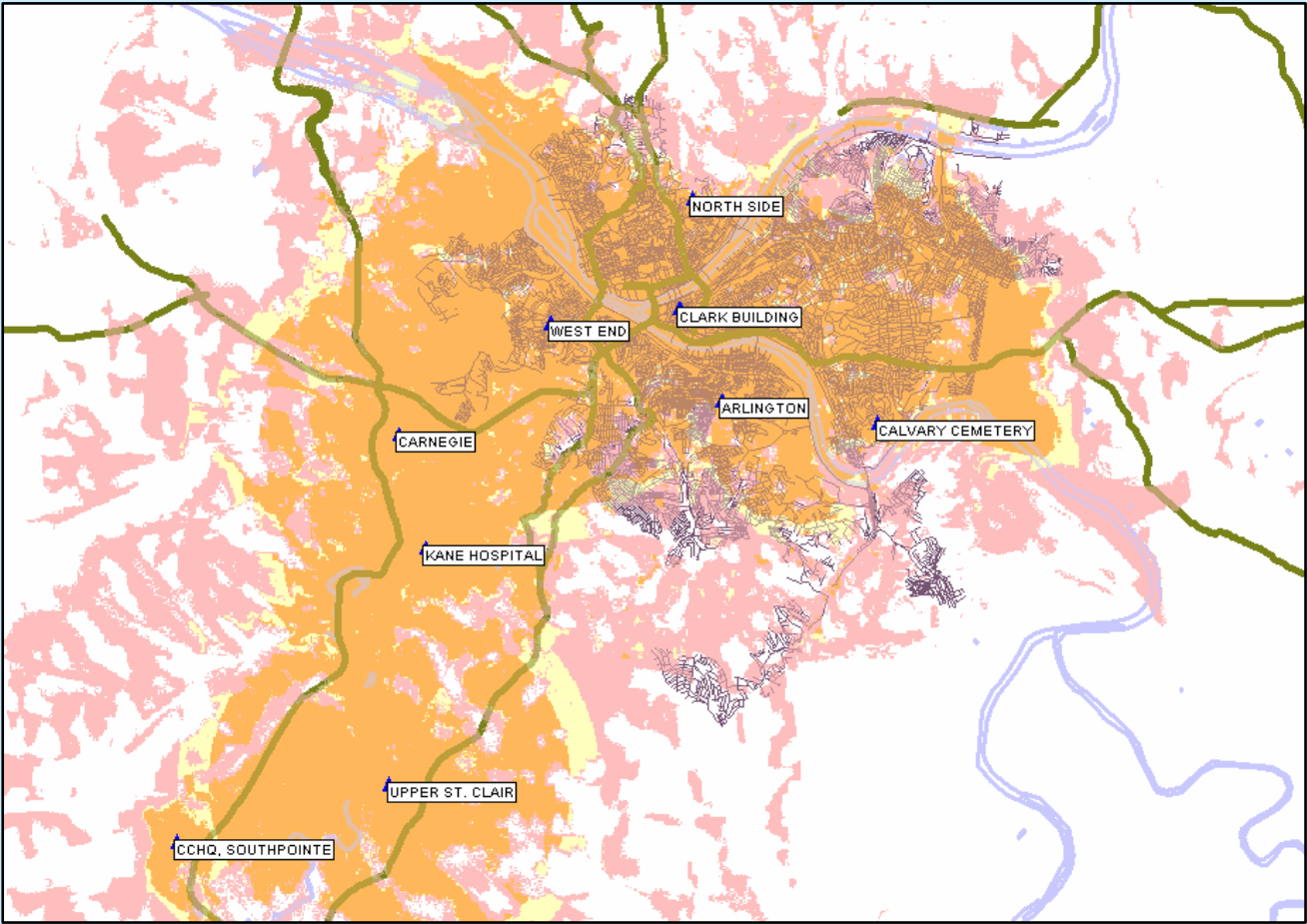
Qualcomm's spectrum is heavily encumbered by digital and analog television broadcasters. Qualcomm's own analysis (FCC letter dated November 16, 2005) shows that, even after recent spectrum clearing efforts, Qualcomm still requires an FCC waiver to deploy its system in 15 of the top 30 markets.

