

STRATEGY AND ACTION PLAN 2007-2011

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| Vision | A world where place of birth and economic status does not determine the access to information, knowledge and communication. |
| Mission | SPIDER will support developing countries in the promotion and deployment of Information and Communication Technology (ICT) with the aim to help closing the digital divide. |

1. Background

The eight Millennium Development Goals (MDGs), agreed upon by all the countries of the world and world development institutions, have set seventeen associated challenging targets to be achieved by 2015. The goals range from eradicating extreme poverty and hunger to achieving universal primary education, combating HIV/AIDS, malaria and other diseases to developing a global partnership for development. Even if the targets of the MDGs are tough to reach, there are opportunities available through which people can be empowered to improve their lives.

The Information and Communication Technology (ICT) revolution has changed the way the world learns, communicates, does business and cures illnesses. ICT covers the whole range of technologies designed to access, process and transmit information in the form of text, sound, data and pictures and comprises the full range from traditional widely used devices such as radios, telephones and television to more sophisticated tools like cell phones, computers and the Internet. This technology, if deployed appropriately, offers vast opportunities for economic and social development in terms of economic growth, improved health, good governance, promotion of human rights, better market information and service delivery, learning through distance education, and social and cultural advances.

The World Development Report 2007, expected to be published in September 2006, is dedicated to "Development and the Next Generation". This report emphasizes that youth are fast adopters of new ICTs. The report points out that ICT enables developing country youth to work across border and without leaving their home countries get faster access to knowledge about health and fertility. The report will have a special section on policies that

enhance the growth potential of youth usage of ICT and promote ICT adoption where it will discuss available evidence on how ICT adoption can improve development outcomes.

ICTs have now become an integral part and key enabler of today's development agenda. There is a growing and increasingly sophisticated demand for donor support for ICT development. Many developing countries have recently developed national and in some cases even sector ICT policies; some have developed more novel ways to raise awareness about ICT. Malaysia, Sri Lanka, Tunisia and Mauritania, for example, have created cyber caravans that travel from village to village to introduce the local population to the Internet and its applications. The demand for development cooperation agencies to include ICT in aid agendas has risen.

Sweden offers cutting-edge expertise in a multitude of ICT sectors, ranging from wireless technology, mobile-, web- and game-applications to telematics, microelectronics, photonics and application of ICT in the government and the civil society. Being a leading country in ICT, Sweden has since long made a commitment to bring ICT into development work for sustainable poverty alleviation. Many countries are already receiving Swedish support in this area, and several integrated ICT projects are under preparation or implementation (e.g., in Laos, Sri Lanka, Burkina Faso, Tanzania, Rwanda, Mozambique, Namibia, Ethiopia, Bolivia and Honduras). There are also a multitude of Sida-supported projects covering a whole sector such as education and energy, where substantial ICT components have been included. Establishment of a resource base in Sweden for development-related ICT issues is one of the cornerstones of the Sida's Strategy and Action Plan for ICT in development cooperation.

To pave the way for fast and smooth, socially and ethically acceptable deployment of ICT in developing countries, **The Swedish Program for ICT in Developing Regions (SPIDER)** was founded with financial support from Sida in July 2004. SPIDER is a national center, which is hosted by the Royal Institute of Technology (KTH), Stockholm, Sweden. Currently, thirteen Swedish universities are members of the SPIDER Network.

2. SPIDER's Objectives

The main goal of SPIDER is to support developing countries in harnessing the benefits of ICTs for development and poverty alleviation. In practical terms, it means promotion of and support to relevant **Information and Communication Technology for Development (ICT4D)** efforts at partner institutions and organisation in developing countries and establishment of networks of collaboration. In collaboration with partners in Sweden and abroad, SPIDER supports development of ICT infrastructure, human capacity and relevant ICT content. It also promotes information management, communication and interaction, networking and awareness raising. Major areas for intervention are access, e-education, e-health and e-governance, including human rights aspects. The use of free and open source software (FOSS) is encouraged.

3. SPIDER's role vis-à-vis the major donor (Sida)

SPIDER plays an important role in assisting the ICT secretariat at Sida in implementing the Sida Strategy and Action Plan for ICT in Development Cooperation. As part of these efforts, the aim is to support the Sida departments, Swedish authorities and Swedish em-

bassies in developing countries in implementing ICT as part of their projects, incorporating ICT in their country strategies, as well as a providing a helpdesk support function. SPIDER also plays an important part in disseminating information about ICT's role in development, both in Sweden and internationally. In all these activities, we pull on resources in our network by identifying the right person/institution for the task at hand.

