# Contents

# 1 Background to MOBILE

## 1.2 Genesis of MOBILE

The MOBILE Project emerged after a protracted process of negotiation and partner identification from 2 project ideas, conceived in the early days of the *European Action Plan for Libraries* in 1991. One idea for a European Bibliobus was developed by the Nederlands Bibliotheek en Lektuur Centrum (NBLC) and the Ministere de la Culture et des Affaires Sociales , Communauté Française de Belgique (MCAS) and the other, for a EuroLibrary Mobile was conceived by Carpenter Davies Associates (CDA) in the UK. Through the auspices of the UK Public Library Development Incentive Scheme (PLDIS) and the National Focal Points (NFP) for the Libraries Programme (as it later became known) in The Netherlands and Belgium, the parties co-operated to develop a project proposal for the 2nd Call for Proposals for the Libraries Programme in 1992 which had the working title *Mobile EuroLibrary (MEL)*. Two library participants in Southern Europe and one in the UK were sought.

The first draft of the project proposal (drafted by CDA in January 1992) had many of the elements which became the MOBILE Project:

> Its central aim is to introduce a prototype multifunctional mobile library in a variety of conditions within 3 or 4 member countries and to evaluate the impact of providing a range of innovative services upon public information and cultural needs.

However, a number of important and mistaken assumptions were made by the participants, namely

- that 65% of the costs would be contributed by the Commission;
- that the Commission would allow discounts on vehicle costs from the coachbuilding industry to be counted as part of the partners' contributions towards project costs;
- that there would be 4 new prototype vehicles in the project;
- that one coachbuilder could be designated by partners to supply all 4 prototype vehicles.

The project was scaled down as these assumptions were corrected: 3 library partners, representing semi-urban and rural aspects of Northern European library services and Southern European circumstances, instead of 4 were planned; smaller, more economical vehicles were envisaged, to be procured in each partner country; the project budget was cut by 50%.

The Public Library of Veria in Greece joined the project team in 1991 and the Scottish Borders Library Service (then Borders Regional Library Service) in 1992.

Experience in the European library and information community of developing and running Libraries Programme projects was necessarily limited in 1992; had this not been the case the MEL Partners would have rethought and re-cast the MEL project in

a more realistic mould before the submission deadline. As it was, the project was submitted, accepted, and revised during the negotiation process in a very short space of time. The Commission was to contribute to the costs of only one new vehicle and the funds in the project budget were moved accordingly from the equipment to the labour and other categories to meet, in large part, the overall funding request. However, this constituted a major change in the shape of the project which subsequently had a devastating effect on progress. Project partners should have foreseen how this decision would constrain the achievement of the MOBILE objectives, but, since Borders and Communauté Française both had new vehicles budgeted to come into service in 1994/95, it was decided to proceed, with Veria receiving the contribution for one vehicle from the Commission.

Shortly before contract signature in mid-1993, the Communauté Française - MCAS - reluctantly pulled out of the project: a change of Minister had brought a change of budget priorities. CBD Friesland, whose representatives had attended one or two of the early project meetings in 1991, stepped in to fill the gap, with virtually no opportunity to consider the details of the project or to make amendments to suit its own circumstances. The operational commencement date was set for 21 January 1994.

### 1.3 Summary of objectives

The agreed objectives for MOBILE can be summarised as follows:

1. to assess the information needs of rural and other communities in the partner library regions where the public library services are currently unable to meet demand;
2. to identify ways in which the specific information needs of target user groups within these communities may be met by the provision of experimental mobile library services using, where appropriate, IT applications;
3. to identify appropriate European sources of information;
4. to investigate the technical feasibility of introducing a range of information services using telematics in mobile libraries to meet the identified user needs;
5. to specify, procure or renovate mobile library vehicles, equipped with the requisite hardware and software, for the three Partner library services;
6. to provide a mix of innovative services in each of these three areas to meet identified demands;
7. to supply document delivery services and the opportunity for hands-on use of IT to the target user groups;
8. to provide training facilities and support for public library staff and other professionals in the three regions, in the use of computers and telematics;
9. to evaluate the effectiveness and impact of the new mobile library vehicles and services in each area;
10. to assess the cost-benefits of further investment in the replication of such mobile information services;
11. to develop tested specifications for mobile library vehicle design and for the use of IT in a mobile library environment;
12. to disseminate the resulting data and conclusions widely to key institutions and organisations throughout the European Union

## 1.4 The Partners

### *1.4.1 CBD Friesland*

Public library service provision is operated as an internal market in Friesland, with communities, through their local government organisations, choosing to purchase services from CBD. The population is relatively affluent, rather younger on average than in the Scottish Borders. CBD-Friesland, the Central Library Service for the Province of Friesland, is an institution supporting local library work, partly on behalf of the provincial government and partly by offering library facilities. CBD comprises the following departments: Automation, Mobile Libraries, Educational Service (support for school and youth library work), Financial and Economic Affairs, Information Service (support for general library work and maintaining background collections), Internal Affairs (accommodation, reproduction, canteen, dispatch), Marketing and PR, Media Management (maintaining central catalogue), Media Processing (central buying and processing of all media, hiring out of collections), Personnel & Organization, Secretariat. The various CBD departments have about 110 staff.

In Friesland there are 30 municipal public libraries with a total of 27 branches. These municipal libraries are all independent institutions which each have their own boards. They are subsidized by the local governments. Officially, the staff of 26 of these branches (165 in total) are employed by CBD-Friesland though, in practice, this is merely a legality.

On behalf of the Government of the Province of Friesland CBD carries out certain tasks for all local libraries free of charge, including those that are fully independent. These tasks include general management and financial management (only for the 26 associated libraries), support for school and youth library work, training, personnel management, central cataloguing and advice on library work. Additional facilities and services provided by CBD-Friesland include the mobile libraries, automation, media processing, etc.

The mobile library service is a facility which CBD-Friesland puts at the disposal of the associated libraries against payment. An associated library hires a mobile library including staff, collections and administration. In 1997, CBD Friesland runs 9 mobile libraries every day. Four of them especially cater for children up to 13, visiting 139 primary schools in 100 villages each week. The other five mobile libraries are intended for both adults and children, covering 212 villages with a total of 231 stops weekly. There is even a mobile library that takes the ferry to one of the Frisian islands once a week. The shortest stop is 15 minutes, the longest 3.5 hours. The Mobile Libraries Department employs 32 staff, 26 of whom are on the road daily.

### *1.4.2 Scottish Borders Council*

The Scottish Borders Library Service serves a largely rural population living in small towns and villages, the largest of which has a population of 15, 700, which are quite isolated by topography rather than by distance. The area covered is 4,731 hectares. The population of 105,700 is relatively affluent and rather older than the UK average: the Scottish Borders is a popular retirement area. The Library Service headquarters is

in Selkirk and it operates 14 libraries and 9 school library branches. It has 9 mobile library vehicles: 7 in the public library service and 2 school library vehicles. The Library Service's annual budget in 1996/97 was £1,240,000 (approx. 1,650,000 ECU). Registered members of the Library Service number 55,000, and of the mobile library service alone, 5,000. Annual issues throughout the Library Service were 1,000,000, and 245,000 of those were from the mobile library service points. The total number of enquiries recorded in the Library Service were 36,000 of which 1,500 were recorded on the mobile library service points. In 1993/94, when MOBILE began, the use of information technology in the libraries was minimal, restricted to an automated library catalogue (not operated on the mobiles) and one or two CD-ROM players in static library service points.

### *1.4.3 The Public Library of Veria*

The Public Library in Veria is known as a "central public library", one of 18 established in the regional capital cities and which also provide a mobile library service to the surrounding districts. The Library occupies premises owned by the Municipality of Veria and its operations are financed by the Ministry of Education. The Library has one static school branch library and operates two mobile libraries (one of which is, in practice, a book delivery vehicle) serving a large area in Northern Greece which is not restricted to its own county. The population served by the mobile libraries can be roughly divided into two types: relatively affluent, accessible agricultural communities surrounding Veria; and remote rural communities in very mountainous countryside, economically disadvantaged and socially isolated. Library service users are predominantly younger than 40 or school children. In 1993/94, when MOBILE began, all its services were sustained by a total book stock of under 60,000 volumes, its staff included two qualified librarians and work on automating the catalogue in the Library headquarters had just begun. To set the national context, Trohopoulos (1994) comments that "the lack of a single law governing all categories of public library, the differences of funding, standards of service, etc., make it very difficult to define and identify the precise role or purpose of the public library in Greece today. Until recently, its image was in general rather old-fashioned, at the expense of meeting the library and information needs of the population at large. Now there is more in the way of popular reading matter or information service provision. The concept of service to readers is slowly emerging, whereas information provision is in its infancy and there is no national scheme of inter-library loans [or bibliographic support] to overcome local collection deficiencies."

### *1.4.4 The Netherlands Centre for Libraries and Literature (NBLC)*

NBLC, the Netherlands Centre for Libraries and Literature, is a research, training and professional support organisation serving Dutch libraries. NBLC is divided in three parts: the Stichting NBLC (association), the Vereniging NBLC (foundation) and NBLC systemen BV (NBLC Ltd). The Stichting NBLC is the partner in the MOBILE project and the total budget of Stichting NBLC is approx. 23 million Guilders. There are 192 members of staff in the association and foundation combined, excluding the limited company. NBLC has three different sorts of income: grants from the national government of approximately 10 million Dutch Guilders (approximately 4,570,000 ECU); membership fees from the public libraries of approximately 1 million (457,000 ECU); income generated by selling products and services, approximately 16 million (7,310,000 ECU) The first two sources of income are for the association and the

foundation receives income by selling things and by producing a number of products and services for the association. The foundation operates as a non-profit-making commercial organisation.

### *1.4.5 Carpenter Davies Associates*

Carpenter Davies Associates (Co-ordinating Partner) is an independent consultancy partnership based in the UK, which was formed in 1990, and which specialises in consultancy and research for library and information service development and management in an international context.

## 1.5 The context for MOBILE

### *1.5.1 Public library policy and funding*

Evident throughout Northern and Western Europe during the life of the MOBILE project, and irrespective of differing perceptions of the role of public libraries, has been the tightening pressures of ever-limited finances. Whether brought about by reasons of political doctrine, to cope with economic recession, or to avoid spiralling national and local taxation, public libraries have suffered in many countries some or all of the following features - the freezing or reduction of public expenditure, the privatisation or contracting-out of services, the gradual introduction of direct charges to users of services previously financed from the public purse, and the vigorous scrutiny of operations to achieve value for money. At the same time, public libraries have been under pressure to introduce new services related to recreational and educational aspirations, to attract different groups of users, to improve physical and information technology facilities.

In Greece, the same pressures on public expenditure had a detrimental impact on Ministry of Education budgets for public libraries, and particularly on staff recruitment. In addition, local government reform has had a significant, often catastrophic, impact on many public library authorities in the UK.

### *1.5.2 Mobile library services in Europe*

The mobile library, at the commencement of the MOBILE project, seemed likely to remain the cornerstone of service delivery in remoter rural areas in Northern and Western Europe for most public library authorities. Mobile libraries were also a widely in use, in place of static branch libraries, to lend [mainly] books to individuals near their own homes in urban and suburban areas. Little effort was made to provide an information service from these vehicles because it was assumed that most people with information needs were highly mobile and had a phone, and their needs could be met far more rapidly and effectively through central public libraries. Information and communications technologies were appearing on mobile library vehicles principally in support of loan and reservation services (automated library systems access).

In Greece, mobile library vehicles were operated by local authorities in relatively few counties, the vehicles being extremely basic book delivery vehicles, with schedules requiring them to cover very large rural territories over periods of up to 2 months.

### *1.5.3 Telecommunications and connectivity*

In 1993, when the MOBILE project proposal was submitted, the European telecommunications network, created to meet the need for transmitting voice messages, had been developed largely by individual governments, and contained national infrastructures of great diversity. In Northern and Western Europe the demand for networks capable of carrying digital information and video was growing; the British government was firmly committed to the market approach to these developments. Investment from the European Union Structural Funds in telecommunications in Southern Europe was transforming the telecommunications infrastructure in the most populous areas (e.g. Greater Athens) while many other extensive regions had never been adequately networked for basic analogue telephony. Cellular phone networks (analogue) were proliferating and competitive in the more populated areas of Northern and Western Europe and were just becoming available in the capital cities of Southern Europe.

