



Department of Computer Science

Memorandum

To ALL TEACHING STAFF

From STUART ANDERSON

Date 5 JANUARY 1989

At the teaching staff meeting of 16th December Robin Milner, Rob Proctor and I agreed to write an alternative to the draft "Future Directions in Computer Science" report distributed prior to the meeting. The alternative report is appended to this memo. Please mail any comments you have to soa.

Stuart Anderson

What is Computer Science?

During the last two decades Computer Science has assumed a character which makes it not just a collection of design techniques and design problems, but a truly general science. It is becoming clear that Computer Science promises a view of the world around us which is as all-embracing as that of Physics; where Physics treats concepts like mass and force, Computer Science treats concepts like communication, action and information.

A good working definition of this science is: "*The Structure and Behaviour of Discrete Dynamic Systems*". To see that this embraces what most computer scientists consider to be their business, we can look at a three-way division:

1. *The logical structure of behaviour specification*: Here questions are to do with the concepts and notations which can be used to talk about the behaviour of a dynamic system as experienced by its environment. In this realm Computer Science has forged an alliance with mathematical logic.
2. *The abstract computational structure of dynamic systems*: This area covers the whole of programming; the design and mathematical theory of programming languages, the design, validation and analysis of particular programs and the study of classes of problem and their computational solutions. It also covers description languages — e.g. description methods for hardware and for communication disciplines. (Programs are just descriptions at a certain level). New mathematical theories are evolving to inform this subject, and to match mathematically structured systems to logically structured specifications.
3. *Architectures*: These are the concrete structures which underly the abstract programming structures of 2. above; again mathematical and logical themes are developing to explain the communicational behaviour of real computer designs in a way which is sufficiently exact to be the subject of rigorous analysis.

In the above crude division, we have emphasised the basic scientific nature of the concepts. In addition each of the above divisions has a corresponding class of design problem. These design problems are particularly difficult. The challenges posed by design in large part motivates the basic science outlined above. In each of the divisions new basic work is needed to support the development of design methodologies which can be relied upon to tackle the increasingly complex problems being undertaken by designers.

In the developed countries of the world solutions to these design problems are seen as crucial to future economic development, a wide range of innovative advances are needed before information technology attains maturity. The question is: how best to stimulate the required developments?

In the past decade Computer Science / Information Technology has been the subject of a number of goal-directed, technology-led programmes oriented to meeting the needs of technology as they arose in the construction of particular artifacts (exemplars, demonstrators etc.). There is growing evidence that such programmes are fatally flawed in their approach and assumptions about the nature of and relationship between science and technology. Binding scientific research to the agendas of technology and the marketplace may seem rational and cost effective but there is a very real danger that this will prove to be self defeating.

Scientific productivity depends to no small extent on its being free to pursue its own internally generated agenda, rather than being directed by the marketplace. It is clear that a number of significant technological developments have depended crucially on the results of fundamental academic research. Semiconductor technology and modern radio communications technology are two striking examples.

There is mounting evidence that the relationship between science and technology cannot be characterised by the crude "science-led" or "technology-led" views. In any technology the relationship with basic science is complex and any programme aimed at stimulating technological development must strike a balance between directed applied research and basic science.

Yet UK policy on information technology is still dominated by the technology-led view. During the Alvey programme it became obvious that there were large gaps in our understanding of basic concepts. In addition there was widespread dissatisfaction with the lack of flexibility of collaboration and funding arrangements. Now we are about to embark on a second national programme which does little to redress the balance between applied and basic work and which requires work to take place within limited, inflexible funding and collaboration arrangements.

The EC programme Esprit II is attempting to stimulate basic research under its BRA programme (which was heavily oversubscribed) yet there is no corresponding programme within the UK. Such a programme coupled with a flexible open funding framework could alleviate many of the problems encountered during the Alvey programme.



Department of Computer Science

Memorandum

To All Staff, Postgraduates
Noticeboard

From Roland Ibbett

Date 26th January, 1989

AGENDA FOR DEPARTMENTAL MEETING

to be held on

Friday 27th January, 1989

Time : 3.30 p.m.
Venue : NEW COFFEE LOUNGE (2510)

Raised by

1. Convenor's Business
2. Proposed merger of Schools of IT and Engineering
See note attached.
3. Reports from Committees
 - (a) Policy
 - (b) Teaching Staff Subcommittee
 - (c) Computing Staff Subcommittee
 - (d) Teaching
 - (e) Syllabus
 - (f) Technical Resources
 - (g) Equipment
 - (h) Publicity
 - (i) Library
4. Report from General Building Services Sub-committee
See note attached.

DTS

RAM

Proposal for setting up a School of Engineering and Information Science

1. I believe it is important for the University and the Faculty to develop our strengths in particular and apparently novel ways. The establishment of a school on the lines implied by the title of this short paper would have the following advantages:-

It would provide a broad base of great strength that would offer very substantial support to member Departments, particularly the smaller Engineering Departments; larger Departments at present covered by protection may well not have that umbrella over them indefinitely, and might also find the depth of resource available to so large a school to be an advantage.

It would afford opportunities within the structure envisaged for the development of joint ideas and initiatives, and would foster emphasis on computer-based developments in Engineering. Moreover it would at least give the appearance of providing such a directed planning base.

It would avoid the domination of smaller schools by the largest units in them.

It would be in keeping with the interdisciplinary philosophy behind the establishment of IRC's.

It might provide some opportunity for using resources more efficiently.

2. This idea can only be useful if certain conditions are met. In particular, the following are seen as boundary-conditions.

The extra administrative burden should be absolutely minimal. In effect, what I have in mind is that the Head of the Departments involved should make up an Executive Group that would meet maybe once a term on a routine basis; these meetings need not be prolonged, and should not be called more often than necessary.

There need be no interference with the present workings of committees like the Committee for the School of Engineering, though duplicated discussion should be avoided where possible.

There would be no question of altering the Departmental structure as part of the establishment of the new school. Where changes were seen at some future date as having advantages, they could be discussed within the school framework.

- 3.

I hope that if the school were set up its Executive Committee could look at the submissions for equipment from the individual Departments, where cross-comment might well be valuable. There is no reason why staffing matters need go through the Executive Committee but some such process might have to be evolved within the framework of the present IT Departments if protection were to disappear.

EAVE

11.1.89

Report from
General Building Services Sub-committee
30th November 1988

Notes to Departmental meeting:

1. The committee has recommended to the Parking Committee that more Sheffield bicycle bars be erected outside the main entrance to the JCMB.
2. Each year the committee must predict electricity consumption for the following University financial year. It has been proposed that a small working party be formed, meeting annually in May/June to discuss and predict consumption. The membership will consist of one representative from CS, one from Physics and one from Chemical Physics. The ERCC is separately assessed. The departmental meeting must nominate our representative and I will forward the name to Roger Hipkin. With apologies to JCD, the Laboratory Superintendants seem to be the obvious choice. Roger will write to Heads of departments outlining the remit of the group.
3. There seems to be a big push on improving the quality and positioning of departmental displays, building signposting, hanging of portraits, etc. This was discussed at length and eventually provoked an angry outburst from me (RAM). One thing worth noting, Christine Johnstone has to be informed of staff changes which require the JCMB room and telephone lists to be changed. I presume that DAW should note this.
4. One brief moment of relief from the boredom was provided by the Maths representative. It seems that in the first week of the session, a classroom nominally under Maths control, was cleared of 20 tables and chairs. To date, neither the furniture nor the culprits have been found.

Notes of Departmental Meeting held on 27 January 1989 in Room
2510

Present: JJ, JCD, PT, DB, SM, PDS, ASW, KEVIN, TMH, ARCH, RAM, DTS, JST, TRS, DJW, NPT, JHB, AJS, RM, DKA, RNI, DAW, SOA, EAK, ALL, TJC, DPYM, RNP, GDP, JTB, DDR, JAH, CMNT, JCB, DJR, MRJ, RJP, RC.

1. Matters Arising

Asbestos: All the asbestos in the JCMB has now been labelled. This Department and Computing Services have contributed to some of the cost involved. JCD had sent a note to RNI explaining that asbestos labelling had not yet taken place in the Appleton Tower.

Consultancy: Nothing official to report.

2. Convenor's Business

Legionella: As a result of the discovery of the bacteria in one of the JCMB cooling towers, RNI informed the meeting how the disease can be caught. Since further discovery of positive bacteria would necessitate the closure of at least one of the cooling towers, JHB explained that this would mean our computing systems would not run at full service. RNI had written to the Secretary of the University complaining that we had only heard the legionella news through the media. The Secretary had responded to his letter.

Science Faculty undergraduate places: RNI reported that applications are up by 30% on last year. The savings target for the Faculty has also been reduced.

AUT position: Nothing more to report.

3. Proposed merger of Schools of IT and Engineering

RNI reported on a recent meeting of the School of IT which the Dean had attended, and at which we had set out some objections to the proposed merger. Following further discussions on the merger, however, the Policy Committee felt inclined to accept the move. A Subcommittee consisting of John Mavor and SM will liaise to produce a constitution. DTS elaborated on the notes attached to the Agenda. SM

envisaged the merger working in advance of the formal organisation being set up through the Deanery. He also observed that there is still plenty of time to change things.

Action - SM

4. Reports from Committees

(a) Policy

Engineering Professors Conference: RNI reported that John Robertson had suggested we make a decision on whether or not we wish to formally be involved with the Engineering Professors Conference to which we have traditionally sent SM. The next conference will take place on 23 February.

Action - RNI

UGC Research Selectivity Exercise: RNI explained what was involved in this exercise of supplying five years worth of statistics in order to assist in future funding calculations. He informed the meeting that RS1 which concerned staff and grants would be handled by himself and AMF, RS2 concerning staff publications would be handled by GDP, and RS3 which concerned PG study would be dealt with by EAK. Other sections of the return involved outlining how successful we have been in meeting our research objectives, important work in progress, future plans, etc. RNI suggests we adopt a policy of accumulating this information every year in the form of a Departmental Report which would make future UGC requests easier to answer. DAW would send out a form for staff to complete in this connection.

Action - DAW

(b) Teaching Staff Subcommittee

It has still to meet to decide how we should advertise the post held by BCT who is leaving us to work for Spider Systems at the end of February. The appointment would commence in October. RNI reported that a work permit is required for Ferenc Devai and this is currently being processed.

(c) Computing Staff Subcommittee

A replacement will be sought for the half-post vacated by KMH, and it is a possibility that it will become a full time post in the summer on the release of TMM from a part-time demonstratorship.

(d) Teaching Committee

The Committee had not met, but would meet on the Wednesday following.

(e) Syllabus Committee

The Committee had not met, but SOA reported on a letter received from the BCS with regard to the teaching of software engineering. ALI and KEVIN had met to discuss what the response should be, and to see where the emphasis might be changed in the current syllabus.

SM voiced his concern about students learning to program well. RM talked about splitting programming methodology into two bits. Staff members should be encouraged to provide practical experience to help students develop skills. E-mail in this connection should be sent to SOA.

Action - SOA

(f) Technical Resources Committee

The Committee had not met.

(g) Equipment Committee

The time is approaching for the annual round of bids.

(h) Publicity

Although there is no committee now, as such, DAW reported that delivery of the new Departmental Handbook is now imminent. The course for school teachers will go ahead in June. Anyone willing to help in this connection should contact DAW. Further UCCA visits will take place on 1 February, 15 February, 22 February and 8 March. RNI remarked that serious thought should be given to how we

advertise our postgraduate courses, and urged staff members to give seminars in other institutions in an effort to recruit good postgraduates.

(i) Library

It was suggested that an e-mail list be circulated indicating the sources from which we regularly obtain reports, and the committee will endeavour to acquire more publications. The possibility of obtaining a microfiche reader will be considered.

Action - MRS

5. Report from General Building Services Sub-Committee

RAM commented on the report attached to the Agenda, beginning with the clearing of bushes near the main entrance to JOMB in order to make way for the erection of more Sheffield bicycle bars. He mentioned that a representative from this Dept. is required to join the Working Party concerned with assessing electricity consumption for the following financial year. JCD seemed the obvious choice, and was willing to be elected. The idea of having portraits of the Professors was discussed, and RNI remarked that SM's portrait should be arranged before he retires. After being questioned by TRS, DAW remarked that the photographs displayed in corridor 25 were of salaried members of staff only.

6. Any Other Competent Business

Systems Design Project: E-mail should be sent to Peter Thanisch in connection with group supervisors for this project.

