



Pakistan
Telecommunication Authority

50th Anniversary of World Telecommunication & Information Society Day, 17th May 2019

Bridging the standardization gap

Telecommunication and ICTs: Drivers of Innovation



International
Telecommunication
Union

President
Islamic Republic of Pakistan
Dr. Arif Alvi

Prime Minister
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Imran Khan

Federal Minister for Information
Technology & Telecommunication
Dr. Khalid Maqbool Siddiqui

Federal Secretary for Information
Technology & Telecommunication
Maroof Afzal

Chairman PTA
Major General Amir Azeem Bajwa (R) HI (M)

World Telecom and Information Society Day (WTISD) is being celebrated on May 17 and theme for this year "Bridging the standardization gap" holds special significance for Pakistan.

The purpose of World Telecommunication and Information Society Day (WTISD) is to help raise awareness of the possibilities that the use of the Internet and other Information and Communication Technologies (ICT) can bring to societies and economies, as well as of ways to bridge the digital divide.

Government of Pakistan is cognizant of the fact that widespread adoption of ICT services necessitates the implementation of international standards in developing countries to bridge the digital gap.

ICT standards are a critical factor in a country's global economic competitiveness. These standards can provide a common platform on which innovation can proceed, giving developing countries the opportunity to create for the world market.

The Government of Pakistan is committed to providing the best possible ICT services to its people. I am hopeful that as we continue to progress in the ICT arena using international ICT standards, we will be able to achieve our goal to maximize the effectiveness of policy development, project delivery and decision making for the betterment of Pakistan.

It is gratifying to note that the World Telecommunication and Information Society Day (WTISD) is being celebrated this year under the theme "Bridging the standardization gap" along with the 50th anniversary of World Telecommunication and Information Society Day. The efforts and initiatives undertaken by ITU for the promotion, development and standardization of telecommunications across the globe are commendable.

Convergence of telecommunication and IT services has created a global info-structure, which plays a vital part in transformation and economic growth. This year's theme helps draw attention to the role that standards play in creating economic value, advancing innovation and help attain the Sustainable Development Goals. The achievement of an information society and knowledge economy is one of the main priorities of our government to enhance efficiency in various facets of the economy, creating new opportunities for employment, service delivery, networking, and education. Pakistan will continue to benefit from new standardized technologies with opportunities to innovate, transform and improve.

I would like to congratulate all associated with the ICT sector and urge them to keep themselves abreast of the latest developments in the field for developing the country's IT and telecommunications industry.

The World Telecommunication and Information Society Day (WTISD) celebrated on 17th May, 2019 is indeed a landmark in the global community's efforts to address the issues related to Information and Communication Technologies worldwide. The theme this year "Bridging the Standardization Gap" is aimed at achieving better opportunities for economic development and technological innovation.

The ITU provides a platform where experts from the developing world get a chance to be part of the standardization process. ICT standards are necessary for ensuring interoperability and connectivity within a global information infrastructure.

In the context of the increasingly diversified ICT applications, the Government of Pakistan is working to improve ICT tools useful in promoting greater government transparency and efficiency of service delivery to public.

An e-ready country necessitates that ICTs must be utilized and used in all aspects of social, educational and business life. Non adoption of universal IT standards can drive up the cost of day-to-day business, government and consumer activities. Partnerships and collaboration between the public and private stakeholders is important to stimulate creative initiatives.

I am confident that our joint efforts will yield better results for the benefit of our country. Our efforts would be further strengthened with the backing of international community, particularly the assistance and guidance of multilateral agencies like ITU in shaping our policies to bridge the digital divide.

The World Telecommunication and Information Society Day (WTISD) celebrated on 17th May, 2019 is indeed a landmark in the global community's efforts to address the issues related to Information and Communication Technologies (ICTs) worldwide. This year, the theme selected by International Telecommunication Union (ITU) "Bridging the Standardization Gap" is to achieve the goal of bridging the gap of digital divide.

