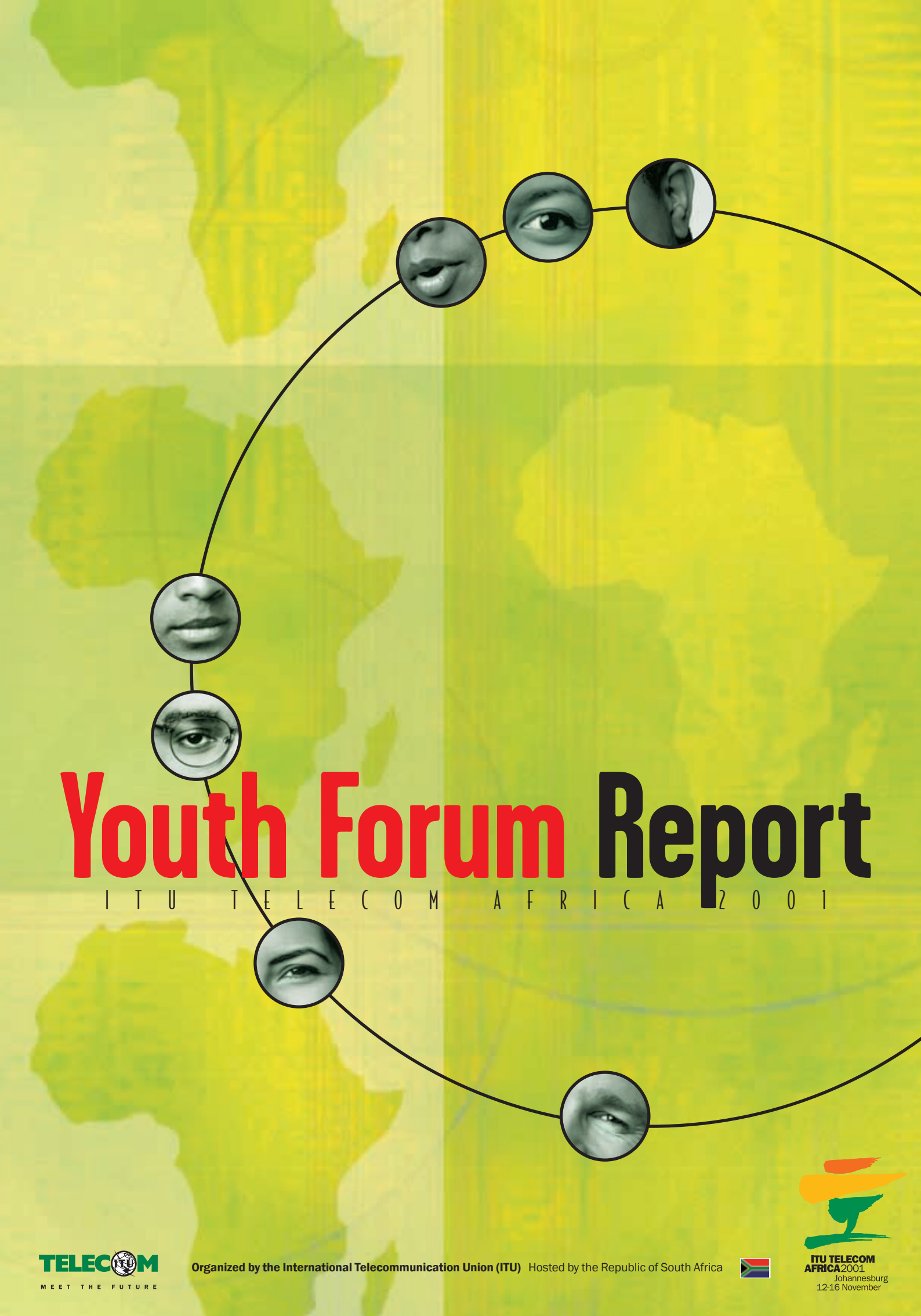


Youth Forum Report

ITU TELECOM AFRICA 2001

TELECOM MEET THE FUTURE

Organized by the International Telecommunication Union (ITU) Hosted by the Republic of South Africa

ITU TELECOM AFRICA 2001
Johannesburg
12-16 November

CONTENTS

Youth Forum Declaration
PAGE 4

Technology:
Threat or Opportunity?
PAGE 7

Youth Forum Update Sessions
PAGE 12

Policy & Regulation:
Information & Communications for All
PAGE 15

Financing:
Who Will Pay for My Telephone?
PAGE 21

The Youth Forum at AFRICA 2001 would not have been possible without the support of a number of sponsors, most important of whom was the State of Geneva.

A number of organizations, including the Development Bank of Southern Africa, Alcatel and Telecel, have made ongoing financial commitments to the AFRICA 2001 Youth Forum

Message from the ITU Secretary General

It is a great pleasure to bring you the Report from the ITU's first Youth Forum, which was staged last November, in conjunction with the ITU TELECOM AFRICA 2001 event.

The Forum brought together far more than the 85 young men and women who actually participated in Johannesburg, South Africa. In total, in fact, thousands of young African people were involved, via the Youth Forum process. This started with the competition procedure, continued through the selection of representatives, and culminated at the AFRICA 2001 event.

We are publishing this Youth Forum Report therefore to remind those who were there how valuable the sessions were, and to bring some of the energy and enthusiasm of the event to those who were not able to attend. It was a real privilege to see young people working together in a spirit of African cooperation, and I hope this spirit shines through the pages of this report.

The original intention of the Youth Forum had been to bring together the ICT leaders of tomorrow. And Judging by many of the interventions, questions, comments and responses in this report, it is my belief that the Youth Forum participants from AFRICA 2001 will indeed go on to become the continent's ICT leaders. I am pleased therefore to be able to announce that the ITU will also be staging Youth Forums at all its forthcoming ITU TELECOM events over the next two years, and in particular at its key event for the global info-communications community, ITU TELECOM WORLD 2003.

It would not be possible to stage the ITU's Youth Forums without the openhanded assistance of the ITU's Member States, or without the generous participation of the Youth Forum sponsors. On behalf of the ITU, therefore, I would like to thank them all for their help. I would also like to say a special thank you to the Government of the Republic of South Africa, which hosted the AFRICA 2001 event and the Youth Forum, and to President Thabo Mbeki, who hosted the Imbizo in Honour of the Youth at the Presidential Guest House in Pretoria at the end of the Youth Forum.

Yoshio Utsumi
Secretary-General
International Telecommunication Union (ITU)

The ITU Africa 2001

Meetings have been held, seminars have been hosted, communiqués have been issued, but it appears that the face of things in Africa remains the same, if not deteriorating. We believe it is high time to take the bull by the horns and exert the force that will take Africa from its current inertia and place it on the path of action and relevance.

Globalization is breaking down the walls that divide continents and nations, and if Africa does not rise to the opportunities held out by information and communication technologies (ICTs), the digital divide will only get wider. With this in mind, we raise our voice as the young people of Africa, as the link between today and tomorrow; one voice that calls for urgent action and not empty boasts and intimidating statistics.

This voice says...

... on education

Since education is undeniably the bedrock of any economy, we recommend that ICT education should be given the highest priority through the integration of ICTs into our school and university curricula, the establishment of high-quality and accessible ICT training centres, scholarships for ICT-related studies, intensive ICT literacy campaigns in rural areas, and synergy between educational institutions and the industry to generate relevant research and development efforts aimed at producing innovative ICT solutions.

Government- and business-funded communication centres should be established in under-developed areas. Training and development can be used in education to encourage the use of ICTs. An integral part of training is therefore to introduce the trainers to new technologies and raise awareness of how ICTs could enhance our lives.

We also commit ourselves to this same cause by educating our colleagues in order to create a generation of African young people with an appropriate attitude towards the continent and its development.

... on technology

As a valid member of the global community, Africa must endeavour to give greater attention to technology through youth-led skills initiatives. We will do this (with the support of our governments, ITU, the private sector and other concerned bodies) by transferring ICT knowledge to underserved communities. Innovative solutions that are specific to Africa should be encouraged and an incubation system that promotes emerging entrepreneurs should be set up.

