

## **WHAT IS INTERNATIONAL TELECOMMUNICATION UNION (ITU) AND HOW IMPORTANT IS IT FOR MERCHANT MARINE?**

ITU is the leading United Nations agency for information and communication technologies. As the global focal point for governments and the private sector, ITU's role in helping the world communicate spans 3 core sectors:

radiocommunication, standardization and development. ITU also organizes TELECOM events and was the lead organizing agency of the World Summit on the Information Society.

ITU is based in Geneva, Switzerland, and its membership includes 191 Member States and more than 700 Sector Members and Associates.

"The International Telecommunication Union is a forward-looking, dynamic organization that has been in the business of helping the world communicate for over 140 years. A resilient organization, ITU remains young at heart and takes the lead at the cutting edge of global communications.

The basis of our social and economic life — and our lifestyles — are increasingly dependant on new, state-of-the-art information and communication technologies. And ITU is at the forefront of this next digital revolution. Our standards in telecommunication and radio communication already underpin the entire global communications framework, and will serve as the platform for a whole range of as yet undreamt-of services. Meanwhile, our development sector ensures that no one is left out of the digital revolution.

ITU works in partnership with our membership, which includes 191 Member States as well as over 700 Sector Members and Associates who hail from the private and public sector and include international and regional telecommunication organizations. As it expands its efforts to develop an enabling environment through policy and regulatory modernization and harmonization, the Union's priorities are to strengthen cyber security and emergency communications, support the migration to next-generation networks, and build capacity especially in least developed countries.

The watchword is 'convergence'. It's changing the nature of what we once called telecommunications services, it's reshaping the way we consume and access those services — and it's transforming the networks by which they are delivered. In the wired — or wireless — world of the future, we will have more mobile applications and we will see an exponential growth of the Internet, which is today still in its infancy. More will also be achieved in Speech Recognition Technologies, breaking all language and literacy barriers — making the world a true Knowledge Society.

**ITU carries the torch to connect all the world's inhabitants to information and communication technologies, especially those who remain unconnected from the enormous benefits unleashed by the ongoing digital revolution.**

**As the specialized UN agency for ICT, it is our Endeavour to fast-track the 2015 targets of the Millennium Development Goals and empowers people everywhere with the means to seek information and knowledge**

**We are dedicated to ensuring access to communications anytime anywhere and at an affordable price."**

**Dr Hamadoun I. Touré  
Secretary-General  
International Telecommunication Union**

**ITU's mission is to enable the growth and sustained development of telecommunications and information networks, and to facilitate universal access so that people everywhere can participate in, and benefit from, the emerging information society and global economy. The ability to communicate freely is a pre-requisite for a more equitable, prosperous and peaceful world. And ITU assists in mobilizing the technical, financial and human resources needed to make this vision a reality.**

**A key priority lies in bridging the so called Digital Divide by building information and communication infrastructure, promoting adequate capacity building and developing confidence in the use of cyberspace through enhanced online security. Achieving cyber security and cyber peace are amongst the most critical concerns of the information age, and ITU is taking concrete measures through its landmark Global Cyber security Agenda.**

**ITU also concentrates on strengthening emergency communications for disaster prevention and mitigation. While both developing and developed countries are equally vulnerable to natural disasters, poorer nations are hardest hit because of their already fragile economies and lack of resources.**

**Whether through developing the standards used to create infrastructure to deliver telecommunications services on a worldwide basis, through equitable management of the radio-frequency spectrum and satellite orbits to help bring wireless services to every corner of the world, or through providing support to countries as they pursue telecommunication development strategies, all the elements of ITU's work are centered around the goal of putting every human being within easy and affordable reach of information and communication and to contribute significantly towards economic and social development of all people.**

**ITU remains dedicated to helping the world communicate.**

**Every time someone picks up a telephone and dials a number, answers a call on a mobile, sends a fax or receives an e-mail, takes a plane or a ship, listens to the radio or watches a favorite television programme, they benefit from the universal telecommunication and ICT frameworks put in place by the International Telecommunication Union (ITU).**

**ITU has been at the cutting edge of information and communication technologies, defining and adopting the globally agreed technical standards that have allowed industry to interconnect people and equipment seamlessly around the world. It has also successfully regulated worldwide use of the radio-frequency spectrum, ensuring all international wireless communications remain interference-free to ensure the relay of vital information and economic data around the world.**

**Spearheading telecommunications development on a global scale, ITU also fosters the deployment of telecommunications in developing countries by advising on development policies, regulatory frameworks and strategies, and by providing specialized technical assistance in the areas of technology transfer, cyber security, management, financing, installation and maintenance of networks, disaster mitigation, and capacity building.**

**Founded in Paris in 1865 as the International Telegraph Union, ITU took its present name – the International Telecommunication Union – in 1934 and, in 1947, became a specialized agency of the United Nations. Nominated by leading international consultant Booz Allen Hamilton in 2002 as one of the world's topmost enduring institutions, ITU is also the most inclusive global telecommunications organization. A public-private partnership organization since its inception, ITU now has a membership of 191 countries and over 700 public and private sector companies as well as international and regional telecommunication entities. The Union's consensus-based approach gives a voice to all its members and its work helps deploy infrastructure, achieve connectivity, and provide efficient telecommunication services worldwide.**

