

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 601

VISITS

Notes on a visit to Mrs H Brown, University of Kent
on 19 March 1982

issued by
D A Duce

1 April 1982

Distribution : R W Witty
 D A Duce
 W P Sharpe
 Miss S P Jones
 Investigators/Mrs H Brown

1. Introduction

The purpose of the meeting was to informally discuss progress on Heather's DCS grant.

Heather has recruited an RA for the project Ian Rollings (surname may be slightly wrong!). Ian was an undergraduate at Kent and then worked with William Newman at Logica VTS; he was part of the Logica exodus.

2. PERQ/RING

Ian is currently working on a PERQ ring interface. This is based on the standard Kent 64K Z80 board, which is linked to the PERQ through the GPIB interface. Ian's work differs from the RAL interface in as much as the Z80 to PERQ interface is at Yellow Book Transport service level rather than at Polynet station register level. Throughput on the GPIB is estimated at 4K bps, but since most of the protocol handling is done outboard, performance should be better through the RAL Mark I interface. The Z80 board Ian is using is a standard Kent board and runs their standard software. Component costs for the outboard interface and around £3,000. Ian has visited Tony Cash to discuss his work.

Heather is generally satisfied with the performance of her PERQ. She has had two faults to date. Response time from the ICL engineer was in each case about 5 working days, but the engineer telephoned first to discuss the fault as far as possible and went well-prepared. The second occasion the fault was an intermittent fault on the display and after repairing the fault he returned a few hours later to check it had not recurred.

3. Text Processing

Heather showed some programs they have written for font manipulation. The Computer Modern fonts have been digitised at 1,000 dots per inch and a package has been developed to convert to coarser resolutions. Most of the conversion is mechanical, but the package contains an interactive editor for final polishing. Computer Modern at 10 pt on the PERQ is just readable (about as good as Tony's Hershey font).

They have a problem in that the RAL FTP to Unix code will not work through the Kent terminal concentrator because of a bsp problem. Thus the major effort at the moment is in getting the ring interface operational.

Heather is awaiting the arrival of 32-bit Unix prior to starting serious work on mounting TEX. The TEX code is heavily dependent on 32 bit integers and conversion to 16 bits is impracticable.

Heather knows about the Unix version of TEX from Santa Cruz. They are charging 6K for binary only and offer a very limited number of output devices. Therefore it is not a good option. In addition Stanford are about to release a new improved version of TEX, TEX 82.

TEX 82 uses the web system, a program documentation system (neatly laid out text mixed with pretty printed code). They have this system (heavily 32 bit oriented) and intend to mount it. Heather has ordered TEX 82.

4. Canon Printer

Heather has now ordered the Canon printer. Contractual problems with Canon which have delayed this seem to have been resolved. Heather would like to know how far Cambridge have got with their order. She is in fairly frequent contact with them.

An Orbis M68000 with ring interface has been ordered. Kent are now gathering tools to support the 68000. They think they have a 'c' cross-compiler on one of the Unix User group tapes. There is a lot of work to be done defining document transfer protocols, etc.

5. External Links

Heather has had a letter from the Printing Industries Research Association (PIRA). Apparently someone from SERC has suggested to the Director of the Committee of Directors of the Research Associations that there should be more collaboration between universities and RA's. PIRA therefore are sending a deputation to Heather's project next week. Heather will send me a note of the meeting if there is serious interest.

Heather has also had a letter from ERCC. They are embarking on a project with Linotype-Paul. The present linotron system has a built-in minicomputer, the aim of the ERCC project is to connect just the laser heads (cost about £8K) to a ring interface and use that as a printer server driver from one of their home grown packages (Hamish Dewar's LAYOUT).

Heather wants to use DCS grant travel funds to visit the States in July; principally for a TEX implementors group meeting (primarily concerned with TEX 82). She will try to visit PARC at the same time (contact Jim Mitchell). She asked if CMU have any work of interest she should try to see.