European Education Partnership

PARTNERSHIPS IN PRACTICE

An observatory
analysing the leading innovative approaches
to improving education and learning
through use of new technologies and digital media.

November 1999

New technologies and digital media are catalysing dramatic improvements in education and training, but even in the most advanced countries we have only just started.

A huge amount remains to be done, to ensure access for all and to maximise improvements in learning.

Public - Private Partnerships are central to most current initiatives in this area. Those involved are finding successful approaches, but also difficult issues.

Development is so fast that even recently published information may not include important new approaches and insights, allowing wrong conclusions.

Good understanding of leading edge developments can only come through dialogue with those actively involved.

The European Education Partnership (E.E.P.) is open to all and is neutral.
We exist to promote leadership in the use of new technologies and digital media in learning.

This observatory draws on the extensive experience of E.E.P. member organisations.
It aims to clarify the key challenges inhibiting more ambitious development - while celebrating successes in public-private partnerships to date.

We invite policy makers interested in exploring the issues more deeply to contact the E.E.P. or any of the E.E.P. Members listed in Appendix IV.

Please return the response form or e-mail info.eep@skynet.be if you wish to receive updates to this observatory.

Roger Broadie
Chief Executive
European Education Partnership

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Please note that throughout this document

— "ICT" (Information and Communication Technologies) is taken to mean all aspects of new technologies and digital media.

— "teacher" is taken to include all professionals mediating learning, working at all levels and in all organisations that promote learning.

A Common Vision

Without a common vision:

We will pull in different directions.

Our arguments may fail to be based on true realities.

We cannot judge progress.

We invite you to consider the following expectations and how fast we can move towards this for all citizens.

All citizens should expect to be able to access ICT when they decide it is appropriate to learning.

Citizens should expect to have affordable access to learning content in their own language and reflecting their own culture.

Citizens should expect equality of affordable access to learning through life, through community access points open to all.

A Common Vision

Children should expect to be able to use computers in school as an integrated part of the curriculum and learning process.

Children should expect to learn how to learn through life, in a networked world, to meet their individual needs.

Children should expect to experience and practice, from an early age, the skills necessary in a networked world.

Citizens should expect a national ICT infrastructure, which enables global access and communications for learning.

Employers should expect affordable access to the ICT infrastructure that will support learning in work and tele-work.

Learners should expect that their learning institution is able to access the resources and communication benefits of the Internet.

Learners should expect to have a teacher who is qualified in implementing ICT to benefit learning.

Learners should expect protection from commercial exploitation of their ICT supported learning activity, and protection of the intellectual property that they invest in their learning.

Teachers should expect to be supported, in their access to the skills training and tools necessary, for them to develop throughout their career as the key professionals mediating learning in a networked world.

The Main Issues - Content Creation

The importance of a strong commercial sector to provide high quality educational content is being stressed by many.

Yet many good initiatives by Government and public sector bodies are also effectively destroying the market for educational content.

The Educational "Content" industry, so far, has not convinced educators and policy makers that their presence in the 'content' arena adds irreplaceable value.

And financial pressure pushes educational service providers to satisfy users' needs by sourcing content from the global market at lowest cost.

We are in danger of losing irreplaceable capabilities as approaches to content creation change.

See Appendix II, page 33, for exploration of this.

Honest and open dialogue is required, between all involved, even though many issues are politically and commercially sensitive.

See the E.E.P. Programme for Dialogue, page 9, for possible approaches.

★ If these trends become the reality:

- Commercially produced educational content will come in the future almost exclusively from big single language markets: the USA today, India and China tomorrow.
- More appropriate content, generated by the public sector and available in educational institutions, will be accessible by learners in homes and community only with difficulty.

The Main Issues - Education Management

Budgets available to schools and colleges do not match the costs of providing adequately for all, making it impossible to plan for long-term viability.

The curriculum and examination requirements to use new technologies and digital media are not yet strong enough to make their use an imperative for schools and teachers.

Teacher training in this area is vital but is insufficient and without continuity.

If these trends become the reality:

- We will have diverging development between countries, and even between regions and cities within countries, with social consequences.
- The teachers and lecturers, on whom we rely for adoption of change, will lose faith in the possibilities for learning benefits, which currently excite them.

We are in danger of creating a Europe of "haves" and "have-nots".

See the case studies in Appendix I, page 16, for examples of diverging development.

To reach all requires political leadership and solutions based on commercial realities.

See 'A strategy for Public-Private Partnership', page 8, which proposes what industry and education need to be able to follow political leadership.

The Main Issues – Curriculum and Assessment

Acknowledgement of the need for the curriculum to reflect the networked world, new technologies, and digital media, does not of itself make change happen. Leadership in understanding what this implies is required.

Teachers will always have strong concern to help their students gain qualifications, so ICT will be marginalised if examinations do not require its use or the skills ICT promotes.

The new skills necessary for a networked world are becoming visible but have not yet been formalised or educationally validated through research.

And Industry increasingly uses conceptually challenging ICT-based meta-data and communicates through integrated , video-rich, multimedia.

The curriculum for learners, and the assessment methods which determine how it is taught, are not changing fast enough.

See "The Value and Benefit of ICT in learning", page 14.

A public mandate for change and willingness to share the risks of change exists in many places.

See 'E.E.P. Programme for Dialogue, page 9, for suggestions of how consensus can be generated.

★ If these trends become the reality:

- The economic needs of countries will be increasingly less well served by their education system.
- Learners, and their parents, will seek out those sources of learning that are best adapted to young peoples' needs, for career and personal fulfilment.

The Main Issues – Policy Development

New technologies and digital media obviously have a key role to play in improving learning, but improvement shown by traditional measures is not justifying the investment required.

New skills and kinds of learning are likely to be very important in the networked world, but their value cannot be measured before they are developed. The necessity to act on faith is inhibiting ambition.

Systemic change in schools and colleges is clearly necessary, but political timidity and financial implications are stalling both vision and policy.

If these trends become the reality:

- Europe will become increasingly less competitive.
- Change that could be very positive, and welcomed by parents and teachers, by being delayed could become even more difficult to implement.

Change is so fast and global that there is no time to wait and watch.

See the case studies in Appendix I, page 16, for indications of the speed of development.

Risks of all kinds can be shared through partnerships, and generation of consensus is possible, through dialogue.

See the case studies in Appendix I, page 16, for examples of how risk is being shared. See "E.E.P. Programme for Dialogue", page 9, for proposals as to how consensus can be generated.

A Strategy for Promoting Public-Private Partnership

To move forward together, we must each work within the constraints of our own organisations and situations, while creating the partnerships that are imperative for success. We believe that it is everyone's responsibility to help their partner-sectors to resolve the issues that inhibit action.

★ Sectors have different requirements, at different stages of change.

Industry's needs	Policy Makers' needs	Education's needs
Understanding of the possible business models in an education environment based on new paradigms.	Thorough understanding of routes to involve fully all potential partners.	Belief in the learning value and educational viability of new approaches.
Clarity of public policy options and the probabilities of implementation.	Conviction that investment will produce measurable return and have the commitment of the professionals.	Contractual requirement by government of learning environments based on new paradigms and support of parents for this.
Identification of critical change agents able to work closely with Industry.	Support in creating the mandate and actions that will make new policies a full success.	Appropriate autonomy to effect change.

The E.E.P. Programme for Dialogue

The E.E.P.'s member organisations are all involved at the leading edge of development of new technologies and digital media for learning. Through our debates and discussions we have identified the issues we believe must be tackled in taking the next steps.

Many of these issues are difficult even to discuss in open forum.
Our aim, however, is not to criticise lack of change, but through asking the questions to find how more open debate on these issues can be promoted.

We offer our neutrality to provide appropriate fora. We will also be pleased to bring our insights to other fora.
We are currently pursuing the following kinds of dialogue.

Presentations of the information and insights on which the statements in this observatory are based, to broaden the debate and to involve others.

Seminars with stakeholders who must be involved in change, to deepen understanding of the issues and to identify critical areas for action.

Working Conferences to explore specific issues in depth and to expand the vision.

Round Tables with government and policy makers, to share views without prejudice and to explore mechanisms for expanding dialogue.

If you would like to know more about our Dialogue Programme please return the response fax enclosed with this report, or send your contact details to the E.E.P. Administrator, Tel +32 2 479 13 53 Fax +32 2 479 13 71 Email info.eep@skynet.be.

Current Key Challenges

In compiling this observatory the Writing Team have held extensive discussions with many individuals and organisations. The following points have emerged as questions worthy of discussion. They are not listed in any particular order.

The E.E.P.'s programme of dialogue is taking forward discussion of many of these issues, focusing particularly on long term educational and financial sustainability and the commercial realities necessary in public-private partnerships.

★ Curriculum and Assessment:

Investment in new technologies for learning must be based on their impact on achievement, but it is impossible to research their impact in isolation from other societal changes. Research takes time and there is urgency to act. What research tools can be used to allow change to be initiated immediately and then guided as it develops?

The skills required for life in a networked world are precisely those skills that are very poorly measured by traditional educational assessment. How can we better assess and value the improvements in communication skills, initiative, collaboration, information manipulation, knowledge management, multimedia literacy and global awareness that ICT is enabling?

Our education systems and assessment processes are heavily based on textual literacy. Educators have a wealth of understanding of textual expression, but our young people live in a multimedia world.
How can an educational understanding of multimedia literacy be established amongst educators and concepts such as multimedia vocabulary, grammar, syntax, forms of expression and creativity be formalised with academic rigour?

As the networked world rapidly develops, new concepts that should be part of a learning curriculum are being discovered. How can the pace at which new ideas are incorporated into official curricula be increased?

★ Content:

Digital media content creation requires involvement of data owners, software companies, publishers, educators, and those delivering content online.
How can the production and value chains be made workable and investment by the commercial sector be rewarded appropriately?

As global aspects of education and learning are developing, global media organisations are spreading their content into education. What are the implications for diversity and national culture?

As tools become simpler and more powerful, there is growing involvement of educators and public sector organisations in content creation. Are the full range of skills available to support this content creation and if commercial sector skills are required what partnerships will make these available?

The necessity for meta-data, to underpin access, search and content distribution, is clear, but how can small developers of specialised content influence how meta-data tagging develops so that it is affordable and workable?

There is a conflict between on one side the benefits of economies of scale and large markets, necessary for involvement of big organisations, and on the other a vibrant open market through which small organisations can be successful.

Video/TV approaches are converging with Internet/intranet techniques. How can we best research the educational benefits of this and how can these two radically different content paradigms best be brought together for learning?

There is a conflict between enabling local choice and diversity and ensuring national provision. How can the balance be set?

With the growth of importance of homes as learning environments, can public sector dissemination processes properly reach all homes, or is a commercial basis also required?

Dialogue on digital content is very difficult due to the different concerns, visions, and even vocabulary of those involved with; large or small companies, public or private sector, TV or Internet, publishing or software, learning styles or content styles, institutional or home use. How can we aid mutual understanding?

Current Key Challenges

Education Management:

Though the best schools and colleges are acting independently to develop use of ICT, the majority require a framework for action in the context of national targets and expectations, with leadership in the change process. What kind of framework and targets will be most effective in promoting change?

There is a conflict between supporting the most needy while helping to push forward the most advanced. Both are necessary but where should the balance lie?

Education of our young people is an emotive issue. How can the professional and parental consensus for radical change best be developed, while safeguarding childrens' education?

Until the use of new technologies is fully required for students to pass all examinations and gain qualifications in all areas, teachers will continue to resort to traditional approaches and will not fully adopt new approaches. How should national examinations be changed and how can this be done while maintaining learning standards?

Teachers need to see a sound pedagogical basis for adopting the use of ICT. How can all teachers be guided to gain the benefits for learners that are being obtained by leaders in the use of ICT?

Professionals in education and learning are facing dramatic change in their lives and jobs and there is natural resistance and fear. How can this be pro-actively addressed and new career routes, appropriate to new ways of delivering education, be created?

It has been clearly shown that personal ownership of computers by teachers has a major positive impact on the speed with which they can be trained to use new technologies. Leadership in change is also critical, but until senior managers in education make personal use of new technologies they will not appreciate fully the power it can bring to learners. How can personal ownership by teachers and managers be stimulated and supported?

The almost "free" availability of large amounts of content destroys the market and creates a bias toward low content quality. How can we have the best of both worlds?

ICT systems in schools and colleges are complex and sophisticated. What is the best way of managing such systems and allowing teachers to concentrate on teaching?

Schools and colleges are beginning to serve as the online learning centre of their communities. Where should management responsibility for this lie and what are the implications for staff capabilities and remuneration?

★ Policy Development:

Learning organisations, to fully benefit from use of ICT, must re-balance their spending on resources and staff. How can significant increase in ICT spending be balanced by using staff and other resources more effectively?

Making change happen has a cost by itself which cannot be totally absorbed within the normal operations of an organisation. How can the process of change be funded?

For long term viability, it is essential that virtually all aspects of new technologies and digital media are funded from annual revenue budgets and not capital budgets. How can policies on national investment in education and learning be changed to allow this?

Teachers are the key professionals who will deliver the radical changes in education that the next two decades will bring. How can teachers be supported in their efforts to obtain the training essential to their career development?

