ATSC MOBILE DIGITAL TV

NORTH AMERICAN BROADCASTERS ASSOCIATION

Wayne C. Luplow
LG Electronics
Zenith R&D Lab
June 5, 2009
We’ve Come a Long Way!

Landmark Agreement

Infrastructure Technology

Broadcasters, Programmers

Device Manufacturers

LG2160
Keys to Creating a Robust Mobile DTV Market

1. Nationwide broadcaster deployment
2. Widespread availability of consumers receiving equipment
3. Retailer commitments
4. Wireless carrier engagement
Broadcaster Deployment

• **Significant momentum in the United States**
  – ATSC Mobile DTV Standard being finalized
  – Broadcasters launching service
    • Numerous Zenith/Harris trials in U.S. & South America
    • OMVC trials in process
    • 70+ TV stations committed already
    • WRAL – first commercial application

• **Preliminary trials in Mexico and Canada**
  – Mexico City: Televisa - 2008
  – Toronto: CTV – August 2009
  – Mexico City: COFETEL – later this year
LG has developed a series of ATSC Mobile DTV receiver prototypes

**Mobile Phones**
- CU920 [CES/NAB2008]
- VX9400 [CES2008]
- Maize (KB770M) [CES/CTIA/NAB2009]
- Voyager (VX10K) [CES/CTIA/NAB2009]
- Lotus (LX600) [CTIA/NAB2009]

**Portable Devices**
- MP3-Player [CES2009]
- Portable DVD-P [CES/NAB2009]
- USB dongle [CES/NAB '08/’09]
- PND [CES/NAB 2008]

**Car Receiver**
- M/H Receiver for Rear-Seat Entertainment [CES ‘08/’09]
Consumer Research – Focus Groups: ATSC Mobile DTV Devices

- Two-thirds of respondents indicated their initial impression and overall appeal to be FAVORABLE
- 60% said they were LIKELY TO PURCHASE

LG PORTABLE DVD PLAYER WITH INTEGRATED MOBILE DTV
ATSC Mobile DTV Focus Group Feedback

“I would take it in the bedroom when my husband or kids are hogging it [big flat screen TV in the living room] so I could get some me-time for MY favorite shows.”

"COOL TO RECEIVE TV ON THIS UNIT."

“For $200, why wouldn’t I want to get free TV channels if I didn’t have any DVDs to play...it’s a great value for a DVD player.”

"Is it like the video I already get on my cellphone?"

“Yes, this is exactly what I need for me and my kids. The kids watch videos, but I’m a TV person, so just to have it going in the backseat while I’m driving would be great to hear the TV news or whatever’s on.”

"I want this."
ATSC Mobile DTV Cellular Phones

- Multiple prototypes
- Based on CDMA and GSM
- Same cell phone platforms that support MediaFlo, DVB-H, T-DMB and other world mobile DTV standards
- ATSC Mobile DTV system adaptation includes ATSC Mobile DTV demodulation chip and software stack improvements
Widespread Availability of Devices

In Your Hand...

• MULTIPLE DEVICES from MULTIPLE MANUFACTURERS

• WE’RE READY TO HELP OTHERS
  – LG REFERENCE DESIGN KIT for receiver and transmitter manufacturers
  – Mass production of chips FOR LG AND OTHERS starts in June 2009

... and On the Go

LG Maize

LG Voyager

LG DVD Player with Integrated Mobile DTV

Kenwood In-Vehicle Entertainment System

Dell ATSC Mobile Netbook
Retailer Support Needed

- Showcased products and technology for retailers at CES 2008 & CES 2009
- Planning demonstrations for major retailers
- Concerns about market-by-market roll-out
- Confusion about ATSC Mobile DTV vs. other services
Wireless Carrier Engagement

- Longer-term, mobile DTV success will depend on availability in mobile phones

- Partner with smaller regional carriers first?

- Opportunity for broadcasters to partner with wireless operators
  - Interactive capability, return path
  - Integrated billing for pay TV service
  - Seamless ESG on dual-mode receivers
  - Free local content complementary to national pay service
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