

Disability & Healthcare Technology

Newsletter of the KaR Programme on Disability and Healthcare Technology



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Foreword

We welcome you to this second edition of the Disability and Healthcare Technology newsletter, which is issued twice yearly under the commission of the Department for International Development (DFID). The newsletter is edited and published jointly by the managers of the Knowledge and Research Programme on Healthcare Technology and Disability (KaR Programme): GIC Limited and Healthlink Worldwide. The aim of the newsletter is to tell readers about disability and healthcare technology activities under the KaR Programme as well as interesting healthcare and disability projects funded elsewhere. Other newsletters are being issued to cover KaR Programmes on Water and Sanitation, Urbanisation, Energy Efficiency, Transport, and Geoscience.

This newsletter is aimed at organisations and individuals who are active in the fields of disability and healthcare technologies. It aims to provide its readers with an update on the progress made within these fields by the projects sponsored both by DFID and by other aid agencies. Thank you to all our readers for their support and comments on the first edition, published in July 2001. We hope you will find this second edition as informative as the first. Please contact us with your ideas and comments for future editions.

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Front cover:

From left, Chapal, Amit and Shubash of Mobility India with a prototype die and plastic orthotic shell (see page 4).

Photo by Mobility India

Introduction

The DFID-funded Knowledge and Research Programme on Healthcare Technology and Disability aims to improve the health and quality of life of poor people. The outputs it seeks to produce are high-quality new knowledge and sustainable new technologies for poverty-focused work in disability and healthcare. Technologies include processes and management practices, organisational and supportive systems, and the knowledge associated with these.

At the time of printing this edition, 17 projects have been or are currently being funded by the KaR Programme. In total £1.2 million was committed to these projects, most of which have received 100 per cent of the funding requested. Activities funded include the creation of CD-ROMs providing healthcare information and involving Southern organisations as information providers; research into an innovative and low-cost method to prevent the spread of malaria in rural areas; and community-based rehabilitation for disabled children. This edition of the newsletter will provide you with more information on these projects and others.

In December 2000 a competition was held for organisations to propose projects for KaR funding. From this first competition 12 projects were selected. A second competition will be launched in Spring 2002, application details will appear in due course on the website of the programme (www.kar-dht.org). Experience from the first competition allows us to share some insights for the next round with our readers, in addition to the key selection criteria as indicated on the website. Firstly, applicants must be aware that only projects geared toward the poorest in developing countries will be funded. Secondly, organisations working in the field of disability are particularly welcome to apply, as they represented only a quarter of the applicants at the last competition. Lastly, applicants are strongly encouraged to include information and knowledge dissemination as a key element of their proposed projects. The KaR Programme is above all about creating and disseminating knowledge.

The months to come will see the implementation of several initiatives designed to examine further and bring forward the key issues and priorities for this programme. A programme-wide impact study is about to be undertaken and a research study looking at how to prioritise technological interventions to alleviate poverty and the detrimental effects of disability is currently being commissioned. Also, 'round tables' are being organised to generate discussion and promote learning around selected issues that are relevant to the programme. The programme's website gives further information on all these initiatives.

Working together on disability technology

The design of metal leg callipers has not changed for over a hundred years, yet in India they are still commonly used by people who have suffered from polio. Although they can be effective, these callipers (or orthotic braces) are heavy and cumbersome and have to be worn with boots, which is inappropriate in a culture where most people (particularly those in rural areas) walk barefoot. Disabled people, especially children, often refuse to use the callipers and as a result their disability becomes more pronounced. The result is isolation, dependence and further loss of mobility.

Unlike metal callipers, plastic knee-ankle-foot orthoses (KAFOs) are light-weight, discreet in appearance and user-friendly and, if fitted properly, have a high acceptance rate amongst disabled children. A well-fitted light-weight plastic calliper used in early childhood can improve a child's quality of life immeasurably by making possible everyday activities such as walking to school and playing. Plastic KAFOs have the added advantage that they can be used with any kind of footwear and, with some modifications, also allow for barefoot walking.