As a new digital society takes shape, we must foresee the possibilities and challenges about the capabilities of current and future technologies, and account for obstacles along the path to digital transformation. The ultimate goal of ITU standardization is the establishment of high-quality international standards, developed using an open, inclusive process, meeting the needs of ICT innovators in a wide variety of industry sectors.

The time has come to generate unique ideas through collaboration and coordinated efforts involving standardized technologies and convert them into tangible results. Consequently, Pakistan shall benefit and progress in the future with this digitalization process.

There is no doubt that innovation is essential not only to our sector, but to our wider economies. With the right approach, cooperation and guidance of agencies like ITU, we can harness the enormous power of IT & Telecommunication for socio-economic development and make Pakistan digitally progressive. Our efforts would be further strengthened with the backing of international community, particularly the assistance and guidance of agencies like ITU in shaping our policies to make Pakistan digitally progressive.

ITU celebrates the World Telecommunication & Information Society Day (WTISD) every year on 17th May. This year's theme is "Bridging the Standardization Gap (BSG)"

Countries around the world are leveraging Information and Communication Technologies (ICTs) to ensure their next leap towards socio-economic advancement. According to International Telecommunication Union (ITU) statistics, in developing countries, steady growth has increased the percentage of the region's population using the Internet from 7.7 per cent in 2005 to 45.3 per cent at the end of 2018. Internet usage in Pakistan has also increased exponentially thus positively affecting the development process. Pakistan's telecom sector has become a role model for other sectors in reshaping the economic destiny of the people.

The overarching goal of this year's World Telecommunication and Information Society Day is to address the disparities in the ability of developing countries, relative to developed ones, to access, implement and influence ITU's international standards. PTA strives to ensure that international best practices and standards are followed for the provision of smart, innovative and high-quality services to the consumers in Pakistan.

The future depends on all of us and our willingness to innovate and collaborate. PTA is making all-out efforts to ensure that the digital gap is bridged to achieve an economically innovative and knowledge-based Pakistan.

International
Telecommunication
Union (ITU)



International Telecommunication Union (ITU) is the United Nations specialized agency for information and communication technologies - ICTs. It was founded in 1865 to facilitate international connectivity in communications networks. ITU allocates global radio spectrum and satellite orbits, develops the technical standards that ensure networks and technologies seamlessly interconnect, and strives to improve access to ICTs to underserved communities worldwide.

ITU has three main areas of activity organized in 'Sectors':

- Radiocommunication (ITU-R) -- coordinates the vast and growing range of radiocommunication services, as well as the international management of the radio-frequency spectrum and satellite orbits.
- Telecommunication Standardization (ITU-T) -- formulates recommendations for standardizing telecommunication operations worldwide.
- Telecommunication Development (ITU-D) -- assists countries in developing and maintaining internal communication operations. ITU champions a number of major initiatives which encompass ITU's internationally-accorded mandate to 'bridge the digital divide'.

Source: International Telecommunication Union (<https://www.itu.int/en/>)

PTA - Enabling Financial Inclusion in Pakistan

Rapidly developing digital financial technologies via mobile phones provide an opportunity to offer financial services at much lower cost while providing access to wider segments of the society. Over the years, Pakistan Telecommunication Authority (PTA) has successfully partnered with the financial regulator, Fintechs, mobile operators and international development agencies to tap this opportunity to improve lives and strengthen development.

With light touch and progressive regulatory framework, the arrangements between mobile operators and banks have revolutionized the provision of banking services to the unbanked and poor in the country with over 47 million mobile financial accounts (m-wallets) and a network of above 425,000 mobile banking agents against only 13,692 traditional bank branches. Currently, there are over 955 million annual mobile banking transactions (2.6 million daily transactions) with an annual volume of over Rs. 3.7 Trillion (Rs. 10 billion worth of daily transactions). Mobile operators have played a vital role in this success, which was never foreseen by the traditional banking sector. Two telco-partnered banks, Mobilink Microfinance Bank (Jazz cash) and Telenor Microfinance Bank (Easy paisa) are main players in the mobile banking market with 90% market share in m-wallet accounts and 68% in active agents. PTA's initiative for the biometric verification of SIMs has played a pivotal role in the growth of

m-wallets in Pakistan. It allowed financially excluded population to open their m-wallets remotely through USSD channel as well as through biometric verification system devices installed at agent locations.

