

SCIENCE AND ENGINEERING RESEARCH COUNCIL
RUTHERFORD APPLETON LABORATORY

COMPUTING DIVISION

DISTRIBUTED INTERACTIVE COMPUTING NOTE 826

VISITS

issued by
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Notes on a visit to Hatfield Polytechnic
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DISTRIBUTION: R W Witty
F B Chambers
G P Jones
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Invest/Bacon
Invest/Bull
Invest/Dixon

1. GENERAL

Hatfield Computer Centre (Mike Sayers) have installed a SEEL Cambridge Ring linking the DEC1091, 2020, PDP11/70, 11/45 etc. They run DECnet protocols over the ring, to conserve software development. Throughput is much better than achieved previously with 9.6K synchronous lines. KMC-11 interfaces are used.

2. CURRENT APPLICATIONS

Jean Bacon, Gordon Bull and Lawrence Dixon are submitting applications for 1 April. They are in separate fields, but are linked in the sense that they want to use Sloman and Kramer's CONIC software. They want identical hardware (11/23's linked by OMNINET) to Sloman so that they can do useful work from day 1. They do not want to do unproductive software development.

2.1 Bull

Bull's application concerns verification and testing of real time software - clearly STI. Gordon has talked extensively with Sloman and Kramer and there is no overlap with what they are doing.

Incidentally, CONIC and Real Time Basic have tackled similar problems and come to similar conclusions. Gordon does not feel RTB is a good basis for his work.

2.2. Dixon

Lawrence wants to look at optimisation techniques applied to plant control. There is some natural parallelism in this - gathering data, data reduction, optimisation, feedback etc. A particular problem of interest is that of convergence in asynchronous systems. CMU, INRIA and Oxford (Clarke - Eng Sci) have done some work in this area.

I pointed out that Gawthrop (ex Oxford) and Hunter are looking at the application of Hunter's system to control problems. Case for support should reference this.

2.3 Bacon

Jean Bacon is interested in protocols, performance measurement, and network management. The work in this project will be undertaken by research students. Jean would like an earmarked studentship for this project.

2.4 Equipment

Immediate requirement to get started in

5 x LSI 11/23
OMNINET interfaces.

Sloman's software will run on this unchanged. OMNINET is preferred to RS232 interfaces - latter are too slow. Each application will ask for this equipment - covering paper will indicate dependencies i.e. only one set needed! Covering paper will also indicate how system will be managed.

Jean Bacon would also like Cambridge Ring, Sloman and Kramer also intend to use ring. Jean will ask for a ring on her grant only.

They also wish to link this system to their 11/45 Unix machine for software development. It is not clear technically how best to do this, though an RS232 link is a safe fallback. They will discuss the problem further with Sloman.