

CET NEWS

Council for Educational Technology for the U.K.

Number 12

May 1981

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Telesoftware

The microcomputer is a new and exciting teaching and learning resource. As with the use of audio-visual equipment, its potential is limited by the ease with which teachers and students can get hold of good educational materials to use with the hardware.

The Council's technical developments programme is starting to investigate how new information and communication technologies might be used to improve the distribution of computer software. The existence of a national computerised information service, Prestel, together with the development of a control program enabling a microcomputer to communicate with the Prestel computer, provides the basis for an electronic national software distribution system. Such a system would enable programs to be directly available to schools, colleges and training establishments. These programs would also be available to the home computer user. In this growing market, the use of the computer may be increasingly allied to more flexible learning arrangements.

This technique is telesoftware. It is based upon the ability of one computer to 'talk' to another. The first computer can automatically retrieve a program stored in the second computer; check that the data has been transmitted correctly; store the program on cassette or disc and execute it as required. The program may be transmitted by broadcast radio and television, or via telephone lines. To date we have experimented successfully using a disc based micro-computer to 'download' programs stored on Prestel, via the public switched telephone network.

The next step, with support from the Department of Industry, is to set up and run a two year trial telesoftware service on Prestel. The purpose of the

trial is to make this form of software distribution widely available; to examine the technical and administrative problems involved, and to make recommendations for a future service.

Using the Council's experience as an information provider on Prestel, we will hold a bank of computer software and inform users how they can obtain these programs which will be of proven educational value. We will be closely monitoring the mechanics of the system in several educational settings.

Format

We will also be working with micro-computer manufacturers to develop a Prestel telesoftware facility for their machines and encouraging other information providers to make programs available on Prestel in a way that is compatible with our service. To this end we have already produced a recommended format for the transmission and reception of Prestel telesoftware.

By now you may be wondering whether this isn't another case of a solution looking for a problem and anyway what's wrong with the postal service, or come to that, carrier pigeons! For the publisher of computer software there appear to be a number of potential advantages in electronic distribution.

Corruption

Programs must be copied on to cassette or disc with total accuracy so that the program can run correctly. It is possible for software mailed by post to become 'corrupted' in transit. In addition, telesoftware has error checking facilities built into the transmission process. Telesoftware removes the necessity to reproduce the same programs several times over in different versions to suit different microcomputers. The different versions are all made available on Prestel and the user routed to the one designed for her or his machine. However, storage space required on Prestel is costly, so we shall watch the introduction of the Gateway system with interest. This enables a Prestel user to access a 'third

party database' via Prestel. (see page 4).

Costs

Telesoftware costs will be a crucial element in its challenge to traditional distribution methods. The Prestel network is already established across 70% of the UK. so that the majority of users would be able to access programs on Prestel at local call telephone rates. As the time required to transmit a program decreases, so the computer time and telephone costs will fall. In the long term, the costs of telecommunications are likely to compare favourably with those of a labour intensive postal service. Telesoftware may indeed become a cheaper method of distribution.

Prestel

With this development, we are also providing the microcomputer user with an extra facility, Prestel. Not only can s/he download computer programs but also access any other Prestel pages. So far the educational trial of Prestel shows that, with important exceptions, the information currently on the databases is not immediately relevant to the teaching of most subjects. At present, therefore, it is hard to make an (educational) case for Prestel in terms of information provision alone. Given present financial constraints, we need to study the widest possible uses for Prestel as a communications system, for instance, distribution by telesoftware, if we are to justify its use as an educational resource.

Orders

The Prestel telesoftware service is attractive to software suppliers as an automatic charging mechanism can be built in. In fact, this may also benefit the user since the low administrative costs, for the supplier, of obtaining the income from the sale of a program may be passed back to the user in the form of cheaper programs. The interactive nature of the system also makes it easy for the user to order any materials associated with the program via a 'response' frame.

Browsing....

By using Prestel, the software producer is able to supply users with the latest and most up-to-date versions of programs. The facility for the continual updating of information is a key Prestel feature. A central reference point will be established on the system to stimulate greater awareness of the range of programs available. Potential customers may be routed from the Council's database to software banks created by other information providers. We hope to provide browsing facilities - program descriptions with sample pages.