Youth Forum Declaration

... on promoting peace and development

We believe that development will help change the face of things on our continent. Human resource development is not negotiable for any group of people, and this, we believe, must enjoy a high level of consideration. The brain drain can be reduced by promoting some form of brain circulation within the continent through regional cooperation. Our governments must invest in basic infrastructure to enable rural access so that we can bridge the digital divide that exists within the borders of our nations.

It is important that research be done prior to any implementation. We need to find out what the real needs of Africa are before we can adopt any technology; in other words, we must produce African solutions for African problems.

We commit ourselves to using ICTs as a tool to promote peace, friendship, democracy, justice and love throughout the African continent. And we call upon our leaders to do likewise.

... on investment, policy and regulation

An open environment that is conducive to investment would go a long way towards helping Africa's ICT sector. Liberalization and fair competition, tax breaks, low tariffs and other incentives would make for a higher level of investment in the African economy. We also believe that something must be done to ensure that regulatory bodies remain independent from external influences.

... on developing a regional network

We believe that the ITU Youth Forum should continue, given the multifaceted impact it has on the continent. The regional meetings (Africa 2001, Asia 2002 and Americas 2003) should culminate in the global meeting (World 2003) which will host the different youth groups from each region. The world conference in 2003 will be a good opportunity for the youth of Africa, Asia and the Americas to meet and chart paths for achieving a global impact.

We will set up the Africa Youth Initiative for ICT Development and will be young ITU ambassadors in our own countries. A website will be set up to serve as a basis for our work.

We therefore appeal to ITU to:

- *assist us with the network so that we can remain connected;*
- *encourage our respective governments to create national youth forums which will be used to promote ICTs among young people in our own countries;*
- *create a coordinating office within ITU to assist our Africa Youth Initiative.*

... and, in conclusion

We hope that we have left behind us footprints which can help relay a message of active involvement to tomorrow's youth and the youth of other regions. We know that the future belongs to us, and we will start to build it now. We are confident that our continent will be reborn, and will work to make the African Renaissance a shared reality.

With infocommunication technologies evolving at break-neck speed, one of Africa's biggest challenges is the struggle to stay abreast of the knowledge curve in order to ensure the continent takes full advantage of the most economical, most effective new solutions.

While ITU Indicators show encouraging advances in mobile penetration over the past two years, easy, affordable access to communications — and especially Internet connectivity — remains well beyond the reach of many millions of Africans. Widespread recognition of the crucial role communications play in development is strengthening government commitment to improving Africa's telecoms scorecard, but difficult choices still lie ahead in determining the most appropri-ate technologies for sustainable, socially beneficial services.

Technology: Threat or Opportunity?

Monday, 12 November, 2001

CONTRIBUTORS

CHAIRMAN/MODERATOR:

Mr Jan Mutai
Secretary General, African Telecommunication Union (ATU)

PANELISTS:

Prof. George ESHIWANI
President, Association of African Universities (AAU) (Ghana)

Mr Jean-Marie Blanchard
Marketing Director Africa, Alcatel (France)

Mr Nico Cras
Business Development Director, Siemens Atea (Belgium)

Ms Vineeta Shetty
Communication Officer (ITU-BDT)

Mr Willem P. Wenztel
Engineering Solutions Manager, Johannesburg Liaison Office
NEC Corporation (Republic of South Africa)

QUESTIONS POSED BY:

Youth Forum Fellows and panel members

INTERNET ACCESS

The ability to tap the vast resources of the World Wide Web is a crucial issue for young people, who increasingly prefer to source their information and entertainment online. With huge potential in areas like education and public health, finding ways to rapidly bridge the Digital Divide and get Africans online has become one of the century's most pressing challenges.

Q: What issues are hampering Africa's Internet take-up?

There's already been considerable progress, with the entire African continent now connected to the Internet, compared with just five countries ten years ago. But it's true that subscriber growth remains slow, and there are a number of reasons for this.

The most obvious is affordability — the cost of access is simply beyond the purses of most people. Unfortunately, the idea of unmetered charging has yet to take off, so most Africans pay not only their ISP charges, but hefty local access charges for the time they're connected, too. While some developing countries — Laos is one example — have chosen not to levy per-minute charges for data calls to ISPs so that users can surf the Net for as long as they want for a flat fee, many African countries still maintain prohibitive timed local access rates, so that moderate-volume users are paying as much as US$160 per month in some countries.

Another stumbling block is the high cost of personal computers. One suggestion is that Africa focus on developing low-cost access devices, such as pocket-sized e-mailers. These kinds of devices are already on the market and currently selling for around US$150 — still out of many people's range, of course, but considerably cheaper than then US$500-plus needed for a basic PC.

Aside from price issues there's the fundamental problem of computer literacy, particularly in rural areas where even basic alpha-numeric literacy may not be widespread. Perhaps the problem of getting access into such areas could be addressed by innovative deployment

of solutions like touch screen devices, whereby users could access services from a centrally-located public kiosk through screen "pictograms". With the huge success of pre-paid in the mobile sector, perhaps extending the prepaid model to Internet access could be another way to get more people online quickly.

Q: How can people without even access to basic facilities like health and water be expected to want to use the Internet?

This is a very interesting question and demonstrates the confusion in many people's minds about the Internet. Investment in Internet infrastructure is not in competition with investment in other priority services like health and education. The Internet is not an end in itself, it is a tool in the service of development, and is in fact a particularly effective tool with which to address critical core development issues like health and education. The Internet is actually far more useful — and essential — in Africa than in Europe or North America, because in these regions there are many other means of communication.

Q: Do you have a vision for the future of the Internet in Africa?

The starting point is this: the Right to Communicate is a fundamental human right, and is recognized as such by the United Nations. But let's take it a step further: everyone has the right to communicate from any place, at any time, regardless of whether they live in the middle of the desert or in a town, whether they're on the move, away from home, or at their work. They should be able to communicate using whichever device is easiest and most appropriate — a mobile phone, a PC, a television — and they should be able to do so in personalized way. One of the great strengths of the Internet is it's ability to handle a huge number of diverse, personalized applications targeted at very small groups. The power of the Internet does not lie in one all-encompassing "killer application", but in the opportunities it offers for the development of local content and highly-specific local applications.

"The Internet is far more useful – and essential – in Africa than in Europe or North America."

This personalization is also very important because it effectively transforms the whole economy from a supply-oriented model to a demand-oriented model. It's the user who decides what information they access, and where and when they access it. The imminent arrival of third generation mobile will represent a marriage between the two most powerful technologies of our time – mobile communications, and the Internet. When these two are combined, they will create enormous opportunities for business in Africa.

MOBILE SERVICES

Africa is currently enjoying an explosion in mobile uptake, with the number of subscribers continent-wide forecast to exceed 100 million by 2005. With third-generation (3G) networks soon to be launched in countries around the world, mobile handsets will become much more than a way for Africa to talk — they'll be a link to the power of the Internet, too.

Q: Third-generation mobile networks will shortly replace Africa's existing GSM system. What changes have been necessary from a technological point of view?

The great promise of third generation networks is that they are based on packet-switched IP technology, and so are not connection oriented. It's this "connectionless" state that makes 3G an "always on" technology and enables 3G networks to support flat rate Internet access over a mobile handset.

From a technological viewpoint, the nuts and bolts of operational issues like call handover is really a matter of standardardization. In order to have seamless handover you've first got to agree on interoperability standards, then translate these into systems capable of monitoring your location, signal strength and so on, and handling the complex mathematical calculations between base stations that ultimately determine which station will carry your call at any given moment.

EDUCATION

Lack of access to educational resources, especially in remote communities, has long been a factor hampering the development of Africa's enormous potential. Now, advanced telecommunications systems such as VSAT, satellite-based radio broadcasting and broadband Internet services can bring the classroom to even the most isolated villages.

Q: What is the role of Information and Communication Technologies (ICT) in education in Africa, particularly in relation to development?

There can be no doubt that the wealth or poverty of nations is closely linked to the quality of higher education, and that individuals with a greater repertoire of skills can look forward to lifetimes of greater economic fulfilment.

