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>> NITYA KHEMKE: Welcome to Session Number 5 on Bridging the Digital Divide. We are running late. That is the nature of these events. Since some of the panelists must leave early, I may invite them to speak first.

Thank you very much for joining us. This session is about the issues contributing to the digital divide and really identifying emerging trends and opportunities in bridging this divide. It is also about highlighting the gaps in access too as well as the usage of ICT.

We have an extremely eminent panel with us this afternoon. Before we begin I would like to really indicate the rules of this session. We are using a new format this year. We are moving away from traditional policy statements to more interactive policy sessions. Each representative will be

asked one question. If we have the time I'll come back to you to ask you a second question.

You have roughly three minutes to answer the question. And unfortunately, I may have to remind you at the end of the three minutes that your time is running out. Please do forgive us for this.

The session in its entirety is about 45 minutes. And at the end of the session if we have time again there will be audience interaction, both on site and remote. So we do get up there and please post your questions.

Finally I would like to remind the participants today that if you can please send the statements you made to the WSIS Secretariat. The statements are due to be published in an outcome document of the high level track.

Without further ado I would like to begin and invite the WSIS Action Line facilitator, Mr. Yushi Torigoe, the Deputy Director, and ask him: How has the WSIS Action Line contributed to bridging the digital divide and how do you think it will further contribute?

>> YUSHI TORIGOE: Thank you, Madam Chair. Excellencies, distinguished guests, ladies and gentlemen, good afternoon. Yes, the digital divide is definitely very old and new question and this is one of the core mandates of the ITU telecommunications sector. ITU has tremendously contributed to rapid growth and expansion of telecommunication ICT networks and services so as to bridge the digital divide. Inequality to access to modern services. To connect the unconnected ITU has been identifying existing networks. And building next generation of ICT infrastructure.

Since 2009, ITU has assisted more than 40 countries with a transition from analog to digital broadcasting, bringing new opportunities to all stakeholders from manufacturers to broadcasters and end users.

ITU has developed master plans for broadband networks to allow for high-speed transmission of voice, video, and data. Since 2011, ITU has been developing reports, case studies, master plans for broadband networks, for eight countries in different regions, providing an understanding of different technologies available for broadband, using both wired and wireless technologies for terrestrial satellite communications.

ITU continues to update and implement the ITU interactive terrestrial transmission labs to show policy makers and investors the missing links in terrestrial transmission. The maps first released in 2013 are cutting edge ICT data mapping platform that features national backbone connectivity.

As of 2017, May, the map contained information interconnection high-speed network provides 184 countries.

Finally, I would like to invite all to the coming world telecommunication development conversation to be held in Buenos Aires, Argentina, 9 to 20 October this year. This conference will provide a unique platform for both sharing knowledge and experience and private public partnership. It will set priorities that will define the future of the ICT sector. Thank you, Madam Chair.

>> NITYA KHEMKA: To fix the missing links in connectivity, I would like to invite our next panelist, His Excellency Dr. Debretsion Gebremichael Measho, Minister of Communication and Information Technology in Ethiopia.

What are the challenges and the way forward in bringing the digital divide in Ethiopia?

>> DEBRETSION GEBREMICHAEL MEASHO: Thank you, Chair. Excellencies, ladies and gentlemen, first I would like to thank ITU and the organisers for inviting me to share my view and also share some experiences from you. As you all know, the digital divide has been with us for so long and unless we made some concerted effort for intervention, this issue will be last longing. The digital divide, I don't think this issue is about technology. It is an issue of serious social concern. And it is manifested in many forms. One of the issues that we have to address is critical connectivity, especially in the rural communities. When you talk about connectivity, it is not about telecom; it is about broadband connectivity.

There are other issues. One is quality of service that it gets, and the other devices that we use for connection. So at the end of the day it boils down to the number of bandwidth for individuals. The availability of bandwidth is the most important factor in connectivity. That's why at times we call the digital divide as a bandwidth divide.

