A) Case Study Summary Information

1. **Title of case study**

   Sengerema Multimedia Community Centre

2. **Details of the person preparing the case study:**

   Organization submitting the case: Tanzania Communications Regulatory Authority

   Address: P O Box 474 Dar es Salaam

   E mail: dg@tcra.go.tz

   Website: www.tcra.go.tz

3. **Status of projects:**

   ☑ Operational

   ☐ Completed

4. **Location and population of the projects area**

   Location (village, district, etc) – District

   Population of the project area – 498,993

5. **Types of a projects**

   ☐ Pilots (trials)

   ☑ Licensed or authorized

   ☐ Project funded by USF

   ☐ Others

6. **Types of application / service**

   ☑ Public voice services

   ☑ Radio broadcasting

   ☐ E-governance, e-administration

   ☑ Support for small business, e-business

   ☐ E-health

   ☑ Tele-education, e-learning

   ☐ ICT training

   ☐ Disaster preparedness / emergency support / disaster mitigation

   ☐ Environmental monitoring / protection

□ Others (please specify)

7. **Type of technology**

☑ Wired local loop: Copper

□ Wireless local loop

□ Fixed wireless access

□ Mobile wireless access

☑ Satellite two way communications: VSAT, etc

□ Wireless LANS and IP-based related networks

☑ Terrestrial voice, data, sound or television broadcasting

□ Satellite voice, data, sound or television broadcasting

□ Hybrid or Combined technologies

□ Others (please specify)

8. **Organizations involved in implementing the project**

International Development Research Centre (IDRC)
International Telecommunication Union (ITU)
United Nations Educational, Scientific and Cultural Organization (UNESCO) under DANIDA Funds
Tanzania Communication Regulatory Authority (TCRA)
Tanzania Telecommunication Company Ltd (TTCL)
Tanzania National Commission for UNESCO
Tanzania Commission for Science and Technology (COSTECH)

9. **Project Summary indicating expected social/economic impacts**

Sengerema Multimedia Community centre is a pilot project which demonstrates the impact and usefulness of Information and communications services to rural community life in Tanzania with special emphasis upon rural developments, small business, education, health, community information, tourism, transport, trade, government service sectors, culture and entertainment. The project also geared to evaluate the social, economic and cultural impact resulting from the accelerated provision of information services and Communication technology through a reproductive and sustainable multipurpose community telecentre in a rural community. The project is an enabler to national policy makers to develop appropriate policies and strategies for telecommunications and information infrastructure development through a multi purpose community telecentres. The telecentre is providing computer training, IT consultancy and advisory, Internet service, secretarial service, meetings and conference facility, local content development, web printing and radio broadcasting

B) Detailed projects targets, objectives

1. Overview of projects targets, objectives and financing

a. Brief description of the country/region geography, terrain, climate, Demographic, socio-economic situation

Tanzania is located in Eastern Africa between longitude 29^0 and 41^0 east. Latitude 1^0 and 12^0 South. Has land coverage of 945,000 km^2
with a population of 32 million people. Have spectacular landscape of mainly three physiographic regions namely the Islands and the coastal plains to the east; the inland saucer-shaped plateau; and the highlands. The Great Rift Valley that runs from north east of Africa through central Tanzania The rift valley runs to south of Tanzania spliting at Lake Nyasa; one branch runs down beyond Lake Nyasa to Mozambique; and another branch to north-west alongside Burundi, Rwanda, Tanzania and western part of Uganda. The valley is dotted with unique lakes which includes Lakes Rukwa, Tanganyika, Nyasa, Kitangiri, Eyasi and Manyara. The uplands includes the famous Kipengere, Udzungwa, Matogoro, Livingstone, and the Fipa plateau forming the southern highlands. The Usambara, Pare, Meru, Kilimanjaro, the Ngorongoro Crater and the Oldonyo Lengai, all form the northern highlands. From these highlands and the central saucer plateau flow the drainage system to the Indian ocean, Atlantic ocean, Mediterranean sea and the inland drainage system.