In terms of education, Africa faces a number of challenges. The first is demographic: the explosive growth in population being experienced by some countries is placing an enormous strain on already-overstretched resources. Another is gender-related, with women and girls still hugely under-represented in enrolment figures for higher education courses. Language issues also play a part, even in emerging ICT applications, because if English and French remain the dominant languages in schools and in the online world, millions of people will remain excluded from the learning process.

Access to the Internet has become critical, yet Africa remains a long way behind. At present, global Internet penetration stands at around 26%. But although Africa accounts for close to 10% of the global population, it has less than 0.5% of the world's Internet connections.

Institutions need to be much more active in tapping the potential of ICTs by organizing themselves to support online communications. There's certainly no doubting student interest in these technologies — the University of Kenya's 10-computer cybercafé has already grown to 70 machines, and still can't keep up with the demand.

PRICING

Inefficient, outmoded equipment and a heavy reliance on the telecommunication sector as a reliable source of hard currency have conspired to keep Africa's phone charges beyond the reach of much of the local population. Now, as competitive pressures begin to make themselves felt in a growing number of markets, downwards pressure on tariffs should go a long way towards extending access.

Q: Why are charges for international telephones in Africa are higher than other countries?

Lack of competition is the main reason. In most of the world, introduction of competition and privatization of the national operator have exerted a strong downwards pressure on tariffs.

Q: Is there any regulatory body that controls prices?

Each country generally does have some sort of price-level agreement in their telecommunications regulations, but for the moment there are no agreed regional or global ground-rules for determining the average basic cost of a local call. However, two-thirds of African countries now have telecommunication regulators, and one of their key tasks is regulating prices.

UNIVERSAL ACCESS

In developing countries around the world, resource sharing in the form of community facilities like village-based multi-purpose telecentres and cybercafés is proving one of the most effective strategies for rapidly extending access to those most in need.

Q: How can the African population and local entrepreneurs get access to the Internet in order to share information and knowledge with the rest of the world?

Community access is not a new concept in the developing world, and many community telecentres are already working extremely well, providing affordable local access to basic telephone services. In most developing countries, then, all the basic ingredients are already there to create thousands of centres offering Internet access.

In many areas, telecentre operators now have the option of adding Internet service to their portfolio of existing services, with the incentive of strong local demand and improved profitability for their businesses. But attracting a strong core of users to these public access Internet centres will mean a critical mass of information that's useful to local people. At the moment we're far from achieving this level of content — we're merely duplicating the Internet as it is used in developed countries.

INFRASTRUCTURE

Africa's poor fixed infrastructure, with its ageing equipment and chronic lack of lines, continues to hamper effective communications throughout the region. Now, thanks to technological advances, new technologies are arriving that promise to bridge that gap and get people and businesses connected quickly, and affordably.

Q: What's the most effective way of improving Africa's communications infrastructure?

Well, first, it's imperative that we work to develop knowledge in appropriate technologies, particularly wireless technologies like GSM and 3G, which will serve as the stepping stone to the wireless Internet. As a latecomer to the ICT market, Africa has the opportunity to leap-frog more established economies to the north by deploying the very latest technical innovations without the need to integrate legacy systems. In the future, everything that can go wireless, will go wireless — and this is especially true in Africa, where wireless is particularly well-suited to local environmental and geographic conditions.

"All the basic ingredients are already there to create thousands of centres offering Internet access"

A second key knowledge area is IP routing and convergence — which makes it possible to connect to and send traffic over the Internet. A third is backbone networks and optical systems, which are needed to address the problem of sluggish connection speeds experienced throughout most of the continent today. But equally crucial are the applications. It makes little sense to develop infrastructure if there are no local applications, local content, Web pages in local languages. Without this local content, we'll never generate the traffic levels needed.

In Africa right now, there are tremendous opportunities for entrepreneurs in the field of ICTs. There are already 500 ISPs active across the continent, all entrepreneurial companies who saw the business opportunities communications technologies offer. Africa does not need a specific, "made-for-Africa" solution, but needs to use generic technologies like wireless and the Internet to build its own solutions, adapting these technologies to the African context and generating a business plan for Africa that works, and is sustainable.

It has sometimes been said that shipping second-hand ICT equipment to Africa is turning the continent into a technology dumping ground. But this is to miss a golden opportunity to take advantage of systems based on very advanced technologies. African companies should be capitalizing on the availability of such equipment and on the willingness of vendors to assist through knowledge transfer. Vendors have a vested interest in helping stimulate economic growth in Africa, in helping develop local business that will in turn generate prosperity and employment and a growing market for their products. While it's true that many dot-coms quickly became dot-bombs, there are still enormous opportunities out there for companies with sound business plans.

Q: Should technology be imported to Africa and be made to fit African needs, or should Africa invent its own technology?

Technology is born out of specific needs in specific countries. That's why different technologies emerge in the Americas, Europe and Asia. Many of these technologies from other parts of the world are being deployed in Africa, and must be adapted and modified at great expense. It's time for Africa to start looking at its own unique problems and to develop solutions that are tailor-made for those problems. That effort will not only help deliver better communications solutions today, but will give rise to an indigenous industry that will bring long-term benefits for all Africans and their children.

There's no doubt that marketing these solutions will initially be difficult. Right now in Southern Africa, products are being produced locally which are not selling because people would rather have things from America or from Europe. We need to focus hard on building local R&D and manufacturing capacity, following examples like Japan, a country which has built such a strong name for itself in technology that it has become virtually synonymous with the latest in high-tech. Just 50 years ago, however, things were very different. Starting from a very low base in the early post-war period, Japan set about learning from the countries around it and adapting available technologies into innovative products which also had the advantage of being inexpensive.

It's true that at the moment "Made in the USA" or "Made in the UK" is considered better than "Made in Botswana". But the Japanese showed that you can take technology from wherever it was first developed and make it your own. So let's learn from others, and use that knowledge to invent something new.

Generating sufficient capacity to build our own technology in Africa basically boils down to education. Africa needs to look at hard at its education systems and the quality of education delivered through those systems, to ensure young Africans like yourselves are equipped to perform R&D at a local level and are much less dependent on external sources.

Finally, it's very important that governments and government departments work together to bridge Africa's Digital Divide through actions like South Africa's e-Africa initiative, which is a multi-disciplinary approach to African problems focused on using technology to meet core objectives in key areas like health, education, development and market access.

Youth Forum

With the participants coming from such a diverse range of backgrounds, countries and cultures, it was felt that the experience of the Youth Forum could be greatly enhanced by providing Update Sessions during the event, and that it would be both useful and appropriate if the Youth Forum Sponsors were to provide the content for these sessions.

As a result, over the four days from Monday 12 to Thursday 15 November 2001, four lunchtime

Monday, 12 November 2001

3rd Generation Mobile (3G)

This session – presented by Youth Forum sponsor Siemens – focused on unveiling the full potential of 3G networks, as well as demonstrating the implementation challenges most commonly encountered in developing markets.

The presentations and demonstrations showed how 3G mobile networks would usher in a true multimedia experience to the mobile environment, by converging IP (Internet Protocol) based core networks, broadband access, and mobile telephony. There were interesting discussions concerning which 3G products and services consumers might prefer, how to make the best use of 2G experience in building 3G networks, finding the real value of 3G technology for developing countries, which tariff and billing models are the most appropriate, and how to finance network build-out.

The agenda was as follows:

12.30	**Introduction of Siemens (Video Presentation)**
12.35	**Welcome speech by Bob Van der Linden, Vice-President Siemens Atea**
12.50-13.40	**Lunch**
13.40-13.15	**From GSM to 3rd Generation Networks: an illustrated evolution**
13.15-14.30	**Debate with participants**

Tuesday, 13 November 2001

Rural Access

This session – presented by Youth Forum sponsor Alcatel – provided a detailed presentation of the available rural access alternatives and comparisons of them from technical and economical points-of-view. It also gave an opportunity for discussion of the main issues involved in the selection of the most appropriate solutions for a specific rural situation.

