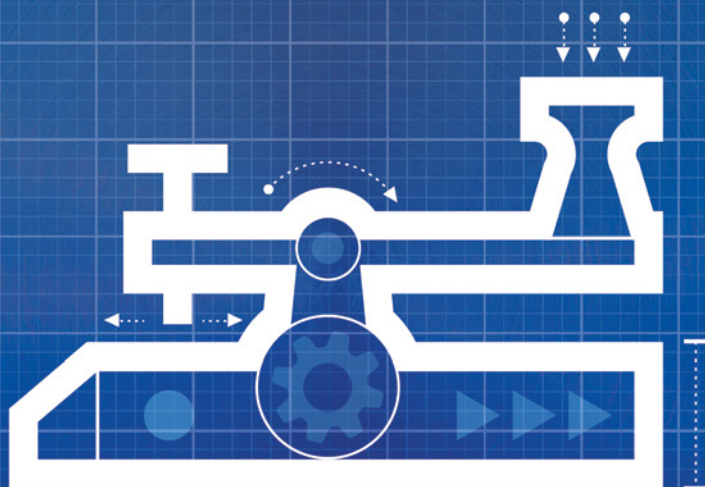**17 May 2015**

ITU 150th ANNIVERSARY CELEBRATIONS

PROGRAMME

ITU

On the cover:

Innovating Together: Telegraph *The first device that could provide long-distance transmissions of textual or symbolic messages.*

The harnessing of electricity in the 19th century led to the invention of electrical telegraphy. In 1839, the world's first commercial telegraph service opened in London, and in 1844 Samuel Morse started a service in the United States. The Telegraph spread rapidly. In 1851, the telegraph service linking Britain and France with a submarine cable carried over 9000 messages. The Reuters news agency sent the latest news racing over the wires. As telegraph lines crossed national borders, new international agreements had to be forged. On 17 May 1865, twenty nations gathered in Paris to sign an international framework, forming the International Telegraph Union. The Morse code was standardized and later became an ITU standard.

CONGRATULATIONS on the 150th anniversary of the International Telecommunication Union!

ITU has earned its global reputation for resilience and relevance. I applaud the agency's many contributions as the oldest member in the United Nations system.

Telecommunications – as well as information and communications technology – drive innovation. The digital revolution has transformed our world. We communicate more easily than ever before. But we need to be more than connected – we need to be united.

That is why the United Nations is mobilizing the world to forge a bold, new agenda for sustainable development.

ICTs can help achieve its goal of a life of dignity for all. New information and communications technology can help boost the economy and protect the environment.

This is a milestone year – the 150th anniversary of ITU, the 70th anniversary of the United Nations, and the potential starting year for transforming our world.

Let us work together to harness the power of technology for our common future.

Thank you.

Ban Ki-moon,
Secretary-General, UN

THIS YEAR, 2015, marks the 150th anniversary of the International Telecommunication Union. Established in 1865, ITU has reaffirmed its reputation worldwide as one of the most resilient and relevant organizations and continues its work as the specialized agency of the United Nations, and its oldest member, dealing with state-of-the-art telecommunications and information and communication technologies.

The remarkable history of ITU exemplifies its stellar role in connecting the world to the most advanced and innovative means of communication, from the days of the telegraph to the Internet and mobile broadband, which now allows us to be in touch anytime, anywhere with friends, family, colleagues and even things.

As we celebrate our 150th anniversary, we look back with pride at our accomplishments. And we look forward to the future as we respond to the rapid changes in the global ICT environment.

The digital revolution has transformed the world. The global economy is now driven by ICTs and these technologies pervade every aspect of our lives. ICTs are also the catalysts for shaping the post-2015 sustainable development agenda.

By connecting the world to communications, ITU helps make our world safer, more peaceful and progressive, and contributes to achieving a sustainable future for all.

I wish you a very productive 150th anniversary in 2015.

Houlin Zhao,
Secretary-General, ITU

1865

*ITU Founding
Member
States, then...*

Austria-Hungary

Baden

Bavaria

Belgium

Denmark

France

Greece

Hamburg

Hanover

Italy

the Netherlands

Portugal

Prussia

Russia

Saxony

Spain

Sweden (and
Norway)

Switzerland

the Ottoman
Empire (Turkey)

Wurtemberg

THE HISTORY OF ITU has been interwoven with some of the landmark inventions and innovations in communications over the past 150 years. In the 1850s, soon after Samuel Morse started a service in the United States, telegraph lines crossed national borders and new international agreements had to be forged. In 1865, twenty nations gathered in Paris to sign an international framework on 17 May, and formed the International Telegraph Union.