A survey of UK public libraries in 1995[1] revealed that only 3% of all UK public libraries had access to the Internet, and that most UK public library Internet activity began only in the years 1993-1995, although UK academics were involved with the Internet quite quickly. This lack of awareness may be due to the lack of a concerted government policy in the UK to exploit the developing potential of the new information and communications technologies. The majority of public libraries with Internet access were using dial-up connections rather than leased lines. In 1995 the survey found that only 28 public libraries in the UK were offering public access to the Internet.

[1] Ormes, S. And Dempsey, L. (1995) *The Library and Information Commission public library Internet survey.*

# 2 Description of the Work Carried Out

## 2.1 Workpackages 1 -12

| **Workpackage 1: Completion of 3 user surveys and service definition** | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Initial research on existing services and design of user survey and needs analysis instruments*<br>CDA and NBLC visited each of the Partner libraries for discussions and data-gathering on existing services and for preliminary identification of target user groups and services. NBLC designed and circulated draft instruments for comment. A postal survey was planned in CBD; delivery of survey questionnaires from the mobile libraries in Borders; face-to-face interview surveys in Veria. | It was recognised that a postal survey, requiring the public to complete and return a written questionnaire, would not work in Greece where there was no experience of market research. Extensive face-to-face interview schedules were planned.<br><br>Changes of project personnel in CBD. | Partners took 2 months to complete this task. |
| b) *Implementation of 3 user surveys*<br>Veria surveyed 212 existing and potential library users in face-to-face interviews among: upper secondary school students and teachers in Imatheia County, users of social centres in rural Kilkis, using external assistance from library school students and graduates.<br>Borders distributed 1200 questionnaires to users of existing services and got 45% return. CBD distributed 1303 questionnaires among users of the mobile services and users of fixed library service points and got 33% return. CBD also conducted 150 telephone survey interviews with non-users of the mobile library services. | The first indication of how the lack of dedicated vehicles in CBD and Borders would constrain MOBILE: the Partners sought target users/unmet needs from within the communities and user groups served by existing services, since MOBILE would be using a vehicle within the existing mobile library schedule. | The completion of this took longer than anticipated in each region, due to limitations on staff time in each Partner library. |
| c) *Analysis of the data from the user surveys*<br>NBLC undertook the data analysis. The analysis of the Veria data was completed first in order to allow Veria to take final decisions about services based on the data before tendering for a new vehicle. A detailed analysis and report was produced for each Partner library (see Deliverables) | As the data was analysed it became clear that the surveys in CBD and Borders had failed to identify any conclusive information needs among the surveyed populations which were currently unmet by existing services (either mobile or static libraries). No clear target groups emerged from these surveys. There was insufficient time to undertake further surveys. | |
| d) *Service definition for each field trial*<br>CDA assisted Veria and Borders to define a range of ICT-based services to be offered from the MOBILE vehicles. NBLC assisted CBD in the same exercise. | In CBD and Borders it was decided to proceed on the basis of enhancing existing mobile services through the use of ICT and encouraging the emergence of new information needs by offering new service opportunities to users. MOBILE could provide an opportunity to make the mobile libraries a more effective "gateway" to a range of information services. Changes of project personnel in Borders | |
| e) *Progress and management reporting*<br>5 management reports and one Progress Report/Cost Statement were produced. | Methodology employed in management reporting was inadequate: changes were recommended and adopted. | |

| Workpackage 2: Specification and identification of resources | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Identification of technologies and sources of supply; negotiations with suppliers and local utilities*<br>Extensive research was undertaken by Partners to determine the options, costs and technical constraints on providing on-line access from the vehicles. This involved discussions with national utilities (PTT in the Netherlands), telecoms companies (Intracom in Greece) and systems suppliers of GSM network and mobile radio systems (Vodata, MDC, ISS), and other library services which had investigated these issues (e.g. Suffolk). Other IT hardware and software also was reviewed and costed. | No feasible and affordable on-line options existed for Veria in 1994/95: the decision was taken not to offer on-line service access. GSM data networks were very new in Scotland and planned for introduction in 1995 in Friesland. Costs were the main factor which persuaded Partners to, nonetheless, adopt the untried GSM technology. | IT hardware and software were selected and purchased for the vehicles locally by each Library Partner. The original intention had been to purchase for all Partners from the same suppliers to achieve the best discounts; however, the internal purchasing rules in Borders required Partners to purchase from regular suppliers to maximise their own discounts and costs were competitive. |
| b) *Specification of design, renovation or adaptation of vehicles and consultations with suppliers*<br>The Veria vehicle was designed, after considerable research and supplier and peer consultation in the UK and Denmark (Nordic Bogbusfestival 1994). Borders and CBD specified the adaptations they required to accommodate IT hardware to their regular vehicle builders and suppliers. | No experience or expertise in designing and constructing mobile library vehicles existed in Greece: Veria was reliant upon expertise from the UK and elsewhere in Europe in the design of a vehicle. The budget, 80% from the Ministry of Education, did not allow the design and purchase of as large a vehicle as originally planned.. | Designs had to be scaled down |
| c) *Specification of stock, staffing, back-up and maintenance arrangements for the field trial vehicles*<br>Borders and CBD chose a range of CD-ROM tittles - reference, bibliographic and educational - for the MOBILE vehicles. Veria needed to select and provide bookstock and periodicals for the new vehicle as well as multimedia and computer software. MOBILE vehicle staff were identified or recruited - at least one librarian member of staff as well as the driver would staff the MOBILE vehicle in each region. Information provision support from HQ for the MOBILE vehicle was arranged by Borders and CBD. Maintenance support in Veria to be provided by the coachbuilder. | Very little material appropriate and high quality available in CD-ROM or software formats in languages other than English.<br><br>Veria and CBD were forced to select English language medium materials for the stock. It was acknowledged that the same problem would be encountered with on-line services and that the language issue would constrain the levels of take-up of and interest in the MOBILE services. | |
| d) *Identify capital and running costs budgets for the field trials*<br>The CBD and Borders vehicles were part of the annual budgeting process, the only addition being an expanded staffing budget for the field trial year. Capital costs were minimal, restricted to purchase of IT equipment and software. Running costs for the on-line access services were estimated.<br>The Ministry of Education in Greece allocated a budget of 18 million drachmes for the new MOBILE vehicle, inclusive of EC contribution. Running costs were estimated | Veria's running costs were negotiated with the Ministry of Education and the local Municipality, since there was no budget for the operation of the new MOBILE vehicle. | |
| e) *Progress and management reporting*<br>3 management reports were produced and submitted during this period | | |

| **Workpackage 3: Procurement or renovation of vehicles and other durable equipment** | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Select suppliers and order vehicles*<br>CBD and Borders ordered their new vehicles from the libraries' regular suppliers, as part of their rolling programme of vehicle replacement. The Veria vehicle chassis was tendered for by the Ministry of Education in accordance with EU rules and a national tender was organised to identify a local coachbuilder capable of building the library body on the vehicle chassis. This process was successful. The mobile library shelving to be fitted in the new vehicle was ordered from a specialist supplier in UK. | No coachbuilder in Greece had previous experience of building a mobile library. It was decided to accept a local bid to ensure that Veria staff could retain oversight and control of the vehicle construction more effectively. | This process was begun in Veria during the first year of the project immediately the results of the user survey had become available and services could be specified. |
| b) *Order other durable equipment from chosen suppliers*<br>Each Partner ordered the IT equipment and other durable equipment required from local suppliers. | . | Delays in Workpackage 1 meant that the new vehicle could not be procured according to the original timetable in order to start the Field Trials as planned. |
| c) *Procurement and delivery of new or renovated vehicles and other durable equipment*<br>The Veria vehicle took approximately 8 months to complete. Other vehicles were procured successfully and on time. IT and other durable equipment was procured and installed on delivery. | Delivery dates in some cases were uncertain and caused delays | A decision was taken to reduce the length of the Field Trial period from 18 months to one year to enable the project to be completed within the agreed timescale. |
| d) *Progress and management reporting*<br>1 Progress Report was produced during this period. | | |

| Workpackage 4: Preparation of evaluation instruments and first evaluation | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Design of performance measures and indicators, methodologies for project monitoring and evaluation*<br>The planned methodology for evaluation and monitoring was mainly qualitative evaluation (illuminative evaluation), with performance data gathered to conform to standard public library data-gathering practice. Instruments capable of customisation were drafted, considered by Partners and used in the MOBILE staff training course in Spring/Summer 1995. Some changes to evaluation/monitoring schedules and quantity of data required were made before instruments were finalised | Public library staff are inexperienced in research evaluation objectives and methodologies, and, in Borders, CBD Friesland and Veria, not familiar with any but the most basic performance evaluation techniques. | |
| b) *Completion of baseline evaluation*<br>Baseline evaluation data was gathered by each partner within the first month of the start of each field trial. | Differences in the way the Partner libraries maintained records, costed and budgeted for their services and kept library statistics had a detrimental impact of the quality of the data. | |
| c) *Progress and management reporting*<br>Three management reports and one Progress report and Cost Statement were submitted during this period. | | |

| Workpackage 5: Preparation of field trial resources | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Design of staff training courses and modules for each field trial area*<br>The preferred content of the training course was discussed among partners at the 2nd Executive Committee meeting in January 1995. NBLC produced a questionnaire for the Partner libraries' MOBILE project staff, to determine their levels of IT awareness and understanding, and designed a draft programme for the course for comment. | The project was now running late: to design and deliver 3 separate training courses for each Partner library would incur further delays. | It was decided to run one course for all MOBILE project library staff for one week in CBD Friesland. |
| b) *Promotion and marketing of new services*<br>A publicity and promotion strategy was agreed at the 2nd Executive Committee meeting in January 1995. One design for all publicity and promotional materials was adopted for all partners; text to be printed partly in three languages. Artwork was prepared for posters and leaflets in The Netherlands; material printed in UK and over-printed locally in Dutch, English and Greek. The publicity and promotional materials was distributed before the start of all three field trials | Some delay was incurred in the design and production of the materials. | |
| c) *Test new vehicles, equipment and telecommunications links*<br>The Veria vehicle was ready for operation in Autumn 1995. In each region the vehicles, IT equipment and software and telecommunications links were tested for 2-3 weeks prior to the start of the field trials. | Telecommunications links in Borders and CBD Friesland caused serious problems. | Borders delayed the start of the field trial for technical reasons. CBD Friesland began the field trial with a very limited operating GSM link. |
| d) *Implement staff training*<br>The programme was finalised and the course Information Technology and Reference Work was run by NBLC trainers in May 1995. There were 13 participants. The training modules and materials were produced and submitted as a project Deliverable by NBLC. | The training course revealed the fact that all preparation for the Field Trials had focused on technical and organisational issues and problems and not on the content of the new services. | The trainers tried to address service content and user issues with the MOBILE library staff, and service and promotion plans were drawn up for each Partner library. |
| e) *Progress and management reporting*<br>2 management reports were submitted during this period. | | |

| Workpackage 6: Implementation of field trials | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Continuous monitoring and gathering of performance data*<br>MOBILE services were delivered in each region. Veria undertook continuous monitoring and data-gathering for the evaluation of the project. Sample data-gathering at agreed times and for agreed periods was completed by CBD and Borders. | Borders and CBD Friesland could not commit their staff to continuous data-gathering during the field trial year, due to staff and financial shortages and time constraints at each mobile library stop. | Data-gathering would take place in Borders and CBD Friesland on a sampling basis. |
| b) *Completion of interim evaluation exercise*<br>Three interim evaluation exercises were completed mid-way through each of the three field trials, evaluating data gathered on services, user feedback, management and technical issues, vehicle operation and impact of the project over a 6 month period.<br><br>The Interim Evaluation report was submitted as a project deliverable. | Borders and CBD experienced almost continuous technical problems with the GSM network telecommunications links.<br><br>On-line costs using GSM network proved prohibitive.<br><br>Borders had staffing problems, with both designated MOBILE staff leaving during the field trial year.<br><br>The take-up of MOBILE services, as they were restricted to existing mobile library service users, was very poor in the Borders. | The Peer Review recommended that Borders made major scheduling and target user changes in MOBILE service delivery or stop the field trials at the Interim stage. Changes proved impossible so the Field Trial was terminated. |
| c) *Completion of final evaluation exercises*<br>Two final evaluation exercises were completed at the end of the field trial periods in CBD Friesland and Veria, evaluating data gathered on services, user feedback, management and technical issues, vehicle operation and impact of the project during the last 6 months of the trial period.<br><br>The Final Evaluation report was submitted as a project deliverable. | Due to technical problems with the GSM network (low transmission speeds and poor coverage) and rising costs, CBD were unable to offer significant on-line access services except access to the HQ catalogue.<br><br>The limited length of stops for the MOBILE vehicle created problems in service delivery. | Rescheduling of stops was implemented where possible. |
| d) *Progress and management reporting*<br>6 management reports and 2 Progress Reports and Cost Statements were submitted during this period. | | |