Plastic KAFOs were first introduced in India 12 years ago, but their cost and the time needed to produce them means that they are not widely available. For example, the conventional method of making a plastic brace for a polio-affected leg is to take a cast of the whole leg to make a plaster replica (see photo). Plastic sheets softened by intense heat are then hand or vacuum-moulded over the replica to make braces that fit the contours of the leg and foot whilst at the same time providing support and

The Jaipur Limb Campaign supports local disability organisations in India, Bangladesh, Mozambique and Angola, and raises awareness of the benefits of appropriate technology and increased South to South co-operation. Mobility India was established in 1994 to support grassroots rehabilitation centres in rural India, and to provide technical training and raise awareness about the benefits and use of mobility aids and appliances.

stretch. Orthoses for lower limbs are usually made in two parts, the below-knee and the above-knee components, which are then joined together using external metal knee joints and uprights. Each orthosis has to be individually crafted, which could take up to five days. Additionally, the disabled person may have to make several visits to the workshop for trials.



*Taking a plaster cast.
Photo by Kamala Achu, Jaipur Limb Campaign*

The KAFO project started in July 2001. The objective of the project is to design and test a system for the mass production of KAFO components, which can then be quickly and easily distributed for custom fitting in rural and urban areas. The project was conceived by Chapal Khasnabis of Mobility India. It is being implemented via a partnership of the Jaipur Limb Campaign (UK) and Mobility India, through grassroots partners and selected prosthetics and orthotic training institutions in India.

Mobility India is working closely with a large plastics manufacturer, Abhyanta Plastics, to test production techniques to produce orthotic shells of the correct dimensions and strength. Measurements for ten standard sizes were obtained by analysing data involving hundreds of individual measurements. A set of blow-moulding dies (see front cover picture) is being fabricated based on this research. There will be 40 dies in total, as four dies (above-knee or below-knee, left leg or right leg) will be made for each of the 10 sizes. Orthoses for approximately 8,000 people will be produced and fitted during the project.

Students at national institutes and technicians from rehabilitation centres will be involved in fitting and testing the product. User response will be analysed and used in further development of the orthoses. The first prototype of one size has been made and trials are encouraging.

The KAFO project is a unique collaboration between NGOs, the plastics industry and training institutions. Given that there are an estimated four million people in India who need orthoses, the impact of this initiative on post-polio management cannot be overstated.

**For more information, please contact Kamala Achu on mail@jaipurlimb.org
Tel: +44 (0)20 7272 9501
Website: www.jaipurlimb.org**

Designing low-cost wheelchairs

Without wheelchairs, many disabled people can become prisoners in their own homes, unable to access education or employment. That is why the estimated 25 million people in the world who need a wheelchair but do not have one are often among the most disadvantaged and poor in society.

The WorldMade project, which is managed by the international disability charity Motivation, aims to address this problem by establishing an international production centre to manufacture a large number of high-quality, low-cost wheelchairs for distribution to local partner groups across the world. The WorldMade project is partially funded by KaR.

In the past, Motivation's approach has been to focus on the training and education of local partner organisations, to enable them to set up small-scale wheelchair production and distribution systems. Although every country has its own unique challenges, over the years Motivation has seen patterns of need develop, suggesting that some solutions can be applied on a broader scale. The establishment of an international wheelchair production centre is one way of addressing those needs. The centre will:

- supply wheelchairs to people who need them in developing countries
- enable partners, previously occupied with small-scale wheelchair production, to concentrate on issues that have an impact on the quality of life of wheelchair users, including health education, mobility skills training and income generation.

Motivation designers are working on both low-tech and high-tech designs for wheelchairs. Trials of the low-tech prototype (pictured) are currently taking place. The feedback from the trials will be the basis for modifications to the design this year. Eventually there will be a range of wheelchair designs suitable for different environments and needs, produced in a kit form and flat-packed for ease of transport.

Alongside wheelchair design development, the project team is researching sustainable methods for financing wheelchairs to enable even the poorest people to have access to a WorldMade wheelchair. The team is also designing a generic training package that will be used to train local organisations to assemble flat-packed WorldMade wheelchairs and distribute them to wheelchair-users worldwide.

