



Good practices and achievements in ICT Accessibility in the Americas Region

-Guidelines and recommendations-

Accessible Americas III
Mexico City – 28 to 30 November 2016

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1. INTRODUCCIÓN

1.1 ACCESSIBLE AMERICAS III

Globally, persons with disabilities (PwD) face a range of barriers and challenges relating to access to information, education and employment, which can be alleviated through equitable access to ICTs accessibility by legislators, policy-makers and regulators.

Some of the challenges PwD face in an ICT context include the cost and availability of necessary equipment such as mobile handsets, televisions, tablets and computers which offer features to enable PwD to use ICTs effectively. Even where there is no additional cost, and accessibility features are embedded (for example in mobile handsets), awareness, training and education of both users and service providers are often required in order to break the accessibility barrier.

As a result of ITU-D efforts to raise visibility on ICT accessibility policies to its Members, the Americas region developed a series of “Accessible Americas - Information and Communication for ALL” events held in Brazil in 2014, in Colombia in 2015, and in Mexico in 2016. The Accessible Americas events have become one of the key events in the Americas region focusing on ICT accessibility for PwD. In addition it brings together stakeholders involved in implementing ICT accessibility policies. These events aim to raise awareness, provide capacity building in ICT accessibility, share experiences, achievements and track concrete results regarding ICT accessibility within the Americas. The positive results provided by these events, represent good practices to be replicated.

1.2 UNDERSTANDING THIS DOCUMENT

This guide presents the developments and improvements in ICT accessibility across the Americas. These improvements have been divided into sections following the Model ICT Accessibility Policy Report as provided by the ITU¹. These sections cover the basic tools that policy-makers and regulators need to consider in order to improve ICT accessibility in their respective countries.

The experiences presented in this document should be used to inspire developments and improvements in ICT accessibility by other countries and related stakeholders in the Americas. Most of the practices and developments are presented considering that they can be replicated. Additionally there are remarks on existing laws and policies as well as examples of practices and regulatory frameworks on ICT accessibility, which could serve as reference to be applied in other countries and hence achieving an inclusive society.

2. ICT ACCESSIBILITY TOPICS

2.1 LEGAL POLICY AND REGULATORY FRAMEWORKS

2.1.1 Brazil: Adoption of a new General Regulation on Accessibility - GRA

The National Telecommunication Agency (Anatel) published the General Regulation on Accessibility – GRA (Resolution nº 677/2016 - Anatel) which defines rights and obligations for consumers and companies, respectively, gathering rules that already existed in several Resolutions as well, and aiming to promote a reasonable balance on the market, by defining lighter obligations to smaller operators. The GRA aims to remove barriers faced by PwD and to achieve an inclusive society. The new regulation enables impaired consumers to

¹ Model ICT accessibility policy report, ITU, November 2014. See: <http://www.itu.int/en/ITU-D/Digital-Inclusion/Pages/Reports.aspx> to download the pdf (In Spanish and English)

have the same treatment that other consumers receive, empowering them with new ICTs accessible functionalities and technologies.

2.1.2 Brazil: GRA Implementation Group

Members of Telecommunication operators, Associations and Anatel, make part of the RGA group, which guides the implementation of Resolution nº 667/2016's rules by promoting discussions on solutions and standards for PwD.

2.1.3 Mexico: Latest Mexican Developments on accessibility and ICTs

The Mexican government has published the web content accessibility guidelines to be followed by public agencies and state companies. The document contains the principles and technical aspects that should be followed to ensure that the 7% of Mexicans that have any type of disability have access to all information and public services. The Mexican Government's new online portal was launched in 2015 and is committed to have all of its content accessible to PwD.

2.1.4 Mexico: Accessibility guidelines for telecommunications operators

The Federal Telecommunications Institute will publish in December 2016 the accessibility guidelines to be followed by telecommunication operators. These guidelines define accessibility aspects relating to customer service, public phones and websites. These guidelines represent an important effort from the government to promote digital inclusion in the private sector. Telecommunication operators will have to:

- Publish contracts, tariffs and billing in digital accessible formats
- Catalogues of equipment's with accessibility functionalities
- Accessible public phone booths
- Customer service with accessibility measures
- Accessible websites (WCAG 2.0 AA)
- Communication and promotion for all users

2.1.5 USA: UMASS Medical School researches text simplification

With the collaboration of IBM, UMass Boston and the Worcester Polytechnic Institute, this research sums up to current World Wide Web Consortium's (W3C) work to produce accessibility standards for persons with cognitive and physical disabilities.

