THE SLIPSTREAM PROJECT

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SLIPSTREAM DESIGN GOALS

Since the beginning of cinema, motion picture production has evolved a methodology for communicating necessary data about the film to a wide range of production personnel whose actions will affect the final product. From initial conception and visualization to direction, editing and final printing, much of the information which shapes the common vision for the story is visually represented and/or identified by location within the story. Traditionally, the data generated over the course of a film's realization has been isolated within specific stages of production: pre-production and planning, Production and Shooting, and post-production. Pre-production, for example, with its volumes of storyboards, notes, location photographs, conceptual art and design passes surprisingly little information on to the shooting crew and editorial. This isolation of data has been shaped in part by the nature of the technology used to record the information: paper, the usual recording and storage medium, is bulky, can be damaged easily, and cannot be updated easily.

Traditionally the continuity supervisor has been responsible for orchestrating the flow of cinematic data from pre-production to the set. Working at the director's side, this person is also responsible for generating new production data which will be passed on to the lab and editing according to those specified formulas which have proved viable over the years.

As the production of motion pictures becomes more complex (hence expensive) and as digital technology becomes more sophisticated, the economic and artistic benefits of using a computational "pipeline" which will allow the production team to share data across all stages of production becomes critical. Drawing on the digital capabilities of the Mac II, the goal of the SLIPSTREAM project is to create a portable environment which will support the visual, textual, and informational needs of complex modern motion picture production.

THE CONTINUITY SUPERVISOR AS MODEL

In creating any movie, ***all information*** which is generated prior to production exists for the sole purpose of improving the production itself. In production, this information -- scripts, storyboards, location shots, etc. are used to orchestrate the flow of actions of the entire technical and artistic motion picture crew. The Continuity Supervisor is responsible foe mixing and matching information. In this sense, he/she can be considered the information hub of any production. Most good continuity supervisors develop their own personal notation system to keep track of critical information. Visual material augments the continuity supervisor's shot logs; Polaroids are taken as reference, and video assist tapes of shot material is available for viewing. The continuity supervisor generates all new information or re-generates older information (added new information to it) to describe for all concerned what actually took place during the shoot. Selected aspects of this information are passed on to labs and the editor. The terseness of this data flow is a function of time, money, and need, but is also constrained by the present form of information gathering.

The SLIPSTREAM will use the methodology of the continuity supervisor to model the information structures needed on the set. The resulting cinematic information environment will allow production personnel the facility to link data generated throughout various stages of production. Past studies of cinematic data flow all but ignore the role of the continuity supervisor. This oversight is incomprehensible, considering the importance of the continuity supervisor to all aspects of production dynamics. Joseph Robertson, in his book *Magic of Film Editing* gives some idea of the continuity supervisor's merit:

> *The script supervisor is the director's right hand… the link of communication between the editor and director… [He] is objective and highly intelligent… without the script supervisor the director can be destroyed… The script supervisor communicates directly with the editor by means of script notes. This is a precise form of communication worked out through many years of effort on the part of the director, the script supervisor, and the editor… Notes will be the bible for the film editor… A producer or director would be very wise to make sure he hires a top script supervisor. A bad one can add weeks of film editing time… If the film editor has to do all the research himself, it can cost the production an untold amount of extra money, time, and grief.*

THE SLIPSTREAM: A FUNCTIONAL OVERVIEW

The SLIPSTREAM will be a portable environment which will allow production crew to manipulate a wide variety of digital images along with associated data quickly. The system is intended for use on the set, on location, in the editing room, or any place where cinematic data is to be generated.

During preproduction, the storyboards can be drawn directly into the SLIPSTREAM system using a graphics tablet or digitized using a scanner. Location photographs can be taken in still video format for digitization into the SLIPSTREAM image database. Any pre-production artwork or design will also be incorporated into the SLIPSTREAM image base during this stage of production.

During production, the SLIPSTREAM system will be on the set for many types of data gathering. Frames from the video-assist camera will be digitized 9in real time) and stored for scene reference. Still video will be used for all continuity and production photography. Shot data will also be entered in the on-set environment with all the information ready to pass along to editorial. Eventually the SLIPSTREAM will feature the use of time-code for linking video-assist time to film frames; this will enable the selected transfer to of film rushes to tape for on-location rough cuts. SLIPSTREAM designers are also considering the utilization of 32 bits of user data in the code word for shot data.

The foundations of the SLIPSTREAM hardware and software are currently being assembled. The project will use the Macintosh II family of computers with a digitizing board. Supercard will be used as the digital image environment. We are currently approaching several other hardware manufacturers in order to pull together the most advanced hardware components including digital stills and video assist. (We have attached a system diagram for your review).

The SLIPSTREAM's head researcher, Alan Lasky, is completing an analysis of the continuity supervisor's procedures for annotation, communication, and data flow; his analysis is based on a series of interviews, sample notations, and his own first-hand knowledge as camera assistant and special effects coordinator on many feature films. This research is being used to evolve the overall data reference model of the SLIPSTREAM which will be built into a commercially available relational database manager. As proof of concept, we plan to shoot a short movie using this system in late March - early April.