[Press Release] November 17, 2009

NHK developes "Hybrid non-linear editing system"

System realizes efficient editing and real-time video effects

- NHK has developed a "Hybrid non-linear editing system"[*1], which enables efficient editing of television programs. The system provides the benefits of both non-linear editing, with high efficiency, and of linear editing, with high performance able to perform tasks such as processing Digital Video Effects (DVE)[*2] in real time.

- In order to edit programs efficiently at a television station, it is becoming more common to use hard-disk-based non-linear editing systems rather than VTR-based linear editors. Non-linear editors are efficient, but they are designed assuming stand-alone use, which makes video processing operations such as DVE to be time consuming.

- Accordingly, we have devised a new approach which enables to follow external time codes, and developed a "Hybrid non-linear editing system" which realizes to act from an external controller for linear editing equipment, similar to a linear editor[*3].

- Generally a non-linear editor has only one video output, but the "Hybrid non-linear editor" has two outputs. These outputs are used as input to external video effects equipment, to perform DVE and other processing before being recorded back on the "Hybrid non-linear editor" (Figure 3).

- This editing system will be exhibited in the Mitomo Co. Ltd. and Kaga Solution Network Co. Ltd. booths at Inter BEE 2009, held from Nov. 18 (Wed.) to Nov. 20 (Fri.) at Makuhari Messe.

*1 Developed in cooperation with Sakura Eiki Co. Ltd.

*2 Digital Video Effects: Processing of digital video with operations such as magnification or reduction.

*3 In order to perform DVE and other operations in real time.

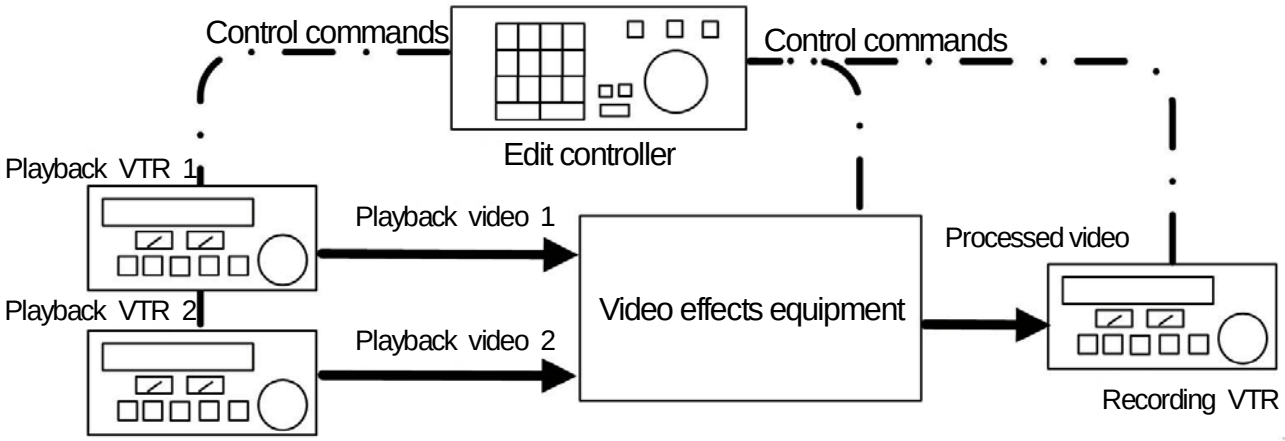

Figure 1　VTR Linear editing system

Video processing is done by using two playback VTRs, one recording VTR, and video effects equipment. This system uses a large amount of video equipment and VTR tapes.

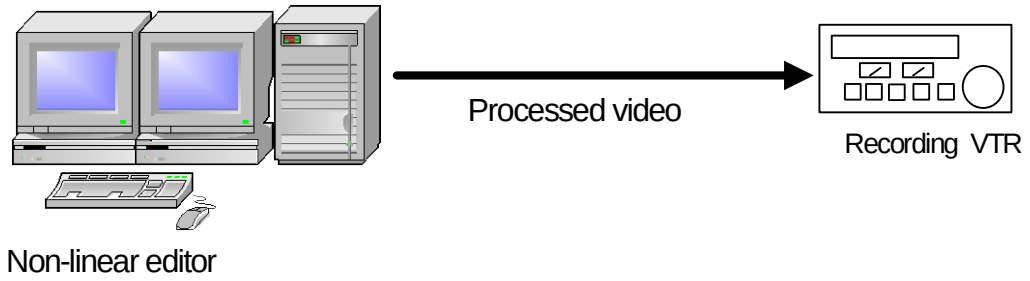

Figure 2　Non-linear editing system

External equipment is not required. But video processing is done inside the non-linear editor, so that results in long rendering times.

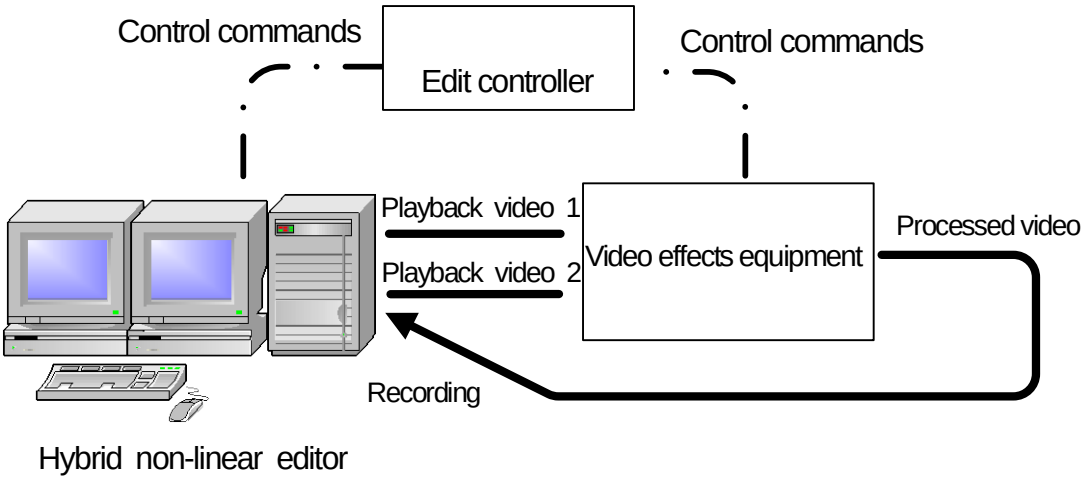

Figure 3　Hybrid non-linear editor operational example

Hybrid non-linear editor can now be controlled by using an external controller. This allows use of external equipment capable of real-time video effects equipment, so video rendering times can be greatly reduced.