



Empowerment of the academic communities in developing countries

through **ICT** education and networking

Rodolfo Candia

Department of Computer and Systems Sciences (DSV)

Stockholm University and KTH

Forum 100, SE-164 40 Kista

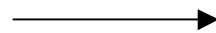
Sweden

candia@dsv.su.se

Our department's focus:

Bridging the gap

**Information
Technology**



Social Sciences

**Behavioural
Sciences**

Humanities

ICT in Academic Development

Projects in cooperation with universities from

Sri Lanka

Vietnam

Mozambique

Tanzania

Ethiopia

Burkina Faso

Uganda

Support: Sida and EU

Why support to ICT in developing countries?

- An unavoidable **challenge**
- An intriguing **opportunity**

ICT as a challenge:

It is necessary to bridge the digital divide

ICT as an opportunity:

**A valuable instrument that can help
developing countries to be a part of the
global economy**

Support to ICT development **at universities**

Why?

- ICT has become an indispensable tool for the scientific and academic community throughout the world.
- Universities are a natural and effective environment for the transfer of ICT know-how and ICT development in society.

The projects' objectives

- To enhance ICT at partner universities**
- To provide reliable and economical Internet connection to partners**
- To contribute to the integration of ICT as a tool for development in sectors and areas where it could make a difference**

Project activities:

- ICT policies and organisation development**
- Technical Infrastructure**
- Human resources development - PhD Programs**

ICT Policy and Master Plan

Success factor for the development and use of ICT:
the existence of a common vision of how ICT can improve
the effectiveness of organisations.

ICT Policy: used as a basis for planning, decision-making,
monitoring and control of all ICT activities in the long
term

An ICT Master Plan: courses of actions required to
implement the ICT Policy, in relation to time, priorities
and costs.

Infrastructure Development

Improvement of the networking infrastructure

Objectives:

- Connect Universities in the country
- Provide/improve internet connectivity to universities and major research Institutes
- Obtain sufficient international bandwidth to support the academic activities of the staff and students of the universities and research institutes.
- Operate and maintain the campus-wide networks.
- Deploy applications such as distance education based on the networks.
- Build and maintain a network management unit to support networking activities in the Research and Education sector.

Functional applications:

- **library information system**
- **a corporate financial system**
- **an academic register information system**
- **e-mail**
- **Internet/Intranet services**

Split (or 'Sandwich') PhD program

- **a total of 43 PhD students from developing countries (24 at DSV and 19 at other Swedish Universities)**

They spend half of the year at their home university and the other half in Sweden.

- **16 Licentiates (12 at DSV, 4 at other Swedish universities)**
- **3 Doctors + 2 doctors in December 2006 (all at DSV)**

MSc programmes

Support for staff from partner universities to study for their MSc degree at Swedish universities

Curriculum Development

Swedish scholars collaborate in the definition of curricula

Aims:

- high academic standards
- degree compatibility
- prospective PhD students
- a start for future research collaboration
- sustainability

Positive effects at partner universities (1):

New or improved networks have enabled new services:

- **access to databases**
- **information systems**
- **portals**
- **libraries**
- **interactive and distance learning**
- **electronic archives**

Positive effects at partner universities (2):

New ICT specialised entities have improved

- the distribution of information services**
- the analysis and implementation of ICT**
- user assistance and support**
- educational activities and knowledge transfer to other institutions and enterprises**

Positive effects at partner universities (3):

Seminars, training programmes on all levels:

- basic users**
- administrators**
- policy makers**

Positive effects in Sweden:

ICT issues addressed by the projects

have an academic potential and value also in Sweden.

A new interest towards developing countries in the Swedish academia.

In turn this stimulates the exchange of scholars.

Other positive effects:

A **catalytic factor** for **South-South** cooperation.

Providing **contacts** for new initiatives in research and education

ICT can make significant contributions for endeavours in **other areas** (medicine, agriculture, public administration)

Replicability

in academic environments in other
developing countries

ICT education and networking:

a simple yet effective approach

for the **empowerment of the academic communities in developing countries**

ICT proliferation and education is a good way to contribute to a culture of development.

Information on DSV – SU/KTH: www.dsv.su.se

Information on DSV's ICT4D projects: www.dsv.su.se/research/sida/

SPIDER

Swedish Program for ICT in Development Regions

- An agent for development, combating the digital divide
- Focal point for international cooperation in ICT
- Focal point for ICT expertise
- Initiator/catalyst for cooperation between the North and the South (developing countries)

SPIDER Network

Universities in Sweden

- Blekinge TH
- Göteborgs Universitet
- Jönköping University
- Karlstad University
- Karolinska Institutet
- Karolinska Institutet
- KTH
- Linköping University
- Lund University
- Mitt Högskolan
- Stockholm University
- Uppsala University
- Örebro University
- Umeå University

- Delft TU, The Netherlands

Developing Countries

- Bolivia
- Burkina Faso
- Ethiopia
- Honduras
- Laos
- Mozambique
- Namibia
- Nicaragua
- Rwanda
- Sri Lanka
- Tanzania
- Uganda
- Vietnam

