

SUMMARY OF GLOBAL STANDARDS SYMPOSIUM SESSIONS

This document has been prepared by TSB Secretariat with summaries of the five GSS sessions that have been provided by the Chairman and the session moderators and includes summaries of the presentations and speeches. The full text of the presentations and speeches can be found on-line at: <http://www.itu.int/ITU-T/wtsa-08/gss/>. If you have any comments please send tsbspd@itu.int

1 Introduction

The inspiration for the Global Standards Symposium (GSS) can be found in Resolution 122 of the Antalya Plenipotentiary Conference and in Resolution 1272 (MOD) of the ITU Council. At the Plenipotentiary Conference, the ITU membership recognized the need to adequately address strategic issues in standardization as well as the evolving role of the World Telecommunication Standardization Assembly (WTSA). This led to the planning and holding of this, the inaugural GSS.

The first-ever GSS dealt with major themes beginning with finding ways to Bridge the Standardization Gap between developing and developed countries. Work in this area has been a major focus of the ITU-T Sector in recent years. The GSS then considered key challenges in the Standardization landscape. These include the desirability of improved coordination between the private sector and governments in charting the landscape of new and emerging technologies and ways to streamline standards development. Another key challenge is developing the necessary standards so that ICTs can best play their role as an enabling technology to combat climate change by limiting and reducing greenhouse gas (GHG) emissions across all sectors. The role of standards in accessibility was another of the challenges discussed at the GSS. Recognizing that duplication should be avoided among the wide range and number of standards development organizations (SDOs), the GSS concluded with a roundtable discussion among representatives of leading standards-making bodies to consider ways to strengthen collaboration, while responding to the realities of the marketplace.

The GSS was organized by a balanced Steering Committee, which built upon the prior work done by a correspondence group. Vietnam and South Africa served as the co-Chairs of the Steering Committee. Making maximum use of electronic and on-line work tools, the Committee developed the program and list of speakers for the Symposium and prepared the draft GSS Report.

The GSS began with opening remarks and keynote addresses by:

H.E. Minister Ivy Matsepe-Casaburri (Minister of Communications, South Africa) welcomed all ITU Member States and Sector members to the GSS, as well as non-members and captains of the ICT industry. She referred to the importance of bridging the standards gap and was pleased that the GSS would provide an opportunity for high-level policy discussions on this important issue. To date, the role of Developing countries in standards work has been almost non-existent and the gap is widening, so the first ever GSS is particularly timely. She noted that the current financial crisis would force governments and industry to reassess the situation and would lead to a paradigm shift and a new vision of the future. Given the rising demand for digital inclusion, for better accessibility to ICTs and the problem of climate change, the GSS needs to discuss new modes of collaboration. She was particularly pleased that the first ever GSS was taking place in South Africa and on the African continent.

Dr. Hamadoun Touré, Secretary-General, ITU. The Secretary-General welcomed participants to the Global Standards Symposium in Johannesburg, the heart of Africa's most vibrant and fast-growing region for information and communication technologies. He noted that the global financial crisis affects everyone, including the ICT industry, but expressed optimism that the industry will weather the storm.

The SG stressed that standards are a proven tool in terms of economic development, citing for example a study by the British Standards Institute that standards make an annual contribution of GBP 2.5 billion to the UK economy and 13 per cent of the growth in labor productivity is attributed to the role of standards. He noted that standards can have a significant effect on limiting the undesirable outcomes of market failure.

He emphasized the need to move forward into an era of even greater efficiency and cooperation in standards, noting that the high level of speakers at the GSS can really make a difference. He recalled the importance of involving developing countries in standards work and mentioned that ITU is spearheading an ambitious global effort to help connect the unconnected by 2015, in partnership with governments, industry, development banks and financial institutions, and other partners.

He mentioned that ITU and its partners are organizing a series of Connect the World regional Summits over the coming years, bringing together like-minded stakeholders to work together on concrete actions and projects to expand information and communication technology (ICT) networks and access as a means of spurring investment, employment and broader social and economic development. The Connect Africa Summit, the first in the series, was held in Kigali, Rwanda in October 2007 and raised 55 billion. Additional Summits will be held in other regions in the coming years. We cannot forget the 3 billion who are not connected.

