



## *ITU Backgrounders*

# ACCESSIBILITY TO ICTs: ACHIEVING EQUITABLE COMMUNICATIONS FOR EVERYONE

### CHALLENGE:

***Cannot see screen,  
navigate websites***

### SOLUTIONS

Screen readers for computers, mobile phones

Converter: information into speech or Braille display

Gesture-based screen readers for touch screen tablets and phones

Tactile markers, tactile and/or audible feedback

Adjustable font sizes

Text-to-speech functionality

Screen magnifiers

Around 15 per cent of the world's population – or [some 1 billion people globally](#) – lives with some kind of disability. Information and communication technologies (ICTs) like mobile phones, Internet-connected devices and television, along with accessible ICT applications, provide disabled people with a way of interacting with the world beyond the physical constraints their disability imposes.

The ICT sector can play a key role in removing many of the barriers that limit access of persons with disabilities to public services such as health, education and information, reduce their opportunities to access the labour market, and diminish their opportunities for independent living.

But to ensure we realize the full potential of new technologies, ICT services and applications need to be designed taking into account the requirements of persons with disabilities, with accessibility issues firmly in mind – ideally, collaboratively with organizations representing persons with disabilities.

ITU estimates that only a fraction of persons with disabilities currently benefit from accessible ICTs, and that the economic cost of many of these technologies is major barrier to increased uptake in the developing world.

There's also a lack of technical standards that would allow developers to take advantage of global economies of scale when developing devices and applications that can benefit the disabled. Most online content, what's more, is only available in a fraction of the thousands of languages that are spoken and signed worldwide.

As the UN agency responsible for connecting the world, ITU is working actively to ensure that ICTs are developed in a way that makes them accessible and affordable for all.

In the area of technical standardization, ITU provides a neutral platform for the development and harmonization of international standards, facilitating the involvement of experts from the private sector, R&D centres and civil society groups around the world through its technical Study Groups.

In our [Telecommunications Standardization Sector, ITU-T Study Group 16: Multimedia](#) is the lead study group on ICT accessibility issues for persons with disabilities, and is responsible for innovations such as ITU-T Recommendation E.161, which has seen device manufacturers worldwide include a raised 'bump' on Key #5, to assist the visually impaired.

More broadly, ITU also plays a key role as a global advocate for the mainstreaming of the use of the '[universal design principles](#)' to ensure that all ongoing development work is disability-inclusive. In addition, the [Intersector Rapporteur Group Audiovisual Media Accessibility \(IRG-AVA\)](#), will study topics related to audiovisual media accessibility and



develop draft Recommendations for 'Access Systems' that can be used for broadcast, cable, Internet, and IPTV.

ITU's [Radiocommunication Sector](#) (ITU-R) is working on new digital TV and radio systems to enhance access for those with disabilities, while advances in developing wireless hearing aids are taking place within ITU-R [Working Party 5A](#).

### CHALLENGE:

**Cannot hear callers or access emergency services**

### SOLUTIONS

- Volume adjustment & speakers
- Relay services
- Video relay services
- SMS and MMS
- Visual or vibrating alerts
- Call logs
- Hearing aid compatibility
- Video/TV captioning/ signing

In ITU's [Development Sector](#) (ITU-D), the emphasis is on grass-roots engagement, awareness-building and information sharing. [ITU-D Study Group 1](#) recently concluded important work on *Access to telecommunication/ICT services by persons with disabilities and with special needs*. At the bureau level, the Telecommunication Development Bureau has produced online toolkits for developers, hands-on training materials and reports including the [Making Mobile Phones and Services Accessible](#) report and [Making TV Accessible](#) report, and promotes the sharing of best practice on policies, legislation and practices online and through series of regional workshops/forums held around the world in local languages. Future work of ITU-D will include the release of a model policy that governments can use to promote accessible ICTs through public policy making.

In addition to the work of the Sectors, ITU has also been working with Irish teenager **Joanne O'Riordan** to develop a ground-breaking accessibility-oriented robot. One of only seven people in the world born with Total Amelia Syndrome, Joanne's lack of limbs has not held her back, thanks to the power of ICTs to bring the world within reach. [Joanne's inspirational talk at ITU's Girls in ICT Day event in New York](#) in 2012 led to a pilot project with engineers at Trinity College Dublin, who unveiled a prototype of the accessibility robot, nicknamed Robbie, ahead of the 9<sup>th</sup> meeting of the Broadband Commission in Dublin in March, 2014. The project attracted additional funding from Commissioners President Paul Kagame of Rwanda and Digicel CEO, Denis O'Brien, and an advanced version is expected to be unveiled in 18-24 months.

### United Nations collaboration

ITU is also an active partner in the [United Nations Convention on the Rights of Persons with Disabilities \(CRPD\)](#), a legally binding international instrument that commits its signatories to build an inclusive society for persons with disabilities. Ratified by 147 states, the CRPD is the first human rights treaty of the 21<sup>st</sup> century. Through its expertise and active advocacy ITU is contributing to implement this treaty, and in particular Article 9 ([Accessibility](#)).

An example of such contribution was the initiative put together by ITU, together with the Broadband Commission, G3ICT, the International Disability Alliance, Telecenter.org, Microsoft, and UNESCO, to gather over 150 expert inputs from 55 countries to produce an assessment on how ICTs can be further utilized to promote the social and economic development of persons with disabilities. The result of this work culminated in the report [The ICT Opportunity for a Disability-Inclusive Development Framework](#), launched in September 2013 at the opening of the United Nations General Assembly



### ***An accessible ITU***

ITU is working to become a more accessible organization for its staff, delegates and the general public , through a new ITU [Accessibility Policy](#) to remove accessibility barriers in all ITU services.

#### **CHALLENGE:**

***Cannot use limbs, flex fingers,  
press/navigate buttons***

#### ***Solutions***

Voice recognition to activate voice  
commands for computers and phones

Auto text

Anti-shake apps

Adapted keyboards/mice

It's all part of ITU's commitment to bringing the empowering benefits of the latest technologies to everyone, everywhere.

Further information about ITU's activities on ICT accessibility, including the reports highlighted in this section is available at [www.itu.int/accessibility](http://www.itu.int/accessibility)