The presentations highlighted the geographical, demographical and economical diversity of Africa, but showed that there were a wide variety of available narrowband and broadband rural access alternatives available, from wire-line to wireless, and from fixed to mobile.

The agenda was as follows:

12.30	**Welcome speech by Mr Gérard Dega, President of Alcatel EMAI**
12.40-13.30	**Lunch**
13:30 – 13:45	**Presentation of a success story in Saint Louis, Senegal, where Alcatel worked with students on building an Internet platform.**
13.45-14.30	**Debate with participants**

SIEMENS

ALCATEL
ARCHITECTS OF AN INTERNET WORLD

Update Sessions

Update Sessions were held at the Gallagher Estate restaurant, and these sessions proved to be not only popular with the Youth Forum participants but also useful and informative, leading to lively debate and a better understanding of some of the key issues and technologies in the field of telecommunications.

Wednesday, 14 November 2001

Applications for Rural Communities

This session – presented by Youth Forum sponsor WorldSpace – provided an opportunity for participants to obtain first-hand information about several attractive applications for rural communities, supported by IP-enabled technologies and the Internet. There were also interesting discussions concerning some of the common challenges experienced in implementing rural communications projects.

Discussions centred on the opportunities telecommunications offer for improving the quality of life in rural communities and narrowing the differences in the quality of life between rural and metropolitan areas.

The agenda was as follows:

12.30	**Introduction of WorldSpace (Video presentation)**
12:35	**Welcome speech by Mr Noah Samara, CEO, WorldSpace**
12.40-13.30	**Lunch**
13:30–13:45	**WorldSpace satellite broadcasting for development. Concrete projects for Africa.**
13.45-14.30	**Debate with participants**

Thursday, 15 November 2001

:

Satellites

This session – presented by Youth Forum sponsor INTELSAT – provided an overview of the communication potential of modern satellite systems as well as suggestions for their efficient use in an African environment.

There were interesting discussions concerning the role of satellites in telecommunications, as an irreplaceable complement to worldwide communications, especially for areas which are difficult to reach, scarcely populated, or both – particularly in the light of the failure of LEO satellite systems to fulfill the expectations of investors as well as of potential users.

The agenda was as follows:

12:30	**Introduction by INTELSAT (Video presentation)**
12:35-12:40	**Welcome speech by Mr Conny Kullman, CEO, INTELSAT**
12.40-13.30	**Lunch**
13:30–13:45	**INTELSAT connects Africa to the World**
13.45-14.30	**Debate with participants**

The Right to Communicate states that all people should be within easy reach of the benefits of telecommunications. While agencies like ITU are working hard to extend these benefits to disadvantaged communities around the world, globalization and the rapid evolution of technologies and services are combining to create new challenges. In an increasingly information-driven society, policy and regulation have a vital role to play in defining new rules for a new Information Age. For Africa, establishing effective policies that facilitate universal access to ICTs remains an urgent priority, not just for the economic prosperity of the continent, but for its future social and cultural development.

Policy & Regulation: Information & Communications for All

Tuesday, 13 November, 2001

CONTRIBUTORS

CHAIRMAN/MODERATOR:

Mr Dan KIERNAN
Director, Regulatory Affairs, Alcatel (France)

PANELISTS:

Mr Megat Ishak MAAMUNOR RASHI
Regulatory Executive, Regulatory Division, Malaysian Communications and Multimedia Commission (Malaysia)

Mr Daniel ESPITIA
Chief Executive Officer, Gyroscop (South Africa)

Ms Marcia WILSON
Senior Lecturer, University of South Africa, Pretoria (South Africa)

Ms Vineeta Shetty
Communication Officer (ITU-BDT)

QUESTIONS POSED BY:

Youth Forum Fellows and panel members

SECTOR REFORM

Throughout the region, the relaxation of restrictions and gradual introduction of competition in a range of market segments is giving rise to a host of new African operators and service providers. With access to ICTs acknowledged as a key development priority, governments and regulators need to create the right conditions for growth of these young companies, while at the same time ensuring consumer interests are protected.

Q: How can we be sure that social obligations are not side-stepped in the rush to liberalize?

This is a very real concern, and it's essential that we remember to emphasize the need to extend access to basic services, rather than focusing solely on introducing advanced services or increasing bandwidth in large urban centres.

Providing access to underserved areas and groups within a community is achievable through clearly-defined universal service obligations (USOs) designed to ensure both individual access and collective access through pay-phones and village telecentres. The desired result is a society where people have easy access, regardless of who or where they are, and it is imperative that all governments take responsibility for social equity by directly and proactively addressing USO issues.

South Africa is an interesting example. In 1991 there were just two million fixed and mobile lines. Ten years later, in 2001, that figure had risen to thirteen million — five million fixed, and eight million mobile. Much of the credit can go to the government, which made a concerted effort through legislation to implement universal access. This process is ongoing — indeed, there is an amendment passing through South Africa's parliament right now that incorporates some very innovative, unique regulations designed to further improve access and stimulate market growth.

As regards regulatory models, it's unlikely the European model can be made to work in the African context. Our circumstances are different, our needs are different,

our level of socio-economic development is different and our political climate is different, so we really need to develop our own African regulatory solution. We should be looking at a model based around an association of regulators, rather than the kind of supranational regulatory approach favoured by the European Union, because even within Africa, we find very different levels of development, resulting in different capacities, needs and priorities.

Q: What's ITU's role in promoting restructuring of the telecoms sector?

It's a good question, because there's a wide misperception that ITU puts pressure on governments to restructure. In fact, ITU does not ask countries to restructure, and believes there are many potentially successful models for telecoms service delivery. What we do do is help cushion the shock of restructuring, helping protect countries from adverse effects of sectoral upheaval through the provision of expertise and resources across a wide range of areas. It is not the role of the ITU to promote privatization or liberalization, but instead to provide information on different strategies and to serve as a repository of information on financing options, human resources development and policy and regulation.

THE ROLE OF THE REGULATOR

The birth of competition has been accompanied by the birth of a new kind of watchdog — the telecommunications regulator. Charged with overseeing the smooth transition to a liberalized environment and the proper functioning of a complex, highly idiosyncratic market, the regulator's task is a complex balancing act embracing a wide range of skills, from engineering expertise to accounting acumen.

Q: Broadly speaking, what are the functions of a telecommunications regulator?

One of the most important functions of a regulator is to ensure consumers are looked after, particularly those living in low-income or isolated areas. That means ensuring both the incumbent and the new operators serve those areas, so that the people living there reap the benefits of competition. The regulator also acts as a market referee, creating a level playing field so that no player is unfairly advantaged or disadvantaged. In addition, the regulator is the guardian and manager of scarce resources like radio frequency spectrum, fixed and mobile numbers and toll free numbers, ensuring they are allocated fairly. The regulator also oversees the market to ensure, for example, that there is no dumping of untested or outmoded technology. Regulators also sometimes have a role in defining future priorities and formulating policies to achieve these goals, in collaboration with government.

Q: Who are the people who make up the regulatory authority, and how can they help extend access to the poor in developing countries?

In theory, the ideal regulator should be very inter-disciplinary, meaning it should include accountants, economists, political representatives, consumer advocates and engineers. If a regulatory body can successfully integrate all these functions under one roof, it will develop much more holistic policy frameworks that will ultimately be more effective.

To promote competition and ensure increased access to poorer communities, the regulator needs to have well defined powers in areas like tariffs and market structure, and be prepared to use those powers proactively.

Q: What about the potential problem of over-regulation? Wouldn't this slow down development of telecommunications, and potentially push operators out of the market?

Indeed, it's extremely difficult to master the balance between too much and too little regulation, and it's a perennial problem all regulators face. The accepted wisdom at present is that less regulation is gradually needed as the market matures and rival operators get used to the dynamics of competition.

Q: In Africa, most regulators are very young, and often privatization is not yet fully implemented. Doesn't this create inevitable conflicts of interest between para-statal bodies, and is there a body such as the ITU which can intervene when there is a conflict?