For the commercial sector to play a full role in bringing the benefits of ICT to learners, profit appropriate to the investment made must be available. How can public-private partnerships be structured to permit this?

With the world moving rapidly to e-commerce there will be inevitable impact on education. How can the techniques of e-commerce best support educational objectives?

The world of TV is changing forever with the introduction of digital TV and Internet browsers on TVs. How should the public service broadcaster's educational obligation be developed?

Homes are growing in importance as an educational and learning environment. What should our expectations of parental responsibilities in this area be?

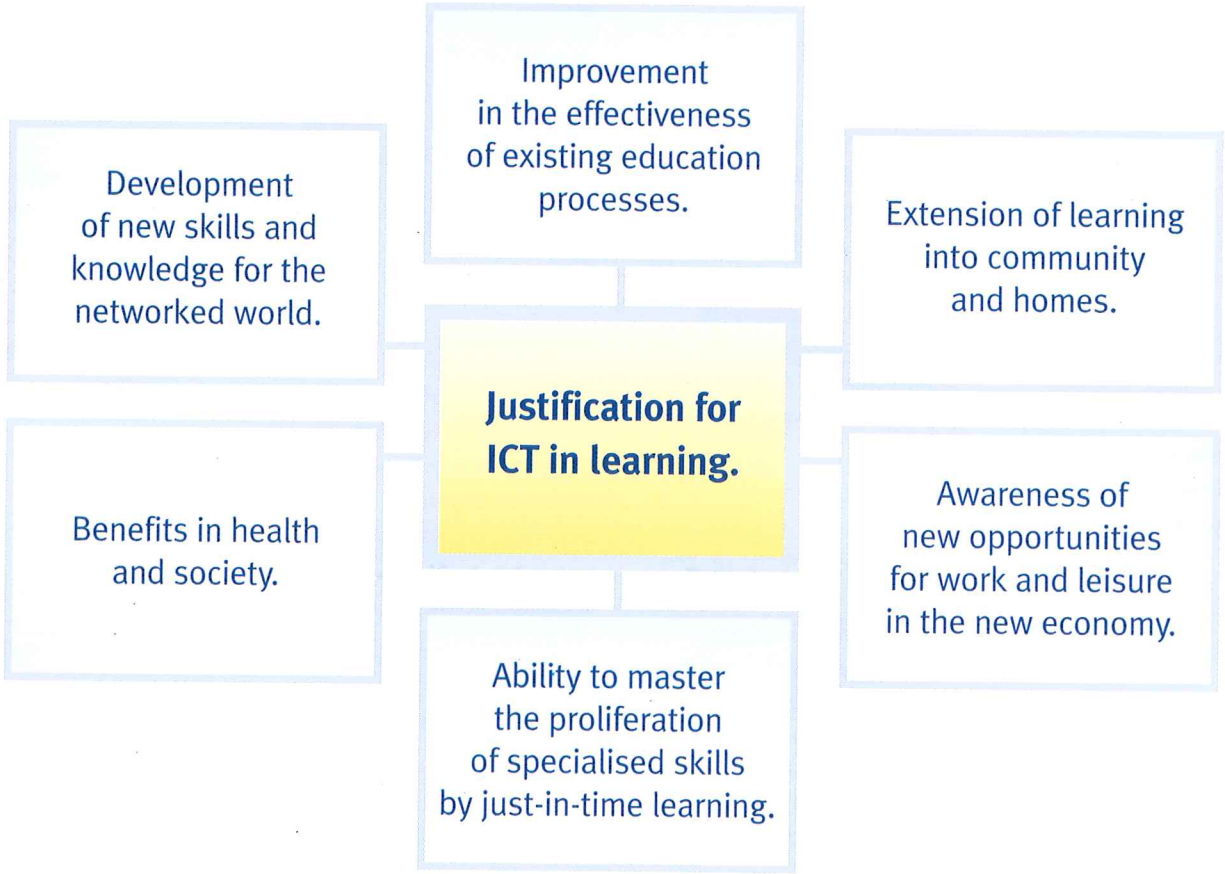
VALUE AND BENEFIT OF ICT IN LEARNING

Teachers using ICT with students strongly believe in the benefits. There is much anecdotal evidence.

Evidence from research quantifying the learning benefits in relation to the investment in ICT is poor.

There are also other un-measured benefits from use of ICT. It is our opinion that the measures of educational value from ICT that are currently being used to justify investment, are incomplete.

Industry has consistently been calling on education to develop in our young people a number of skills and attitudes which are not reflected in current national qualifications. These are such things as initiative, collaborative skills, communication skills, information accessing and manipulation, multimedia literacy and independent learning skills. New technologies and digital media appear to have a major role in developing these skills.



We wish to develop case studies exploring the value and measurement of all aspects of the benefits of ICT in learning, for publication in this observatory. We welcome contact from any educators who have such evidence.

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APPENDIX I

The following public-private partnership Case Studies have been created by the Partnerships in Practice Writing Team.

We are seeing the emergence of a new kind of market, which requires cross-departmental government involvement, the capabilities of Education Authorities and Institutions, Public Service broadcasters, and many sectors of industry, in partnership.

This new market is strongly characterised by complex and deep partnerships, and by the growing use of e-commerce techniques.

The aim of these Case Studies is to identify the leading edge of partnerships for education and learning. By exploring the contributions of all to the partnerships, we hope to understand the match between education/learning value and the commercial realities that can enable the benefits to reach all in Europe.

Where previously public sector provision and the commercial market were relatively distinct, they are now merging into a new kind of public-private market.

There are radically new approaches developing. In many instances, functions previously being performed by the public sector are being under taken by commercial companies. Functions previously mainly in the commercial sphere are being under taken by public sector bodies, often in semi-commercial ways.

Each Case Study is supported by a more detailed Briefing that has been made available to all E.E.P. Members. Members will be pleased to discuss these Case Studies in more detail

3Com - support for Education Action Zones

3Com believes that powerful integrated networks will underpin new strategies for raising educational achievement in schools.

3Com's desire is first and foremost to help prove how education at school level can become more effective and then through developing a sustainable market to bring the benefits of networking to all schools and colleges. It aims to do this by sponsoring the application of 3 education action zones for approved status during 1999.

Education Action Zones are a key element of the UK government's strategy for raising educational standards and pioneering innovative approaches to education in areas of low achievement and high unemployment. The application process for the first two waves of zones during 1998 and 1999 has been competitive and each successful zone will receive up to £1m per year of which the government will support with up to £750,000.

Zones have to submit detailed plans showing how they plan to raise achievement and the support they have from business, either local or national. Some zones may start to function formally from January 2000. More details on the Education Action Zones are available from EAZAS, Floor 23, Millbank Tower, 21-24 Millbank London SW1P 4QP, Tel: 0171 802 2314.

3Com is contributing a significant amount of human resource to bring networking knowledge and skills to aid policy creation, planning, implementation and management. This is in addition to ensuring through equipment support that the demonstration networks use fully up to date equipment and have sufficient bandwidth.

A number of other companies are partnering with 3Com in providing the complete range of support needed. The educators who have submitted bids to become Action Zones are undertaking considerable additional work and are staking their reputations on raising the educational achievement of the young people in the participating schools. A true team effort will be needed to help school heads, governors and teachers with difficult personal and institutional change-management issues.

Lessons being learnt include:

- the importance of working with partners who have the qualities and vision to be successful.
- the necessity for students and parents to have a sense of ownership and commitment to the changes; it is they who will actually make the initiative a success.
- the 3 year timescale, while educationally essential, presents problems for private sector investment.

- A major issue that will need to be tackled is the financial basis for spreading these approaches widely. The real and unavoidable costs of the technological infrastructure will require either a re-balancing of educational spending, or continuing additional investment.
- It is also already clear, that there must be continuous two-way feedback between the educators and the companies involved. This is difficult to quantify and manage for commercial partners, and difficult to include in busy schedules for the educators.
  Most critical will be the progress towards systemic change in the schools, but while intentions are very positive there has not yet been time to see such change beginning.
- In addition to supporting Action Zones in the UK, 3Com Europe has announced a $1 million equipment pledge to help network schools across Europe. This pledge is part of 3Com's support for the European Commission's 'NetD@ys Europe 99' initiative to encourage schools, vocational training centres, museums and cultural organisations to set up educational online projects as part of its ongoing commitment to the education sector. The announcement was made at the opening ceremony of NetD@ys Europe 99 in Helsinki, 12 November 1999, 3Com being a lead sponsor of NetD@ys Europe 99.
  Final details of the $1 million equipment pledge, together with an application process, will be announced at the BETT show in London UK in January.

For more information :
email: Alex_Quinn@3Com.com
web: www.3Com.co.uk

Anglia Multimedia - creating effective educational materials

For the purposes of this report, Anglia Multimedia comprises two principal elements with two distinct and clear ranges of products:

1. **Anglia Multimedia**, which is the interactive publishing arm of United News and Media
2. **Anglia Campus**, which is a joint venture between Anglia Multimedia and BT (British Telecom)

Anglia Multimedia currently focuses on three areas:

I CD-ROM development for schools, with particular initiatives in numeracy at primary level, and science and English literature at secondary level. The main market for these products is the UK, but the US is also a significant market area, especially for the science products.
Anglia sees no reason to believe that the CD-ROM market will diminish in the near future. There remains a great concern in schools that Internet connections will run up very large telephone bills, and even the deals available to schools which ensure that bills do not go over a maximum ceiling can still mean very high charges for a primary school. Additionally, CD-ROMS run quickly and efficiently, and often make use of assets such as video, which the Internet, at present, cannot deliver effectively.

II Open software packages for schools that offer richer teaching and learning opportunities and experiences than those offered by some commercial 'off the shelf' packages and applications.

At the same time, Anglia is upgrading some of its existing products in this field.

III Professional development of teachers in ICT within the UK. This is a government initiative, made possible with money from the New Opportunities Fund, and sets out to ensure that all UK teachers have a grounding in basic ICT. This is a substantial growth area for Anglia Multimedia.

Anglia Campus focuses on delivering curriculum based content to schools and to homes over the Internet, and uses a subscription model for its business there. This enables the company to develop bespoke learning modules which ensure that all aspects of the curriculum are covered. Software tools such as Java and Javascript are utilised by Anglia staff in the compilation of these modules, and the creative effort inside the company can be tightly focused. Because the content is obtainable only on subscription, it is possible to monitor and control all of the rights issues.

Anglia sees that creating effective educational materials is the heart of its business, with technology being utilised only in so far as it assists in the creation and delivery of the content.

■ Being able to deliver content across a range of delivery platforms is critical here, and Anglia is already involved in porting its content to digital TV. This itself will probably mean re-purposing the content for terrestrial, satellite and cable transmission, as the technologies and capabilities differ on each.

■ Anglia sees that these delivery types offer new and different revenue streams, and does not see that these represent great changes for the company in terms of creation, marketing and legal issues.

■ The notion that educational content can be 'free' is one which Anglia sees as potentially destructive, and misleading, since at some point, everything has a price. The price might be in the devaluing of educational learning materials if publishing skills (editorial, design, research, updating, renewal and so forth) are ignored or lost; it might be in disguising the fact that the 'free' material has been paid for in other ways - perhaps by direct government grants, for example.

Anglia believes 'Traditional' revenue streams may no longer be sufficient, but believes that others will develop. However, no publisher can survive without any revenue streams!

For more information :
web: www.anglia.co.uk
www.angliacampus.co.

Apple - Distinguished Schools and Teacher Development Centres

By helping "lighthouse" schools develop more successful strategies for the use of computers and the Internet in classrooms, Apple hopes more educators will realise the high value of the investments governments and schools are making.

By partnering Teacher Development Centres, in making training in the use of ICT more effective, Apple hopes to dramatically increase the number of learners getting the benefit of new technologies in education.

Apple has for many years invested in fundamental education research, through the Apple Classrooms of Tomorrow project, pursued in close cooperation with the public sector in several countries. Apple's contribution to partnership is now focused on building a research based project and lesson plans called 'Units of Practice' and creating training approaches, that the Distinguished Schools and Teacher Development Centres can tailor to suit local language, culture and curriculum.
In Europe Apple is now supporting 3 ACOT sites and 15 Distinguished Schools, spread across 13 countries. Each Distinguished School is associated with a Teacher Develoment Centre. The schools are selected on the basis of their commitment to an approach that fully integrates use of ICT in learning and their willingness to promote to policy makers, VIPs, and press the value of the approach they are taking. Apple contributes some additional equipment, but a significantly greater cost is supporting the collaboration between the teachers, their updating, and their involvement in Europe-wide projects.

The public sector contribution is largely through the strong desire of the teachers and trainers in the project to contribute their time and expertise to the goals they too wish to achieve.

Lessons being learnt include:

- the degree to which the globally relevant approaches, that Apple can help bring, need adapting to be successful in different countries.
- how collaboration between countries clearly shows where national policies are most effectively helping teachers, and the considerable differences between European Countries.
- how, in order for most benefit to come from Apple's, the Schools', and the Teachers Centres' efforts, an openness to change by policy makers and education managers is required.