- **Larger handsets**

Qualcomm's 700MHz handsets must be significantly larger than a DVB-H 1670MHz handset to achieve the same antenna gain

# Mobile Media Trial System

# Trial System Pittsburgh Coverage Area



# Trial System Key Suppliers

## Transmitters:



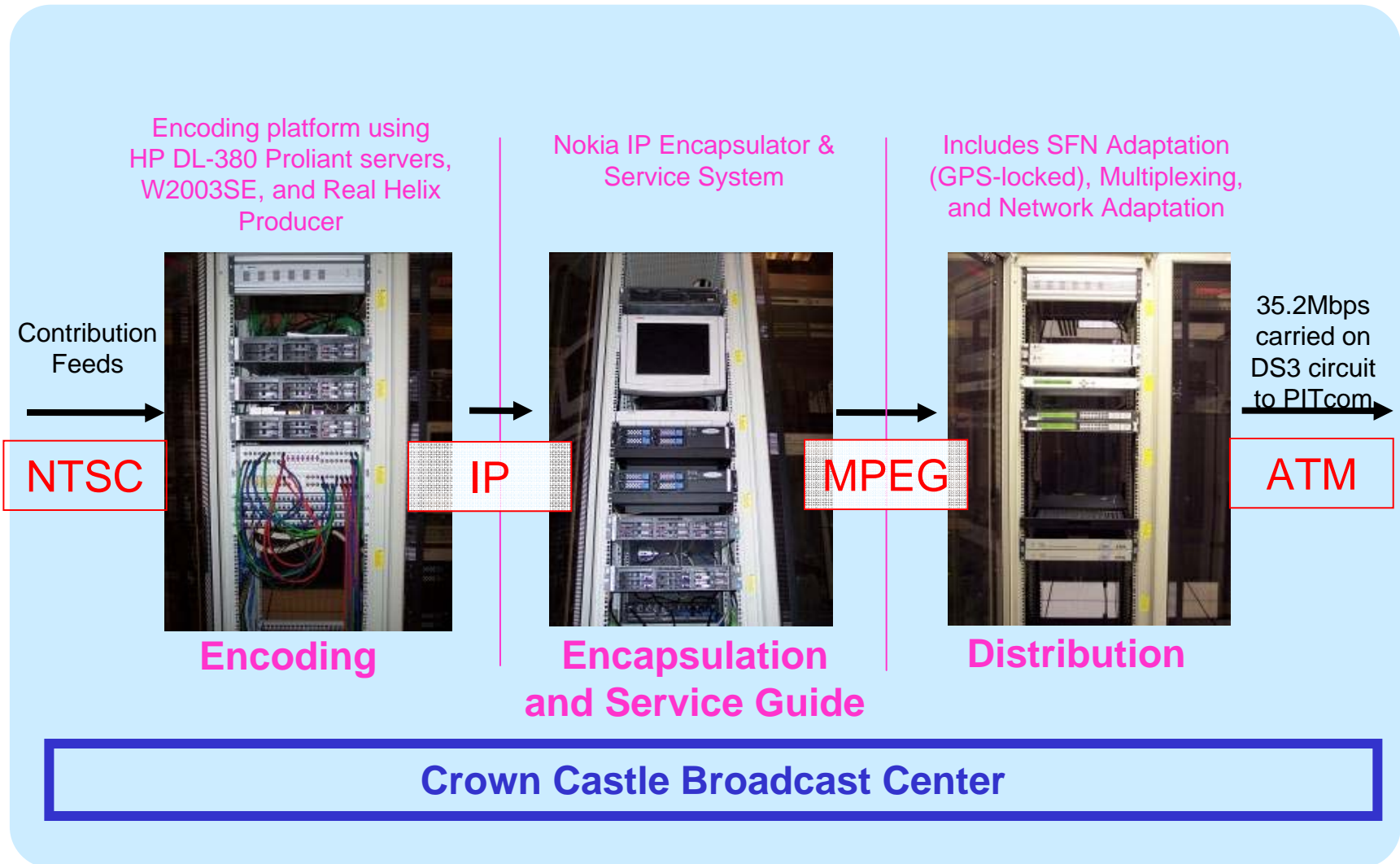
## Antennas:



