Paul Kagan Seminar— Digital Television Summit II

Panel 2: NEW BUSINESS MODELS: Profiting from Digital Program Production

Comments by Robert Hopkins, Sony Pictures High Definition Center

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What are the additional per-episode costs of producing prime-time series in digital format? What opportunities does digital open up, especially for incorporating interactive data and additional information within the program? Most theatrical movies are ideally suited to the HDTV format, but what are the challenges for original TV programs? And what could be the impact on the syndication value of series produced on tape before the advent of digital? Who is likely to bear the additional costs of digital production — advertisers, producers, networks, stations or consumers (through some form of subscription service)? If TV stations do use digital multicasting as a means of entering the subscription business, how much of that revenue stream is likely to flow back to copyright holders and producers?

The panelists have been asked to start off the discussion with a primary question that is related to broadcasting data-oriented services. As this is not my area of expertise, nor is it the area of expertise of my company, Sony Pictures, if I may, I will address some of the other issues that were assigned to this panel. Sony Pictures' interest is in programs for television and, for my division within Sony Pictures, high definition programming.

But first, I will offer a couple personal comments on issues related to data services. During my time in Washington, DC where I was very much involved in the digital broadcasting standard as the Executive Director of the Advanced Television Systems Committee (ATSC) and as the chairman of various subcommittees of the Advisory Committee on Advanced Television Service, I participated in a number of discussions related to broadcasting data. Some tests performed by the Advisory Committee served the purpose of determining how much data you could broadcast without harming high definition picture quality. For example, the bit capacity of the terrestrial broadcasting channel is about 20 million bits per second; we found that you could consistently dedicate about 3 to 4 million bits per second to a data service without seeing any detrimental effects on the high definition picture quality, except for the most demanding picture material. Tests by other organizations showed that significant bit capacity could be diverted on a scene by scene basis, even with demanding pictures in some scenes — they called this "opportunistic data". While ATSC, the organization that developed the technical standard adopted by the FCC, did not specifically develop a standard for data services, it was clear that the adopted technology would support a data service. ATSC developed the standard for pictures, sound, and the method for transmitting the bits for pictures, sound, and data. We could not foresee particular data applications — indeed, that was not our mandate — but we did believe that other organizations would develop the techniques as well as the market driven applications for data.

Now let's talk about prime-time television shows. How will they be produced for high definition? Today about 2/3 of the prime-time shows are shot on film, most of that on 35 mm film. Most of these shows are then posted with standard definition video with no cut film. Because high definition equipment costs more than standard definition equipment, you can expect that post

production costs will be more with high definition. Over time, I would expect the premium for high definition equipment to decrease, and thus the post costs would decrease.

Also, as high definition is still a developing technology, you will find that some equipment exists in the standard definition world but it does not yet exist in HD. For example, there are many companies that offer a myriad of standard definition products; they have yet to extend these designs to HD because they are afraid to commit their resources to a market that is only beginning to develop. That means HD production and post production services cost more than NTSC services because you have to use less efficient techniques to complete jobs. These costs also will decrease in the future as more and more products begin to appear.

We have not tried to price a prime-time show in HD. But, we have studied comparative costs of shooting and posting a full length feature in HD and film. The cost of HD is lower than 35 mm film, but higher than 16 mm film.

Let's talk also about transfer of movies. The High Definition Center has transferred over 200 feature films the past couple years, and about a dozen television movies of the week. The cost is higher than a standard definition transfer. But, one transfer works for the HD master, the NTSC master, and the PAL master. And, the NTSC and PAL masters are superior quality. Did you know that the Sony Pictures DVD titles are getting top ratings for quality — and did you know that they were authored using our HD transfers? Not only do we end up with superior standard definition masters, but we have an HD master. That means a future value.

So, we will have many feature films on HD when HD broadcasting begins. And some television programs will be posted, and possibly shot, in HD. But what about older television programs. What will happen with them? Some may be upconverted from NTSC for HD broadcasting. If they were shot on film, I would expect many would be re-transferred in HD. Even if they were shot in a 4:3 aspect ratio, we have found that it is relatively easy to crop the top or bottom to make an acceptable picture. Yes, there will be some cases where you cannot crop the top or bottom without loosing something of meaning, but those cases will be the exception. And, I would expect that some programs will have value remaining in a 4:3 aspect ratio.

Who will pay these additional costs? I suspect we will all bear a portion of them. My guess is that the higher rated shows will end up in HD. Post houses may find their margins are decreased with high definition. Broadcasters may find they pay more for the higher technical quality program. Advertisers may find they pay more for time on the HD channel. At the same time, though, keep in mind that the bulk of the costs of a program are not the costs for the technical equipment.

I suspect that in a few years, we won't even think about these issues because HD will be how things are done, and we will just do it. By the way, when was the last time you heard a discussion on whether a TV show should be done in black and white or in color?