The meeting closed at 5.12 p.m. The next meeting will take place on Friday, 3 March at 3.30 p.m.

Department of Computer Science



Memorandum

To Teaching Staff + JHB and GLC

From Stuart Anderson

Date 13th February 1989

This is a revised version of the "What is Computer Science?" document we are preparing for a Working Party of the Conference of Professors of Computer Science. As it stands it is intended that the original Bristol draft (issued earlier) should follow our definition and this document be submitted by the Working Party to the Conference. If you have any comments on this version please get in touch with me.

Future Directions for Computer Science

A draft response to SERC

February 13, 1989

Introduction

This report consists of two sections. The first section attempts a definition of Computer Science and discusses broad policy issues in the area of support for research in Computer Science. The definition stresses the unity of the science and argues that much basic work is needed within Computer Science in order to support developments in Information Technology. The second section is more discursive and attempts to give some flavour of the range of research which is being carried out now and of the likely developments in the next few years.

By including these two complementary viewpoints in the same document we hope to give a more complete view of the science than is available from any single point of view.

What is Computer Science?

During the last two decades Computer Science has assumed a character which makes it not just a collection of design techniques and design problems, but a truly general science. It is becoming clear that Computer Science promises a view of the world around us which is as all-embracing as that of Physics; where Physics treats concepts like mass and force, Computer Science treats concepts like communication, action and information.

A good working definition of this science is: "*The Structure and Behaviour of Discrete Dynamic Systems*". To see that this embraces what most computer scientists consider to be their business, we can look at a three-way division:

1. *The logical structure of behaviour specification*: Here questions are to do with the concepts and notations which can be used to talk about the behaviour of a dynamic system as experienced by its environment. In this realm Computer Science has forged an alliance with mathematical logic.
2. *The abstract structure of computational dynamic systems*: This area covers the whole of programming; the design and mathematical theory of programming languages, the design, validation and analysis of particular programs and the study of classes of problems and their computational solutions.
3. *Architectures*: These are the concrete structures which underly the abstract programming structures of 2. above. In addition to the study of architectures which support particular

dynamic systems (often called digital electronics), this area also studies the *interface* between description languages and general purpose hardware. Again mathematical and logical themes are developing to explain the communication behaviour of real computer designs in a way which is sufficiently exact to be the subject of rigorous analysis.

In much Computer Science research one can identify two complementary strands. They might be classified as the *quantitative* and *qualitative* aspects of the science.

Quantitative work grows out of a concern that computation should be efficient, secure and reliable. Drawing on diverse application areas, this branch of the science is concerned with developing theories of information, analysing the structure of problem classes, devising computational solutions which are widely applicable and with the modelling and evaluation of the performance of systems. In this area Computer Science has contributed to and stimulated work in many areas of Mathematics — e.g. graph theory and cryptography.

Qualitative work springs from the need to ensure that dynamic systems achieve what is required of them. One particular concern is with the development and analysis of the properties of description languages (programs are just descriptions at a certain level) — e.g. description methods for hardware and for communication disciplines. New mathematical theories are evolving to inform this area; of particular concern is the matching of mathematically structured systems to logically structured specifications.

In the above crude divisions, we have emphasised the basic scientific nature of the concepts. In addition each of the above divisions has a corresponding class of design problems. These design problems are particularly difficult. The challenge posed by design in large part motivates the basic science outlined above. In each of the divisions new basic work is needed to support the development of design methodologies which can be relied upon to tackle the increasingly complex problems being undertaken by designers. This development involves an essential aspect of Computer Science: the need to experiment. The adequacy of theories must ultimately be judged in the context of the design problems to which they are applicable.

In the developed countries of the world solutions to these design problems are seen as crucial to future economic development. A wide range of innovative advances is needed before information technology attains maturity. The question is, "How can we best stimulate the required developments?"

In the past decade Computer Science and Information Technology have been the subject of a number of goal-directed, technology-led programmes oriented to meeting the needs of technology as they arose in the construction of particular artifacts (exemplars, demonstrators etc.). There is growing evidence that such programmes are seriously flawed in their approach, and in their assumptions about the nature of the science and its relationship to the technology. Binding scientific research to the agenda of technology and the market-place may seem rational and cost effective, but there is a real danger that this will prove to be self defeating.

Scientific productivity depends to no small extent on researchers being free to pursue their own internally generated agenda, rather than being directed by the market-place. It is clear that a number of significant technological developments have depended crucially on the results of fundamental academic research. Semiconductor technology and modern radio communications technology are two striking examples. [POSSIBLY TO BE REMOVED: A recent example in the area of Computer Science is the Edinburgh LCF project, which is the basis for a number of important applied systems.]

There is mounting evidence that the relationship between science and technology cannot be characterised by the the crude "science-led" or "technology-led" views. In any technology the

relationship with basic science is complex and any programme aimed at stimulating technological development must strike a balance between directed applied research and basic science.

Yet UK policy on Information Technology is still dominated by the technology-led view. During the Alvey programme it became obvious that there were large gaps in our understanding of basic concepts. Though some parts of the Alvey directorate (notably Software Engineering) addressed the need for basic research, the technology-led framework of the programme was not entirely suited to the support of basic research. In addition there was widespread agreement that the lack of flexibility of collaboration and funding arrangements had the effect of distorting research initiatives and reducing productivity. Now we are about to embark on a second national programme which does little to redress the balance between applied and basic work and which requires work to take place within limited, inflexible funding and collaboration arrangements.

The EC programme Esprit II is attempting to stimulate basic research under its Basic Research Action programme (which was heavily oversubscribed) yet there is no corresponding programme within the UK. Such a programme, coupled with a flexible open funding framework, could alleviate many of the problems encountered during the Alvey programme.

A Survey of Computer Science

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Department of Computer Science

Memorandum

To All Staff, Postgraduates
Noticeboard

From Roland Ibbett

Date 2nd March, 1989

AGENDA FOR DEPARTMENTAL MEETING

to be held on

Friday 3rd March, 1989

Time : 3.30 p.m.
Venue : NEW COFFEE LOUNGE (2510)

1. Minutes of last meeting
2. Convenor's Business
3. Advisory Board for IT Education
4. Reports from Committees
 - (a) Policy
 - (b) Teaching Staff Subcommittee
 - (c) Computing Staff Subcommittee
 - (d) Teaching
 - (e) Syllabus
 - (f) Technical Resources
 - (g) Equipment
 - (h) Publicity
 - (i) Library (report attached)
5. Any other competent business.

s/w. → Equipment?
wed Imagij

Roll SM
re library/IS

Report of the Library Committee

The results of the recent questionnaire are summarised below. The 'interest' column gives the total votes cast; since 24 forms were returned, each contributing up to two votes for any given journal, the theoretical maximum in this column is 48. The 'quality' column presents a weighted average in the range [0,1].

Title	Code	Price	Interest	Quality
<i>Computer Integrated Manufacturing</i> , Taylor & Francis (4 issues per year).	1	£65.00	3	0.5
<i>Information & Software Technology</i> , formerly <i>Data Processing</i> , Butterworths (monthly).	2	£90.00	4	0.45
<i>Software Engineering J.</i> , BCS/IEE (6 issues per year).	3	£59.00	11	0.67
<i>Computer J.</i> , CUP/BCS (6 issues per year).	4	£130.00	15	0.52
<i>Formal Aspects of Computing</i> , Springer (4 issues per year).	5	£60.00	19	0.71
<i>Human Computer Interaction</i> , Ablex Publishing Corporation (4 issues per year).	6	\$80.00	6	0.75
<i>Distributed Computing</i> , Springer (4 issues per year).	7	~\$100.00	15	0.73
<i>J. Systems and Software</i> , North-Holland (4 issues per year).	8	~\$120.00	11	0.61

Of the journals which attracted at least 10 votes, *Computer J.* seemed rather expensive and was considered by the electorate to be of indifferent quality, and *J. Systems and Software* seemed marginal in popularity. Furthermore, many members of the BCS would presumably have access to private copies of *Computer J.*. The library committee therefore decided to recommend to the department the purchase of three journals: *Software Engineering J.*, *Formal Aspects of Computing* and *Distributed Computing*.

27th February 1989

Notes of Departmental Meeting held on 3 March 1989 in Room 2510

Present: RNI, EAK, PDS, RJG, KEVIN, JHA, DTS, JAH, DJR, TMH, PT, JCD, DAW, GDMR, SM, RJP, MIKEF, DJW, RAM, RM, ALI, TJC, JHB, JTB, JJ, MRI, SMAILL, ARCH, PJJ, RNP, RC.

Apologies were received from GIC and SOA.

1. Matters Arising

Asbestos: JCD had hoped to report that removal of asbestos from the bulkheads had commenced, but they had failed to obtain a waiver on the 28 days notice from the Dept. of Health. He will warn us when this is likely to take place.

Consultancy document: Anyone involved in consultancy should read this document and supply RNI with details.

Legionella: The cooling tower which has been closed is now back in operation. A letter of apology has been received from the Works Dept. for failing to keep us in the picture.

Undergraduate applications: FS reported that since applications were up by 30% this year, our intake could increase by that number. It was decided that FS should form a working party to consider the admissions policy to be adopted for next year.

Action - FS

M.Sc. applications: DJW reported that around 56 applications had been received.

Proposed merger of Schools of IT and Engineering: SM reported that this is going ahead, but has not been finalised as yet.

UGC Research Selectivity Exercise: RNI reported that the exercise had been completed and duly despatched. Staff are welcome to look at copies of our returns.

Microfiche reader: The Library committee are considering this.

2. Convenor's Business

IRC in Parallel Computing: RNI reported that nothing had resulted from

this since the Council had taken the view that no centre of excellence had been identified from those applications finally shortlisted.

SERC PG quota allocations - sanctions: RNI reported that a letter had been received from SERC concerning the misallocation of four 1981 starters who had been recorded against our Department instead of Artificial Intelligence. Since the matter has now been rectified our Department's overall submission rate has increased from 35% to 44% thus removing it from mandatory sanctions.

Animal rights: Following the recent damage carried out by the animal rights campaigners at Bristol University, RNI warned people to be on their guard here.

DEC: RNI reported that the University has been approached by Digital who wish to maintain a good relationship with us. Several campus engineering centres have been set up, and DEC are hoping to recruit graduates to work for the company.

3. Advisory Board for IT Education

RNI informed the meeting that representatives would be required from each of the three main IT Departments plus Cognitive Science. The Board would meet once a year. NPT as course organiser for the M.Sc. seemed a likely representative, along with an undergraduate representative. It was decided that the matter should be left to the Syllabus Committee to sort out.

Action - Syllabus Committee

4. Reports from Committees

(a) Policy

At the last meeting it was decided that portraits of Professors would be hung after they had retired.

(b) Teaching Staff Subcommittee

It had been decided that we would advertise BCT's post as a software engineering post. RNI remarked that there remained a one year temporary post resulting from RB's five year Fellowship.

RNI reported that the ETP money had been spent for the purposes it had been requested, and he gave details of the posts involved. The Department was now being asked to bid for up to £78K for 1989-90.

It was thought appropriate to ask for an extension of Ferenc Devai's work permit to September next year.

(c) Computing Staff Subcommittee

This committee has still to meet.

(d) Teaching

The committee had met, and the minutes had been posted. PDS reported that some discussion had taken place with regard to recruitment of students to ISI, and there had been concern about confusion in general over first year courses: a questionnaire to Directors of Studies in other departments to get feedback should help. Some worry had also arisen about recommendation of AI1.

The teaching committee expressed its thanks to the CO staff for their sterling efforts in moving machinery when the cooling towers closed.

The question of 4th year and M.Sc. exams arose in the light of recent AUT actions. Dates for these are dependent on results of meetings with the Dean and Principal and also the AUT and CVCP.

A meeting had taken place with a team from AI to discuss the joint undergraduate degree. AI propose to put forward more modules for the 3rd and 4th year, submitting them to our syllabus committee. Discussion about projects had taken place.

(e) Syllabus

The committee had not met. If anyone has views on the GS3 material, Mikef would be grateful to receive e-mail.

The recruitment committee had written again regarding entry requirements to our courses. They would like us to note for each year what we expect the student to know and have experience of in order to enter each of the years. The syllabus committee will discuss this with course organisers.

(f) Technical Resources

The committee had not met. RAM reported on a proposal to clean all the pipework associated with the recirculated water. This will involve the air-conditioning being down for one week, but RAM has still to obtain more details.