The telesoftware project is designed to experiment with the use of Prestel as a means of distributing computer programs. Three other methods are being examined using teletext and mainframe links to intelligent terminals. We will be in touch with these projects and with both the Microelectronics Education Programme and the Scottish Microelectronics Development Programme. However, the first crucial step is to get the service operational. We are currently recruiting staff, negotiating for programs and sorting out hardware problems. We plan, at this point in time, to announce the service publicly after Easter. An information sheet will be produced, describing the hardware and software required to use the service. This will, of course, be updated when, say, other microcomputers have acquired a Prestel facility, or as we add more programs to our database. It certainly should be very exciting for the user, once having selected a program, to have it immediately delivered at the press of a button.

Vincent Thompson

In the last issue, we referred incorrectly to the Centre for Extension Studies at Loughborough. This is, in fact, a department of Loughborough University of Technology.

Jane Hustwit

Quals?

Quals is the Council's nickname for our annual list of major courses leading to qualifications in educational technology. One of the key areas of interest for the Council is that of training in educational technology, and the directory is compiled to help in the selection of a suitable course provided by a British institution.

The directory includes:

- a) courses lasting one year or more, full-time or the part-time equivalent
- b) courses lasting less than a year, but at least one term, full-time or the part-time equivalent

The courses are either concerned wholly with educational technology or include educational technology as a major component. They include innovative courses, such as that provided by Dundee College of Education. This is the Advanced Diploma in Educational Technology (Distance Learning).

Here students receive study units and exercises by post and so they are able to study at their own rate at home. They also attend college for practical work and group sessions. The minimum time to complete the course is twenty-one months and the maximum is four years. College-based blocks each last for one week twice a year. Special arrangements are made for students unable to attend; in fact, it is possible to complete the course without ever visiting Dundee.

While we have tried to identify all relevant courses, there may be some which have not been reported; the list makes no claim to be comprehensive. Information is currently being collected for the next edition (1982-3) which should appear in the summer. Contact me if you'd like a copy: it's free.

Jan Wright

Prestel progress

There are indications that the Council's Prestel Umbrella is reaching a watershed in its career. The early stages were marked by the chicken and egg dilemma of why put educational information on Prestel when so few sets were in use and, at the same time, why get a Prestel set when there is so little educational information on it. This has been overcome by a wide variety of organisations taking a positive view of the new information technology and going ahead to put up information about education and training. Our database is expanding at a healthy rate with the range and depth of information continually increasing.

One of the most positive recent developments is the decision by the North East London Polytechnic to put up 50 pages of information on its undergraduate and postgraduate courses. We hope this will pave the way for other polytechnics.

Gateway

There is no doubt that we are on the way to providing a comprehensive database on national education and training information. The watershed is caused by the new and important Prestel options which are becoming available, such as the 'gateway' facility. This uses Prestel to access a private computer system, or bank, of information. One possibility is that educational information might be accessed in this way. The advantage of this, from both the user's and the information provider's point of view, is that more hard information could be provided at less expense.

Although these developments are at an early stage (Gateway is not likely to be operational before mid '82), we are watching Prestel carefully to ensure that education and training gets the most out of viewdata.

If you would like to put information about your organisation on Prestel, do contact me. Otherwise watch this space for news.....

Mary Hope

Computer programs in libraries

Computer assisted learning packages are just as much the proper province of the librarian as learning packages based on old fashioned media such as audio and video.

Although in the past neither the national bibliographic agency nor most librarians have been concerned with the cataloguing and collection of computer programs, libraries may be required to take on new responsibilities in the future.

The advent of relatively cheap small computers has made computing power much more widely available than ever before. Unfortunately the production of software for the new microcomputers continues to be time-consuming and intellectually demanding. Many users do not have access to specialized staff in their own organisations and in preference to writing their own software may choose to buy or borrow programs written by others.

In the last few years these developments have helped to foster a 'publishing explosion' in computer software, particularly in the business field, but in other areas, such as education, users continue to report difficulties in finding out what software exists in a particular subject field. The difficulties of users in all fields are increased by the lack of compatibility between different machines and the problem of inadequate or confusing descriptions of items in commercial catalogues. Programs may also exist in a number of different versions, and may be modified to the extent that the final version hardly resembles the original at all.

The Council, and other interested groups, has put this argument to the British Library's Research and Development Department. Following our approach, the British Library felt that the matter was sufficiently important to merit a seminar to take a preliminary look at the need for a national cataloguing arrangement, the provision of information and

lending services, the implications for the librarian's role and training, and (inevitably) copyright.

