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ITU World Telecommunication and Information Society Award 2010

Meet the laureates

The ITU World Telecommunication and Information Society Award is presented on World Telecommunication and Information Society Day (17 May). This year, it focuses on three eminent personalities, who have contributed to promoting ICT as a means of providing a better life for humanity. The Award winners were announced during Council 2010 (Geneva, 13–22 April) by ITU Secretary-General Dr Hamadoun I. Touré.



Malaysia's Prime Minister Dato' Sri Mohd Najib bin Tun Abdul Razak has made connectivity one of his priorities. As part of the New Economic Model for Malaysia, he has placed high priority on strengthening broadband infrastructure. He has also played a big part in building a world-class education system in Malaysia, turning the country into a regional education hub and centre of excellence.



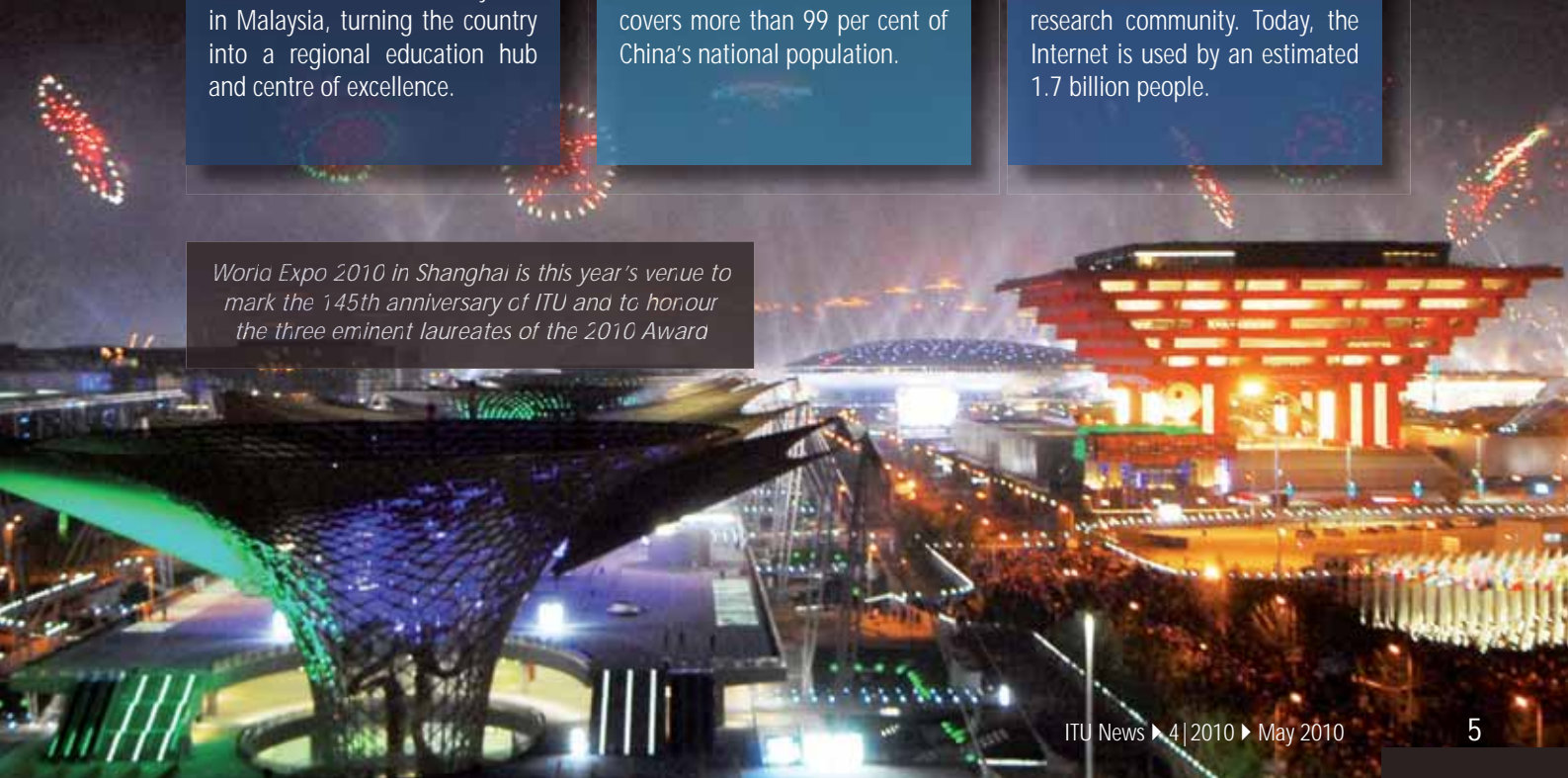
Wang Jianzhou, Chairman and CEO of China Mobile, is connecting the world via mobile phones. Under Mr Wang's leadership, China Mobile has attained the largest market capitalization among global telecommunication companies, with a subscriber base of 530 million. The mobile network covers more than 99 per cent of China's national population.