He applauded the initiative of the TSB director to organize the GSS and stressed that the Symposium can influence the future direction of standardization, ensuring that standards meet the specific requirements of global business, consumers, developing countries and others with limited access to the benefits of ICTs, as well as people with disabilities, and can also significantly help lessen the effects of climate change. He cautioned that the meeting should not forget the three billion people in the world still lacking an affordable and reliable connection to basic services.

He mentioned that many governments have recognized that ICTs are now the key engine for economic growth. With the right mix of infrastructure and services, these under-developed markets will quickly take off. This can be a win-win situation in which everyone will benefit. Here in Africa, a place clearly very close to his heart, every child will get access to the information and communications they need to realize their potential and create a much brighter future.

Mr. Malcolm Johnson, Director, Telecommunication Standardization Bureau, ITU. The Director expressed his sincere gratitude to the South African administration for hosting the first-ever GSS and for providing such excellent levels of support. He considered that GSS would provide a platform to the world's standards leaders and technology companies to give their views on how to create an environment of trust, efficiency and clarity in the world of ICT standards.

The Director emphasized that the need for stability and coordination of standards work at an international level was perhaps more obvious today than it has ever been. The standards world is characterized by a bewildering array of organizations vying for attention with different agendas and a very divergent set of modus operandi. The GSS can play a role in bringing greater clarity to the process, to ensure we all pull together and avoid duplication of effort and waste our increasingly limited resources. Even large organizations are having difficulty resourcing this effort, so how can small organizations, especially from developing countries, hope to play a role.

Clarity and efficiency must be brought to bear in this – most important of industrial sectors. ITU has long championed this cause. He mentioned that it has regularly hosted meetings of forums and consortia and has formal relationships with 44 standards bodies. In the past few years for example, ITU-T took the lead in terms of defining the global standards for next generation networks, spearheaded by our Focus Group on this issue and now the NGN Global Standards Initiative. ITU members have asked us to take the lead in these fields and we have acted.

The Director mentioned that the Antalya Plenipotentiary Conference in 2006 dealt with major themes beginning with the need to find ways to Bridge the Standardization Gap between developing

and developed countries. It discussed the concept of the “ladder of development”, in which a country is profiled in terms of ICT standardization based on criteria such as usage and application of standards, capacity building and human resources, participation in the standards-making process, development of future technologies and setting technological trends.

He mentioned that another key challenge was to develop the necessary standards so that ICTs can best play their role as an enabling technology that can combat climate change by limiting and reducing greenhouse gas (GHG) emissions across all sectors. From a standardization perspective, we have already produced a checklist for standards authors to ensure climate change is taken into account in standards development. We’ve also had the first meeting of the ITU-T Focus Group on ICTs and Climate Change which will produce concrete deliverables by April of next year.

There is a need for the ICT industry to limit its own emissions, maximize its potential as an enabling technology to help other sectors reduce emissions and work toward concrete targets for more energy efficiency and reduced GHG emissions. Several ITU members have already made commitments to do this and we strongly encourage others to do so. The decision to make ITU-T recommendations free on-line has also been a green success.

The role of standards in accessibility is another of the challenges we will discuss. Recommendation V.18 was a major landmark tying together text telephone protocols allowing different - previously incompatible - textphones in different countries to communicate. An example of recent work focuses on taking accessibility needs into account in the development of all standards, from the very beginning. The recently published ‘Accessibility Checklist’, gives guidance to the makers of standards on how to incorporate the needs of people who have restricted access to ICTs.

The GSS concluded with a roundtable discussion among leading standards makers to consider ways to strengthen collaboration and improve efficiency, while facing the realities of this somewhat turbulent marketplace. I look forward to some lively debate.

In the last decade, the standards world has changed at a pace matching the wider world of ICTs. It has changed irrevocably. The array of fora and consortia *is* frankly bewildering and talk of competition and the potential for duplication of work between SDOs will not help. All SDOs including ITU should work closely together to ensure that the global needs for efficient standardization are met. We should recognize that our roles are complementary and not competitive.

Standardization *is* a key building block in constructing a globally connected society. We can and will connect the world. We will do so by building on the work of the thousands of dedicated individuals—from governments, the private sector and civil society—who come together, in organizations like those represented here today, to develop standards and guidelines that keep costs low and facilitate access to global markets and allow for economies of scale in production and distribution, safe in the knowledge that standards-compliant systems will work anywhere in the world. The work is not the most visible, but it is nonetheless essential for our common digital future. Working together we will succeed.