WorldMade is an ambitious and exciting project for all involved, one that is necessary to make a real impact on the lives of wheelchair users throughout the world.

For more information about Motivation or the project, please contact Zoe Hurworth on hurworth@motivation.org.uk

Tel: +44 (0)1275 464017

Website: www.motivation.org.uk



The low-tech WorldMade wheelchair design with folding backrest and removable wheels.

Photos by Motivation

Motivation is an international disability charity based in Bristol. Since 1991 it has established 15 self-sustaining projects in 14 different countries, helping over 18,000 people.

Healthcare technology management: benefiting from shared knowledge



A radiation specialist checks equipment.

Photo by WHO/Arias Skvarla

Services and FAKT (Consultants for Management, Training and Technologies), launched a project to produce a series of simple, generic and practical procedure guides for managing healthcare technology that was supported by the KaR Programme in 2001.

Ziken International and FAKT have worked in a number of developing countries over the last ten years, supporting the development and implementation of national healthcare technology policies. ECHO has expertise in managing the process of procuring of healthcare equipment. The three organisations are being supported by an advisory group of representatives from Pan American Health Organization (PAHO), Deutsche Gesellschaft für Technische Zusammenarbeit (German Society for Technical Cooperation, GTZ), the World Health Organization (WHO), the Swiss Centre for International Health, and the Medical Research Council of South Africa, who are sharing their knowledge and written materials.

The guides are aimed at health service provider organisations, in the government, non-governmental organisations (NGOs), or private sectors. The primary target audience is workers at health facility and district levels, but the guides also cover activities at regional and central levels. They will be designed as tools for the

many different types of staff involved: equipment users, technical staff, purchase and finance officers, facility and service managers, and representatives of external support agencies.

The working titles decided upon as the first priority for production are:

- organisation of countrywide equipment management systems
- planning the stock of equipment and budgeting for it
- procuring and commissioning equipment (for health service providers and donor agencies)
- daily operation of equipment and safety issues
- maintenance management at facility or district/regional level
- financial management of maintenance services (a business and efficiency approach for technicians, hospital administrators, and managers).

The guides will be developed from work already undertaken in individual countries, so that different countries can learn from each other's experience. Potential users will review the draft guides before content is finalised. They will initially be available free on the Internet. It is hoped that hard copies will be available later under the WHO's umbrella series of publications '*Healthcare Facilities and Technology Management Tool Kit*'.

The project started in June 2001. To date initial meetings of the implementing and advisory groups have been held, and work has begun on sharing resources, assimilating data, and preparing drafts. The drafts for review will be ready by May 2002, with final versions available on the Internet in the first half of 2003.

For more information about Ziken International, or if you would like to review one of the guides in the draft form, please contact Caroline Temple-Bird on zikenequip@cs.com Tel: +44 (0)1273 477474

Once health service providers have developed policies on healthcare technology, the effective management of their facilities and equipment depends on establishing suitable procedures for activities such as planning, procurement, operation, maintenance and training. Health service providers greatly benefit from written materials about how to set up these procedures, but in developing countries such materials are often unavailable.

Many developing countries and international agencies have made considerable improvements in the management of healthcare technology, but often the work done in one country has not been widely shared with other countries. Recognising this, a consortium led by Ziken International, with ECHO International Health

Established in 1986, Ziken International is a specialist health planning consultancy group that has the objective of supporting the development of health services in developing countries.



*Using computers to access information.
Photo by Healthlink Worldwide*

INTERNATIONAL FEDERATION FOR MEDICAL AND BIOLOGICAL ENGINEERING

A web-based international centre for healthcare technology management

Not only do many developing countries have limited access to healthcare technologies, the potential of those technologies that are available is often not realised. One reason for this is that healthcare technology management (HTM) practitioners and other decision-makers often cannot find even the most basic technology-related information. Another reason is that HTM practitioners often lack the logistical and financial resources to meet with their peers from other

countries and regions. Given that many countries face similar challenges, there is much to be gained from pooling information and knowledge.

