My Lie

SCIENCE AND ENGINEERING RESEARCH COUNCIL
RUTHERFORD APPLETON LABORATORY

COMPUTING DIVISION

D I S T R I B U T E D   C O M P U T I N G   N O T E   6 3 1

Darmstadt Trip Report
Wednesday 28th April-30th April

DISTRIBUTION: F R A Hopgood
                 R W Witty

I talked to Hans Dieter Olsowski about their work on video discs and PERQs. Their plan is to implement a multi-media data base (video, audio, text, "data") using video discs as the storage medium.

Currently they have a read-only video disc, and have built a simple device which allows a PERQ to control the playback, via the RS 232 port. Essentially its just a soft control panel for a conventional disc player, but obviously enables them to edit a sequence and replay it etc. Their current player has severe reliability problems, and getting discs made takes about three months. One disc holds 80K video frames.

Their intent is to obtain a Phillips disc (2.5 GigaByte digital equivalent) which will allow writing to the disc. Writing is permanent however. Because of this feature, they have adopted the approach of storing the original information (of whatever medium) and the changes which have been made to it. Potentially several change sets can be stored for the same original, leading to a tree of views of the information. This all clearly requires significant compute power. The plan is to have a data base engine consisting of 4 M68000 processors, with several attached peripherals (video discs, facsimile, winchester disc etc). One processor would act as the control unit, accepting queries, allocating work etc, while the others would perform updates on video, audio and binary respectively. (I'm not sure why this division - the cpu time is not necessarily equivalent for the different tasks). The intent is to attach this engine to a PERQ, allowing eg video to be transferred to the PERQ, allowing eg video to be transferred to the PERQ memory as well as to the video monitor. An early implementation might use the PERQ winchester to store change information, as there are no known timescales for getting a writable video disc.

Unfortunately it seemed that there was no specification of how they propose to interface to the PERQ. Hans claimed not to know anything about the hardware interfacing. I suspect that problem may have been deferred. They have not had their PERQ very long. Specifications of the functionality of the software (query-level) interface were said to be well on the way. They have a man moving the operating system from their Varian (which they seem to like) onto the M68000. I could get no details of the system architecture they are using.

I was given a short demo of their drawing program, a hierarchical menu-driven interface to the GKS functions. It enables one to produce quite reasonable drawings (eg for viewgraphs) quite simply, using a refresh vector display with lightpen, buttons etc. The system had a few foibles, which may reflect the early level of GKS. The man had to modify his program to get it to run without the plotter being available!