The seminar, held in March and supported by BL's R and D Department, brought together a wide cross-section of people, including those involved in recording and/or distributing educational software. Representatives of the Microelectronics Education Programme and the Computers in Education as a Resource (CEDAR) project, based at Imperial College London, were among those present. Other organizations in the computer field with relevant expertise were also represented, including the National Computing Centre. Delegates from school, polytechnic and university libraries, ASLIB, the Library Association and the British Library Bibliographic Services Division also attended.

One of the main issues considered was the problem of bibliographic control, and there was general agreement that a national catalogue of computer software was required. The seminar participants went on to discuss who should maintain the catalogue, the extent of its subject coverage, the content of the catalogue record and the problem of ensuring that only programs of adequate quality were listed. Finally participants considered means of making programs more widely available, bearing in mind the need to protect the rights of program 'authors', the ease with which programs can be copied, and the present uncertainties over copyright protection in this area.

A report on the seminar will be available shortly. Contact Paul Baxter, British Library, Research and Development Department, Sheraton House, Great Chapel Street, London W1V 4BH Tel: 01.636.1544 ext. 564.

OLS News

This is a free newsletter about open learning systems sponsored by the Council. The March edition (No. 2) carries news from colleges working on various aspects of open learning, a re-

port from the National Extension College at Cambridge who are very involved in the development of Flexistudy and information on resources, such as the information and consultancy unit based at Coombe Lodge.

OLS News is produced by the Council's Open Learning Systems programme staff. It is intended to:

- provide individuals and institutions active in developing open learning with a means to exchange basic information about this important educational activity
- stimulate interest in OLS among those not yet involved.

It is distributed to those who have been involved in open learning development and also to the recipients of EDUCA, the Digest for Vocational Education & Training, published by Guildford Educational Services Limited.

Contributions to 'OLS News' should be less than 400 words in length and include, where appropriate, a source for further information. Items for inclusion should be sent to John Coffey, 31 Bassett Avenue, Southampton SO1 7DP. If you'd like to go on the mailing list, write to CET at Devonshire Street.

Phase Two

Phase Two is a new illustrated periodical which covers a wide range of material relevant to anyone interested in educational computing. It is published by the Scottish Microelectronics Development Programme and gives special attention to its activities.

SMDP is a national programme which aims to develop educational applications of microelectronics. It is supported by the Scottish Education Department through the Scottish Council for Educational Technology.

However, Phase Two is much more than an in-house newsletter. Feature articles are illustrated with photographs and diagrams and are written in non-technical

language. They cover all aspects of the use of computers in learning, teaching and educational management. There are also sections of news and reviews which include software, hardware, books and audio-visual materials. Throughout the emphasis is on the educational implications of the new hardware and software developments.

The individual subscription is £4 per annum including postage. If you would like to receive future copies, please write to let us know and we'll invoice you.

Scottish Microelectronics Development Programme, Dowanhill, 74 Victoria Crescent Road, Glasgow G12 9JN
Telephone: 041 357 0340
Answering service: 041 357 0414

Director: David D. Walker
Depute Director: Jacquette Megarry
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successful strategies for the introduction of new techniques into schools.

On the whole the courses have been welcomed by the LEAs and enjoyed by those attending. Their effectiveness will only become apparent when the trainees have been back in their Authority for sometime. However effective they might prove to be it is unlikely that these pilot courses will form the model for future training for advisory staff. This will have to be of a continuing nature and related to the MEP network of regional information centres and training programmes.

CET will be preparing a report for MEP on the courses and on the training needs of advisory staff which have been identified through them, with recommendations for future action. MEP has reserved the rights to any materials, reports, surveys etc. produced for use on the courses or by trainees during the courses and will arrange for the availability of any which seem to have wider interest.

Clive Neville

MEP advisers training

As part of the first year of the Micro-electronics Education Programme CET proposed to the DES that training courses for LEA advisory staff should be run on a pilot basis. Six such courses have now been held, two at each of three centres. The centres were at Middlesex Polytechnic, Newcastle Polytechnic and Gwent College of Higher Education and advisers attended six weeks full time, their salaries and some expenses being reimbursed to their Authorities for that period. 37 Advisers or advisory teachers from 35 LEAs have been trained in this way.

The aim of the courses was better to prepare those advisers who are being given responsibility in their Authorities for both advising schools and developing LEA policy on microelectronics in education. Emphasis has therefore been less on developing in-depth technical expertise than on understanding the potential and implications of the newer technologies for education, on identifying sources expertise and support and on developing

Support staff task analyses: next step

In November 1977, after two years of investigation and consultation, CET published its 'Outline Structure for Support Staff in Educational Technology'. The document set out to clarify the confusion which existed, at that time, over the employment of staff at ancillary and technician level. It outlined tasks to be carried out, proposed new titles for the jobs concerned, and suggested a possible career structure. The favourable reception given to the document led to the subsequent production of a detailed set of task analyses upon which new training courses are now being built.