The concept of a web-based international resource centre in support of HTM activities, focusing particularly on the needs of developing countries, was first proposed by the Working Group for Developing Countries of the International Federation for Medical and Biological Engineering (IFMBE) in 1998. This led to the creation of the International Centre for Healthcare Technology Management (ICHTM), which aims to provide an on-line reference, networking and support service to HTM practitioners in developing countries. The initiative is supported by international organisations including the World Health Organization (WHO) and regional partners like the Africa Federation for Technology in Healthcare (AFTH), who provide advocacy and promotion through their respective channels, and guidance about new developments and emerging knowledge.

The IFMBE is a federation of national and transnational organisations representing practitioners in medical, biological and clinical engineering, with an estimated 25,000 members in 47 countries. The IFMBE's aims are to encourage research and the application of knowledge, and to disseminate information and promote collaboration in the areas of medical, biological and clinical engineering.

An open invitation is issued to all those interested to join the ICHTM process and become a member of the ICHTM family.

The ICHTM approach recognises that most technology-related challenges in healthcare in developing countries require a multi-disciplinary response. Additionally, the existing mechanisms for collaboration between different professional, multilateral and bilateral organisations need to be expanded. Despite this, there is wide experience, knowledge and goodwill in these organisations. The challenge is to promote collaboration between organisations so that this goodwill, experience and knowledge can be pooled and used for the benefit of HTM practitioners in developing countries and globally. The power of the Internet to communicate over large distances at low cost offers the opportunity for widespread communication and collaboration.

The first phase of the ICHTM initiative, funded by KaR, is to establish a website that will include:

- an electronic newsletter
- an HTM glossary and selected bibliographies
- best practice guidelines and policy frameworks
- networking tools and interactive resources (e.g. discussion lists, electronic conferences)
- links to international, regional and national web-sites and resources.

Access to the ICHTM website will be free of charge. The content will be adapted and modified to meet the needs of target groups through piloting and ongoing analysis of user feedback. The initial working language will be English, with other languages introduced as and when resources allow.

The design of communication and networking tools, the implementation and testing of a prototype server, and the piloting of a prototype website have been completed. It is estimated that the site will be fully functional by the end of April 2002.

**For more information about IFMBE or ICHTM, please contact Mladen Poluta on poluta@cormack.uct.ac.za
Tel: +27 (21) 406 6545**



Livestock owners spraying their cattle with insecticide.
Photo by NRI

NATURAL RESOURCES INSTITUTE

Controlling malaria and trypanosomiasis

In developing countries, the poor feel the debilitating effects of malaria most acutely. Poor people are more likely to contract malaria than wealthier people, and time off work sick with malaria reduces their productivity and incomes further.

There are already effective technologies for reducing malaria transmission, such as insecticide-treated bednets. In addition, modifications to technologies originally designed to tackle other problems can make malaria control more cost effective and therefore more available to the poor.

One example of this is adapting existing insecticide-treated cattle (ITC) programmes for use in malaria control. ITC is already used for controlling tsetse (which carries trypanosomiasis, or sleeping sickness) in cattle in sub-Saharan Africa. In some of these tsetse-infested areas the main malaria-carrying mosquito is *Anopheles arabiensis*, which obtains half of its bloodmeals from humans and half from cattle, and so is vulnerable to being killed by ITC.

Local livestock owners identify

trypanosomiasis in cattle and malaria in humans as the two most important diseases limiting their health and livelihoods. For many livestock owners, cattle are the main source of wealth and nutrition, as well as being used for load pulling.

Trypanosomiasis in cattle results in poverty, as infected animals become progressively weaker and eventually die. Farmers attempt to minimise the risk of both malaria and trypanosomiasis by living and working in the highlands where mosquitoes and flies are less widespread. However, environmental degradation and increasing population densities are forcing people to occupy potentially more productive lowlands, thereby putting themselves and their cattle at greater risk of disease.