- The most significant factor preventing this partnership having deeper and wider impact is the uncertainty of national visions, as to how the whole teaching force will gain expertise in integrating ICT into their students' learning.
- The most significant positive results to date are the professionalism and commitment shown by those in both public and private sectors and the enhanced learning all the schools are seeing. There is also a strong belief that similar energy will come from many others, given appropriate motivation and support.

For more information:
web: www.apple.com/(country of your choice e.g. De, Fr, It, UK)/education/ads/adschools.html
email: Josiane Morel, Morel.J@euro.apple.com

Averbode Publishers - the realities of Educational Publishing

Averbode Publishers launched its first educational magazine in 1920, and today has a list which encompasses educational magazines and books for children and youngsters as well as for teachers, including fiction as well as reference.
The company was one of the first publishers in Belgium to enter into the multimedia business by developing CD-ROM products and Internet sites both for children and for the educational community. The Kid City website - published in Dutch and French - is particularly well known.

As far as Averbode is concerned, developing multimedia products means mixing pedagogical know-how with the new technologies and not merely translating existing content. The specific strengths of multimedia (communication, interaction, networking, one to one relations) are being used to create powerful and original educational products, services and tools with no relation at all to existing Averbode products.

■ The key issue for the success of the new information technologies in school will be the capacity to create original, culturally adapted and professionally managed educational content.
This will be all the more difficult because the market in Europe is small and fragmented (Belgium itself has only 10 million inhabitants, and three languages).

■ In such markets there is little chance that any valuable content will be financially self-supporting without third party support.
If the Belgian authorities deem it necessary for all children to have access to the NIT (the Internet in Belgium) in school, their support will be needed not only to acquire hardware and telecom products but above all to develop quality content.

■ Another key issue is to bring the majority of the teaching community to use the NIT. This involves teaching the teachers but also giving them enough time to get used to the NIT and to get acquainted with the possibilities offered by it.

Averbode's latest initiative in this field is the Explorian site (www.explorian.com), which has been developed especially for classroom usage. Explorian has also been conceived in such a way that it can easily be adapted and localised for use in other markets. This option was taken bearing in mind that exporting this product would be a crucial element in the overall business model.

Another vital factor for the viability of Explorian is the need to find alliances with natural partners in the realms of the Internet and convergence industries (including telecom operators, access providers, software developers, hardware builders, etc). Without them, the package of services needed to create comprehensive content products will not be persuasive. Such an alliance is being formed around Explorian in Belgium with the likes of Belgacom, Apple and Win.

Averbode is facing up to the realities of online educational publishing into the new millennium, where new kinds of partnerships and alliances are vital for a healthy future, and where new kinds of digital products must go hand-in-hand with new and flexible business models. It is also preparing to go to market in a Europe that is fast becoming one, but where differences in culture, language and curriculum make the creation of cross-market products a real challenge.

For more information :
web : www.averbode-online.be
www.kidcity.be
www.explorian.com

Centre for Educational Technology - fulfilling schools' needs

CET understands that schools must have software and training provided with computers, in order to make effective use of them. CET's aim is to provide schools with complete turn-key solutions and a single point of contact to resolve problems.
In providing this for the first Israeli government 5 year plan 'Tomorrow 1998', CET, which is itself a non-profit organisation, focused on software management tools, curricular software, provided hardware and also collaborated with hardware suppliers, Compaq and Acer. There was also pedagogy support either by CET or through collaboration with the public sector.

Lessons being learnt include:

- how the scale of the project created useful consolidation in the industry and enabled the commercial sector to develop the turn-key solutions, unique schools management software, and training courses necessary, with realistic expectations of sufficient commercial return to justify this.
- how the risks and responsibilities can be shared, between commercial partners and between the commercial sector and the public authorities.
- the time savings for schools in managing 'turn-key' systems, and the reduction in support required. Schools and municipalities were happy to have a single contact point for support, and could more easily calculate the total cost of ownership for the long term.

- An issue that has arisen in the current phase of procurement for schools is that changes have acted against provision of turnkey solutions. Splitting procurement and provision of hardware, software, and training into three separate parts has made it very difficult for schools to resolve problems. This is due to the problem of identifying where faults lie, software and hardware being so closely integrated and levels of training not being guaranteed.
- An additional problem is that movement to lowest cost tender processes has made it very difficult for the commercial sector to continue to invest in the time-saving tools, which are focused on schools' needs, provided with earlier systems.
- There is also an issue with regard to software. The Israeli government has taken an enlightened approach to software from the start of 'Tomorrow 1998', with 40% of the funding being allocated to software. In the second phase this has been reduced to 30%, but there is also the effect of falling hardware prices reducing software spending pro-rata. Consideration should be given as to how the appropriate investment in software for educational institutions should be assessed, relative to need rather than as a straight percentage of overall spend.
- Turn-key systems are obviously desired by schools as they continue to approach CET and other integrators for such systems. Looking forward, the partnership between government and the commercial sector needs development, in order that best value can be obtained for schools without losing those elements that are of high value to educators but which are not clearly costed or paid for.

For more information:
web: www.cet.co.il
email: leah mansoor.leahM@cet.ac.il

Public-Private Partnerships in Practice

Cisco - Networking Academy Program

It is only if sufficient young people develop the knowledge and skills to make the networked world a reality, in all countries of Europe, that we will remain a powerful global economic force.

Cisco wishes to operate in those dynamic, forward-looking countries, where their employees can play a full part in the 21st century world, and where the whole economy is vibrant.

To this end Cisco has created the Cisco Networking Academy Program, which has developed and maintains an important part of the 21st century curriculum. Cisco's long term contribution underpins open development of the Academy syllabuses and its extension to new regional centres and their partner colleges.

Individual schools and colleges, that appreciate the potential benefit for students, have joined. They are independently growing availability of courses and qualifications for young people.

Lessons being learnt include:

- the importance of the body of knowledge and concepts, and not just the technical skills, that the Academies deliver.
- how the qualifications gained through the colleges teaching the Networking Academy Program improve the employability of the students and help overcome the skills gap for local new technology based companies.

- This public-private partnership is expanding through geared approaches that give a measure of autonomy to regional centres, with a very high level of activity in many of the poorer and smaller countries of Europe.
- An inhibition to greater expansion is the need for greater public sector involvement, if what the Academy offers is to reach people in their local language and with greater integration with national qualification structures.
- A significant positive result is the entrepreneurship being exhibited by colleges that choose to establish Networking Academy courses, and the large amount of support that is then forthcoming from students and parents.

For more information :
web: www.cisco.com/edu/emea
email: emea-academies@cisco.com

Deutsche Telekom - present engagement with ICT in Learning

Deutsche Telekom (DTAG) aim at providing learning services which cover the whole range of education and training, whether in school, universities, business and leisure time. They will do this by providing a highly flexible modular platform through which a broad spectrum of content providers can offer their products, including publishers of school materials.

Not only will the content cover a wide range; Telekom's education and training platform will also allow all conventional learning styles and modes and add new ones based on new methodology. There are complete service packages for schools, universities and other educational institutions.

DTAG is making large investments in their Global Learning platform. They are installing technology the capacity of which will not be exhausted even in the event that the most optimistic prognoses become true.

They will also tailor comprehensive training solutions to a wide spectrum of learning environments using a variety of technologies. This spectrum will comprise corporate training, schools and public education, as well as university instruction.

DTAG has exploited the relationships of Learning with the New Media with neighboring fields, such as Teleworking and Product Documentation, by using them as a way to ready the market. They have used these fields for raising awareness and creating acceptance of ICT in learning. They plan to integrate such services, where desired and feasible, and, therefore, refer to their services as Information and Knowledge Management.

Public-sector involvement

DTAG recognized early that ICT in learning will only be successful if questions of cognitive approach, pedagogy for the New Media and quality of content are resolved. In preparing for the pedagogical side of ICT in learning, DTAG has formed a public-private partnership with the German Federal Ministry of Education. This non-profit organization is called Schulen ans Netz e.V. (SaN) or "Schools go Online". The project was initially funded with 30 Mill. ECU put up by the Ministry, Deutsche Telekom and a group of other industrial sponsors.

SaN led to many projects of high quality, which became examples of best practice and served as multipliers for the advancement of ICT in learning. SaN intends to equip all 40 000 German schools and connect them to the internet. This goal is expected to be reached in 2002.

With teacher shortage being a major obstacle in the introduction of ICT in schools, SaN has inaugurated a project for Teacher Training in ICT, Lehrer online, in the Schulen ans Netz program. Deutsche Telekom is also participating in R&D projects of the European Union that are aimed at radically transforming the way students learn and teachers teach.

An important aspect of Telekom's learning services is the "metering" of services: The learner pays as much as he or she uses and only that. This type of financing allows low-cost services and is the only way of ensuring sustainable and competitive funding of telelearning services in the long run.

Lessons being learnt include:

- They were able to weed out non-promising avenues in ICT in Learning and found that more is not always better. Thus they realized that interactive television (in the US sense) with two-way video has not been effective pedagogically. This was supported by an empirical study by Schulen ans Netz. US universities that employ interactive television have reported similar results.

- DTAG found that partnerships in their traditional form are too inflexible to react to the continual rapid changes that the field is undergoing. A period of six months for negotiating the partnership contract, as has been customary, cannot be tolerated in this field. With the kind of close cooperation that is required, the "chemistry" between the collaborators from the partner companies becomes essential. Also, the controllability of partnerships in terms of change of direction or quick adjustment to new market conditions has been a crucial factor.

- Therefore, in partnerships, DTAG considers it important that appropriate measures be taken such as mutual representation on the Board of Trustees or at least at the middle management level. They think that giving a partnership the character of a joint venture will also be helpful. Certainly a jointly operated customer service department must ensure that there is consistency in customer support. In all these measures care must be taken to alleviate the junior partner's fear of being crushed by a behemoth of a 200 000-employee Corporation.

Present issues and tasks

An obstacle in the introduction of ICT in schools is seen in the lack of a federal, i.e. supra-regional, office that takes the lead in integrating ICT in schools. Doing promotional work in each region separately duplicates efforts in time and resources. An example of a useful measure by such an agency would be the introduction of the European Computer Driver's license in the area under its authority. Instead of viewing content providers as customers who place their content on learning platforms, DTAG will in the future ensure high quality content by forming partnerships with content providers such as universities, corporations and public institutions.

For more information :
email : gabriele.zillner@telekom.de
web : www.dtag.de

DZS Publishers - a pointer to the future

DZS is a pointer to the future for much European new media publishing, and it is already facing up to challenges that will soon become familiar to many other educational publishers, not just small publishers.

DZS is a Slovenian company, and its home market, with a population of two million, is small by definition. And, despite our common heritage as Europeans, DZS faces all of the usual language, cultural and curriculum challenges if it wishes to sell beyond its borders. DZS could then, either look to a small slice of a large market, or a large slice of a small one. It has opted for the latter to give it enough strength in its home market to be able to face global futures.

DZS Inc is the major publisher of educational materials in Slovenia, and it has a long tradition in text book publishing. Up until the very recent past it focused on the institutional educational market, mostly in primary (7-14) and secondary school (15-18). It entered the new media business five years ago with reference CD-ROMs. Because of the very small market, it had to look for more systematic and long term solutions.

As Slovenia is a small nation, and because of the possible threats it will encounter in a united Europe, DZS has to have a strong home market position and be prepared to face the European market. So, its strategy is to build a Slovenian Learning Information Community, with strong participation from foreign publishing, software and communication companies. It is building an information system designed to be flexible and open, so as to fit within the worldwide information society.

It plans to become a knowledge provider independent of media type and to offer the best quality of products and services. To this end, DZS started a huge project which can be translated as "Education by Choice and Measure" whose main purposes are:

- orienting all educational activities to the individual
- publishing basic, additional and special content on different media
- transferring from being content to knowledge providers (educational services)
- entering all subjects, levels and across the breadth of the learning population
- setting up an appropriate digital publishing information system and, finally, setting up the information learning community with all interested industries, government and the public sector.

In order to make that suite of products acceptable and workable across the broadest possible band of technologies and delivery platforms, DZS is adhering to international IT standards, and has developed close relationships with the relevant key players in the convergence industries.

Partnerships are critical here, and DZS is strongly connected with European educational publishers for joint R&D projects, and is running several projects with national research institutes and universities. It has signed a letter of intent to co-operate with Slovenian Telecom, has made long term deals with Dorling Kindersley MultiMedia, Discovery, Q-Multimedia, Compedia, and is working together with the Slovenian Ministry of Education.

In Slovenia, DZS has found that the biggest challenges are not with the technologies, but with people. When promoting new technologies, concepts and philosophies in traditional environments it found that persuading traditionalists takes much time and energy, with no guarantee of success. It found no problem in convincing top management, but there was resistance at middle management and shop floor level.

Clearly, it was essential to retain traditional didactical, pedagogical and psychological knowledge and methodologies across the gamut of educational publishing, including "digital learning". Therefore, DZS is adopting a gradual transition from traditional to digital through hybrids and additional materials.

Products under development include:

- TRIS integrated content (three types of media and three types of content)
- Personalised content over the Web (flexible self-learning)
- Distance learning courses
- Standalone applications with new didactic approaches.