**ITU's biggest achievement is undoubtedly the pivotal role it has played in the creation of the international telecommunications network – the largest man-made artifact ever created. Today, thanks to the advent of the Internet, mobile wireless telephony, convergence strategies and more, this network keeps us in touch, brings us world news and entertainment, provides access to a huge global store of information, and underpins the global economy. It would not exist without ITU's work.**

**Membership of ITU is open to governments, which may join the Union as Member States, as well as to private organizations like carriers, equipment manufacturers, funding bodies, research and development organizations and international and regional telecommunication organizations, which can join ITU as Sector Members.**

**With telecommunications taking on an ever-greater importance as the universal facilitator of global economic activity, membership of ITU gives governments and private**

organizations the opportunity to play an active role in the organization, which can boast more than 140 years' experience in building the world's communications networks.

Through membership of the world's largest, most respected and most influential global telecommunication organization, government and industry alike can ensure their voice is heard, and make an important and valued contribution to the developments reshaping the world around us. Direct involvement in the work of ITU gives all members a chance to influence, learn and play a part in forging a new world for a new millennium.

Private companies and other organizations may elect to join one or more of the Union's three Sectors, according to their particular sphere of interest. Whether through their participation in conferences, assemblies and technical meetings or in day-to-day work, members benefit from unique networking opportunities and a universal meeting ground where they can debate issues and forge deals and partnerships. ITU Sector Members also develop the technical standards which will underpin future telecommunication systems and shape tomorrow's networks and services. Finally, Sector Members gain privileged access to restricted first-hand information which can prove highly valuable in their business planning.

Because of its unique role and track record in worldwide telecommunications, ITU provides the ideal forum for governments and the private sector to come together to set agendas and policy frameworks that will have tremendous impact on the future of global business.

### **RADIOCOMMUNICATION SECTOR (ITU-R)**

Managing the international radio-frequency spectrum and satellite orbit resources is at the heart of the work of the [ITU Radiocommunication Sector \(ITU-R\)](#).

ITU is mandated by its Constitution to allocate spectrum and register frequency assignments, orbital positions and other parameters of satellites, "in order to avoid harmful interference between radio stations of different countries". The international spectrum management system is therefore based on regulatory procedures for frequency notification, coordination and registration. Major tasks of ITU-R also include developing standards for radio communication systems, ensuring the effective use of the radio-frequency spectrum and studies concerning the development of radio communication systems.

ITU-R further carries out studies for the development of radio communication systems used in disaster mitigation and relief operations and these can be found within work programmes of the Radio communication Study Groups. Aspects of radio communication services associated with disasters include disaster prediction, detection, alerting and disaster relief. In certain cases, when the "wired" telecommunication infrastructure is significantly or completely destroyed following a disaster, radio communication services are the most effective in disaster relief operations. Radio communication systems have

been expanding at an incredible rate in the last decades. Their importance as development infrastructure and as a major asset for governments, the telecommunications industry and the general public is unquestionable. Radio-frequency spectrum is a natural resource, and its rational and efficient exploitation can enhance a nation's productivity as well as the quality of life of its citizens. In order to derive its full benefits it is critical to develop and implement efficient national frameworks for spectrum management.

The ITU Radio Regulations, and particularly its Table of Frequency Allocations, have been revised and updated almost regularly in view of the enormous demand for spectrum utilization. This is critical to keep pace with the rapid expansion of existing systems as well as the spectrum-demanding advanced wireless technologies that are being developed.

The ITU World Radio communication Conference (WRC), which convenes every three to four years, is at the core of the international spectrum management process and constitutes the starting point for national practices. WRC reviews and revises the Radio Regulations, an international treaty establishing the framework for the utilization of radio frequencies and satellite orbits among ITU member countries, and considers any question of a worldwide character within its competence and related to its agenda. Equitable access to spectrum and orbital resources is of special concern, given the uneven needs of developed and developing countries. As a consequence, the principle of a priori planning of spectrum and orbit resources is considered in conjunction with a series of plans established by radio communication conferences. Through its various activities covering the implementation of Radio Regulations to the establishment of recommendations and guidelines on the usage of radio systems and spectrum/orbit resources, ITU-R plays a vital role in the global management of radio-frequency spectrum and satellite orbits. These limited natural resources are increasingly in demand from a large and growing number of services such as fixed, mobile, broadcasting, amateur, space research, meteorology, global positioning systems, and environmental monitoring that depend on radio communication to ensure safety of life on land, at sea and in the skies.

## **TELECOMMUNICATION STANDARDIZATION SECTOR (ITU-T)**

ITU's standards-making efforts are its best-known — and oldest — activity. Working at the coalface of the world's fastest changing industry, today's **Telecommunication Standardization Sector (ITU-T)** continues to evolve, adopting streamlined working methods and more flexible, collaborative approaches designed to meet the needs of increasingly complex markets.

