Delegate of the Swiss Federal Council for the World Summit on the Information Society Permanent Mission of Tunisia to the United Nations Office at Geneva

26 June, 2002

Note to the Permanent Missions

Subject: Report on April 30th Information session on the Information Society

We are pleased to send you herewith the Report on the 30th April Information Session organized by Switzerland and Tunisia in advance of the first PrepCom for the World Summit on the Information Society.

We hope that this reminder of our content discussions will be useful for you in preparation of your participation in the discussions of early July and would very much appreciate your feedback on the Report.

Enclosed please find:

- Brief Summary Document
- Full Report

Sincerely yours,

• Speaker Biographies

We take this opportunity to thank you for your participation at the Information session and your continuing engagement in the World Summit on the Information Society.

Daniel Stauffacher	Mohamed Hatem Ben Salem
Ambassador	Ambassador

Enclosure

Delegate of the Swiss Federal Council for the World Summit on the Information Society Permanent Mission of Tunisia to the United Nations Office at Geneva

Information Session for the Permanent Missions to the United Nations at Geneva for the World Summit on the Information Society

Tuesday 30 April 2002

BRIEF SUMMARY DOCUMENT

On 30 April 2002, an Information Session on issues related to the World Summit on the Information Society was held at the ITU (International Telecommunications Union) in Geneva. The meeting was organised jointly by the Governments of Switzerland and Tunisia, the two host countries of the Summit. The purpose of this Information Session was to introduce representatives from the Permanent Missions to the United Nations in Geneva to experts and practitioners dealing with the new technologies in order to better understand the issues facing us as we move forward with Summit preparations.

Guest speakers were: Elmar Brok, Senior Vice-President, Media Development, Bertelsmann AG, Germany, Member of the European Parliament; Emmanuel N. OleKambainei, from Tanzania, Coordinator for Policy and Regulations with the African Connection Program, based in South Africa; V. Ranjit Khosla, Chief Financial Officer, TARAhaat Information and Marketing Services Ltd, President, Excelsior Ventures Management LLC, India and USA; and Paul Saffo, Director, Institute for the Future, USA.

The panel was presided by Marc Furrer, Director-General of the Swiss Federal Office for Communication. Alain Modoux, Former Assistant Director-General of UNESCO for Communication and Information, Consultant to the Swiss Executive Secretariat for the World Summit on the Information Society moderated the discussion.

Paul Saffo started the panel presentations with a round-up of the new technologies and a peek into what the future holds. He referred to the next revolution, and maintained that even as we struggle to understand the Information Society, it and the new technologies underlying it are transforming into something else. New opportunities are created along with a new personal media order emerging from the dot.com bubble, which will deliver on some of the promises of the "old information revolution" in new and profound ways. The challenge and opportunities will be greatest in areas of global society not yet touched by the information revolution. Finally, he asserts that policy decisions made over the next five years will determine the global information order for the next two decades.

Ole Kambainei made his presentation on the digital divide. The key issues facing the developing world are concerned with infrastructure and connectivity, access to content, policies and regulations. He stressed the need for partnerships between institutions and people, pointing out that there would be no point installing appliances and facilities if they are not appropriate or affordable to the local population.

V. Ranjit Khosla has experienced both sides of the digital divide, as his companies are based in India and the United States. For him, the digital revolution presents unique opportunities to invent new situations and enterprises. One Tarahaat.com project is a "road" connecting Indian

villages to the rest of the world—designed to be so simple that even a small child or an illiterate person can quickly learn to use it and to benefit from all it has to offer. His inspiration comes from Mahatma Ghandi, who spent his life seeking ways to improve the lives of villagers in India.

A discussion followed the presentations. Elmar Brok brought up the issue of content, saying that issues are frequently discussed from a technological point of view, but content is rarely addressed. "Content is the result of human creativity and entertainment," he said. The new information technology knows no borders; content is no longer "controllable." While we have different national constitutional boundaries, there is no legitimate body at the world level to legislate on these matters.

Marc Furrer closed the session, thanking all participants. He stated that clearly access and content are key issues for debate. He ended the discussion by drawing attention to the need for constructive dialogue between Governments, the private sector and representatives of civil society at the forthcoming World Summit.