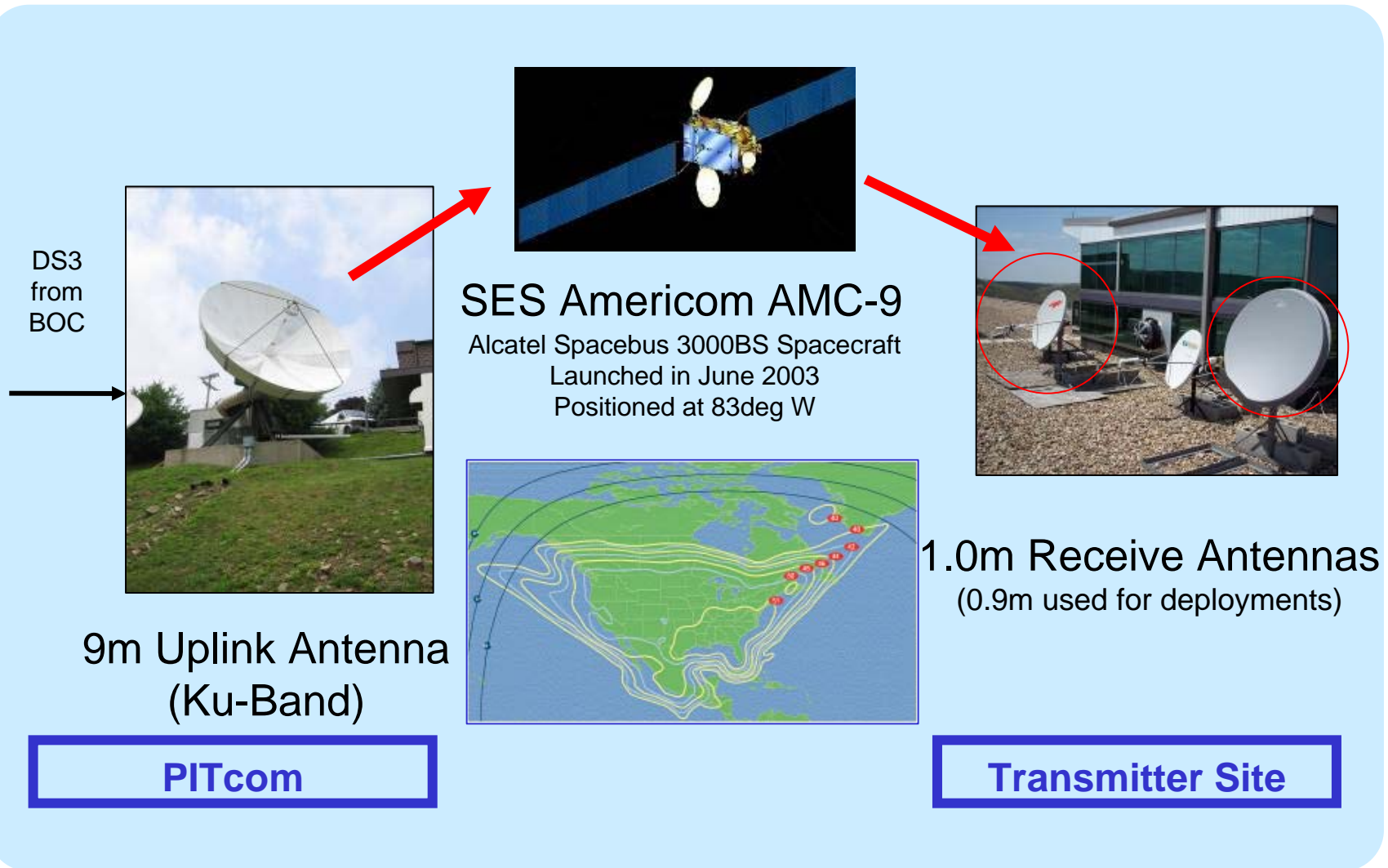
## Broadcast Center:



# Trial System Head-end

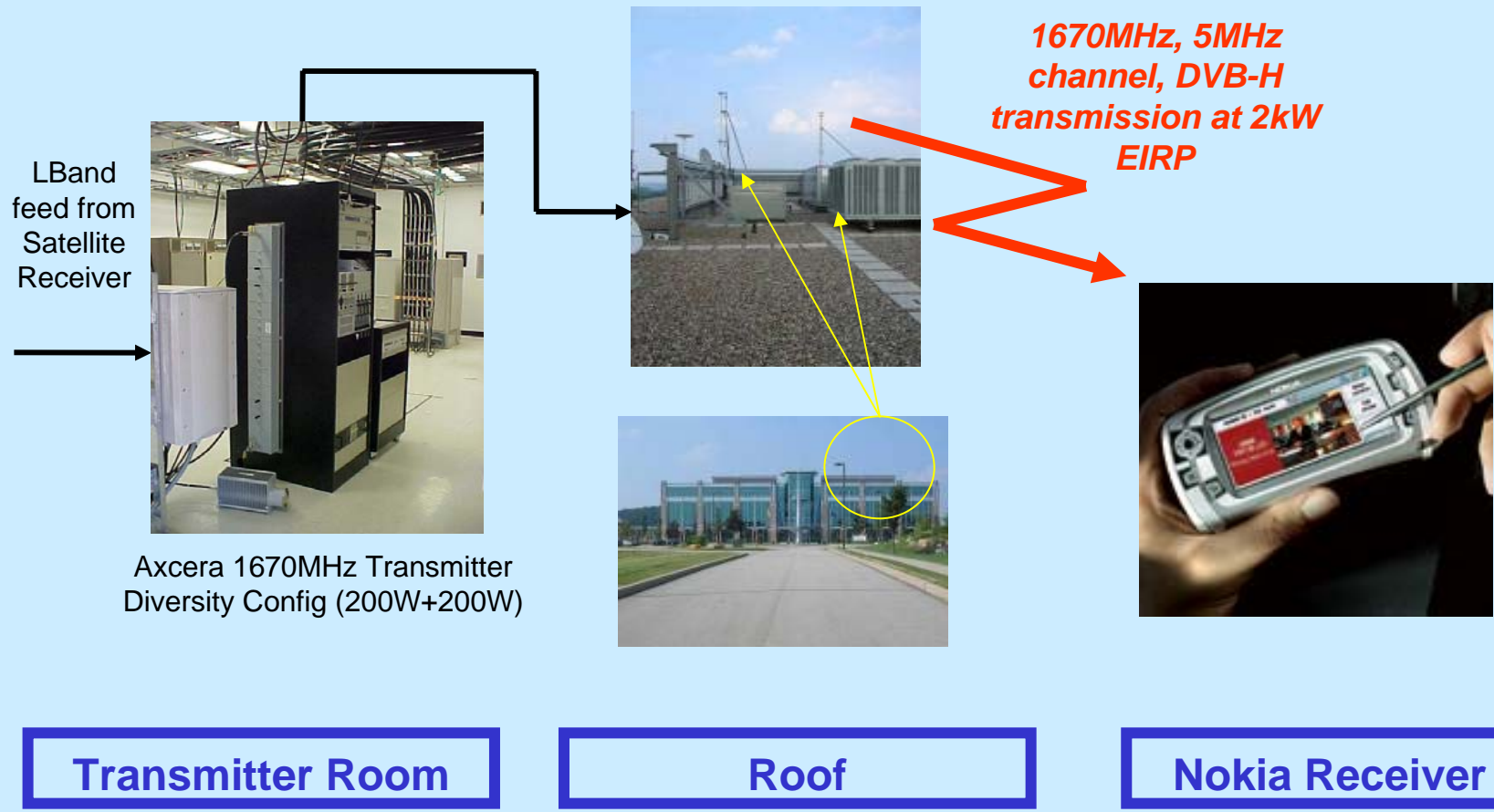


# Trial System Distribution

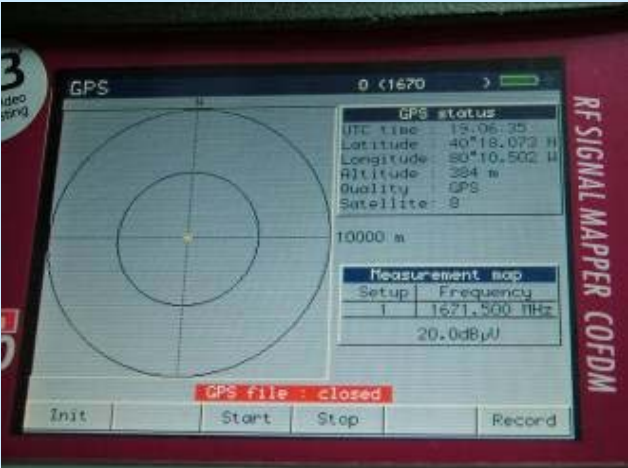