(g) Equipment

The committee had not met, but JHB reported that it would meet Tuesday week. We should have some idea of what we want our equipment bid to look like.

(h) Library

The committee had met, and MRJ reported on the recommendations attached to the Agenda. RNP expressed some concern at the way in which the recommendations were derived, and felt that minority interests did not get a fair share. It was also thought that the committee should consider cases based on the needs of students requiring access to particular journals referred to in teaching. The committee will look again at the recommendations and report back on progress with library finances.

Action - MRJ

5. Any Other Competent Business

University Library: SM reported that the University Library Committee has an admissions subcommittee working group which is concerned with the role of the Library in the Information Services of the University as a whole. If anyone has any views on this SM would be glad to hear from them.

Catering arrangements: Mikef expressed concern at the recent news that the Refectory will close, and said he wished it be made known to the relevant University committee that we were unhappy about this decision.

The next Departmental meeting will be held at 3.30 p.m. on Friday, 5 May 1989.

School of Engineering

Chairman
Professor J.Mavor



School of Information Technology

Chairman
Professor S.Michaelson

Telex: 727442 UNIVED G

Telephone: 031 667 1081

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All academic staff,
Department of Computer Science,
James Clerk Maxwell Building,
The King's Buildings.

14th April 1989

Dear Colleague,

MERGED IT/ENGINEERING SCHOOLS

You will, by now, be aware that as the result of a suggestion by the Dean of Science both School Committees have agreed to a merger. The prime purpose of this move, as we see it, is for a large grouping to be formed which can represent the views of the I T/ Engineering Departments and respond to external inputs such as resourcing issues. It should particularly benefit small departments by giving them powerful support and lead to improved cooperation in teaching and research throughout a wide community. Although we propose a Standing Committee which will have some teeth, the autonomy of individual departments is unaffected. Other details are given in the draft Constitution attached to this letter.

In order to allow full discussion, we are calling an Open Meeting on Wednesday 26th April at 4pm in Classroom 10, Alrick building extension. You are most welcome to be present and to contribute to the formation of the new School.

Yours sincerely,

Handwritten signature of J. Mavor.

Handwritten signature of S. Michaelson.

J.Mavor,
S.Michaelson.

Encl:- Proposal for the new School.

PROPOSAL FOR A SCHOOL OF INFORMATION SCIENCE AND ENGINEERING

Background

Both outside and inside the universities, information technology is playing a growing role in every branch of engineering. It is used as a tool in the modelling of situations to facilitate their analysis. Very often it is a tool in the design process. It is used as a tool in production and sometimes is incorporated in the finished product. Information technology has many of the characteristics of a new branch of engineering and this is widely recognised. It has a broad practical and professional basis, a strong theoretical aspect and a wide range of applications in other branches of engineering and in the world at large. It is appropriate that the relevant academic Departments should reflect this larger reality.

The Dean of the Faculty of Science has suggested that the School of Engineering and the School of Information Technology should merge to form a single School. This proposal has been considered by the two School Committees which both felt that on balance it would be advantageous to proceed and they asked Departments in the two Schools to consider it further. The Departments concerned have given a measure of agreement to the proposal and have asked to see a Constitution for the new School.

The Chairmen of the two Schools have therefore prepared this draft Constitution. They have circulated an earlier draft to the Heads of the Departments concerned, and the comments returned have been taken into account in preparing this draft for consideration by the members of the seven Departments.

It is proposed to hold an Open Meeting of interested members from the two existing Schools to discuss details pertaining to the formation of the merged School.

DRAFT CONSTITUTION

Title of the School

The title of the new School shall be

"The School of Information Science and Engineering".

Aims of the School

The Departments in the two existing Schools, of Engineering and of Information Technology, have already established a good deal of cooperation within their Schools and between Departments in different Schools. The merged School should further enhance cooperation between Departments which are at present in separate Schools. It will aim to facilitate the formulation and presentation of teaching and research policies in their fields within the University and would coordinate requests for resources. It will promote the development of collaborative links with industry. It would also promote the effective operation of teaching and research policies within the group of Departments which are very much concerned with engineering, information technology and their underlying science. The merged School will speak for about one third of the Faculty of Science, measured by student numbers, staff and cash input. This new School will show the community at large that the University and the Faculty are sensitive to the new approach to the funding of academic work, and would serve as a bulwark against some of the attacks which stem from that approach.

It is recognised that Departments have lives of their own, and the School will distinguish clearly between encouraging collaboration and being coercive. Its functions are advisory, but decisions taken jointly by the Heads of Departments are expected to be adhered to jointly.

Structure of the School

The School will have 7 principal members:

- The Department of Artificial Intelligence
- The Department of Chemical Engineering
- The Department of Civil Engineering and Building Science
- The Centre for Cognitive Science
- The Department of Computer Science
- The Department of Electrical Engineering
- The Department of Mechanical Engineering.

There are other Departments, not members of the School, with which Departments in the School run joint degrees or which contribute modules to degrees run by Departments of the School. Those Departments could be represented on the appropriate Sub Committees of the School by invitation from the convenors. It may be that the School Committee would wish to have representatives of some of those Departments amongst its members. The University Library and the Computing Service both play a large role in the teaching and research of the School and the School Committee may wish to include representatives of those two organisations amongst its members.

The School will have a Standing Committee composed of the Heads of the seven Departments who will choose a Chairman, being one of the Heads of Departments or any senior academic in the School. The Chairman will normally serve for three years at a time.

There will be a School Committee which will consist of the seven Heads of Departments and another representative of each Department. The departmental representatives will normally serve for three years.

The Chairman of the Standing Committee will also chair the School Committee and will be Chairman of the School.

The Standing Committee will provide a Secretary for itself, possibly from among the administrative staff of the Departments, who will also act as Secretary of the School Committee and of the School.

The School Committee will delegate certain functions, and executive power in some cases, to sub-committees which will report to the School Committee as instructed. It will communicate with the Departmental Committees to collect Departmental views and to let them know about discussions and decisions by the School Committee. It will also look outwards to represent the views of the School to other bodies, such as the Faculty of Science, the Engineering Council and the DTI.

The School is meant to act on behalf of all its members. The force of this will be enhanced by its committees being school-wide. Since there are differences between the appropriate groupings of Departments for different purposes, it should be left to the individual sub-committees to decide whether their business can best be carried out by their having further sub-structures such as sectional divisions, or members who attend for particular topics or any other arrangement that they find suitable which does not contradict the general philosophy that the sub-committee must ultimately speak for the whole school.

The subcommittees are constituted for the time-being. They disappear when their useful lives are ended.

When the School Committee sets up a sub-committee it will choose the convenor and indicate the range of topics that is to be covered. It may also suggest some of the members to the convenor. The convenor will choose the initial members of his committee and with them will develop a remit. This will be put to the School Committee for approval.

The Sub Committees proposed at this stage are:

Accommodation.

This will represent the School's view of the needs of individual Departments in the School as well as shared needs. An example of a need which is shared is the necessity of keeping spaces for the Computing Service sufficiently close to the Departments.

Computing Policy.

This will advise the School Committee and Departments on matters relating to the provision of computing services, both by Departments themselves and by the Computing Service. It will act on behalf of the School and Departments where this is of benefit to the Departments.

Gould Users.

This will oversee the use and performance of the Gould Computer and will recommend its replacement when appropriate.

Postgraduate Teaching.

This will coordinate the curricula, syllabuses, timetabling and teaching of the MSc courses taught individually and jointly by the Departments of the School. It will also coordinate admission policies.

Publicity and Information.

This will coordinate the collection of material, the preparation of documents and their distribution so that the burden on individuals can, as far as is practicable, be reduced by sharing the load. Schools liaison and industrial liaison should come under the purview of this committee and we expect to be able to render this activity still more effective.

Research.

This is to promote cooperation between the Departments, to arrange the sharing of resources where appropriate and to show that the University is responding to suggestions from outside. It will also serve to protect the Departments from undue pressure from bodies such as the UFC, which expects the University to display its responsiveness to ideas such as Research Selectivity. There may well be circumstances in which the School as a whole should show itself to be in support of particular areas of research and this sub-committee would be the place to raise such matters.

Laboratories and Workshops.

This sub-committee will be concerned with the provision of individual and shared workshops and laboratories, especially for teaching. It will consider the requirements for space, equipment and staffing.

Undergraduate Teaching.

This will coordinate all undergraduate teaching. It will deal with curricula, work loads, admissions, staffing and other resources needed for teaching. It will deal with the preparation of material to be presented to the new Board of Studies (see below).

All Committees and Sub-Committees of the School shall be able to set up ad-hoc Working Parties as they find it necessary.

Board of Studies.

The Board of Studies in Engineering should be replaced by a Board of Studies for the new School. This should be concerned with all the BEng, BSc and MEng degrees taught and examined by the Departments of the School. Although this should remain a Board of the Faculty of Science, it should bear some responsibility towards the School and should report to the School Committee as well as to the Faculty.

John Mavor
Sidney Michaelson

14th April, 1989



Department of Computer Science

Memorandum

To All staff; Post Graduates; Notice Board

From Roland Ibbett

Date 4th May 1989

AGENDA FOR DEPARTMENTAL MEETING

to be held on

Friday 5th May, 1989

Time : 3.30 p.m.
Venue : COFFEE LOUNGE (2510)

P. Duffy

Raised by

- 1. Minutes of last meeting
2. Convenor's Business
3. Reports from Committees
(a) Policy
(b) Teaching Staff Subcommittee
(c) Computing Staff Subcommittee
(d) Teaching
(e) Syllabus
(f) Technical Resources
(g) Equipment
• The IT School Machine (see note attached)
(h) Library
4. Any other competent business.

PG/staff Resources.

ETP +30K recurrent
13/6 ICE
11/5 IT adv board
BEST D/B.

JHB

Vex

The IT school machine

John Butler

May 1, 1989

EUCS have run the Gould PN9000 "ispna" for the IT School for about four years and have run the Gould NP/1 "eive" as a software development base and as a 1990 replacement evaluation machine for about 18 months.

ispna gives good performance when it works but it is prone to long periods of totally unacceptable unreliability which Gould seem unable to address and is short on disc space and communications accessibility. It is also overloaded.

The collaborative exercise with Gould has run into difficulties and it looks as if EUCS will now run its central service from 1990 on a Sequent multi-processor machine.

This has a knock-on effect on the future of the ispna machine and the Department has to decide what to do about it.

EUCS have offered us a deal.

We currently spend about £16,300 pa on ispna maintenance. If we make this recurrent sum available to them they will undertake to replace ispna by a preferential share in the Sequent machine. They reckon they can guarantee to deliver us considerably more than the performance of 30% of "ispna".

We don't have to accept this and indeed EE probably won't. We are therefore left with essentially four alternatives:

1 Maintain the status quo

We would continue to maintain the Gould with AI and EE. AI have a Gould of their own and have Gould expertise. EUCS will have to split their support effort between the Sequent and ourselves. Gould can be expected to lose interest in us even further and there is a real danger of a bad situation becoming worse. In other words we could end up trying to run a service on an unreliable machine with reduced support from the manufacturer and the Computing Service.

1

This is not an attractive option.

2 Invest in an EUCS-run non-Sequent

EUCS have produced what they regard as the most acceptable deal and are unlikely to be persuaded to go through the whole exercise again even assuming they would be in a position to provide manpower and resources to run such a machine given that they are committed to running the Sequent.

It is possible we could persuade them to run a cluster of Sun compute/file servers for us but there seems to be little to gain over doing it ourselves.

This is not really an option.

3 Invest in an EUCS-run Sequent

This appears to be a definite possibility but the whole discussion hinges on the following point:

Can the Computing Service can deliver to us a preferential share of the Sequent machine which is worth our investment and would it be managed in a way that we would find acceptable?

3.1 Performance

The Sequent configuration under consideration would be a single University computing resource running Unix BSD 4.2. It would comprise 8 Intel 80386 processors and 80Mb of RAM. This machine would be supporting about 140 users at peak times. Elementary arithmetic thus indicates that each user receives about 1/17th of an 80386 and 1/3 Mb of RAM on average. We would regard one 80386 as being a relatively modest desktop machine so at first sight this loading seems nonsense.

A closer examination of course shows that a normal '386 machine spends most of its time I/O bound or at best in memory wait-states so an appropriate architecture could deliver much more performance from a '386 than we would expect if it provided caching, fast RAM and fast discs. Performance is nevertheless critically dependent on the machine's scheduling and offers the possibility of going very wrong.