FULL REPORT

Introduction

A special information session for the Permanent Missions to the United Nations organized jointly by Switzerland and Tunisia in advance preparation of the first PrepCom of the World Summit on the Information Society (WSIS) was held on Tuesday 30 April 2002 at the ITU in Geneva.

The session was opened by Ambassador Daniel Stauffacher, Delegate of the Swiss Federal Council for the World Summit on the Information Society and Ambassador Mohamed Hatem Ben Salem, Ambassador of Tunisia to the United Nations. Ambassador Stauffacher explained that the Swiss and Tunisian initiative resulted from a conviction of the need for a better vision of the information society, to remind participants of the challenges facing us.

Reflecting over the last 20 years, it becomes very clear that the advent of mass computers and access to information technology has contributed to the gap between the developed and developing world. Various speakers referred to the impact of the industrial revolution; concluding that missing out on the information technology revolution would be catastrophic. We now live in a world of international commerce, and if we are to learn from the past then it is essential that we address the digital divide, that we outline policies, and that we anticipate the future before it is too late.

The consensus of this meeting was that we should look forward, evaluate past experiences, and weigh up the issues so as to bridge the digital divide.

The aim of the session was to define the issues to be addressed during the Summit. It became clear that the digital divide would be high on the agenda; not only the question of providing resources, but ensuring that they are appropriate and that the recipients are integral to the process.

Overview

Marc Furrer, Director-General, <u>Federal Office of Communication</u>, Switzerland, emphasized the importance of the role of the UN representatives as the link to governments, and that although the Summit process is led by the ITU, the International Telecommunications Union, with Swiss and Tunisian Government support, collaboration is needed. "Content is the main issue, as good content for the summit will be the best way to attract funding from the private sector and the NGOs". The information technology (IT) bubble has now burst, leaving space for a realistic analysis of the situation and a time for reflection. What can we really expect from IT? Although we have fabulous instruments at our disposal we still live in a world of poverty and hunger with little cultural understanding. Maybe this is one of the main questions which the summit should address: What can information technology contribute to lessen these problems?

Paul Saffo, Director of the <u>Institute for the Future</u> in Silicon Valley, an American technology forecaster, presented a brief exposé of the information technology revolution in order to put it in context.

- The surge in Internet providers over 10 years, in contrast to the dismal proportion of Internet access (not even providers) in developing nations
- As a forecaster, he pointed out how the next five years of policy decisions would shape the next 20 years
- The importance of the advent of wireless connections: "You may never have to see your colleagues again"
- An important revolution is afoot, and it is "your responsibility for taking the revolution and connecting it to the rest of the world".

Emmanuel N. OleKambainei, Coordinator for Policy and Regulations with the <u>African Connection Program</u>, an engineer from Tanzania, concentrated his remarks on the digital divide. If none of the three telephones in Arusha work, there is margin for improvement in order to communicate with the rest of the world, or for that matter the next town.

Major points of the digital divide highlighted:

- True or complete connectivity
- Infrastructure delivery services
- Technology and capacity
- Content
- Support services and facilities
- Policies and regulations
- Institutional and Human Partnership

V. Ranjit Khosla, President of Excelsior Ventures Management LLC, USA and Board Member of <u>TARAhaat.com</u>, India, expanded on digital equity for a more sustainable future.

- The need for a new breed of enterprise with proposed solutions for a problem in one or two villages which can be applied universally and enable empowerment
- User orientated interfaces
- Programmes specifically useful to the population or area in question, for example, on-line grain prices
- Giving the poor a participatory role in their development is successful as shown by the Indian experience of Tara.

Ranjit Khosla's descriptions of what TARAhaat, his company, can achieve led to discussion of appropriate technology for different needs and countries, reminding the participants that a model for one country may not be entirely suited to another. Practical questions such as dust and humidity led to questions on adapted technology, awareness of gender barriers and training.