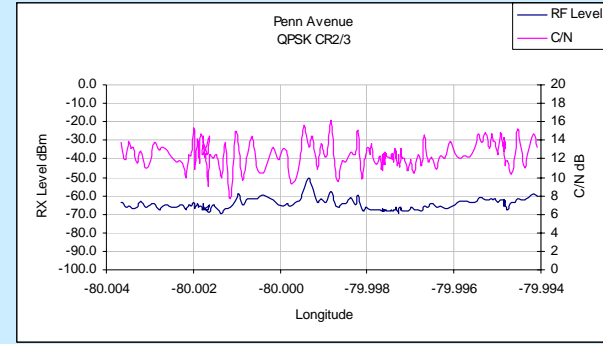
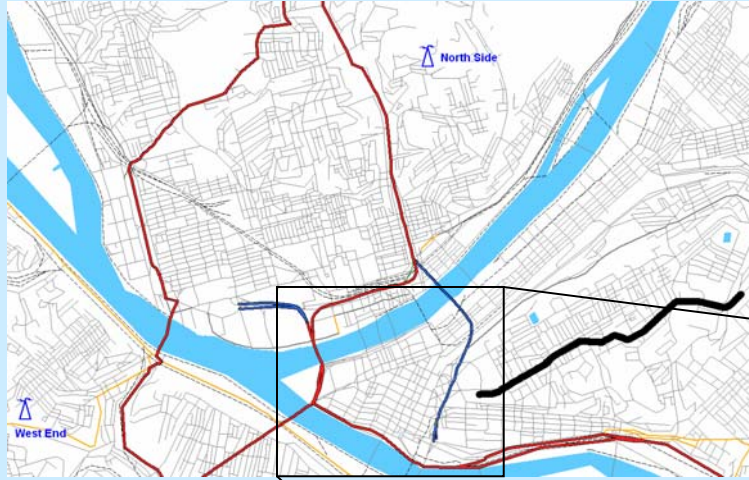
# Trial System Transmitters