| Workpackage: 7: Preparation and submission of final project report | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Analysis of cost, statistical/technical and performance data*<br>Cost, statistical and performance data, as well as anecdotal evidence, feedback from users and staff, were analysed as part of both Evaluation exercises and to form the basis of the Final Report of the project. | Variations in the way statistical data were gathered (i.e. continuous and sampling) recorded, as well as poorly defined cost data, prevented detailed comparison of the project in three regions. | |
| b) *Preparation and revision of draft report*<br>The Final Report was drafted by partners in April/May 1997 and submitted to the Commission. | | |
| c) *Progress and management reporting*<br>2 management reports and one Progress Report/Cost statement were produced and submitted during this period. | | |

| Workpackage: 8: Planning research dissemination: organisation of meetings and conference(s) | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| *a) Plan a schedule of presentations on MOBILE at relevant national and international events; publicity plan for press and media in the EU*<br>Each Executive Committee meeting approved forward plans by Partners to present aspects of the project within their own countries/regions. Partners collaborated in responding to some invitations to present at conferences and to prepare journal articles.<br><br>Each partner implemented local press and media campaigns about MOBILE with success.<br><br>In addition to the promotional material for the project, a MOBILE Newsletter was produced midway through the field trial periods to inform interested parties and the professional press about the progess of the project. 300 copies were mailed throughout Europe. | Considerable delays in the early stages of the project, and uncertainty over the scheduling of the field trials, prevented partners from developing a joint plan for conference/seminar presentations. | Partners responded separately to national and international opportunities to present aspects of the project, with agreement of the Executive Committee. |
| b) *Arrange, as appropriate, a series of national/international meetings and seminars to present the research results*<br>During the course of the project (including the months immediately following completion), partners presented aspects of MOBILE at 9 international conferences and seminars and 5 national seminars and workshops. | | |

| Workpackage: 9: Publication and dissemination of final project report | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Run publicity campaigns in field trial countries* | Funds were not available to mount a second publicity and promotion campaign to publicise the final results of the project. | Results will be disseminated through existing mailing and contacts lists, built up during the life of the project, and through publicising outcomes on the Internet. |
| b) *Present MOBILE results through European media*<br>Numerous press releases and reports about the project were printed in national and regional press and in the professional journals; the MOBILE services were reported on regional TV and radio broadcasts in Scotland, Friesland and Macedonia; information on the project was provided through 2 Web sites on the Internet; one chapter of a book on public library networking was written about the progress of MOBILE and published in January 1997 in the UK. | | |
| c) *Attend conferences, meetings and seminars*<br>9 international and 5 national conferences and seminars were attended by partners to present aspects of MOBILE. The final results of the project will be presented at IFLA 97 in Copenhagen.<br><br>The MOBILE Partners planned and hosted an international conference in Veria (April 1997) to present and disseminate the findings of MOBILE and to debate issues arising from the project. The conference, Information on the Move was attended by over 80 participants from 10 European countries. | | |
| d) *Respond to feedback to publicity*<br>A mailing list of over 200 individuals and institutions was compiled and maintained by Co-ordinating Partner in order to respond to continual interest throughout the life of the project. It is anticipated that this interest will continue after the formal end of the project. Partners are agreed that a summary of the Final Report will be made available in three languages for dissemination in print and through Web sites in response to continuing feedback and to satisfy requests for information. | | |

| Workpackage: 10: Project management and reporting to the Commission | | |
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| **Actual work carried out** | **Problems and solutions** | **Changes and modifications** |
| a) *Design and implement routine project control procedures*<br>Minimal control procedures were established. | In each partner organisation, principal responsibility for MOBILE lay with one manager only, each with many other duties and minimal staff support. | Routine control procedures and bureaucracy were reduced to a minimum. |
| b) *Co-ordinate project activities and deliverables; quality control*<br>Co-ordinating Partner co-ordinated activities with inputs from all 5 partners; other activities were agreed in Executive Committee meetings and were the responsibility of each individual partner, liaising with Co-ordinating partner as appropriate. All Deliverables were produced. Quality control was adequate. | Delays were incurred by each Partner in executing many of the agreed activities, for external reasons in some cases (e.g. technical problems) but also because of pressure on staff and resources within each organisation. | Where possible, delivery deadlines and project schedules were revised, with the agreement of the Partners and the Commission. |
| c) *Produce and/or edit reports to the Commission*<br>Management and Progress reports were filed with the Commission as required.<br><br>Major reports were compiled or edited by Co-ordinating partner for submission to the Commission. | | |
| d) *Set up effective information flows with and between MOBILE partners*<br>Communication was mainly by fax and telephone; only two Partners initially had e-mail facilities; by the end of the project 4 were able to communicate using e-mail.<br><br>Communication flow became more effective in the last two years of the project.<br><br>The project Executive Committee met 6 times during the life of the project; Co-ordinating Partner had separate meetings with partners at appropriate points in the project on 9 occasions. | The plan to establish immediate e-mail connections and electronic conference facilities was not implemented, mainly because of costs and inability to persuade library authorities of the necessity and cost-effectiveness of such links. | |

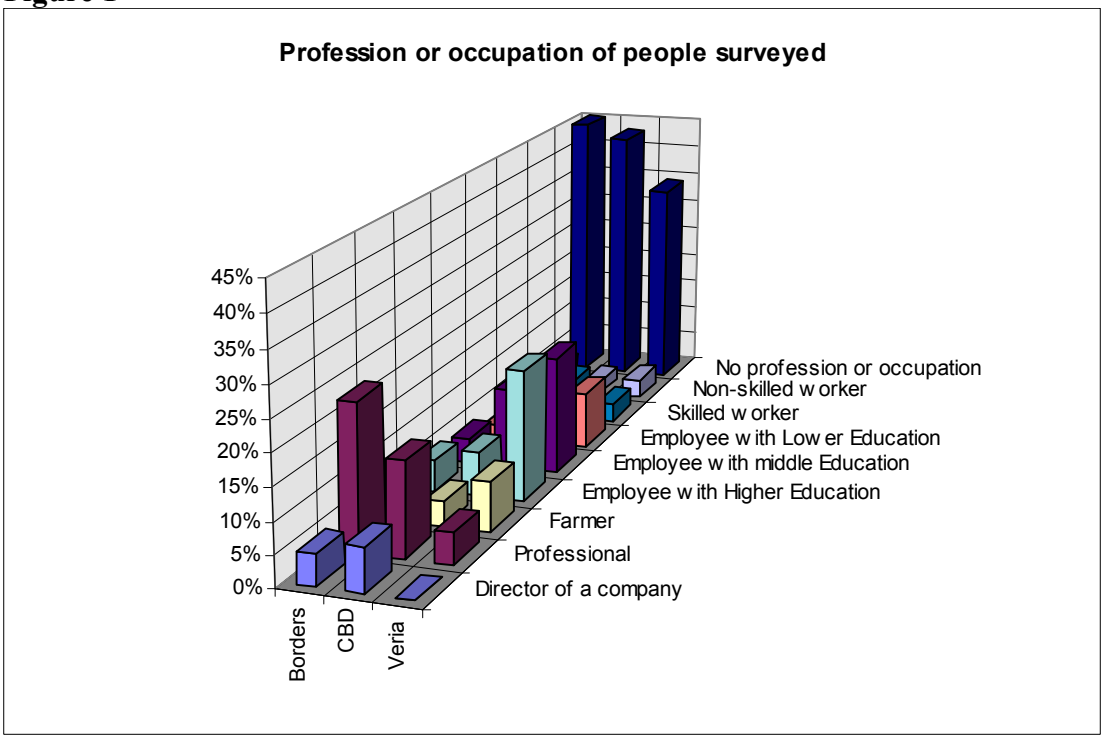
## 2.2 Target user groups

### *2.2.1 The user survey and its outcomes*

NBLC designed, produced and analysed survey questionnaires for use in each of the three regions. In Borders the questionnaire was distributed among users of the existing mobile library services; in Friesland and Veria the survey was implemented among both users of existing mobile library services and non-users (in Friesland these were users of static library service points). The Survey in Borders was distributed and collected by the mobile library staff from the vehicles; in Friesland it was a postal survey; in Greece the Survey was conducted in face-to-face interviews. The return of the questionnaires in all three regions was satisfactory, in comparison to similar surveys conducted in other projects, and sufficient to develop profiles of users and needs. 545 questionnaires (45%) were returned in the Borders; 465 (33%) in Friesland; and 212 interviews undertaken in Veria.

Each of the surveys was designed to be as similar as possible to the others to facilitate some comparison of the results, although it should be noted that half the interviews in Greece were conducted among specific target user groups (students and teachers at senior secondary schools), unlike the surveys in Borders and Friesland. Some aspects of the survey results are illustrated and described below. A full analysis of the surveys can be found in the Survey Reports submitted as project deliverables (see Annex 1).

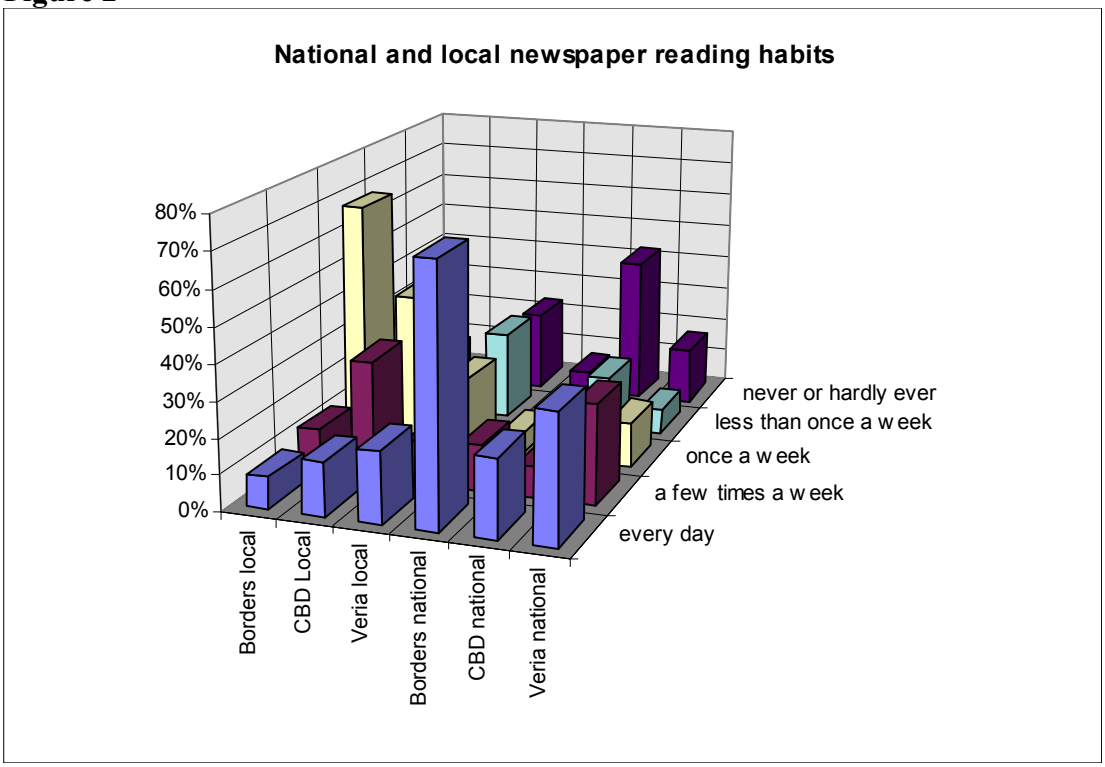
**Figure 1**




In the Borders 75% of the sample did not have a paid job at the time of the survey, and of those, 67% were retired from paid employment. In Friesland, 57% of those surveyed were not in paid employment, of which 13% were retired and 29% were