You say African regulators are young, but most European regulators were created in 1998, and we are now only in 2001, so we are all very young. Basically, resolving these problems is a national issue, and depends on how a country is structured in terms of corporate governance. If there is conflict of interest, there might be another body within the government or a special agency which can look

into such issues. In Malaysia, for example, there is a body called the anti-corruption agency, which is a separate watchdog overseeing all the government agencies.

TARIFFS

The price of calls is a delicate issue in most parts of the world, but nowhere more so than in Africa, where millions of people live on or below the poverty line. Getting the cost of access down to a level where ordinary people can readily make a call or surf the Web will be a critical element of plans to bridge Africa's Digital Divide.

Q: In some African countries, tariffs are still very high and governments seem to view telecommunications as a luxury, so we are taxed for making a call. At what point would ITU intervene in such a situation?

ITU would not intervene directly, but with a membership comprising just about all the world's governments, we hold regular international meetings where members from around the world can get together to discuss issues such as regulatory best practice, privatization and liberalization. Through these meetings, as well as a through range of other communications strategies, we work to actively promote the benefits of liberalization and independent regulation as a means of stimulating the market and creating increased demand for service. We try to make governments understand that market deregulation is in the interests of incumbent operators as much as new competitors, because it generates increased revenues and creates a bigger pie for everyone to share in.

It's important to recognize that while resolving the problem of high tariffs might sound relatively easy, there are some complex issues involved. For example, in many countries in developing regions like Africa, income generated by the national operator can represent one of the country's major sources of earnings. That means the telecoms sector is used to finance development in other crucial areas like health and education. So the challenge is to lower the price to consumers while retaining enough income to support and maintain other important areas.

Q: It seems that when national companies are privatized, tariffs very often increase. Does this imply that privatization is not a good solution for bridging the Digital Divide?

It's true that there has to be a balance when it comes to privatization and competition, which is why we sometimes speak of "managed liberalization". This means instead of a competitive "Big Bang", competition is introduced slowly, so you get the benefits of the competitive pressures that help bring down tariffs while ensuring you don't blow the market apart. It's certainly a difficult tightrope for governments, who are faced with the need to use telecoms income to fund basic services while coming under enormous pressure from organizations like the IMF and the WTO to restructure and open their markets. Governments need to realise that they have a very powerful tool at their disposal: the competitive operator's licence. There are many companies out there looking for investment opportunities in new markets, and Africa can capitalize on this by building price and cost elements into competitive licence provisions. To date, most developing countries have yet to effectively flex that muscle.

One of the reasons tariffs increase when privatization is introduced is because of structural reform and tariff rebalancing. Rebalancing tries to redress past inefficiencies, whereby the use of cross subsidies from one businessline — say, international calls — to another — say, local calls — helped shore-up the market by keeping prices in one area artificially low at the expense of another area, where they were artificially high. While the rationale may have been to keep prices as low as possible for the majority of ordinary people, cross-subsidy encourages inefficiency and makes it ultimately impossible to determine the actual cost of providing a service.

Best practice dictates that all operators should now be moving to cost-based pricing, which means tariffs that more accurately reflect the cost of providing the service. For example, while people generally think that the further your call travels, the more it costs, newer technologies mean this is not strictly true. On the other hand, the local access network is very expensive to build and to maintain. Rebalancing has, admittedly, led to tariff increases in some areas, and we do clearly need to work hard to address issues of affordability.

THE ROLE OF THE REGULATOR

Market liberalization brings with it complex issues related to universal service, and regulators are being called upon to develop new USO models that disadvantage neither new or nor incumbent operators, while at the same time ensuring service levels to out-of-the-way areas are maintained and strengthened.

Q: There seem to be many contradictions inherent in issues of pricing, affordability, universal service, universal access, competition and privatization. What is South Africa doing, especially in the context of the establishment of a second national operator?
The new amendment before the South African parliament is looking at the basics of competition, and acknowledges the need to address issues of price, affordability and access. Introducing a second operator should improve access in terms of creating more infrastructure, but we've also introduced other measures such as a universal service fund, which will use obligatory contributions from operators to fund service to communities where such provision would not necessarily be cost-effective, in terms of return on investment

Q: How will South Africa ensure operators adhere to their universal service obligations?
It's built into the legislation; operators will have to pay into the universal service fund. At the same time, through initiatives like our recent call for education partnerships, we're providing very cheap Internet access for schools and focusing on getting youth online. That way, even if people can't afford access, their children can get access at school.

CAPACITY BUILDING

With increased demand for trained telecoms professionals as markets liberalize and competition takes off, Africa needs to cultivate a pool of highly skilled staff who can serve the future needs of government, regulatory agencies and a fast-growing pool of local operators.

Q: If you want to study telecommunications in Africa there's very little choice in terms of schools. How can we get a scholarship, and where can we find a school?
A limited amount of training is available in-house through organizations who already employ telecoms professionals, and the ITU also runs a number of distance learning courses. One new initiative is called the Internet Training Centres initiative, and is a partnership project between ITU and the US equipment manufacturer, Cisco Systems. Under this scheme, around 50 Training Centres will be established in developing countries around the world, with a particular emphasis on the Least Developed Countries. The first three Centres in Africa are located at the Ecole Supérieure Multilaterale des Télécommunications in Senegal, the Ecole Supérieure des Télécommunications in Tunisia and the Kigali Institute of Science, Technology and Management, Rwanda, and we are now setting up Centres at the Universidade Jean Piaget, Cape Verde, the instituto Nacional de Telecomunicações in Angola, the Dar es Salaam Institute of Technology, Tanzania, and the Lilongwe Technical College, Malawi.

"We're providing very cheap Internet access for schools and focusing on getting youth online"

REGULATORY ENVIRONMENT

Transparency and fairness in the decision-making process are fundamental to a regulator's credibility with operators, and with the broader community.

Q: Do we have transparent regulation in Africa?
Many African regulatory bodies currently lack transparency, sometimes carrying out shoddy decisions that seem to be based merely on one person's opinion or judgement. This lack of openness can often have disastrous results in terms of scaring off potential investors.

It's worth adding, too, that in Europe operators' ability to launch 3G mobile networks on schedule has been put in grave jeopardy by regulatory decisions which drained financial resources by setting extremely high licence prices. This underlines just how important wise and effective regulation is.

Q: Would you say communications are well regulated in Africa?
Yes, they are generally well regulated, but it's true that to get competitive pricing you need to have competition in the market, and it's also true that some regulators lack accountability. When setting up a regulator, governments need to make sure there is some kind of in-built appeals process, so that if a party feels discriminated against, there is recourse to another arbiter.

GOVERNMENT AND THE REGULATOR

The relationship between the Ministry and the regulator is complex, with the former accountable to the market and the latter accountable to parliament and the democratic process. The principle of good governance also remains a pressing one for Africa, which continues to suffer from an image of entrenched corruption that can deter potential investors.

Q: What's the actual relationship between government and the regulator?
Ideally, there is a clear separation between the regulator and the Ministry, with the Ministry being responsible for policy development, taking into account the national

objectives of the government, and the regulator responsible for ensuring the operators abide by these policies. The regulator has to be powerful and independent, but also has to act in line with the government policy of the day because ultimately the government represents the voters, and is serving the interests of the people.

Q: Doesn't the credibility and effectiveness of the regulator basically come down to more fundamental issues of good governance?

The issue of good governance is certainly crucial, and it's important to differentiate here between a lack of good governance and merely a lack of good skills, which is another problem regulators face. Sometimes things aren't handled as well as they might be, not because of corruption, but because of a lack of capacity and a lack of understanding of the processes. Right now in Africa there is an investigation into the possibility of creating a good governance practice institute that would provide training in areas like mediation and best practice management.

Q: What is the real level of independence of regulatory authorities, because it would often seem they are not as independent as you like to say. Aren't you just telling us they are independent because that's what you want us to hear?

When it comes to independent regulators, it's true that even though we all talk of regulatory independence the majority of telecommunication regulators in Africa today are not completely independent. Of course the problem is the word "independent"; you always have to be independent with regard to something else. Indeed, this problem is not just confined to Africa — in some sense, there is no totally independent regulator anywhere in the world, because all are subject to pressure from lobby groups and so on.