H.E. Mr. Nyugen Thanh Hung Vice-Minister, Ministry of Information and Communications, Vietnam. The Minister welcomed everyone present to the GSS in Johannesburg and asked all to express their great thanks to ITU, the Steering Committee and to South Africa for the excellent preparations. He recalled that this is the first ever GSS and it is based on RES. 122 of PP-06, which recognized the importance of global standardization. GSS is very open and would be a change to share and exchange diverse views. He had high expectations for the Symposium and would report its conclusions to the WTSA for consideration. It is noteworthy that the GSS is being held one week after World Standards Day, which for a theme focused on sustainable development He noted as well the importance attached to standards work in the WSIS output documents, which defined it “one of the essential building blocks of the Information Society “(Declaration of Principles (WSIS, 2003), in paragraph 44)

He mentioned that nowadays, one can easily realize the rapid and diversified development of ICT applications in every aspect of social life. It's difficult to imagine how our lives would be without popular information tools such as email, internet, webcam, messenger, or videoconference, IP telephony, IP TV, mobile TV, etc., which are controlling the global social-economic activities. We are approaching closer to the goal: "communication for everyone, everywhere at any time" and the further goal: "all activities go online". All these achievements that we have are owing to standards and recommendations developed by SDOs, including ITU, assuring the compatibility, interoperability and accessibility regardless of technology, network and service. In the context of increasingly diversified ICT applications, the coordination and cooperation between different standardization areas, various ICT standardization organizations are becoming more and more important.

He noted that standards have allowed a fully connected, interoperable, accessible world regardless of network or service. The role of SDOs is becoming more important and he noted that ITU-T had received an Emmy award for its work on H.264, along with ISO and IEC. In addition, standards impact the economy, the environment and social development and thus must be considered from many perspectives. That means we would need more comprehensive and global solutions for ICT standardization and that requires new resources. Ties should be strengthened between ITU and other SDOs.

He admitted that the issues before the GSS, including bridging standardization gap, ICT and climate change, global standards collaboration, were not simple, and he thanked all the participants in advance for the quality of their contributions and looked forward to a stimulating debate. In closing, he expressed his appreciation for having been designated to chair the GSS, which showed the evolving interest of developing countries in standardization.

2. Session 2: Bridging the Standardization Gap

Session 2 of the GSS on Bridging the Standardization Gap, was moderated by H.E. Ambassador Ronaldo Sardenberg, President of the National Telecommunications Agency of Brazil (Anatel).

Session 2 provided valuable inputs, experiences and insights to the global effort on bridging the ICT gap.

Mr. Ashadjon Khodjaev, Deputy Director-General of the Communications and Information agency of Uzbekistan, spoke about the importance of the ITU decision to make ITU-T Recommendations free-of-charge online, and how this decision has affected the CIS and Central-Asian countries. Mr. Khodjaev also informed the audience about some of the results of the Regional Development Forum, held in Tashkent, last June. The CIS and Central Asian Forum had 115 participants from 18 ITU Member States, and they discussed issues such as telemedicine and education, increasing the production of handbooks at regional level, quality of service and interoperability.

Mr. Matthias Kurth, president of the Federal Network Agency of Germany, provided insights on the definition of the gap and the importance of having global ICT standards in order to lower prices for consumers, which would benefit from the economies of scale of standardized lines of production. Mr Kurth also mentioned the subject of global interoperability as a key to bridging the gap, and highlighted the importance of providing access to ICTs to the general population by the dissemination of e-services, such as e-government and e-health.

Mr. Patrick Masambu, Chief Executive of the Uganda Communications Commission, spoke about the central role of ICTs in the economic and social development of countries. Mr. Masambu provided some interesting concepts, such as utilizing holistic solutions at macro levels, and adopting some of the principles in the approach currently used for universal access, in order to bridge the gap. Mr. Masambu emphasized the importance of broadening stakeholder involvement and of strengthening policy and regulatory institutions at national levels, in order to raise the degree

of responsiveness of developing countries to ICT standards-making efforts. He also mentioned the importance of involving universities and research institutes in national standards-making processes.

