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DEPARTMENT OF EDUCATION AND SCIENCE

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FROM THE SECRETARY OF STATE

The Rt Hon Norman Tebbit MP
Secretary of State for Trade and Industry
1-19 Victoria Street
LONDON SW1

12 July 1985

Dear Secretary of State,

ENGINEERING AND TECHNOLOGY PROGRAMME

As you know, officials from the Departments concerned have been meeting to develop proposals for allocating the remainder of the resources under this Programme and they have been assisted in their work by advice from a range of sources including, in particular, Sir Robert Clayton on behalf of the Information Technology Skills Agency.

2. Although the complexities of the Programme inevitably mean that some details are still to be resolved, I would now like to set out our proposed approach to the remainder of this Programme in order to secure a general agreement from colleagues that will allow subsequent progress in resolving final details ready for public announcement. I shall deal more fully with the timing of this below.

3. Briefly, we have the option of selecting provision for this Programme from bids ranked alpha (academically and on the basis of industrial advice) from UGC universities; the rather different bid from Salford University for assistance towards is proposed IT institute; a similar bid for assistance for Sir Henry Chilver's IT Institute to be based on Cranfield and Shrivenham; and proposals building on the existing strength of the Open University in distance learning within the field of the new technologies. There is also a need to determine the portion of available resources for which public sector institutions might bid under the separate procedures now in train.

4. Following agreement between officials, supported also by Sir Robert Clayton on behalf of ITSA, I now propose that the remaining resources should be allocated in the following way:-

- i. Public sector institutions should receive some £5 million spread over two years of the programme - the exact sum to be determined in the light of the nature and quality of the bids received.
- ii. Salford University should receive recognition for its

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initiative in developing its novel proposal but should not receive resources disproportionately greater than other institutions of greater present strength and reputation in this field. Further discussions with the University have indicated that a sum of £1.5m over the lifetime of the Programme would enable 150 undergraduate places to be created and would bestow a mark of recognition that would encourage additional assistance from private industry to develop the Institute further. Salford are prepared to operate on this basis - though we will no doubt hear more from John Ashworth.

iii. Recognition should be given to Sir Henry Chilver's achievement in assembling impressive industrial support for his proposed Institute. Postgraduate and research work would be funded independently of Government. My proposal would be to fund 150 undergraduate places at a cost to be further negotiated but likely to be some 10% below the £5,000 per student place initially quoted by Sir Henry Chilver. This allocation would also need to be subject to adherence to an agreed timetable for implementation of the Institute proposals.

(Salford and Cranfield have only very recently supplied details of their proposed courses. These are to be scrutinised by, among others, Sir Robert Clayton. I will let colleagues know if any unexpected difficulties arise).

iv. In the light of strong support from a number of quarters for the novel proposals by the Open University, which would reach large numbers of students otherwise unlikely to be reached by the higher education system, I propose an allocation of £1.5m for programmes to increase student numbers on five existing courses related to computing and information technology and to develop new course materials on microelectronics and digital telecommunications.

5. The remainder of the resources (some £20m) would be allocated to a high proportion of the good bids put forward by universities last autumn in response to a request from the University Grants Committee. Universities knew they were competing for a fixed sum of money and in almost all cases made bids at marginal costs well below current average costs. In making our selection from the large number of suitable bids available, we are aiming to maximise quality and cost-effectiveness. This is inevitably leading to some difficult decisions at the margin because some institutions of recognised quality (Imperial, Oxford and Bristol) have put in proposals that are significantly more expensive than other bids, particularly since they involve significant building. In developing final proposals, we are also being particularly influenced by the need to secure an appropriate coverage of relevant course areas. Beyond that, the UGC is negotiating with the expensive but high-quality institutions in an attempt to reduce the costs of their bids. Some success has already been achieved, but this process is not yet complete and so the information I give about our plans for the UGC institutions must therefore be subject to confirmation once these discussions have been concluded.

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6. For present purposes, however, annex A to this letter summarises the breakdown of the remainder of the programme into constituent areas, with associated costs. Annex B sets out the UGC institutions (and relevant courses) we would plan to include within the UGC share of the programme: institutions are included on the basis that their building costs fall within reasonable bounds - as set by UGC norms. A "reserve list" details bids that would be generally acceptable and available in case any "expensive" institution were ultimately to be rejected following a refusal to modify the costs of its proposals. Annex C and Annex D set out, respectively, the student places by course area that would ensue under phase 2 of the programme and the total student places, by course area, that would ensue from the programme as a whole (both excluding the public sector, where details are not yet known, and the Open University). The preponderance of provision is likely to be in the areas of electronic engineering and computer science, which many - including in particular the IT Skills Shortages Committee chaired by John Butcher - maintain to be the areas of greatest need. Such provision also formed the major part of the bids received by the UGC. However, recognising that more recent advice has strengthened the case for a significant element of courses in the area of advanced manufacturing technology, we shall be looking particularly to the public sector bids to increase the proportion of such provision within the Programme as a whole.