PTA is an active player in the implementation of National Financial Inclusion Strategy (NFIS), which was launched by Government of Pakistan in 2015. Under NFIS, PTA and State Bank of Pakistan are working with the stakeholders to launch an integrated platform / an interoperable solution which will allow any person with a basic mobile phone to open a digital transaction account of any bank from any mobile operator's network, swiftly through a USSD code from anywhere, at any time. To facilitate further proliferation of mobile banking in Pakistan, SBP and PTA have also signed MOU and developed appropriate regulatory framework for the technical implementation and interoperability of mobile banking. This regulatory framework has ensured facilitation to all the existing one-to-one arrangements of mobile operators and banks. Further, PTA has also issued licenses to Fintechs/Third Party Service Providers to play a catalyst role to provide technical services for the interoperability of innovative digital solutions for financial inclusions. To this end, PTA has also facilitated technical integration of mobile operators, Fintechs and banks.

The fast proliferation of 3G / 4G services, with the current base of 69.6 million broadband subscribers, has

also opened opportunities for advanced digital payments and e-commerce. The enabling regulatory framework and prosperous digital financial services market in Pakistan has also attracted Foreign Direct Investment and international partnerships in the sector. For example, Ant Financial Services Group ("Ant Financial"), with its technology in Alipay, the World's largest digital payment platform, has reached a strategic partnership agreement with Telenor in Pakistan, where Ant Financial will invest USD 184.5 million for a 45% stake in Telenor's easypaisa to further develop mobile payment and digital financial services. Further, Alipay/Ant Financial and Telenor have also launched an innovative block chain based remittance service in Pakistan. Such partnerships will strengthen future digital payment platform and inclusive financial services to individuals and small business in Pakistan.

Access to financial services is critical for an inclusive growth, poverty reduction and women empowerment - however, a considerable population of Pakistan is still financially excluded. To rectify this, continuous collaborations between Fintechs, mobile operators and banks with ample support and facilitation from the financial and telecom regulators shall pave way for innovative solutions and access to underserved markets in new ways.

Dr. Shahbaz Nasir
(PTA)

Pakistan ICT regulatory regime has been ranked as the only 4th Generation Regulatory regime in South Asia as per ITU ICT Regulatory Tracker. Pakistan is ranked 35 out of 190 countries worldwide



50th ANNIVERSARY
World
Telecommunication and
Information Society Day

Bridging the
standardization gap

17 May 2019



#WTISD www.itu.int/wtisd



World Telecommunication &
Information Society Day 17th MAY 2019



Bridging the
standardization gap

A New Spectrum of Possibilities

We celebrate "50th ANNIVERSARY OF WORLD TELECOMMUNICATION AND INFORMATION SOCIETY DAY (17th May 2019)" with an unwavering commitment of bridging the standardization gap and further strengthening the telecom sector of Pakistan with state of the art telecommunication systems and services.



PTA Milestones:

- Telecom sector deposited Rs. 147.2 billion as contribution to national exchequer during the FY 2017-18.
- Foreign Direct Investment (Inflow) in telecom sector reached at US\$ 246 million, which is 7.2% of the total FDI (Inflow) in Pakistan, during FY 2017-18.
- PTA launched Device Identification, Registration & Blocking System (DIRBS)
- Implementation of Third Party Service Providers Licensing and facilitation for National Financial Inclusion Strategy.
- Introduction of Biometric Verification System for sale of SIMs
- CMO's license renewal policy 2019
- Restoration of Internet Services in Bajaur District- 25th March 2019
- Pakistan has been Ranked Number "1" for the Provision of Most Affordable Telecom Services- (World Economic Forum)
- Pakistan ICT regulatory regime has been ranked as the only 4th Generation regulatory regime in South Asia as per ITU ICT Regulatory Tracker. Pakistan is ranked 35 out of 190 countries worldwide
- PTA committed to Polio eradication efforts
- PTA received over 4,905 complaints during the year and 99.64% were redressed in cooperation with respective operators.
- PTA introduced online NOC portal for citizens of Pakistan to register IMEI based devices.
- PTA introduced a new online Complaint Management Software (CMS) for customer complaints.
- PTA launched its new website (www.pta.gov.pk) with features providing access to persons with disabilities
- Test and Trial Framework for 5G and Advanced Technologies



