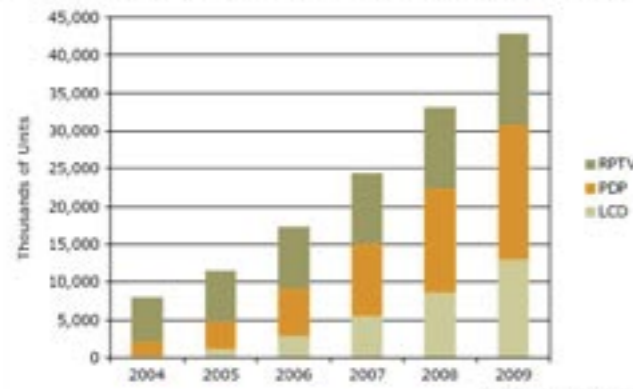


Figure 1: Digital TV Shipments for 40-inch and Larger Sizes by Technology, 2004-2009



Source: iSuppli Corp, May 2005

High Definition TV provides the consumer with picture resolutions almost 6 times that of SD broadcasts. Add multi-channel surround sound to stunning picture quality and the home entertainment experience is like never before, particularly for sports and movies.

It must be noted though that having a high definition television does not mean that the picture quality is always high definition unless the content is. Moreover, a true digital TV is one which is able to receive digital terrestrial transmission.

Many broadcasters are still debating the business models needed for HDTV transmission, and adoption differs by region. One of the issues facing HDTV before transmission and after reception is the ability to cope with the huge amount of data involved. High-resolution, uncompressed pictures of over 2 million pixels in size can equate to about 1.4Gb/s of bandwidth.

A daunting challenge awaits with the addition of a plethora of standards available for transmission, compression and interfaces, formats and technologies for displays and the need for flexibility, upgradeability and high performance becomes clear.

"Digital though will still be the future," observed Donald Tan, IKONVERGENZ's Sales & Marketing Director. "Going digital allows more services within the same bandwidth as compared to analogue. However, HD through broadcast transmission is still subject to how the market evolves in the next couple of years."

ENCOURAGING NUMBERS

Despite such hurdles, Ovum Consultancy expects worldwide shipments of integrated digital TV sets to rise from 10 million units today, to over 140 million units in 2007. IDC on the other hand expects worldwide shipments of high definition TV sets to rise from 750,000 units today, to over 3 million units in 2007.

As of March 2005, just 10 million households worldwide had both, according to research firm In-Stat.

Only five countries have widely available HDTV broadcasts: Australia, Canada, Japan, the US and South Korea. Almost one-half (45%) of all HDTV households get their service from a satellite TV provider, with the remaining service provided by cable and terrestrial providers.

In-Stat predicts the number of HDTV households worldwide will increase from 15.5 million at the end of 2005 to 52 million by the end of 2009.

As of March 2005, the number of HDTV households in the US reached 4 million (or 40% of the worldwide market) up from 1.6 million in March 2004. (eMarketer, 2005)

The digital set-top box and digital TV semiconductor market will grow from \$3.1 billion in 2003 to \$9.3 billion by 2008 (a healthy 25% CAGR), according to a report from IDC. Although the market for low-end digital set-top box semiconductors is maturing, IDC is seeing a rapid transition toward higher-end designs which support advanced functionality such as digital video recording and high definition. However, a majority of this growth will be driven by digital TV. (IDC, 2005)

TIMELY SOLUTION FOR A BURGEONING MARKET

The continuous challenge for any TV manufacturers is to deliver the latest TV models (fast-time-to-market) at the most attractive cost structure (low cost) while maintaining a certain level of quality (high quality). Any TV manufacturer struggling with resource issues need to explore options to maintain its competitiveness and ensure its survival into the future.

IKONVERGENZ, dedicated R&D guru for digital (DVB-T / ATSC) and analogue (PAL / NTSC / SECAM) LCD televisions, has been a leading champion for this evolution.

Equipped with in-house test facilities, and patented global digital and analogue TV solutions, IKONVERGENZ offers TV makers with flexible field-tested solutions that allow manufacturers to address the complicated global TV markets cost effectively, both digital and analogue within a few months.

Consumer adoption and awareness of digital television is on the increase, with the provision of high-quality, widescreen images, clearer digital sound and interactive services causing many people to switch from analogue systems.

IKONVERGENZ allows manufacturers to "leap frog" the competition without undergoing the "aches and pains" during the R&D, validation, qualification and the (field-) trial stages. TV makers no longer need to struggle with the complexity of the digital TV requirements, but rather focus their resources on marketing and selling their TVs to the consumers.



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LEAPFROGGING THE COMPETITION

The IKONVERGENZ Advantage

BY CASEY OH (EDITORIAL, BUSINESS/CORPORATE, WIRELESS WORLD)

TV has evolved in many aspects over the recent years. This evolution is evident through the physical characteristic of the TV, the technology used and the merger of technology.



IKONVERGENZ's Donald Tan

The birth of digital has given the world a whole new art piece to appreciate and ponder over. While industries clamber to be where the growth is, other traditional empires are being re-shaped and born again. Such evolution requires visionaries and experts in complimentary fields, coming together to address the challenges and needs of the TV market to newly grow and survive a new world order.

Broadcasters are heavily investing in the promotion of digital TV as it creates opportunities for many new revenue streams from advertising, pay-per-view, email/Internet services and commerce.

Until recently, the only way for consumers to access digital TV was by way of a set-top box. Alternatives abound today in the form of integrated digital TV sets

These are basically receivers of free-to-air digital signals usually via a normal TV aerial, without the need for a set-top box. Set-Top boxes with conditional access are currently still required for reception of pay-TV channels from terrestrial, satellite or cable, but it is possible that these could also be integrated in the future.

As with most emerging technologies, digital television has a plethora of standards to choose from depending on display types and formats, transmission and compression schemes and regional variations to name but a few.

With many countries choosing to cease analogue broadcasts completely in the coming years to free up transmission spectrum, the growth of these digital TV sets is expected to increase sharply. This means that being among the first to market with high-quality, cost-effective sets is more important than ever.

GOING DIGITAL, GOING HIGH DEFINITION

According to iSuppli Corporation, the digital TV (DTV) market is not on the path of growth after having gained acceptance from the various participants in the food chain.

Growth in the DTV market is fuelled by greater availability of sets that are capable of receiving digital signals. LCD, PDP and microdisplay-based rear projection all support a minimum of 480 rows and are capable of receiving digital signals. Intense competition exists between these technologies as their backers hope to gain consumer mindshare as well as actual market share.

Global mandates have been implemented to ensure a smooth transition from analogue to digital broadcasting.

Connectivity, says iSuppli, is king. Indeed, consumers; DTV viewing experience will depend on various factors like the TV set, STBs, external de-interlacing systems, A/V receivers, DVD players, connecting cables, and even interfaces. Each of these must be compatible with each other and sufficiently advanced to facilitate viewing of high-quality HD video.

Most digital content (except top prime-time shows and games) remains in the standard definition format. Broadcasters are working on expanding the number of programs relayed in high definition (HD) format, which can only be offered in digital transmission due to its high bandwidth necessity.

Most of the content available today is in the standard definition (SD) format. Thus, increased availability of high definition content is necessary to attract consumers to purchase a more expensive HD TV set.