Presentations

Full presentation of Mr. Ranjit Khosla and Mr. OleKambainei are available in MS Powerpoint format at http://www.itu.int/wsis/documents/ (tbc)

Paul Saffo, Director, Institute for the Future "The Digital Divide Will Not Solve Itself" A brief synthesis:

My first slide displays the continuing rise in Internet service providers (despite the dotcom down turn), my second, shows the percentage of populations with Internet access. My point is this: the developing world does not even figure on the second slide. To quote Bill Gibson: "You know the future has already arrived, it's just not distributed evenly", which leads me to say, that: "the digital divide will not solve itself". The next five years of policy decisions will shape the next 20, real life experiences in Silicon Valley clearly demonstrate that it takes 20 years to mutate an idea to concrete reality. So we must take the right decisions now. It is no longer an information revolution, as it permeates our lives but rather a media revolution, local information is now global in 15 minutes. My next point is this: "Where is the revolution actually affecting us?" This is why wireless matters. It is going to be fundamentally different in two years time. "Cyberspace matters because in cyberspace there is no distance". This notion would be encouraging news to Tanzanians, who seemingly still have to go via European phone lines to call their neighbouring countries.

"I am a technology forecaster and I think I'm pretty good but I know the limits of forecasting". He gave a classic example from the Internet: the boom in book buying that occurred with the advent of the Internet was the opposite of what had been forecast.

Thus the challenge for the developing world is to use the new technology as it comes along, the growing edge of communication will be machines talking to machines, people will no longer talk to people, but access information. The digital divide issue is crucial, IT has permeated developed societies. The information age was the era of the Cold War, with mass computers, PCs, closed circuits and vertical organization. This has been replaced by the media age, in the era of globalisation, by information appliances (smartifacts), open systems and horizontal organization. The video game *Doom* has now been adapted as an army training tool, popular video games are being used for pilot training. There is a huge revolution afoot and he dared the audience by telling them that they were responsible for taking that revolution and connecting it to the rest of the planet.

Emmanuel N. OleKambainei, Coordinator for Policy and Regulations, African Connection Program

"The Four C's: Co-ordinate, Co-operate, Collaborate within Competition" A brief synthesis:

As you saw the first slide showed no developing countries, this is the digital divide, although big strides have been made in Africa, the "link" is still "missing", although networks are now more digitalized, Internet cafes do exist – at a price – and so do cell phones, but there remains an absence of true connectivity. Hence the possibility of a "new missing link" between the "technologically rich" and the "technologically poor," within communities, countries, regions and globally. Does the information society mean that everyone must have a computer? Africa missed the agricultural society and the industrial society, but just as not everyone in Europe has a car it is not necessary for every African to have a computer, only to have access to one.

There is no point in having appliances and facilities if they are unaffordable to the local population, or inappropriate. Content and capacity have to be considered: "The pricing of access and utilization of the capacity, services and applications that is affordable and value for money by the demand side and sustainable on the supply side" is absolutely crucial. The relevance of content, language, and literacy must be considered for mutual exchange of content (information and knowledge), thus the consideration of the user's needs is essential.

It is not practical if support services are six kms away, connected by electricity and telephones which experience frequent breakdowns. The research is done in developed countries where the problems of humidity and dust, two things computers hate, are not addressed. So we must consider technology and capacity, and price connectivity.

Do we have policies or civil servants charged with connection, facilities, or institutional and human capacity? Do we have general literacy and commitment? Are we facilitating the people? These questions lead to the four C's: Co-ordinate, Co-operate, Collaborate within Competition. Competition gives the consumer/user a choice but it also gives the provider choice of approach and technology.

But why are we bothered about bridging the digital divide? Why was there confrontation at Davos? "Because some communities feel marginalized by globalisation, and globalisation must be a blessing". IT is not an end product but a tool to be used, to facilitate, to empower, to tame globalisation, and to allow for full membership to that society, particularly for those who missed out on the other major societies.

We must consider how and in which areas to bridge the divide, what are the IT and digital opportunities in daily life? General communication? Education? What is the use of being literate if we can't communicate? Thus what we are talking about is communicacy, IT could actually help to bridge the divide, for example by not only providing e-health but actually delivering it. How can IT help to improve industry, transport, and agriculture?