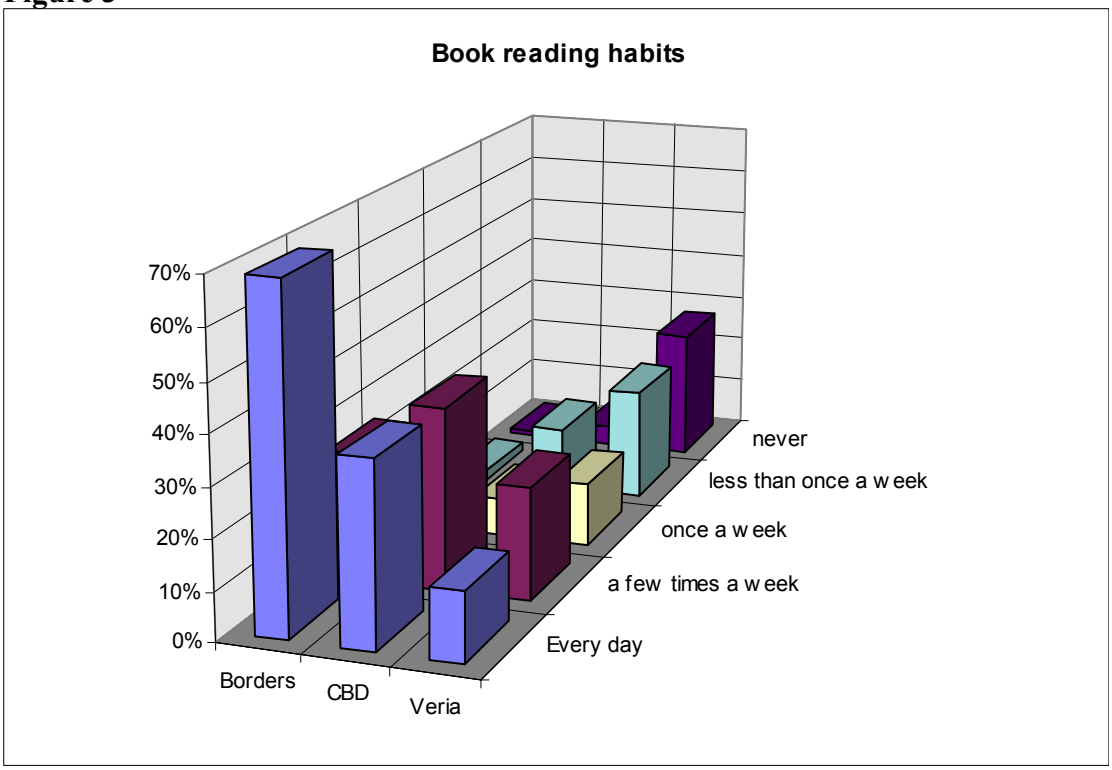
housewives or house husbands. In Veria, 45% of the general public interviewed were not in paid employment, of which 57% were students.

**Figure 2**




The answers to questions on reading habits reflect in part the fact that most local newspapers are only published once or twice a week.

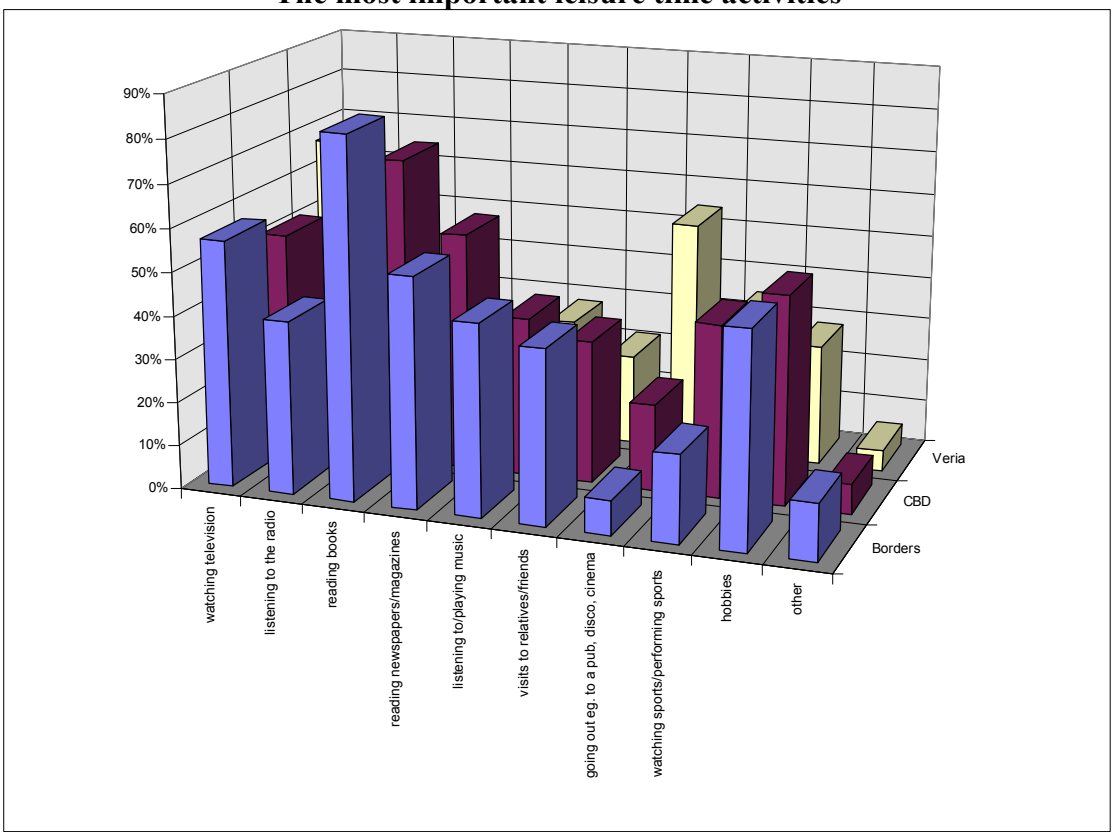
**Figure 3**



In the Borders and Friesland the majority of reading (average 65%) among the sample is done for leisure purposes. The question was not asked in Veria.

**Figure 4**

**The most important leisure time activities**




In the Borders 16% of respondents said that they use a computer; in Friesland 28% of the mobile library service users said they use a computer, but 52% of those using the static branch libraries use a computer, indicating an interesting difference between the urban and more rural communities. In Greece, 26% of the general public said they use a computer and 24% of the school students and teachers.

### *2.2.2 Identifying user needs among target user groups*

The first Peer Review summarised the situation: the user surveys in Borders and Friesland, where the MOBILE project would use vehicles already operating mobile library service schedules, "failed to identify any unmatched demand because the demands and expectations of the target user populations do not match the assumptions of the project and at the same time the mobile library service in the two areas clearly meets demand successfully...In Greece the survey suggested that the position is quite different, with clear unmatched demand that the project team can work upon. The lack of any current mobile services or levels of public library provision in [parts of] the area explain the different outcomes."

## 2.3 Technical Options chosen

The main technical issues were the design of the vehicle in Veria, telecommunications options for potential on-line access from the vehicles, and the choice of computer hardware, software and peripherals.

The new vehicle in Veria was based on the design of the mobile library vehicles used by CBD Friesland. The chassis size and type was dictated to a large extent by landed costs in Greece since the Greek government was to tender for the procurement of the chassis. Interior designs and technical specifications were drawn up by Veria and Co-ordinating Partner. Mobile library shelving was purchased in the UK.

The Partners quickly concluded that establishing on-line access services in the new vehicle in Greece would not be technically feasible: the national telecommunications infrastructure in parts of Macedonia was poorly developed; even the option of using open telephone lines in, for instance, schools, would be subject to poor quality lines and slow transmission speeds. No GSM cellular telephone networks operated in the area, nor were any planned until 1996/97. Mobile data radio (MDR) and VSAT satellite options were simply too expensive to contemplate. In Borders and Friesland MDR was attractive in that it involved high capital costs but insignificant running costs. Friesland seriously considered this option, but Borders lacked the funds to make such an investment. The European Commission contribution to the costs of MDR (and all other) equipment would be no more than 33%. A further constraint was that while MDR is efficient for mobile vehicles wishing to communicate with their headquarters or with each other, the "patching" method of gaining on-board access to external networks is unreliable and costly, and transmission speeds are unsuitable for the transmission of large amounts of data (such as using the World Wide Web). Since MOBILE's principal aim is to offer mobile library service users access to a wider world of information sources and services, Borders and CBD Friesland opted for the GSM network option, with relatively low start up costs, but potentially high subscription and running costs.

Advice about on-board computers and peripherals - the preferred size, robustness and maintenance issues - was sought before procurement from a number of UK and Netherlands library authorities with experience of automated systems in mobile libraries.

## 2.4 Deliverables

Annex 1 provides a list of Project Deliverables and their status. Most of the Deliverables were not intended for immediate public consumption since they were not readily comprehensible taken separately outside the overall context of the project. With the completion of MOBILE all the significant deliverables will be made publically available (see status notes on Annex 1) on request.

# 3 The Role of the Partners

## 3.1 Intended roles and actual inputs

The Partners planned the following major roles and inputs:

### *3.1.1 Co-ordinating Partner*

Carpenter Davies Associates was to be the Project Manager and Coordinating Partner. In addition, they were to have several professional responsibilities within the Project including

- the design of performance evaluation and monitoring instruments,
- advice on the design of the new vehicle and the selection and procurement of materials (stock) and equipment,
- implementation of the field trial evaluation exercises and analysis of data, preparation of the final report.

### *3.1.2 Partner - NBLC*

NBLC's role in the Project was to be the professional support, and included the following responsibilities:

- Design of the user survey methodologies and instruments, and analysis of data;
- assistance in the identification of equipment suppliers;
- assistance with the implementation of the field trial evaluation exercises;
- design and delivery of library staff training programme(s)
- planning and implementing the dissemination and presentation programme for project results.

### *3.1.3 Partner - Borders, Partner - CBD Friesland, Partner - Veria*

The three Partner library organisations were to be principally responsible for:

- implementing the user surveys;
- planning and resourcing MOBILE services and service delivery schedules;
- adaptation/renovation of vehicles or design and procurement of new vehicles;
- operation of the field trials;
- performance data gathering and monitoring service provision;
- publicity and promotion of MOBILE project services within each region.

Due to staff changes and shortages, as well as other factors which emerged during the progress of the project, some minor modification and re-assignment of responsibilities took place. The only significant change in Partner inputs to the project was that Co-ordinating Partner and Veria took over the responsibility for planning and implementing the dissemination and presentation of project results in Stage 3 of the project.

## 3.4 Staff resources

In each Partner one manager was designated as principally responsible for MOBILE activities, supported where required by other staff:

- Julie Carpenter was the Project Manager, supported by part-time clerical staff in the UK;
- Brian Croft, Deputy Head of Borders Regional Library Service, and then Head of Scottish Borders Council Recreational and Interpretative Services, was the manager of MOBILE in Borders. One librarian was seconded by the library service to operate the MOBILE services and deliver services from the vehicle: normal practice in Borders mobile library services is for vehicles to be staffed by one driver/library assistant only.
- Corrie Roersma, Manager of the Mobile Libraries Department in CBD Friesland, managed MOBILE activities, supported by technical and administrative staff in her department. Two professional library staff were designated responsible for the operation of MOBILE services from the vehicle: normal practice in Friesland is for vehicles to be staffed by one driver and one librarian.
- Ioannis Trohopoulos, Director of the Public Library of Veria, was the manager of MOBILE activities, supported by the library's information technology and library automation manager. Two professional library staff were contracted to operate MOBILE services and travel with the vehicle.
- Wilco de Gier was the manager of MOBILE activities in NBLC. The project called upon other NBLC resources to provide services, namely in the analysis of user survey data, the design and artwork for publicity materials and in staff training.

## 3.5 Staff training

Formal training for staff in the MOBILE consortium consisted of one 5 day course designed for the project and implemented by NBLC in Friesland (see Workpackage 5 above). Other informal, on-the-job training took place in Borders and Veria, delivered by other members of staff from the MOBILE consortium.

# 4 The project results

## 4.1 Value of the work carried out

The MOBILE Project has been a qualified success. While, on the one hand, the project failed to meet several of its objectives (see .4.4 below), it has successfully

- exposed inequalities inherent in the European, market-driven telecommunications infrastructure, in terms of coverage and quality, speed of development and costs;
- highlighted the difficulties of navigating effectively through the many publicly accessible but unorganised networked information sources, under cost and time pressures;
- demonstrated decisively the effectiveness and high potential of CD-ROM and multimedia technology in a mobile library environment;
- drawn attention to the need for greater flexibility in timetabling and staffing mobile library service points if ICT are to be exploited successfully;
- demonstrated the paucity of quality electronic and networked information in European languages other than English.