4. The Network and the role of the SPIDER Center

SPIDER is a multi-stakeholder network governed by a board with representatives from the EU Parliament, senior management of Swedish universities, private companies and Sida. As shown in the schematic diagram to the right, it is a web of institutions, organizations, companies and individuals committed to promoting ICT for development by sharing resources and utilizing synergies in collaboration with the SPIDER Center. Thirteen Swedish universities are currently formal network partners and KTH functions as the node and facilitator. These partners comprise Blekinge Institute of Technology, Göteborg University, Jönköping University, Karlstad University, Karolinska Institutet, Linköping University, Lund University, Mid Sweden University, Royal Institute of Technology, Stockholm University, Umeå University, Uppsala University and Örebro University. Joining the SPIDER Network gives its members access to the following benefits:



- Project opportunities for joint collaboration among institutions and organizations in Sweden, as well as across borders
- Opportunities to cooperate with other ICT4D actors and organizations
- Information sharing and publicity through the SPIDER Newsletter, website and secretariat, as well as access to relevant documentation
- Access to students and professionals with special knowledge and interest in ICT and development issues
- Access to information about current ICT4D activities and possibility to attend workshops and meetings regarding ICT and development
- A window to the South

The overall objective of the SPIDER Center as the center of the network is to act as a competence broker; matching the right person/institution (i.e. academia, public and private sector, civil society and individuals) for the job or project at hand. In its role towards the different stakeholders, SPIDER offers ICT expertise, resources, international networking opportunities, collaboration possibilities, experience from developing cooperation projects, expertise about developing cooperation, information and education within the area of ICT4D. It is the aim of SPIDER to utilize the resources in our network and include our partner universities, the private sector and civil society at an early stage in our projects. This requires a logical and structured approach to processing applications that are sent to us for financial support. The application process should at the same time be open and transparent and not limit creative thinking and the generation of new ideas and solutions. The quality of the project idea is the deciding factor in the initial decision to take the pro-

ject through the application process, and formulation of a detailed proposal. SPIDER is in the process of developing standardized but flexible application, assessment and evaluation forms to guide the applicants, collaborating partners and assessors in their undertakings with regards to developing projects.

There are a number of organisations around the world with objectives similar to that of SPIDER. What makes SPIDER different is its Network of stakeholders from different sectors of society, which are committed to decreasing the digital divide between the developing and developed countries. The success of SPIDER compared to other peer organizations will primarily depend on a combination of **what** we do and **how** we do it. The how aspect of working in a collaborative manner with the academia as well as the private sector may give SPIDER an edge over other peer organizations.

Another uniqueness of SPIDER lies in the innovative collaboration between a national donor agency and a center of excellence in ICT to mobilize Sweden's ICT resources. SPIDER is different from similar programs elsewhere as it is the first attempt where the strength of the Swedish Universities is coupled with the strength of the business community for the above-mentioned objective. With good knowledge of development cooperation, ICT4D, access to expertise within all sectors of ICT and the unique collaboration among the stakeholders from developing countries, Swedish academia and the business community, SPIDER is well positioned to assist bridging the digital divide.

5. SPIDER Strategy

SPIDER believes that the most important prerequisites for ICT projects to be sustainable are local ownership and that human capacity development is an integral and fundamental part of the project. The lack of capacity to effectively make use of ICT is a major constraint in many cases rather than the lack of technology and equipment. The participation of private sector is instrumental in expanding access and development of applications, whereas the governments play a key role in establishing a well-regulated, competitive enabling environment where ICT can flourish.

SPIDER activities shall be considered keeping in view both development needs and feasibility. For ICTs to have a positive development impact, the various social groups must have equal access to them - particularly the disadvantaged groups such as the poor, women and children, and indigenous people. Also, priorities for ICT support will be determined taking into consideration needs as well as to the viability of activities to make a difference in addressing them. When relevant and appropriate, each project/activity supported by SPIDER will be analyzed in one or more of the following perspectives: poverty, environment, gender, HIV/AIDS and conflict resolution.

In order to sustain and improve on the quality of the results reflected in the projects and the activities either completed or ongoing, as well as to increase the participation by stakeholders, partners, and potential beneficiaries, SPIDER intends to formalize a quality assurance system. The system will be based on a well defined set of indicators, procedures, and standards that should be applied both to the projects being submitted and to the internal assessment of the Center itself. The SPIDER strategy for the next five-year period (2007-2011) is based on the following nine pillars.

5.1. Strengthen and expand the SPIDER Network

The SPIDER network is the resource pool for assistance in the field of ICT to developing countries. Strengthening the network means that we can provide high quality services and advice to developing countries. The network will be strengthened by enhancing the ICT capacities of the SPIDER network members through support to cooperation with organizations in developing countries in the form of collaborative ICT projects, information sharing, advisory services and capacity building initiatives. The strengths/specialization of each university are documented and linked to the SPIDER Webpage. Workshops/seminars are arranged to discuss how strengths of the different groups can be used in synergy.