Experience from other sites is encouraging and is backed up by preliminary benchmarks. There is also a safety-net in that EUCS will be able to invest Sequent-related contract

2

earnings in up to 3 "units" of additional equipment where a unit is 2 processors, a disc controller+Ether controller or 16Mb of memory.

EUCS have given us assurances that they will do everything in their power to guarantee us our share of the load. The Sequent scheduler has a variety of load-sharing tools but EUCS are quite open about the fact that at the end of the day the performance we get depends on the vigilance of the system manager.

3.2 Resilience

The Sequent is a single box serving the whole University and is a single point of failure. If a processor fails the system will crash but will reboot immediately and the processor will remain dead till an engineers' slot is scheduled to replace it.

Sequent quote an achieved MTBF of 11500 hrs (over a year) and EUCS's evaluation machine hasn't failed yet.

3.3 Administration

We believe our portion of the machine would be run for us much as "ispna" is run now. We have one Superser account which we use with restraint but which enables us to set up large numbers of accounts at course turnovers without having to wait in a queue. In return we adhere to a naming convention. EUCS account numbers are present but they are decently hidden. We would regard this as a minimum necessary access but would hope that we could evolve some scheme of joint management whereby management of our portions of the system is delegated to us.

To make sense of this machine in a distributed environment we would also have to ask the Computing Service to look favourably on cross-mounting file partitions on our Sun cluster, or put another way, to assign a number of file partitions to us and delegate to us their management.

EUCS are prepared to be as flexible as possible in all these respects.

4 GO OUR OWN WAY

This is the realistic alternative to 3.

With £16,300 per annum we could do the following:

Year 1:

Purchase a screenless Sun 4/60 for about £5,500.
Upgrade its memory to 16Mb for about £2,000.
Add a fast 700Mb SCSI disc for about £3,000.
Purchase a 10-line SpiderPort for about £2,500. This will provide a total of 12 RS232 lines into the machine.
This represents a capital cost of about £13,000. Most of the remaining £3,000 would be required to maintain it.

In year 2 we could probably do the same again but would have to rely on costs coming down as we would have to budget for two lots of maintenance. We would also need a Gandalf ASM card at £1000. By year 3 half the sum would be eaten into for maintenance.

In practice we would invest differently - we would increase capacity generally on our large servers and allow RS232 access through asynchronous multiplexors. A first reaction from the gurus is that this is very tight indeed in year 1 and we would have no safety nets of any kind. It would certainly involve cooperation between course organisers to avoid panics at deadline times.

The danger of putting money into a single University Sequent is that it becomes diluted and we never see a satisfactory return. A workable compromise would have been that we support CS1, CS3, CS4 and the MSCs and rely on EUCS to support most of CS2.

This is not possible as EUCS tell us that unless we invest our money in a Unix timesharing service they cannot offer us Unix support for our major classes

There are attractions in pulling out completely and doing our own thing but if we want to go this path we must accept that it is an expensive pastime and must be very sure of our motives for doing so. It is also extremely risky without the safetynet of EUCS until we build our teaching resources up more than we have so far. We are also paying for the Computing Service whether we use it or not.

Equally if we continue to use Computing Service facilities, we must work jointly to provide the kind of service that we as users want. That will all fall into place if EUCS can take a relaxed and unbeaureaucratic attitude.

There is a compromise which should be explored. Transfer our investment to the Sequent for now but pull out progressively over a couple of years as our CS2/3 facility grows. This allows us to jump either way. If the Sequent delivers what the Computing Service promises then we could stick with it. If not we have a means of withdrawing with grace at the expense of the effort of a double transfer from Gould ⇒ Sequent ⇒ CS2/3 lab.

Notes of Departmental Meeting held on 5 May 1989 in Room 2510

Present: RNI, EAK, DJW, JHA, RC, PT, JCB, TYG, ASW, RAM, JJ, JAH, SM, PDS, MIKEF, JHB, DTS, KK, KJC, KEVIN, DPYM, JCD, ARCH, DAW, DDR, JST, RJP, SOA, GLC, DKA.

Corrections to notes of Departmental meeting of 3 March: Item re IRC in Parallel Computing: This should read "RNI reported that nothing had resulted from this since the Council had failed to support the centre of excellence".

Item re University Library: line 2, "admissions subcommittee" should read "automation subcommittee".

1. Matters Arising

Undergraduate applications: This had been discussed at a meeting of teaching staff on 28 April. IT Education Advisory Board: the Syllabus Committee had nominated SOA and NPT to serve on the Board.

2. Convenor's Business

New staff: RNI reported that Ferenc Devai had joined the staff on a temporary lectureship and Anne Salvesen had joined the LFCOS as an RA.

CO promotions: 3 CO's had recently been promoted, namely GDMR, AJS and DDR.

First aiders: RAM, KJC, Carol, GI and MLG have now become members of the JOMB emergency first aid team.

ETP bid: RNI reported that there had as yet been no formal reply to our bid. He informed the meeting that we had asked for an additional lectureship, making a total of nine funded by ETP. We had also requested more money in the demonstrating grant, and more in the class grant to meet increased maintenance costs. Some money was committed to VLSI fabrication. JHB reported that the inventory total stands at just over three million.

Differential fees: RNI reported on a document he had received which proposed to introduce a new fees structure, dependent on the subject(s) of the degree course. Volunteers were required to formulate a response to the proposal. PDS, SM and ASW volunteered, and JHB requested the material to be copied to him.

Action - PDS, SM and ASW

State of the School of Engineering and IT: The formalities required to create the School were progressing through the University. There was dissatisfaction in some quarters with the name, but most Departments could see no reason to change the name, and it was likely to go through as it stands.

IEE: RNI reported that the IEE wish to accredit the joint CS and Electronics course, and will be sending 2 representatives for a visit to us on 13 June.

Advisory Board for IT Education: The Board will meet on 11 May with 3 internal representatives of each of the main IT Departments taking part.

SDA document: RNI read from a document concerning Algotronix Ltd., a firm in which John Gray and Tom Kean are involved. The SDA will pay for some kit which Algotronix will produce, and institutions are invited to apply for the kit.

Faculty business: SM questioned what we should tell students regarding their overall assessment. He was referred to the official notice describing this procedure.

With regard to the Faculty recruitment committee, the meeting discussed a document giving a clear statement of the knowledge and skills required for courses. The question of first year courses and acceptances for second year courses also arose, especially concerning students who require to catch up before coming here. ASW will pursue this with FS, and will look into the admission into CS2 of Singaporean students.

Action - ASW and FS

The suggestion that Faculty should have a MicroLab Policy Committee met with the feeling that we require more information on this before commenting.

RNI reported on the discussion taking place in Scottish Universities of credit transfer whereby students studying for one year at Edinburgh could then have that year accredited to them if they transfer their studies elsewhere.

Front door keys: RNI stressed that people leaving the Department permanently must return their keys and copier cards. Course organisers should remind CS4 students about this.

B.E.S.T. database: RNI reported that a plentiful supply of forms are still available for this.

3. Reports from Committees

(a) Policy

It met on 8 March to discuss proposals for the ETP money.

(b) Teaching Staff Subcommittee

Adverts for lectureships are currently in hand: one in software engineering and one temporary 1 year lectureship. There has been no confirmation yet of the ETP post. The applications have been read by a group of people and references have been requested for approx. a dozen. There will be another meeting in four weeks time when it will be decided who should be called for interview.

(c) Computing Staff Subcommittee

The committee had not met.

(d) Teaching

PDS reported that there would be an official meeting the following week, but a quick emergency meeting had been held to discuss the AUT boycott. AUT have now said that exams should go ahead but marking should not take place. Since the boycott did not commence until the beginning of 2nd term we should aim to give merit certificates where it seems reasonable and also consider exemptions for the 1st half course only.

(e) Syllabus

A working party is looking at the possibility of 3rd year students substituting an AI module for a CS module.

(f) Technical Resources

RAM reminded staff that they should fill in the appropriate green sheet and send it to DCH when they require technical work to be done. Faulty equipment should be reported to Carol or Linda.

(g) Equipment

JHB explained the equipment bid process, and reported that there would be a meeting of the departmental equipment committee on 12 May. He will make the list available to staff.

With regard to the IT School machine, JHB reported that the Gould users committee had met and suggested two options. We could either invest some money in the proposed Sequent machine with Computing Services, the benefit to us being a more reliable service and more performance, or we could pull out of

the venture and use the money to purchase more SUNs. A suggestion was made to transfer our current use of the Gould to EMAS.

After some discussion, it was decided that RNI and JHB should consult with AI re the last option. If that option were to be pursued, we would then inform Computing Services that we would like to use the Sequent experimentally, but not as a major teaching vehicle. RNI will also talk to Brian Sutton.

Action - RNI and JHB

(h) Library

The committee had not met.

4. Any Other Competent Business

It was felt that something should be done with regard to obtaining equipment for PGs. With the help of SM, GDP and a research student liaison committee, the technical resources required by the PGs might be resolved.

Action - SM and GDP

The next Departmental meeting will be held at 3.30 p.m. on Friday, 2 June 1989.



Department of Computer Science

Memorandum

To Staff; Postgraduates;
Noticeboard

From R.N. Ibbett

Date 1st June, 1989

AGENDA FOR DEPARTMENTAL MEETING

to be held on

Friday 2nd June, 1989

Time : 3.30 p.m.
Venue : COFFEE LOUNGE (2510)

Raised by

1. Minutes of last meeting
2. Convenor's Business
3. IEE Visit ~~_____~~ *Tue 1/6 10am* RNI
4. JCMB General Building Services Subcommittee (see papers attached) RAM
5. Reports from Committees
 - (a) Policy
 - (b) Teaching Staff Subcommittee
 - (c) Computing Staff Subcommittee
 - (d) Teaching
 - (e) Syllabus
 - (f) Technical Resources
 - (g) Equipment
 - (h) Library
6. Any other competent business.

*Maple
Recursive*

REPORT FROM JCMB GENERAL BUILDING SERVICES

The subcommittee met on Thursday 25th May to discuss the Geology/Geophysics merger and to hear if there were any major bids for accomodation during 1989/90. There were minor matters, there always are.

Matters you may wish to be aware of:

- Bicycle bars will be funded during the coming financial year and will be sited at the main entrance to the JCMB, replacing the bushes. There will be no change to the provision in the next year.
- The annual maintenance survey will be carried out in mid-June and work carried out during the long vacation. I suggest that John Dow should coordinate the survey of our area and the list handed to Roger Hipkin by 12th June.
- Rather than summerise the Geology/Geophysics plans, I have reproduced the papers presented at the meeting. You should note that all that has taken place with the UGC has been by telephone and a letter has been "on its way" for some months.

The proposed alterations don't affect this department very much but you should note the changes proposed to the sixth-floor common room and its replacement in extensions to the 3rd-floor common room.

- Space requirements for next year came up but was really only an opportunity to place markers for real requests in September. We have asked for a large laboratory to house the terminals from 2501. Two smaller laboratories with the required combined floor area may be preferable. Stuart McKirdy was not at the meeting and has not contacted me to discuss the matter although it is understood that Physics are prepared to give us space. Where, we don't know yet. The other departments don't have requirements to interest this department.

The proposal we have is to move the terminals out of 2501 to the acquired lab or labs, move the staff, research and LFCS Suns into 2501 freeing up 1501 and a CS3 laboratory and freeing perhaps two of the three VLSI Sun Lounges.

15xx flooding

15xx manhole strips

Note on Geology & Geophysics Accommodation in JCMB

From August 1 1979, the existing Departments of Geology and Geophysics will merge to form the Department of Geology & Geophysics. As part of the UGC Earth Science Review, a sum of £1.1M has been promised for additional accommodation. Under the plan apparently approved by the UGC, this money would primarily be spent on an extension to the Grant Institute to provide new Geology teaching laboratories and allow level 5 of the Appleton Tower to be vacated. Staff and research facilities in the existing Geophysics Department would continue to occupy their existing space in JCMB.

The UGC did not provide the funds requested for an extension large enough to house all activities of Geology and Geophysics in one building. Many, including the Dean, believe that staff split between two buildings will not prove viable for a group which must demonstrate the productivity appropriate to the largest and best endowed Earth Science Department in Britain. In February, the Dean asked JCMB Users Committee to investigate whether Geology teaching laboratories could be housed in JCMB in order to allow all staff from Geology & Geophysics to be housed together on the Grant Institute site. I took the view that we should not consider schemes which involved any appreciable space belonging to other Departments, but only those which redistributed communal facilities. At its last meeting, Users Committee agreed to set up a small emergency group consisting of David Ferro, Alastair Gillespie, Stuart Mckirdy and Eric Mackenzie to look after the interests of other Users should an urgent decision be needed. I briefed them on likely proposals but no urgent decision has yet been required. It now seems likely that consideration can go through normal channels: the letter from the UGC confirming the sum available, promised 'next week' for the last six months, has not yet arrived and the remote possibility that work might start in the forthcoming long vacation has now vanished.