Specialists drawn from industry, the public sector and R&D entities worldwide meet regularly to thrash out the intricate technical specifications that ensure that each piece of communications systems can interoperate seamlessly with the myriad elements that make up today's complex ICT networks and services.

The result of a cooperative effort that sees leading industry players put their competitive rivalries aside in favour of building global consensus on new technologies, ITU-T standards (known as Recommendations) are the bedrock underpinning the modern information and communication networks that serve as the lifeblood of virtually every economic activity. For manufacturers, they facilitate access to global markets and allow for economies of scale in production and distribution, safe in the knowledge that ITU-T-compliant systems will work anywhere in the world: for purchasers from telcos to multinational companies to ordinary consumers, they provide assurances that equipment will integrate effortlessly with other installed systems.

Today's working methods bear little resemblance to the old-fashioned paper-based procedures that once made standards agreement a lengthy and arduous operation. The development of electronic working methods, first introduced in the late 1990s, complemented by a dramatic overhaul of approval procedures in 2001, has meant that the time needed to adopt final technical texts has been cut by as much as 95 per cent. But if procedural reform was top of the ITU-T agenda five years ago, today's keynote is cooperation and collaboration. There is now a general understanding that the nature of the ICT market means you cannot go it alone. That's why, over the past eight years, ITU-T has adopted a very proactive stance when it comes to working with other standards organizations, from large industry entities to smaller single-technology groups. As the only truly global ICT standardization organization, ITU has taken a lead role in bringing together senior figures from ICT standards groups worldwide, with a view to fostering inter-organizational cooperation and avoiding duplication of effort.

Other activities designed to promote a new spirit of collaboration include regular workshops on key industry topics, often in partnership with industry groups. Such workshops not only serve as a platform for better standards-making coordination, they also promote the knowledge sharing essential for the rapid development of new technologies, particularly in developing countries. A recent initiative will bring greater participation of academia and encourage emerging young talents to familiarize themselves with the work of ITU. Looking ahead, convergence between different industry types is one of the main challenges facing the Sector. With traditional telephone services, mobile networks and TV and radio broadcasting now beginning to carry new kinds of services, the scene is set for a revolution in the way we communicate and process information.

As in the past, when seismic shifts transformed the simple world of the telegraph to create wire line telephony, followed by radio and satellite systems, fiber optic networks, and cellular mobile, ITU-T plays a central and critical role in ushering in this new converged environment. ITU-T coordinates global efforts, promotes technical excellence and impartiality in standards development, and builds the consensus needed to ensure that new technologies and equipment are embraced worldwide.

## **TELECOMMUNICATION DEVELOPMENT SECTOR (ITU-D)**

The ITU [Telecommunication Development Sector \(ITU-D\)](#) was established to help spread equitable, sustainable and affordable access to information and communication technologies (ICT) as a means of stimulating broader social and economic development. Held every four years, the World Telecommunication Development Conference (WTDC) establishes concrete priorities to help achieve these goals. Through a series of regional initiatives together with comprehensive national programmes, activities on the global level and multiple targeted projects, the Sector works with partners in government and industry to mobilize the technical, human and financial resources needed to develop ICT networks and services to connect the unconnected. To that end, we are pushing for the expansion of global broadband connectivity that is pervasive, simple and affordable for all and enables the migration towards next-generation networks (NGN).

In order to address the challenges raised by fast-paced ICT growth, we promote an enabling regulatory and business environment through a range of tools for policy-makers and regulators that have resulted in innovation and a more efficient telecommunications marketplace. We support the deployment of new wireless and mobile technologies through projects that bring access to rural communities and, when necessary, provide disaster relief through emergency telecommunications. We furthermore help create an ICT-literate workforce through our numerous technical and policy training initiatives around the globe, paying particular attention to the specific needs of youth, women and people with disabilities. Acting as a promoter and catalyst for ICT development, ITU-D engages with government leaders and the international donor community to find the right balance between public and private investment. There is no “one-size-fits-all” strategy to create digital opportunity, and ITU-D assists Member States in elaborating targeted national e-strategies, including in the areas of e-government and e-learning. Further, we Endeavour to build safety in cyberspace by helping developing countries secure their networks and promote a culture of cyber security. In addition, ITU-D offers widely referenced, reliable statistics on trends and developments in the ICT field and organizes study groups on key questions facing governments and industry.

ITU-D provides a unique one-stop service for governments and private sector companies interested in forging new development partnerships, by identifying “win-win” opportunities for collaboration, and linking external partners with experienced ITU project specialists to ensure successful project implementation.

ITU-D’s activities, policies and strategic direction are determined by governments and shaped by the industry its serves. The Development Sector’s diverse membership includes telecommunication policy-makers and regulators, network operators, equipment manufacturers, hardware and software developers, regional standards development organizations and financing institutions.

This page contains contact information for many areas within the ITU. Paper mail may be addressed to each Bureau at the ITU postal address.

Don't know who to call? Call the ITU switchboard at +41 22 730 5111

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