Robert E. Kahn, Chairman, CEO and President of the Corporation for National Research Initiatives (CNRI), conceived the idea of open-architecture networking. He is a co-inventor of the Internet. In 1973, the initial work on Internet protocol development began, and, by the mid-1970s, a nascent Internet was created within the research community. Today, the Internet is used by an estimated 1.7 billion people.



World Expo 2010 in Shanghai is this year's venue to mark the 145th anniversary of ITU and to honour the three eminent laureates of the 2010 Award





Dato' Sri Mohd Najib bin Tun Abdul Razak

Prime Minister of Malaysia

Dato' Sri Mohd Najib bin Tun Abdul Razak became Malaysia's 6th Prime Minister on 3 April 2009. He is the eldest son of Malaysia's second Prime Minister, Abdul Razak Hussein. In 1974, he graduated from the University of Nottingham, United Kingdom, with a degree in industrial economics.

Returning to Malaysia, he joined the national oil company, Petronas as an executive, where he served until his plunge into politics following the sudden death of his father in 1976. He served as Deputy Minister of Energy, Telecommunications and Posts, as well as Deputy Minister of Education and Deputy Minister of Finance.

Following the general elections of 1986, he was appointed Minister of Culture, Youth and Sports. In 1990, he was appointed Minister of Defence and then, in 1995, Minister of Education. He played a big part in building a world-class education system in Malaysia, turning the country into a regional education hub and centre of excellence.

Following the 1999 elections, he was again appointed Defence Minister, a position he held until September 2008 when he took over as Finance Minister. The 2004 general elections, which came a few months after his appointment as Deputy Prime Minister, saw him winning his parliamentary seat with a whopping majority. In March 2009, he was elected as Umno President and in April he was sworn in as Prime Minister. He still holds the Finance Ministry post.

Malaysia's New Economic Model and high-speed broadband

Building an inclusive society

■ The New Economic Model

In the months after he became Prime Minister, Dato' Sri Mohd Najib bin Tun Abdul Razak set up an independent National Economic Advisory Council, and tasked it to carry out a thorough review of Malaysia's economy. He asked the Council to make bold, yet practical recommendations for a new economic model to transform the country's economy.

At the end of March 2010, the Prime Minister unveiled the Council's preliminary report on the country's future economic direction. The report sets out the state of the nation's economy — its strengths and its shortcomings — and assesses current policies as well as potential areas of future focus for Malaysia. The New Economic Model, to be achieved through an Economic Transformation Programme, constitutes a key pillar for Malaysia to join the ranks of the high-income economies, in line with the goals of the country's Vision 2020.

The growth process, which the country will embark on, needs to be both inclusive and sustainable. As the report points out, inclusive growth enables the benefits to be broadly shared across all communities. And sustainable growth should increase the wealth of current generations in a way that does not come at the expense of future generations.

A number of strategic reform initiatives are proposed. These are aimed at greater private initiative, better skills, more competition, a leaner public sector, pro-growth affirmative action, a better knowledge base and infrastructure, the selective promotion of sectors, and environmental as well as fiscal sustainability.

The next step in the process will be a public consultation to gather feedback on the key principles of the New Economic Model. The key recommendations will then be translated into actionable policies.