Ambassador David Gross, coordinator for International Communications and Information Policy of the United States, presented the results of the OECD Ministerial held in Korea. He mentioned the concept of the Internet Economy, based on the fact that the Internet has reached more than 1 billion users worldwide and that, nowadays, it underlies every aspect of the global economy. This makes access to ICTs fundamental to the social and economic insertion of developing countries in global society. The Ambassador pointed out the increasingly important role of the ITU in implementing the necessary changes to adapt the global society to the new “ubiquitous” nature of the Internet.

Dr. Hyoung Jun Kim of the Electronics and Telecommunications Research Institute of Korea, presented the Korean case on bridging the gap. The concept of the gap was further elaborated and divided into sub-level intertwining gaps, such as the gap among industries, among communities and between providers and consumers. All of these gaps add up and expand the gap between developing and developed countries. His vision is that we need to identify the actors in the sub-level gaps and solve their gap issues, in order to lower the disparities between real products and global standards. The Korean approach to bridge the gap seems a government-driven one, with national authorities paving the way for the industry to follow.

Mr. Baoxin Zhou, Secretary-General of the China Communication Standards Association, presented the China experience on bridging the gap. Mr. Zhou recalled that China has reached almost a billion telephone users and more than 250 million Internet users, thanks to investments in networks and R&D. Mr. Zhou emphasized the three major transformations that the Chinese telecom standardization work went through, namely: the consideration of issues such as industrial development, market regulation, public interests and social harmony in the telecommunication standardization work; the development of homegrown standards, resulting in 612 Chinese contributions to the ITU-T in 2007; and integrating the standardization process with the views of businesses, universities, research institutes and users, taking advantage of the resulting synergies and leverage. Mr. Zhou concluded his speech by stating that standardization efforts should be industry-oriented, in the sense that international standards bodies should consider national industry needs when elaborating recommendations.

Dr. Sebiletsa Mokone Matabane, CEO of Sentech, presented the South African case study on the adoption of international standards and the national experience. Dr. Matabane added that the gap, in addition to the problems presented by the other speakers, also presents trade barriers, which result in damage to market competition, in lower quality of service and higher prices to consumers. The South African approach is one of enhancing interaction between national standards bodies to increase cooperation and decrease disagreements on the adoption of standards.

Session 2 presented interesting statistics and new, valuable concepts, such as the emphasis on including the academia sector and research institutes in standardization work, an idea that can be implemented anywhere in the world.

The global community has to include developing countries in the standards-making process through all means possible. To start, there is a need to improve human capacity by fostering research, innovation and the participation of the academic sector.

In order to level the standardization work in the global society and bridge the gap, we must level the knowledge about it, and Session 2 provided not only knowledge, but also creative ideas and approaches directed at reaching the common goal of bridging the standardization gap.

3. Session 3: Global Standardization Challenges

Session 3 was moderated by H.E. Dr. Benjamin Aggrey Ntim, Minister of Communications, Ghana.

On behalf of Ghana he thanked the South African administration for the excellent organization of the GSS and both the ITU Secretary General and the TSB Director for the invitation to moderate the third Session of GSS. He stressed the importance to involve developing countries in the process to develop standards with the aim to bridge the standardization gap.

The Session discussed future challenges for the standards-making community and in particular the role that ITU standardization Sector (ITU-T) should have in the global standardization landscape. Various standardization areas requiring ITU-T future studies were identified.

Mr. Nasser Kettani, Regional Standards Officer, Microsoft MEA, reviewed the positive impacts and potential negatives of standards on product innovation and dynamic markets. He mentioned that some have argued that governments should intervene to mandate standards to ensure interoperability. However, the fact that two products conform to the same standard is no assurance that they will interoperate. Today, companies are addressing interoperability in a number of ways, of which standards is only one option. An open approach to standards allows for the adoption of neutral procurement policies which allow government agencies and businesses to choose the best software and business models for their specific needs. Benefits of this open approach include fostering robust competition, recurrent innovation, and greater choice in the marketplace.

He discussed the steps that governments can take to build a nation standards system, starting with the establishment of national technology prorates. He commented on ways in which the ICT sector should engage in standards work and the importance of international standards processes, based on a consensus approach that offers alternatives, as well as providing technology, best practices and governance expertise to developing countries. He concluded with a focus on neutral procurement policies that promote economic development.