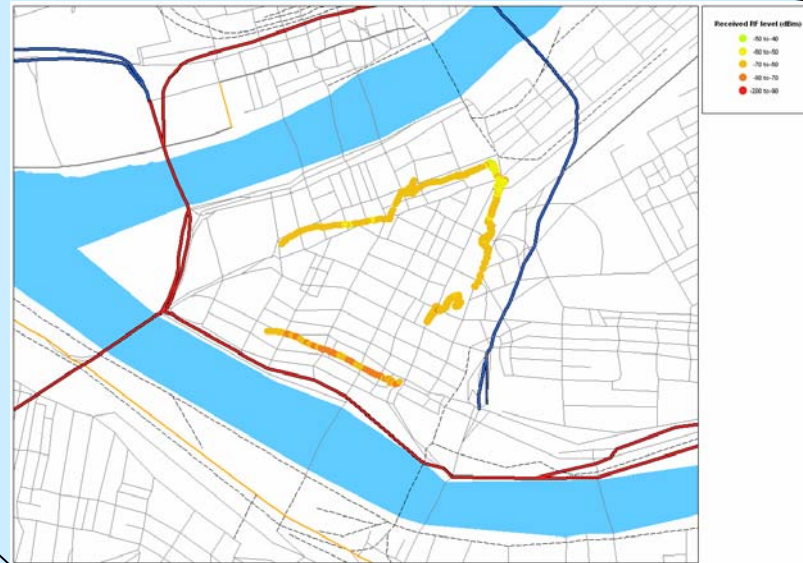
# Trial System Test Equipment



# Test Results Dense Urban Coverage



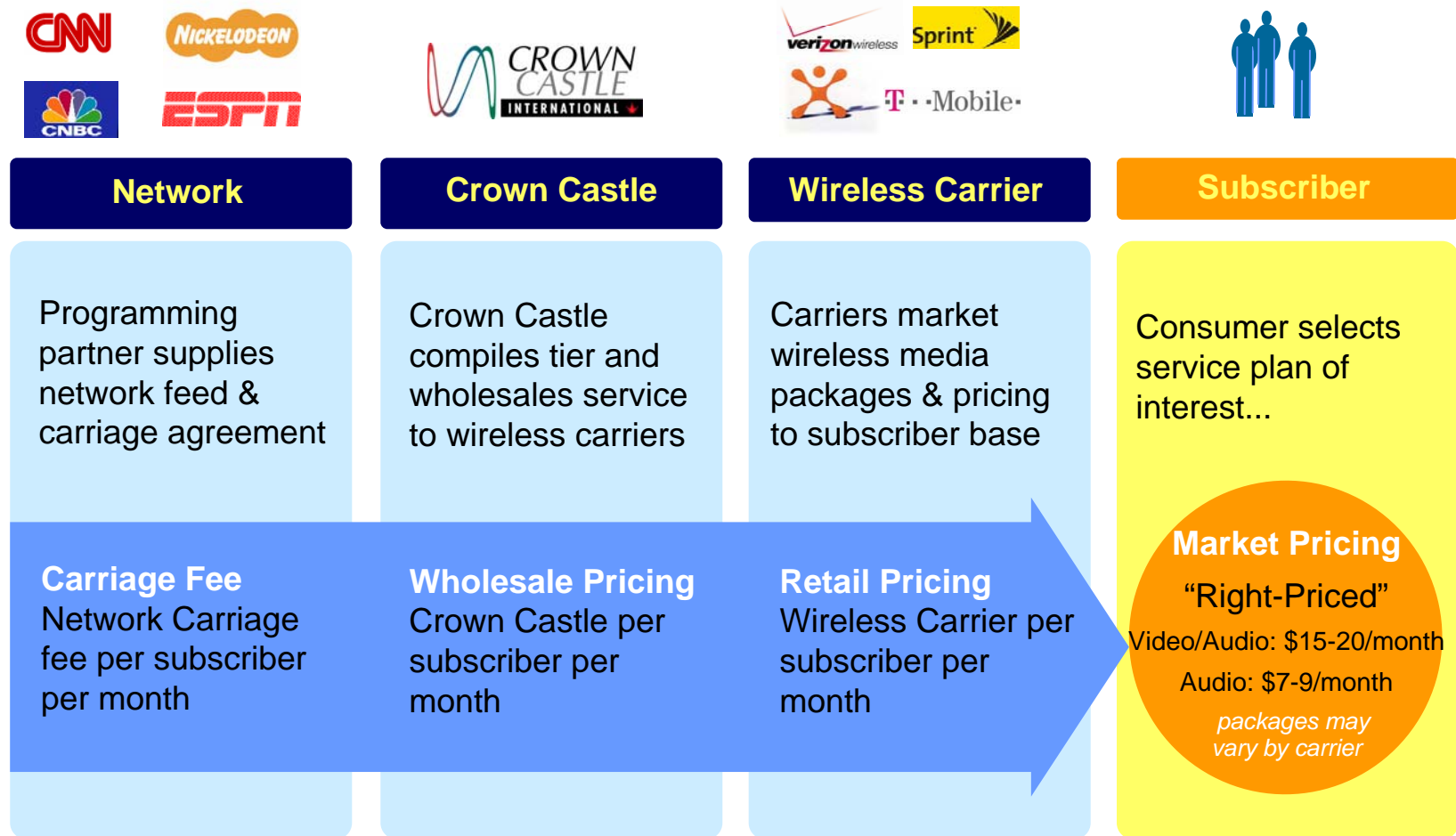
SFN gain helps to ensure quality coverage with high availability