The value of the work carried out will be demonstrated in the short- to medium-term in the following areas:

- expansion of the role of mobile libraries in Greece, and a renewed focus on the potential of public libraries as public information providers rather than cultural archives;
- debate on important issues of mobile library function, policy and cost-effectiveness in Northern and Western Europe as public library networking becomes increasingly commonplace;
- focusing attention on the important role of the European Union in public information provision and communications, since this has been a very visible library project with wide public and professional impact in the project regions;
- A forum for international exchange of ideas and example, with particular value in Southern Europe where investment in mobile library services is increasing.

## 4.2 What could/should have been done differently

With hindsight the MOBILE project would have benefited from the following changes of structure, focus and scheduling:

- Fewer partners: it was over-ambitious, given the limited resources at the disposal of the Partners, to attempt to trial MOBILE services in 3 library organisations: the project would have been more effective and manageable if only one Northern European library had participated.
- A different focus for the user surveys: the identification of definable groups of potential users (e.g. in education, in local government, or business), who were not already users of the mobile library services, as the focus for the user surveys in Borders and Friesland might have produced indications of clear user demands for ICT-based information services, and clear targets for the project. However, it is

hard to see how Borders and Friesland could then have met these needs given their service obligations to existing users (see 5.4 below).

- Government policies and national information developments: insufficient project time and resources had been allocated to establishing and maintaining a clear understanding of all relevant government, local and regional policies and programmes, and the national information context, including telecommunications developments and library developments for the project period. The project would have benefited from a preliminary `feasibility' phase, resulting in a tighter focus for the `demonstration' phase.

## 4.3 Results obtained versus the anticipated results

### *4.3.1 Services developed and delivered*

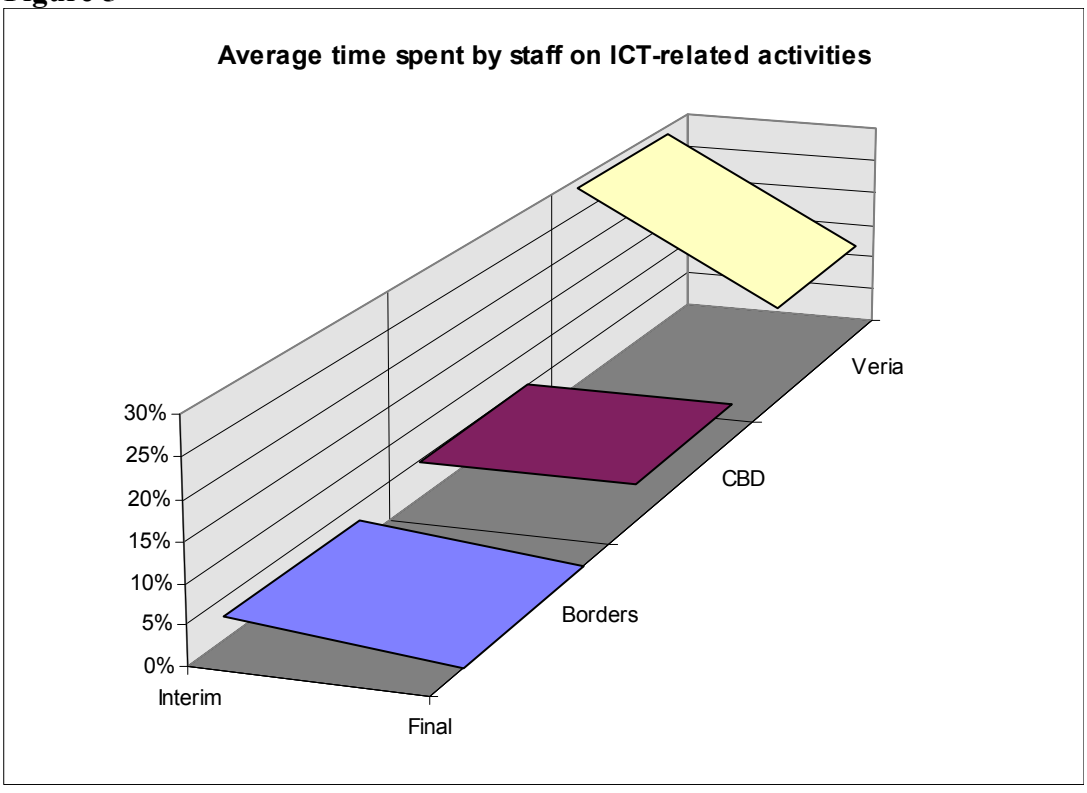
| Partner | Target users | Planned services | Actual services |
|---|---|---|---|
| **Borders** | Existing users of mobile library services | • on-line public access to a range of external networks and databases, including the Internet<br>• public access to CD-ROM databases, information sources and programs<br>• off-line access to Library service automated catalogue<br>• "One-stop shop" for information on a range of community services<br>• phone/fax enquiry link to HQ reference library<br>• on-board photocopying/fax | • very limited on-line access to external information sources and databases; severely constrained by coverage of GSM network<br>• public access to CD-ROM databases, information sources and programs<br>• limited on-line and off-line access Library service automated catalogue<br>• limited access to local community information<br>• phone/fax enquiry link to HQ severely limited by location, cost/speed of GSM network<br>• on-board printer |
| **CBD Friesland** | Existing users of the mobile library services New users from business/professions | • possible on-line public access to national and international information services<br>• document supply services<br>• CD-ROM - based reference & enquiry service<br>• phone/fax reference enquiry service back to HQ<br>• on-line access to CBD automated catalogue & circulation system<br>• fax services | • CD-ROM based reference & enquiry service<br>• document delivery services using fax link to HQ, constrained by speed and cost of network<br>• phone reference enquiry service back to HQ<br>• on-line access to CBD automated catalogue & circulation system |
| **Veria** | Teachers and students in senior secondary schools in Imatheia Adults using day and evening facilities of village and town social centres in Kilkis | • access to hands-on demonstration and training in IT & computer use<br>• public access to CD-ROM, CD-I and software in language learning and vocational subjects<br>• use of IT, books & AV in local exhibitions & educational project work<br>• off-line staff access to central automated catalogue<br>• CD-ROM & book - based reference & enquiry service<br>• mobile phone link with HQ | • access to hands-on demonstration of IT<br>• public access to CD-ROM reference and language materials<br>• collection of video materials and on-board viewing facilities<br>• off-line access to central automated catalogue and circulation system<br>• loan collection of books and magazines |

### *4.3.2 Implications of ICT-based services for users and staff*

The implications of ICT-based services for users in the Borders and CBD Friesland were minimal. A very positive reaction to the addition of CD-ROM access to the regular services provided by the mobile library from children and school students was tempered by the lack of availability of Dutch language materials in this format (see 5.8 below). In both the Borders and CBD Friesland MOBILE needed to be successful in introducing existing mobile library users to a new world of information access and presentation, and a new range of hitherto unsuspected information sources, which would stimulate demand and attract different kinds of library service users. The failure of the GSM network to provide secure, reliable and fast on-line connections to information networks was one of the main factors which obscured these potential implications among the adult user groups.

The situation in Veria was quite different: here the introduction of information technology, in the form of computers, software, CD-ROM materials, as well as video facilities, in a purpose-built, large mobile library vehicle which also offered parallel print-based information and loan services, served to highlight for users the enormous potential of ICT in information provision, education and leisure. Adults and children (mainly the latter), as well as library staff and other professional colleagues in the area, embarked upon a new learning experience, as Figures 5 and 6 indicate.

**Figure 5**

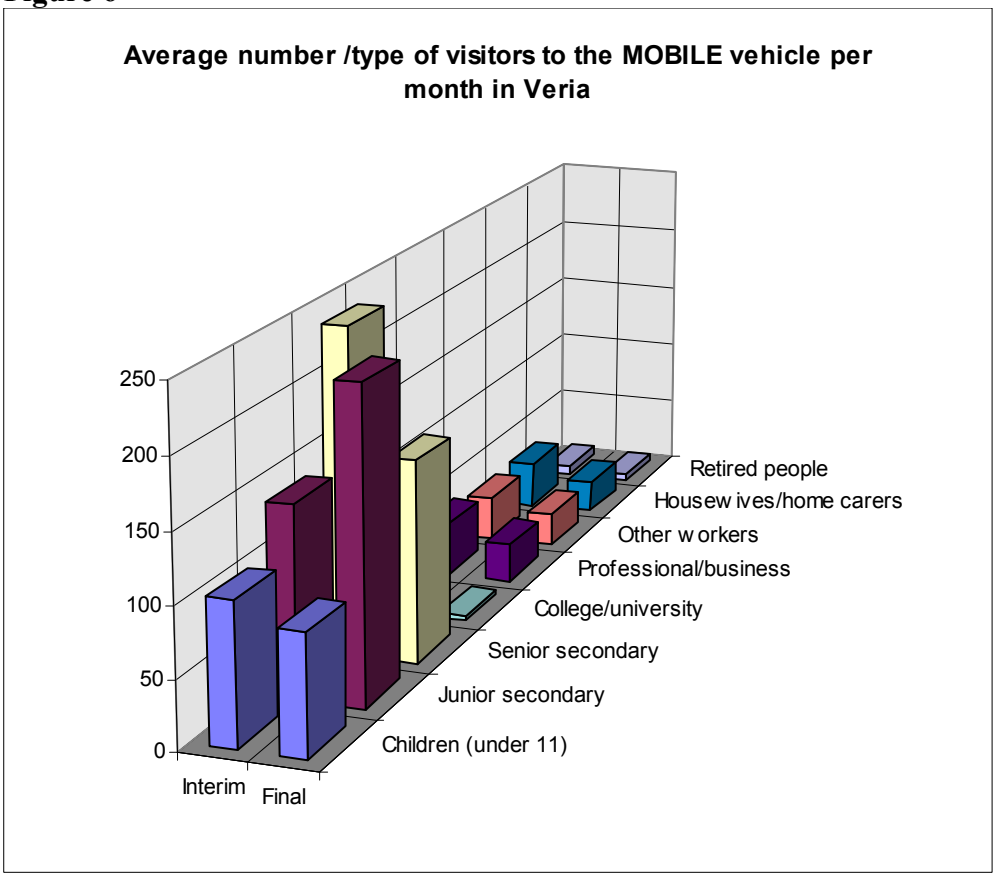



### *4.3.3 Potential value of ICT for rural and remote communities*

In all three regions there were clear indications (anecdotal), in the final weeks of the field trials, that exposure to the ICT - based services - limited though these were - was achieving a growing awareness among key user groups in the rural communities served (e.g. teachers in Veria, professional and business people in Friesland) of the

potential value of ICT and specific information needs which might be satisfied through ICT-based services.

