Urgently penetrating low-cost dependable broadband to isolated communities

Workshop Name: Urgently penetrating low-cost dependable broadband to isolated

communities

 Workshop Link: https://www.itu.int/net4/wsis/forum/2022/Agenda/Session/222

Organization: Global Plan Inc.

Date: Wednesday, 20 April 2022

1)Relevance with the WSIS Action Lines – please specify the Action Lines C1 to C11
C2. Information and communication infrastructure
C3. Access to information and knowledge
C6. Enabling environment
C7. ICT applications: benefits in all aspects of life — E-learning
C7. ICT applications: benefits in all aspects of life — E-health
C7. ICT applications: benefits in all aspects of life — E-environment
C8. Cultural diversity and identity, linguistic diversity and local content
C11. International and regional cooperation

2)Main linkages with the Sustainable Development Goals (please specify the SDGs)
Goal 1: End poverty in all its forms everywhere
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3: Ensure healthy lives and promote well-being for all
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5: Achieve gender equality and empower all women and girls
Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all
Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation
Goal 10: Reduce inequality within and among countries
Goal 11: Make cities inclusive, safe, resilient and sustainable
Goal 13: Take urgent action to combat climate change and its impacts
Goal 16: Promote just, peaceful and inclusive societies
Goal 17: Revitalize the global partnership for sustainable development

3)Did your workshop highlight any issues related to COVID-19? If yes, please explain.

Connecting the remaining 2.9 billion people of the globe to the Internet is urgently required to counter the threat of COVID-19 Pandemics.

For rapidly and globally deploying broadband infrastructure in remote areas in developing countries, it is important to know the strengths and weaknesses of Optical Fibre, Low-Earth Orbit(LEO) Satellite, and Fixed Wireless(FW) technologies for best selecting them for the difficult social and natural environment. Session 222 tried to understand the technologies, needs of developing countries, standards, and strategic approaches for the mass deployment of the connectivity.

4)Key achievements, announcements, launches, agreements, and commitments

Connecting all the world's population to the Internet reduces the social loss from pandemics, disasters, inequality, and attempts to change the status quo by force through global cooperation and opinion formation. An unprecedentedly wide range of stakeholders has been invited to session 222, a fiber expert, a satellite expert, a fixed radio expert, a standard expert, developing country users, and an influencer/the advocator of public interest capitalism.

A fibre optic solution meeting new ITU-T Recommendations L.1700*, L.110, and L.163 was presented as the unprecedentedly cost-effective key solution to connect all, that could be complemented by LEO satellite and FW technologies case by case.

 *L.1700: Requirements and framework for low-cost sustainable telecommunications infrastructure for rural communications in developing countries

New economic principles, such as public interest capitalism, may help connect all, in addition to shareholder capitalism and the use of constrained funds/grants.

Local stakeholders need to proactively select the suitable technology in a needs-sensitive holistic manner: it affects the community's future.

5)Main outcomes highlighting the following:

I.   Debated Issues
•   Please capture highlights of the main issues discussed and interactions with audience
•   Please highlight key achievements and challenges shared by the audience and/or panelists

Sustainable operation of fibre connectivity is not always easy in economically difficut areas. Nepal ICT4D is interested in online businesses such as online tourism (see QR slide 21), online disaster prevention, and online emergency aids including the use of drones. The revenue can be used for maintenance, and public purposes such as e-Leaning, e-Health, and e- prevention/relief of disaster in isolated villages scattered along with the fiber lines.

II.   Quotes
•   Please provide two important quotes from the session and the names & organisations of the person you are quoting

•   ITU-Standardized Affordable All-Terrain Optical Fibre Connectivity
Haruo Okamura, Global Plan Inc. Japan

•   Enriching lives of People in Developing Countries through Public Interest Capitalism
George Hara, Chairman of the Alliance Forum Foundation(AFF), USA and Japan

III.   Overall outcomes of the session highlighting
•   main conclusions reached during the discussion
•   the vision for implementation of WSIS Action Lines beyond 2015
Toward realizing the truly global Information Society, the following points were recognized as useful during/after the session.

(1)   The low-cost optical fibre solution meeting new ITU-T standards L.1700, L.110, and L163 was installed by non-skilled local people: CAPEX was reduced by 88% from a conventional cable solution. The ITU-D Rural Connectivity Group reported that the above ITU Standards are the most popular and useful in addressing rural connectivity.
(2)   The LEO satellite solutions are characterized by e.g, the data rate per user, beam coverage, availability, sustainability, life, and user fee. The LEO projects with, e.g., 12,000 satellites/10 BUS$ (Starlink), and 298 satellites/5 BUS$(Telesat) still have unknowns: global consensus/alliance/competition. Starlink launched 49 satellites in 2022 but 40 were doomed.
(3)   The challenges of the FW solution identified are the rapid deployment of high-speed, flexible, scalable, and reliable backhaul networks with optimized CAPEX and OPEX. It covers 60 % of the global connectivity in length today: the ratio might be maintained for a while if the budget allows. An example transmits 1 Gbps X 2-4 channels over tens of kilometers.
(4)   Head, Africa Alliance for Affordable Internet stated that Only 1 out of 50 people in LDCs are connected to meaningful connectivity.
(5)   The chair of ITU-D Rural connectivity stated the reduced CAPEX of fibre rural connectivity of 10.000 to 5,000 US$/km is still expensive but encouraging. Not only infrastructure but also local content on e-health, e-Education, etc. is important.
(6)   Nepal stated the fiber solution was installed in the west part (10 km) and, the east part (42 km, ongoing) of the Himalayas; local communities well accepted. Microwave solutions are hoped to be affordable/scalable with ease of maintenance; the battery at low temperature is an issue. The synergy of fibre, LEO, and FW solutions is anticipated.
(7)   As an example of the public interest capitalism presented by Ambassador Hara, 40% of the business profit from for-profit companies was distributed by NGOs for public services. In 2005, the World Bank introduced this business model for its potential to improve the standard of living in Bangladesh.

6)Suggestions for thematic aspects that might be included in the WSIS Forum 2023
A thematic aspect could be the complimentary use of low-cost, dependable, and sustainable broadband solutions for urgently connecting all that conquer difficult natural and societal environments including changeable terrain.

7)Towards WSIS+20 and WSIS beyond 2025, please share your views on the challenges, achievements, and opportunities in the implementation of the WSIS Action Lines to date.
COVID-19 and War in Ukraine drastically increased the need for building an inclusive information society, where global cooperation and public opinion formation should be possible with the participation by all: implementation of WSIS Action Lines 2 is critically important.