Andy Mills President and CEO Netcell Corporation

The Promise and Challenges of Centralized Video Storage in the Home

Distributing video and other rich media content within the home has become a highly debated topic as digital video recorders start their trend towards “space-shifting” (the ability to share recorded content between multiple TVs in the home), having conquered “time-shifting” (pause, rewind, record live TV). As HDTV becomes more pervasive, the problem of how and where to store the extremely large data files created during HD recording process is now surfacing. Further, the need to stream HD content outside of the box to other rooms in the home is also presenting new challenges. Tackling this single problem of multi-room access, along with the expected rapid growth in downloaded digital video via broadband, is what is expected to drive the next generation of home networking technologies beyond just simple Internet access sharing and drive up the use of shared or centralized storage.

•Getting to this next level, there are a number of key issues the industry faces:
•HDTV eats up hard drives pretty quickly (up to 8G per hour). Capacity is expected to run out more often, leading to a need for a scalable storage solution;
•Today’s most prevalent home networking technology, wireless LANs, are not fast enough and cannot reliably deliver streaming video beyond a limited number of devices and over a limited distance;
•Home networked storage is not secure enough to satisfy the needs of the content creators with added problem of growing digital rights management interoperability issues;
•Increased product obsolescence in video consumer products has a growing number of users concerned about transporting purchased or more meaningful content to a newly upgraded video player without losing it;
•Integration of other digital media on the same disk as video, such as purchased digital music and original digital photos, have many concerned about how they will reliably maintain this data during and beyond their lifetime – especially given the reliability record of some DVRs to date.

Enter the promise of shared home networked storage; a technology that can reliably store information for multiple generations, be easily accessible by all types of compatible playback equipment and simplify the process of upgrading equipment by separating out the data from the digital players and devices.

This talk will summarize how early systems are or may be deployed using connected “islands” of storage and what challenges the industry will face as home networking storage and data/content sharing is implemented on a wider scale. The Netcell SPU processor approach is summarized and how it will help ease this transition.

Andy Mills is the President and CEO of Netcell Corporation, a fabless semiconductor and software development company focused on delivering storage technology and solutions to address the emerging home consumer PC and rich media device storage markets. Prior to joining Netcell, he held various executive and non-executive management, marketing, field applications and development positions at TDK Semiconductor, Rockwell Semiconductor, Advanced Micro Devices and Ferranti Computer Systems (UK).
Andy Mills has worked in the networking, computing and storage industry for over 20 years. He is a published author with Prentice Hall on high speed local area networking (Fibre Distributed Data Interface, or FDDI), an architect and designer of highly reliable real-time embedded parallel processor systems and has also led the corporate level strategic marketing efforts related to advanced networking at several companies including Advanced Micro Devices, TDK Semiconductor and Rockwell Semiconductor Systems (now Conexant).
In his spare time, Andy is a budding home networking enthusiast and amateur 32 bit digital audio recording studio owner. His home is networked with 10/100 Ethernet, 802.11b/g and HomePNA2.0 and he has up to 9 active data networked devices in his home ranging from media center PCs, networked PS2s, to network attached printers and standard Windows and Linux desktop PCs.
Andy graduated with a Masters degree in electronic engineering and Bachelor degree in electronic and electrical engineering (with honors), both from University College of North Wales in the United Kingdom. He is also a chartered UK engineer (CEng, MIEE) and member of the MIEEE.