The KaR-funded project

The Natural Resources Institute is an internationally-recognised multi-disciplinary centre for research, training and consultancy concerning the management of natural and human capital to support sustainable development worldwide.

implemented by the Natural Resources Institute (NRI) in August 2001 builds on the existing tsetse-control initiatives of livestock owners and non-governmental organisations (NGOs) in southern Ethiopia managed by the Konso Development Association and FARM-Africa. The objective of this project is to provide evidence that ITC can kill a sufficient proportion of the mosquito population to break the transmission cycle of malaria, an approach that has never been tested previously in sub-Saharan Africa.

Initial trials of ITC against tsetse in these areas have been well received. Community-based ITC projects pool the resources of the poor, and enable families to reap the benefits of a relatively small investment in the cost of protecting their animals from disease. Communities are provided with spraying equipment and insecticide to treat their cattle, which families share. The NRI project uses this existing technology, but with a different insecticide that can also kill mosquitoes. Cattle-owners use the insecticide spraying equipment they are familiar with to treat their cattle with the new insecticide, and so do not have to learn any new techniques. In the first three months of the current project, it has been indicated that the malaria mosquitoes are susceptible to being killed by ITC.

Further activities of the project are:

- identifying quantitative relationships between the density and distribution of cattle and people, and the transmission of malaria
- identifying quantitative data on the effects of ITC on mosquitoes
- making recommendations on the suitability of ITC to control mosquitoes and tsetse in the project area in particular and tsetse-infested areas of Africa in general.

For more information about NRI or the project, please contact Gabriella Gibson on g.gibson@greenwich.ac.uk Tel: +44 (0)1634 883379 Website: www.nri.org

A low-cost mechanical Braille writer

Most of the estimated 45 million blind and visually impaired people in developing countries today are unable to read. The reason for this is the lack of written materials printed in Braille, the system of raised dots that enables blind people to read. In the words of the World Blind Union, Braille serves as “a building block to literacy, independence and successful employment”, but “in the developing world there is widespread ‘starvation’ of the most basic Braille materials”.

Much progress has been made in the mass production of Braille material using computer and embossing technology, but it will be a long time before many people in developing countries like Cambodia have access to such technology. The Development Technology Workshop (DTW) has received KaR funding to develop an alternative low-cost mechanical Braille writer.

The project started in July 2001 and will run for 14 months. All design and fabrication work is carried out in DTW’s workshop near Phnom Penh, Cambodia, with the involvement of the Cambodian Association for the Blind. The DTW Braille writer is based on a simple wooden machine built by the Pearson Trust (a UK charity). During the course of the project there will be two cycles of development and prototyping. Relevant organisations in Cambodia, Kenya, Vietnam, Thailand and the UK will evaluate sample machines at each stage, and their feedback will be incorporated into the design process. The third and final design of the Braille writer will be distributed worldwide to stimulate interest, along with manuals covering production, maintenance, repair and operation.

Established in 1995, DTW is a UK registered charity that seeks to promote technical development in poor countries through the establishment of sustainable manufacturing enterprises. It has worked primarily in the local production of equipment for landmine clearance, and wherever possible employs disabled people.

The first new prototype has recently been completed, and whilst there are several obvious improvements to be made, no major obstacles have become apparent. Encouragingly, it is clear that the machine is capable of producing high quality Braille, using relatively simple mechanisms and manufacturing processes.

Existing mechanical writers have proven extremely reliable and capable of consistently producing high-quality Braille. The new design aims to match these criteria, whilst reducing the complexity of the machine and making it suitable for manufacture in developing countries. In addition, the maintenance and repair of the writer

should be possible with minimal technical skills and equipment. The final aim is to achieve an overall production cost of US\$50 per machine, which compares well with existing machines typically costing US\$400.

Looking to the future, distribution of the Braille writer could involve production on different scales and using a variety of techniques. For example, several components can be cut from wood, fabricated from metal, cast from aluminium, or injection-moulded from plastic. The choice of material will depend on the particular organisation involved, but wherever appropriate DTW hopes to see a double benefit: the upgrading of vital technical skills together with the availability of a much-needed piece of equipment, both achieved through sustainable local manufacture.