Unveiling the report, the Prime Minister explained: "The New Economic Model is a vital part of the Malaysia we are building, the structure that will serve our people for the future. As a metaphor, think of a house under the Malaysian sun. We need a roof — an overarching philosophy that encompasses all parts of the building. In our case, Malaysia is the roof that we gather under. The Government Transformation Programme — a programme of delivery on six key areas — is one pillar of this home. A second pillar is the Economic Transformation Plan that will deliver the New Economic Model. And the floor, the basis on which all Malaysians will move forward are the 10th and 11th Malaysian Plans."

The report will be published and made available to the general public to gather their input and provide them with an opportunity to be part of the decision-making process. As the Prime Minister said, "It is only through consultation with the Rakyat and all the other stakeholders that we can achieve a strong, convincing and effective plan to implement our New Economic Model. The rakyat — and groups such as business leaders and investors — want and deserve input into the policy-making process. We must develop a

more consultative approach to engaging our most important stakeholders. Only through such a process can we broaden our viewpoints, challenge conventional wisdom, and help build transparent and open consensus for the right way forward. This is the path we will follow. People will come first."

Broadband on the front burner

Through a public-private partnership, a high-speed broadband network is being deployed in Malaysia and is capable of offering 10 Mbit/s to 100 Mbit/s. The government decided to launch this public-private partnership with an allocation of RM 2.4 billion over three and half years, while Telekom Malaysia will provide RM 8.9 billion more over 10 years. The first part of phase one is to connect 1.3 million premises with fibre-to-the-home (FTTH) which can reach an individual household or to the building (FTTB) by the end of 2010.



Malaysia is divided into three zones and this first roll-out is targeted for zone 1, which has a high population density, as well as being economically well off. This network will be open access and with fair access pricing and competition among all service providers. All subscribers will receive a minimum of 20 Mbit/s. After phase one it would begin — broadband for the general public, which will deliver 2 Mbit/s and will consist of both wired and wireless networks.

In March 2010, the Prime Minister launched a high-speed broadband service at Merdeka (Independence) Square in Kuala Lumpur. Recognizing high-speed broadband as a key enabler to change Malaysia from a medium-income to a high-income country, he said: "Definitely, high-speed broadband will make Malaysia a 21st century nation." The new service is expected to stimulate the economy, enhance competitiveness, reinforce local and foreign investor confidence, enrich creative and innovative minds, and act as a conduit to disseminate information and knowledge to the people.

"It cannot be denied that high-speed broadband will make our lifestyle more sophisticated, making it easier for us to communicate with one another. For example, I have been using this service when I invited 300 of my Facebook friends to have tea with me recently. From 138 000, who have registered as my Facebook friends, I invited 300 of them for a tea reception. I feel this is my way of communicating with the people directly," the Prime Minister said.

In a bid to drive the social and economic transformation towards achieving high-income nation status, the Prime Minister went on to announce the following national broadband initiatives:

- ▶ The setting up of some 246 community broadband centres for 615 000 people.
- ▶ The establishment of people's Internet centres at 138 Information Department premises nationwide for 400 000 users.
- ▶ Providing e-kiosks at community centres nationwide.





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ICT and the Multimedia Super Corridor

The Multimedia Super Corridor (MSC), created thanks to heavy investment by the Malaysian government to attract domestic and foreign investors to its ICT industry, now serves as the backbone of the ICT infrastructure in the country. It is supported by high-speed links that to Japan, the Association of Southeast Asian Nations (ASEAN), the United States and Europe.

The development and widespread use of ICT are central to the realization of a knowledge-based economy. ICT usage has improved efficiencies among Malaysian enterprises and increased Malaysia's competitiveness in the global economy.