# Mobile Media **Launch Plan**

# Mobile Media Launch Plan

## A Simple and Clear Business Model

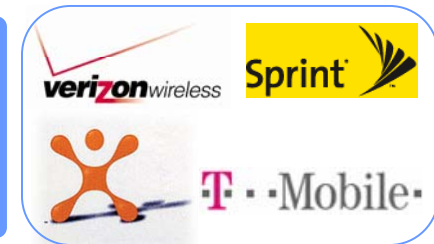


# Mobile Media Launch Plan

## Alternative Routes of Entry into the Market

### Wireless Carriers

- Largest existing subscriber base
- Extensive marketing budgets
- Looking for ways to boost ARPU



### Wireless MVNOs

- Willing to be early movers
- Younger subscriber demographics
- Pay for spectrum use so even more cost effective



### Alternative Wireless Devices

- Broad base of other devices that could be enabled with DVB-H



# Mobile Media Launch Plan

## New York City

A high quality mobile media network covering over 8m people

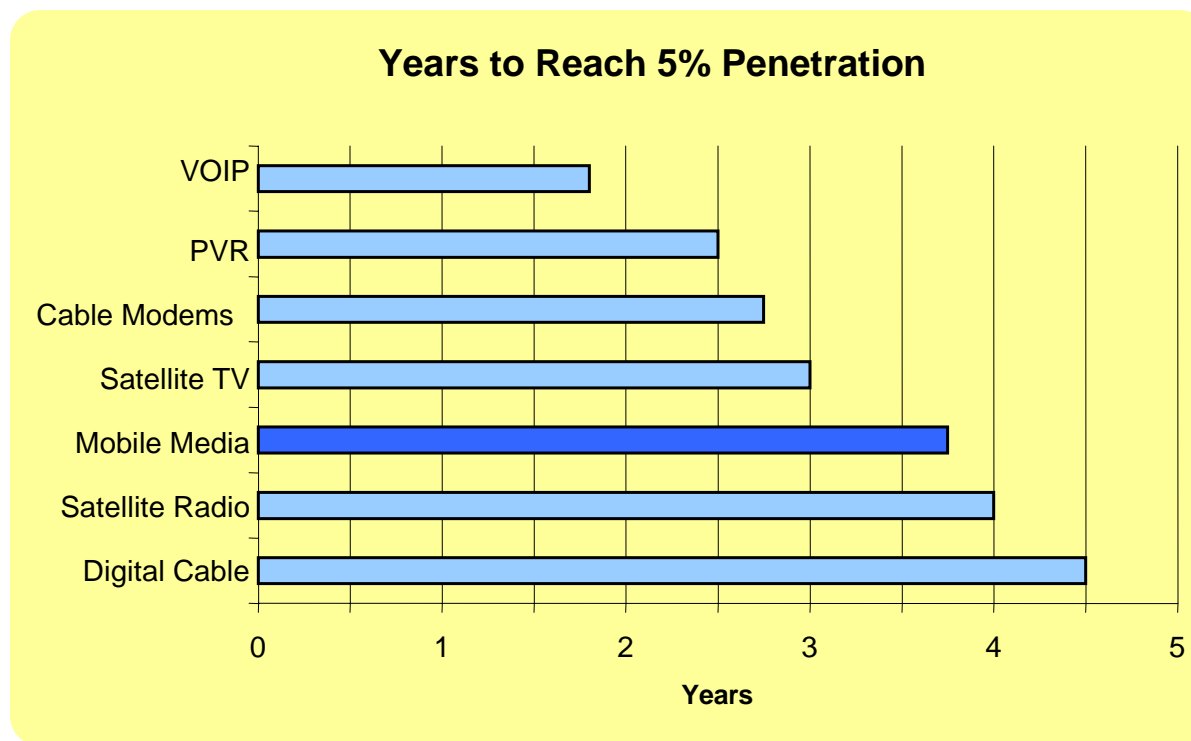


- By far the most attractive US market for mobile media from a density, demographic and cultural perspective
- Difficult market to build. Site acquisition started over 18 months ago
- First sites on air
- On track to be ready for commercial service in Q2 2006

# Mobile Media Launch Plan

## Penetration Rates – the Key Variable

We expect to reach 5% penetration of covered POPs in just under four years, consistent with the adoption of other comparable services



Source: Kagan, Wall Street research and Company filings.



# Mobile Media **Launch Plan**

## Customer Status



2006

- **Laptops and Portable Media Players**

Unconnected (non-cell phone) DVB-H products will launch early in 2006 and provide an attractive early opportunity in partnership with device manufacturers and/or digital media vendors

- **Mobile Virtual Network Operators (MVNO)**

New entrant MVNOs showing strong interest and perhaps more willing to lead

- **Regional Wireless Operators**

Regional wireless vendors also showing strong interest and more willing to launch in limited geography

- **National Wireless Operators**

Verizon, Cingular, Sprint and T-Mobile are all interested and engaged, but more likely to contract as the timetable for nationwide coverage is fully developed