Tanzania has a tropical type of climate. In the highlands, temperatures range between 10^0c and 20^0c.during cold and hot seasons respectively. The rest of the country has temperatures never falling lower than 20^0c. The hottest period spreads between November and February (25^0c - 31^0c) while the coldest period occurs between May and August (15^0c - 20^0c).

Two rainfall regimes exist over Tanzania, (December - April) and (October -December and March - May). The former is experienced in southern, south-west, central and western parts of the country, and the later is found to the north and northern coast.

Per Capital GNP is Estimated at US $ 246 (2001) and Official currency is the Tanzania shilling or 100cents which is approximately US$ 0.00077. Tanzania Shilling exchange rate *US$ 1 = T.shs. 1300*). Tanzania has the following Natural Resources:

Minerals - gold, diamonds, tanzanite and various other gemstones, natural gas, iron ore, coal, spring water, phosphates, soda ash and salt.

Wildlife and Tourism - 12 National Parks, the Ngorongoro conservation Area, 13 Game reserves, 38 Game Controlled Areas: National Cultural Heritage Sites (about 120 sites)

Fisheries - three large lakes: Victoria, Tanganyika and Nyasa, the Indian Ocean coastline, rivers and wetlands. Potential yield of fish from natural waters is estimated to be 730,000 metric tons annually; present catch is 350,000 metric tons.

Forestry and Beekeeping Non-reserved forest-land (1,903.8 km^2), forest/woodlands with national parks (200 km^2), and Gazettes forest reserves (1,251.7 km^2).

b. Objectives and Implementation details of the projects applications (basic telephony, e-business, e- administration, e-education, e-health, ICT training etc)

The objectives of the project include:

- To demonstrate the impact and usefulness of the accelerated introduction of information and communication enabled services and programmes into rural community life in Tanzania with special emphasis upon the rural development, small business, education, health and government service sectors.
- To build an example and a model of reproductive and sustainable multi purpose community telecentre in Sengerema, Tanzania
- To promote the integration of rural communities into the national and global Information Society
- To develop ICT and its applications in the areas of
  i. Education, health, and government community services
  ii. Tourism and transport, trade
  iii. Culture and entertainment
- Evaluate the social, economic and cultural impact resulting from the accelerated provision of information services and network through to multi purpose community telecentre in rural community context.
- To support national policy makers to develop appropriate policies and strategies for telecommunication and information infrastructure development through multi purpose community telecentres

c. Consideration of indigenous communities, isolated and poorly served areas, small island and their particular needs and situations

Sengerema telecentre manager and two trainers were recruited in 2001, along with maintenance and security staff. A Local Steering Committee was established, and computer training was initiated for members of the community, free of charge for a core user group from development sectors and on a fee basis for others. Since it began operations, the telecentre has earned some USD 7000 from training fees. The temporary premises were enlarged, pending the construction of the new permanent building in 2002. Members of the Sengerema Informal Sector Association are among the major users of the MCT facilities. They include metal workers, carpenters, farmers and artisans. The opening of the MCT coincided with that of three gold mines in the area, resulting in economic activity that has created income-generating opportunities. Small and micro enterprises have been quick to seize these opportunities. Some members have received computer training at the MCT, and several of them can now send and receive e-mail messages to locate buyers and suppliers.

d. New technologies deployed for providing reduced cost capital and operating cost solutions

MCT have installed VSAT dish for internet services and plans to provide internet link to District Government offices and other district institutions for e government, e business e education etc.
Telecentre Radio broadcasting station was started in September 2003. Telecentre 2006 Revenue report shows that the broadcasting station brought about Tshs 1,457,550.00 from Jan to July 2006 which is 15% of the total revenue of the project.
Landline telephone has been installed for public use; prepaid cards are being sold by the project.
Computers for training have been installed; Sengerema institutions, students and residents have been trained and pay for the course modules given training contributes 38% of the total revenue

e. Financing and partnership aspects of the project, including the estimated total cost of the project and the types of funders (e.g. sponsors contribution, charitable donations and subsidies from USF)

Project financing planned that financial resources expected to come from stakeholders and partners. A total of USD 492,670 was budgeted for the project formulation.