The computing segment is the largest application segment for semiconductor consumption in Asia while communications and consumer applications are the fastest growing segments, according to the International Data Corporation. Globally, Malaysia is ranked as the third most favoured location for outsourcing of business processes. Malaysian ICT companies are capable of providing a wide range of services, including:

- ▶ *mobile and wireless communication;*
- ▶ *business application software development;*
- ▶ *Internet-based business applications in the financial sector;*
- ▶ *digital content development;*
- ▶ *networking and outsourcing for e-commerce;*
- ▶ *bio-informatics;*
- ▶ *e-government.*

Malaysia is a top choice among companies in West Asia for ICT off-shoring. Progressive government policies, a world-class environment and attractive incentives will continue to attract business from around the globe.

- ▶ Building a total of 873 telecommunication towers, including 278 in Sabah and 257 in Sarawak.
- ▶ Allocation of funds from the universal service provision (UPS), with the providers agreeing to hand out laptops to needy students nationwide.
- ▶ The agreement of Telekom Malaysia to reduce broadband packages with netbooks from RM 50 to RM 38 — in the UPS areas, this would be further reduced to RM 20.

Pekan leads the digital transformation

Meanwhile, the citizens of Pekan in Pahang will be experiencing the latest digital technology in a new programme announced at the end of January 2010. The Digital Pekan programme aims to ensure that the benefits of digital technology are accessible to all within the district.

The launching of Digital Pekan marks the determination of the government to incorporate information and communication technologies (ICT) and broadband into the digital district strategy, in line with the national agenda. The digital district programme is a key contributor to achieving the national target of 50 per cent broadband penetration by end of 2010. The launch of Digital Pekan was organized by the Ministry of Information, Communications and Culture,



together with the Malaysian Communications and Multimedia Commission (SKMM).

The Prime Minister stated that "In our outreach to the rakyat wherever they may be, bridging the digital divide through the delivery of modern facilities and services to various parts of the country via the approach in creating digital districts is a step in the right direction. Everyone everywhere should and will be able to enjoy the benefits of ICT and broadband so that Malaysia can move towards becoming a high-income nation... The digital district strategy employs a 'building block' approach — working on the smallest units. And with the integration of these units, we get to build up 'digital states' and thereon towards a 'digital nation'."

The Digital Pekan programme will set the pace for the development of other districts in the country. Through smart collaboration with various stakeholders from the government, the private sector and academia, the initiative will include the drive to own a personal computer and will provide services such as wireless hot spots, free e-mail accounts and e-government services to the rakyat in Pekan.

Innovative partnerships between the public and private sectors are needed to create opportunities and solutions to realize the vision of a digital district. Apart from the Ministry of Information, Communications and Culture, and SKMM, the Pekan project has been developed through the support and collaboration of many partners and sponsors, including Wi-Net Technology Sdn Bhd, Telekom

Malaysia Berhad, Intel Malaysia Sdn Bhd, HeiTech Padu Berhad, Astro, Hewlett-Packard Malaysia, Danawa Resources Sdn Bhd, Maxis Communications Berhad, DiGi Telecommunications Sdn Bhd, Celcom Axiata Berhad, U Mobile Sdn Bhd, the Malaysian Administrative Modernization and Management Planning Unit and the Ministry of Education.

The broadband experience centre within the Pekan Resource Centre will provide a good opportunity for the rakyat to experience new broadband services and applications. This opportunity will be organized as part of an education and awareness programme relating to broadband services. Initiatives to create more local content will help increase literacy and digital inclusion among the rakyat of Pekan. The project reflects the message that broadband and going digital, with innovation as a way of life, will pave the way to creating a better quality of life and a brighter future for future generations of Malaysians.





Wang Jianzhou

Chairman and CEO, China Mobile

Wang Jianzhou is the President of China Mobile Communications Corporation, and the Chairman and CEO of China Mobile Limited. He formerly served as the Director General of the Department of General Planning of the Ministry of Information Industry, and Chairman and President of China United Telecommunications Corporation Limited.

Under Mr Wang's leadership, China Mobile has attained the largest market capitalization among global telecommunication companies, with a subscriber base of 530 million. The mobile network covers more than 99 per cent of China's national population. The brand value of China Mobile is estimated at USD 39.2 billion. Mr Wang was chosen as a *Business Week* Best Leader for 2006, and in 2008 he co-chaired the World Economic Forum Annual Meeting in Davos, Switzerland.