Accessibility is a key to digital inclusion and to bridge the digital divide. In his view, accessibility should be considered not only for disable persons but also accessibility to literacy, education etc. It is very important to address accessibility in standardization work sooner than later and various SDOs should join together to minimize the related costs and redundancies and to facilitate interoperability. Accessibility and Assistive Technologies should not be a subject of competition in the industry. Regulation should not take place at the detailed technology level; rather the Regulator should require that the Government must provide built in Accessibility in their citizen services.

Dr. Stephan Scholz, CTO of Nokia Siemens Networks, spoke on the Standardization Landscape in Tomorrow's connected world.

He observed that the Telecommunication industry is drastically changing. In a few years we will connect 5 billion people and see a 100-fold traffic increase. This increase requires a fresh look on the optimal network architectures supporting connectivity and application domains.

Standardization is vital to new technologies such as NGN and will shape the technology solutions of tomorrow. These changes will also affect the standardization landscape. On one hand the existing SDOs and fora have to look at their own structures and mechanisms. On the other hand we should consider necessary an overall look at the whole standardization landscape. This landscape has grown over the years, and a high level review from major industry players, who contribute the majority of standardization resources, would benefit the whole Telecoms industry.

Key needs are to reduce overlaps and complexity in the different standard bodies, focus according to agreed priorities, accelerate the standard work to meet internet time challenges, increase market orientation and pragmatism, synchronize different bodies based on agreed overall architecture and keep strong commitments to standard works. He reaffirmed support of the need for CTOs to more fully engage with ITU-T in the evolution of standards.

Mr. Marc Fossier, CTO, Orange presented his views on the international standardization landscape and the consequences for the industry of this fragmented global standards environment,

in particular potential overlap, competition among standard bodies. He also discussed some thoughts on how to improve this situation in a coordinated way across industry players.

He reviewed the important role that standards play to guarantee interoperability across operators and vendors, ensure fast development of innovation, ensure economy of scale and allow open provision of telecom services, through different operators operating in different countries.

He mentioned that standardization is essential and Orange is committed not only to implement standards but especially to participate to the development process, which requires more than 400 experts yearly. The many existing bodies to develop standards represent a financial difficulty for companies who are committed to standardization and thus there needs to be a more rational standards landscape. Increasing the involvement of CTOs of major telecoms standards actors could support this evolution.

He suggested a new classification of standards work and proposed a number of actions for the evolution of the new standards landscape, including:

- Foster coherence of standards activities
- Accelerate standardization work in order to cope with market evolution
- Redefine the role of each organisation and promote “complementarities” instead of competition
- Reduce overlap between organisations
- Keep strong commitment to international standards, taking into account all stakeholders needs
- Develop a overall standardisation architecture, to ensure better anticipation and consistency, for the benefit of all players

He concluded that increased involvement in ITU standards work of CTOs of major telecoms standards actors could support this evolution.

Mr. Yoshiaki Kushiki, Senior Fellow, Panasonic Co. spoke on Eco-Architecture and Eco-Literacy on ICT for a Sustainable Society.

He presented key data concerning climate change and the growth of GHG emissions in the ICT industry under the present architecture, networks and data systems. He mentioned the work of the ITU-T Focus Group on climate change. He made a number of suggestions to reduce emissions from ICTs and introduced the concept of eco-literacy, meaning that consumers also must be aware of the need to reduce emissions.

In his view, the explosive growth of digital information will exhaust electric power. We need to discuss the architectures including archive and deletion of data to manage the huge amounts of information stored in servers. Also we need to establish systems which cover users, ISPs, and operators to optimize the transmission of huge amounts of information.

He noted that the ITU-T is responsible for ICT standardization and is expected to expand its activities to promote Eco-Architecture to resolve Global Climate Change problems. ITU should investigate, e.g., the evaluation index such as carbon footprint of information traffic over network. He introduced the concept of eco-literacy, concerning end-users of data.

In his view, the scope of ITU-T should be expanded to enable ICT experts to collaborate with those of other technology fields to resolve Climate Change problems including: 1) Collaboration with other International SDOs such as ISO, IEC (e.g. Energy saving of air-conditioning system in data centre) and 2) Collaboration with corresponding Forums for each issue (e.g. Digital Entertainment Group for its CO2 emission data).