The other element of concern that we try to address in addressing the digital divide is utilization. What for do we connect? Are we getting value for it? So the effectiveness of the connections that we have made is one of the most important. It has to have an impact beyond poverty and other factors. The individuals, wherever they are, must get services in their routine as well as they will expect some changes in their life as well. So the effectiveness of the connectivity is another factor that we have to address.

But here there is the issue of knowledge, the issue of skills. There is a content of the Internet, and also to

exchange ideas there must be an issue of language. So the local content is the most important.

Services that we get is very critical.

The other dimension we look into is the demographic factors, socioeconomic factors. Affordability of the connectivity and the services that are offered are very important. So we are addressing the issues. And ultimately this digital divide is connected to poverty. Unless people have the ability to pay and have education, they can not use the Internet. The services that are provided through the Internet. So to provide a solution for the digital divide it means it has to be linked to poverty elimination programme. The digital divide cannot be addressed in a silo or singularly but as part of a development programme of poverty eradication. Thank you.

>> NITYA KHEMKA: Thank you very much, Your Excellency for your insight full comments. I think you raised several important points to think about. The digital divide is as much a social issue as it is a connectivity issue.

Our next panelist is His Excellency Mr. Edgar Olvera, Vice Minister of Communications. I would like to invite him to give his statement.

>> EDGAR OLVERA JIMENEZ: Good afternoon to you all. I would like to thank the World Summit on Information Society for giving me the opportunity to share with you some of the most importance tan advances web able to make in Mexico in order to close the digital divide. What I can do is share with all the citizens the same opportunities of access to the various tools provided by technology in favor of development and wellbeing. The telecom reform started out in 2013 and brought billion by Enrique Pena Nieto to guarantee to our citizens the same access to ICTs and to telecom services. This is a major turningpoint, milestone in the telecom in Mexico because under this constitutional reform what we are able to do is put it in the normative document, the access to ICTs as a human right, a fourth generation human right. And this goes into the fundamental document of our country. There is the obligation on the part of the state, the government, the three components, legislative, judicial, and also executive in this way to guarantee every person in Mexico to have the right of gaining access to make sure that the government would secure this fourth generation right to the citizens. The reform and based on the constitution, seeking to increase the infrastructure and improve the quality of infrastructure and reduce the access cost as well. Only in this way is it possible to provide equitable access.

Four years down the road in 2017 in Mexico we have had tangible advances in the number of users of Internet in the country. It went from 41 to more than 76 million users. And these people had access through a smartphone. This is almost 85 percent of the total of the users.

In order to maintain this trend upward, today we are carrying out a number of different projects based on infrastructure and connectivity. The first one is very important or instrumental, the international competition through public-private contract in which there is international Consortium providing 91 percent of the population, fourth generation access and soon the fifth generation as of March of next year. This will generate access to 92 percent of the population making it possible in this way to close the digital divide, bridging the digital divide. There will be social connectivity in connection to different public sites. Thank you.

>> NITYA KHEMKA: Thank you very much, Your Excellency, for highlighting the advances that Mexico made in bridging the digital divide.

I would like to invite next Mr. Shigeki Suzuki, the Vice Minister of Policy Coordination, Ministry of Internal Affairs and Communications in Japan. I would like to ask you, what is the best way to address bridging the digital divides in a way that allows us to achieve the Sustainable Development Goals.

>> SHIGEKI SUZUKI: Thank you, Chairman. The Asia-Pacific report says that developing Asia's needs will require investment of 2.3 trillion U.S. dollars in the telecommunications network for 15 years from 2016 to 2030 to maintain its growth momentums. To secure this huge investment, investment from the private sector is essential. The role of the government is to show that national ICT infrastructure development goals and plans and to disseminate it to stakeholders and make policy and declarations to encourage investment and build on empowerment that enables private sectors to invest actively.