2.1.6 USA: Perkins Access initiative to support educational institutions in complying with US federal accessibility regulation

Several lawsuits have been filed in the USA against major organizations due to the lack of accessibility features on their websites. In response, the Perkins Access initiative consists on providing support for educational institutions to comply with federal digital accessibility regulations. Based on the support of a group of tech experts with different disabilities, Perkins organization generates digital assets' assessments and offers solutions for adapting institutional websites to the most recent regulatory standards.

2.1.7 Canada: emergency telecommunication

911 is Canada's National emergency line. Canadians who have a hearing or speech disability and who have registered can now send a text message 9-1-1 in the case of an emergency. This is done by first placing a voice call to 9-1-1 – this is to ensure operators can locate the individual making the 9-1-1 calls. The 9-1-1 operator, upon not receiving a vocal response, will check for the phone number in the database of text-to-9-1-1 users. The 9-1-1 operator will then send a text to the phone number who made the 9-1-1 call, beginning their interaction.

In this way, regardless of the person's abilities, all Canadians are able to access this service that is critical for health and safety.

2.2 PROMOTION OF PUBLIC ACCESS

2.2.1 Argentina: Seniors in San Luis

The government of San Luis province in Argentina, announced its new digital inclusion campaign that will target senior members from the community. The "Algarrobo Abuelo" campaign is part of the digital plan of San Luis 3.0 that seeks to digitalize the community's public services. It will also provide personalized support to teach seniors how to use their new devices. For example, through a sub initiative called "Nube de Plata", pensioners from the province will conform a network of retired volunteers to support teach their peers digital literacy skills.

2.2.2 Brazil: Availability of telecommunication documents in Braille or other accessible format

Receiving a telecommunication document in an accessible format from the operators became possible after the new regulation adoption. As requested by an impaired consumer, operators must send, at no costs, a copy of the contract, service plan offer, billing document, among other documents, in Braille or other accessible format, to visually impaired people (RGA's Article 8º, I).

2.2.3 Canada: Mapping to pinpoint accessible locations

Maayan Ziv, a student from Ryerson University that lives with muscular dystrophy, has developed an app that shows accessible locations worldwide. This has been very well received by wheelchair users and is also an invaluable database for public authorities and other parties concerned to pinpoint areas that need improvement. So far, 93 cities and 1629 places have been pinned.

2.2.4 Colombia: Convertic - screen readers and magnifiers

The government of Colombia acquired a 4 year-term license of JAWS (screen reader) and a license for MAGIC (screen magnifier) that is available to any person in Colombia that is blind or has low vision. Training is included and the government is providing digital literary courses for the use of this software. As part of this project, technical support as well as installation in libraries, in kiosks (ViveDigital) and other locations, is provided. This program enables PwD to access to screen reader and magnifier that would not be affordable otherwise. Moreover, this project targets a train the trainers' course for 50 persons with visual disability to ensure that this knowledge will be expanded. Creation of capabilities is a cornerstone of the program where more than 5,000 persons have been trained in the appropriation of ICT by PwD and elderly.

2.2.5 Colombia: AyudApps: Technological solutions to remove barriers for PwDs

Ayudapps is a project to develop technological solutions that respond to the needs of PwD and help them in their daily life. The project has several stages. In the first stage of the project any person could present or explain what type of barrier they encounter and what the needs are. The second stage invites developers to present their proposed solutions to address the need and eliminate the barrier. At the end the best project is selected. This initiative is led by the Ministerio de Tecnologías de la Información y Comunicaciones (MinTIC).

2.2.6 Colombia: MappAcc: Accessible locations app

MappAcc is an application that enables a person with a disability to know beforehand the level of accessibility of places, products and services. MappAcc allows a person with disability to evaluate the level of accessibility of a place. Once the user accesses MappAcc it geographically place him and will display categories (e.g., hotel, restaurant, hospital) with a checklist indicating the level of accessibility of the selected items. Such information will certainly be useful for another user. MappAcc seeks that in the long run, there may be an evaluation overtime as to whether a certain place has improved in accessibility and if so, a certification may be granted.

2.2.7 Peru: Peruvian Women and Vulnerable Population Ministry (MIMP) to support digital inclusion for PwD

The Women and Vulnerable Population Ministry (MIMP) from Peru, with the support of the National Council for PwD (CONADIS) and the Centre for Prevention of Drug Abuse (Cedro) signed an agreement to provide digital and financial training for PwD. This collaboration seeks to strengthen the digital skills of PwD. Beneficiaries will receive free training related to diverse software by using accessibility tools for persons with visual and hearing impairments.