V. Ranjit Khosla, Chief Financial Officer, TARAhaat Information and Marketing Services Ltd; President, Excelsior Ventures Management LLC "Digital Equity For a More Sustainable World" A brief synthesis:

Paul Saffo and OleKambainei have set the stage ideally, I don't have to mention the words 'digital divide', the digital revolution presents unique opportunities to invent new situations and enterprises, when we decided to address these issues, we decided that there should not be years and years of people being left out there, 10 years was the maximum. We wanted to have entirely self-financed projects adapted to the communities in question, sometimes this may involve selling power capacity to cover costs, we wanted to use IT as a tool for sustainable development. The web site we created is entirely interactive, move the cursor over the homepage and it will talk to you, or tell you about information in your village. We thought health would be big, but no health in the villages is about crisis management, which we have not yet met, but "TARAhaat.com is the road that connects the Indian villager to the rest of the world... It is designed to be so simple that even a small child or an illiterate person can quickly learn to use it and to get all the benefits it offers". The inspiration comes from Mahatma Ghandi who spent his whole life looking for ways to improve the lives of villagers in India; but "we still haven't found the solution to reaching the poorest of the poor". The organisation TARAhaat was created by the Development Alternatives Group, for whom they are the marketing arm, making and selling the technology they design, but we need venture capital and we need to attract corporate support. We must consolidate global efforts, the "World community just has to DO IT."

Discussion

1. A delegate from Latin America asked: "How can we use technology to take up experiences of other countries?

Ranjit Khosla replied that Internet sites can be useful, but the sharing of information in English alone is limiting, sites need to be translated, but we don't have the people or the funds. "A lot of solutions are migratable, it is the methodology we are applying which changes".

2. A European representative asked whether the panel whether e-government for developing countries could improve the problems of the digital divide?

Elmar Brok, Senior Vice-President, Media Development, Bertelsmann AG, Member of the European Parliament, replied that the USA was working on it, but that he feared exclusion through lack of access.

- 3. An African representative had a number of questions
- 3a. Technology and research is booming, biological and genetic discoveries could be dangerous, have we measured the consequences if IT goes the same way?
- 3b. Bad use of the Internet, are children losing their souls in front of a screen?
- 3c. Human rights are fundamental to a pacific world, should the information society not install respect?

Paul Saffo replied, "Technology is an amplifier of the human spirit. It is all of our responsibility to minimise the bad that comes with the good".

4. An Eastern European representative voiced his fears that despite the increased comfort of life, with the advent of IT he felt he was increasingly dependent on something, and that if it breaks not only he, but also, whole nations, could grind to a halt.

OleKambainei pointed out that we are no longer tied to copper wires; solar energy is now being applied. Ranjit Khosla replied that power failures at least usually resulted in a baby boom nine months later, on a more serious note he asked the audience "who are we to judge whether fellow man can profit?" If his situation is no telecom and no power, working for 50 cents a day on a construction site where life is brutish and short, then maybe IT can bring him some good. There are uses of technology which are important to development, and the global community is becoming very small".

The morning's presentations were followed by a panel discussion, led by Alain Modoux, former Assistant Director-General of UNESCO for Communication and Information, Consultant to the Swiss Executive Secretariat for the World Summit on the Information Society.

Panel Discussion "What kind of global society for the future?"

Elmar Brok, Senior Vice-President, Media Development, <u>Bertelsmann AG</u>, Member of the European Parliament, opened the discussion by picking up on the question on content posed by the African representative.

He remarked that issues are frequently discussed from a technological point of view but content is rarely addressed. "Content is the result of human creativity and entertainment". Its appropriate application is indispensable but the new IT knows no borders, it is no longer controllable, the advantages are that it has become increasingly difficult for dictators, yet too much regulation could equally go against the consumer. Pornography is not the only problem, violence is also cause for concern, but it is the World Wide Web, we have different constitutional boundaries, there is no legitimate legal body.

Alain Modoux agreed that these were very important points: "the problem of content is enormous", but UNESCO and WIPO have an important contribution in this domain. He asked the panel and the audience "What are we expecting from this summit"?

"I may be American but I don't have an opinion about everything" remarked Paul Saffo, who admitted that he didn't know, but "I'm impressed and overwhelmed by the process you are undertaking, these issues are not remote but touch on our everyday life".