**Figure 6**




### *4.3.4 Cost benefits and cost-effectiveness*

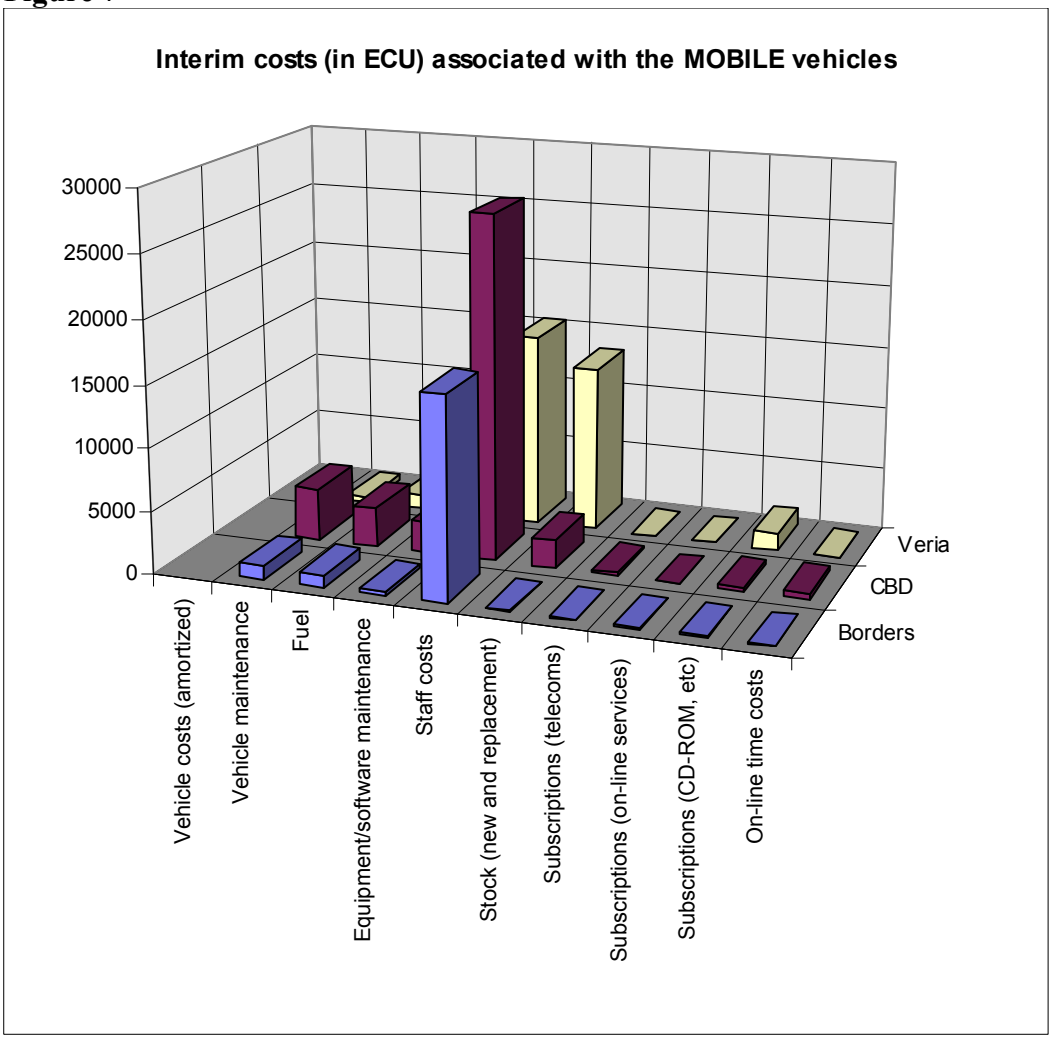
Cost benefit analysis for the MOBILE services was not attempted for the reasons given in paragraph 5.3 below. The cost effectiveness of mobile libraries in general is a deceptively difficult topic to address. The MOBILE project's ability to gather cost data from different sources **on a comparable basis** and associate that with data on use **on a comparable basis** was very limited. In addition, the concept of **effectiveness** varied considerably among the three partner library organisations and their users.

Comparison of the cost data which MOBILE was able to gather is fraught with problems (see Figure 7): for instance, the staff costs in Veria relate to two full-time library assistants working on the MOBILE project; in Borders, the costs relate to one library assistant, and in CBD the costs represent a proportion of the time of two library staff. Also in Veria, since the Library was building and stocking a completely new, rather than a replacement, vehicle, the costs of stock procurement were high compared to the two other library partners.

Because of the interrupted and very limited opportunities for MOBILE to offer a full range of ICT-based services in Borders and Friesland, and the not-unrelated low levels of interest and uptake of these services, it was not possible to produce any meaningful results for costs **additional** to those costs involved in running the traditional and existing mobile library services. In Veria, previous to the MOBILE project, the

Library offered only basic book delivery services over a wide territory, with which comparisons of the costs of the new MOBILE services would not be meaningful.

**Figure 7**




### *4.3.4 Vehicle design*

The vehicle in Veria was modelled on the vehicles in CBD Friesland: the body (6m) was built on a DAF chassis with separate cab. The design incorporates features which are standard for mobile libraries in Western Europe, such as air-conditioning/heating, glass inner doors, washbasin and water supply for staff, but which are unusual - if not unknown - in Greek library services. The design of the vehicle was in no sense revolutionary or innovative: the computer hardware and video equipment, as well as desk space for users and staff were incorporated according to well-tried mobile library designs. Because only one vehicle was built under the MOBILE project there was little opportunity for introducing comparisons between the three services. In each case, there is no doubt that similar conclusions were drawn about the difficulties of accommodating reasonable user access to IT and access to traditional book lending services within the same vehicle.

### *4.3.5 Wider visibility for public libraries*

There is no doubt that MOBILE increased the visibility of and generated considerable interest in the public library services within each region, as well as, in the case of Veria, nationally. In the Borders, the launch of MOBILE services, and the publicity campaign beforehand, created much interest and enthusiasm, not borne out by the actual uptake of what services were eventually on offer. The abiding impressions among users were that the public library service was "modernising" and that the overt European connection was something positive. In Friesland, a similar level of interest was stimulated by the publicity campaign and the official opening of MOBILE services by the Member of the European Parliament (MEP). In Veria, the press and media attention on the MOBILE project started much earlier than this, with the Ministry of Education's key role in providing substantial funds for the new vehicle; keen mainstream media interest was fuelled by the concept of a new role for the public library, focusing attention on public libraries in a way that rarely happens in Greece.

## 4.4 Compliance with Project objectives

Those objectives which depended on reliable and affordable telecommunications links were difficult to fulfil satisfactorily in Borders and Friesland. No attempt has been made to assess cost benefits; they were impossible to calculate, since there were too many other variable factors impacting on the project but outside of the control of the Partners, staff in the three libraries lacked the experience necessary to gather and identify key data, and there was insufficient time among project staff to develop such exercise. No tested specifications for vehicle design were developed since only one vehicle was designed and built in the project and its features were determined by cost and local skills rather than by innovation. Some broad conclusions about vehicle design and use are drawn (see paragraph 5.6 below).

Broadly speaking, it can be concluded that the Partners had set themselves too ambitious a range of project objectives, and had not thought through, in advance of project commencement, the likely impact of the restrictions of funding and allowable costs on project design and the likely impact of additional work on the staff of the three Partner library services, which were already under significant pressure to reduce costs and staff.

## 4.5 Unsolved problems

The project Partners in Borders and Friesland were unable to solve the technical problems they encountered in the provision of on-line access and other services requiring a communications link.

Time constraints on staff and users in all three library services were insoluble except by changing schedules to allow longer stops for the vehicles, which was achieved in some locations: there remained insufficient time for both service users and staff operating the ICT-based services to search effectively, to browse for information and entertainment, and to learn techniques and skills and absorb information.

Equally space constraints within the mobile library vehicles remained insoluble and created continual problems in Veria and Friesland as the popularity of, for instance, the CD-ROM materials and information sources began to increase among children.

Creating user demand for the new ICT-based MOBILE services became an unsought priority for the library service staff, particularly among user groups in Borders and Friesland which were largely satisfied with their existing, traditional, book-based services. MOBILE had not planned for this "educative" or "persuasive" function within the project schedule and main tasks. It presented serious problems in Borders and Friesland, taking up valuable staff time with no positive returns in rising user demand for services. In Veria, substantial amounts of staff time were also devoted to promotion of services, persuasion among new user groups to make consistent use of the MOBILE facilities, etc. These efforts paid far greater dividends.

## 4.6 Expected follow-up to the Project

### *4.6.1 Information on the Move*

The success of the end-of-project Conference Information on the Move (see Workpackage 9) in Veria will be followed up by the compilation and dissemination of Conference papers among both Conference participants and other interested parties. The Conference was attended by over 80 library and information service managers from 10 European countries, including Greece, United Kingdom, the Netherlands, Spain, Belgium, Finland, Sweden and Slovenia (see Annex 3 for Conference programme). Levels of interest about MOBILE and its outcomes remain high in Europe, as well as further afield: it is anticipated that this interest will generate specific request for information about the project for some months after its completion.

### *4.6.2 MOBILE Services in Greece, Scotland and the Netherlands*

The MOBILE vehicle in Veria remains a central part of the Public Library of Veria's widening range of services, endorsed by the Greek Ministry of Education, the Municipality and County authorities. Services will continue in Imatheia, particularly those serving schools and teachers, and it is likely that an appropriate telecommunications link for both voice and data will now be possible in the region, to allow Internet access. Services to the remote areas which MOBILE served in Kilkis will, unfortunately, be terminated on completion of the project: the costs of maintaining these services from Veria are too high, because the distances which the vehicle has to travel are so great.

MOBILE services were terminated in Borders halfway through the field trial, due to lack of demand and staff losses, and in Friesland on completion of the field trial. In Borders, the case has been successfully made to the funding authority, based on the evidence provided in MOBILE, for re-scheduling one of the 7 mobile library vehicles to provide services in the evening in some locations on a trial basis. It is anticipated that demand for ICT-based information services will increase in these locations.

### *4.6.3 CD-ROM use in mobile libraries*

MOBILE proved beyond dispute the effectiveness and popularity of CD-ROM format information, education and entertainment materials in mobile library environments. The use of CD-ROM will be extended to all the mobile library service vehicles in Friesland and Borders within the short to medium term.

### *4.6.4 MOBILE South East*

A proposal has been submitted to the European Commission for a follow-on project involving library services in Eastern and Southern Europe (Veria) which will build upon the work and achievements of MOBILE, as well as avoiding the pitfalls and mistakes made. This is one of several mobile library - based projects and project proposals which have been developed as a direct consequence of MOBILE.

## 4.7 Impact of MOBILE

The impact of MOBILE can be summarised under 5 main headings: aspects of this impact are elaborated in the conclusions in Section 5 of this report.

### *4.7.1 Attitudes towards IT among library funders, staff and users*

The potential of information and communications technologies within public library and information services has been strongly illuminated by the MOBILE project in the three regions, despite the failure of that technology in allowing reliable and comprehensive service provision. The project focused the minds of funding authorities, library boards, management and library staff on the concept of information service provision within very traditional public library services, particularly in Borders and Veria, where, prior to the start of MOBILE, exposure to IT and to ideas of networking, online services, CD-ROMs etc. was very limited. MOBILE has had a lasting impact on staff attitudes at a time, throughout Europe, when public attention is increasingly drawn to the benefits and features of the Internet. Even those library service users who chose not to make use of MOBILE services, where these were available, know more now than they did before the advent of MOBILE about what the Internet means and what it offers, and about the aims of the European R&D Programmes.

### *4.7.2 Staff development*

Staff development benefits were limited in the Borders by several staff changes during the life of the project. Staff in CBD Friesland were able to build up significant experience in offering new information services in mobile libraries, and to explore the potential of rescheduling services to meet new user demands. Staff in Veria, in particular the two qualified librarians specifically to work on the project, benefited enormously from the planning and implementation of the MOBILE project, especially in terms of

- information technology skills
- mobile library service management
- identifying user needs
- user instruction and education

- knowledge of the European Union, the Commission's research programmes, their purpose and development.

### *4.7.3 Exchange of ideas and experience*

The constructive exchange of ideas and experience required in the planning, implementation and review of MOBILE, and the opportunity to set the work of each regional library service into a wider European context, was perhaps the greatest benefit of the project for the Partners, and the benefit with lasting impact on the partner library services..

### *4.7.4 Mobile library service development in Greece*

MOBILE had a significant impact in Greece, not only upon the citizens who benefited from services provided by the project and the municipal authorities in whose areas MOBILE operated. Because the national Ministry of Education provided the capital funding to pay for the new vehicle, and because the MOBILE vehicle was a completely innovative kind of mobile library in Greece, the project became widely known and discussed. Its impact was significant principally in three ways:

- it focused the attention of national and regional media on the role that public libraries could play in society if the new information and communications technologies are exploited: a quite different role than the traditional, cultural and archival functions of most municipal libraries.
- MOBILE drew attention to the way in which the combination of mobile library service points and ICT could extend public library services outside the population centres or to groups of citizens not normally seen as library users: within two years of the commencement of MOBILE two other Ministries (Ministry for Internal Affairs and Ministry of Culture) were operating, or planning to operate mobile library services - albeit heavily book-based - in different areas in Greece.
- MOBILE has provided a model of new information services combined with traditional book loan services in a mobile library context for the other municipal libraries in Greece: librarians from over 20 different municipal libraries attended the MOBILE conference.

# 5 Issues Raised And Conclusions

## 5.1 Research projects in public libraries

A UK study published in 1996[2] concluded that, in order to be an effective partner in a European research and development project, an organisation needs to be able to demonstrate

- a willingness to bear up-front costs, including indirect costs such as the commitment of senior staff time;
- a high level of expertise in the area being addressed;
- an ongoing commitment of resources in programmes which require matching funding;
- ability to meet the technical requirements of the programme;
- enthusiasm and commitment

The MOBILE partners would endorse these points and add, with the benefit of hindsight, the need for

- stable and transparent resource allocation from funding authorities for the duration of the project;
- stable institutional structures, and
- clear policy and planning guidelines for both the library service and parent/funding bodies.