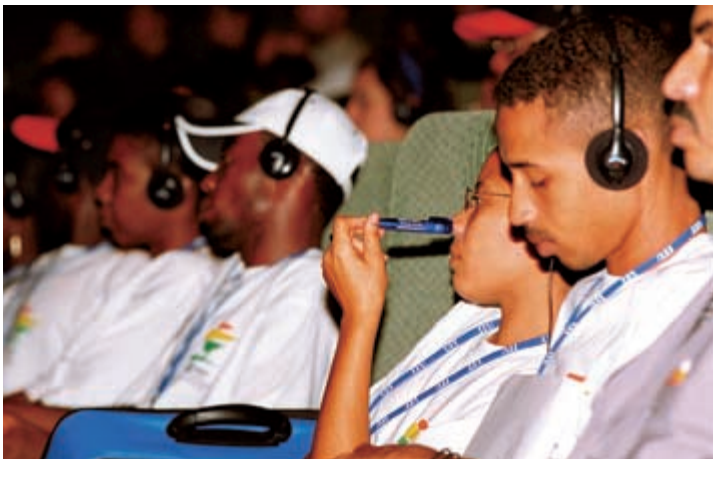
On the whole, the best built-in control in this area is transparency. If decisions are publicized, and if there has been a transparent process by which those decisions have been made, it becomes very difficult for a politician to manipulate the situation to his or her advantage.

Q: On the issue of independence of our regulators in Africa, is there a political problem here?

Yes, there's no doubt that there's a problem with corruption in Africa, and that an operator prepared to spend enough in the right area could well find itself at an advantage over its competitors. It all comes back to transparency. But ultimately what's most important is not necessarily independent regulation, whatever that really is, but effective regulation. Is the regulator achieving its objectives, meeting its targets?

Q: So what constitutes an effective regulator?

The major role of the regulator should be to protect the consumer. It should carry out price regulation, regulation of interconnection fees and monitoring of quality of service. Quality of service is an area that's been neglected, and this needs to be addressed so that people aren't paying line rental for networks that are largely unavailable, or for large numbers of dropped calls on mobile networks.



The provision of telecommunications services is highly capital-intensive, yet over the past two years the sharp downturn in world financial markets has led to a souring of investor confidence in technology companies. With equipment manufacturers amongst the hardest hit, operators are finding private capital, such as vendor loans to finance infrastructure build-out, is becoming increasingly scarce. While there's still funding to be had, today's investors are seeking enterprises that are able to demonstrate sound business plans and clearly achievable profit margins.

Financing: Who Will Pay for My Telephone?

Wednesday, 14 November, 2001

CONTRIBUTORS

CHAIRMAN/MODERATOR:

Ms Walda ROSEMAN
CEO, CompassRose (United States)

PANELISTS:

Mr Jay NAIDOO
Chairman of the Board, Development Bank of Southern Africa (South Africa)

Mr Olof LUNDBERG
Chairman & Chief Executive Officer, Globalstar (U.S.A.)

Mr Mesfin AYENEW
Chief Operating Officer of Afristar, WorldSpace (U.S.A)

Dr Ini J. URUA
Principal Industrial Engineer, African Development Bank (AFDB)

Mr Pape TOURE
Head Financing Strategies Unit (ITU-BDT)

QUESTIONS POSED BY:

Youth Forum Fellows and panel members

FINANCING

Once the exclusive domain of government, the high cost of building and running increasingly complex networks has led to the emergence of new public-private financing strategies that, if managed effectively, can yield fruitful results for both parties, as well as for a nation's telecommunications users.

Q: In a nutshell, what are the financing issues facing Africa and other developing countries today?
Let's look at this from three distinct clusters of issues. The first is investment. How can companies in Africa attract investors and attract capital, attract partners? The second is regulation, particularly its economic aspect. Are there new business approaches that need to be considered for your country and for this continent? The third is entrepreneurship. How can people start a telecoms business, and how do they get financing?

Q: What exactly is a development bank, and how does it differ from other banks?
Well, to give one example, the Southern Africa Development Bank is a government-owned bank that basically supports the financing of infrastructure — anything from roads, water and electricity to bridges and municipal projects. Infrastructure that has real potential to improve the quality of life of people. The Bank does not get money from the South African government, it has to raise its own money, and it doesn't just focus on South Africa — indeed, around a third of our total spend is outside South Africa. What's more, for every rand spent by the Bank, the private sector is obliged to contribute close to five rand, so overall the bank is responsible for more than 12 billion rand worth of infrastructure development throughout the region annually.

Q: If development banks are one mechanism for making a difference in Africa, what else needs to be done?
Africa certainly needs more active institutions like development banks, rather than more people drafting

more policies that may never get put into practice in any meaningful way.

But in addition, we need to get rid of our dictators. You can't develop anything if you don't have democracy. You can't have economic development without freedom, and the pre-requisite for building any economy is democracy.

Organization is also important. People have very little access to capital, but if you unite and organize people you can combine that power and negotiate better deals. In South Africa, the biggest obstacle to black entrepreneurs growing successful businesses is the fact that white institutions still control much of the financing. There are very few people in control of economic power who will be prepared to help black entrepreneurs in this country.

Q: Is there one straightforward solution that could help the whole of Africa gain access to the infrastructure it needs?

It's important to remember that Infrastructure is essential because of the services that depend on it, so while we do need to focus on bridging the Digital Divide through equipment, we also need to focus on promoting access. Governments alone can't do this, so we've had to develop new financing strategies that define relationships between consumers, access providers, service providers, investors, the state and international partners. Such strategies are designed to create the best possible partnership conditions and to minimize as much as possible the risks related to investment. The legal environment is a very important part of this, and we need to call on the youth of the continent to do their utmost to promote democracy and a legal framework without which development will be impossible.

Markets are extremely complex, and work at many levels — global, regional and national. The situation and experience of all African countries is not the same, so policies do need to be tailored to meet the conditions, rather than just developed as a blanket regional approach. Over the last year or so, investors been put off the telecoms sector by the history of the dot-coms. They began very favourably, often led by youngsters with loads of energy and enthusiasm. We all know what happened, but it's also important to realize that every time a company closes its doors, another opens them. The business environment is very robust, there's always someone else out there with a better idea or a new approach.

Q: How is South Africa approaching the problem of bridging the Digital Divide?

In South Africa, we took a decision to deliver reconstruction and development. But to do it in a way that is commercial, because we're running a country and you have to make sure that country works. In the area of telecommunications we said we want to put a phone line in every village, school, hospital and post office. That means putting in three million new lines, which is going to cost US$ 50 billion. The government was bankrupt, so we couldn't borrow money. So we took the decision to sell 30% of the national operator. We got US$ 1.25 billion, and we put US$ 1 billion of that immediately into infrastructure. In exchange for this investment, for world-leading technology and expertise, we gave our investors a five-year exclusivity deal. It's not a decision that's right for every country, but in South Africa we made that decision because delivering a telephone line to every village and every corner of the country was our number one priority. At the end of that phone line you can put a phone, a fax, or a computer connected to the Internet. Giving people access is crucial. The second phase of our program, which is beginning now, is to drive down the cost of calls.

Q: What's ITU's role in developing infrastructure in regions like Africa?

ITU helps both with the implementation of new projects and with the development of business plans, accounting procedures and so on. We have a fund called the TELECOM Surplus Fund, which takes the surplus money from our TELECOM shows and uses it as seed money for a range of development projects, particularly focusing on the Least Developed Countries. We generally look for projects based on a clear, achievable plan, and which can be self-sustaining after the initial investment, to maximize the long-term benefit to the community.

Q: Everyone's talking about the Digital Divide. What can really be done at a practical level to solve this problem?

At the moment we're all focused on bridging the Digital Divide between Africa and the rest of the world, when we probably should be looking first at bridging the divide between cities and rural areas, and then between the countries of Africa, between Botswana and South Africa, Botswana and Namibia, South Africa and Ghana, for example. Then, after bridging those, we could talk about bridging the digital divide between Africa and the US, Africa and Europe. That's the way we should be going.