17 May is now observed annually as World Telecommunication and Information Society Day.

The theme for ITU's 150th anniversary "Telecommunications and ICTs: drivers of innovation" is in line with several core activities and imperatives of ITU and underlies the work of the three Sectors of the Union as well as ITU Telecom.

In a rapidly evolving global ICT environment, fostering growth and innovation at all levels – from policy-makers and industry to academia and civil society¬ – is the key to meeting the aspirations of end-users and people around the world

as we embrace the digital world. Broadband infrastructure development is a critical element in ensuring that ICTs are used innovatively as delivery vehicles for health, education, governance, trade and commerce in order to achieve sustainable socio-economic growth.

Innovative ICTs and broadband access are now recognized as critical factors in achieving an environmentally sound and sustainable future in the post-2015 era. Innovative measures can bridge the digital divide between countries, between cities and rural areas, and those living in differing socio-economic levels, providing new ICT opportunities.

ITU's 150th anniversary focuses attention on our accomplishments. As the specialized agency of the United Nations for information and communication technologies, we can now look ahead at driving innovation in ICTs together with our 193 Member States and a membership of over 700 private sector entities and academic institutions.

2015

*ITU Founding
Member
States, now...*

Austria

Belgium

Denmark

France

Germany

Greece

Hungary

Italy

Netherlands

Norway

Portugal

Russian Federation

Spain

Sweden

Switzerland

Turkey

150th Anniversary Partners

Ministry of Communications and High Technologies, Azerbaijan

ITU has played a great role in the development of global telecommunications and formation of the information society in the world. Therefore, the 150th anniversary of ITU should be considered a great achievement in the history of telecommunications. The application of modern technology in people's everyday lives has improved their living standards and stimulated the development of education and science. After being elected to the ITU Council we are even more eager to share our triumphs and success stories with the ITU community. Hence we continue to represent Azerbaijan at the highest level and we are proud to be a Gold Partner of the 150th anniversary of ITU.

Ministry of Communications and Information Technology, Saudi Arabia

The International Telecommunication Union has the world leading role in the ICT sector and is an essential pillar for the progress of nations. The 150th anniversary of ITU is a major milestone in its distinguished history, and a starting point towards new horizons at a time when ICT has become an essential service to the peoples of the world. The Kingdom of Saudi Arabia, since becoming a member of ITU in 1949 and of its Council In 1965, has actively contributed to the work of ITU and continues to be fully committed to supporting ITU in achieving its mission for the future.

Telecommunications Regulatory Authority (TRA), United Arab Emirates

We are pleased to convey our congratulations on the 150th anniversary of ITU, an organization which is the principal organ of the United Nations on ICT and telecom-related matters. ITU, which started modestly with 20 participating members, now proudly stands firm with the support of 193 Member States in addition to Sector Members, Associates and Academia. The organization, which was founded as the International Telegraph Union, has emerged as a multi-faceted specialized UN agency which facilitates saving lives, assists developing countries in their ICT projects, develops standards for ICT services, and facilitates the management of scarce resources. As we mark the sesquicentennial of ITU, let us pledge to work even harder to further the vision and mission of ITU and build a future where all members of the human family are connected and enjoy access to ICT services.

1865 2015

Thank you to our Partners

Gold Partners

MINISTRY OF COMMUNICATIONS AND HIGH TECHNOLOGIES OF THE REPUBLIC OF AZERBAIJAN
Republic of Azerbaijan

المملكة العربية السعودية
Kingdom of Saudi Arabia

TRA
TELECOMMUNICATIONS REGULATORY AUTHORITY
United Arab Emirates

Silver Partners

RÉPUBLIQUE DE CÔTE D'IVOIRE
Union - Discipline - Travail
Republic of Côte d'Ivoire

Republic of Ghana

ZIMBABWE
Republic of Zimbabwe

Bronze Partners

ART
RÉPUBLIQUE CENTRAFRICAINE
Central African Republic

HUAWEI

inmarsat

NTT Group

ROHDE & SCHWARZ

Rostelecom

ITU celebrates its 150th anniversary as the leading United Nations agency for telecommunication and information and communication technologies, driving innovation in ICTs together with 193 Member States and a membership of over 700 private sector entities and academic institutions.