"We have a mission, if this world summit could facilitate that, it would be wonderful" was Ranjit Khosla's answer, but he added that "accident put me here", I could have been born the individual child whose face haunts you, we all have a responsibility to do something: "The governments cannot do it alone", so we need alliances, we must encourage people to participate, "we don't need more institutions I would like to see practical solutions".

"Looking at IT as a tool, we should bring on board all the issues we have been attacking on a global level ... We should bring hope to people rather than people leaving home in search of hope", OleKambainei asked how do we deliver quality of life to people where they are? Avoid confrontation and participate together in ICT governance? Elmar Brok felt that the marketplace would increase possibilities and suggested that maybe the CEO's of the major companies could enter into discussions with the political leaders.

Another African representative said: "I am no longer a fan of IT unlike my friend from Eastern Europe", he called for the demystification of IT and the accompanying 60 page incomprehensible booklets, he hoped that this summit would help, but pointed out that "technology for development is difficult to focus on in this area". His comments brought to the fore one of the underlying concerns of the participants: namely the accessibility of IT, their fears were allayed by Ranjit Khosla who humorously pointed out that: "It is a generational issue, I can't use a VCR, people in villages in India under 30 want to play with a computer, it's our generation which needs demystifying, my Uncle is 89 and uses email". *The Prince Charles Foundation* was cited as one organisation that recycles technology for development.

A Latin American representative called for regulation and co-ordination, he added that state monopoly was "yet another barrier to closing the digital divide" Access is already difficult enough for those who have the money.

A Caribbean representative voiced his fears that a portion of the population would always be left in the dark, which recalled an earlier point, that the wrong application of ICT and technology can make poverty much worse, the fourth world is then created by the success of the third, which reflects what OleKambainei said about the technologically rich and the technologically poor.

An African representative highlighted another aspect to the digital divide: "Why can't Africa be a producer and not always the consumer"? The reply from Paul Saffo had both good and bad news: the nature and hardware of manufacturing are going to be hard to break up, up front development is not a small scale business, and the wrong regime setting up the regulation of telephone companies does not make the process any easier, however the good news is Wireless, or more specifically a tiny chip called 802.11.

A Northern European representative brought to the fore an issue which had been alluded to in the presentation on TARAhaat, i.e.: the Gender gap, the need to evaluate gender issues when considering the digital divide, as frequently women, poor women especially have even fewer opportunities to be involved in the information society than the rest of the population. There is another divide, that between institutions and the thinkers behind creative content. We must secure a dialogue with the private sector.

An African representative was thankful for the scope of issues discussed, "some of which have left me confused", so what are we expecting as the objective for the preparation of this summit? A declaration, common policies and standards, a desire to educate the summit on what is available? "I am expected to go home and steer a committee, what do I say"? Paul Saffo's hunch was that "If we are going to have an information society we have to have a "common" one otherwise there is no "information society", we are on the boundary between an intellectual society and an information society which equals a media-information commons".

The meeting was brought to a close by Marc Furrer, Director-General of the Swiss Federal Office of Communications:

"Thank you all for your energy over the last four hours, I have asked myself whether this summit is not too late, but no, I think not, the euphoria of information technology is over, it has been demystified, we can be more realistic". He asserted that access and content are clearly key issues, and that now is a good time to open discussions between the private and the public sectors. Partnerships and alliances must be created. The first PrepCom will be held on 01-05 July 2002, and there is a need to discuss more than just formalities, and to address the main issues. It is vital that the first PrepCom serve to establish "le fil rouge" the main direction we intend to take. He closed the session with a reminder of the need to examine the role of IT, and to try to cover everything discussed during the presentations and panel discussions.

SPEAKER BIOGRAPHIES

<u>Marc Furrer</u> Director-General, Federal Office of Communication, Switzerland www.ofcom.ch, www.isps.ch

Marc Furrer was born on 24 February 1951 and is married. From 1970 to 1976 he studied law at the University of Berne. In 1978 he qualified as a barrister and notary. He started his professional career in 1978 at Radio DRS. Until 1980 he was employed as Home Affairs Editor. He subsequently spent four years as Head of Consumer Broadcasts at Radio DRS. From 1984 to 1988 Marc Furrer worked as Federal Parliament correspondent for Radio DRS.