Every year for the 4 year period of MOBILE the county council in Borders and regional authorities in the Netherlands have been forced to make service reductions in all local services, the public libraries taking their share of the pain, to meet even lower spending targets and reduce overheads. These resource constraints in the Borders and Friesland have resulted in public library staff cuts and annual cuts in book funds.

The lack of certainty for all three Partner library services, about funding allocations, staffing resources and, in the case of Borders, actual local authority structures, has made planning for, and implementing, MOBILE activities a constant struggle.

Lack of experience among senior and middle management in planning and managing research projects above the normal workload also had an impact on MOBILE. Most public library services and local government authorities lack this kind of expertise and experience, with some notable exceptions in the UK, the Netherlands and Scandinavia, though the recent increase of public library involvement in European R&D projects is improving this situation.

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[2] Brophy, P. (1996). *Case studies for libraries in Europe (OPLES)*, British Library LIR Report 107, London, British Library.

## 5.2 Mobile library staffing

One factor which was not taken into account before the commencement of MOBILE, but which became apparent early in the project, is that mobile library staff are frequently under-qualified and inexperienced in comparison to the staff in static branches of the library service. This is due to the very traditional nature of the majority of European mobile library services, as dispensers of recreational reading materials, which demand strong interpersonal and administrative skills, but not expertise in reference and information work, knowledge of policy and planning issues, experience of using information technology or of developing new, innovative services. This problem is particularly acute in library services operating one-person (driver/library assistant) vehicles such as Borders and Veria, and in public library services in which the use of IT is not widespread in HQ or static branches, thus providing a poor environment for learning new skills or contemplating innovation. This was the environment in which MOBILE was implemented in all three Partner library services: indeed, the MOBILE vehicles were ahead, in terms of the project's aims and objectives, of developments in the rest of the public library service. Providing CD-ROMs, for instance, is not a standard service in most public libraries in the Netherlands. Catherine Suyak Alloway observed the same problem in the United States in 1990[3] and recommended that

> "Bookmobile librarians must become better aware and informed of online technology. This requires a special effort, as outreach staff are not normally inclined to attend meetings or read journals devoted to online topics."

## 5.3 Cost effectiveness

It has not been possible to draw detailed and comparative conclusions about the cost effectiveness of the MOBILE services during the field trials: one of the weaknesses of the project. It is possible, however, to draw several general conclusions about costs and effectiveness of introducing ICT-based information services into existing traditional mobile library services.

- Staff costs will be higher than simple book-lending mobiles because, in many cases, the number of staff on the vehicle will have to be increased from one to two, or the calibre and qualifications of the library assistants on the vehicle will need to be higher if information services are to be effective (meeting quality standards) and efficient (given tight time constraints).
- Capital costs for vehicles will be slightly higher than a book-based vehicle; back-up batteries and space for their storage, cabling for the hardware, interior design to accommodate PCs etc., will all increase costs and reduce space for other activities or storage within the vehicle.
- Running costs will be only marginally different to those in traditional mobile libraries (e.g. electricity and maintenance of equipment may increase costs) except where online services are offered. If cellular digital telecommunications links are

[3] Catherine Suyak Alloway (1990) *Bookmobiles going (or not going) online: a view from the road.*

used, connect time costs could be high, depending on the length of time service is provided. If a landline connection is used (e.g. the telephone line in a school or office at the vehicle stops) connect time costs will still be significant.

Measures of cost-effectiveness for ICT-based services in mobile libraries are no different from such measures employed in purely traditional services, and just as open to error and misinterpretation. As Fuegi points out [4] "cost effectiveness could be influenced by numerous factors" including demography, geography, multilingualism, frequency of visits, membership charges. The management tool to help us decide whether the performance of a library is good or bad is benchmarking - essentially comparisons of equivalent services such as comparing issues per head of catchment population for the territory served by mobile libraries with that served by static libraries; costs per issue or per visit for mobiles and static libraries; and, for comparing one mobile with another, the percentage of public service time, or the time spent open to the public (travelling time and administration at base are not public service time), and issues per head of staff.

MOBILE had problems in applying these kinds of measures of cost-effectiveness because

- no comparable ICT-based services in static branches were on offer in the partner library services;
- no ICT-based services comparable with those planned (if not actually implemented) by MOBILE were offered in mobile libraries in other European public library services;
- no consistent period of sustained ICT-based service provision was achieved in Borders or Friesland from which to develop accurate cost models.

## 5.4 Users and user needs

MOBILE faced a dilemma in Borders and Friesland: how to design and introduce effective new services, using new technologies, which will be of recognised value to a group of mobile library users with no apparent need for such services. How could library users express a clear need for access to information services and sources when they were completely unaware of their existence? Could MOBILE be successful in introducing library users to a new world of information access and presentation, and a new range of hitherto unsuspected information sources, which would stimulate demand and attract different kinds of library service users? Ideally, the partners should have identified a different set of target users; groups of people who are not currently regular users of the mobile library services, such as those undertaking full-time and part-time adult education courses locally, local business people and entrepreneurs; and groups which can be expected to have information needs which traditional mobile library services do not cover. The problem for MOBILE with this

[4] David Fuegi (1997) *The cost effectiveness of mobile libraries: A benchmarking approach.* Paper presented at **Information on the Move: the MOBILE conference.** Veria, Greece, 4-5 April 1997

approach was that, due to funding constraints and the restriction to only one MOBILE vehicle imposed by the European Commission, MOBILE services had to be grafted onto existing mobile library services funded by the Scottish Borders Council and CBD Friesland on behalf of, or directly by local taxpayers. Without a dedicated, experimental vehicle, it was impossible for MOBILE to ask Partners to remove one vehicle from its regular schedule of stops and services, in order to dedicate it for one year to providing experimental services to entirely different groups of people. Those regular users thus deprived of their much-valued mobile library services would protest, and with justice.

## 5.5 Dedicated vehicles for ICT-based information services

In 1990 Catherine Suyak Alloway from St Louis Public Library described the electronic bookmobile

> "[which] could have many applications depending on community profiles and needs. For example, neighbourhood stops.....might have increased use with homework-laden students making use of CD-ROM reference sources, or pages faxed from the main library. A bookmobile targeted to the business community with stops scheduled at office complexes could have a number of machine-readable statistical and business databases available....Schools lacking adequate libraries could benefit from a mobile unit set up as an "electronic learning center" with multi-media equipment, microcomputers, and other resources on board for special research projects."[5]

The MOBILE project points to the conclusion that , to do any of these things effectively, requires a dedicated mobile service unit, offering equipment, materials, expert staff, information and other services which are targeted at a defined user group or groups. Services based on ICT can conflict with the more traditional, book-based mobile library services. Public library funding constraints, limited staffing options, restricted space within the library, and inflexibility in scheduling stops are all factors which present problems. Two major questions emerge from MOBILE:

- does the nature of social development in many Northern European countries make mobile library services fundamentally inappropriate for ICT-based information services? In rural areas the trends show that income earners with cars will use library and information services in urban centres and demand for mobile library services will increase in the future from the elderly and housebound reader. In this context, will significant medium-term investment seem worthwhile to equip the mobile library for on-line network access, fast document delivery and extended use of CD materials?
- If the users of existing mobile library services are not the ones most likely to benefit from and demand ICT-based access to remote information services and sources, is the development of new and separate mobile service units the most effective way of delivering such services to targeted users? In the European

[5] Catherine Suyak Alloway *The Electronic Library*, 8 (2), 100-106.

Information Society, won't it be reasonable to assume that potential and enthusiastic users of information networks, databases and document delivery services, such as adult learners in full or part-time education, businesses and entrepreneurs, will themselves join the growing number of individual and corporate PC users and Web browsers, instead of relying on access via public libraries?

## 5.6 Mobile versus static service points for ICT-based services

The telecommunications issue is the most damaging factor mitigating against ICT-based services in mobile libraries as MOBILE draws to an end. If mobile digital telecommunication infrastructures do not significantly improve, come down in cost and become more widespread, access to networked information services from mobile service points will not be practical or, in some areas, viable. Static branches of public library services will, in the foreseeable future in most of Europe, be provided with affordable national network links or, at least, dial-up networking facilities.

Obvious space constraints exist in mobile library service points compared to static libraries. These constraints are significantly exacerbated when ICT-based information services are grafted onto, and run in conjunction with, book-based lending services. Access by staff and public to sufficient numbers of PCs and peripherals has equal potential to be a problem in small branch libraries and mobile service points.

The crucial factor in provision of such services from a static branch library is time: unlike the mobile service point, the information and networking services offered in a static branch do not leave the neighbourhood for a week or more after a maximum of 3 hours open to the public.

Time in locations stops, and therefore the number of locations served, is also another potential area of conflict between ICT-based information services and book-based lending in mobile libraries: book lending and returning is a relatively fast transaction (including time for browsing) which can be predicted; information and enquiry work is not necessarily fast and the length of transaction with the public is far from predictable. Effective use by the public of CD-ROM materials and networked information online requires relative freedom from time limitations. Reconciling these different time requirements in a schedule for one vehicle which satisfies the different needs of user groups is extremely difficult; perhaps impossible.

## 5.7 Significant technological barriers

It has to be assumed that the cost (per connect minute) and range of GSM networks, where these are available, will continue to improve, and that other forms of telecommunications in a mobile environment, such as satellite links and MDR, will also come down in cost and provide the appropriate bandwidth for serious use of information networks. It remains an open question as whether GSM networks, where they are operational, will ever provide the secure, fast and economical data connections that are now a reality for many ISDN telephone line and cable customers.

There are indications that these advances are already underway in some parts of Europe, driven by large industries (transport) and private sector competition in the telecommunications market. In this sense, MOBILE was ahead of its time. Mobile library services will never drive change in this area - no public sector organisation has the economic weight, nor is the mobile library sector a sufficiently large market, Europe-wide, to have an impact on developments within the telecommunications industry.

MOBILE's experience on service provision in rural and remote areas in the UK and Greece leads the Partners to question whether Europe's largely market-driven development of telecommunications infrastructures can be relied upon to ensure that rural, remote, sparsely populated or economically disadvantaged regions in Europe do not become the lower tier in a two-tier information society, permanently disadvantaged by limited or inadequate provision of telecommunication links.

## 5.8 Access to multimedia materials and sources of networked information

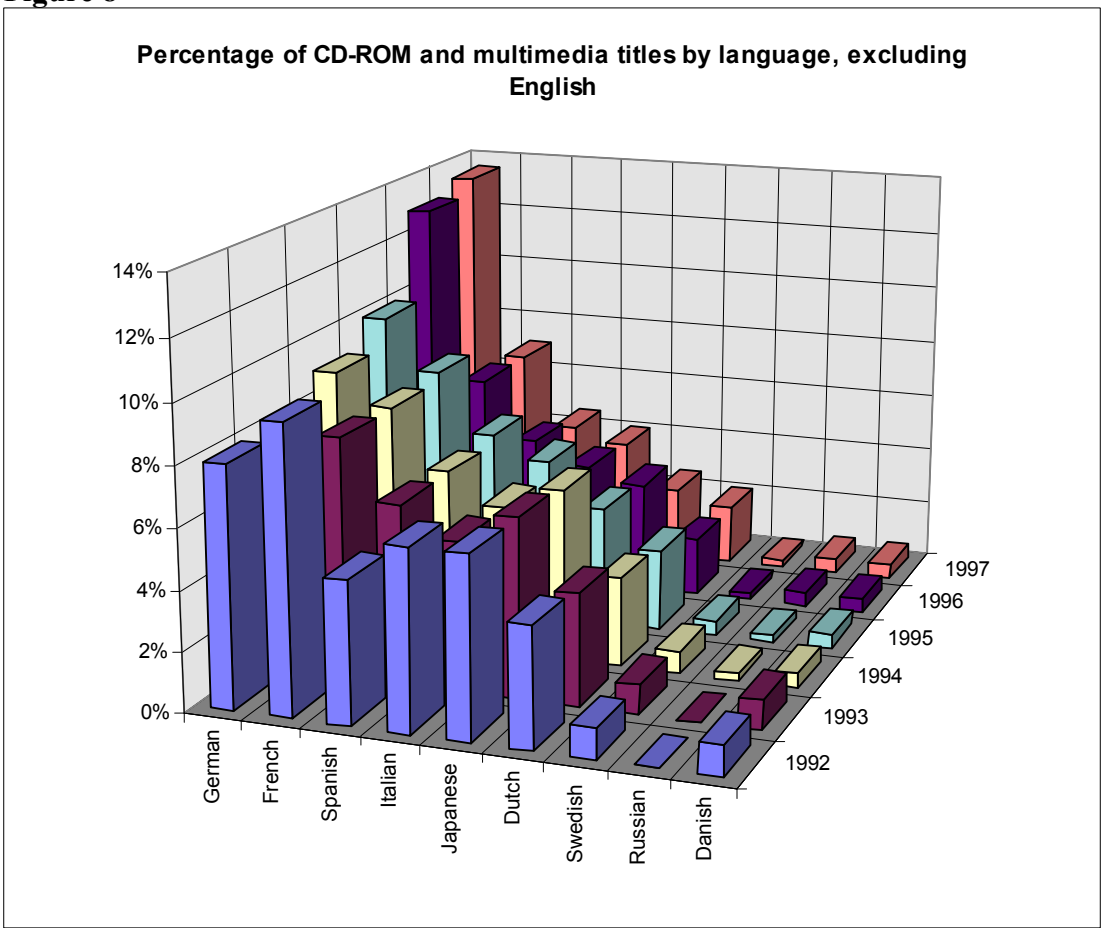
During the lifetime of the MOBILE project the Partners had very restricted choices of materials in CD-ROM and multimedia, particularly in languages other than English. This situation is changing rapidly: the number of commercially available titles increased by 45% during 1996 alone[6]. Almost every type of information is now available on CD-ROM; the numbers of general interest, recreation and leisure titles have increased by a similar volume over 1996. English remains the language of ¾ of the CD-ROMs available, with German second and French a distant third (see Figure 8). The two categories of subjects that are clearly growing the fastest are "general interest, recreation and leisure" and "education, training and careers". Since 1993 the proportion of titles originating in North America has been decreasing in the face of faster growth in Europe. With Europe's multiplicity of markets and the growth of localisation this should be expected. But the number of new publishers in Europe has grown dramatically: a 90% increase in one year, especially marked in Germany and France.