**For more information about DTW, please contact Michael Prince on dtw@bigpond.com.kh
Tel: +855 12 812031
Website: www.dtwuk.fsnet.co.uk**



Testing a prototype of the low-cost Braille writer at Krousar Thmey School for the Blind in Phnom Penh. Photo by DTW

Using information technology to improve healthcare in Malawi

Healthcare in Malawi is hampered by a shortage of medical staff, drugs and diagnostic resources – a situation common to many developing countries. Addressing these problems is made particularly difficult by the absence of reliable data on which to base any plan for improvement.

In response to this situation, the Baobab Health Partnership has developed and used a computer-based health information system, using lessons learned from information science and medical informatics. The ultimate aim of the system is to help reduce morbidity and mortality in the target population by:

- helping clinicians with direct healthcare delivery
- collecting complete, accurate and timely information, and making it available in order to support decision-making at all levels.

The system is being piloted in the 180-bed paediatric department of the Central Hospital in Malawi's capital city, Lilongwe. It was introduced in May 2001.

The system has several computer-

Baobab Health Partnership Inc. was created to improve healthcare delivery and health systems in developing countries through the implementation of appropriate information technology and data management systems.

based clinical workstations, each with a computer, a small printer and a power supply, all built into a rolling desk. The computer has a touch-screen interface in place of the traditional mouse and keyboard, so that people without previous experience of computers can quickly learn to use the system. A car battery powers the computer and printer, so the system can continue to function during power cuts. Workstations use wireless networking technology to communicate with a centralised computer, where all data is stored.

The workstations are designed to be used in the workplace, taking into account existing procedures so as to minimise disruption. They are used in real-time to support healthcare delivery processes. For example, nurses record information given by patients directly onto the system,

rather than handwriting notes and inputting these into the system later. Eight workstations are being used in inpatient registration, the outpatient clinic and inpatient services.

Since the beginning of the pilot project, information about 26,500 patients has been registered – 22,000 outpatients and 4,500 inpatients. Information collected during outpatient visits and inpatient stays helps clinicians by making the medical history of returning patients available at the time they are being seen. The system has also improved access to patients' paper-based medical records by cross-referencing patient names with the corresponding medical record number under which all charts are filed. In addition to informing individual patient care, the data is summarised and used for planning, health facilities management and public health initiatives.

Most staff members in the paediatric department use the system and informal feedback shows that they find the system to be very user-friendly. This may be due to the simplicity of the touch-screen interface and the way in which the system mimics existing processes.

There are plans to extend the system to the paediatric department at the Queen Elizabeth Central Hospital (QECH) in Blantyre and to expand the inpatient module to include a version of the clinical pathways (a system of integration of record-keeping between departments) that have been developed and are currently used at QECH.

For more information about Baobab Health Partnership or the project, please contact Gerry Douglas on gdouglas@baobabhealth.org Tel: +1 412 401 3160



*Using the touchscreen interface to register new patients.
Photo by Baobab Health Partnership*



Two users of one of TALC's popular publications 'Where there is no doctor' — information on the CD-ROMs will supplement such literature. Photo by TALC

TALC

Using CD-ROMs to share health information

Teaching-aids At Low Cost (TALC) has distributed more than ten million health information books and accessories to the developing world. Yet, although TALC's books are cheaper than those in the commercial sector, they are often still beyond the means of many who could benefit, since the cost of postage alone means that organisations can often only order a limited number.

Advances in information technology mean that health information can now be distributed more cheaply and quickly than circulating printed materials. Although access to computers in countries in the South is more limited than in the North, it is

TALC is a UK-based charity that specialises in providing low-cost health information to countries in the South. It was founded in 1965 by its president, Professor David Morley CBE, MD, FCRP.

definitely increasing. The potential of the Internet, which is one way of using this technology, is enormous. However, access to the Internet is limited in countries where telephone services are often unreliable, and where line charges remain high.