7. Colleagues will note that while Scottish universities are well represented in this second phase of the programme, no Welsh UGC institution is included. I understand, however, that the Polytechnic of Wales is likely to be a strong contender for funds in the public sector element of the programme.

8. I would now welcome your assent, and that of other colleagues to whom this letter is copied, to this general approach to the remainder of the programme. Once detailed discussions concerning the UGC institutions have been concluded, it would be my intention to write again to you and others reporting the outcome. You will recall that a fundamental element is that institutions will be given provisional allocations, which will be confirmed only after they have provided clear evidence of additional industrial assistance. If any of these other proposals fall, for example by reason of the institution's failure to secure industrial assistance, there would need to be agreement about the redeployment of the resources in question within the public sector or universities.

9. Subject to colleagues' agreement to these present proposals, it would be my intention to make known these conditional allocations as soon as possible, bearing in mind the need to finalise proposals for the UGC institutions. Because the National Advisory Body is holding a special meeting on 17 July, to shortlist good quality bids from the public sector, it would be helpful to have colleagues' replies by July 16 (with perhaps detailed points to follow), in order that NAB may know in time for that meeting the target figure for bids likely to be supported under this programme.

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10. I am sending copies of this letter to the Prime Minister, the Chancellor of the Exchequer, the Secretaries of State for Defence, Employment, Energy, Scotland and Wales, the Minister without Portfolio, the Chief Secretary to the Treasury, Sir Robert Armstrong and Sir Robin Nicholson.

Yours sincerely,

Robert Smith

Approved by the Secretary of State
and signed in his absence.

ANNEX A

ENGINEERING AND TECHNOLOGY PROGRAMME

PROPOSED ALLOCATION OF PHASE 2 FUNDS

	£m
UGC Institutions	20
Salford IT Institute	1.5
Cranfield	0.6
Open University	1.5
Public Sector	5.0
	—
TOTAL	28.6
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ANNEX B

ENGINEERING AND TECHNOLOGY PROGRAMME

UGC INSTITUTIONS AND COURSES PROPOSED FOR INCLUSION IN PHASE 2

Bath:	Electrical Engineering
Bristol:	Communications Engineering; Computer Systems Engineering
Cambridge:	Computer Science
Durham :	Integrated Physics and Electronics (undergraduate and postgraduate)
Edinburgh:	Artificial Intelligence and Computer Science; Computer Science and Electronics; Computer Science; Integrated Circuit Technology; VLSI Design and Fabrication (postgraduate)
Glasgow:	Electronic Engineering; Computer Integration and the Engineering Environment
Kent:	Electronic Engineering
Liverpool:	Advanced Manufacturing Systems Technology (postgraduate)
Imperial College: London	Computing and Software Engineering; Electronics Engineering
UCL:	Electronic Engineering
Manchester:	Computer Science
UMIST:	Micro-electronics Systems
Newcastle:	Computer Science; Micro-electronics and Software Engineering; Electronic Engineering
Oxford:	Engineering and Electronics and Structural Materials; Engineering and Computer Science (leading to a degree in either Computer Science or General Engineering)
Sheffield:	Information and Control Engineering
Southampton:	Integrated Information Engineering; Computer Science
Strathclyde:	Electrical Engineering
York:	Electronic Engineering

Reserve List

Leeds:	Electrical Engineering; Micro-wave Devices and Circuit (postgraduate)
Liverpool:	Micro-electronic Systems and Telecommunications (postgraduate)
Queen Mary College: London	Computer Science and Computer Systems with Micro-electronics
Manchester:	Electrical Engineering
Warwick:	Computer Science; Computer Systems Engineering

A late, and highly ranked (academically and industrially) bid from Queen's University, Belfast in respect of an MSc in Computer Science, might be added to the reserve list, if the costings which the University has been asked to supply prove satisfactory.

ANNEX C

ENGINEERING AND TECHNOLOGY PROGRAMME

STUDENT PLACES* ARISING FROM PHASE 2, BY COURSEWORK AREA

	ENTRANTS	STEADY STATE
Electronic Engineering	401	1336
Software Engineering and Design and Computer Science	291	942
General Engineering	15	60
Production Engineering	47	152
Applied Physics and Material Science	50	150
	804+	2640+

* Excluding Public Sector and Open University

+ of which postgraduate places = 34

ANNEX D

ENGINEERING AND TECHNOLOGY PROGRAMME

STUDENT PLACES* ARISING FROM THE PROGRAMME (PHASES 1 & 2) BY
COURSEWORK AREA

	ENTRANTS	STEADY STATE
Electronics Engineering	732	2308
Software Engineering and Design and Computer Science	368	1193
General Engineering	77	258
Production Engineering	156	446
Applied Physics and Material Science	50	150
	1383 ⁺	4355 ⁺

* Excluding Public Sector and Open University

+ of which postgraduate places = 138