# *Mobile Media Launch Plan*

## **Funding**

- Funding to date (<\$30m total) has been provided largely by Crown Castle, with a small contribution from Allen & Company. This has covered:
  - Acquisition of spectrum
  - Construction and operation of Pittsburgh test network
  - Design, site acquisition and zoning for New York network
  - Business development G&A
- Deployment of nationwide network (30 markets, ~75m pops.) will cost about \$500m. We anticipate this will be funded externally
- First step is likely to be ~\$100m equity raise from a strategic investor. Anticipate announcement on this early in 2006

# *Forward-Looking Information*

This presentation contains forward-looking statements that are based on management's current expectations. Such statements include, but are not limited to plans, projections and estimates relating to Crown Castle Mobile Media regarding: (i) network geographic coverage, (ii) benefits to wireless carriers, (iii) mobile video service revenues, (iv) market acceptance of mobile media, (v) strategic relationships, (vi) third party vendors and products, (vii) services and content, (viii) mobile media launch plan and entry into market, (ix) business model, including fees and pricing, (x) timing for launch, commercial service and market penetration, (xi) customers and (xii) funding.

Such forward-looking statements are subject to numerous risks, uncertainties and assumptions, including prevailing market conditions and other factors. Should one of more of these risks or uncertainties materialize, or should any underlying assumptions prove incorrect, actual results may vary materially from those expected. More information about potential risk factors which could affect our results and the results of Crown Castle Mobile Media is included in our filings with the Securities and Exchange Commission. The Company assumes no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

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