CD-ROMs are another way of using technology as a means of communicating health information. The advantages of CD-ROMs are that they are cheap to produce compared to books, and cost little to distribute because they are lightweight. Unlike the Internet, CD-ROMs can be used without your computer being connected to a telephone line. They can also hold a great deal of information, which can be selected, adapted and tailored by users to meet their local needs and develop their own libraries of materials at low cost. The information can be made interactive for training purposes, and

for those with access to laptop computers it can also be used in the field.

Because CD-ROMs can only be used by people with access to computers, they cannot wholly replace hardcopy information such as books and newsletters. But they are an important way of increasing the availability of health information. Recognising this, TALC launched a KaR-supported project in June 2001 to distribute free, regular, up-to-date health information on CD-ROMs to organisations in the South.

One unique feature of the project is that TALC will encourage southern non-governmental organisations (NGOs) and health workers to supply information for the CD-ROM, which they wish to distribute to others. This will provide a vehicle for South-South exchanges of information, therefore reducing the South's dependence on the North for health information.

TALC has set up an office in Oxford with technical staff to produce the CD-ROMs. It has already received a great deal of interest from other organisations that are considering using the service to distribute their own health information, including the World Health Organization (WHO), the HIV/AIDS Alliance and the International Centre for Eye Health. It is currently gathering material for the first CD-ROM, which will be ready in March 2002. This will be sent to health workers on TALC's database who are known to have computer access. The CD-ROMs are being designed to be easy to use, and will include a search engine so users can quickly find the information they need. A questionnaire will be used with the first CD-ROM to gather feedback from users, so TALC can develop further CD-ROMs to suit users' needs.

**For more information about TALC or the CD-ROM project, please contact the Project Co-ordinator, Pip Elphick, on info@e-talc.org
Tel: +44 (0) 1865 791624
Website: www.e-talc.org**

Project summaries

The following projects were approved in the first competition and have been in implementation since June 2001.

Disability Projects

Prefabrication of knee-ankle-foot orthoses

INDIA £137,186

Aims to design a mass-production system to prefabricate low-cost thermo-plastic knee-ankle-foot orthoses for rapid production, easier assembly and fitting in large quantities, as an alternative to mainstream metal calipers.

■ JAIPUR LIMB CAMPAIGN, UK
Kamala Achu, mail@jaipurlimb.org
Tel: +44 (0)20 7272 9501

WorldMade wheelchairs

20 COUNTRIES £100,000

Aims to establish an international production centre for high-volume manufacture of low-cost wheelchairs, appropriately designed for use in developing countries.

■ MOTIVATION CHARITABLE TRUST, UK
Zoe Hurworth, hurworth@motivation.org.uk
Tel: +44 (0)1275 464017

Mechanical braille writer

CAMBODIA £49,075

Seeks to increase access to communication for blind people through the improvement of a proto-type low-cost mechanical Braille writer in order to make it suitable for local manufacture and repair for staff with limited skills and resources.

■ DEVELOPMENT TECHNOLOGY WORKSHOP, UK
Michael Prince, dtw@bigpond.com.kh
Tel: +855 12 812031

Community-based rehabilitation

KENYA £59,537

Aims to empower parents, families and communities with rehabilitation techniques, to help them to better manage and reduce the negative impact of disability on affected children as well as guide them towards seeking appropriate help.

■ VOLUNTARY SERVICE OVERSEAS, (VSO), UK
Wambui Kennedy,
Wambui.Kennedy@vsoint.org
Tel: +254 2 571 378

Instrument to improve children's communication

KENYA £49,905

Seeks to validate a new instrument that measures children's communication disabilities, and use this tool to measure the impact of community-based interventions to address these disabilities.

■ INSTITUTE OF CHILD HEALTH, UK
Sally Hartley, s.hartley@ich.ucl.ac.uk
Tel: +44 (0)20 7905 2383

Testing of the access portfolio

SRI LANKA, UGANDA AND MALAWI £60,500

Aims to improve the technology for identifying disabilities among children to ensure these are detected as early as possible so appropriate follow-up interventions can be taken.