12:30
- CICG Opens to participants

13:00
- Arrival of VIPs

13:30
- Opening Ceremony
- Welcome Address by *ITU Secretary-General* **Houlin Zhao**
- Message from *UN Secretary-General* **Ban Ki-moon**
- Keynote Speech: **Ms Doris Leuthard,** *Minister of Environment, Transport, Energy and Communications,* Switzerland

13:30
cont.
- Historical ITU150 video
- ITU150 Awards Ceremony and high-level discussion
- Recognition of ITU Founding Member States
- Recognition of long-standing ITU industry members

15:15
- Interactive Innovation Break

16:15
- ITU 150 app Q&A with audience
- Video of global 150 anniversary celebrations
- Recognition of ITU150 sponsors
- One Day on Earth: video
- Discussion Panel: ICTs driving a sustainable future
- Greetings from Outer Space and global celebrations

18:00
- Closing Ceremony

Anchored by **Imogen Foulkes***, BBC Switzerland correspondent*

1865
150 ITU
2015

Thomas Wiegand • Martin Cooper • Bill Gates • Robert E. Kahn • Mark I. Krivocheev • Ken Sakamura

1865

150 ITU

2015

MARTIN COOPER is a pioneer in the wireless communications industry; an inventor, entrepreneur and futurist. He has been a contributor to the technology of personal wireless communications for over 50 years. He conceived the first portable cellular phone in 1973. Cooper knew then that people needed the freedom that comes from anywhere, anytime telephony in contrast to being tethered to a desk or a car. He has been referred to as the 'father' of portable cellular telephony and is recognized as an innovator in spectrum management.

Cooper was a submarine officer in the U.S. Navy. Following military service, he became a division manager and head of R&D for Motorola over his 29-year tenure at the Company. As a serial entrepreneur, Cooper has started a number of businesses including co-founding GreatCall, Inc., maker of the Jitterbug phone and service, ArrayComm, the world leader in smart antenna technology and Dyna LLC, a business incubator, where he currently serves as Chairman.

Cooper is a member of the National Academy of Engineering and was an inaugural member of the Wireless History Foundation (WHF) Wireless Hall of Fame. He is the recipient of the IEEE Centennial Medal, was awarded the Prince of Asturias Prize for Science and Technology; is a co-recipient of the Charles Stark Draper Prize; one of the world's preeminent awards for engineering achievement, and the 2013 winner of the coveted Marconi Prize. Most recently, Cooper was awarded the IEEE Masaru Ibuka Consumer Electronics Award.

Cooper holds a B.S. and an M.S. in Electrical Engineering from the Illinois Institute of Technology on whose board of Trustees he serves. He also serves on committees of the Federal Communications Commission and the United States Department of Commerce.

Robert E. Kahn

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, 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 programmes, mobile software agents in the network environment.

Among his numerous awards, Kahn received the ITU World Telecommunication and Information Society Award in 2010, the Presidential Medal of Freedom in 2005, and the National Medal of Technology in 1997.

Mark I. Krivocheev

MARK I. KRIVOCHEEV was born in the USSR on 30 July 1922. He graduated from the Moscow Telecommunications Institute in 1946.

In 1966, he became Doctor of Technical Sciences and in 1968, he was awarded the rank of Professor. In 1992, he became a Corresponding Member of the Academy of Technological Sciences of the Russian Federation.

Mark I. Krivocheev is best known outside Russia for his work in the International Radio Consultative Committee (CCIR) of the International Telecommunication Union. In 1970 he became Vice–Chairman of CCIR Study Group 11 (Television) and in 1974 he was elected Chairman. His function was to coordinate studies in television broadcasting. The proposal for a world television digital standard (Recommendation 601) earned ITU-R the Emmy Engineering Award. Other recent texts of prime importance adopted by the ITU-R are Basic parameter values for the HDTV standard for the studio and for international programme exchange (Recommendation 709); Method for the subjective assessment of the quality of television pictures, etc. in high–definition television (Recommendations 500–4 and 710).

He has received many government awards and the USSR State Prize. In 2007, he was named laureate of the ITU World Telecommunication and Information Society Award. The Montreux Symposium gave him its Gold Medal in 1987, and the EBU awarded him a certificate on the occasion of the 60th anniversary of the CCIR in 1988. In 1990, following the adoption of CCIR Recommendations on HDTV, his achievements were praised around the world: NANBA awarded him a special plaque, the Australian Department of Communications and Broadcasting awarded him a certificate, and France has made him a Chevalier de l'Ordre National de Mérite.

Ken Sakamura

KEN SAKAMURA, born in Tokyo in 1951, received a Ph.D. in Electrical Engineering from Keio University, Japan in 1979, and subsequently became a research associate at the University of Tokyo, where he has stayed ever since.

Currently, he is a professor of the Interfaculty Initiative in Information Studies at the Graduate School of the University of Tokyo, the director of the YRP Ubiquitous Networking Laboratory (UNL for short), and the chair of TRON Forum and uID Centre.

He has been the leader of TRON Project since 1984, and has designed the TRON open computer system architecture which will be useful for ubiquitous computing of the future.