Mr Wang is one of the three winners of the 2010 ITU World Telecommunication and Information Society Award. In this article, he tells us how the company he runs is promoting information and communication technologies to improve people's lives throughout China and highlights its future outlook.

Connecting the world via mobile phones

■ Company profile

In terms of subscriber base and network coverage, China Mobile Communications Corporation (China Mobile) is the world's largest mobile operator. Established on 20 April 2000, it is the majority shareholder of China Mobile Limited, a company that went public on the Hong Kong and New York Stock Exchanges in 1997. Currently, China Mobile Limited is the largest telecommunication company by market value. The company has been selected by the Financial Times as one of the "FT Global 500" and by Forbes magazine as one of "The World's 2000 Biggest Public Companies".

The China Mobile Group's business grew steadily in 2009, despite facing multiple challenges. We successfully competed to win higher market share by attracting new customers, while maintaining a low customer churn rate. The Group preserved its

existing customer base and kept average minutes of usage per user per month stable. The total customer base at the end of 2009 reached 522 million, of which more than 65 million were net additions. The contribution to total revenue from value-added business increased substantially, including revenue generated from mobile music, which again exceeded USD 1.5 billion. And the Group's total voice usage volume was around 2919 billion minutes, with average minutes of usage per user per month at 494 minutes and average revenue per user per month at USD 11.

We maintained our world-class network quality and continued to widen our international roaming service coverage. The number of base stations exceeded 460 000, with a population coverage rate of 99 per cent, while the fibre-optic base station access rate surpassed 96 per cent, putting our services in the near vicinity of most office and commercial buildings. We completed the upgrading of our core network to

be fully IP-based, hence laying a solid foundation for a full-service network that is geared to future needs and capable of providing integrated services.

Bridging the digital divide

China mobile plays a key role in bridging the digital divide through the construction and operation of a reliable telecommunication network. The company has been instrumental in bringing telecommunication access to more than 77 000 remote rural villages, as well as in launching an array of products and services to promote rural development and the creation of a "New Countryside".

To ensure that mobile telecommunication is affordable to rural residents, China Mobile promotes several specially-priced local calling packages in rural markets. For example, there are special pricing packages for rural users who primarily use their phones within limited geographic areas, allowing for





significant cost savings. This is in line with three major principles that the company applies in rural markets: lower average revenue per user per month; lower average minutes of usage per month; and lower cost.

While upgrading the rural information network, the company has worked alongside national and local governments to promote the spread of information technology. By offering a suite of new products and services, the company has helped to drive development in rural business and trade. This, in turn, has increased financial service capabilities and gone some way towards addressing employment challenges in rural areas.

Reducing emissions and green actions

As the leading operator, China Mobile is strongly committed to conserving energy and reducing emissions. Since initiating its Green Action Plan in 2007, the company has worked to improve network efficiency; compared to 2005 levels, energy use per unit of telecommunication traffic has decreased by 49 per cent. By the end of 2009, our "Green Boxes" environmental protection campaign was active in all of our proprietary sales outlets, and more than 5 million mobile phones and accessories had been recycled.

China Mobile cooperates with telecommunication vendors, promotes seven energy-efficiency standards for telecommunication equipment, and has built a green industry value chain. This has led to an overall decrease in the energy and space required for telecommunication equipment in China. This year, the company has already saved 1.8 billion kilowatt-hours of electricity. By 2012, it will reduce energy use by 20 per cent per unit of telecommunication traffic, as compared to 2008 levels — equivalent to a reduction of 11.8 billion kilowatt-hours of electricity during that period.

Beijing Olympics partner

As the mobile telecommunication services partner for the 2008 Beijing Summer Olympic Games, China Mobile ensured uninterrupted communications support and services throughout the event. We were with the Olympic Torch Relay team every step of the way, as it ascended the icy heights of Mount Everest, passed through the tropics of Hainan Island, and finally went along the streets of old Beijing to the ultra modern Olympic Stadium, the "Bird's Nest". We won praise from industry peers and games organizers alike. As the International Olympic Committee



President Jacques Rogge said, "China Mobile's innovative technology brought the world a hi-tech Olympics." Success at the Olympics improved our business and service levels and greatly enhanced our company's brand value.