Not through aid or assistance. It is private sector investment. Especially in the case of ICT infrastructure in nonprofitable areas of low population density areas, it is necessary to use some public assistance and appropriate technologies to those areas in technology-neutral approach such as fixed wires, wireless, satellites and mobile networks.

In Japan, under the free competition, telecommunications carriers and cable network operators developed network infrastructure. In unprofitable and low population density areas, the government and our local municipal assists the

private sector. They have built the infrastructure by the local government itself. So, for example, in Japan to use the technology of these nonprofitable areas, for example, is using TV white space frequencies, multi wireless technologies and wireless access to school and medical clinics in mountainous regions, et cetera.

And also in the occasion of the national disasters, we in Japan developed special equipment unit known as MDRU, movable and deployable ICT resources units which quickly exports ICT technologies in disaster times. This is very useful in rural areas. Thank you very much.

>> NITYA KHEMKA: Thank you very much, Your Excellency, for your excellent comments and also flagging issues like connectivity in low population density areas and in times of natural disasters.

The next panelist we have is His Excellency Mr. Rashid Ismailov, Deputy Minister, Ministry of Telecom and Mass Communications of the Russian Federation. The question I would like to pose: What is the concept of the digital economy? How has it developed in the Russian Federation?

>> RASHID ISMAILOV: On the first of December 2016, during my yearly statement at the federal meeting to the President of the Russian Federation, he tasked us with working on a new programme for the digital economy. The aim of this was, should be the overall implementation of digital technology across all aspects of life. And work of our society. Our programme is focused on supporting development of existing solutions and creating the conditions to ensure that new break through technologies and promising developments can become part of our day-to-day life in our country. Briefly, the digital economy can be divided into three levels. That's how we say it in Russia, anyway. This is the market and economic sector. Here already there is significant cooperation between providers and end users in terms of goods and services.

Secondly, it is a platform and technology to create competencies to then create markets and sectors of the economy. Thirdly, this is an environment that is created, and it creates the environment therefore for a platform in technology. This covers state government, state management, ICTs, infrastructure, staffing, and information security.

The programme is mainly focused on the second and third levels of the digital economy. And sets out the goals and challenges and indicators for the development of them. I would, in terms of our approach, Russia's approach I would draw attention to the fact that our programme and our understanding is not an overall collection of projects of IT

projects. It was created and focused mainly to develop socially important aspects for society and the programme has set out a task of implementing digital technology in areas where the state believes to be vitally important, healthcare, governance, education and smart cities.

I would like to note separately that today representatives of our Delegations who are, vice Director of our national library received a prize from the ITU. It is a unique programme we have in the Russian Federation, it is called the eLibrary, electronic library. It is located in Moscow. Obviously, our country is vast. There are ten time zones. So all people need access not only to the Internet but also access to resources and knowledge. We adopted this programme. I would like to say today, we have 4.3 million facilities, items in this library. So newspapers, books, journals, et cetera. It is free, open access. People can log in and access a unique mass of resources and information, et cetera. So these are all pulled together on a national eLibrary. And there are 37,000 libraries on the Russian Federation. And the aim is to cover 100 percent of libraries in the Russian Federation.

So those who visit the libraries can have access to the main body of resources that they contain. Thank you very much.

>> NITYA KHEMKA: Thank you, talking about breakthrough technologies like the eLibrary and transferring them to day-to-day life.

Next panelist is Mr. Virat Bhatia, I would like to pose a question to you today, India has had success in going from less than one phone per person 25 years ago to nearly a billion phones. What are the reasons for success in this incredible pace in mobile telecommunications?

>> VIRAT BHATIA: Thank you, moderate. The first telecom licenses were given out in 1993 in India. You are correct about the fact there were less than one phone per 100 people. Right now we are over 75, nearing 80, over a billion phone connections mostly mobile, almost entirely mobile.

And this happened, for the first ten years there were only 40 million in the next ten years, 8 millions, it grew crazy as expected.