Mr. Keith Dickerson, Head of Global Standards, BT plc mentioned that Climate Change presents a huge challenge and opportunity for international community and leadership required by the ITU to deliver a positive impact on our world and opportunity for all.

The global ICT footprint is currently 2-2.5% of all energy consumption (equivalent to air travel) but it's growing at compound rate of 6% per year. This means that by 2020 GHG (Greenhouse Gas) emissions from ICT will have nearly doubled compared to today's levels.

He identified the actions that the international community/ITU can take to reduce the impacts of climate change through developing new ICT standards and to create an open innovation culture to stimulate new and exciting innovations that will make a positive impact on climate change. Proposals include setting targets for the reduction in GHG emissions resulting from the use of ICT equipment and services, through to ICT standards enabling the substitution of high carbon products and activities with low carbon alternatives, e.g. Homeworking, Telepresence, Audio conferencing. In this way, increasing GHG emissions from ICT will be more than offset by the reductions in GHG emissions that ICTs and ICT standards enable to be achieved in other sectors. Continued ITU leadership and international collaboration is vital as we are to create an innovation eco-system that will encourage new Climate Change solutions that will improve opportunities for all. ITU must take the lead and help all other SDOs to work together to exploit the power of ICT in reducing GAS emissions and so climate changes. The need of an open industry standard protocol for on-line interrogation of energy consumption of equipment was mentioned.

In closing the session, Minister Ntim noted that CTOs had expressed the desire to be more closely involved with ITU-T in the evolution of the standards landscape. ITU should take the lead in coordinating standardization work undertaken in various SDOs to promote climate change and enhance accessibility. It would be a good idea to move immediately to digital broadcasting from analog broadcasting as the latter is much more problematic in terms of GHG emissions.

4. Session 4: Global Standards Collaboration Roundtable

Session 4 of the GSS on Bridging the Standardization Gap was moderated by Mr. Gary Fishman, Chairman, ITU-T Telecommunication Standardization Advisory Group (TSAG).

The session brought together senior figures from a range of bodies engaged in bridging the standardization gap in order to share their experiences and views.

Mr. Alan Bryden, Secretary-General, International Organization for Standardization (ISO), had come directly from the ISO General Assembly which had marked World Standardization Day, on 14 October. He noted that convergence accentuated the need for collaboration between SDOs, for example, to consider ICTs in appliances and buildings. ISO sought to widen participation in its approval process, by raising awareness, by the use electronic working methods, by regional cooperation and by the use of twinning arrangements between members in developed and developing countries. It was seen as vital to ensure awareness of the importance of standardization at the political level.

Dr. Walter Weigel, Director-General, European Telecommunication Standards Institute (ETSI) recalled the success of the GSM standardization activity. Although formally a European body, the standards produced by ETSI were generally global in their use. ETSI had adopted a simplified approvals procedure. It had also created a portal for electronic work on standards to widen participation and to reduce the costs of participation for its members. The lack of manufacturers in developing countries was reflected in the lack of demand to participate in the work of ETSI.

Dr. Yuji Inoue, President and CEO, Telecommunication Technology Committee (TTC), Japan, explained that the work of his organization was primarily the adaptation of ITU-T Recommendations to the needs of the Japanese market. It collaborated with similar bodies, for example, in China and the Republic of Korea. TTC also participated in the Asia-Pacific

Telecommunity Standardization Program (ASTAP), which promotes and coordinates telecommunications standardization in the region. Japan had been very successful in progressing up the standardization ladder, for example, in taking chairmanships of ITU-T SGs, and with the ability to use standards for economic and social goals, for example, in implementing NGNs.

Dr. Bilel Jamoussi, Board of Governors, IEEE-Standards Association, represented 376,000 individual members in nearly all countries, responsible for more than 900 standards. There was formal collaboration with other SDOs, including IEC and the ITU. IEEE had a Standardization Education Committee and held seminars in a range of countries to promote standardization. A system of electronic voting on standards permitted the widest participation.