DZS is in a strong position precisely because it saw the absolute necessity to build a strategy that fitted its market, and is building products that will fit in an educational environment where integrated learning is the norm in all learning establishments.

For more information :
Web: www.dzs.si

Espresso - interactive, video-rich, content for classrooms

Espresso is focussed on creating and delivering a new level of video-rich multimedia content, based on convergence of skills from education, television, computing and telecoms.
Their aim is to bring the digital media of the future - to support education now - by using satellite delivery and powerful in-school systems.

In doing this they are working closely with educators and have trials established across 15 education authorities in the UK. The educators are contributing to the development process to ensure the content is educationally appropriate. The European Space Agency is also supporting the trials. Commercial launch of the service is scheduled for Q1 2000.
The service brings to learners, real world events with full-screen video news, TV, library resources and selected world-wide web-sites, as well as the specially created curriculum content.
All content is supported by the Espresso Staffroom, available over both broadband and narrowband internet, providing teachers with an extensive range of pre- planned lesson guides, community development and curriculum development content guides.

Insights being gained include:

- the high level of stimulation and motivation that it is possible to achieve with media of this kind and the strength of the learning that follows.
- how content created to suit a specific physical or curriculum area can be powerfully relevant in other areas, due to the richness of the media.
- the difficulty of convincing some educators of the benefits that properly authored, video-rich, content can bring. Content of this kind has to be experienced to be properly appreciated.

- The lack of understanding of, and belief in, the educational impact of this kind of content is a major inhibition to development. It is concerning that in general, little attention is being paid by education authorities and agencies in Europe to the content possibilities that broadband brings. This is particularly worrying given the speed with which broadband connection is being introduced.

- The problems in expanding content development are compounded by the idea, in the minds of many educators, that Internet 'content' is free. As a result huge amounts of teacher time is being wasted in hunting for web sites. The use of these then requires additional teacher time to integrate their use alongside other content, to suit the teaching approach.

While teachers have considerable skill with textual media, their skills in using and developing educationally focussed multimedia are poorly developed. Espresso has recently won accreditation from the UK Teacher Training Agency to deliver an extensive range of broadband, interactive, video-based teacher training modules for use of ICT in the classroom.

Espresso is showing that where partnership between professionals in this field and educators is happening, the learning that results considerably exceeds expectations. The key issue is how we can spread these benefits rapidly enough.

For more information:
web: www.espresso.co.uk
email: tbowden@ espresso.co.uk

France Télécom - developing internet use in education

Assuring that the tools of the information age are used in French schools is a major challenge for France and one that will significantly affect future employment and social unity. To do so also means taking a decisive action to modernise the educational system.

Since two years France Télécom has worked in collaboration with the sector's players and the French government to develop the use of ICT in the schools. For the educational system, the company is already very active in developing Internet access networks and educational applications of on-line services and multimedia.

To meet the requirements of the educational authorities, France Télécom has set up a specific group to broaden its product line in this area and has built a range of products specifically dedicated to education under the name of Scol@gora.

France Télécom and multimedia in education

France Télécom has set itself objectives at three levels:

1 Technology: Schools will need the appropriate equipment and services to be able to take advantage of the new technologies. France Télécom's objective is to propose solutions that will be easy to install and use, particularly from the point of view of those responsible for acquiring and operating the systems, whose concerns include reasonable prices and cost control.
2 Quality: Teachers will not use any system, no matter how "magical," unless it is truly useful for teaching. Only high quality content will motivate teachers and students.
3 Equality of access: France Télécom, the national operator in charge of universal service, wants to assure equal access from anywhere in France.

Special terms for Internet connection for schools and educational institutions

Since July 1998, France Télécom has offered a "School Internet Pass" at substantially lower rates than both consumer and business rates, providing:

1 Favourable pricing, identical throughout France to ensure that all educational institutions have equal Internet access;
2 Annual contracts to allow accurate budgeting and cost control;
3 A simple and modular price structure to allow for growth in the use and the installation of additional PCs.
Wanadoo, France Télécom's Internet service provider, is also available at a special flat fee for unlimited use.

The continuing growth of the number of teachers and students accessing the Internet and the accelerating trend toward multimedia content will require services giving schools easy-to-handle high-speed access at affordable prices. To meet these needs data transmission speeds of both the access and transport networks have to be increased.

To prepare for these changes, France Télécom has set up experiments in partnership with manufacturers and the education authorities. They involve either ADSL, a technology which provides high-speed transmission over the existing hard-wired telephone network, or satellite access in conjunction with terrestrial networks, a solution well adapted to the interactive distribution of multimedia resources.

France Télécom intends to be a major player in the development of Internet educational services and applications.

France Télécom aims to be a major partner in the education sector, which includes teachers, programme providers, local authorities and multimedia publishers. Various Groupe France Télécom departments, and subsidiaries as well as regional agencies and the Education Project management team are working together and are combining their expertise in numerous partnerships that will encourage the development of Internet use in education.

At the start of the 1998/99 school year, the company has set up a Web site for teachers at www.edu.francetelecom.fr. This site was replaced at the end of 1999 by a new educational portal called Wanadoo Edu with tools specifically developed for teachers and pupils, so that they can easily create their own websites, engage in cooperative work between classrooms and search for pertinent information with high educational quality.

Finally, the company is involved in the creation and transmission of educational content. Examples are the on-line service @près l'école, developed in conjunction with Bayard Presse for home use, and the edutainment CD-ROMs published by France Télécom Editions.

On its own, France Télécom has launched the programme, "France Télécom's Ambassadors to Schools," where 3 000 employees conduct, on a volunteer basis, information sessions for teachers and school administrators at their places of work. The purpose of these sessions is to familiarise the teachers with Internet use regardless of their knowledge of new technologies.

For more information :
web : www.francetelecom.fr (to know the specific offerings for schools)
www.wanadoo-edu.com, the new France Télécom's educational portal
email : christiane.payan@ francetelecom.fr

Granada Learning - new strategies for educational content

Granada Learning is one of the UK's leading educational multimedia companies, publishing CD-ROMs and videos for the primary and secondary sectors. Teachers and educationalists are involved at every stage of the production of titles, strengthening the reputation of Granada's curriculum-based list.

The company has a number of key new products and strategies. These point to its future in a UK market which is increasingly competitive. It will become all the more competitive as new business models for the creation and purchase of learning content emerge, and as learning grids become more and more influential.

Granada Learning also has a special needs division, SEMERC, the acknowledged market leader in the field of ICT and special educational needs.

Taken together, all of these new products and strategies show Granada working towards a schools environment where fully networked ICT solutions are the accepted norm for much day-to-day teaching and learning.

■ Alliances, partnerships and acquisitions:
Granada recently announced its purchase of Letts Education, which is one of the most well known educational names in UK publishing. Its books are prominent in high street book stores and one in five primary school children use a Letts Literacy book. Letts itself has recently been re-thinking its own strategy with regard to multimedia and the re-purposing of its content for use on the UK National Grid for Learning.
Another recent acquisition is BlackCat Software, a leading supplier of educational software for primary schools, specialising in tools and applications.
Each of these strategically chosen alliances helps to strengthen Granada's presence in the marketplace.

■ European product:
Working in co-operation with the EU's Telematics Applications Programme, Granada has developed a Europe-wide language learning CD-ROM, enabling children in Key Stages 3 and 4 to work in English, French, German or Spanish. As well as covering the modern languages taught in UK schools, this product will allow Granada to enter wider European markets.

A second partnership product is due to be launched in November 1999 and is a multi-lingual CD ROM, 'Technology Insights - Knowledge Society'. This bas been developed in conjunction with the Open University and SAELN (Students Across Europe Language Network).

■ Winsuite:
This is a product which enables the management of the way PCs are used and accessed, allowing administrators to define who has access to what on the computer, and also allowing tight control over Internet access. Products like Winsuite are becoming more and more necessary as schools invest in suites of computers that would normally require individual maintenance and control.

■ Intranet solutions:
Perhaps the most adventurous of Granada's recent new products is a browser-based content retrieval and creation system. At its heart is "Internet Odyssey", a Granada application which enables Local Education Authorities (LEAs) to store huge quantities of information on their own servers, which can then be accessed and used by all the schools in that LEA. The content is based upon Granada's own product lines, with Odyssey enabling users to mix and match to their own requirements.

For more information :
web: www.granada-learning.com
email: info@granada-learning.com

ICL - Synergy Centres

Synergy Centres in Belfast, Northern Ireland, is a joint venture between ICL, the leading IT global services company, and the University of Ulster. The project was originally funded by the European Union Special Programme for Peace and Reconciliation. The centre, which is right on the Belfast peace line between the protestant and catholic communities, aims to equip people who missed out in mainstream education with the IT skills necessary to survive and gain employment in the digital age.

ICL's vision in creating this initiative was threefold.
As a responsible global employer it wished to add its weight to peace and reconciliation in the area in a practical way. Secondly its corporate policy is to show social responsibility by investing in communities in which it does business and thirdly, by so doing, it believes its core business will be enhanced.

The specific aim behind Synergy Centres was to create a self-sustaining business, exploiting and delivering information-age technologies to aid employment, counteract social exclusion and assist with economic regeneration in a very challenging part of the United Kingdom.

Synergy Centres offer IT training at two levels.
Firstly there are the CyberSkills workshops which provide an introduction to Internet, interactive multimedia, web authoring, video-conferencing and e-mail. Since its set up in 1997, around 6,000 workshop places have been provided. There are many accounts of people who have applied the skills they developed in the CyberSkills workshops to their own small businesses in the area. Accreditation is possible via the Open College Network (OCN) and training has been provided by seconded staff from the University of Ulster and ICL staff.

Secondly a multimedia apprenticeship is offered directed more specifically at producing IT professionals after one year's full-time training. The skills developed on this programme include more in-depth web authoring, CDROM production, 3D animation, digital audio and video and delivery optimisation. This programme is in its second year and last year of the 12 students taken on, within 2 months of finishing the programme 7 got jobs in the multimedia industry, 2 set up their own businesses, 2 got jobs outside IT and one was still a job seeker. This qualification is similarly accredited by the OCN at National Vocational Qualification level 3.

Synergy Centres' contribution to the community has been so successful that in July 1999, it was awarded a Business in the Community Award for Excellence, presented by the Rt Honourable Tony Blair PM.

- ICL believes that a project like this owes its success to partnership with the public sector, but with a firm steer being given by the company itself. It has seconded two of its senior managers to ensure that the centre is well-run, focused and has a sustainable future based on a carefully thought-out business plan.
- Shared aims with the public sector partner are obviously vital and in the case of Synergy Centres both sides share a firm commitment to peace and reconciliation through economic regeneration and prosperity, based on the acquisition of skills for the digital age.

For more information:
email : callicl@icl.com
web : www.icl.com

Intel - the Scoilnet portal

Intel is collaborating with the Irish Government Department for Education and Science, and NCTE, in establishing a very innovative approach to provision of online content and services to schools and homes. The aim is to enable schools, pupils and parents to benefit from the most up to date and forward looking online systems possible, and raise the quality of Irish education.

The portal, www.scoilnet.ie, includes:

- free content
- online publishing tools to encourage pupils, teachers, and parents to participate in the development of online resources
- a variety of online discussion forums
- newsletters
- staffroom section
- special needs area
- professional development area.

An e-commerce area is also being developed to help providers market and supply a range of high quality goods and services directly relevant to the needs of schools, teachers, and parents (such as musical instruments, books, educational software etc).

Intel have a large presence in Europe, including a manufacturing site in Ireland. Support of national communities throughout Europe is a priority for Intel. Intel is also strongly committed to aiding development in the education sector generally, worldwide. The investment being made is partially philanthropic but also for long range strategic purposes.

Intel is supporting national education in Ireland through the design, development, hosting and maintenance of the Scoilnet site and are at present in advanced discussions with a number of other countries and regions, to provide similar services throughout Europe and Asia.

Intel is contributing considerable manpower for management and development, and the expertise and knowledge that allows the Education Portals to be developed - and then to continue to evolve at Internet speed, taking immediate advantage of new technology developments.

In Ireland a team of 50 volunteer expert teachers spend a little of their time each week moderating the content that is developed by schools. The support of this team is a matter of partnership, with support from both Intel, the Irish government, NCTE, and the schools from which they come. All partners work closely in developing the portal.

Public-private partnerships (ppp) are proving to have a much wider impact today than their more traditionally perceived role as a source of funding to allow government ministries to achieve more than their budget allows. Today they are enabling government to partner with world-leading technology companies, to benefit from the best technology and management experience in the private sector. Critically, a ppp enables a government to share the risk of a major investment evenly with a strong private sector partner.

Lessons being learnt include:

- that it is possible to form very close partnerships between government and commercial companies, provided appropriate safeguards are built into the agreement, and the priorities and aims of the commercial partners complement educational principles.
- that clear policies on online advertising, with clear separation between classroom and commercial activity, are practicable and can in fact bring real benefits to the education community.
- the necessity to combine development of the site with training of teachers.
- it is possible to enable many smaller providers of good educational products and services to reach out to schools, teachers, and parents in a way that previously only large companies could do.

