

Testimony of
John I. Taylor, LG Electronics USA, Inc.
before the
House Subcommittee on Telecommunications and the Internet
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Mr. Chairman and members of the Subcommittee, my name is John I. Taylor. I am a Vice President for LG Electronics USA, Inc. I also serve as Chairman of the High-Definition Television (HDTV) Committee of the Consumer Electronics Association (CEA) and Vice Chairman of CEA's Video Division. I also represent LG Electronics as a founding member of the new Digital Television (DTV) Transition Coalition. I welcome the opportunity to appear before you today to speak about the exciting DTV transition.

LG Electronics USA is the North American subsidiary of LG Electronics, a \$48-billion multinational electronics and communications firm. One of the world's largest manufacturers of television sets and of flat-panel TV displays, LG Electronics has established itself as a global digital leader, and its LG brand is among the fastest-growing in the United States.

LG Electronics also is the parent company of Zenith Electronics Corporation (Zenith), the U.S. technology company that developed the "VSB" (Vestigial Side Band) digital transmission system adopted by the Federal Communications Commission (FCC) as the centerpiece of the Nation's DTV broadcast standard.

Decades ago, Zenith was instrumental in the founding of both the National Association of Broadcasters (NAB) and CEA. In addition to its long-time leadership in digital HDTV, Zenith

pioneered industry standards for black-and-white and color television and is credited with the invention of countless industry-leading innovations, including Stereo FM radio, television stereo sound, television remote controls and flat color picture tubes, to name a few. Beginning in 1988, Zenith was one of the first developers of HDTV technology. In 1993, Zenith helped found the Digital HDTV Grand Alliance, which developed the Advanced Television Systems Committee (ATSC) DTV broadcast standard.

Building on this extensive experience, and the combined strengths of LG Electronics' worldwide engineering and production capabilities and the Zenith R&D capability in the United States, LG Electronics has led the industry in optimizing DTV broadcast reception. In particular, LG Electronics' fifth- and sixth-generation VSB chips, which eliminate multipath interference concerns, are considered top performers by both broadcasters and electronics industry analysts.

As part of our commitment to drive the DTV transition to a successful conclusion, LG Electronics partnered over the past two years with the NAB and the Association for Maximum Service Television (MSTV) in a joint effort to develop prototype high-performance, low-cost digital-to-analog converters to enable existing analog TVs to continue to receive free over-the-air broadcasts after the Nation's switch to all-digital broadcasting in 2009. This alliance accelerated LG Electronics' product development timetable, resulting in prototypes that meet the goals set forth by the National Telecommunications and Information Administration (NTIA) and the establishment of a state-of-the-art reference design for the industry. So, I believe, it is obvious that LG Electronics has a significant stake in the digital transition.

The Committee is focused today on the status of the Nation's transition to digital television technology. Mr. Chairman, LG Electronics shares your view that successfully

concluding this transition is of critical importance. This Committee has been instrumental in advancing DTV's deployment, and as a result, today we are seeing exciting marketplace developments involving digital technologies. Digital transmission offers incredible high-resolution video, and anyone who has experienced HDTV becomes an instant believer in this technology. In addition to these benefits, the digital transition provides an opportunity to return spectrum for important governmental objectives (including public safety and homeland security needs) and to deploy new commercial technologies for consumers.

There are many important issues associated with the DTV transition, including manufacture of digital-to-analog converter boxes compliant with NTIA's requirements; government assistance to help consumers purchase boxes capable of converting free, over-the-air DTV broadcast signals for viewing on their existing analog TV sets; and consumer education. Please permit me to address these three areas.

In previous testimony before this Committee, LG Electronics stated that factors such as the level of technology and unit sales volume influence any estimate of converter box costs. Since then, NTIA issued technical specifications for converter boxes eligible to be covered by the coupon program. This gave manufacturers the certainty needed to prepare for mass production of these devices, because we know what we must build and we therefore have some ability to estimate the cost of our converter boxes.

Consistent with the intent of Congress, the NTIA's specifications provide an appropriate level of features necessary to provide reliable reception and to enable consumers to use the boxes satisfactorily. As you know, some of NTIA's converter box elements are required, while others are permitted (but not mandatory). NTIA addressed encoding; output formats; Program and

System Information Protocol (PSIP) processing; the range of capability for receiving channels; RF (radiofrequency) input and output requirements; composite output; and interference levels. Also, NTIA required that converter box equipment must display all channels; provide closed captioning, emergency alert systems, and parental controls; include a remote control; and meet energy efficiency standards. These parameters should yield converter boxes sufficient for average, non-technical consumers to enjoy the DTV experience.

We are pleased that additional features that are not required to convert a digital over-the-air signal were not mandated, as that would have increased the prices of converter boxes by a significant margin. Rather, manufacturers are permitted to include a limited range of “no frills” functions in eligible converters so that they will be easy to use and perform well.