There have however been detailed discussions within Geology and Geophysics about how an acceptable split of the new Department incorporating the resulting of Geology teaching labs can be achieved. The essential points are to convert the Examination Hall (6231) into one Geology teaching laboratory and the level 6 common room into the other. The level 6 common room would be replaced by a smaller bookable annex to the level 3 common room; the reading room function of 6231 would be replaced by the existing classrooms 5327 and 5326, with new classrooms replacing them constructed out of Geophysics space; a large examination room would be found on the KB site, outside JCMB. The latter has yet to be identified, although the Kings Buildings Centre is one contender, but

It is the Dean's opinion that this should not stand in the way of an otherwise satisfactory solution

The net effect on JCMB would be to create about 824 m² of space for Geology & Geophysics compared with 1023 m² currently occupied by Geophysics. This would result in a net release of about 200 m² in the building, including 10 - 15 offices on level 6. All the existing classrooms would be retained or replaced by others with a similar seating capacity. In addition a 60 seater classroom would be created, predominantly on a generally bookable basis. With the possible exception of occasional use of the 70 seater room in conjunction with an adjacent teaching lab, it is not intended to transfer additional lecturing to JCMB.

The opportunities for rationalisation presented by a major redistribution of facilities are not likely to recur often. It is unfortunate that only some of the structural difficulties of the past few years can be dealt with. Releasing offices on level 6 does not help Computer Science in any immediately obvious way. Nor are there obvious classrooms well placed for Computer Science laboratories which might be replaced elsewhere. However, it should be possible to remedy both the long-standing underprovision for mathematics and the shortage of reading space near the JCMB Library. It could be a matter for future minor works to connect rooms 5326 & 5327 to the JCMB Library by an internal stair. Again, vacated laboratory space on floor 5 could provide nearby short-recall storage for older books and journals from JCMB Library so releasing space in the main book stacks. As some consolation for Computer Science, I note that the former Post Office plant room on floor 2 is to be vacated shortly and provides a large area of space near existing Computer Science machine halls. It must of course be recognised that, because it is an internal room, it is not intrinsically desirable space and may also need some noise suppression.

I enclose two somewhat overlapping Departmental memos giving more detail about the changes proposed in JCMB. Although the timescale for decision is still not clear, I would like members of Users' Committee and the General Building Services Committee to have the opportunity to review the proposals at forthcoming meetings. If the proposal is considered acceptable in principle, and if it ever reaches the stage of an active project, Users Committee would then appoint representatives on the Project Committee to look after general interests.

Roger Hipkin 18:05:89

A previous plan, which remains a possible choice, involved significant structural alterations on the Grant Institute site, decanting laboratories into the MRC building and building a new block between the Geology Museum wing and the Geology Library wing. The new block would require the demolition of the existing sub-standard Geology 2 & Geology 3 teaching labs, replace them and permit the transfer of the Appleton Tower accommodation to the Grant Institute site. It would however retain the split between Geologists in the Grant Institute and Geophysicists in JGMB. Funding of £1.1M from the UGC and the University is believed to be available for this proposal.

1. It is now proposed that the main teaching facilities for the Department of Geology & Geophysics will be in JGMB but with a combined Geology 4 and Geophysics 4 work area in the Grant Institute. The present lecture theatre and seminar room in the Grant Institute will remain.

2. This arrangement will release the two full floors of the new block. An additional 200 m² of space will be needed on the Grant Institute site to permit all the Department's staff to be housed in the extended main building of the Grant Institute, with all their research students and laboratories on the same site. This space, which can include the 200 m² of basement under the new block, can also be found by compression, elimination of waste or using space in JGMB for non-teaching facilities.

1. The provision of space in JGMB for Geology teaching laboratories cannot be achieved with the type of accommodation currently within the Geophysics Department. In order to provide the necessary type of accommodation, the JGMB Level 6 Common Room will need to be replaced by a smaller annex to the Level 3 Common Room, the classroom 3212. This classroom will be replaced by the existing Geophysics 4 room, 6224. The Faculty Examination Hall must be relocated outside JGMB, possibly in the Kings Buildings reading room; the reading room function will be replaced by provision in smaller rooms, the existing classrooms 5326 and 5327. These will be replaced by conversion of the Geophysics rooms, 6310/6311 and, possibly through an exchange with Mathematics, 6313/6314/6315 or created out of part of 6301 to permit more flexibility in the provision of communal classrooms in JGMB. This flexibility should allow transfer of classes between Geology teaching laboratories and adjacent classrooms on a relatively unplanned basis, without incurring the penalty of adding significantly to the overall Departmental area to be set against the UGC norm.

1. The Geology & Geophysics teaching area will be contained on the sixth floor of JGMB and be identifiably departmental. The exhibition area opposite the Level 6 lifts may house display cases and the east corridors may contain wall-mounted displays. Geology and Geophysics students will interact with those from Physics, Computer Science, Meteorology, Statistics and Mathematics. These and other science faculty students will pass Geology & Geophysics displays when using communal teaching facilities and the Faculty Microcomputing laboratory.

The teaching area will contain 3 teaching laboratories (6231 - 203 m², 6307/8 - 154 m², 6201 - 90 m²) two 16 m² prep rooms/technicians offices, a teaching rock collection and map store (6210/11 - 85 m²) and a staff work room (6309 - 34 m² with the existing class room replaced by 6207). (At present, the total Geology space in the Appleton Tower is about 600 m², the Geology 2/3 Lab 142 m² and the Geology 4 Lab 112 m².)

Refer H/plan in 05104189

JGMB alterations for the Geology & Geophysics rationalisation

1. Geology 2/3 teaching laboratory

Equip room 6321 (now the Examination Hall and UG reading room) as a fixed bench teaching laboratory for about 70 - 80 students. If possible using the benches from level 5 in the Appleton Tower. Bench services limited to electrical sockets. Likely to need improved illumination and possibly a teaching dais at north end. Two sinks in alcove by entrances.

2. Geology 1 teaching laboratory

Equip room 6307/8 (now the level 6 common room and former kitchen area) as a teaching laboratory for about 55 students. Install fixed benches with electrical services or moveable unserviced benches. Create blackboard and small teaching dais in centre of south wall and improve blackboarding. Remove existing dais at west end of room. JGMB opening plaque on west wall and sliding partition now in front of the kitchen area and keep for use on level 3.

3. 40 seat classroom

Remove the dividing wall between 6310 and 6311 and refurbish as a classroom with a blackboard at the west end. Block up the existing door to 6310.

4. 60 seat classroom

Build a dividing wall to partition off the low ceiling area (the width of the corridor) at the north end of 6301 and stop up the door from 6301 to 6302. Refurbish the remaining area of 6301 as a classroom with blackboard and teaching dais at the north end.

5. Store

Make a door from the partitioned off area at the north end of room 6301 opening into the corridor.

6. Technicians office and prep room

Make a door from 6302 into the corridor, refurbish as an office with a suspended ceiling to cover up service ducts.

7. 40 seat classroom

Re-instate and refurbish 6224 as a classroom. (The existing blackboard is damaged).

8. Conversion of 6313/4/5

Either (a) remove the wall between 6314 and 6315 and refurbish as a single room to office standards. 6313 remains opening off.

Or (b) remove walls between 6314 & 6315 and between 6313 & 6314 and refurbish as a single 40 seat classroom with a blackboard at the west end.

9. Level 3 common room and function annex

Remove north and east walls of the store 3314B and refurbish as part of the level 3 common room. Move the fire doors now opening from the west end of the common room into the corridor further west in line with the west wall of the blind corridor. Replace the fire doors to the blind corridor by lockable doors to form a catering store. Install the 2.8 m sliding partition (now dividing the kitchen area from the level 6 common room) in the east end of the wall dividing the level 3 common room (3313) from the class room 3312. Refurbish 3312 as a common room overflow and function annex.

Notes of Departmental Meeting held on 2 June 1989 in Room 2510

Present: RNI, JHB, KEVIN, DTS, RM, SM, PT, RC, ASW, TJG, JAH, DKA, JTB, ARCH, JCD, DJR, RAM, CPS, DPYM, PUL, KJC, MIKEF, NPT, DAW, RJP.

Apologies from GLC, GDP.

1. Matters Arising

Differential fees: PDS had called a meeting of those who had expressed interest in the form, and had produced an A4 sheet with several points to be addressed to Faculty. (See attached.)

Recruitment: ASW had discussed this with John Hannah, and entries had appeared in various publications encouraging students to apply.

Goald machine: It was reported that we have given three months notice that we wish to discontinue the maintenance contract on the Goald w.e.f. 31.8.89. SM suggested we inform the M.Sc. students that they will soon be unable to use the Goald.

Research student liaison committee: SM reported that a request for resources had been formulated, and that he will convene the first meeting of this committee in October.

2. Convenor's Business

RNI reported that our proposed budget for use of the final increase in ETP funds had been approved by the Principal.

3. IEE Visit

RNI reported that this will take place on 13 June when the IEE will send along their consultant, Mr. Morley Sage, to discuss the joint Computer Science and Electronics degree and M.Eng. It is likely he will be taken on a tour of our facilities. RAM will look out relevant BCS submission material for this visit.

Action - RAM

1

4. JCMB General Building Services Subcommittee

RAM drew the meeting's attention to the tabled accommodation plan from Geology and Geophysics. The level 6 common room will be converted to offices, but extensions will be made to the level 3 common room to act as a replacement.

During the ensuing discussion, the question of catering arose. Mikef suggested the Department purchase a microwave oven, and RNI agreed we we could do so when the ventilation problem was solved.

Action - JCD/KK

Any views with regard to the proposed accommodation changes brought about by the Geology and Geophysics merger should be e-mailed to RAM or RNI. RAM reported that Physics had made us an offer of Room 3208, but it was decided that he should inform them that we are not happy with this offer. RNI will confer with Dr. Shottler.

Action - RNI

RAM reminded the meeting that the annual maintenance survey would soon be taking place, and any faults should be reported by e-mailing JCD.

5. Reports from Committees

(a) Policy

Nothing to report.

(b) Teaching Staff Subcommittee

It has looked at the applications for the lectureships, and some of the applicants will be interviewed on 14 June. It was reported that we had been successful in our ETP budget proposals.

(c) Computing Staff Subcommittee

DJR questioned what powers the committee had in assigning COs to assist with research. RNI suggested the committee should discuss what its terms of reference ought to be, but should observe the 30% guideline with regard to the amount of CO effort to be devoted to research.

(d) Teaching

PDS reported it had met on 10 May, and notes of the proposed discussions had been circulated to all teaching staff beforehand. He briefly outlined the likes

2

and dislikes of students to their courses in each year of study.

(e) Syllabus

It was reported that it would meet during the following week. There should be a possibility of an AI module in third year to be substituted for one existing module. Changes to other third year modules will be discussed along with the M.Sc. VLSI theme which has been changed.

(f) Technical Resources

The committee had not met, but RAM commented on the business of our acquiring a lab. and wiring it up. JCD mentioned the cabling which would take place in the very near future. SM asked JCD to stress to the maintenance crew that it is important that the power be switched on again as soon as possible at maintenance weekends.

Action - JCD

(g) Equipment

JHB reported that our submission had gone off to Faculty, having been prioritised at the last meeting. Faculty will meet at the end of next month. A certain amount of reordering of the top items had been necessary. (See attached.)

(h) Library

Nothing to report.

6. Any Other Competent Business

None.

A date for the next Departmental meeting is yet to be decided.

Differential Fees.