- An issue is the on-going costs of content development. As this is potentially a limitless cost, the current policy is to mount only freely available content, from commercial or education sources, on the site. All the funded content effort is put into managing and moderating this content to ensure quality and usefulness.
- As the way the site develops will depend on access, a critical component is the provision of Internet access to schools and homes, on which the Irish government is working closely with Eircom.
- A key element of this innovation is exploration of the business and management models that will bring sustainability. With e-commerce only in its early stages of development in Europe, the prediction of how this will develop is impossible, but this is a risk Intel and the Irish government feel is worthwhile.

For more information:
web: www.scoilnet.ie
email: Peter.Hamilton@Intel.com

Microsoft - the AATP programme

Microsoft have been running the Authorised Academic Training Partner (AATP) programme since 1992 and currently have over 300 partner educational institutions on the programme in Europe.

AATPs deliver software-related training using specially designed resources, the Microsoft Official Curriculum, preparing students for certification which is recognised as a benchmark credential in the IT business. An AATP can be any education establishment in Europe, a school, college, university or any not-for-profit training provider.

Like all major IT vendors, Microsoft is concerned about the labour market shortage across Europe for skilled IT professionals - whether those vacancies are in user organisations or providers such as service providers or vendors. In setting up and fostering the AATP programme, Microsoft believes it is playing a major role in reducing that gap, by encouraging academic institutions to offer Microsoft certified professional qualifications. These are often taken alongside degrees or courses validated by other bodies. Microsoft has also a strong corporate sense of social responsibility and is committed to helping academic institutions support economic development and regeneration in their own local communities through the application of IT business skills.

AATPs such as the UK Universities of Sheffield Hallam, Wolverhampton and Plymouth can purchase the Microsoft Official Curriculum resources at cost price. Their students vary considerably, from traditional undergraduates on full-time courses, to unemployed adults on re-training linked to redundancy and outplacement programmes, to employed IT professionals. Certification ranges from the entry-level 'Microsoft Certified Professional' (MCP) through to 'Microsoft Certified Systems Engineer' (MCSE) and MCSE plus Internet. The courses cover Developer, Back Office and Desktop Operating Systems products. Academic staff have to be themselves certified as Microsoft Certified Trainers (MCTs). Universities that join the programme deliver at least 100 course units per year.

Partner institutions, such as the universities above all feel they are responding to the needs of both their students and the labour market by offering a business certification programme, often alongside traditional courses. In particular they feel they are responding to the need for rapid training throughput and flexibility in skills needed. In the past, the application-specific training they provided was often out-of-date or too narrow for the needs of business. Using the MOC materials either to supplement existing courseware, or as stand-alone for Microsoft accreditation, means they can produce students with the generic practical software skills needed by the majority of businesses.

AATPs can also offer training on new Microsoft products, thereby ensuring that students are continuously at the leading edge. Some of the students in the universities given as examples above are already IT professionals studying part-time to gain formal recognition for their current skills. Others may be re-training into the IT world and are often on redundancy programmes from previous employers. This is often the case at Sheffield which is still suffering from the decline of the traditional steel industry.
As in any partnership, the critical success factors are those concerned with co-operation between the public-sector provider and the commercial partner and ensuring that the needs of all are met as far as possible.

Microsoft's AATP programme is successful in that it provides benefits to:

- the students, who are better placed for the job-market;
- employing organisations in that the labour market shortfall is reduced;
- partner institutions whose knowledge and traditional offerings are enhanced;
- and Microsoft itself which gains recognition and is seen to be contributing towards economic development and alleviating the IT skills shortage.

For more information:
web : www.microsoft.com/education

Oracle : the Oracle Academic Initiative

Oracle, in furthering ICT in learning, concentrate on the academic community. Their approach is unique in that they do not sponsor activities, in terms of spending money and hoping for future benefits, but rather have tailored support to the academic community on a break-even basis.
Thus, in principle, they can afford to expand such support activities in an unlimited way since budget justifications are not a sensitive issue. Their program is called the Oracle Academic Initiative and has developed activities across Europe. They form partnerships with Colleges and Universities.

Since budget justification has not been an issue, no internal resistance or problems had to be tackled, resulting in unhindered growth of the program.

Lessons being learnt include :

- The philosophy of the Oracle Academic Initiative is that involvement, and learning results, are much more effective when the commitment of the supported is ensured by affordable financial sacrifice. This principle is standard practice in psychotherapy and is supported by striking results. There is no doubt that the same is true for learning.
- Oracle consciously stayed away from arrangements in which institutions that participate in the program must commit to certify their instructors. Oracle's experience is that through such a condition too much inflexibility and a dampener on motivation are introduced.

History and details

The initiative was started in September of 1998 and thus can look back on two years of experience. Alone in France there are 100 institutions where the program has been integrated into the curricula.
Oracle's motto for the initiative is Win! Win! Win! The phrase refers to the triple benefit of supporting students and teachers at educational institutions, creating, in a tight human resource market, a pool of experts who are familiar with Oracle software and thus boosting Oracle's sales in the long run.
Oracle's program offers different types of support depending on the type of agreement that Oracle has negotiated with a particular institution. They speak of modules and compare them with Lego bricks:
The institution can get the unlimited use of a set of software including a Support Kit. For this the institution pays a flat fee of EURO 1000 per annum. In another arrangement, students and teachers at an institution are entitled to a 50% discount on courses at Oracle customer training facilities.
In a third module they offer Starter Kits, of which they presently have 13, for EURO 177 each. In these they offer a curriculum supported by print and electronic material on how to install and initial Oracle databases. In hands-on experience, these curricula can be integrated into the institution's syllabi by applying them to real-world problems such as laboratory work etc. And finally, students can receive a 40% discount on certification exams.

Tasks pursued

Oracle sees itself as successfully tackling the precarious situation in which the field is today, which is characterized by an extreme shortage of human resources.

Oracle's aim for the initiative is:
"Partnering with Academia Across Europe to Prepare Students to Address European Computing Infrastructure, Manage Year 2000 Issues, and Process Single European Currency."

The last two issues have significantly contributed to drain the European market of experts.
Since Oracle is providing, and bases their learning units on, the latest software developments, institutions are able to improve their infrastructure and attract talented students.
Oracle has not done research to quantify the achievements of the program. They are sufficiently convinced of the program's benefits, so that expensive studies are not warranted in their view.
At the same time, Oracle can afford to be unconcerned about showing quantifiable results since they are in much less need to justify budgets than others.

For more information:
web: http://education.oracle.com/oai
email: jplamarg@fr.oracle.com

RM plc - the Managed Service provider to Dudley LEA

Last January, RM signed a 10-year contract with Dudley LEA to build and operate the Dudley Grid for Learning.
Dudley is a local education authority in an urban area of the West Midlands serving a population of 0.3m and with 105 schools.
This PFI (Private Finance Initiative) project is a government 'pathfinder' project in the field of ICT in schools and its implementation phase is now nearly complete. RM is involved in a number of Managed Service projects but this is the most ambitious to date.

The Dudley Grid for Learning will provide 105 schools, 2,500 teachers and 44,000 pupils with up-to-date computer equipment, including laptops, Internet access, email connection for all students and teachers (providing email addresses to all pupils and teachers two years ahead of the Government's own targets) and new learning software.

The educational impact these will bring represents a step-change in the attitudes towards, and the usage of, ICT by pupils and teachers, in delivery of the National Curriculum in the classroom through ICT and in independently-evaluated pupil learning gains. The aim is that RM's management of the technology will free teachers and pupils to focus on the National Curriculum value of ICT in the classroom.

This ten-year contract, a 'first' in the educational sector, is unique in that it directly links receipt of payment to learning gains.
This clause not only assures the availability of equipment, software and services, as most PFI projects do, but also assures a genuine contribution to the development of teaching and learning in Dudley.

The service is based on a wide-area network linking all schools. In addition, each school receives its own local network, delivering a wide range of multi-media curriculum resources. These include learning system software to support pupil development in English and Maths; video conferencing; interactive whiteboard technology and access to resources from home.

A Dudley Virtual Resource Centre, an extensive website, is being created which will hold teachers' resources and host teacher conferences promoting best practice. It will also promote inter-school collaboration.

As part of the Managed Service a laptop is being provided for all full-time equivalent staff to enable them to develop their own skills and manage their own work. Training will be provided for all teaching and administrative staff. This will cover basic computer skills, curriculum usage of ICT, school administration and management of learning system software.

Lessons being learnt include:

- For it to succeed, it is essential that the aims and objectives of both the supplier and the authority are very closely linked so that each shares the other's success and a strong partnership is built.
- Another key issue is to identify the customers of the service and to communicate with them as often as possible.
- For this approach to become widespread, companies will need the confidence to support similar projects with the necessary finance.
- The support of the Government for ICT PFI projects, and especially educational ones, will also be crucial.
- However, the principle of a specialist supplier managing the technology, while the ICT co-ordinator in school spends more time ensuring that other teachers use the technology successfully has to be sound."

For more information:
web : www.rm.com

Appendix II
Future digital media business models

The business of traditional content providers and educational publishers is likely to be very badly damaged by the digital future.

The following scenarios are already happening in Europe. If successful they will spread rapidly

The main issue is whether irreplaceable capabilities and skills will be lost, if these business models prove to be viable and to properly serve the needs of learners.

The difficulties in creating dialogue to explore these issues are:

- Those developing new approaches are extremely cautious about exposing commercially confidential information.
- Traditional publishers feel very threatened by the difficult changes and possible dramatic decline in revenue of new business models.
- For policy makers, approaches that are educationally and financially desirable may have big implications for national education management and free market competition.

The E.E.P. is hosting Seminars to find ways to explore the issues raised. We will also be pleased to hold Round Table discussions with Policy makers about these issues.

The following snapshots are underpinned by a fuller Briefing that has been circulated to all E.E.P. members.

FUTURE DIGITAL MEDIA BUSINESS MODELS

★ Managed Services

For schools a very desirable approach to provision of access to computers and networks is to buy a managed service.
Full managed services include updating of hardware, maintenance, support, training - and provision of content.

As education budgets are very tight and hardware and support are expensive but vital, most of the money a school pays is spent on these. Schools also need more computers and higher bandwidth, so more attractive offerings can be made to schools if the content can be sourced more cheaply.

As the companies providing managed services have global contacts through which they can obtain free content, and as older but still effective content can be purchased very cheaply, the money spent on content can be minimised.

If it becomes national policy that schools should purchase managed services, an effect could be that there is much less money in the content market, excluding innovation, constraining the free market for content and lowering quality.

★ Independent Experts

An academic has more information, textual and visual, on a major cultural heritage site than anyone living. She acknowledges that she knows nothing about the publishing process but can see that digital publication can take her material and disseminate it.

A company that understands the technical issues agrees to work with her to make the material available. Unfortunately neither she nor the company understand issues such as rights, structure, design, editing, production, and marketing/distribution.

Many thousands of euros are spent along the way, but the technically oriented company mangles her concept and content. What should be a superb and unique information resource gets effectively lost because of naivety and ignorance and some bad advice. It exists, but is of poor useability, poorly promoted, and impossible to resell or re-publish.

★ Commercial organisation with educationally useful information

A major provider of utility services to homes is already in conversation with telcos about broadening its services into the home.
That means content available on domestic appliances such as refrigerators, as well as TV, computers and mobile phones.

The Utility Service Company acquires another company with a huge cartographic and telematics arm, Internet content with a development team, and a Publishing Division.

This commercially generated content is marvellously educational, including maps of most of Europe, travel publications and huge databases of geographical, historical and cultural information.

As the content has been fully paid for by the market for which it was originated, it is a marginal cost to version it for learning and educational purposes.
In addition, its use in education will promote the home services from which the Utility company makes its revenue.
Even free distribution could be contemplated.

★ Public Sector Broadcasters

As part of their educational remit, a public broadcaster produces educational CD Roms. These are sold to schools for little more than media and distribution cost. They are also developing educational websites, accessible free.

The expectation of very cheap content is created in the minds of teachers, which severely damages the commercial educational content market.
This also acts against national efforts to stimulate the commercial content sector.

Content from organisations with community responsibility

A City Council has big plans for a community education infrastructure providing vast amounts of local information to everyone, free. This will be provided through all the libraries, schools, Council offices, and - ultimately all the homes of all the citizens.

Their vision is that everything, from court records to church records, to museum collections, to whole books of local interest, to regional TV archives, will be available on computer, on touch screen and on TV.

The Council understands partnerships, knows that this is about real, grass-roots democracy, and have numerous connections they can use to help make their vision a reality. They can also re-engineer Council budgets as traditional information dissemination mechanisms are superseded.

The power goes to them and to their citizens; it no longer rests with traditional knowledge and content providers.

Free Content

An internationally respected content provider decides to make all their content available free on a web site. Their intention is to use this online content as the promotional tool for revenue generation from other sources.

Schools and colleges, with good bandwidth, computer systems, and printing facilities, find this content initially very useful.

However, over time, the priorities driving the content generation change in response to the advertising and product opportunities of non-educational users.
This impacts on the educational usefulness of what previously was good educational content.