But the 1977 document dealt only with ancillary and technician levels. The attempt which it made to suggest career routes from technician level into the managerial and professional levels failed because of the very complex situation which exists there. Now, as a result of

the reaction to the previous work, CET has attempted the difficult task of analysing and clarifying the managerial and professional level tasks involved in providing a teaching and learning support service.

Gerald Collier, former Principal of Bede College, Durham, spent a year studying a wide variety of support services and units in universities, polytechnics, technical colleges and schools throughout the country. As a result of his work, and in the light of many reactions received to his drafts, a three-part document has now been completed, and will be published by CET later this year.

The aim of the document is a simple one; to spell out the tasks which have to be carried out at managerial and professional level, and to suggest titles which may be appropriate for some sets of tasks. A major problem arose from the wide variation, both in demand and in provision, for support services between higher education institutions on the one hand, and secondary and primary schools on the other.

It is for this reason that the document is being presented in three parts; one for higher education institutions, one for further education institutions, and one for the schools. For although the analysis of tasks is common to them all, in smaller institutions, not only will several tasks be carried out by only one person, but frequently that one person will carry responsibilities outside the provision of teaching and learning support services. To avoid confusion, therefore, a different presentation of the information has been adopted for each of the sectors.

The task analysis covers nine jobs, which fall into three separate categories, as follows:

I Management

- a) Overall management/director
- b) Management of the storage and retrieval of non-book teaching and learning materials service
- c) Management of technical services

II Production

- d) Production of teaching and learning materials

III Academic

- e) Participation in planning and preparation of courses

- f) Consultancy to teaching colleagues or to external clients

- g) Staff development

- h) Teaching

- j) Research

The documents are just being put into production by the Publishing Department, and they should be on sale before the beginning of the autumn term. Bob Windsor can give more information about the preparation of the task analyses, and the Publication Officer will keep a note of your name if you want to know when the documents are published.

Norman Willis

CONTACT

It is just possible that final attempts to find continuation funding for CONTACT when the Council's funding arrangements come to an end, have been successful. A national funding agency has shown an interest in the project and discussions are currently taking place. As a result of this, CET's Executive Committee has agreed that we should continue to support the service for a further four months until the outcome of these discussions is known.

So if you haven't discovered CONTACT already, find out about it now - if you have, you will be pleased to know that it will now be fully operational at least until 31st July 1981. You can get further details from me at CET or from Jessica Claridge on the CONTACT special number: 0392 35440.

Jill Coates

Helping children w

In the last issue of CET News I outlined ways in which microelectronics could contribute to the education of slow learners and handicapped children, and raised some questions that had to be answered before plans for future work could be drawn up. After consulting a large number of people working in this field, the Council has sent a report and proposal to the Microelectronics Education Programme, suggesting ways in which the needs of this group of children could be met.

The evidence indicates that the potential is enormous. It is most dramatic for physically handicapped children where new educational activities can now be undertaken. Opportunities for children with learning difficulties can also be improved significantly. Whether judged in human, educational or economic terms the possible contribution of microelectronics is large.

The main recommendations:

1. Special education microelectronics resource centres

We recommend that eight special education microelectronics resources centres (SEMERCs) are set up as part of the regional resource centres scheme. Different models of SEMERC will be adopted according to the regional situation. They will be sited in special schools, teachers' centres or within the regional resource centre itself. The functions will include increasing awareness, providing information and advice, providing and maintaining software.

2. Curriculum development

Software for children with special needs will include:

Software produced for ordinary education

Software produced for ordinary education, but modified for the physically handicapped and the blind

Software produced primarily for children with learning difficulties, but which may be of use in ordinary education

Developments which are relevant only to children with special needs. These will include software to enable the severely physically handicapped to communicate, devices for the multiply handicapped and robotics.

We have no comments on the production of type 1. Type 3 can be produced by the regional curriculum development groups, planned by the MEP. Programs will also be produced by teachers, parents etc working outside the MEP. In this case MEP will buy a licence from the owner so that the program can be made more widely available. Developments in areas 2 and 4 are at a very early stage and require the funding of several smaller exploratory projects with national co-ordination.

The Schools Council will examine the contribution of microelectronics to the special education curriculum, advise on priorities for software production and assist the SEMERCs in the summative and formative evaluation of the software.

with special needs

It is proposed that a Curriculum Development Co-ordinator be appointed to liaise with software producers.