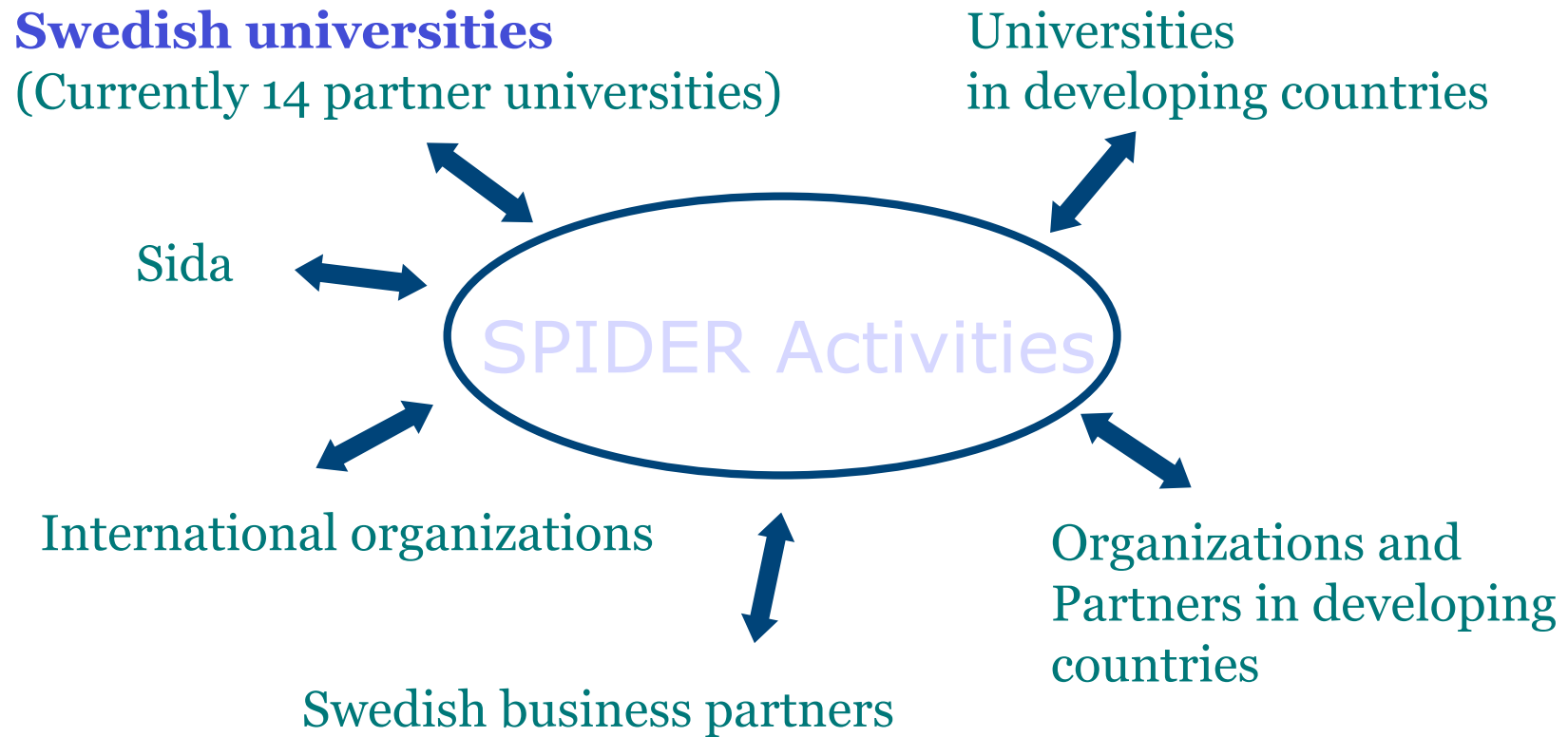
SPIDER

- Resource base for Sida
- Partner for ICT industry
- Partner /coordinator for the academic sector
- Window to the South
- Promoter of the Swedish ICT resources and solutions
- Partner for peer institutions (EU, WB, InfoDev, IICD, IDRC, Bellanet,)
- Gateway to the academic and private (ICT) sector in Sweden
- Entry point to the Swedish society for universities in developing countries

SPIDER activities:

- Projects initiated by Swedish Universities in collaboration with developing countries
 - *E-learning in Tanzania*
 - *Grid computing in Sri Lanka*
- Demand driven projects from developing countries
 - *Uganda, Mozambique, Tanzania, Sri Lanka*
- Education
 - *ICT4D International Master course*
- Seminars and workshops
 - *WITFOR 2005, WSIS-II, eLearning Africa*
- Counterpart in Sida supported projects
 - *Bolivia, Burkina Faso, Honduras*
- Helpdesk for Swedish Authorities
 - *HIV/AIDS study*

SPIDER Network



Information on SPIDER: www.dsv.su.se

More information: www.sasnet.lu.se/compsth.html



Thank you