5.2. Promote North-South, South-South and North-North cooperation

Resources for supporting ICT4D are limited in both developing and developed countries. SPIDER will therefore mobilize and make optimal use of the scarce expertise available for ICT4D. This will be achieved by pooling resources and stimulating cross border cooperation. The North-South and South-South cooperation will be stimulated and supported by collaboration on technology and knowledge transfer initiatives. The North-North cooperation will be strengthened by interconnecting peer programs and harmonizing activities with peer organizations in the North.

5.3. Focus on rural and poor urban areas

A majority of the poor population lives in rural and neglected urban areas. These groups are the main target of poverty alleviation initiatives. SPIDER will promote ICT collaboration in rural areas with a purpose to fulfill needs in this specific context. SPIDER will also stimulate the development of contextualized group specific ICT content. Especially disadvantaged groups, e.g. based on gender and ethnicity, may be in focus for specific activities. SPIDER will include both rural and urban areas in its support.

5.4. Prioritize least developed countries

The least developed countries, particularly those in **Sub-Saharan Africa**, where conditions are appalling, are in the greatest need of support and development interventions. At the same time, it is often difficult to make a real difference in such countries. SPIDER aims to target the poorest and least developed countries in ways that can allow for the greatest possible impact. At the same time, SPIDER can also be engaged to support favorable impacts through indirect mechanisms, e.g. by enabling ICT to foster more environmentally friendly conditions or technologies, or by strengthening greater trust and reliability in network opportunities for the poor. Finally, SPIDER can also support multi-country and cross border initiatives of importance for disadvantaged groups.

5.5. Broaden horizons from R&D to implementation of ICT applications contributing to development

There is an urgent need to find appropriate, cheap and innovative ICT solutions for development in the poor areas. Working only with R&D in developing countries does not on its own lead to poverty alleviation in the short and medium term. This strategy will be promoted by assessing new projects for expected deliverables and their impact.

5.6. Widen activities from academia to society at large with collaboration between academia, private and public sectors

Most of the large ICT initiatives supported by Sida have hitherto focused on academia in developing countries. The biggest ICT projects have been to computerize universities in developing countries, but little has been done in other sectors where ICT can make a considerable contribution. Within the framework of this strategy, the balance will be improved by increased support to other areas, **particularly e-education, e-health, e-banking and e-governance**. Special efforts are made to involve the private and public sector in these initiatives to further support the fostering of innovative solutions.

5.7. Act as a catalyst in multi-stakeholder ventures

Multi-stakeholder ventures are often necessary in the implementation of complex ICT based solutions. Most developing countries seek support for ICT as an integral part of bigger development plans or schemes. ICT infrastructure in developing countries, particularly within the field of mobile telephony, has largely been funded by the private sector since the 1990s, but that does not mean that we can leave all aspects of implementing ICT to the private sector. An enabling legal and regulatory environment is needed to attract investors. Special efforts have to be made to make sure that the target groups include the poor and other disadvantaged groups which tend to be left outside privately funded development and commercial efforts. Therefore, there is a clear role for the government, donor agencies and many other stakeholders to complement private sector funded initiatives. SPIDER will contribute to the creation of fruitful multi-stakeholder ventures by mobilizing specific expertise in the SPIDER network to organize and participate in national and international events.

5.8. Broaden the funding base

Increased funding and a broadened financing base are needed to develop SPIDER further and achieve its full potential. A broadened funding base will also decrease the dependency on one donor and the consequent vulnerability. Efforts will thus be made to get other donors on-board. This will be done by delivering and promoting high quality of services to its stakeholders.

Enhanced collaboration with peer organizations and participation in multi-stakeholder projects will promote this strategy. SPIDER will thus pursue establishing contacts with other donor programs.

5.9. Develop the needed internal organization

SPIDER primarily draws on expertise from the stakeholders in the SPIDER network. However, in order to secure quality of services by defining procedures and standards, SPIDER will need to have a strong internal organization. This is also necessary to add value to the network as well as to achieve higher level of fulfillment of the operative goals. SPIDER is continuously assessing its staffing needs and will make sure that the staff number and competence level is commensurate with the task it has undertaken.

6. Action Plan

SPIDER has two fundamental goals: 1) to strengthen the ability of our counterparts in the South to access and make use of relevant ICTs as a tool for poverty alleviation and 2) to strengthen the capacity of the SPIDER network to deliver the most appropriate services. In order to achieve the above-mentioned purpose and mission, SPIDER has launched the following major activities:

6.1. Support to joint ICT projects

Within the framework of this activity, two kinds of projects are supported.