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IoT (Internet of Things): The Next Chapter

The unforeseen growth and impact of internet has revolutionized human life. Internet of Things (IoT) is an emerging topic with technical, social and economic significance. Consumer products, durable goods, industrial and utility components and everyday objects are being designed and operated to be interconnected to transform our everyday life. In a broader sense, the term IoT means a large network of interconnected devices from everyday life to sophisticated industrial and scientific components, sharing data and communicating with each other without any human or machine intervention over the internet through the use of electronics and sensors.

Despite widespread development, we've only seen a fraction of what the Internet revolution has yet to bring and IoT is here to augment the speed of this revolution. The automation and data sharing among these devices brings new concept of life in the form of smart homes, smart cities and connected industries. It is a future in which companies will indulge in digital evolution using IoT, Artificial Intelligence and machine learning to rapidly evolve in a way never seen before.

Global sharing of telecom services and enhanced wireless communication coverage has opened up great opportunities in the field of IoT. Fast speed wireless networks are proving to be a catalyst for the growth of IoT. With 5G on the horizon, IoT is going to play a substantive role in 5G network services and devices and vice versa. Pakistan is also moving towards IoT technological advancement by improving its wireless network communication, introducing new technologies through the process of type approval of smart devices. Pakistan Telecommunication Authority (PTA) as a regulator is mandated to issue guidelines and implement policies for wired/wireless communication networks which encourages telecom operators to deploy latest technologies, expand telecom infrastructure country-wide and to use state of the art equipment.

Pakistan has emerged as one of the leading markets in telecommunications. With 161 million cellular mobile subscribers touching a 78% penetration rate out of the total population. Almost 70 million broadband users are accessing the internet with majority on 3G/4G networks. With enhanced data speeds and good coverage, our cellular networks are providing a platform for IoT in Pakistan. Some projects using the IoT technology have been initiated like 'Safe City' project being executed in several cities of Pakistan. Smart meter reading mechanism for utility companies has also been introduced. In health care, hospitals are facilitating their patients with IoT applications and devices, and manufacturers of home and industrial appliances are connecting these appliances through this technology. We see the

application of IoT in our everyday life in the form of medical devices sending data to doctors through internet, utility meters sending data of energy consumption to the utility company, sensors installed in our vehicles sending data to the owner, controlling the home appliances remotely through internet and many more.

With huge number of devices connected through internet, a vast amount of data is also being generated and with today's high end computers and large data stores it is becoming more feasible for the IoT industry to grow. However, due to the open nature of internet, diversity of technology, platform segmentation and lack of standardization, there is big concern for data security and privacy in IoT. At the centre of creating a vast, reliable IoT network lies a significant issue: compatible standards and framework to address the issues of security and privacy. There is a dire need for standardization to connect more devices and applications through a set of standards that are safe and secure. To reap the benefits of IoT to the maximum, telecom regulators, international standardization bodies and policy makers should come forth and play their role in formulating and issuing guidelines related to IoT security.

Rizwan Muazzam (PTA)

PTA Vision

Create a Fair Regulatory Regime to Promote Investment, Encourage Competition, Protect Consumer Interest & Ensure High Quality ICT Services

Striving Towards Consumer Satisfaction

1. Web Portal



2. SMS



PTA is mandated for protection of consumers interests and rights. Consumer Protection Directorate is responsible for registration & redressal of telecom consumer complaints made to the Authority through:

Website: <https://www.pta.gov.pk>
Email: complaint@pta.gov.pk
Toll Free Number: **0800-55055**
Telephone: **051-9225325**
Fax: **051-2878127**
Post: PTA H/Qs, Sector F-5/1, Islamabad.

E-commerce Juggernaut in Pakistan: Role of Broadband & Mobile Connectivity

and Pakistan is no different.