UNESCO/DANIDA	USD 97,230
IDRC	USD 70,000
ITU	USD 127,000
National Stake holders	USD 137,280
Local Community	Tshs 74,000,000

Individual commitments of national stake holders stand as follows:-

Tanzania Telecommunication Company	USD 85,230
Tanzania Communications Regulatory Authority	USD 100,000
COSTECH	USD 10,000

These stake holders were required to support the formulation and running of the project until it is capable of operating independently.

f. Decision- making process to determine the project

The centre was developed out of UNESCO initiative, and the aim of the project for promotion of the telecentre concept, experts took a detailed study of all scenarios concerned.
Project action plan was developed during Jan 2000 to July 2001 period.
Sensitization and creation of awareness was done through meeting, press releases, advertisement for community participation
Identification of potential user group of the project was outlined and
Various International and National stake holders were cooperated for financial and supervision of the project.
The task of signing agreement between the project executing agency and international partners outlining the various parameters for their commitment and support of the project

2. **Infrastructure and Regulatory environment**

a. ***Infrastructure components: Pre-existing telecommunication facilities, transport access, electricity supply, distance to the nearest local exchange and/or IP network, human resource, security.***

Fixed Network Telephone lines (Copper wire), Uses VSAT dish for internet services
Local exchange has been installed few meters from the MCT
Tanzania electricity Supply Company is providing electric power to the Centre.
Electric standby power generator is used incase of power failure

b. ***Regulatory components: Universal service obligations, licensing conditions, Frequency availability (for radio-based projects), other regulatory issues.***

Sengerema telecentre has been authorized to deliver its services by Tanzania Communication Regulatory Authority who is among of the facilitator of the project, It has been licensed to offer broadcasting services since 2003, The station has also applied to enter new converged license regime which started 2005 and has been licensed under the category of a community radio for Sengerema community.

c. ***Other factors which influenced the operating environment (manufacturers)***

Maintenance of equipment, internet offline and VSAT Operations

3. **Technical description and services provided.**

a. ***Architecture, type of systems, main technical characteristics, frequencies (for radio-based projects) power consumption, performances (capacity, reliability, quality of service), network management, etc***

Radio station is broadcasting at 98.8FM, has transmitters of 350Watts, antenna installed Has height 6.5Meters, arrangement are underway to install powerful transmitters 850meters from the centre to increase coverage antenna to be installed will have 50meters height.
Internet, secretarial and training room use Desk computers, Server, UPS and regulators

b. ***Installation and deployment: network planning, subscriber management, etc,***

Satellite solution (VSAT) is used for internet connectivity, Software and operating systems used is Linux

d. ***Interconnection to national networks/backbones,***

Fixed telephone is connected to national fixed line (Tanzania Telephone Company TTCL) to district digital exchange
VSAT has been installed by Simbanet Company for internet services,

e. For each service delivered (POTS, "IP telephony", etc): mode (data type and bit rate) and quality (voice quality and bit rate error rate).

The centre don't Offer IP Telephone services,

4. Cost aspects.

a. Cost of the equipment, cost per line and cost of the operation of the system

2 Photocopiers @ USD 4,500
Audio Cassette recorder USD 150
TV Set USD 600
VCR USD 300
Fax Machine USD 250
Scanner USD 500
Multimedia PC (6pcs) USD 9,600
Multimedia PC (10pcs) USD 13,000
Note book computer MMX USD 2,500
LAN Server USD 4,000
Modems USD 200
Color Laser printer USD 1,000
6 UPS and 4 Regulators USD 1600
10 UPS and Regulators USD 4,720
Digital camera USD 500
AC and backup generator USD 5,787
Digital video camera (DVD) USD 6,000
LAN Application software + other software USD 3,600
Audio, video Tapes, CD ROMS & Other software USD 13,800
Radio station equipment + transmitters USD 13,000
Cost per line/Operation of system
VSAT USD 800 Monthly
PSTN line USD 40 monthly
Radio USD 140 monthly
Computer services USD 50 Monthly

b. Cost of each terminal and cost of the service for the user.