India is in the ITU Member States the most connected country when it comes to Internet access, yet it has 800 minimum citizens yet to access the Internet. It is a massive and very challenging policy paradox for the government, regulator, as well as the industry who is at it.

In terms of what made this happen, it will be a combination of issues, but let me first illustrate quickly the government intervention in this. Government has come out with policies every time the sector required intervention, whether to introduce competition, whether it was to introduce private sector or new technology, whether there was trouble in the sector and it needed recasting the economics of the sector. Even when there was a market failure, for example, rural telephony which is not penetrated at the level that urban is, the government is deploying broadband, a government funded fiber optic network which will connect nearly 600,000 headquarters. Government has come in at all the right times to make the policies and change the policies to facilitate competition.

India is one of the few countries that has seven or eight operators even today, consolidation is on the way. At one point there were 17 or 18.

The Honorable Prime Minister Mr. Modi who took over in 2014 was also driving this and has been very passionate about using technology for development, put out several different programmes, Digital India, Smart Cities, which the government machine is behind this. Equally the private sector invested \$110 billion over -- they completed fixed line 2 percent fixed lines in a year. They will be the example of mobile access in the world. As to the spectrum, the technical communities come to the party making sure that the limited spectrum available among the many operators was used exceedingly well.

It is a combination of government initiative, private sector investment, technology that was latest. It leapfrogged all challenges that other countries had to deliver us the level of penetration that we have. Lots of learning. There will have to be new learning for the Internet access. There are language and other issues coming into play. Right now the success comes out of the combination of these three or four factors. Thank you.

>> NITYA KHEMKA: Thank you very much, Mr. Bhatia for highlighting the paradoxes in a vast country like India and telling us what the government and private sector is doing to bridge this digital divide.

Next panelist is Dr. Syed Ismail Shah of the PTA, Pakistan Telecommunication Authority.

Do you think lack of access to the Internet is the only reason for the digital divide?

>> SYED ISMAIL SHAH: Thank you, doctor. If, when we talk about this digital divide, usually what comes to our mind is the geographical divide. Of course, that is important. That

is, we need to have the access. But is that the only kind of divide that we can imagine that is there in the different countries that we have? Let's say if we have the access part there, if we have the coverage, you are under the broadband coverage or have some kind of land line there, is it affordable? That's another kind of digital divide, whether it is affordable by a common person.

The next digital divide that we can have is related to the kind of services. Many people feel that there isn't enough for them, enough content, enough services where they need to be connected. So there is this need. You have this digital divide where you don't realize the need. Then we have this digital divide related to gender. All of you know that the female ownership of mobile phones, female access to the Internet is, there are fewer females on the Internet as compared to males. There is a digital divide across gender also.

Then we have a digital divide across, the abilities or different kinds of abilities. Have you ever imagined how would a blind person, for example, a person with visual disabilities access the Internet? So we have a division there. The Internet is not as accessible to a person with disabilities as compared to a person who doesn't have these impairments.

And finally, there is a digital divide across skill sets. There are people who know about the technology, who know how to use it and people who don't. As we move into the future, those who currently know the technology may also lack eventually in the skills required for the future. Just to give you an example, if the artificial intelligence reaches a stage where it replaces the doctor, for example, the decisions that the doctors make or the lawyers make, what kind of digital skills would be required at that time? People who know about artificial intelligence who can analyze big data. We need people who will have these skills related to data analytics, cybersecurity. These are actually the kind of skills that will also create a divide among the people.

So what are the different things that are happening in our country? In my country, Pakistan? For the access part, of course, as was mentioned by some of the other panelists, we do have the universal service fund and also the private sector is spending a lot to provide the access.

And affordability issue. We are addressing that. In fact, Pakistan is one of the markets where we have the ownership or the affordability is very good. Similarly on persons with disabilities we have a special section in our IT

policy about how to make the Internet accessible for persons with disabilities. And as far as the new skills are concerned we have a comprehensive plan that is being worked on where we will use all the means to train all of our youth and those people in the need in the latest technologies.

