

Personal Video Recorders, a Challenge for Cable TV

David Broberg, © Saturday, June 23, 2001

I've been living with a personal video recorder (PVR) in my home for six months. As a habitual early adopter, I got the usual grief from my family who frequently got burned by the hard-to-use technology I often bring home. Having spent ten years in various aspects of product development and strategic assessment with a major consumer electronics manufacturer, I have brought countless one-of-a-kind prototypes home for evaluation. Somehow the PVR was different.

The concept of pausing live TV was amazing to everyone. Even after my thorough explanation, they still didn't understand how they could stop the action of a live event. Finally after showing them with the PIP, that the program didn't actually stop, they started to understand the magic was in the box. Now the kids have become so accustomed to the power of the new tool they seldom want to watch any TV at friends' homes, since they can't back-up and pause.

My three boys tend to enjoy taking things apart, and while I won't let them near the PVR with a screwdriver, they seem to be never satisfied with taking apart the programs they watch. They've produced some amateur films themselves with our home video gear, so they are always fascinated by special effects. They often use the pause and slow speed modes to carefully examine commercials, sleight-of-hand, or other tricks of illusion, often howling with laughter as they spot strings, wires or other tools of the trade.

Aside from all the fun that the boys have with it, the family also finds the PVR a very convenient tool for time-shifting. A few of these stored programs are gems and are kept on the hard disk, as if permanent. While the 35 hour recording limits of my early box is hardly sufficient for storing a library of programs, it is easy to imagine the value of that library function as the storage capacity increases to hundreds of hours with newer products.

One of the key advantages of today's digital PVRs is the *stickiness* they apply to the service provider (that is, their ability to hold subscribers). For example, some stickiness is provided by the small investment in the hardware. The PVRs available today, are either integrated with a DBS receiver, or are standalone analog devices, made to work with cable boxes. At some point, they will be included in retail, digital cable boxes. If you buy one of the DBS boxes today, it cannot be reconfigured for a competing service provider, keeping you tied to that provider. But the real stickiness comes from the potential library you build in the process of using it.

Digital cable boxes will soon have this built-in PVR function too, but will it come first in a retail device or as part of a new box provided by the MSO? If the box is provided by the MSO, I suggest that there is really no stickiness, since the consumer has made no investment. What's worse, is that there may actually be a form of anti-stickiness or repulsion, if the user creates a library and later finds out he has to forfeit the library if he has to relocate and must turn the box back in to the MSO.

On the other hand, if the PVR function is provided as part of a retail, OpenCable™ compliant STB, which makes use of the OpenCable Application Platform (middleware), the stickiness is assured. The consumer has made an investment, which cannot be transferred to a competing form of service provider and the user is assured that any library they accumulate will go with them when they move, since they take the hardware along. The OpenCable STB can be moved freely across the country and will be compatible with services provided by any cable operator.

The inclusion of the standardized middleware (OCAP) assures the subscriber that the same box will work with new or different applications provided on the next cable system. Even if the PVR application he was using with his first cable operator was based on Tivo, the next cable operator may provide a PVR application based on Replay or Ultimate TV or some other application. Regardless, upon relocating, the new application is downloaded and the core functions are restored, perhaps with a different skin.

Creating standards for a PVR equipped STB that can be moved easily between different cable operators is no easy task. This challenge is much more difficult for the cable environment than it is with DBS market, since a cable box must include the added complexity of providing this standard middleware so that the box can work with different applications provided by wide range of cable operators. While a similar DBS product only has to work with one service provider and one application regardless of where you move it. All these standards also have to be done in a way that provides the content owners with adequate copy protection.

CableLabs has initiated the standards process needed to address the questions of PVR portability. The standards will include extensions to the OCAP specifications and to the OpenCable Host Requirements Specifications. Meeting this challenge will provide cable operators a chance to compete for the subscriber stickiness benefits provided by PVRs.