To ensure the best service for the Beijing Olympic Games, the company provided:

- ▶ Three base stations on the peak of Mount Everest. The highest, at an altitude of 6500 metres, enabled full coverage for the Olympic torch relay via Everest.
- ▶ The fastest photo transmission for the Olympics — with data cards embedded in cameras, photographers could send off their photos directly after taking them.
- ▶ Network coverage with the largest capacity — during the opening ceremony, 260 000 subscribers registered on China Mobile network in and around the Bird's Nest, generating 220 000 calls per hour. Some five million China Mobile subscribers downloaded the Olympic theme song "You and Me" in the 24 hours after it was performed at the dazzling opening ceremony, breaking the record for the fastest publishing of a single song.

During the Olympics, China Mobile signed roaming agreements with 26 mobile carriers, including Vodafone, AT&T, T-Mobile, NTT DoCoMo, Telstra and Telenor.

3G development

In 2009, with the second and third phases of network construction completed, 3G network coverage fanned out to include 238 cities across the country, including a 70 per cent coverage rate of prefecture-level cities. Technological innovations helped solve critical network challenges, enabling the quality of the 3G network to be close to that of our 2G network.

We are participating in the development of TD-SCDMA (TD) technology throughout the entire supply chain, and the Group's parent company has set up a joint research and development incentive fund to promote TD terminals. The aim of the fund is to attract additional participation and investment from major terminal manufacturers. As a result of such collective efforts, there are already 266 different designs of TD terminals on the market, ranging from high-end series with improved features, to models for the mass market priced below USD 150.

China Mobile has promoted the international standardization of TD-LTE in several international organizations, paving the way for the continuous and healthy development of the TD industry. The group will debut the first TD-LTE showcase network at World Expo 2010 in Shanghai.





AFP/Imaginechina

Fireworks illuminate country flags at World Expo 2010 in Shanghai during the opening ceremony

Future outlook

The effect of the global financial crisis on the Chinese economy, changes in the competitive landscape, the increasing mobile penetration rate, along with convergence across telecommunications, Internet, and radio and television broadcasting networks, all pose fresh challenges for the future development of China Mobile.

Fortunately, the Chinese government has pursued policies aimed at boosting domestic consumption and strengthening economic growth. The resulting economic development and growing consumer purchasing power will lead to increased demand for telecommunication and information services throughout all sectors, particularly from individuals and families. We also expect to see growth in the corporate sector, driven by accelerating demand from enterprises and industry.

The government attaches great importance to home-grown innovation, which gives us confidence to move ahead with our 3G development. In addition, the flourishing mobile Internet and the “Internet

of Things” concept, as well as the integration of mobile payments in the financial system, have all created new revenue stream possibilities and present us with opportunities for future development.

China Mobile believes in growth via making new markets, and advocates for rational competition to preserve industry profitability levels. Based on our strong foundation and integrated capabilities, the Group will focus on growing its telecommunication and information service business, continuing to meet our customers’ needs, and achieving sustained growth. Driven by value creation, we will expand 3G services and promote mobile broadband services to individuals, families and corporate customers. We will move into new business areas in mobile Internet and the “Internet of Things”. At the same time, we will capitalize on our overall influence to promote and participate actively in research on the development of LTE mobile networks.



Robert E. Kahn

Chairman, CEO and President of the Corporation for National Research Initiatives

Robert E. Kahn is Chairman, CEO and President of the Corporation for National Research Initiatives (CNRI), which he founded in 1986 after a 13-year term at the United States Defense Advanced Research Projects Agency (DARPA). CNRI is a not-for-profit organization for research and development of the National Information Infrastructure.

Following a Bachelor of Electrical Engineering from the City College of New York in 1960, and MA and PhD degrees from Princeton University in 1962 and 1964 respectively, Dr Kahn worked at AT&T and Bell Laboratories before he became Assistant Professor of Electrical Engineering at the Massachusetts Institute of Technology (MIT). He took a leave of absence from MIT to join Bolt Beranek and Newman, where he was responsible for the system design of the Arpanet, the first packet-switched network.