Internet Access USD 2,400
Tel/Fax calls 10,500
Leased lines USD 13,500
Line installation USD 1,980
Telephone Sets USD 600
TV Access USD 900
TV Access USD 2,200
Cost of services
Internet users USD 1 per hour
Training fee USD 20 per month
Radio adverts USD 5 per advert

5. **Effectiveness and sustainability of the project.**

Services provided (i.e. computer training, Internet services, photocopying, secretarial services, small scale activities, Telephone/fax, CD/Diskettes/Voucher cards sales have been attracted more people to utilize the project facilities. This enables the sustainability of the project, Radio station installation increases awareness of the centre activities and usage to Information

Support from local and governmental stakeholders is also contributing to sustainability of the project

a. ***Effectiveness and benefits of the project for the targeted user groups***

Training provided to the sengerema people assisted them to get employment in the private and government offices.

SME, Civil etc obtain tailor made training to assist them to cope with computerized assignments,

Through Internet services civil workers, students, fishermen and other users group are able to get information required to carry on with their duties

b. ***Profitability of the project and/or its contribution to local entrepreneurial activities***

Through radio and internet local entrepreneurial are able to get information,

Consultations related to their activities and marketing themselves.

Training in computer applications has improved working situations.

c. ***Specific strategies to respond to the needs of women, youth, handicapped, indigenous People and other marginalized or socially disadvantaged groups***

Provision of class and centre facilities to educate women groups, youth groups and Disadvantaged group.

Special classes are conducted to collect group views on how to assist them.

Centre is also providing consultancy their different proposals which are being sent to the Government and other firms for assistance.

d. ***Aspects of the project, which could be strengthened to enhance its effectiveness or Sustainability maximizing the benefits of telecommunication infrastructure in rural and Remote areas.***

Replacement of PCs, Power backup i.e. solar power, competent staff for Broadcasting, MCT Sustainability, Scaling up of existing projects, Content and local development Programs/services

6. **Social and human developments impacts**

a. ***Overview of key social and human development needs of the population in the project area***

Sengerema‘s relative geographic isolation creates considerable demands for Information and communications services for entire Sengerema district in Education, Market services, health, basic telephone, government, employment and religious Developments.

b. Role and commitment of the project to addressing these needs

The project has improved government, business and community information services, saving transport costs, generation of employment. Researchers, students, teachers, health staff

The project has been supporting small scale enterprises government, students and Community on Computer applications training and Consultations.

Establishment of radio station has increased awareness of the community demand for more information regarding their area and the associated views on their developments.

Project has set an example which will be used in setting up similar projects in area and the country to meet community Information and communication access

c. Socio-economic benefits for, and impacts on the community/ies and/or at a wider level, Including support for gender equity, promotion of community participation and needs of Marginalized and disadvantaged populations

MCT provides Computer knowledge and awareness to governmental private workers through its Computer training, it has increased technical skills among users and strengthening local entrepreneurial and managerial capabilities.

improved access to financial capital, facilitating access to global and local markets, enabling efficient business processes and stimulated community demand for ICT.

MCT is providing conference room for people with disability and women groups meetings for free, these groups are also given access to use MCT facilities such as computers for internet and other programs.

Computer application training courses are currently being conducted for free to disadvantages groups

d. Means foreseen to enhance the project's future contributions to human and social Development

To involve local community, ISPs and stake holders in the

- Expansion of the Radio coverage and development of the local content programs/services.
- To become District Internet Provider (ISP)
- To continue to conduct Computer application training and IT
- To continue with sensitatization programs on the advantages of accessing information using radio programs
- To provide IP telephone services.

7. Other observations

a. Unexpected results and lesson learned

Increased number of high demand of ICT service users more than planned.

High demand of Radio users rise up need to increase coverage to reach other remote areas of Sengerema

Sustainability of the project without donors help

High Internet connection and monthly fees

b. Anticipated near/long term project challenges and reorientation

Radio coverage increase, uses of IP telephone, to find out reliable and affordable internet Connection,
Provision of internet services to Sengerema institutions and government offices.

c. Additional information considered useful