In 1988 he moved to the former EVED (now DETEC – Federal Department of Environment, Transport, Energy and Communications) where he worked for four years as personal political secretary to Federal Councillor Adolf Ogi.

Since 1992, the year when OFCOM was founded, Marc Furrer has been director of the Federal Office of Communications (OFCOM) in Bienne. With a team of 293 employees he is the regulator responsible for the drafting and implementation of legislation in the telecommunications sector as well as for radio and television. He is also responsible for management of the frequency spectrum and for supervising the performance of licensees.

<u>Alain Modoux</u> Former Assistant Director-General of UNESCO for Communication and Information; Consultant to the Swiss Executive Secretariat for the World Summit on the Information Society

Alain MODOUX, a Swiss citizen, is a former Assistant Director-General of UNESCO for Communication and Information. In this capacity, he was responsible, *inter alia*, for the coordination of UNESCO's contribution to the "World Summit on the Information Society. He also represented the Organization on the "Digital Opportunity Taskforce" (DOT Force) set up by the G-8 to address the challenges of the Information Society.

In all the posts he has successively held at UNESCO, Alain MODOUX has played an instrumental role in bringing into play the "New Communication Strategy" adopted in November 1989 by the General Conference of UNESCO to replace the highly controversial "New World Information and Communication Order" (NWICO). The many actions carried out since then under his direct responsibility to promote press freedom, media independence and pluralism have led the Organization to gain worldwide recognition among its governmental and non-governmental partners as well as the media. Alain MODOUX is also the initiator of the UNESCO proposal which led to the decision by the General Assembly of the United Nations, in December 1993, to proclaim 3 May "World Press Freedom Day".

In June 2001, Alain MODOUX retired from UNESCO and opened an office in Geneva, Switzerland, as communication consultant. His main activities are related to the preparation of the « World Summit on the Information Society » as advisor to UNESCO and the Swiss federal administration. He is also associated, as senior partner, with INTERMEDIA-Consultants, Bern, a private company specialized in the development of communication, which carries out various programmes in developing countries on behalf of the Swiss Agency

for Development and Cooperation, the World Bank and the International Organization of the French-speaking countries.

At the academic level, Alain MODOUX, is co-founder, and since January 2002, president of ORBICOM, the international network of UNESCO chairs in communication, whose purpose is to favour and foster co-operation between academics, scientists, professionals and industrialists specialized in the field of communication. ORBICOM has some 300 members worldwide and its secretariat is located at the University of Quebec in Montreal (UQAM).

Alain MODOUX has contributed to various books and publications on the role of communication professionals (journalists and public relations practitioners) in a democratic society. Under his direction, UNESCO published in 1998 the "World Communication Report" which draws a worldwide picture of the impact of the digital revolution and the convergence of technologies in the communication field.

<u>Elmar Brok</u> Senior Vice-President, Media Development, Bertelsmann AG; www.bertelsmann.com

Personal details:

- Born on 14 May 1946 in Verl (Northrine-Westfalia/Germany)
- Married, three children
- Studies at the Center of European Governmental Studies, University of Edinburgh, UK

Political and professial career:

- Since 1993 employee of the international media company Bertelsmann AG, where he is today Senior Vice President Media Development

Since 1980 Member of the European Parliament; currently Chairman of the Committee on Foreign Affairs, Human Rights, Common Security and Defence Policy

V. Ranjit Khosla Chief Financial Officer, TARAhaat Information and Marketing Services Ltd.; President, Excelsior Ventures Management LLC www.tarahaat.com

V. Ranjit Khosla is CFO of TARAhaat Information and Marketing Services Ltd and also President of Excelsior Ventures Management LLC. TARAhaat is a nationwide Internet Portal, promoted by one of India's leading independent sustainable development agencies, Development Alternatives, and its marketing arm, Technology and Action for Rural Advancement (TARA). TARAhaat brings relevant information, products, and services via the Internet, through a network of franchised centres, to the underserved markets of rural, and peri-urban India. TARAhaat is a gateway that connects the village user to information, services, government agencies, and to all kinds of markets.

Excelsior Ventures Management LLC is a USA based private venture fund. Excelsior is an investor in TARAhaat, and has raised funds to partially finance the start-up phase of TARAhaat's operations. It also provides TARAhaat with managerial assistance.