1. We feel the general objectives prompting the plan are faulty. For example, the first "immediate advantage" quoted is to "promote effectiveness in marketing" (Section 4a). Then in section 9, there is the wish to apply "the desired market disciplines".
2. Pressure of market forces is liable to force rapid changes that are incompatible with sound long-term academic objectives. Emphasis will be on attracting students now, rather than on designing academically satisfactory courses.
3. The paper contains apparant reassurance on various topics; but there must be anxiety about the next stage after the plans in the paper have been implemented. For example, section 5 states that for qualifying students the fees "will be reimbursed in full by the Government". Then in section 7, the paper says that "fee expenditure is not cash limited", and that this will continue; however the very next sentence says that the Government will keep under review overall public spending on higher education.
4. Is the next stage another round of "loan" proposals?
5. The paper recognises the problems for part-time students. It suggests that the UFC should take this into account in the distribution of central grant, so that "there is no reason why part-time fees should rise" (section 14). However, there is considerable danger that the anomalies thus created will create pressure for subsequent fee increases for this category of student. This would work against the objective quoted in section 4b of "widening access".
6. The proposals have serious implications for self-financing students. The paper suggests that central funds will enable us to offer protection for those already enrolled (section 17). For newly enrolled self-financing students "institutions will be able to determine individually their policy on future fees". We are particularly concerned about the the position of students who start on a grant but, for one reason or another, have to fund themselves for an extra year. Unless the university feels able to take on under-funded students, the new fees will work against the objective of "widening access" and will reduce the proportion of students able to complete their courses.
7. The effect of market forces and differential fees upon self-financing students is likely to steer such students away from the science-based courses; this seems to be contrary to the government's and our objectives.
8. With our Scottish course structure, the large number of students taking "outside" courses from varied cost bands would make the calculation of a fair fee both cumbersome and contentious.

Equipment - result of meeting

John Butler

May 26, 1989

Item	Cost	Funding	
14 Additional teaching Sun 3/80s	£35,600	Faculty no.1	(8 of them)
Add big discs to 4/330 "Bute"	£26,700	ETP	(6 of them)
New Sun 4/330 fileserver "Rhum"	£5,725	Faculty no.2	
Staff/Postgraduate Sun lab	£27,333	Faculty no.4a	
	£26,700	Faculty no.4b	(6 of them)
	£17,800	Faculty no.6	(4 of them)
			(No disc or s/w)
Suns for Databases, graphics, CS4 support	No		
Suns for Computer Algebra, POSIE	No		
Upgrade 7 4Mb KB Sun clients to 8Mb	£7,900	base	(9 cut to 7)
Logic Analysers + Scope	£10,764	Faculty no.5	(Analysers)
	£3,674	Faculty no.7	(Scope)
Enhancement to CS1 laboratory	£7,820	Faculty no.3	(No 8Mb memory)
Extra RAM for Macs	£3,680	No	
Improving Appletalk connectivity at AT and KB	£315		(cheap option)
Macs for CS4	£2,000	No	
Document scanner + OCR software	£1,117	Faculty no.8	(Not OCR)
CD-ROM reader + software	£771.94	No	
EPLD Programmer upgrade	£1,025	ETP	
SpiderPort	£2,817.5	Base	(when/if needed)
Ardent DORE graphics software	£3,680	Base	(Cut to 15-user)
P-CAD/P-CAP	£6411.35	ETP+Base	
Prototype VME rack for low-level programming	£3,000	Class Grant	
Support items for loaned HP equipment	£975.74	Base	(Not printer)
Solid-area colour printer	£1,272	Faculty no.9	
Occam for Suns	£3,000??	No	
Power Supplies	£576.85	Class Grant	
Total	£200,658		

The items to faculty have been reordered within the 'safe' band (items 1-5). Firstly the new server is inseparable from its workstations and it was impossible to make sensible separate cases. Secondly, splitting the Suns left a weak case for "more of the same" near the cutoff point and thirdly the CS1 machines were put here to back up our case for more cash to support more new undergraduates.



Department of Computer Science

Memorandum

To All Staff; Postgraduates

From Roland Ibbett

Date 6th July, 1989

AGENDA FOR DEPARTMENTAL MEETING

to be held on

Friday 7th July, 1989

Time : 3.30 p.m.
Venue : COFFEE LOUNGE (2510)

Raised by

1. Minutes of last meeting
2. Convenor's Business
3. Proposal to move CS1 labs from Appleton Tower to Refectory Area at KB
4. Reports from Committees
 - (a) Policy
 - (b) Teaching Staff Subcommittee
 - (c) Computing Staff Subcommittee
 - (d) Teaching
 - (e) Syllabus
 - (f) Technical Resources
 - (g) Equipment
 - (h) Library
5. Use of recycled paper in printers and photocopiers
6. Any other competent business.

PEVE (GLC)
DAW Vae
Students

Paper

RJP

Note on Item 5

In these environmentally conscious days the department should perhaps consider the use of recycled paper for our printers and copiers. It works perfectly well, costs the same and saves trees. A smaller stock of white paper could be kept for camera ready purposes, if necessary.

Notes of Departmental Meeting held on 7 July 1989 in Room 2510

Present: TMH, RJG, CCMJ, PT, RNI, SOA, EAK, JHB, DAW, KMG, JTB, PDS, JJ, GJC, ASW, JST, TRS, AJS, RC, FS, DTS, RM, AII, PLD, DJR, RJP.
Apologies from SM.

1. Matters Arising

Accommodation: RNI reported that negotiations for rooms in JCMB were still going on.

2. Convenor's Business

Allocation of duties: RNI reported that teaching duties for 1989/90 had been agreed. GJC had agreed to look after the PEVE course for the Department as a whole. DAW will be looking after vacation students, both internal and external.

Dean's letter: RNI read from a letter concerning target savings. The University has not yet met the target which must be achieved, but is close to it. The Policy Committee will consider what our realistic target establishment might be so that a proposal can be sent to the Dean before the new academic year.

Action - Policy Committee

Technical Research Centre of Finland: RNI reported on a letter he had received from the above who are looking for industrial/academic research groups with parallel interests in software engineering. The Centre's goal is to contribute in the next Espirit2 Call for Proposals scheduled for autumn 1989. See RNI for details.

3. Proposal to move CSI labs. from Appleton Tower to Refectory Area at KB

SOA reported on this proposal, but pointed out that such a move would be unlikely before October 1990. Following lengthy discussion, it was decided that a working group be set up to look at the case fully, taking into account student opinion. SOA expressed willingness to organise this, assisted by RJG. ASW and RJP requested that they be kept informed.

Action - SOA/RJG

4. Reports from Committees

(a) Policy

RNI reported that an offer had been made to a candidate for the recently advertised lectureship, but his reply was still pending due to having been interviewed for a Chair elsewhere. Two people would be interviewed on the following Thursday.

(b) Teaching Staff Subcommittee

Nothing to report.

(c) Computing Staff Subcommittee

Although there had been a CO duties meeting, no list was available for circulation as yet.

(d) Teaching

Nothing to report.

(e) Syllabus

The modules which had been approved would be running in the new academic year, and the ones relating to software engineering would probably run in the year following. DAW has circulated the current syllabus for staff to update if appropriate. It was noted that the normal level for entry to CS had been set, as usual, as a Grade A, B or C pass in CS2 (and, in the case of joint degrees, permission from the other Department). Owing to a shortage of places in AI, they have set the level for entry to AI3 as a Grade A or B pass in AI2, plus permission from the CS Department. Concern was expressed at the effect of this imbalance. The problems surrounding entry to joint Hons. classes was referred to the Teaching Committee.

(f) Technical resources

In the absence of RAM, JHB reported on the rewiring of 2501 and 321S which require to be carried out over the summer.

(g) Equipment

JHB reported that a great deal of equipment is currently on order. He informed the meeting that our UGC bid had been trimmed slightly, and reported briefly on the items we would not be getting. Two file-servers had just arrived. The staff involved in getting together a unified system were commended for their hard work.

(h) Library

Nothing to report.

5. Use of recycled paper in printers and photocopiers

RJP raised the question of considering some practical arrangement for making use of this. DDR was nominated as the person best suited to look at the practicalities of RJP's suggestion.

Action - DDR

There being no other competent business, the meeting closed at 4.50 p.m.

Department of Computer Science

Cards (Good)
6 Oct PG reception
4pm 625b



Memorandum

To All Staff
Postgraduates

13? CS3/4 reception
50N Courses

From Roland Ibbett

Date 28/9/89

Catherine Farrell

AGENDA FOR DEPARTMENTAL MEETING

CS0 + Geo

to be held on

Co

Friday 29th September, 1989

3 x VDU

Time : 3.30 p.m.
Venue : COFFEE LOUNGE (2510)

Raised by

1. Minutes of last meeting
2. Convenor's Business
3. Reports from Committees

join +
Future Computer
Requirements.

- (a) Policy
- (b) Teaching Staff Subcommittee
- (c) Computing Staff Subcommittee
- (d) Teaching
- (e) Syllabus
- (f) Technical Resources
- (g) Equipment S(w)
- (h) Library

ETP.

Mick
RNP.

See if PGs
want on
of TAW

4. Remit and Membership of Committees
5. Departmental display area. See note attached.
6. Policy concerning food and drink around equipment. See note attached.
7. Any other competent business.

RNI

DAW

JHA

Notes for Departmental Meeting, 29th September 1989

Item 5: Departmental Display Area

At a very poorly attended meeting, plans were made for the departmental display area situated outside the main lifts on level 2.

It was decided that this area should be seen to be the entrance to the Computer Science department and that the staff photographs and a map showing the CS occupation of the building as well as a copy of the telephone list should be there.

The area is now being redecorated and improved and when completed, a permanent, dynamic exhibition area will be set up. This will comprise a display area which will rotate amongst the various groups identifiable in the dept:

complexity, VLSI, architectures, parallel computing, performance
and simulation, graphics, databases, languages, proofs, semantics, con-
currency, specification and design (12 in all)

on a monthly basis. Surrounding this area will be a more fixed (time-wise) display of eg. the photographs which are to appear in the new schools brochure and information on the teaching of the dept.

Alongside the display will be a colour monitor which will show messages of interest, events happening in the department etc.

Dorothy Welch

Fluids
on 3/50

Item 6: Policy concerning food and drink around equipment

The recent move of Sun equipment into the 2501 terminal room has brought out some conflict concerning the rules about consuming food and drink near terminals. 2501 is now the main postgrad work room, and many postgrads seem to dislike the official rules that we are not allowed to bring coffee cups and snacks in there. I'd like the meeting to discuss a suggested new version of the rules.

The suggested version is:

- In general, coffee cups and other drinks are allowed around terminals and Sun equipment, if they are always set down in stable positions (such as on the floor or on separate tables) where they can't spill onto machines or power or communication lines.
- Drinks should always be held and carried carefully, well away from any power and communication lines.
- In general, food is allowed around terminals and Sun equipment if care is taken to prevent crumbs or stickiness from falling into or otherwise affecting equipment.

Note that these changes do not prevent us from banning food and drink in specific places, such as the machine halls or the undergraduate terminal rooms. I will speak more on these points, and on the issue in general, at the meeting.

Jamie Andrews.

ACCOUNTS
Aesth
Safety
Sun
In
One Can
General
Admin
Horse

Notes of Departmental Meeting held on 29 September 1989 in Room
2510

Present: RNI, EAK, JST, TMH, RC, SM, JGB, PDS, JJ, DB, PT, ASW, KJC, TRS, LAH, RAM, SMALL, DTS, CMNT, KI, Mikel, DJW, RJP, CPS, DAW, ARCH, GJC, JTB, SOA, JST, FS, DDR, DPYM, RNP.

1. Matters Arising

Dean's letter: RNI reported on discussions with the Policy Committee concerning our establishment target. He will reply to the Dean's letter within one week. It was felt that unless external pressure and funds to expand further were brought to bear, the Department should remain at its current size.

Action - RNI

Proposal to move CSI Labs.: Following response from students in this connection, SOA tabled a note at the meeting indicating their preference to have the CSI Lab. remain in the Appleton Tower. A move will therefore not be pursued.

Use of recycled paper in printers and photocopiers: RNI reported that AMF had made some enquiries into this, and found the cost to be prohibitive. DDIR will carry out further research regarding recycled paper.

Action - DDR

2. Convenor's Business

Departmental photographs: They will be taken in the second week of term.

Card entry: CAROL will issue cards this year to the appropriate people.

Reception on 6 October: A reception to welcome new staff and graduate students will take place at 4.00 p.m. in the 6th floor Common Room. There will also be a reception for CS3 and CS4 students on 13 October at 5.15 p.m. in the same venue. CS1 students will be welcomed with coffee and biscuits during Freshers Week.

Fun Run: BCS are seeking support for the Fun Run in aid of the disabled. Details from TMH.

Undergraduate curricula for Software Engineering: Mikel will represent the Department at a meeting concerning this on 1 November.