3. Teacher training

In general, special education teachers should be trained with teachers from ordinary schools. The MEP should initiate and fund specialist one week courses on communication aids.

4. Central co-ordination

Central co-ordination is necessary. The Council is willing to undertake this if it is the wish of the special education community.

5. Hardware provision

Although the MEP is not intended as a source of funds for hardware, we recommend that two exceptions are made.

A pump-priming fund to enable schools which have difficulty raising money to acquire some hardware in order to get started.
A small devices fund which will enable small purpose-built devices for special education to be produced in limited numbers.

6. Meetings fund

A small fund for meetings of workers in special education should be made available.

7. Special edition of a newsletter

We propose that an educational issue of ACE (Aids, Communication and Electronics) be sent to every special school.

8. International dimension

MEP should seek funds to initiate European meetings to exchange ideas and experience on communication aids and the use of microelectronics with children with learning difficulties.

At the time of writing these have been discussed by the MEP's Advisory Committee which agreed that there was a need for the Programme to work in this field. No decisions have so far been made about priorities, or actual funding.

I hope that, in the next issue of CET News, I will be able to report on progress made in this exciting and important field.

Mary Hope

Conferences for directors of professional studies

At a recent meeting the regional co-ordinators of these conferences felt that the original aim of this activity (ie to develop a better understanding of the role that educational technology might play in teacher training) was still worth pursuing.

Isolation

However, the problems encountered so far in the mounting of regional conferences for professional studies and educational technology staff were several. The educational technologist still felt isolated from colleagues, because the educational technology approach was still regarded by many as a separate subject. Not enough dialogue had been created between the educational technologists and other staff. There was great disparity of interests amongst those who attended the conferences, participants having very different levels of knowledge about educational technology. Although educational technology was slowly becoming accepted, its integration still needs active support.

Co-operation

We would like to discover what interest there would be in seminars on different aspects of educational technology arranged for staff from several institutions coming together at a local, central venue. The emphasis could be on the importance of bringing staff up-to-date on the state-of-the-art in educational technology.

Microelectronics

A second and important aspect of the work of this group was felt to be concerned with microelectronics. There was general agreement on the need for awareness by all staff in teacher education institutions of the impact of microelectronics on society as a whole, and of their potential for educational use. It was felt necessary to assure the integration of micros within all subjects (as with educational technology), and not leave the teaching about

them to the maths specialists.

I would be pleased to hear from anyone wishing to comment on or discuss these ideas.

Bob Windsor

NCAVAE

On 31 March 1981 the 35 year existence of the National Committee for Audio-Visual Aids in Education was finally brought to an end, as a result of the withdrawal of local authority funding. For the last 30 years the National Committee had operated in an integrated way with the Educational Foundation for Visual Aids, and for many people in education the boundaries between the two organisations had become blurred.

Now that EFVA is going ahead on its own, it has been restructured, and has been moved into one building. Both the National Audio-Visual Aids Centre and the National Audio-Visual Aids Library are now at the former Library building in South East London. From this centre now operates the audio-visual equipment service, a multi-media kit and film sales department, and a training and production department, as well as the film hire library and other EFVA activities. Full details of all EFVA services are available from the National Audio-Visual Aids Centre and Library, Paxton Place, Gipsy Road, London SE27 9SR.

We understand that the Technical Information Service which was controlled by the National Committee is being established as a quite separate unit, so that it remains completely independent of the commercial operations of EFVA. Full information is not yet available about these new arrangements, but we shall include them in CET News as soon as they are known.

Norman Willis

Patterns of teaching

If you write objectives for a course you are likely to consider whether your teaching methods are suitable for achieving them. If your objectives are in the affective domain of Bloom's taxonomy for example, will you, can you, achieve them by straight lecturing? Is there any evidence on which to base your choice of teaching method? Is there a correlation between levels of the taxonomy and effective teaching methods?

When the Technician Education Council (TEC) required further education establishments to submit courses for validation in 'objectives' form, the Council asked the Staff Development Unit at Manchester Polytechnic - a unit which had been actively concerned with the problems of further education in the north west - to try to find answers to these questions, and to present the findings in an easily assimilable form. 'Patterns for Teaching' is the second outcome of that request.

The first was 'Designs for Teaching'. These are workshop materials and individual study units intended to encourage further education staff to explore the relevance of five widely used teaching methods to achieving objectives within the TEC hierarchy. These have been extensively bought and successfully used by individuals, colleges and LEAs. However they were never intended to do more than alert staff to the potential of a wide range of teaching methods. Production time for the materials did not allow for more.