Q: But isn't there an incompatibility between connecting Africa and making a profit?

The idea of universal service basically encompasses three elements. The first is availability: the state wants telecoms infrastructure to be everywhere. The second is access: the state wants the various population segments — young, old, fit, ill, disabled etc — to have fair and equal access to communications. The third is affordability. For rural areas, it seems inevitable that some form of subsidy is going to have to come into play, because providing access simply isn't economical. Even in the US, certain areas are still subsidized, so perhaps we shouldn't get too hung up on this. Additionally, getting appropriate access to people as quickly as possible should be a priority. By this I mean that it's all very well to provide an Internet connection to a village where most people can't read or write, but a simple telephone may well be more useful, at least to start with.

FINANCING

Because of its low level of technological development, opportunities abound for entrepreneurs looking to find a niche in the African market.

Q: If you had your own money to invest, where would you put that money, knowing that you could either lose it, get it back, or earn money on it?

It's a difficult issue to answer. Governments should be looking hard at their taxing policies, because tax regulation can have profound affects on the appeal of a market for investors, as well as the viability of the market for new operators and service providers.

There are many appealing areas in Africa — e-commerce systems, electronics manufacture, education, software development, telemedicine. But what's crucial is that before you invest in anything the viability of the project must be assessed, to ensure it's a sustainable undertaking with a promising future.

ACCESS CHARGES

For many Africans, the cost of communications remains a major hurdle, with the most economically disadvantaged communities also the most marginalized when it comes to access to even basic technologies.

Q: As a user of telecoms services, my biggest problem is this: who will pay my phone bill. Should phone bills be subsidized to provide wider access to basic services?

On the issue of subsidies, it's worth noting that it's often very dangerous when things are free, because there's a loss of discipline. Nothing is really free. It costs money to provide a telephone service, and while this doesn't mean costs to the end user have to be high, there's an issue of cost recovery if we're to further extend services to new areas and new subscribers. So let's not start from the premise of finding someone to pay for you to enjoy these services, but let's instead try to develop a system that allows us to provide affordable services.

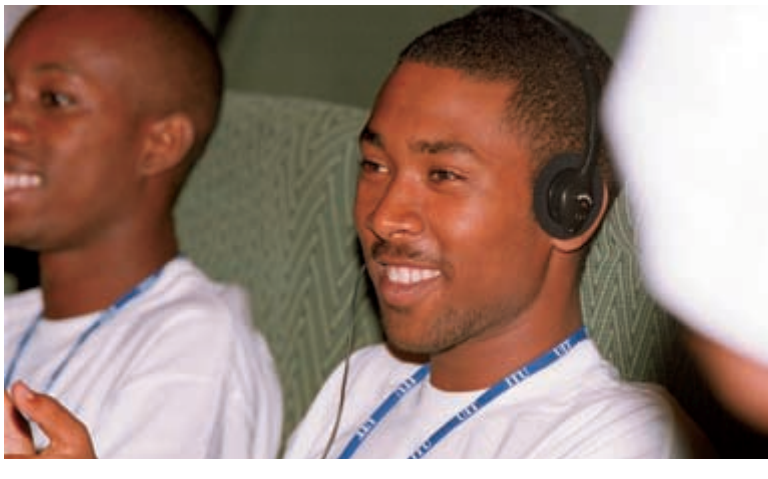
The bottom line is ultimately this: if you don't pay your own phone bill, one of your neighbours will have to. In the end, somebody has to pay that bill. Maybe you feel it would be fair for your neighbour to pay part of the cost of your bill. But eventually, one day, you'll have to pay the whole bill yourself, because the person helping you can't go on helping you forever.

ATTRACTING INVESTMENT

With government resources stretched to the limit, Africa needs to tap into the power of the private sector if it is to make real progress in telecoms development. For most countries, the question is how to harness those resources without risking loss of control.

Q: There's a problem, because we know governments can't finance it all, we have the World Bank and the IMF pushing privatization and liberalization because they have a lot of powerful companies behind them looking for new markets, and African governments are afraid to open their markets because they don't want foreign investors coming in and taking all the profits back to their own countries. How can we encourage our own African businessmen to invest in Africa?

There are some important points to make here. First, many people view private sector investment as a magic wand that will solve all our problems. This is simply not true, and the role of the state remains very important — indeed, even in the developed world many countries have relied heavily on the state to build up infrastructure. While there's no shortage of highly-paid consultants walking



around chanting "privatize, liberalize" as if it were a mantra, it's important to remember that even the World Bank's activities in Asia and Africa have not, by its own admission, always been an unqualified success.

The state also has a very important role to play in training, equipping people with technical skills that will enable them to support this growing industry. Finally, the state is an important incubator of new talent, helping entrepreneurs get started through provision of resources like office space or venture capital. In South Africa this is beginning to happen now — our new fund for youth projects is a good example.

One other pertinent issue is debt cancellation. We all agree that this is necessary, but we also need to ensure in future that when we borrow money, it does not go straight into some Swiss bank account. We need to ensure that that money has been used for the purposes for which it was intended, and that the people of the country know where it is.

Q: If even Africans are unwilling to put their money into their own continent, how can we hope to attract foreign investment?

There's no lack of money in the world, money seeking a home, money that wants to be invested. Many investors are looking for a high return, and are prepared to live with a higher risk to get that return.

There's a saying in the investment community "Capital goes where it's treated best". People investing their money make their decisions on the basis of opportunity costs, one important component of which is risk. Investors weigh-up risk-free investments, such as US Treasury bonds, against making an investment in Africa, and ask "how much risk premium do I have to build into my investment decision?"

"Making Africa the investment destination of choice for Africans and non-Africans alike remains one of the continent's greatest challenges."

That risk premium decision encompasses complex issues like the regulatory environment, the level of corruption, the country's economic predictability, and so on. This is crucial to the issue of why Africans don't invest in Africa. Like everyone else, Africa's billionaires are taking their capital where it gets treated best. Redressing this and making Africa the investment destination of choice for Africans and non-Africans alike remains one of the continent's greatest challenges.

Q: So how do we go about overhauling the same, predictable script and writing ourselves a new future?

When we decided to create this conference, we wanted a meeting that reflected the voice of Africa, with African Ministers meeting to discuss the issues rather than someone from the World Bank coming and telling us what our problem is. Well, you know what our problem is — it is ourselves! We are shooting ourselves in the foot. We are responsible for the state of Africa today. Let's stop blaming colonialism and whatever else. We are responsible for letting it happen.

Corruption is a undeniably a major problem, and a very destructive one. Leadership starts at the top. If the Minister's corrupt, the Chief Executive of the telecoms company says "Why should I be any better?" and so it goes.

If you want to change something, you must mobilize yourself. In South Africa we developed a strategy called the African Connection that was about human resource development, financing and competition. Part of this strategy involved travelling to troubled parts of Africa to show people that we have confidence in our continent, to convince people that it is safe to put their money into Africa. But in truth, many of the ministers here from other Africa countries still have never visited parts of their own country. So the bottom lines is this: you've got to do it yourself if you're going to be credible, and if you're going to get people to support you.

GETTING STARTED

As markets open up, there are more business opportunities than ever before in Africa's nascent ICT industry — and increasingly intense competition between young hopefuls scouting for investment capital to finance their idea.

Q: What does a company seeking funding have to do to convince an investor, like a bank, to loan it money?

It's very important to be clear on what you're really trying to do. You need to ask yourself a lot of questions about your technology — is it viable, reliable — your market, your strategy, and the risks. You need to know the answer to these questions, because your financier will certainly want to know them, and to see that you've thought them through. There's an element of risk in everything, and you need to be honest about this — if you simply can't predict a certain risk, tell your financier. He can often help you better understand and manage these risks.

Q: What's the key to building a successful business in Africa?

Building a business means working hard, understanding what you are selling and to whom, what your margin is. It means starting with little money, and it doesn't mean trying to be a Bill Gates. Almost no-one becomes a millionaire overnight, so you shouldn't build your model with this objective. Success in business comes from a sound strategy, a clear idea of your goals, and a problem-solving approach each new hurdle.