Courses with a European dimension: RNI will chair a BCS meeting in London about this on 26 October.

School of Engineering and I.T.: A representative is required to serve on its School Committee, Mikel was nominated by RNI and seconded by SM with the agreement of the meeting.

Action - RNI

Letter from the Institution of Electrical Engineers: Re accreditation of the B.Eng. (Computers and Electronics), RNI reported that it had been agreed that accreditation should be continued until a further visit is undertaken in 1992.

3. Reports from Committees

(a) Policy

RNI reported that Kathryn Farrell had been appointed to look after the accounts. Some of the "Pot of Gold" money had also been used to upgrade TMH's Demonstrator post to a lectureship

(b) Teaching Staff Subcommittee

DKA had been appointed to a new lectureship in 1990 and EM had been appointed to an ETPP lectureship w.c.f. 1 October 1989, but would be away from January to September 1990.

Dr. Lengauer will take up his lecturing appointment in January.

(c) Computing Staff Subcommittee

A half CO post remains to be filled, and a whole CSO post when LINDA leaves.

(d) Teaching

The committee had not met recently, but in view of the possible merger with the Syllabus committee, PDS and KEVIN had checked on outstanding action and noted that some further guidance on tutoring of first year students had been requested. It was hoped to arrange this shortly. On a related topic, PDS reported that the University T/A committee was running two one-day courses for postgraduate students who were likely to be involved in laboratory demonstrating. The course aimed to be subject-independent and he had booked enough places for all existing PG students who had volunteered to go, plus a number of further places to cover a proportion of the new PG's expected. The dates of the courses (4th and 18th October) were not very convenient for new PG's, most of whom might

not arrive until two days before the first course, and they were already booked for Firthush Point on the second date. PDS asked supervisors to draw the attention of new PG's to the course on 4th October.

The problems surrounding entry to Joint Honours, particularly Joint Honours with AI, were discussed and the fact that entry into third year honours classes required permission from both departments independently. PDS had approached Jim Howe again and the latter had agreed to reconsider his list of students eligible to enter AI3. Directors of Studies would be informed of the outcome as soon as possible.

(e) Syllabus

A KBS module had been approved as a substitute for a module in GS, but it is unclear what the uptake is likely to be. The committee has looked at various modules taken on the joint honours degrees and are revising the list of recommended modules for joint honours students. RNI will write to JAMH re proposals for the joint course for next year.

(f) Technical resources

The committee had met last week to discuss the safety audit. RAM reported that accommodation would in future be handled by RJP, and the new plan would be circulated in due course. Technical staff are ahead of schedule with their current workloads.

Departmental Kitchen: RNI reported from JCD concerning ventilation work which will commence shortly to remove steam in the kitchen. Purchase of a microwave oven is still being considered.

Room 3208: Work on this room has been completed, and it is now ready for use. Rooms 2501 and 1501 have also had work carried out in them, but might require further work when freed from equipment.

Safety Audit: Following discussions between JCD, the Works Dept. and Mineva, computing power will not be switched off when the fire alarms sound unless the alarm comes from the machine halls.

(g) Equipment

The committee had not met. JHB reported that 2501 is now a workstation lab, but a cooler has yet to be installed. He also reported on new equipment in the machine halls, and wished to record a vote of thanks to all the people who had worked hard in this connection. The Gould machine has now been taken away. RNI reported that some ETP money was available to spend on equipment.

(h) Library

Nothing to report.

4. Remit and membership of Committees

RNI asked if staff were happy with the committee structure. It was felt that the Policy Committee worked fairly well. The Teaching Staff Subcommittee had two elected representatives, and this system seemed to function well. CPS questioned the system of how decisions were made with regard to foreign visitors, and asked if these matters could be brought to the Departmental meeting. RNI proposed that the Teaching Committee and Syllabus Committees be merged, but the meeting did not accept this proposal.

Joint Subcommittee on Future Computing Requirements: RJP will be the Convenor of this committee which meets once a year, and will discuss with JHB its terms of reference and when it should meet. RAM will convene the Technical Resources Committee. DB will canvass PGs to find a representative for the Equipment Committee. It was noted that the Publicity Committee had been disbanded. Re the Library Committee, a replacement requires to be found for RM. Suggestions for this should be sent to the convenor, MRJ.

A new committee document will be prepared for the next meeting.

Action - RNI

5. Departmental Display Area

The meeting discussed the tabled note from DAW concerning a Departmental display following The JCMB Users Committee's decision that the Department should be allocated an area to display aspects of its work. RNI suggested that PGs should be encouraged to help in this connection, and this could be mentioned to them at the Firthush Study Week.

Action - RNI

6. Policy concerning food and drink around equipment

A lengthy discussion ensued concerning the tabled note from JHA re the above. In conclusion, RNI proposed that for the time being food and drink should be banned from public areas. All members of staff will also be informed that they should refrain from taking food and drink near equipment in their offices. Almost

all the COs and Technical staff had expressed their objection to any move which would allow the consumption of food and drink in close proximity to equipment.

Action - RNI

There being no other competent business, the meeting closed at 5.55 p.m. The next meeting will take place on 27 October.

Notify re Unix
Conf & leave.

Sources EUCS?
Catal EAK



Department of Computer Science

Staff / Student Ratio
341 ; 31 ;

Memorandum

To All Staff; Postgraduates

From R.N. Ibbett

Date 26th October 1989

AGENDA FOR DEPARTMENTAL MEETING

to be held on

Friday 27th October, 1989

Allocate
VDS

Time : 3.30 p.m.
Venue : COFFEE LOUNGE (2510)

Raised by

1. Minutes of last meeting
2. Convenor's Business
3. School of Engineering & IT
4. Proposed Departmental Committee Structure 1989/90
5. Reports from Committees
 - (a) Policy
 - (b) Teaching Staff Subcommittee
 - (c) Computing Staff Subcommittee
 - (d) Teaching
 - (e) Syllabus
 - (f) Technical Resources
 - (g) Equipment
 - (h) Library
6. Any other competent business.

RNI

RNI

Report etc

Future
2501

PROPOSED DEPARTMENTAL COMMITTEE STRUCTURE 1989/90

POLICY COMMITTEE

This committee will formulate policies on strategic issues and make recommendations to the Departmental Meeting for approval and where appropriate will act as an advisory body to the Head of Department on sensitive issues.

Membership

The Head of Department (Convenor)	RNI
The Professors	RB,SM,GDP,MIKEF PDS
Convenor of the Teaching Committee	DJR
Convenor of the Computing Staff Subcommittee	JHB
Convenor of the Equipment Committee	RAM
Convenor of the Technical Resources Committee	MRJ
Convenor of the Library Committee	GLC
The Assistant Director of the LFCS	

Remit

1. To formulate the Department's Academic Plan
2. To advise the Departmental Meeting and the Head of Department on staffing and resource requirements
3. To advise the Departmental Meeting and the Head of Department on staffing and resource allocations
4. To formulate policy on external relations

TEACHING STAFF SUBCOMMITTEE

Membership

The Head of Department (Convenor)	RNI
The Professors	RB,MIKEF,SM,GDP PDS
Convenor of the Teaching Committee	RC, MRJ
2 elected representatives of the teaching staff	

Remit

1. To advise the Policy Committee on teaching staff requirements
2. To set up appointment and interview committees
3. To advise the Head of Department, in appropriate cases, on matters relating to teaching staff development, appraisals and promotions

COMPUTING STAFF SUBCOMMITTEE

Membership

A Convenor appointed by the Head of Department	DJR
The Senior Computing Officer	JHB
Representatives of the Teaching Staff	RJP
Representatives of the Computing Officers	GDMR

Remit

1. To advise the Policy Committee on CO staffing requirements
2. To consider requests for CO support for projects involving more than about 3 man-months of effort
3. To allocate CO duties
4. To advise the Head of Department, in appropriate cases, on matters relating to computing staff development, appraisal and promotions

TEACHING COMMITTEE

Membership

A Convenor appointed by the Head of Department
Course organisers

ALL, Kevin, Gordon
SOA, PT, CPS, NPT
DAW

The Admin CO
Volunteer/elected Computing Officers
Co-opted members as appropriate

Remit

1. To coordinate the work of course organisers for MSc and undergraduate classes. In connection with these classes:
2. To review and coordinate the teaching and assessment procedures
3. To advise the Teaching and Computing Staff Subcommittees of the teaching and CO staff requirements for teaching
4. To advise the Equipment Committee of computing and software needs for teaching
5. To advise the TRC of space and technical requirements for teaching
6. To receive reports from staff-student liaison committees.
7. To coordinate the arrangements for degree examinations, invigilation and examiners meetings; to liaise with External Examiners and Convenors of Boards of Examiners
8. To specify requirements for the student record system and to collect statistics on student numbers

SYLLABUS COMMITTEE

Membership

Convenor Head of Department
Secretary A. Snail
All members of the teaching staff

Remit

1. To be responsible for the syllabuses of all Departmentally taught courses which appear in the University Calendar.
 2. To prepare proposals for Boards of Studies.
- Operating Procedures
1. Most of the work of the Committee will be carried out by small working groups. The work of these groups will be discussed at a committee meeting (with a quorum of 10) before any matters involving anything other than individual course/module syllabuses are decided.
 2. The Committee will seek the views of other interested members of the Department on matters for decision.
 3. The Committee will bring matters of decision to the attention of Departmental Meetings.

JOINT SUBCOMMITTEE ON FUTURE COMPUTING REQUIREMENTS

A joint subcommittee of the Teaching and Syllabus Committees convened from time to time to assess the impact of research and changes in available computing equipment on both syllabuses and teaching methods. This subcommittee will provide input to the Equipment Committee.

Convenor RJP

TECHNICAL RESOURCES COMMITTEE

Membership

A Convenor appointed by the Head of Department RAM
The Laboratory Superintendent
Representatives of the technical staff
Representatives of the Computing Officers
Representatives of the teaching staff

Remit

1. To provide authority to the Laboratory Superintendent for disposition of technical staff effort
2. To monitor progress of technical work within the Department
3. To allocate space and technical resources within the Department
4. To advise the Policy Committee on technical staffing requirements
5. To organise a forum in which Technical Staff can discuss matters relating to technical support within the Department
6. To advise the Head of Department, in appropriate cases, on matters relating to technical staff development, appraisals and promotions

EQUIPMENT COMMITTEE

Membership

The Senior Computing Officer (Convenor) JHB
The Head of Department (ex officio) RNI
Representatives of the Teaching Staff MIKEF, RNP
A Representative of the Computing Officers DWB
A Representative of the Computing Support Officers
A Representative of the LFCS Paul
A Representative of the Research Students ASO

Remit

1. To formulate requirements for major hardware and software acquisitions
2. To coordinate bids for capital funds from the Faculty and elsewhere
3. To consider requests for major re-dispositions of existing equipment
4. To consider the take-over of research equipment accruing to the Department at the end of research grants
5. To consider strategic issues regarding maintenance

LIBRARY COMMITTEE

Membership

Mark Jerrum (Convenor)
(Robin Milner)
David Pym
Frank Stacey
Nigel Topham

Remit

1. formulate departmental policy on library matters and to advise the Policy Committee
2. consider the allocation of funds to large or recurrent items, especially journals and conference proceedings.

Notes of Departmental Meeting held on 27 October 1989 in Room 2510

Present: RNI, EAK, DJW, KC, ASW, DAW, SM, D'PYM, KJC, RAM, JHB, DDR, DTS.

Apologies: Mikef, GDMR and ALL.

1. Minutes of the last meeting

Letter to Dean: RNI had now written to the Dean regarding our establishment target.

Use of recycled paper: Nothing further to report as yet.

School of Engineering and I.T.: RNI reported that Mikef's name had gone forward as the School's Sub-Committee representative for undergraduate teaching.

Joint Subcommittee on Future Computing Requirements: A new version of the committee background had been circulated.

Departmental Display Area: RNI said he hoped that, during the Fribush Study Week, PGs had been encouraged to offer help with regard to the new display area.

2. Convenor's Business

Proposal re Edinburgh Parallel Computing Centre: RNI reported that this had been approved at the Edinburgh Computing Policy Committee meeting and had been forwarded to the Educational Policy Committee for formal approval. SDA funding for Technology Transfer seemed certain, and a meeting will be held to discuss the long term future of this.

Action - RNI

Computing Board Visit: RNI reported that we were being offered most of what had been requested on the 1990 replacement.

Royal Society Industrial Fellowship Schemes: Dr. Wakely had recently visited with a view to collaboration with LFC'S or the Edinburgh Parallel Computing Centre.

