

# LGE Presentation for Chile

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# DTV Broadcasting in Korea

- ❑ Republic of Korea adopted ATSC Standard in 1997
- ❑ Commercial ATSC service launched in October 2001
- ❑ Reevaluation of standards decision in 2003 led to government/industry reaffirmation of ATSC in 2004
  - Spectrum efficiency (the most payload and capable of full High Definition)
  - More energy efficient compared with DVB (lowest transmitter operation costs)
  - Most able to use existing broadcast towers
  - Allows full use of UHF and VHF spectrum
  - Designed and optimized specifically for 6 MHz TV channels
  - SFN (single frequency network) possible
  - Early problems handling multipath (ghosts) have been resolved

# DTV Broadcasting in Korea (continued)

- ❑ >154 stations on the air, reaching 95% of population with more than 5 DTV Channels
  - Nationwide coverage completed by the end of 2005
- ❑ 6.3 million units sold through December 2007, 35% household penetration
- ❑ Korea is known as worldwide leader in interactive DTV services, using ATSC DASE/ACAP standard
  - Commercial applications for 2002/2006 World Cup, 2002 Asian Games, 2004 Olympics

**DASE: DTV Application Software Environment**  
**ACAP: Advanced Common Application Protocol**

# Economic Advantages of ATSC

- ❑ ATSC is worldwide leader in HDTV deployment
- ❑ Lowest possible prices for DTV receivers and set-top boxes
  - Applying economy of scale for both HDTV and low cost D2A converters for the existing analog TVs (>80M NTSC TVs in use)
  - 6 MHz system, with all-format decoding (all possible 18 formats)
    - Avoid implementing 6 MHz version of predominantly developed for 8 MHz system
    - Avoid a barrier to the introduction of HDTV, by ensuring against receivers that cannot handle an HDTV signal
  - Leverage huge North American market to lower prices in Chile
- ❑ Full participation in future ATSC open standards development process

# Explosion of DTV Products and Sales

- ❑ ~900 DTV products, mostly HDTV
- ❑ Sales growing exponentially
  - >80 million units to date
    - ❑ >50 million ATSC receivers to date
    - ❑ >30 million ATSC receivers *per year* in 2008 and beyond
- ❑ 27-inch integrated receivers:
  - SDTV as low as \$180
  - HDTV as low as \$250
- ❑ Other integrated receivers
  - SDTV 13" as low as \$90, 20" as low as \$140, 24" as low as \$150
- ❑ HDTV prices falling to former prices for analog color TVs
- ❑ *Within 2 years, virtually all DTVs sold in the U.S. will be HDTV!*
  - *79% of TVs sold in U.S. in 2008 will be HDTVs*



# Example Prices – November 2007

## *ATSC Integrated Receivers*

- ❑ Best Buy
  - Dynex 13" Tube SDTV - **\$89.99**; 24"- **\$149.99**; Insignia 24" Flat-Tube SDTV – \$179.99
  - Insignia 15" LCD HDTV - \$214.99; 22" - \$229.99; Magnavox 19" LCD HDTV - \$299.99
- ❑ Circuit City
  - Polaroid 19" LCD HDTV - \$279.99; Sharp 20" LCD HDTV - \$349.99
- ❑ Sears
  - Venturer 19" LCD TV - \$199.99; Sharp 19" LCD TV with built-in DVD player - \$299.99
  - Vizio 32" LCD HDTV - \$598.00; **42" Sylvania LCD HDTV – \$899.99**
- ❑ Staples
  - 32" LCD HDTV - **\$449.98**
- ❑ Target
  - **Audiovox 12' Kitchen LCD HDTV with built-in DVD player - \$199**
  - **Trutech 19" 1080i Widescreen LCD HDTV with built-in DVD player - \$199**
  - Olevia 37" 1080i Widescreen LCD HDTV - \$549
- ❑ WalMart
  - Vizio LCD 720P HDTVs: 32" - \$587; 37" - \$767; 42" - \$946; 42" 1080P - \$1100
- ❑ Costco.com
  - Digital Research 32" LCD HDTV – \$499.99; **Philips 42" Plasma - \$999.99**

# Prospects for ATSC M/H Process

- ❑ High-quality mobile/portable services via ATSC are expected in 2009, *in the same 6 MHz channel*
- ❑ Three ATSC M/H solutions were proposed
  - LGE/Zenith & Harris: MPH (Mobile, Pedestrian and Handheld) System
  - Samsung/R&S: A-VSB System
  - Thomson System
- ❑ ATSC M/H Schedule
  - 2008 Jan: All document submitted
  - 2008 Feb. 18: Full System Hardware Submitted
  - 2008 Feb. 28: Field Tests Began in three locations (San Francisco, San Jose, and Las Vegas using both VHF and UHF Channels) by IDOV\* under OMVC\*\*
  - 2008 April: NAB Demo (Live)
  - 2008 Nov.: Candidate Standard Recommended
  - 2009 Feb: ATSC M/H Standard Chosen
  - 2009 ~: Commercial ATSC M/H broadcasting



# ATSC: The Best Option for Chile

- ❑ Best choice for preserving open television
  - Chile TV structure generally similar to North America
  - Like North America and Korea, Chile uses 6 MHz channels
  - ATSC far ahead in upgrading to HDTV
- ❑ Lowest possible prices for receivers and set-top boxes
- ❑ Best reception coverage for Chilean terrain (75% of Korean Peninsula is mountains)
- ❑ Highest data payload, most services to viewers
- ❑ In-Band Mobile and portable services available this year
- ❑ Best prospects for increasing exports, jobs and growth
- ❑ Best prospects for participation and ongoing IPTV and Data Broadcasting innovation
- ❑ Best prospects, by far, for the successful introduction of DTV in Chile

# LGE's Commitment

- ❑ Support to Set up ATSC DTV Model Station in Chile
- ❑ ATSC Mobile DTV Research cooperation with Chilean Universities and government research labs
- ❑ Low cost D2A HD or SD STB development
- ❑ Support Interactive DTV ACAP solutions for Chile
- ❑ LGE-Chile can provide the lowest ATSC products for Chile
  - Direct Imports from Mexico LGE Factories
  - FTA between Chile and Korea
  - Provide the best available DTV products in Korea and North America to Chilean Market