>> NITYA KHEMKA: Thank you very much, Dr. Shah, for highlighting the digital divide across different vulnerable groups and tell us what Pakistan is doing to bridge this divide.

We move to our next panelist, Ms. Constance Bommelaer, Senior Director of Global Internet Policy, Switzerland. The question I have for you this afternoon is: What are the greatest challenges for local access solutions?

>> CONSTANCE BOMMELAER: Thank you very much, Mrs. Moderator. Just to start, a quick word with the Internet Society. The Internet Society was founded 25 years ago by one of the inventors of the Internet, Vint Cerf, to lead in Internet policy, technology, and development. Thank you for your question.

I would like to mention a report that we released recently on community networks in Africa which basically maps the various initiatives in the region. If you have a look at this document, which is available on our website, you will see that it reflects the incredible things, incredible values we have in terms of sustainable economic development in local communities if we are able to develop local access.

But this report also helped us better understanding some of the challenges and barriers to local access. And if you take a step back and you consider the bigger picture and the agreements, the targets that were set at WSIS Plus 10 and also at the sustainable development summit, we realize that we cannot conduct business as usual. If we want to end universal and universal access for all by 2020 we will require new approaches to ensure that no one is left behind.

So one of the starting points from our perspective here is, first of all, to adopt a holistic approach in embracing the full potential of ICTs in the fields from health to environment to education. And this will really allow us to have, reach all the benefits that ICTs can bring for sustainable development.

But also in developing a holistic approach, when you think about the policies that we conceive and conduct, this is what we call at ISOC building an enabling environment, basically a blended approach based on infrastructure development, good government, capacity building and strong local communities who can support the entire ecosystem.

This is really at the heart of the Internet Society mission.

Another priority we would like to highlight today is the importance of local access solutions that can be used. This report that I mentioned in my introduction on community networks in Africa really was an opportunity for us to understand how community networks can literally catalyze the development of Internet infrastructure. Because the WSIS Forum for us is a chance to take stock and share ideas for the future, I would like to conclude with three concrete suggestions. First of all if you're a regulator consider community networks a legitimate and complementary form of local connective. If you're a policymaker, consider ways that existing or new funding programmes could support them. And finally, if you are from the operator's community, perhaps consider partnering and supporting local community networks, possibly through equipment donations, training opportunities or backbone ability to reach Internet access.

In conclusion, everyone has a role to play in expanding Internet access. The participation from many leaders today shows that the ITU can help us elevate the importance of connectivity to reach broader development goals at the highest level. Thank you.

>> NITYA KHEMKA: Thank you very much for you are insights and highlighting how community networks can catalyze the community development infrastructure.

I would like to move on to Mr. Jamie Herrera, Member of the Board, Superintendencia de Telecomunicaciones from Costa Rica. The question I would like to pose to you, sir: As a regulatory body what is your organisation SUTEL do to help close the digital divide?

>> JAIME HERRERA: In Costa Rica, in June 2007 was approved the new general telecommunication law, opening the market of mobiles and Internet services to competition. And at the same time SUTEL was created. SUTEL is the regulatory body for telecommunications. Maybe one assignment the law gives to us different to all the regulators in the world is that the law gives the responsibility to manage the Telecommunications National Fund in order to fulfill very clear objectives. One is to provide telecommunications on time to populations from remote areas where the provision of services is not a business for the operators, to persons that cannot pay for the services, persons in vulnerable conditions like indigenous populations, children, older adults and others and public institution places in that difficult or remote areas.

Second, to review the digital divide and assure the same opportunities to all the Costa Rican population in promoting connectivity and development of infrastructure and the availability of terminals and large band services.

The fund is financed with the resources produced by the spectrum assigned to the operators. Also with 1.5 percent of the rural income of the operators every year and voluntary donations.