Earlier he was Senior Vice President and Director off Operations at ITT Information Services and Vice President of ITT Corporation. During his 25 years with ITT, he held a number of senior operational, business development and financial positions in the Insurance, Finance, Telecommunication Operations, Hotels, Information and Natural Resources sectors of ITT.

Prior to joining ITT, he was Chief Financial Officer of Beneficial National Life Insurance Company. He was educated at the London School of Economics and Political Science.

<u>Emmanuel N. OleKambainei</u> Coordinator for Policy and Regulations with the African Connection Program <u>www.africanconnection.org</u>

OleKambainei is a Registered Professional Aeronautical Engineer in Tanzania. After being on sabbatical leave for six months from the Ministry of Communications and Transport doing consultancies for the International Telecommunications Union (ITU), he is since January 2001 on unpaid leave working as Coordinator for Policy and Regulations with the African Connection Program.

He has completed many consultancies with the ITU among them being on ITU-BDT Reference Book on GMPCS, status of telecommunications in the Least Developed Countries (LDCs), strengthening of policy and regulation in Ethiopia and the policy and regulatory program for the Centres of Excellence for English speaking African countries. In the ministry he was a Chief Executive Engineer and Professional Advisor after having been the first Director General of the Tanzania Communications Commission (the regulator for posts and telecommunications), Commissioner fro Communications and Transport, General Manager and Chief Executive Officer of Air Tanzania Corporation and had been Private Secretary to the Minister of Communications and Works and variously Director of Aviation, Aerodromes and Air Transport.

He was a member of the G8 Digital Opportunities Task Force (DOTForce) for Tanzania. Elected Chairman of the ITU Global Mobile Personal Communications by Satellite Memorandum of Understanding (GMPCS-MOU) Group since February 1997 and continues to date to be the focal point and leader for further development and implementation of the GMPCS-MOU and its Arrangements. He has served in several Boards including the East African and Tanzania Civil Aviation Boards, Air Tanzania Board, Tanzania Tourist Corporation Board, DAHACO Board as Chairman, the SITA Board 1991/2 representing African airlines, and was President of the African Airlines Association (AFRAA) in 1991/2. He is Founder Vice-Chairman of Front Against Corrupt Elements in Tanzania (FACEIT) an NGO on corruption in Tanzania.

OleKambainei received his university education at Loughborough University of Technology, in the United Kingdom, getting a Bachelor of Technology (B.Tech) Honours degree – Aeronautical Engineering and Design, in 1972. He is Fellow of the Institution of Engineers in Tanzania (FIET), Member of the Royal Aeronautical Society (MRAeS), Member of the Chartered Institute of Transport (MCIT) and Hurbert Humphrey Fellow (HHF).

He undertook a one year postgraduate program at the American University in the USA on Development Management, International Development, Public Financial Management, Resource Mobilization and Conflict Resolution; and various short professional courses and seminars on airports, civil aviation, airline operation and security, logistics and transportation, telecommunications and mobile satellites as well as restructuring and regulation of utilities and infrastructure. All these at various institutions in USA, UK, Malaysia and Tanzania.

OleKambainei is married and has two daughters and two sons.

<u>Paul Saffo</u> Director, Institute for the Future, USA <u>www.iftf.org</u>

Paul Saffo is a technology forecaster studying long-term information technology trends and their impact on business and society. His essays have appeared in numerous publications, including *The Harvard Business Review, Wired Magazine, Civilization Magazine, The Los Angeles Times, The New York Times*, and *Fortune Magazine*, as well as other more specialized periodicals.

Paul is the author of *Dreams in Silicon Valley* and *The Road From Trinity*, both of which are available in Japan. He was a 1997 McKinsey Judge for the *Harvard Business Review*, and in the same year was named one of one hundred "Global Leaders for Tomorrow" by the World Economic Forum. Paul serves on a variety of boards and advisory panels, including the AT&T Technology Advisory Board, the World Economic Forum Global Issues Group, and the Stanford Law School Advisory Council on Science, Technology and Society. Paul holds degrees from Harvard College, Cambridge University, and Stanford University. IFTF is a 30-year old foundation that provides strategic planning and forecasting services to major corporations and government agencies.