It was in the early 2000s, when the Internet bubble was just about to burst, that Pakistan saw its first exploration into the electronic commerce market space. At that time, e-commerce was considered a distant dream, an entrepreneur's fantasy with internet access being a privilege and smart phones mere foreign objects accessible to a few. However, the digital revolution and broadband penetration enabled the e-commerce market to witness phenomenal

e-commerce can provide entrepreneurship and self-employment opportunities to the youth (Pakistan has 100 million youth under the age of 24). Also we are making spectrum available so that expansion in Next Generation Services can be supported.

Already digital payments (includes credit/debit cards, interbank funds transfer (IBFT), prepaid cards and mobile wallets) have shown growth of 93.7 percent in FY18 to reach Rs40.1 billion as compared to Rs20.7 billion in FY17. To bolster



growth. A simple mobile device became an important conduit for e-commerce. Pakistan's e-commerce sector has slowly become a juggernaut in recent years. The State Bank of Pakistan (SBP) puts the size of the e-commerce market in Pakistan at Rs99.3 billion in FY18 (FY17: Rs51.8 billion) mainly depending on cash on delivery. Market estimates put the share of postpaid cash on delivery (COD) settlements at around 80-90% of the total volume and about 60% of the total value of e-commerce in Pakistan. However, PTA and SBP have been trying to bridge this gap where they have issued Third Party Service Provider licenses. SBP is establishing its own payment gateway for the ease of doing business and promotion of e-commerce in Pakistan. Ministry of Commerce is developing formal ecommerce framework and lead world ecommerce players like Ali Baba have already shown interest in Pakistani market. Pakistan has become a hub of digital innovations where local entrepreneurs have launched several e-commerce websites and some of the popular websites have also received foreign investments. More and more products & services are now being made available online in Pakistan. Pakistan is also making good progress on the Business to Business (B2B) front as the software industry aims to achieve the goal of USD 5 billion export mark by the year 2020. Approximately 10,000 new IT graduates are being produced every year and we expect that

growth here, some recent noteworthy initiatives taken by Ministry of Information Technology and Telecommunication (MoITT) and Ignite includes the launch of National Incubation Centres (NICs) and the Digital Skills (DigiSkills) Training Program. The NICs are facilitating and nurturing new ICT entrepreneurs and start-ups by tapping a vast network of business partners and mentors including specialized innovation centers in thematic areas including FinTech, Artificial Intelligence, and Internet of Things. Meanwhile DigiSkills, which is Pakistan's largest online, free training programme; aims to equip a million people across the country with digital skills over a period of two years.

PTA is striving to create a viable environment for the proliferation of standardized mobile devices, increased investment in network infrastructure, and availability of spectrum for mobile broadband, in the knowledge that these will further drive growth. Broadband is more than just a technology - indeed, it is the future of shared opportunities, a medium where all countries - especially Pakistan - can compete in the digital economy; where it can deliver e-services and initiatives to its people; and where the imaginations and skills of today's children will deliver the inventions and innovations of tomorrow.

Tayyaba Iftikhar PTA



50th Anniversary of World Telecommunication & Information Society Day, 17 May 2019



BRIDGING THE STANDARDIZATION GAP



BUY ONLY PTA APPROVED MOBILE DEVICES

To ensure usage of only mobile devices that conform to international technical standards, health & safety and imported via formal channels, PTA is blocking devices that are programmed with non-standard IMEI or imported without fulfilment of Government of Pakistan's codal formalities.

Users are advised that prior to buying/obtaining a mobile device, authenticate status of the device by **sending SMS** for each **15 digit IMEI** to **short code 8484** and ensure device status is **PTA Approved/Compliant**. IMEI number can be obtained by **dialing *#06#** from your device dial pad or can be found written on the box of the mobile device.

Registration of mobile devices can be done via

- a) <https://dirbs.pta.gov.pk/drs>
- b) USSD *8484#
- c) Mobile Operators Franchisee Centre, list is published on www.dirbs.pta.gov.pk

For all queries and issues please email: typeapproval@pta.gov.pk or Helpline: **0800-55555**