Consequently it had been the original intention to accompany the materials with a 'reader' containing articles and research papers for those who wanted evidence or argument on which to base a more systematic choice of teaching method. When Mantz Yorke and the others in the team in Manchester looked for suitable articles they found there was practically nothing directly concerned with teaching in further education. It therefore became necessary to adopt and

adapt work done in other sectors of education.

The result is a totally new book, discussing each of the five teaching methods chosen for the workshop and individual study units, and relating research findings on each of them to the practical problems of teaching in further education and particularly on TEC courses. However, because the effort has been made to interpret the research in a broader context than that in which it was carried out, many, other than those in further education, will find its contents relevant and challenging.

The teaching methods covered are:

1. Lessons and lectures
2. Practical work, demonstrations and projects
3. Independent learning
4. Teaching small groups
5. Team teaching

The book is eminently readable, well illustrated with diagrams and tables, and contains very extensive references and bibliography.

Clive Neville

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'Patterns of Teaching' by D. Mantz Yorke is available at £8.00, plus postage and packing.

'Designs for Teaching' - workshop materials and organiser's manual at £10.00 per set, plus postage and packing. Individual study units on each of the above methods £2.50, plus postage and packing.

All are available from the Council's Publications Department. Please do not send money with orders; you will be invoiced.

* * * * *

Copyright?

By Philip Goodwin Miller

Until last summer anyone questioning a teacher about the prevalence of illegal copying of copyright material in schools was likely to be met with the response that what went on in schools was not something copyright owners could establish and, even if they could, their past reluctance to take action indicated that they either didn't care or, if they did, considered it not worth the bother.

However, in June 1980 the music publishers Scholt & Company on their own behalf, and on behalf of other music publishers, sued the Borough Council of Wolverhampton. More recently Novello & Company took the initiative against Oakham School. Although neither case was argued out in court, it appears that the publishers had sufficient evidence of unauthorised photocopying of sheet music to convince the educational authorities concerned that there was no point in contesting the action. Both cases were therefore settled out of court in favour of the publisher, and at considerable financial cost to the defendants.

To appreciate why the defendants felt unable to contest the claim, it is necessary to examine the Copyright Act 1956. This gives protection to the composers by granting them the sole right to copy, publish, broadcast and publically perform musical works. When the composer dies the copyright continues for a further 50 years. Any benefits resulting from copying, publishing etc accrue to whoever benefitted under the will by having the copyright bequeathed. When a musical work is published a quite separate and additional copyright is acquired by the publisher in the typographical layout. This lasts for 25 years. In addition, if the work is engraved, as is usually the case, the engraver acquires a separate copyright which runs until death and for 50 years thereafter.

It follows that anyone copying printed music without authority is liable to run foul of several different copyright elements owned by as many different people. Each element must be considered on its merits. So although Beethoven's music

is out of copyright, an edition published in the last 25 years is still protected and, if engraved, the engraving will still be protected if 50 years have still to lapse since the engraver's death.

It is the case that unauthorised copying in certain circumstances is permitted by the Copyright Act. So infringement of the copyright occurs only if a substantial part is copied. Although there is no definition of the term in the Act it is evident that it would have to be a very small and insignificant part indeed for a court to accept as not substantial! Then there is 'fair dealing' for various purposes including research and private study. But here again it has been established that for someone to make multiple copies for distribution to students would not qualify.

Finally, there is the notorious Section 41 which provides that teacher and pupils may copy in the course of instruction at a school or 'elsewhere', provided no machine for making multiple copies is used. This section bristles with ambiguities. Must a teacher be a qualified professional teacher, or does it include someone who is teaching at the time the copies are made? Does 'in the course of instruction' imply that the pupils must be assembled with the teacher, or can copying be carried out before they arrive? As for 'elsewhere' this could mean either any place where teacher and pupils are engaged in instruction or merely an annex or some place attached to, or serving, a school. Unfortunately there is no such ambiguity about the Section's embargo on the use of photocopiers and the like.

This brings us back to Wolverhampton and Oakham. It may be presumed that the reason why the case was not defended was because, irrespective of the meanings of the vague phrases listed above, it could not be denied that machines for making multiple copies had been used. In this respect the music publishers were on strong ground. Had one or other of the cases been defended in court it is possible we may have been given, for the first time since the 1956 Act came into force, an interpretation of the terms in Section 41 which have given such trouble in recent years. As it is, we must wait either for

a relevant case which is contested or for a new copyright act which may sweep away the ambiguities of the 1956 Act and, no doubt, replace them with a brand new set for our delectation.