Government level partnerships.

A national government, requiring a single main portal for learning content, partners with the global company that can best provide the technology, databases, servers and software required.

Part of the overall deal is the contractual arrangements which determine how educational content will be created and disseminated via this system.

A powerful incentive for this approach is very close linkage with teacher training approaches. This radically increases the useage of the content in schools and market awareness of the company.
A benefit for government is that it can easily promote to all schools specific approaches to key areas, such as literacy and numeracy teaching, which it believes will raise standards.

Through the power of the government's support, the portal becomes the main route by which schools, teachers and learners access the Internet and digital content. This brings significant advertising and e-commerce possibilities which themselves could influence how the system is developed and the priorities for deciding on content.

Appendix III
Partner Organisations exploring developments

The European Education Partnership is pleased to be working with the following organisation, some of whom are also E.E.P. Members, as all are sources of vital information to aid promotion of ICT in leaning.

BESA (British Educational Suppliers Association)

■ e mail: besa@besanet.org.uk ■ Website: www.besanet.org.uk • www.education.co.uk

BESA is the trade association for the British educational supply industry. Funded by industry to inform, to promote and to unite the UK based companies serving the education and training sectors, working together to ensure high standards and value for money in the supply chain.
BESA members form a unique community serving a specialist market and include the widest range of suppliers of products and services for use in education and training including teaching aids, equipment, furniture, technology hardware, software, ICT peripherals and infrastructure, for all subject areas and across all age ranges.
BESA is the focus for the committed educational supply industry and acts as a link to Government, working alongside education.
The Association's work includes services offering Information, Promotion, Research and Export opportunities and in the UK includes the development of both national educational exhibitions BETT and The Education Show.

ecmc (European Centre for Media Competence)

■ e mail: info@ecmc.de ■ Website: www.ecmc.de

The European Centre for Media Competence (ecmc) was established as an interface organisation in the appearance of a public-private partnership with public and private shareholders (among them Deutsche Telekom, German Trade Union, RTL, Siemens and more). As its core task, ecmc has specialised in planning media competence schemes for a variety of fields and target groups and in implementing them in projects, e.g.:

- Call Center Academy NRW (CCA NRW) - Training for a future-oriented sector at more than 20 locations (www.cca.nrw.de).
- European Experts' Network for Educational Technology (EENet) - German member and host of website (downloadable report at:www.eenet.org).
- NETD@YS NRW - in the frame of Netd@ys Europe; 1999 score: 160 schools and well above 400 companies and organisations participated (www.netdays.nrw.de).
- Telementoring - pilot project that combines the proven practice of mentoring with Internet communication, enabling professionals to make significant contributions to job opportunities of young people (www.telementoring.de).

ETIS - European Telecommunications Informatics Services

■ e mail: rs@etis.org ■ Website: www.etis.org

ETIS is a Telecom Operator Organization, playing a catalyst role between the telecoms and the IT industries.
ETIS' mission is to provide a forum for cooperation in IT fields for its members and players of the new Information industry, including Telecom Operators, IT suppliers and content providers. ETIS provides a forum for exchanging ideas and experience, and identifying common business and technical issues where joint activities could be carried out to address them.
ETIS has several main streams of activity :

- projects relating to proper implementation and use of open standards for telecoms services
- conferences, workshops and seminars addressing the major challenges for IT executives in the telecoms industry
- benchmarking and best practices in software technology
- involving key players in the IT industry to speed up convergence
- the Strategic Advanced Management Education Programme (STAMP), focusing on new ways of educating and training managers and professionals in modern European companies, involving tele-learning and interactive learning.

European Schoolnet

■ e mail: office@eun.org ■ Website: www.eun.org

European SchooNet (EUN) provides a framework for collaboration between European Ministries of Education, by bringing together national and other computer networks.
EUN is providing, through its web site www.eun.org :

- Resources; A wide range of educational resources are on the web site, and a search engine allowing pupils and teachers to search websites selected by EUN's partners.
- Innovation; The European Network of Innovative Schools (ENIS) brings together 500 schools who are pioneering the use of new technologies in the classroom.Website : http://enis.eun.org
- School collaboration; The Collaboration Area of the EUN web site is an online meeting place where teachers can find help to run a European school project.
- Teacher training; The Training Area provides self-training materials and forums where teachers can share ideas.

European Commission, Education and Culture DG

■ Website: www.netdays99.org. • www.europa.eu.int/com/dgs/education_culture/index_en.htm

Netd@ys Europe 99 is one of the major initiatives supported by the Directorate-General for Education and Culture. Netd@ys Europe 99 happened in the Autumn of 1999, raising awareness of ICT for learning amongst a wide public and stimulating a very large number of pan-European projects.

The Community programmes Socrates, Leonardo, and Youth for Europe supports the development of the use of ICT in learning in a variety of ways.

Partner Organisations exploring developments

European Commission, Enterprise and Information DG

■ Website: www.europa.eu.int/comm/dgs/information_society/index_en.htm
www.europa.eu.int/comm/dgs/enterprise/index_en.htm

In the Multimedia Applications for Education and Training area of EU programmes for Research, is the PROMETEUS partnership initiative - PROmoting Multimedia access to Education and Training in European Society.

PROMETEUS is a specific action now being undertaken to bridge the gap between research and actual use of learning technologies, content and services. The European Commission is helping in the PROMETEUS start-up by providing a PROMETEUS Coordinator and website.

Miranda

■ e mail: enquiries@mirandanet.ac.uk ■ Website: www.mirandanet.ac.uk

MirandaNet is a non-profit international fellowship of teachers, teacher-educators, advisors, government agents, researchers, librarians, and industry representatives. Our aim is to enrich lifelong learning using advanced technologies, across social, vocational, cultural and political divides.

MirandaNet provides a forum for agents of change and concentrates on the development of innovative ICT professional development processes. These sustainable and replicable processes depend on peer mentoring, peer review, face-to-face workshops, on-line tutorials, mentoring and conferencing, exchange visits, and publication in a variety of media.

The MirandaNet Partnership is supported by learning-aware companies, whose representatives work with the educators.

MirandaNet Fellowship is awarded when scholars have published their case studies. MirandaNet Fellows come from Europe, Central Europe, Latin America and Africa. In ten countries they have established a national MirandaNet, adapting the model to local culture and language. MirandaNet Fellows offer an expert advice service to the teaching community and are currently trialling a new web-enabled learning environment, 'Scoop'.

The MirandaNet website, developed in partnership with Oracle, is a key component in introducing teachers and lecturers to new ways of teaching and learning. It is also a focus for publications.

pjb Associates

■ e mail: pjb@pjb.co.uk ■ Website: www.pjb.co.uk

pjb Associates provides Advice, Research & Development, Training in Telematics, Innovation Transfer, Flexible & Distance Learning, and Knowledge Brokering.
pjb Associates analyses, monitors and evaluates developments across Europe and other parts of the world concerning the pedagogical, managerial and technological issues related to networked learning. The company advises policy makers and decision-makers in industry, government and institutions, including the European Parliament and the European Commission, through consultancy services and specific studies on key issues and concerns across all sectors of education and training.
A recent study outlines the development of interactive digital TV to the home and its implications for learning; multimedia technologies in school and the transition from primary to secondary schools; developing telematic-based learning services and the role of SME networks.
The company is specialising in:

- issues that involve the dissemination of knowledge
- innovation and technology transfer
- the costs of teaching and learning with technology
- standardisation issues which enable multimedia learning resources to the assembled, disassembled and reassembled easily across platforms
- the ability to make micro-cash payments for products and services.

SBLN

■ e mail: enquiries@sbln.org.uk ■ Website: www.sbln.org.uk

Formerly The South Bristol Learning Network Ltd, SBLN developed the model for the CyberSkills(TM) programme. The company has introduced over 7000 individuals, from all sectors, to the use of Information and Communications Technologies through hands-on events.
We have considerable experience of ICT focusing on the user's perspective. Our partnership network includes the CyberSkills(TM) Association members, a range of European organisations involved in the European Schoolnet, A Ponte, Netd@ys99 and "FIRST" consortia together with local Educational, Business and Civic bodies. We have considerable experience of ICT, focusing on the users' perspective, and have produced appropriate training materials for several European educational projects.

SCET

■ Website: www.scet.com

SCET (Scottish Council for Educational Technology) provides direction to the Scottish government in the use of new technologies in education. It is a member of European advisory groups including the International Education Network and PROMETEUS, and is involved in European projects including ARIADNE, Netd@ys and the evaluation of educational software for use in Estonian schools.

SCET is currently focusing on online learning and its influence on learning in the 21st century. It is jointly responsible for the National Grid for Learning (Scotland). SCET has expertise in software and Internet development, multimedia production, consultancy, training and providing information and support on all aspects of learning through technology.

Appendix IV
E.E.P. Members' Profiles

3Com
■ e mail: David.Huggett@3com.com ■ Website: www.3com.com

With more than 300 million customers worldwide, 3Com Corporation connects more people to information in more ways than any other networking company.
3Com delivers innovative information access products and network system solutions to large, medium and small enterprises; carriers and network service providers; PC OEMs; and consumers. As a long standing network partner to the education community worldwide, 3Com is dedicated to delivering network solutions that enable educational institutions to meet the needs of a new generation of applications and to open new avenues for enhancing the academic experience.

Advantage Learning Systems
■ e mail: jefield@advlearn.co.uk ■ Website: www.advlearn.com

Advantage Learning Systems - Building Life Long Learners...
Learning information systems help teachers accelerate learning and increase motivation, by providing immediate, individualised and constructive feedback on student's learning. With detailed, diagnostic information at their fingertips, teachers can address pupil's individual needs. Better data means better teaching!
Accelerated Reader - is a learning information system for reading and literacy. It monitors literature based reading for all children of all abilities from Reception through to Year 12. Accelerated Reader actually saves teacher time by automatically producing over thirty different informative reports providing teachers with timely information so that they can intervene immediately, allowing teachers to do what they do best – teach.

Anglia Multimedia
■ Website: www.anglia.co.uk & www.angliacampus.co.uk.

Anglia Multimedia is one of the leading suppliers of ICT materials to schools in the United Kingdom. It develops educational CD-Roms, operates an on-line service, trains teachers in the use of ICT in the classroom through Anglia Multimedia Professional Development and is developing learning materials across the full range of digital delivery systems, including television.
Its partner company, Anglia Campus, offers an on-line curriculum service to schools, with over 2,000 schools already subscribing to the system. Anglia Campus offers a total curriculum approach, supplemented by web indexing, special events, bulletin boards and chat facilities. Anglia Multimedia's products are distributed worldwide, and have been translated into thirteen different languages.

Apple Computer
■ e mail: Morel.J@euro.apple.com ■ Website: www.apple.com/uk/education/ads (or use Fr, De, It etc instead of UK)

Apple is the world's leading supplier of computers to education.
Apple has worked very closely with educators throughout more than 20 years experience of supplying education systems. Apple funded the ACOT (Apple Classroom of Tomorrow) research which showed clearly the necessity for effective software and training to accompany installation of hardware, and how changing to a constructivist approach in classrooms dramatically enhances learning. Apple is disseminating this experience in Europe by collaborating with educators in the Apple Distinguished Schools and Apple Teacher Development Centre Programmes. Schools and Teacher Development Centres in 13 countries in Europe are now involved in these Programmes.

Averbode Publishers
■ Website: www.averbode-online.be • www.kidcity.be • www.explorian.com

Averbode is a leading Belgian publisher specialising in educational publishing for children and teachers, and was one of the first in Belgium to enter into the multimedia business by developing CD-ROM products and Internet sites both for children and for the educational community.
The Kid City website is one popular example, another is their latest initiative, the Explorian site, which has been developed especially for classroom usage. Both these sites operate in Dutch and French, the two main languages in Belgium.

BESA
(see partner profiles page 38)

Bocom International
■ Website: www.bocom.ie

Bocom International is a provider of point-to-multipoint communications solutions, using the latest data broadcast technology. The EdCast multimedia transmission system allows low-cost, easy and extremely fast access to relevant educational material. This revolutionary system uses the spare capacity in a standard television signal to broadcast messages, computer files and web sites to PC's located in schools. Not only is EdCast ideal for curriculum based education in Schools, but also for continuing education, distance education and corporate training.
The system is also being used in one European country, for transmission of the official state examination papers, to 1,450 schools.

Bretton Hall College
■ e mail: esestini@bretton.ac.uk

Bretton Hall was founded in 1949, and during its first ten years, the college trained teachers in the specialist subjects of the arts and education. Since that time it has considerably expanded its portfolio of courses within these specialist areas. As a constituent college of the University of Leeds, Bretton Hall offers a full range of undergraduate and postgraduate awards.
Bretton Hall maintains and develops high quality programmes of study, research, consultancy and training in the Arts and Education. It values innovation, performance, enterprise and professionalism in a range of communities and seeks to maximise access to the opportunities it creates with its partners.
The Faculty of Education operates through schools which are organised by age phase, these being Early Years Education, Primary Education, and Secondary and Tertiary Education. A wide range of post-experience and advanced training programmes are offered in all faculties. A modular structure operates across these academic programmes during two 15-week semesters.
The college also has links overseas, particularly exchanges with Scandinavia and Southern Europe, through the Socrates and Erasmus projects.