■ INSTITUTE OF CHILD HEALTH, UK
Sheila Wirz, s.wirz@ich.ucl.ac.uk
Tel: +44 (0)20 7404 2062

Healthcare Technology Projects

The development and integration of the EHTP with a Healthcare Technology Management System

SOUTH AFRICA, MOZAMBIQUE £55,000

Aims to integrate two tools facilitating healthcare technology related decision-making, planning and management into the Simulation/Healthcare Technology Management Information System in Mozambique. These tools are the Essential Healthcare Technology Package developed by the South African MRC and the WHO, and a management system from the MOH of Mozambique.

■ AFRICAN FEDERATION FOR TECHNOLOGY IN HEALTHCARE
Peter Heimann, pheimann@mrc.ac.za
Tel: +27 (21)938 0274

Preparation of procedure guides

WORLDWIDE £159,292

Development of generic practical Health Care Technology Management Procedure Guides for health service staff in developing countries to help them in their daily management of equipment. In collaboration with WHO.

■ ZIKEN INTERNATIONAL, UK
Caroline Temple-Bird, zikenequip@cs.com
Tel: +44 (0)1273 477474

Production and distribution of electronic information materials

WORLDWIDE £111,437

Aims to increase the efficiency, reach and impact of health information dissemination. The project will produce and distribute free CD-ROMs containing training materials and information to health workers in the South.

■ TEACHING-AIDS AT LOW COST (TALC), UK
Pip Elphick, info@e-talc.org
Tel: +44 (0)1865 791624

Controlling malaria and trypanosomiasis

ETHIOPIA £51,913

Aims to determine whether the established technology used for controlling tsetse and tick-borne diseases with insecticide-treated cattle could also be used to control malaria in rural areas where livestock plays an important role in keeping malaria-transmitting mosquitoes alive.

■ UNIVERSITY OF GREENWICH NATURAL RESOURCES INSTITUTE, UK
Gabriella Gibson, g.gibson@greenwich.ac.uk
Tel: +44 (0)1634 883379

International HCT management centre

SOUTH AFRICA AND WORLD £30,000

Aims to establish a virtual International Healthcare Technology Management Centre to act as a support, networking and reference resource for healthcare practitioners. To facilitate further dissemination of information, the website will link relevant international and regional websites and will include newsletters, best practice guidelines, policy frameworks and networking tools.

■ INTERNATIONAL FEDERATION FOR MEDICAL AND BIOLOGICAL ENGINEERING, SOUTH AFRICA
Mladen Poluta, poluta@cormack.uct.ac.za
Tel: +27 (21) 406 6545

Project summaries

The following projects were approved in January 2001 under the fast-track procedure and were implemented in 2001. For further information please visit the KaR website (www.kar-dht.org).

Training of wheelchair technologists

TANZANIA

■ MOTIVATION CHARITABLE TRUST, UK

Health information systems processes and technologies

MALAWI

■ BAOBAB HEALTH PARTNERSHIP INC, USA

Medical equipment maintenance training

THE GAMBIA

■ ECHO INTERNATIONAL HEALTH SERVICES, UK

Research into the economic impact of uncorrected vision

GHANA AND INDIA

■ ADAPTIVE EYECARE LIMITED (AEL), UK

Creation of a global knowledge network

WORLDWIDE

■ GIC LIMITED, UK

International good practice on disability

WORLDWIDE

■ HEALTHLINK WORLDWIDE, UK

DFID KaR newsletters

Five parallel newsletters are produced on DFID's research related activities. To receive copies, please contact the relevant editor.

■ EARTHWORKS

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DFID KaR programme websites

The main KaR website can be found at
www.kar-dht.org

Five websites complement the research activities

■ EARTHWORKS

British Geological Survey
www.bgs.ac.uk/dfid-kar-geoscience/

■ ENERGY EFFICIENCY

ETSU, Harwell
www.etsu.com/dfid-kar-energy/

■ TRANSPORT

Transport Research Laboratory
www.trl.co.uk/dfid/dfid-kar-transport.htm

■ URBANISATION

Loughborough University
www.lboro.ac.uk/garnet/UrbanKaR/DFID-KAR-urban.html

■ WATER

HR Wallingford
www.hrwallingford.co.uk/projects/dfid-kar-water.html

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