Towards this end the Department of Trade has announced that a Green Paper will be shortly published as a further step along the interminable road to up-dated legislation. Whether this will include suggestions for blanket licensing as suggested by the Whitford Committee on Copyright and Designs, or whether pressure to reduce public expenditure will have provoked some alternative ploy remains to be seen. In the meantime, anyone eager to avoid following in the footsteps of Wolverhampton and Oakham are reminded that CET publish a range of free leaflets on copyright matters, offers an advisory and lecture service and also published the highly successful "Guideline Two: Copyright Clearance - a Practical Guide" at £3.25, plus postage and packing.

Geoff Crabb
Rights Development Officer

are not 'Which' type reports. They do not recommend 'best buys'. What they do is to list those clauses in the USPEC where the piece of equipment falls below the minimum USPEC standard. They also contain a statement on the safety of the equipment in question, and in many cases, a comment provided by the manufacturer/distributor.

USPEC 2	Synchronized tape-visual systems (using compact cassettes)
USPEC 3	Overhead projectors Technical assessment reports on Elite Viewrite 2008LV, ITM 330LV (Portascribe), Erskine Westayr 10LV, Elite 2000
USPEC 4	Cassette audio-tape recorders and playback units (Mono-phonic) Technical assessment reports on Sharp RD610, Tandberg Audio Tutor 771, Coomber 309, Coomber 343
USPEC 5	Marker boards and pens
USPEC 6	Combined filmstrip/slide projectors Technical Assessment Reports on Hanimex Syllabus 4000, Rank Aldis Tutor 2, THD Halight, THD Halight 24/250
USPEC 7	Projection screens
USPEC 8a	Plugs and connectors (audio and audio-visual)
USPEC 8b	Matching (audio and audio-visual)
USPEC 9	Code of operating practice for overhead projectors
USPEC 11	Pen and inks for use with OHP transparencies
USPEC 12	Storage containers for teaching and learning materials
USPEC 13	VHF radio receivers
USPEC 14	Microform readers
USPEC 15	A guide to the selection of video cassette/cartridge recorders and playback units
USPEC 16	Synchronised tape/visual operating practice
USPEC 17	Headphones Technical Assessment Reports on Eagle HME 400 Mono, Tandberg TLH 78, AKG K108 Mono, Eagle HME 450, Hanimex PA 3000

User Specifications

The Council's user specifications are a series of free publications which deal with the performance and standards of audio-visual and related equipment required by educational users. We also publish a complementary series of technical assessment reports.

These reports contain information about the way in which individual items of equipment match up to the specifications set out in the USPEC. They have been prepared as part of our standards and specifications programme and are based on tests carried out by a co-operative of audio-visual test centres drawn from education and the services.

The reports are free of charge and available to those who normally receive USPECs. Indeed, it is essential that they are read and used in conjunction with the USPEC to which they refer, since they

- USPEC 19 Symbols for use on audio-visual equipment
- USPEC 20 Frames for overhead projector transparencies
- USPEC 21 A guide to the preparation of operating and maintenance documents for audio-visual equipment
- USPEC 22 Slide and filmstrip viewers for individual use (virtual image)
- USPEC 23 Magazine slide projectors for 50x50mm slides
Technical Assessment Reports on Kodak Carousel SAV 2000, Liesgang Fantimat 150, Gnome Jaguar 7106, Hanimex 1500 RF
- USPEC 25 A guide to the selection of electronic calculators
- USPEC 32 A guide to the selection of microcomputers

Focus on safety: A guide to the safe handling and operation of audio-visual equipment

USPECS in production include:

Printers for microcomputers
Word processing systems
Sound systems
Reprographic equipment
Episcopes

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Amendments to USPECs

Please note that the following amendments have been made to two USPECs:

- USPEC 4 Cassette audio-tape recorders and playback units (mono-phonic)

Clause 6.8 now reads: For a C60 cassette, neither the fast forward nor the rewind time shall be greater than 110 seconds.

- USPEC 23 Magazine slide projectors for 50x50mm slides

Clause 5.7(a) now reads: The remote-control voltage shall be no more than 34v dc or 24v ac (rms) and shall be isolated from the mains supply.