We are working very hard in implements five programmes that are complemented, one with the other, to fulfill this obligations. We hope the answer to these questions is done.

>> NITYA KHEMKA: Thank you very much, sir, for highlighting the role of your organisation, particularly in bridging the digital divide in Costa Rica.

Our final panelist for this afternoon is Ms. Fatima Barros from Portugal, the Chair of ANACOM's Board of Directors. The question I have for you: What are the programmes in Portugal to close the digital divide?

>> FATIMA BARROS: Well, good afternoon, everybody. I hope that you still have the patience to listen to me. I'm representing here Europe somehow. I think I'm the only European around here. I would like to tell you what is our main concern right now. It is about connectivity, as some of my colleagues just mentioned. It is also about affordability, about use, adoption, et cetera.

But there is a minor difference that is all the difference. When we talk about connectivity, we talk about high-speed broadband. So our main goal is to assure that every household will have access to high-speeded about broadband and this means we have a big challenge again. In general, broadband is assured for almost 100 percent of the population in Europe and the same in Portugal.

My country is an example. In the case study in Europe, about a very high coverage in terms of NGN, next generation networks. I would like just to highlight very quickly why are we such a success? Just to give you an idea, 75 percent of our households have access to NGN. And this means that we have large coverage in terms of fiber to the home, FTTH and also 3.0 doxy. Why is this possible? We have very fierce competition among cooperators. We have three platforms of vertical integrated operators. They offer fixed networks and also mobile services.

And they are able to bundle all the services and they compete fiercely. Because there is strong competition there is investment in NGN.

This is very important because of the measures that the regulator adopted a few years ago. I would say 12 years ago. I'm talking about regulating access to decks. I don't know if you are aware of the fact that the giving access to the decs of the previous operator reduces cost of NGN by almost 80 percent. When you impose these regulations you reduce the costs for alternative operators to make these investments.

This was possible to make Portugal a success in terms of NGN coverage. Also we imposed a few years ago access to all the infrastructures that can host electronic communications networks like utilities, like roads. This was also very important to promote investment by reducing the cost of investment. So on one side we have connectivity assured for a large part of the population. In those rural areas where there is no commercial business case, there were some investments under PPP and we built dark fiber networks that are open access. So any operator can just connect and give access to the population. And this was very important, but it is not enough. So we will still have some part of the population without access to very high-speed network. And of course, this is also a concern for us. It is probably the challenge that we have right now.

One of the measures that was very important to us, when we run the auctions for the 800 band, for example, we imposed coverage obligations on the operators. And any time that there is a renewable, renewal of the license, we impose more coverage obligations. And we did this for 4G, for example. We have a very, very large coverage of more than 95 percent of the population have access to 4G.

However, there is another problem that is the other side of the equation. It is about adoption. It is about penetration of broadband, high-speed broadband. In these terms we have a very low percentage. We have 25 percent, which is rather below the average in Europe. And the main reason is connected to the fact that we have an elderly population. And we have very low, low digital literacy for the elderly population. This low literacy means that people can have access to the networks. They can afford to have access to the network. But they don't feel the need to use a computer because they don't know how to use it.

So the big challenge that we have right now in Portugal is to improve the digital literacy of about one-third of the population that unfortunately doesn't have the skills that allow them to benefit from the great networks we have already in place. Thank you.

>> NITYA KHEMKA: Thank you very much, Madam, for raising the important point of connectivity and the access to infrastructure and digital literacy. With that we have to close this panel. Unfortunately we don't have time for audience questions. But if there are any pressing questions, please do post your comments and questions to the WSIS Secretariat. They will find a way to reach it to the panelists.

I want to thank you very much for your time this afternoon. I think our panelists have raised several important points, particularly regarding the gap in access to and usage of ICT. I want to mention that the final summary of this session will be available tomorrow, the 14th, at 4:30 p.m. Thank you once again very much to all our panelists on stage and all of you in our audience. Thank you.

(Applause.)

(The session concluded.)

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