Fribush Study Week: The Fribush event had proved most successful, and it was hoped to repeat it next year.

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BCS Workshop: RNI and ASW had attended this Workshop which concerned courses with a European dimension, and also involved the ERASMUS credit transfer scheme.

Staff/student ratio: RNI quoted our ratio as 341 to 31.

3. School of Engineering and I.T.

RNI reported on a recent meeting which he and Mikef had attended. Discussion had taken place re subcommittees of the School and their respective remit.

4. Proposed Departmental Committee Structure 1989/90

GDMR had been put forward as a representative on the Teaching Committee. PAUL is the LFC'S representative on the Technical Resources Committee. AJCD had been elected as the research student representative on the Equipment Committee. We still require a replacement for RM on the Library Committee.

5. Reports from Committees

(a) Policy

A Working Party to look at first year teaching is underway. A more detailed academic plan is required by next May, and we await information from the Dean as to what format it should take. The Annual Report had been discussed, and it was noted that not everyone had responded. Contributions for this are therefore still sought. DTS suggested that contributions could be sent in e-mail form, and this was agreed. An improved scheme for dealing with new arrivals was discussed, and suggestions were put forward as to how we might keep track of visitors on a forward-planner chart.

(b) Teaching Staff Subcommittee

Had not met.

(c) Computing Staff Subcommittee

Nothing to report.

(d) Teaching

Had not met.

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(e) Syllabus

The committee will meet on 10 November, and it was noted that the M.Eng. requires discussion.

(f) Technical Resources

The committee had not met, but JCD had sent a memo to RNI to report that ventilation had been installed in R.1501, but ventilation in R.2501 is still under negotiation. There will be a 3-phase power supply to VAX disks installed shortly. Rooms 3412 and 1415 will be painted soon. JCD suggested that if all staff removed their cups from the kitchen, leaving only glass cups for visitors, this would avoid a clutter of unwashed crockery. His suggestions were noted. The publicity and display area has now been painted and staff photographs have been mounted there. It was suggested that group photographs be mounted in the 25 corridor to compensate for the removal of the individual ones.

Action - DAW

The recently purchased microwave oven appears to be faulty, and an engineer has been called in. RJI wished to record the fact that he disliked the metal hood which has been installed in the kitchen, and has made the kitchen darker. DDR would investigate improving the situation.

Action - DDR

(g) Equipment

JHB remarked that though the Department purchased most of its equipment from Faculty money made available in August, there was still money available (base allocation and ETP) for "fine tuning" computing resources during the year. He was due to speak at a Systems Group lunch the following Monday on computing resources, and would use the opportunity to discuss how this might be achieved. One of the options would be to pension off ECSVAX and replace it by a Unix timesharing service.

(h) Library

Nothing to report.

There being no other competent business, the meeting closed at 4.20 p.m. The next meeting will take place on Friday, 24 November at 3.30 p.m.



Department of Computer Science

Memorandum

To All Staff; Postgraduates

From R.N. Ibbett

Date 24th November 1989

AGENDA FOR DEPARTMENTAL MEETING

St Denis

to be held on

Friday 24th November, 1989

Time : 3.30 p.m.
Venue : COFFEE LOUNGE (2510)

Raised by

1. Minutes of last meeting
2. Convenor's Business
3. Reports from Committees
 - (a) Policy
 - (b) Teaching Staff Subcommittee
 - (c) Computing Staff Subcommittee
 - (d) Teaching
 - (e) Syllabus
 - (f) Technical Resources
 - (g) Equipment
 - (h) Library
4. Any other competent business.

Ad. CSO

Notes of Departmental Meeting held on 24 November 1989 in Room 2510

Present: RNI, EAK, JCD, SM, RAM, KEVIN, DKA, ASW, PDS, JHB, SMAILL, JJ, CCMJ, FS, DPYM, ALI, ARCH, RMB.

Apologies: GLC.

1. Minutes of the last meeting

Proposal re Edinburgh Parallel Computing Centre: RNI reported that this had been formally approved by the Educational Policy Committee.

Staff photographs: They had now been moved to the publicity and display area, and would eventually be displayed in a manner similar to the one in the Physics Department. It was agreed that a second set of staff photographs be mounted outside PDS' office to conceal the marks left when the original set was removed.

Action - JCD

Kitchen: Nothing has been done as yet to brighten the recently-installed metal hood, but turning the lights around was one solution suggested. JCD commented on condensation on the hood which was being caused by someone switching the fans off.

2. Convenor's Business

Staff: RNI reported on the departure of KAM on 24 November, and the fact that LINDA would also be leaving on 8 December on maternity leave (one week early due to annual leave remaining). DKA was welcomed back to the Department following his recent long spell of sick leave.

Educational Policy Committee and Faculty: RNI reported on the appointment of subject advisors by the Chief Executive of the UFC. He also remarked on the fact that our student numbers appear to have decreased. Following discussion it was agreed that FS should present a report at the next meeting on admissions quotas. SM suggested that a list of unit costs within the University would be useful.

Action - FS, RNI

Educational Policy Committee - Enterprise Programme: Faculty papers concerning this had been sent to the Science, Arts and Law Faculties, but it is unlikely that we would be able to secure any funding for Departmental activities from this initiative.

Computer Board Visit: RNI reported that the University had not received the amount sought, but had received more than originally offered. JHB informed the meeting that Computing Services had offered us the opportunity to have our own fibre optic link between here and Appleton Tower, the cost being in the region of one thousand pounds. With regard to the new network, expected capital charges would be £190 per office port and £50 per Microlab port. No additional Faculty money is available for this.

Student sponsorship: RNI reported that Thorn EMI would be willing to sponsor undergraduate students for vacation work, and RNI will investigate the possibility of this being extended to include postgraduates.

Action - RNI

Talk by Alex Currie: RNI informed the meeting of a talk by Alex Currie to take place in the 6th Floor Common Room on the eve of his retirement, the title being "My Life and Soft Times".

3. Reports from Committees

(a) Policy

The committee had met on 10 November when the Unix server had been discussed. The need to replace KAM immediately had also been discussed, due in part to the imminent departure of LINDA. RNI reported that we have been given permission to fill KAM's post straightaway with a two-year appointment.

(b) Teaching Staff Subcommittee

Nothing to report.

(c) Computing Staff Subcommittee

The committee had not met, but had discussed how best to cope with LINDA's absence. It was decided that we should use the half CO post as a short-term additional CSO appointment until our workstation picture changes. Meantime we will go ahead and advertise for a new CSO.

Action - RNI

(d) Teaching

PDS reported on the TLA induction course for Lab. demonstrators which five of our postgraduates had attended. They had found the course valuable and it was recommended that we should send people again next year.

The committee had agreed that exemption from the degree examination should be given to those awarded first- or second-class merit certificates in CS1A1h, CS1B1h and CS1B2h, but not in CS1A2h, nor in Information Systems 1. (The calendar permits us to award such exemptions but does not require us to do so.)

There was some concern over withdrawal rates from courses, following a table which Faculty had circulated to Directors of Studies. The dropout rate seemed high compared with other subject groupings.

(e) Syllabus

The committee had met and produced Boards of Studies papers. Some changes are likely in IS1 rules which would allow people in other disciplines to take CS1A or CS1B after IS1, but students changing to CS would not be able to count IS1 as part of the degree.

The M.Eng. still requires attention; the IT Education Advisory Board did not consider it would be viable unless it had a six-month project built into it.

The Board of Studies in Engng. is due to meet on 17 January, the deadline for items being 15 December.

RNI read from a document which suggested a joint Hons. degree with Japanese as an option. After some discussion, RMB suggested RNI write saying that in addition to the academic arguments against it, the administrative overheads would be too high.

Action - RNI

(f) Technical Resources

Nothing to report.

(g) Equipment

JHB reported on the Sun timeshare equipment which DWB will manage when it arrives. This will also result in 32 lines worth of Unix vdu access in the New Year. There has also been an urgent request for one more disk in the system, but any further capital expenditure will have to be looked at very closely.

(h) Library

SM reported on complaints from students working on VLSI that we appear to be lacking Proceedings of conferences in that area. He suggested we spend more

money on such Proceedings. ALI commented that no requests are ever turned down.

4. Any other competent business

JHB informed the meeting that Sun wish to rent some of our Machine Hall space in the first or second week of vacation. ALI thought that this would inconvenience 4th year students working on projects. After some discussion it was decided that JHB should offer them space at Appleton Tower instead.

Action - JHB

Due to the Christmas closure, the next Departmental meeting will take place on 26 January 1990.

DEPARTMENT OF COMPUTER SCIENCE
DRAFT ANNUAL REPORT 1988/89

Partly in order to make the next research selectively exercise easier, but also to allow us to have an additional means of publishing our achievements I propose that we record useful information in an Annual Report. This partial draft indicates the form which the Policy Committee believes this report should take, and attached is a pro forma on which individuals can report their own contributions to the relevant sections. I would be grateful if you could complete and return it asap. Please also check the contents of the draft and inform me of any changes/corrections.

The report will be made available for circulation externally as a Departmental Report, and will be circulated to all staff in the department with the annual update to the Academic Plan attached as an appendix.
RNI

Students

Undergraduate

Computer Science 1A1h	191
Computer Science 1A2h	186
Computer Science 1B1h	89
Computer Science 1B2h	35
Computer Science 2	110
Computer Science 3	72
Computer Science 4	51
Information Systems 1A1h	69
Information Systems 1B1h	59

Degrees Awarded

Computer Science	25
Computer Science and Electronics	10
Computer Science and Management Science	2
Computer Science and Mathematics	4
Artificial Intelligence and Computer Science	6
Ordinary B.Sc.	5
M.Sc.	
Ph.D.	3

Staff Changes

Miss J.E. Hillston joined the Department as a Research Assistant.

Dr C.B. Jay joined the Department as a Research Assistant in LFCS.

Miss C.C.M. Jones joined the Department as a Research Assistant in LFCS.

Dr M. Turner joined the Department as a Research Assistant in LFCS.

Mr J. Lohian joined the Department as a Research Assistant.

Dr D.C.J. Matthews joined the Department as a Research Assistant in LFCS.

Mr N.J. Stevenson joined the Department as a Research Assistant.

Mrs A. Sabessen joined the Department as a Research Assistant in LFCS.

Mr F.L. Devi joined the Department as a Temporary Lecturer.

Mr P. Thanisch joined the Department as a lecturer.

Mrs C. Anstruther joined the Department as a Computing Support Officer.

Dr I.M. Bellke joined the Department as a joint Lecturer with Cognitive Science.

Professor M.P. Fournan was appointed to the Department's Chair of Software Systems.

Mr G. Inkster joined the Department as a Technician.

Ms L.M. Edgar joined the Department as a Secretary.

Dr A. Smail joined the Department as a joint Lecturer with AI.

Dr R. Harper left the Department to take up a post at Carnegie-Mellon University.

Ms K.M. Humphry left to take a post with Clan Systems.

Ms M. Lekuse left at the end of her contract.

Mr B.C. Tompsett left to take a post with Spider Systems.

Mrs M. Melvin left to live in Spain.

Mr I. Conkey left to take up a post in industry.

Dr P.M. Taylor left the Department to take up a post with Scicon.

Mrs I. Rollo left and has taken up a post with Edinburgh Portable Compilers.

Mr J.A. Harland left the Department and returned to Australia.

Dr M. Tojte left the Department to take up a post in Kenya.

Staff Activities

Awards

Conferences

Committees

Visitors

Seminars and Academic Visits

Infrastructure

Industrial Collaboration

Research

Research Grants

Publications

External

LFCS Reports

Ph.D. Theses

M.Sc. Dissertations

DEPARTMENT OF COMPUTER SCIENCE

ANNUAL REPORT 1988/89

Please note your contributions to the following sections of the Annual Report on this form and return it to Dorothy Welch as soon as possible.
RNI

Staff Activities

Awards

Conferences

(i.e. activities as organiser or committee member)

Committees

(i.e. major University or external committees joined)

Visitors

(i.e. academic visitors received in the department)

Seminars and Academic Visits

(i.e. at/to other institutions)

Infrastructure

(i.e. new services introduced or well-loved (hated?) old ones discontinued)

Industrial Collaboration

Research Grants

(i.e. started in the period 1 Aug to 31 July)

Publications

External

(actually published in the period 1 Aug to 31 July)

Ph.D. Theses

(supervisors please give names of students and thesis titles)