MOBILE also concluded, in the limited time that partners were able to experiment with online access, that the Internet/WWW was not something you could just plug into and access information with ease. If all technical issues are solved, effective information access and retrieval using the WWW requires time and a significant level of staff and/or user expertise. Sources of information on the Internet: the range and number are expanding daily - in the English language. MOBILE partners were never able, because of time, staff and technical constraints, to spend sufficient administrative time investigating and identifying WWW and other information sites relevant, or potentially relevant, to user needs. The problem with the Internet is so much information available that it is very easy to miss materials - unless a significant amount of time is spent browsing and checking sites. In the last 2 years a number of increasingly sophisticated search engines and software tools have become available to assist end-users and information intermediaries to solve some of these problems of information overload: products that continuously monitor multiple Web pages chosen by the user, detecting any changes, capable of monitoring sites as often as every 15

[6] Data taken from *Multimedia and CD-ROM Directory 1997* published by TFPL, UK

minutes or only once a month; software packages enabling the user to cut down on phone bills by allowing them to "surf the WWW" offline; the software allows the user to select a WWW page that will be accessed on a regular basis, add it to a list, then it automatically logs on to the site and downloads a copy of the page with active links to all other pages and sites. This can then be read and browsed through offline. Clearly these kinds of tools have the potential to solve many of the time and access constraints which MOBILE encountered.

**Figure 8**




## 5.9 Southern, Central and Eastern Europe: developmental leapfrogging

Citizens and communities in many areas of Southern, Eastern and Central Europe are without adequate access to public information, particularly the increasing variety and range of networked information. Public libraries have either never developed effective branch library infrastructure or have been forced through resource cuts to allow that infrastructure to deteriorate. Other public information providers (government agencies, social, health and welfare organisations, etc.) have accorded low priority to active information management and flow. Commercial information services, taking advantage of developments in technology, are emerging in business and research, but these do not generally reach the majority. The spread of personal computing and institutional networking is slow in Southern Europe in comparison with Northern Europe and citizens are further disadvantaged by unfamiliarity with IT and telecommunications developments and benefits. Cost effective ways of exploiting

multimedia and new technologies in information service delivery are required, which do not depend upon extensive library infrastructure, systems and automation.
In this context, the potential of using mobile library service points combined with ICT to provide information and IT access lies in

- flexibility, where investment and services can be targeted at different locations and user groups according to needs;
- focus, because mobile libraries can take services direct to the users;
- functionality is possible with minimum infrastructural support.

The experiment in Greece in MOBILE indicated this kind of potential, but it was constrained by the restrictions of the telecommunications infrastructure in the region, which did not allow viable access on-line to networked services

## 5.9 Integrating services with government/funder policies and plans

MOBILE in Greece would certainly have benefited, and have had even greater impact, from a more coherent and explicit policy and planning dialogue with government (the Ministries of Education and Culture), with national library and information bodies and professional associations. Dialogue did take place, but on an *ad hoc* basis and largely dependent upon individual personalities. As a result, it is doubtful whether the valuable lessons learned in MOBILE and the experience built up under the project will have the deserved effect on future developments in public library provision.

Similarly, though different in scale, MOBILE in Friesland was not regarded, by the top management in CDB Friesland and NBLC, by the regional authorities or the national professional bodies, as anything other than a localised, departmental initiative to experiment with technical innovation. The project was never "owned" by the higher authorities, and no vision of its wider implications and pioneering potential was apparent at those levels. The necessary dialogue and exercises in persuasion had not been written into the project plan and were never undertaken.

In Borders, MOBILE was regarded as highly significant and forward-looking by the regional and funding authority, which, despite considerable reorganisation and resourcing problems, maintained its support for MOBILE activities within the limits of the funding available. Though the take-up of MOBILE services was disappointing, and the problems of staffing and scheduling finally insurmountable, the aims and objectives of the project were widely known and admired in Scotland.

## Annex 1

# List of Deliverables with their status

| Deliverable | Date issued | Prepared by | Status |
|---|---|---|---|
| MOBILE Survey Greece | 16 August 1994 | NBLC | Public |
| MOBILE Survey Borders | 20 September 1994 | NBLC | Public |
| MOBILE Survey Friesland | 10 October 1994 | NBLC | Public |
| Offering on-line services in Borders and Friesland: a technical report | January 1995 | CDA | Public |
| Lists of equipment and costs | May 1995 | Partners | Not public |
| New vehicle in Veria | June 1995 | Veria | |
| Training course outline, materials and report | June 1995 | NBLC | Public |
| Baseline evaluation data: a technical report | January 1996 | CDA | Public |
| Interim evaluation report | September 1996 | CDA | Public |
| MOBILE Newsletter | September 1996 | CDA | Public |
| Final evaluation report | February 1997 | CDA | Public |
| Final Project Report | June 1997 | CDA | Public |
| Information on the Move: the MOBILE Conference. Papers presented at the Conference | July 1997 | CDA | Public |

## Annex 2

# A selection of published articles, conference papers, and dissemination activities.

| Title | Source | Date | Type of publication |
|---|---|---|---|
| Extending European Information Access through Mobile Library Services (MOBILE) | Online and CD Notes, Aslib, UK | March 1994 | Periodical article |
| Παρουσιαση του Βιβλιοθηκονομικου Προγραμματοσ MOBILE LIBRARY SERVICES: presentations by Julie Carpenter, Wilco de Gier and Ioannis Trohopoulos | Σειρα διαλεξεων ΣΚΥΤΑΛΗ 22, Department of Library Science, TEI Thessaloniki, Greece | 2 February 1994 | Seminar |
| The MOBILE Project: presentation by Wilco de Gier | FILIBUSSEN '94: the Nordisk Bogbusfestival, Denmark | 27-29 May 1994 | Conference presentation |
| Μια δμοσια υπηρεσια διδασκει (ΚΟΙΝΟΣ ΝΟΥΣ) | ΤΟ ΒΗΜΑ (Ioannis Marinos) | 14 August 1994 | National newspaper article |
| Extending European Information Access through Mobile Libraries: presentation by Julie Carpenter, Lydia Sapounakis-Dracakis and Ioannis Trohopoulos | 34th European Congress of the Regional Science Association, Groningen, the Netherlands | 23-26 August 1994 | Conference presentation |
| European Projects: MOBILE: presentation by Ioannis Trohopoulos | 2nd Seminar of Scandinavian and Southern European Countries Public Libraries: Lisbon, Portugal | 28-31 October 1994 | Conference presentation |
| Extending end-user services in public libraries: the future of Greek public libraries and their mobile library services: presented by Ioannis Trohopoulos | Library networking in Europe/Les Bibliothèques en Réseau en Europe, Brussels | 12-14 October 1994 | Conference presentation |

| | | | |
|---|---|---|---|
| Report on the opening of MOBILE services by Piet Dankert, MEP, in CBD Friesland | Leeuwarden Courant | 26 September 1995 | Local newspaper article |
| MOBILE: Καλυτερη Προσβαση στισ Πληροφοριεσ μεσω των Υπηρεσιων που προσφερουν οι Κινητεσ Μοναδεσ. Καποια πρωτα Συμπερασματα. Presentation by Julie Carpenter and Ioannis Trohopoulos | The Telematics RTD Programme of the European Union: A Conference, Athens, Greece | 27 November 1995 | Conference presentation |
| New service from mobile library | Berwickshire News, Scotland | 30 November 1995 | Local newspaper article |
| Road to knowledge takes a new turn | The Southern Reporter, Scotland | 30 November 1995 | Local newspaper article |
| EU money for Region's libraries | The Southern Reporter | November 1995 | Local newspaper article |
| Proyecto Mobile: bibliobuses con informacíon en línea | Correo Bibliotecario: Boletín informativo de la Subdirección General de la Coordinación Bibliotecario, Madrid, Spain | 4 March 1996 | Periodical article |
| Extending European Information Access through Mobile Library Services: some first results: presentation and paper by Ioannis Trohopoulos and Julie Carpenter | IFLA Annual Conference, Istanbul, Turkey<br>Resource Sharing and Information Networks, Vol 12. No. 2 pp 49-58. | IFLA 1995<br>Published 1997 | Conference presentation and periodical article |
| Extending European Access to Information through Mobile Libraries: an experiment in networking by Julie Carpenter | The Internet, networking and the public library; edited by Sarah ormes and Lorcan Dempsey. London, Library Association | 1997 | Chapter of published book. |

# Annex 3

## The MOBILE Conference Programme

**Information on the Move: Mobile Libraries and New Information Services**
**The MOBILE Conference and Workshop**
**4-5 April 1997 Veria, Central Macedonia, Greece**
**Conference Programme**

**Friday 4 April**

| | | |
|---|---|---|
| 0900 - 0915 | Welcome address & Conference briefing: | MOBILE Partners /Chairperson |
| 0915 - 1030 | MOBILE: the main conclusions: a presentation of the MOBILE project findings | MOBILE Partners: Julie Carpenter, Brian Croft, Corrie Roersma, Ioannis Trohopoulos |
| 1030 - 1100 | Questions and discussion on MOBILE | |
| *1100 - 1130* | *Coffee break* | |
| 1130 - 11215 | Affordable telecommunications solutions: a European view | Mr K. Tzakis, Hellenic Telecommunications Organisation |
| 1215 - 1245 | Questions and discussion | |
| *1300 - 1430* | *Lunch break* | |
| 1430 - 1500 | Sources of information: what do users want? | MOBILE Partners: Julie Carpenter |
| 1500 - 1530 | Questions and discussion | |
| 1530 - 1615 | How cost-effective can mobile services be? European comparisons | David Fuegi, Essex County Libraries, UK |
| 1615 - 1645 | Questions and discussion | |

**Saturday 5 April**

| | | |
| --- | --- | --- |
| 1000 - 1030 | Mobile library services and social change I: A view from Northern Europe | Professor Chris Turner, Vice-Prinicpal, King Alfred's College, UK |
| 1030 - 1100 | Mobile library services and social change II: A view from Southern Europe | Maria Antonia Carrato, Centro de Coordinación y Extension Bibliotecaria, Comunidad Autonoma de Madrid, Spain |
| 1100 - 1130 | Mobile library services and social change III: A view on Eastern Europe | Monika Segbert, CEC DGXIII and Nika Pugelj, Oton Zupancic Public Library, Ljubljana, Slovenia |
| 1130 - 1230 | Questions, discussion and contributions from the floor | |
| | Conference End | |