E.E.P. Members' Profiles

Britanica.co.uk Ltd

e mail: ebrit@britannica.co.uk ■ Website: www.britannica.co.uk

Encyclopaedia Britannica has recently been renamed Britannica.co.uk Ltd, reflecting the electronic nature of its business, with two CD-ROM editions and a DVD-ROM complementing the Britannica Online and Britannica.com Internet services. Britannica is committed to providing the best in knowledge to all users, and plans to develop education-specific Internet Services during 2000.

BT Education

Website: www.bteducation.com

BT is a major international communications company with a history of working closely with education, especially in ICT propositions and knowledge management. Our commitment to education extends through special pricing for access to the Internet, to fully managed community solutions, and to Awards Schemes for all levels of education. To address the growing importance of education BT has established a new sector to focus all our resource and talent on the needs of the education. To discover more about the work that BT is doing to make 'Lifelong Learning' a success, visit our education web site.

Centre for Educational Technology

e mail: leahm@cet.ac.il ■ Website: www.cet.co.il

Founded in 1971, the Centre for Educational Technology (CET) is Israel's premier publisher and developer of educational software for the international school and home markets. CET produces technologically advanced, comprehensive, self-learning titles for children. The company's innovative products are developed by multidisciplinary teams of leading educators and other professionals. In addition to educational content, CET's solutions offer system integration and the building of virtual school communities. Our goal is to arrange distribution agreements and license our products to K-12 multimedia publishers, distributors dealing with distance education (Internet), and other decision makers in the field of education. We wish to team up in an effort to strengthen the processes of teaching and learning and to secure the future of education into the next century and the new millennium. We welcome your questions and interest concerning a potential partnership with CET.

Cisco Systems

e mail: emea-academies@cisco.com ■ Website: www.cisco.com/edu/emea

Cisco Systems is the worldwide leader in networking for the Internet. Cisco's networking solutions connect people, computing devices and computer networks, allowing people to access or transfer information without regard to differences in time, place or type of computer system.
In response to the huge demand for networking professionals created by the growth of the Internet, Cisco Systems has developed the Cisco Networking Academy Program (CNAP). Delivered through a partnership with educational institutions all over Europe, CNAP teaches students how to design, build and maintain networks.

Compaq Computers

e mail: education@compaq.co.uk ■ Website: www.education.compaq.co.uk

Compaq Computer Ltd is the world's number one PC manufacturer. Compaq's product range encompasses handheld PCs, notebooks, desktops, workstations, workgroup servers, networks, access and communications products. Together with service and solution partners Compaq offers everything from advice, service and support, to fully configured network solutions.

Corel Corporation

Website: www.corel.com

Since its foundation in 1985, Corel has developed products known for excellence and value that target emerging trends in the software industry. Corel Corporation is an internationally recognized developer of award-winning graphics and business productivity applications. Development of market-leading products, such as the CorelDRAW® line of graphics applications and the Corel WordPerfect® family of business tools, is continually evolving to meet the demands of the corporate, retail and academic markets. By focusing its technology direction to offer customers performance, compatibility and value, Corel has become a leader in the productivity applications market while remaining dedicated to providing access to breakthrough technology, cross-platform solutions and flexible software products.

Czech Technical University

Website: www.cvut.cz/ascii/index.html

The Czech Technical University in Prague (CTU), founded in 1707, is the most important technical university in the Czech Republic. At present it has 19000 students enrolled in engineering courses. Research is undertaken at CTU in all the basic disciplines taught at the university: i.e. in mathematics, physics, computer science, civil engineering, mechanical engineering, electrical engineering, nuclear and physical engineering, architecture, transportation science, and in many interdisciplinary areas as well. CTU has entered into official agreements with leading industrial establishments and research institutes. The emphasis in all the educational and research activities conducted at CTU is on international cooperation.

E.E.P. Members' Profiles

Deutsche Telekom ■ e mail: gabriele.zillner@telekom.de ■ Website: www.dtag.de

Deutsche Telekom AG (DTAG) was split off from government-owned Deutsche Bundespost and today Deutsche Telekom is a corporation with their stock widely spread. DTAG is aggressively pursuing a policy of diversifying into "added-value services" and plans to draw half of its revenue from such services in the future.
They aim at providing learning services which cover the whole range of education and training, whether in school, universities, business and leisure time.
Increasingly, DTAG will enter into partnerships with specific content providers to ensure high quality of their learning services.
In preparing for the pedagogical side of ICT in learning, DTAG has formed a public-private partnership with the German Federal Ministry of Education, Schulen ans Netz e.V., and inaugurated a project for Teacher Training in ICT, Lehrer online.

DZS Educational Publishers ■ Website: www.dzs.si

DZS was founded in 1945 as the National Publishing House of Slovenia and after completion of its ownership restructuring in 1995, changed its name to DZS, Publishing and Trade, Inc.
Today DZS Inc. is one of the major publishing houses in Slovenia with activities in General publishing, Educational Publishing, Printed forms publishing, Trade and Capital investments.
The Educational Publishing Division makes the company the biggest Slovenian publisher of textbooks, school books and multimedia.
The IMI development project is putting into practice our vision, which is based on comprehensive support for education in the information society, the humanisation of education and respect for the interest and needs of each individual.

ecmc (European Centre for Media Competence) (see partner profiles page 38) ■ e mail: info@ecmc.de ■ Website: www.ecmc.de

Education Online ■ e mail: mike@collett.demon.co.uk ■ Website: www.edon.org.uk

Education Online promotes the innovative use of online technologies in teaching and learning. It is particularly interested in open standards for learning technologies and Director Mike Collett is involved in the CEN/ISSS Learning Technology Workshop, Prometeus and the IEEE Learning Technology Standardisation Committee. Education Online also supports several UK school projects, in particular The Netherhall School.

e-media.com ■ e mail: dennisgarrison@e-media-tv.com ■ Website: www.e-media-tv.com

e-media.com is a UK based content acquisition company founded by former Knowledge TV Managing Director Dennis Garrison. The team at e-media.com source and negotiate carriage contracts for digital content including Hollywood movies, music, television programming, interactive games, education, training and retail transactional channels for clients such as Future TV. Future TV has developed an integrated platform for provision of personalised video-audio on demand, interactive services, internet, commerce and banking for cable and telecom companies.

ETIS (see partner profiles page 38 ■ e mail: rs@etis.org ■ Website: www.etis.org)

Espresso Productions Ltd ■ e mail: tbowden@espresso.co.uk ■ Website: www.espresso.co.uk

Espresso for Schools is a broadband interactive multimedia internet service for enhancing teachers' delivery of the curriculum. The service was designed and created by Espresso with the support of the British National Space Centre, European Space Agency (ARTES-3), and fifteen Local Education Authorities. Extensive trials programmes have been conducted since January 1998. Satellites allow Espresso to beam to schools a broadband signal containing a fusion of near broadcast quality video, within a web browser, with a range of interactive activities and exercises specifically designed for the Curriculum at up to 32 megabits/second - today. Delivery via cable and adsl is also available.
The implication is that broadband education services can be available to schools throughout Europe and much of the rest of the world, even to the most isolated areas and those with poor telecommunications infrastructure.

Fondation Sophia Antipolis ■ e mail: info@sophia-antipolis.org ■ Website: www.sophia-antipolis.org

Sophia Antipolis is a scientific industrial park located in the south of France, with 1200 companies and 20000 staff. The sectors of activity are research and development, health and life sciences, biotechnology, computer, network and telecommunications technology.
The Fondation Sophia Antipolis (FSA) was set up in 1984. Its main objective is the cultural and scientific development of the site, through the facilitation of exchanges at French, European and international level in the fields of science, industry and culture. FSA thus organises courses, seminars and conferences to create an environment that will facilitate partnership, technology transfer and entrepreneurship. This role as a "Laboratory of the Future" is illustrated by its participation in Smart Communities, Netdays, Medsat and other events.

France Télécom ■ e mail: christiane.payan@francetelecom.fr ■ Website: www.francetelecom.fr

France Télécom, the telecommunications operator in charge of universal telephone services in France, provides a wide range of products and services for the consumer and business market, in the fields of fixed and mobile telephony as well as Internet. France Télécom is the leading national telecommunications and internet access provider in France, is currently developing its activity abroad, and is present in most countries in Europe.

Futurekids ■ e mail: fkmaster@mail.telepac.pt ■ Website: : www.futurekids.pt

Futurekids was founded in 1983 with the express purpose of equipping children with the basic computer skills needed to excel in school and in the workplace.
Futurekids set up a worldwide network of computer Learning Centers in 1989, and currently has operations in over 70 countries and provides computer literacy training in over 2,000 locations.
The educational methodology used for the Computer Mastery Program has been extended to School Technology Solutions and personalized adult computer literacy training.
The unique teaching philosophy is based on providing students with an interactive, creative environment, hands-on instruction and integrated, theme-based projects.

E.E.P. Members' Profiles

Future School

■ e mail: steveo@futureschool.co.uk ■ Website: www.futureschool.co.uk

The Future School CD-ROM system is unique in the world. This unique teaching/learning system uses the latest technology of full screen video to present maths and English lessons for ages 5 to 18. Supported by worksheets and a comprehensive management system for teachers, the Future School system offers teachers for the first time a real practical IT Solution for the delivery of the numeracy and literacy curricula. FS has NO CHARGE for operating systems, site licences, installation and training.
Future School is accredited by the United Nations Trade Point Development Council and is a founding member of the UN Virtual Classroom.

Granada Learning

■ e mail: info@granada-learning.co.uk ■ Website: www.granada-learning.com

Granada Learning is one of the UK's leading sources of software to support the use of Information and Communications Technology (ICT) within education.
The company supplies educational products to meet the needs of learners of all ages and abilities.
Granada Learning also incorporates SEMERC, which has established itself as the leading supplier of ICT related advice, information and equipment to support students with special educational needs.
In September 99, Granada acquired Letts Educational, the UK's market leader in the provision of educational textbooks and examination revision guides for the home market.
One month later Black Cat the market leader in Key Stage One educational software also joined Granada Learning.

IBM

■ e mail: ■ Website: www.ibm.com/education

IBM is a world-leading technology company and is contributing its breadth of expertise to deliver ICT systems that make schools and colleges more effective. Through IBM's Reinventing Education grants programme, IBM is working in close partnership with government, teachers and education managers to develop solutions that meet the needs of teachers and students in the classroom, and which support systemic change.

ICL

■ e mail: callicl@icl.com ■ Website: www.icl.com

ICL is a global IT services company. It designs, builds and operates information systems and services for customers in the retail, finance, government, telecoms, utilities and travel markets. The company has operations in over 40 countries and employs over 22,000 people.
Today ICL improves business performance and competitiveness through services focused on electronic business, enterprise applications and the implementation and outsourcing of IT infrastructure.
Through the Integration of Information and Communication Technologies (ICT), ICL works in partnership with customers to create a learning environment that enables individuals to develop the confidence, competence and understanding necessary to succeed in the Knowledge Society.
Current major educational projects include a £12.5m National Grid for Learning PFI for Moray Council, Merseyside Education Online Network (MEON) as well as the Synergy Centres, a social and economic regeneration project in Northern Ireland, winner of the 1999 Business in the Community award.

Intel

■ Website: www.intel.com/europe

Intel is at the centre of innovations that are reshaping the way we live and learn.
For many years, Intel has provided strong support to governments and educationalists by providing the best possible computing platform for today's educational needs. Now Intel in Europe is working with a number of companies on a broad range of Education initiatives with the aim of supporting teachers with high quality training, innovative educational software and research to constantly evaluate how we can better meet the needs of education today and for tomorrow.

Intelecom

■ e mail: ■ Website: www.intelecom.org

INTELECOM is a non-profit educational media production and distribution company, formed by a consortium of 48 California colleges. For over thirty years, television courses produced by INTELECOM have made their mark in virtually every major market throughout the world. Series such as The Examined Life, Crossroads Café, Preserving the Legacy, Taking the Lead, Mechanical Universe, and Earth Revealed have garnered the most Prestigious awards television and education have to offer. Each course produced by INTELECOM combines at least one form of telecommunications media, generally video, but also computers, the internet, CD-Rom and other new technologies, along with print-based text materials.

Jostens Learning Corporation

■ Website: www.jlc.com/index.html

Jostens Learning is one of the world's leading developers of K-12 educational software and professional development, with programs in over 15,000 schools serving 10 million students. Dedicated to student achievement, we're a company primarily staffed by educators. Building on a nearly 30-year history, Jostens Learning offers flexible solutions to fit specific country, state, district, and classroom needs, as well as networked and stand-alone curriculum to meet students' varying learning styles. Jostens Learning offers solutions for accountability:
• Courseware that is research-based, educationally sound and correlated to national and state standards.
• The Jostens Comprehensive Assessment Tests, designed to identify student weaknesses and assign effective lessons to address specific needs.
• Safe, educationally-sound internet access with Worldware software and the Jostens Learning Worldware web site.
• A Curriculum Manager for making student assignments and monitoring student progress professional development recognized by an independent Education Market Research study as the number one training organization in the industry.

