in the correct proportions. The black-and-white signal provides the luminance for the color set and resolves fine detail.

The problem with this technology is that the color bandwidth was limited and thus so is its ability to resolve color accurately in fine detail.

This is where HDTV comes into play.

Theatres May Feel The First Marketplace Benefits Of HDTV

Economies of scale enter the picture as far as theatre exhibitors are concerned because of the growing availability of DBS or Direct Broadcast by Satellite.

Motion picture exhibitors with an eye on the future envision a totally electronic theatre, with movies sent via DBS or fibre optic link to theatres across the nation. There they will be received and projected electronically immediately, or stored in some digital domain medium and then shown when the time is right. This would eliminate the costly distribution system presently in place and cost reduction for the motion picture exhibitor would be available at every stage.

There is another issue which is of increasing concern to motion picture makers — piracy of motion pictures. DBS probably wouldn't eliminate piracy altogether, but it would certainly reduce the exposure and the opportunities for pirates to obtain high quality masters.

If motion picture exhibitors could eliminate the physical transportation of an actual print, they would enjoy considerable cost savings. No longer would they have to buy the print, than store it, maintain it, transport it and warehouse it in climate controlled conditions. It doesn't require much thought to realize the widespread implications of the instituting of this technology, that is currently available. As a sidebar benefit to both the exhibitor and the moviegoer, DBS would ensure a pristine print with no emulsion scratches or lost audio because the signal would always be in the digital domain.

The multiplex-size theatre is uniquely positioned to take advantage of this technology — small enough to be intimate, but with enough screens in place to be an economically viable concept. Costs would be high to convert to an all-electronic cinema, and not all of the tools are in place at present for this conversion. But as has been the case with all electronic inventions to date, substantial reductions in price occur as the technology gains widespread acceptance and economies of scale come into effect for the manufacturer.

A Canadian Was One Of The Pioneers In Making Use Of HDTV

John Galt, formerly of Northernlight and Picture Corporation Studios, pioneered on the HDTV front in a joint venture with the CBC, *Chasing Rainbows*. (He also was one of the featured speakers at the Ottawa HDTV seminar, along with the engineer for the project Charlie Pantuso.)

Most Canadians will remember *Chasing Rainbows* as a 13-episode series. The picture people saw at home was downconverted from NTSC, so some of the picture information was not seen on home receivers. We were fortunate enough to see a dub of the original HD master in the proper aspect ration of 5:3.

John Galt, who was the director of photography as well as the co-producer through Northernlight, made the creative decision to use HDTV special effects compositing abilities. The reality of economics impinge on any production, affecting what can and can't be done. In this instance, economics predicated the use of HDTV.

The grand scale of the story would have been diminished if shot on 16mm film, and 35mm was out of the question because of cost. Period films are expensive because of the need to re-create the locations of the time frame in which the story took place. Re-creating a period involves one or a combination of methods. You can rebuild the entire locale where the story took place. If that is a city such Montreal, as was the case in *Chasing Rainbows*, the cost is prohibitive. Or you can rebuild part of the locale and use matte paintings to fill in the part of the location that is missing. Again, film mattes would be out of the question because of the cost and the time involved, typically you have to go through a long and involved process

→