Today, the real-time operating systems based on the TRON specifications are used for engine control on automobiles, mobile phones, digital cameras, and many other appliances, and are believed to be the among most popular operating systems for embedded computers around world.

The R&D results from TRON Project are useful for ubiquitous computing. For example, UNL joined the standardization efforts at ITU-T and helped produce a series of Recommendations, including H.642 "Multimedia information access triggered by tag-based identification". The idea behind H.642 series is based on de facto "ucode" standard developed by UNL for communication in the age of the Internet of Things.

For his achievements, Sakamura has won many awards: Takeda Award, the Medal with Purple Ribbon from Japanese government, Okawa Prize, Prime Minister Award, and Japan Academy Prize. He is a fellow and the golden core member of the IEEE Computer Society.
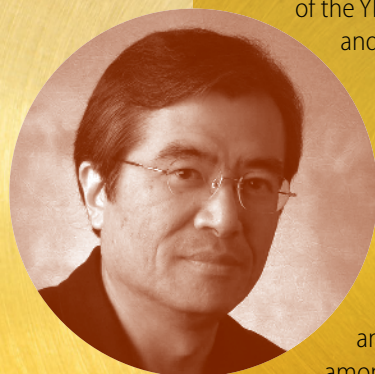
Thomas Wiegand

THOMAS WIEGAND is a professor in the department of Electrical Engineering and Computer Science at the Technical University of Berlin and is jointly heading the Fraunhofer Heinrich Hertz Institute, Berlin, Germany. He received the Dipl.-Ing. degree in Electrical Engineering from the Technical University of Hamburg-Harburg, Germany, in 1995 and the Dr.-Ing. degree from the University of Erlangen-Nuremberg, Germany, in 2000.

As a student, he was a Visiting Researcher at Kobe University, Japan, the University of California at Santa Barbara and Stanford University, USA, where he also returned as a visiting professor. He was a consultant to Skyfire, Inc., Mountain View, CA, and is currently a consultant to Vidyo, Inc., Hackensack, NJ, USA.

Since 1995, he has been an active participant in standardization for multimedia with many successful submissions to ITU-T and ISO/IEC. In 2000, he was appointed as the Associated Rapporteur of ITU-T VCEG and from 2005-2009, he was Co-Chair of ISO/IEC MPEG Video.

The projects that he co-chaired for the development of the H.264/MPEG-AVC standard have been recognized by an ATAS Primetime Emmy Engineering Award and a pair of NATAS Technology & Engineering Emmy Awards. For his research in video coding and transmission, he received numerous awards including the Vodafone Innovations Award, the EURASIP Group Technical Achievement Award, the Eduard Rhein Technology Award, the Karl Heinz Beckurts Award, the IEEE Masaru Ibuka Technical Field Award, and the IMTC Leadership Award. He received multiple best paper awards for his publications. Thomson Reuters named Wiegand in their list of "The World's Most Influential Scientific Minds 2014" as one of the most cited researchers in his field.

Bill Gates is co-chair of the Bill & Melinda Gates Foundation. Along with co-chair Melinda Gates, he shapes and approves grant-making strategies, advocates for the foundation's issues, and helps set the overall direction of the organization.

Bill and Melinda Gates work together to expand opportunity to the world's most disadvantaged people by collaborating with grantees and partners. They also participate in national and international events and travel extensively to focus attention on the issues the foundation champions.

Gates began his major philanthropic efforts in 1994, when he created the William H. Gates Foundation, which focused on global health. Three years later, he and Melinda created the Gates Library Foundation, which worked to bring public access computers with Internet connections to libraries in the United States. Its name changed to the Gates Learning Foundation in 1999 to reflect its focus on ensuring that low-income minority students are prepared for college and have the means to attend. In 2000, to increase efficiency and communication, the two groups merged into the Bill & Melinda Gates Foundation.

In 1975, Gates left Harvard University in his junior year to focus on Microsoft, the company he founded with his childhood friend Paul Allen. As chief software architect and chairman, Gates led the company to become the worldwide leader in business and personal software, services, and solutions. In July 2008, Gates transitioned into a new role as chairman of Microsoft and advisor on some key development projects.
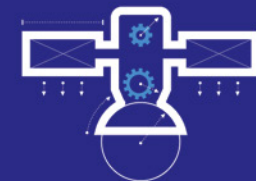
Telegraph

Fixed Telephone

Radio

Broadband

Satellite

Television

Internet

Big Data

Mobile Phone

Cybersecurity

Internet of Things

Cloud Computing

150 ITU

innovating together

150 ITU 1865 2015

150

ITU

1865 - 2015

innovating together

www.itu150.org

download the ITU150 app at www.itu150.org / app