Ms. Leslie Daigle, CTO, Internet Society, explained that the work of the Internet Engineering Task Force (IETF) included the evolution of the architecture of the Internet, such as IPv4, IPv6 and HTTP. In addition to rotation of the location of its three plenary meetings held each year, it provided access by audio streaming and instant messaging. It worked with regional Network Operating Groups (NOGs) to tap local expertise and to support them with travel fellowships. The IETF focused on what people could do, to develop standards for new services.

Mr. Enno Liess, Vice-President, International Electrotechnical Commission (IEC), represented members in 153 countries with responsibility for 6,000 standards. It was working with a new organization, the African Electrotechnical Standardization Commission (AFSEC), to support development of standards, even though millions of people on the continent lacked electricity.

Dr. Reinhard Scholl, Deputy-Director, ITU-T, explained that bridging the standardization gap was part of the ITU's commitment to connecting the world. He described the almost overwhelming complexity of the SDO landscape, forcing companies to decide about where to commit their resources. Providing free access to standards had proved beneficial for all countries. Access from developing countries had also been increased by relocating meetings and by offering enhanced remote access and participation. A programme of regional fora over the last few months had proved successful. He believed that developing countries were becoming a driving force in innovation.

Mr. Akossi Akossi, Secretary-General, African Telecommunication Union (ATU), explained that his organization coordinated positions of the African nations for ITU activities. It was identifying areas that were not yet fully standardized, such as power line communications. Africa had to overcome serious problems of structural weakness in order to follow the examples of China and the Republic of Korea. He observed that increasingly operators in Africa were trans-national with standardization activities limited to their headquarters, with national subsidiaries left to follow guidance. This meant that national efforts to ascend the standardization ladder were likely to stall.

The Moderator noted the common themes in the presentations. He asked for ways in which participation from developing countries might be improved.

All panelists stressed that activities were in place to raise awareness and participation, though these required significant resources, with no silver bullet, and that further expansion of the work was necessary. There were, for example, education programmes for professors and students. Many operators were able simply to accept standards. By comparison the bulk of the work on new standards came from manufacturers which were weak or absent in many developing countries.

The Moderator suggested that the needs of developing countries were not well understood and asked where countries aspired to be. He suggested that a bridge had, to some extent, to be built from both sides towards a meeting point.

The capacity for active participation in standards was a factor in economic growth, a message that was increasingly being understood. It was an essential part of the ecosystem that allowed and encouraged innovation. Need to invest in science and technology. At present only about 0.4% of publications in science and technology came from individuals working in Africa. All these elements had to be addressed.

Work through regional bodies.

5. Session 5: Closing

In session 5, each of the moderators provided a brief summary of their session.

For session 2, Mr. Sardenberg indicated participants had offered many good ideas and different viewpoints on how to Bridge the Standardization Gap. There is a need to include research institutions in standards. Developing countries must be more involved in standards by any and all means possible, starting with development of the necessary human resources. Knowledge can play a key role to bridge the standards gap.

For session 3, Minister Ntim noted that there is a need to emphasize and increase the participation of Developing countries in standards bodies. Participation levels had been low in the past but were growing. With more support from ITU, the number would be enhanced. Capacity building is a critical need in developing countries to foster standards work. But this is a partnership exercise and developing countries must establish a platform to benefit from standards

Further, the standards landscape contains many SDOs and fora and need to be clarified to improve efficiency and to assist the industry. The ICT industry can play a key role in combating climate change and the work of the ITU-T Focus Group on climate change is encouraged. Accessibility to ICTs is an important objective and this perspective must be taken into account in all standards work

For session 4, Mr. Fishman summarized as follows:

- all the SDOs on panel have active programs to work with dcs and local entities
- bridging telecom standards gap is linked to advance in other sectors (need to build infrastructure)
- must pay attention to end-user applications
- building the bridge will work best when there is complementary action from both sides

The Report was then open for comments from the floor.

The GSS then **approved** the Report of Conclusions circulated before Session 5.

The Chairman commented that the GSS had been very successful. Some 500 participants had attended this inaugural Symposium. The conclusions in the Report were due to hard work of secretariat and Steering Committee, and a wide range of comments taken into account. The GSS Report of conclusions would be transmitted to WTSA for consideration in accordance with PP Res. 122 and would appear as an official WTSA (D-121) document in 6 languages.

The Secretary-General then closed the first-ever GSS.