- a) Support is provided to need-driven projects originating in developing countries and SPIDER takes an active role in identifying and linking these projects to the most suitable resources in Sweden. When considered of benefit, the projects may also be linked to partners in third countries. SPIDER hands over the projects to its network partners after the initial matchmaking and only makes a follow-up of the activities. Interesting to note is that in most of the projects supported until now, the private sector has been involved with a purpose to make the project sustainable and/or achieve a higher impact.
- b) Support is provided to Swedish universities for implementation of ICT projects in collaboration with partners in developing countries. The projects are normally initiated by Swedish researchers. Project applications are assessed by a specially constituted reference group on the basis of development relevance, needs of the developing country involved, innovativeness, originality, sustainability and impact.

For these ICT projects, a Quality Assurance System is under development. This system will take into consideration variables and indicators such as structure and organization with respect to clearly identifiable phases and time related deliverables, checkpoints to assess the progress of each phase and uniform way of reporting. Other parameters in the quality assurance program will be the objectives of the projects with respects to target groups, local ownership, replicability and sustainability. The model will also include risk analysis from the conception to implementation and compliance with the MDGs and SPIDER's objectives.

6.2. Capacity building and education

SPIDER has launched activities aiming at strengthening the capacity of the resource base in Sweden. SPIDER took initiative to develop and implement a 5 Swedish credits (7,5 ECTS credits) distance course in ICT4D with e-education, e-health, and e-governance as major components. Participants of this course were both from developing countries and Europe. The first batch of students completed the course in December 2005 and the feedback was positive. Depending on the outcome of the second cycle in the autumn of 2006, it may become a regular annual activity.

An **MSc degree program in ICT4D** will be launched at DSV in 2006. SPIDER and Ericsson Microwave Systems AB have agreed to jointly support MSc theses in areas relevant to ICT4D.

A **junior ICT expert program**, under which ICT experts from Sweden or elsewhere within the SPIDER Network can be sent to developing countries is under inception.

Further, a **network for PhD students** in ICT4D is also under formation where students will be provided with opportunities to interact through the web and seminar activities.

SPIDER provides support for organizing ICT4D related **conferences** in developing countries as well as in Sweden. Furthermore, SPIDER takes the lead roll in organizing **workshops** on important ICT4D issues. Support is also provided to participants from developing countries to attend national and international conferences.

6.3. Helpdesk for Swedish authorities

SPIDER provides advice and assistance to Swedish authorities including the Swedish Embassies, the Ministry for Foreign Affairs and Sida on ideas and proposals within the area of ICT4D. SPIDER intends to make active campaigns to spread information about this function by holding seminars for the different Sida departments and by getting in direct touch with the Embassies. We have already visited the Swedish Embassies in Bolivia, Honduras and Bangladesh and have a very good working relation with the Embassy in Tanzania. A new brochure about SPIDER containing more comprehensive information about SPIDER has been published and it will be sent to relevant Swedish Embassies, selected Swedish Ministries and ICT champions at Sida.

6.4. Act as counterpart to developing countries for large Sida-supported ICT projects

Sida, through its department for research cooperation (SAREC), has launched a number of ICT projects at universities in developing countries where the aim is to computerize the university and connect them to the Internet. SAREC has selected SPIDER to be the counterpart for universities in Honduras (UNAH), Burkina Faso (UO and CNRST) and Bolivia (UMSA).

7. Concluding remarks

SPIDER has been in existence for only 2 years. The feedback from stakeholders on its achievements during this period is encouraging. This document presenting the strategy and action plan for the five years period (2007-2011) is based on what can be envisaged today. ICT is a dynamic field; new technologies and solutions are developed continuously. SPIDER will therefore strive to be flexible and sensitive to changing demands. Additional activities commensurate with new demands will therefore be added to the action plan as and when required. SPIDER will review this strategy every alternate year and make necessary modifications to suite the new realities on the ground.

To enhance the quality of the strategy, this document was subjected to the Logical Framework Approach (LFA) in a workshop organized in Stockholm on 22nd and 23rd March 2006. The workshop was moderated by Erik Kijne, an LFA expert from the PCM group in Belgium and was attended by eleven participants from the SPIDER Network. The main questions discussed were **what** services should SPIDER deliver and **how** it will become more effec-

tive in delivering these services. This strategy document has been revised after sharing experience with representatives from the SPIDER Network and due consideration to the issues discussed in the workshop.

List of Abbreviations

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| DSV | Department of Computer and Systems Sciences |
| FOSS | Free and Open Source Software |
| FTE | Full Time Equivalent |
| ICT | Information and Communication Technology |
| ICT4D | Information and Communication for Development |
| KTH | The Royal Institute of Technology, Stockholm, Sweden |
| PRSP | Poverty Reduction Strategy Papers |
| SAREC | Department for Research Cooperation at Sida |
| Sida | Swedish International Development Cooperation Agency |
| SPIDER | The Swedish Program for ICT in Developing Regions |