

# Living Together in the Digital Home

by Stephen Palm, Broadcom -- Multichannel News, October 10, 2009

As digital content and connected IP consumer-electronics devices become more pervasive, the desire to stream commercial and personal HD video throughout the home and beyond has grown, and the ability to monetize such services has become a reality.

Added to this, many homes will soon have the home-network infrastructure, usually Multimedia over Coax Alliance, to provide surplus bandwidth for a high-quality content-sharing experience. The key means to make this work is bringing together proven and established network and multimedia standards into a single consistent and reliable framework that serves developers, consumers and service providers alike.

With so many protocol and technology choices available, the biggest hurdle for streaming any kind of video or other digital content throughout the home is the potential incompatibility between devices from different suppliers. This is where the Digital Living Network Alliance comes into play. DLNA was formed in 2003 to enable cross-industry convergence of multimedia content in home networks. It works hand in hand with MoCA, the standard for home entertainment networks over coax. MoCA, along with Wi-Fi and Ethernet, are the approved connectivity technologies for DLNA.

Many homes already have an extensive coaxial-cable framework that provides high-bandwidth wired connectivity throughout the home. The MoCA standard exploits this existing infrastructure to bring televisions, set-top boxes and receivers into the home network for advanced connectivity applications like multiroom DVR.

Using DLNA-enabled devices with MoCA means multichannel service providers can move away from the model of one set-top per TV to a single server gateway or box for the entire home, reducing complexity and power requirements. This DLNA-enabled home network allows content to be quickly and effortlessly streamed to TVs and devices across the home. Service-provider content can be securely streamed using DLNA's link protection — DTCP-IP. Content can also be served to personal media players, connected picture frames, PCs and even mobile phones, extending the entertainment experience and enabling value-added services to be deployed on a much larger scale. Such an architecture, based on cross-industry standards, frees client devices from hefty software requirements for interactive television on cable.

A DLNA backbone also brings added branding opportunities via advances promoted by the RVU Alliance. This consortium of leading service providers, semiconductor makers and CE companies aims to advance the use of Remote User Interface technology for home networked television entertainment, ensuring interoperability among devices implementing RVU's RUI technology. An RVU client has a lightweight footprint so it can be readily included in connected CE devices that already feature DLNA. Since the technology is pixel-accurate, an RVU client displays the exact look and feel of the RVU

server and is flexible enough to take advantage of a client's local graphics capabilities. A service provider's branding and applications can be spread over devices in conjunction with the actual content, reinforcing customer loyalty. This allows the brand and features to appear on devices providers do not have to supply and offers subscribers additional places to enjoy content, such as on a mobile phone or a PC.

Service providers can utilize consumer-electronics devices — via DLNA, RVU and MoCA — to drive additional revenue streams while offering their subscribers the latest HD content, direct to their CE devices, for an enhanced and more enjoyable home-entertainment experience.