E.E.P. Members' Profiles

Lambrakis Foundation ■ Website: www.lrf.gr

The Lambrakis Research Foundation (LRF) is a not-for-profit organization, founded in 1991. It undertakes research and development projects and awareness initiatives in regard to the public educational system, in collaboration with Greek and European organizations, universities, research centres, private companies and the media.
Projects include :
• the production of 20 videoprogrammes (as an integrated learning "package") and 2 CD-ROMs for Greek secondary schools
• the participation in and/or co-ordination of several network-based European projects in the area of teacher training, Open and Distance Learning, research on market trends, the new learning paradigm, European Networks and multimedia, for cultural and archive organizations in Europe (4th RTD Framework and SOCRATES Programme)
• national activities which include studying the impact of ICT in the Greek cultural sector, consulting for the public schools sector, open and distance learning and making use of web-based cultural content.

Microsoft ■ Website: www.microsoft.com/education/

Founded in 1975, Microsoft is the worldwide leader in software for personal and business computing. The company offers a wide range of products and services designed to empower people through great software - any time, any place and on any device. Microsoft recognizes that technology can create enriched learning environments, and that academic and information technology experts can effectively enhance teaching and learning with innovative tools and resources. The Microsoft Education Group focuses on developing partnerships, solutions and tools to help teachers, administrators, and IT professionals within education institutions improve efficiencies, enhance the learning processand prepare students for the workforce.

Miranda (see partner profiles page 39) ■ e mail: enquiries@mirandanet.ac.uk ■ Website: www.mirandanet.ac.uk

Nieuwe Media School ■ e mail: willy.aerts@skynet.be

NMS is a non-profit organisation operating in Belgium. We promote and stimulate didactic use of new media in education, with a focus on the development of the digital learning environment, the use of ICT in environmental education and the raising of European awareness among youngsters.
For this purpose NMS organises study days, courses and in-service training about forementioned subjects, through operating an e-mail helpdesk and web- and videoconferencing.
This activity is principally aimed at teachers, schools and educational institutions with the cooperation of colleges, publishers and providers, to produce, distribute and support educational CD-ROMS and websites.

NTS Computer Systems Ltd ■ e mail: neal_kelly@nts.dreamwriter.com ■ Website: nts.dreamwriter.com

NTS Computer Systems is a leading provider of portable computer technology for schools in North America and the United Kingdom.
NTS provides a product familiar to all: the DreamWriter® product line, affordable portable educational computers for students. Combined with the Rol-A-Lab® mobile recharging cabinet, the DreamWriter® provides schools with a flexible mobile computer lab.
With world class manufacturing facilities, direct sales and support teams combined with long-term relationships with educators worldwide, NTS stands alone as a company focused on providing a computer for every student™ as an essential component to their educational experience and achievements.

Oracle Corporation ■ Website: www.education.oracle.com

Oracle Corporation is the world's leading supplier of software for information management, and the world's second largest independent software company. With annual revenues of more than $9.1 billion, the company offers its database, tools and application products, along with related consulting, training and support services, in more than 145 countries around the world.
To education institutions in particular Oracle offers an integrated suite of administrative solutions specifically tailored for the education environment".

Philip Harris Education ■ Website: www.philipharris.co.uk

Philip Harris is a long established supplier of equipment and teaching resources for education. The company employs teams of design, development, marketing and support specialists, with many years of experience, who are all focused on providing quality products that will enhance learning.

pjb Associates (see partner profiles page 39) ■ e mail: pjb@pjb.co.uk ■ Website: www.pjb.co.uk

Ransom Publishing ■ e mail: ransom@ransompublishing.co.uk ■ Website: www.ransom.co.uk

Ransom Publishing is a young innovative multimedia publisher. Based in the UK, Ransom develops its own multimedia titles, as well as licensing-in titles developed by overseas partners. Our publication list now includes more than 30 CD-ROM titles, many with accompanying printed teachers' packs for use in schools.
The company has developed a reputation for publishing high quality multimedia titles of strong educational value for both formal education and for the home environment, some of which have won prestigious awards. Ransom is a rapidly growing brand name in the UK, reflecting the companies range of innovative, quality multimedia titles with educational value, all offered at good value prices.

E.E.P. Members' Profiles

Research Machines ■ Website: www.rm.com

RM is the worlds largest company dedicated to the ICT needs of education. Based in Oxford, and listed on the UK Stock Exchange, England RM employs 1200 staff in the design, development, support and sales of software, services and hardware just to Education. Our products range from individual learning systems, school administration products and networking software through to a range of on-line services and an increasing involvement in ground breaking educational managed services. Currently most of RM's revenue comes from UK schools, however we see building our position in the evolving global education markets as strategically vital.

SBLN (see partner profilespage 39) ■ e mail: enquiries@sbln.org.uk ■ Website: www.sbln.org.uk

Sheffield Hallam University ■ Website: www.shu.ac.uk/virtual_campus/cnl/

The Virtual Campus Programme is the University's academic-led Programme to actively foster ICT-based Teaching Learning and Assessment.
This involves elements of pedagogic analysis and debate, research and development, pilot trials, staff development, benchmarking within the sector, publicity, partnership (with students and other stakeholders) and change management, to result in the production and delivery of high quality teaching and learning systems and materials using new and emerging technologies.
In addition to the work undertaken within the University the Virtual Campus, team members are involved in external research and development projects, these include:

- The "Upgrade2000" project (with other partners) to deliver training in Basic Skills to employees in small companies using Digital TV, multimedia/DVD and the Internet.
- The "GENESIS" project (undertaken under the European Union TEN-TELECOM Programme) which makes use of satellites to distribute teaching and learning materials to a wide area at low cost with high levels of security.
- The "Hidden Costs of Networked Learning" project involved the study and identification of unrecorded or hidden costs involved in Networked Learning for the benefit of policy makers, course providers and students

Sun Microsystems ■ Website: www.sun.com/edu/index.html

Sun Microsystems is a world leader in provision of network computer products, including JAVA, network computers, workstations and network servers. Sun supports education in numerous ways, worldwide. With a dedicated Team working with Education and Research Institutions all over Europe Sun is eager to establish bidirectional links into this community.
With a mission to provide easy and reliable access to Network Resources to as many students as possible, Sun is focused to work on projects in multiple technology development areas, such as :
Primary and Secondary Schools - Easy Administration Classrooms and Library Automation for the Digital Age
Distance Learning - enabling new ways of learning and teaching
Service Provider/School Tone - delivering reliable access to managed Applications through the Net.

Telia ■ Website: www.telia.com

Telia is the Swedish leading telecommunications operator whose mission is to unite people through user-friendly, telecom-based information. This means enhancing the quality of life for private subscribers while offering our business users a competitive edge and improving the efficiency of the public sector. This is achieved from Telia's European base with its global reach and leading-edge technology.

Université Libre de Bruxelles ■ Website: www.ulb.be

The ULB was founded in 1834 and is made up of eighteen faculties, schools and institutes, several hospitals, as well as industrial and experimental centres in Brussels and in the Walloon region.
The ULB is widely involved in several international research and development programmes, such as Erasmus.
As an all-round university, which is extremely active at European level, it bases its teaching and its research on its long tradition of tolerance and protection of liberties (the so-called Freedom to Investigate principle). It may be noted the 18000 students actively participate in the main decision-making structures of the University.

University of Kariskrona/Ronneby ■ e mail: elisabet.rosengren@dat.hk-r.se or lennarth.forberg@for.hk-r.se ■ Website: www.hk-r.se

Founded in 1989 as a small University Karlskrona/Ronneby's strategy has been to concentrate resources in targeted areas rather than try and imitate the breadth of larger, older universities. The objective is to produce a strong depth of knowledge and competence in specific niches, which matches national and international standards.
The chief focus of the University is on Information Technology and we currently have the second highest intake of students studying Infocom in Sweden.
Ultimately, our aim is to become national leaders within the field of applied IT.
To realise this goal, the core subject must be developed in depth, with specialisation in a number of technological and social science subjects. Results have been good thus far, with several industry-related projects yielding new courses and official publications. Conversely, theoretical insight has frequently led applied research into new fields.
Partners have included companies such as Ericsson, Nokia, Europolitan, Global 1 and Sydkraft and during the past five years 2,500 new jobs have been created through the Infocom development projects of Soft Center (in Ronneby) and Telecom City (in Karlskrona) in which the University plays an integral part.

Appendix V
The European Education Partnership

The European Education Partnership (E.E.P.) exists to promote the use of new technologies and digital media in education and learning. To make it possible for all citizens in Europe to have full access to learning in the networked world is a huge but vital task -

The E.E.P. is a neutral organisation open to all. Only by working together pre-competitively can we develop understanding of the necessary Public-Private partnerships.

We are seeing the emergence of a **new kind of market**, as public provision merges with the commercial market.

When will we have:

- all schools and colleges equipped with sufficient computers, networks, and bandwidth to give all the students access on demand.
- effective, sustainable systems to create content appropriate to local curriculum, culture and language, involving both public and private sector.
- all teachers trained, owning their own computers and with easy access to the Internet.
- curriculum and assessment promoting the key skills for life in a networked world.
- access to learning from all homes.
- e-commerce techniques integrated into education.
- convergence of digital TV with Internet approaches, with full use of video-rich multimedia in learning.

In education and learning the partnerships are uniquely complex. Change is so fast that the most important insights can only be gained through dialogue with people intimately involved, and from all sectors.

The dialogue must include:
- Commercial Providers
- Education Authorities and Institutions
- Cross-departmental government
- Public service broadcasters

E.E.P. Activity

The E.E.P. is funded entirely through Members' subscriptions.

The E.E.P. is governed by an Executive Council elected by the Sustaining Members. This Group guides the strategic direction of the E.E.P.

European level activity

- Partnerships in Practice; an observatory reporting on the leading edge of public-private partnerships.
- Working Conferences; exploring in depth the educational and commercial realities of new approaches and issues of concern Europe-wide.
- Public presentations; at E.E.P. meetings and other conferences, to spread our insights and understanding more widely.
- Information for Members; through Briefings analysing public-private partnerships, exploring new business models and assessing the educational value of ICT.

National level activity

- Development of understanding of specific national issues
- Meetings with policy makers.
- Seminars and discussion conferences with stakeholders.
- Support of current national initiatives.

How to get involved with the E.E.P

To join: Companies with an annual revenue greater than 50 million Euro join as Sustaining Members. Education and public organisations, small companies and individuals can join as Affiliate Members for a nominal membership fee of 250 euros.

To view the E.E.P.'s public statements: see the E.E.P. website www.eep-edu.org.
Members also have access to the Members' Intranet for Member Briefings and the most recent Case Studies.

To discuss how we can help you: Please contact the E.E.P. Administrator - Tel +32 2 479 13 53 - Email info.eep@skynet.be

Appendix VI
E.E.P. Members' List

Members *(As at 30 November 1999 - please see our website for the current list)*

3Com
Anglia Multimedia
Apple Computer
Averbode Publishers
BT Education
Centre for Educational Technology
Cisco Systems
Compaq Computers
Corel Corporation
Deutsche Telekom
DZS Educational Publishers
Espresso Productions
France Télécom
Granada Learning
IBM
ICL
Intel
Microsoft
NTS Computer Systems
Oracle Corporation
Philip Harris Education
Research Machines
Sun Microsystems
Telia

Advantage Learning Systems
BESA
Bocom International
Bretton Hall College
Britannica.co.uk
Czech Technical University
ecmc (European Centre for Media Competence)
Education Online
e-media.com
ETIS
Fondation Sophia Antipolis
Futurekids
Future School
Intelecom
Jostens Learning Corporation
Lambrakis
Miranda
Nieuwe Media School
pjb Associates
Ransom Publishing
SBLN
Sheffield Hallam University
Université Libre de Bruxelles
University of Karlskrona/Ronneby

Partnerships in Practice 1999
has been written by
the E.E.P. Observatory Writing Team:

Roger Broadie, Chief Executive, E.E.P.
Telephone: +44 1 354 695583
Email: Roger@Broadie.demon.co.uk

Mic Cady, Media Industry Adviser, School of Computing,
University of Plymouth
Telephone +44 1752 232541
Email: cadys@dial.pipex.com

Hartmut Grebe, consultant, Grebeconsult
Telephone: +49 30 814 1718
Email: hgrebe@ymeilen.de

Jeff Morgan, consultant, J&M Associates
Telephone: +44 1203 325 316
Email: jeff@jamassociates.co.uk

This report is issued on behalf of the
European Education Partnership
by the E.E.P. Executive Council
Chair: Josiane Morel, Apple Computer
Email: morelJ@euro.apple.com

Statements made in this Observatory
are by the Observatory Writing Team and do not necessarily
reflect the position or views of any E.E.P. Member.

Publication Co-ordinator
Caroline van de Leur

For all enquries about this report contact
the E.E.P. Administrator,
European Education Partnership
Buro & Design Centre, Heysel Esplanade 101, bte 56
B-1020 Brussels, Belgium
Tel: +32 2 479 1353
Fax: +32 2 479 1371
Email: info.eep@skynet.be