In 1972, Dr Kahn moved to DARPA and subsequently became Director of its Information Processing Techniques Office. There he initiated the United States government's Strategic Computing Program. Dr Kahn conceived the idea of open-architecture networking. He is a co-inventor of the TCP/IP protocol, and was responsible for originating DARPA's Internet Program.

More recently, Dr Kahn has developed the concept of a digital object architecture to provide a framework for interoperability of heterogeneous information systems. He is also co-inventor of Knowbot programs, mobile software agents in the network environment. Among his numerous awards, Dr Kahn received the Presidential Medal of Freedom in 2005 and the National Medal of Technology in 1997.

Interview with Dr Robert Kahn, co-inventor of the Internet

1 *Some 40 years ago, you showed the world how to connect different kinds of computers on different types of computer networks. The modern Internet is the direct result of those efforts. How do you feel about this huge success?*

»» **Robert Kahn:** I used to do white-water canoeing when I was a little younger. You put your canoe into the river and it just keeps going because of the raging rivers. And it feels a little bit like this whole Internet evolution has been like a raging white-water stream that we got into some 40-odd years ago, and still going. It's pretty amazing to see what has happened around the world. In 1973, the initial work on Internet protocol development began, and, by the mid-1970s, a nascent Internet was created within the research community. It was not until 1983 that the Internet protocols were formally adopted for use.

The most eye-opening of all of the events that I've witnessed was probably at the 2003 World Summit on the Information Society in Geneva, when for the first time I got to witness all the nations of the world, coming together and publicly discussing what the impact of the Internet was on their country, and how they planned to deal with it, going forward.

Note: Dr Kahn's full interview is available online at www.itu.int/itunews

2 *There are those who say that the underlying architecture of the Internet may not cope with ever-growing traffic from new, bandwidth-hungry applications. They advocate a clean-slate approach to the future Internet. Are they justified? Or is evolving the Internet the answer?*

» **Robert Kahn:** From my perspective, the Internet is a global information system that enables component structures like networks, computers and devices of different kinds to intercommunicate by passing information between them. The essence of the Internet is the protocols and procedures that enable this to happen. The protocols and procedures were designed to be independent of the kinds of networking and computing components that comprise it.

We have to keep evolving the Internet. And the way to evolve it is by integrating with or building on what's there. I don't think you need to destroy what exists in order to create a better future. When the original computer networks were developed, they weren't developed by destroying the telecommunications infrastructure. Where we are today with the Internet, we can do the same thing by leveraging the capabilities that are there to build new and better, more powerful, more relevant applications for the future and more relevant infrastructure to support those applications.

A clean slate is not really practical. Maybe it once was, when there was nothing to begin with. But once you have something that's widely deployed and in daily use by a large fraction of the world's population, you have to work with what you have.

3 *You developed the digital object architecture concept. What is it exactly and how does it work?*

» **Robert Kahn:** The Internet, as originally envisioned by me and others that I worked with, involved moving bits around from place to place on a worldwide basis, without having to know details like what network the party was on, how to route data, and so forth. It was a convenient way to get information (as essentially undifferentiated bits) from one place to another, reliably and rapidly.

What occurred to me, a number of years ago, was that we needed to take an additional step forward, and begin to think about the Internet as a vehicle for managing information, as opposed to just delivery of undifferentiated bits. The problem with much of the technology on the Internet today is that it is a function of other technology that's available on the Internet. To give you an example, when I first started in computer networking, the way we addressed computers was by the wire that the computer was connected to — on the one and only network in existence. When we got to multiple networks, then that wire might actually go to another network, and so it wasn't sufficient to say "send it out on that wire", you had to say "then what? Where else would it have to go?" So we created the notion of IP addresses to identify the machines, regardless of where they were. And then we had to create simple ways for people to remember those addresses. That was a kind of application, which is now well-known as the domain name system (DNS). We made the decision to adopt the DNS in the mid-1980s; and it has served us well for more than two decades.