For example, the inclusion of a simple electronic program guide (EPG) is optional, and this adds very little to a converter box’s price. But the EPG will make the box much easier to use, and this is especially important because digital broadcasters can “multicast” or transmit multiple programming streams via their DTV signals. This multicasting greatly expands the number of program offerings made available to over-the-air television viewers. Allowing simple EPGs in eligible boxes will enable viewers to navigate multicast channels and thereby maximizes the number of viewers able to enjoy the benefits of DTV technology.

By adopting minimum performance requirements, NTIA enhanced significantly the likelihood of the program’s success by helping to assure that the devices eligible under the coupon program perform to the satisfaction of American consumers. NTIA’s specifications were clear, and at LG Electronics we moved forward rapidly to comply with these standards. I am

pleased to report that NTIA has now certified our converter box and especially pleased to report that production is scheduled to begin next week.

In addition to V-Chip parental control, LG Electronics' box provides advanced digital closed captions, including the capability to choose from multiple type fonts, sizes, colors, backgrounds and more. The remote control includes a "cc" button for easy caption access. For easy setup and simple navigation, the LG converter will include a trilingual (English, Spanish, and French) on-screen display. Other features include an all-format ATSC receiver, flexible 4:3 and 16:9 display formats, PSIP processing, channel 2-69 tuning, RF input and RF output, and composite video and left-right stereo TV audio outputs.

Designed to operate at less than 8 watts active and 1 watt standby, the certified converter box exceeds the U.S. Environmental Protection Agency's EnergyStar program requirements for digital-to-analog converters. I would add that D-A converters are among the year's "greenest" products, because they will extend the lives of tens of millions of old analog TVs that otherwise would be discarded.

Many consumers may neither need nor want a coupon to purchase a converter box. Between now and February 2009, according to CEA estimates, American consumers will purchase more than 60 million television receivers and set-top boxes with over-the-air DTV tuning capability, independent of the converter box program. This is in addition to the 50 million DTVs purchased by consumers in the past five years (2002-2006).

While it is unclear how many of these have actually displaced or will displace older analog-only TVs, these receivers no doubt will impact the number of American households needing a low-cost converter box under the coupon program. Given the rapidly growing number

of households that are expected to have access to digital signals – either over-the-air, via cable or by satellite – well before the transition’s end in 2009, we are hopeful that sufficient funds will be available in the coupon program to ensure that converter boxes are provided to all households that need them.

With regard to the price of converter boxes, our retail partners set the selling price, but LG anticipates that its converter boxes meeting NTIA’s specifications should be available to consumers for around \$60. Manufacturers anticipate producing tens of millions of converter boxes. LG Electronics’ boxes will be available to our retailers this December.

Finally, we are vitally interested in helping to meet the critical need for a vibrant consumer education effort related to the DTV transition. Spurring consumer interest in the converter box program and ensuring that consumers’ participation in the program is not burdensome will require a broad-based effort involving the government and multiple industries and stakeholders. As an active participant in the new DTV Transition Coalition, LG Electronics is fully committed to working with the government, our major retailers, and our colleagues in the consumer electronics and broadcast industries to facilitate the program’s success.

In particular, we are intensifying our own sales training efforts with retailers and collaborating with broadcasters to promote DTV technology. We also maintain an informative DTV website guide (<http://us.lge.com/GuidetoHDTV/what/index.html>), which introduces consumers to the features available through DTV technology. We will update this website on an ongoing basis with valuable information about the DTV transition and the converter box program. It is important, for example, that consumers understand that they will not only be receiving better picture quality through the digital

signal, but they also will be able to enjoy additional programming that was not available in the analog world. These additional features will make the transition even more attractive to consumers.

LG will implement a toll-free number that consumers can call to receive assistance with installing and connecting their new converter boxes. We have enhanced our toll-free consumer call center, adding more than 100 customer service agents who are fluent in Spanish. The LG call center, which handles more than 2 million customer inquiries each year, will offer assistance to consumers on antennas as well as installation and operation of the converter boxes themselves.

LG's converter boxes also will feature an easy-to-follow installation guide that includes simple instructions in multiple languages. We anticipate that these efforts will be helpful to varied population groups, assist consumers to use the devices, and prevent them from unnecessarily returning boxes to retailers.

Of course, the converter box program is just one aspect of the digital transition effort. By next year there will be a range of options, including very affordable integrated DTV receivers. Those who want high definition reception and other features will pay more, just as they do today for progressive-scan DVD players. Manufacturers such as LG Electronics are doing our part to offer consumers a wide array of quality DTV products at affordable prices. Product prices will continue to decline, as they have done since DTV's introduction in 1998, and this will speed the transition.

LG Electronics commends this Committee for its efforts to advance the digital transition, and for its attention to avoiding potential disruption to consumers when the final switch-over to digital broadcasting occurs. We look forward to continuing to work with you to ensure that all Americans are able to enjoy the tremendous benefits of digital television.

I am, of course, pleased to respond to any questions you may have, and I appreciate the opportunity to appear before you today.