If you are not already on the USPECs mailing list and would like to receive copies plus the assessment reports, please write to me here at CET•

Susan Sheahan

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Educational Resource Groups

Even in these difficult times, groups of teachers who share a particular interest or enthusiasm tend to get together in their own locality to promote that interest. There are, at present, about fifty groups of this kind with an interest in educational technology, audio visual methods and other aspects of resource use. These Educational Resources Groups have set up a Committee to organise information and awareness of their work at a national level.

From 1 April 1981 the Committee, under the chairmanship of Ralph Powell, from Barnsley, has adopted a new constitution and is working in association with CET, which is providing them with a secretary and accommodation for occasional meetings. A major activity of the Committee for Educational Resources Groups (CERG) is to be an annual one-day course which this year will be held on 3 July 1981 at the CET offices in Devonshire Street. The programme will deal with subjects such as Prestel and telesoftware, and the application of microcomputers at primary and secondary level. The course will be restricted to members of formal Educational Resources Groups.

The Committee has produced a leaflet about the work of the Groups, copies of which are available from the Secretary, CERG, c/o CET at Devonshire Street.

Norman Willis

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International standards for A·V equipment

Members of the Council's Support Group on Equipment Standards Specification and Operation are active in the field of international standards for audio-visual equipment by their participation in the works of the International Electrotechnical Commission (IEC), sub-committee SC60C. At a recent meeting in Prague the sub-committee (which previously dealt with the application of educational and training equipment) was re-named and its scope widened to reflect the growing involvement with equipment intended for the domestic market and the increasing influence of microcomputers in all aspects of the sub-committee's work.

The new title of the sub-committee is Systems of Audio-visual and Electronic Technology for Information and Communication and its scope will now cover:

- a) To prepare standards and recommended practices for applications, adaptations and combinations composed of audio-visual, video or electronic products including items intended for the domestic market.
- b) To further the development of communication, presentation, education and training and to facilitate information and cultural exchange by the promotion of compatible, safe, effective and economic systems.

The sub-committee is responsible for preparing a series of standards for audio-visual, video and television equipment and systems, IEC Publication 574 in 12 parts. The following parts have been published:

- Part 1 General
- Part 2 Explanation of general terms
- Part 5 Chapter I. Synchronised tape/visual systems - operating practice
- Part 8 Symbols and identification
- Part 10 Audio recording systems

Work is in final stages of production on the following:

- Part 3 Connectors for the interconnection of equipment in audio-visual systems
- Part 4 Preferred electrical values for the interconnection of equipment in audio-visual systems
- Part 5 Chapter 2. Control systems for two still projectors - operating practice
- Part 7 Safe handling and operation of audio-visual equipment
- Part 8 8A: Additional symbols specific to educational training equipment

The following parts are nearing completion:

- Part 10 10A: Superimposed cueing systems
10B: Digital counters for cassette recorders
10C: Audio striped card systems
10D: Audio pages
10E: Labelling for educational cassettes
- Part 11 Video and television systems - operating practices for sampling or browsing of a video programme

Other items of work which are being dealt with include:

- Connecting sockets for automatic projection
- Digital control systems for multiple still projectors
- Marking of electrical supply on rating plates
- Audio learning laboratories
- Matching of cassette equipment and tapes
- Editing systems
- TV projection systems
- Retrieval and interactive video systems
- Operating practice for video tape/disc leaders and trailers
- Telesoftware production systems
- Methods of measurement and reporting the performance of audio-visual equipment

Terminology for educational or training equipment and systems

Sub-committee SC60C is only one part of the parent committee, Technical Committee TC 60. Recording- SC60A (Audio) and SC60B (Video) are the two manufacturing standards committees and close liaison is maintained with these committees. From time to time joint meetings between the committees are arranged to exchange views on common areas of consumer/domestic and educational needs. One such exchange concerned the educational requirements for video disc players. The committees' recommendations have contributed to improvements and developments now incorporated into machines entering the market. This indirect influence on the world's manufacturers is an important contribution to educational and training requirements in the field of audio-visual equipment and systems.

Susan Sheahan

Evaluation

In January this year, the staff of the CEDAR Project, Imperial College, London, compiled a useful bibliography on the evaluation of computer based learning. This is available from Judith Morris, the Council's information officer for computer assisted learning who is based at CEDAR.

She is responsible for answering enquiries, referring people to their most appropriate source of information and generally developing the store of information held about CAL in education and training.

Judith is also responsible for CAL News. Another edition of this newsletter was produced in March - CAL News 16. If you would like a copy of this and to go on the mailing list for future editions, contact Judith. It's free.

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