It's also important to separate the technology from the benefits. A common mistake many companies make is to fall in love with their own technology, forgetting that technology is only part of the puzzle. You have to get involved with your customers, help them integrate your technology into their business. It isn't enough nowadays to offer an isolated solution and to say "Well, that's the customer's problem." If you really want to succeed, you have to solve the customer's problem, make it your problem, not just theirs.

Q: How can a small new business ever hope to succeed in competition with a powerful monopoly?

What you need to do is base your company's success on the lines of least resistance. If you try to compete in an area where the monopoly is most powerful, you're on a losing streak. But there are many segments where monopolies are weak. Look for these areas, identify your potential clients and how you could serve them.

Message from Intelsat, Sponsor of the Africa 2001 Youth Forum Report

Solutions for Africa and the World

The new wave of innovation and development in the satellite industry today is due in many respects to privatizations, consolidations and other activities that are contributing to a redefining of the roles satellites play in global telecommunications. Satellite players are developing "portfolios" of hybrid, or space-terrestrial, solutions that are expected to make it easier for clients to engage in one-stop shopping in fulfilling their connectivity needs.

Intelsat, for example, recently announced its Internet Trunking service, which uses managed and integrated space and ground segments with Internet backbone access, and gives customers easy access to the Internet via bundled solutions. It is designed to give them the ability to: connect areas where fibre availability is poor or non-existent; easily distribute Internet traffic to multiple sites; and get their own customers up and running quickly, avoiding lengthy and costly fibre installation.

Hybrid solutions, such as this one, bode well for Africa, where access is challenging at best, and satellites already offer many advantages for continent-wide connectivity. The opportunities for communications providers in Africa should increase as new hybrid solutions come on the market.

INTELSAT/ITU MOU

Intelsat continues to support the International Telecommunication Union's (ITU) commitment to reliable, high-quality telecommunications for rural and remote areas. One example is an initiative designed to assess the technical and financial requirements for connecting rural and isolated areas, and then recommend satellite-based programs to develop the appropriate communications infrastructure.

Intelsat also has been involved in many Application, Support and Training projects in Africa, including the following: a Universal Access project for 500 villages in Mali; the expansion of remote area communications in Ghana; technical expertise in the implementation of a distance learning project in Ghana; a remote area connection to PSTN and Internet access in Tunisia; Internet and VoIP services in Benin; and advisory assistance in the procurement of an earth station in Botswana.

The Central Bank of West African States (BCEAO) uses corporate network services provided over Intelsat satellites to link its branches in 15 countries. And the Internet now reaches Timbuktu because of a joint effort between Afripa Telecom and national operator Sotelma that uses Intelsat equipment to connect the remote southern enclave to the rest of the world.

INTELSAT, LTD

Intelsat, which became a private company on 18 July 2002, has been providing satellite communications services to Africa since 1965, when the company - then an intergovernmental organization (IGO) - launched its first satellite. Today, Intelsat offers telephony, corporate network, broadcast and Internet solutions via 11 of the 21 satellites on which the company owns or leases capacity, and plans to increase this number to 14 by the end of 2003.

One of the newest satellites to serve Africa is the Intelsat 904 satellite, launched on February 23 2002. It is expected to be operational at its Indian Ocean Region orbital role in early April, and one of the tasks the 904 is expected to be used for is the bundling of Internet services combining space segment, ground segment and Internet backbone connectivity.

As a private company, Intelsat expects to gain the flexibility to better serve its customers on the continent in ways that include being able to act more quickly in accommodating specific customer needs. Intelsat also is expected to be better positioned to continue providing high-quality services and, at the same time, to pursue the development of new customer- and market-focused products and services -- including end-to-end solutions.

The high-powered Intelsat satellites scheduled for launch are expected to provide customers with a number of new advantages, including reduced ground segment requirements and the associated costs. These changes should allow people in even more remote areas to become connected while enabling Intelsat to address more of the continent's communications needs.

Intelsat is committed to doing all it can to ensure that Africa has the communications tools to become an increasingly strong player in the new information economy.

Flavien Bachabi
Regional Vice President, Africa
Intelsat Global Service Corporation

Intelsat offers telephony, corporate network, broadcast and Internet services worldwide via capacity on 21 geosynchronous satellites. For nearly four decades, leading telecommunications companies, multinational corporations and broadcasters in more than 200 countries and territories have relied on Intelsat satellites and staff for quality connections, global reach and reliability. For more information, visit **www.intelsat.com**

Youth Forum and Steering Committee-Members

PRESIDENT

Mr Yoshio Utsumi
Secretary-General (ITU)

HONORARY ADVISORS

Mr Roberto Blois
Deputy-Secretary General (ITU)

Mr Hamadoun I. Touré
Director (ITU/BDT)

COORDINATOR

Mr Hans Pieterse
Executive Manager (ITU TELECOM)

CHAIRMAN

Ms Walda Roseman
President and CEO, CompassRose,
and Chairman of AFRICA 2001
Forum Programme Committee

DEPUTY CHAIRMAN

Mr Jan Mutai
Secretary-General
African Telecommunication Union (ATU)

MEMBERS

Mr. M. A. Abdalla
Regional Representative,
Arab States (ITU-BDT)

Ms Sunny Bekele
Forum Officer, ITU TELECOM

Ms Marianne Dimier
Forum Manager, ITU TELECOM

Mr Georges Dupont-Henius
Senior Programme Manager/Senior
Liaison Officer to ITU (Unesco)

Ms Patricia Faccin
Head, Fellowship Services
(ITU-BDT)

Prof. Géza Gordos
Professor, Department of Telecommunications
and Telematics, Budapest University of Technology
(Hungary)

Dr Marko Jagodic
Adviser to the Director General,
Iskratel (Slovenia)

Mr Bruno Lanvin
Executive Secretary, DOT Force
(The World Bank)

Mr Dan Kiernan
Director, Compagnie Financiére,
Alcatel (France)

Ms Elizabeth Lake
Forum Manager (ITU TELECOM)

Mr Mario Maniewicz
Head, Human Resource Development
(ITU-BDT)

Mr Rik Michel
Senior Staff Engineer
Siemens ATBA NV, (Belgium)

Dr Milenko Stojkovic
Director, Telecommunications Policies
& Regulatory Affairs (INTELSAT)

Ms Asenath Mpatwa
Coordinator, Africa Region
(ITU-BDT)

Mr Vusi Mthembu
Control Administrative Officer, Youth Desk,
Dept of Communications (South Africa)

Ms Pam Rakgwathe
Dept of Communications (South Africa)

Mr Brahima Sanou
Head of ITU Regional Office
for Africa (ITU-BDT)

Ms Lyndall Shope-Mafole
General Manager, Paris Office,
Dept of Communications (South Africa)

Ms Barbara Wilson
Human Resources Development Officer
(ITU-BDT)

ELIGIBLE COUNTRIES

Algeria
Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Chad
Comoros
Congo (Rep. of the)
Dem. Rep. of the Congo
Côte d'Ivoire
Djibouti
Egypt
Eritrea
Equatorial Guinea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea Bissau
Kenya
Lesotho
Liberia
Libya
Madagascar
Malawi
Mali
Mauritania
Mauritius
Morocco
Mozambique
Namibia
Niger
Nigeria
Rwanda
Sao Tome & Principe
Senegal
Seychelles
Sierra Leone
Somalia
South Africa
Sudan
Swaziland
Togo
Tunisia
Uganda
Tanzania
Zambia
Zimbabwe

Information about ITU TELECOM future events:
www.itu.int/itutelecom

ITU TELECOM ASIA 2002
2-7 December
Hong Kong, China

ITU TELECOM AMERICAS 2003
25-28 February
Buenos Aires, Argentina

ITU TELECOM WORLD 2003
12-18 October
Geneva, Switzerland

International Telecommunication Union
ITU TELECOM
Place des Nations
CH-1211 Geneva 20
Switzerland
Tel.: +41 22 730 6161
Fax: +41 22 730 6444
telecominf@itu.int

TELECOM ITU
MEET THE FUTURE