2.2.8 Latin America: Launching People- Mixed Talents

“Launching People – Mixed Talents” is a Samsung program to get Millennials engaged in generating ideas and solutions for promoting digital inclusion of children in Latin America. The overall concept consists in combining the skills of young people from multiple backgrounds, to combine their ideas with guidance from experts in the technology and education fields.

2.2.9 USA: Programming and computer science to better prepare students with disabilities

According to an article published by the Huffington Post in April 2016, coding may generate important benefits particularly for students with learning disabilities. Some of the main reasons for this are that programming skills provide these students with the opportunity to strengthen their proficiency in areas such as organization, higher order thinking, self-esteem, socialization and teamwork. Coding skills offer solutions by building confidence and empowering them. For example the New York based organization Tech Kids Unlimited was created in 2009 to empower digital natives through the use of ICT tools. Another similar organization provides technical training to students with autism with the purpose of supporting them to fulfil their goals.

2.2.10 USA: TalentWorks online tool to guide accessible e-recruitment practices

The U.S. Department of Labour with the support of the Partnership on Employment & Accessible Technology (PEAT) launched TalentWorks, a free online resource that provides guidance for organizations to ensure that their web-based job applications and recruiting processes are accessible for PwD. Building a platform to provide accessibility guidance for employers may potentially improve hiring processes thus leading to a more diverse and inclusive workforce. Considering that most of the recruitment processes have recently moved online, this sort of initiative is necessary to promote equal opportunities to access the labour market.

2.2.11 USA: Bookshare: free accessible online library for US students

Bookshare is a digital platform initiated by Benetech a non-profit organization engaged in using technology to address social challenges. Under the sponsorship of the U.S. Department of Education, Office of Special Education Programs, the “Bookshare and Innovation for Education” initiative offers more than 390,000 free titles for US students who have visual impairments, physical or learning disabilities.

2.2.12 USA: New full page braille reader under development

A team of researchers at the University of Michigan is developing a prototype for a new Kindle-style full-page Braille display that would allow users to access content on a full page at the same time, instead of reading one line at a time. The new device works through a pneumatic system instead of an electronic one, with a display made of tiny bubbles that could be filled with air or liquid to become Braille characters.

2.2.13 USA: New gadget to help the visually impaired

Caltech, the California Institute of Technology, developed a wearable gadget named vOICe Device aimed at helping blind people experience the surrounding environment as it translates images into sound. The gadget has the shape of sunglasses and transforms the images captured by its attached camera into associated sounds via a computer algorithm.

2.2.14 USA: Indoor navigation system for the visually impaired

NavCog uses Bluetooth beacons strategically placed indoors to collect the data needed and generate a topology map that will guide the app user around universities, laboratories or even at home. In simple words, this works similarly to a GPS, but for indoors.

IBM Research teamed up with Carnegie Mellon University to develop NavCog and made its platform open source so developers from around the world can contribute to the project.

2.3 MOBILE COMMUNICATIONS ACCESSIBILITY

2.3.1 Argentina: Nahual and DANE

Argentinian company FDV Solutions is working in two digital inclusion projects called Nahual and DANE. The DANE project started in 2013 with the support of organizations such as the Argentinian Association of Parents of Autistic Children (APADEA) and the Argentinian Association for Down Syndrome. Its main objective is to create apps to promote ICT inclusion for PwD, with the support of experts in education, students and volunteers. One example is “Juguemos Todos” app, which was designed to enable persons with Down Syndrome to utilize information technologies.

2.3.2 Brazil: Hand Talk smart phone app

Hand Talk is a smartphone app developed to improve social interaction and facilitate independence for deaf mobile users. This app presents an animated avatar named Hugo who converts speech into sign language, acting as a personal sign language interpreter for deaf mobile users. Hand Talk won the 2015 Accessible Mobile Applications Contest, an ITU Regional Competition for the Americas, which judged creativity, development and user experience of the app.

2.3.3 Brazil: Obligation to disclose the accessible functionalities, facilities and technologies of handsets

The operators must publicize accessibility features for hearing impaired (like subtitles and messages options), for visually impaired (like screen reader, audio description, beeps, scanner, text-to-speech), for motor impaired (like voice recognition, voice reply, autotext) and for cognitive impaired (like voice recognition, text prediction), according to RGA’s Article 9º.

2.3.4 Brazil: Interaction through webchat, electronic message and video

The GRA establishes that there must be channels for accessible communication by Internet, with professional interpreters talking in Libras (the Brazilian language of hearing impaired people) to assist people with hearing impairments (RGA’s Article 8º, VI).

2.3.5 Brazil: Communication Intermediation Central – CIC

Fixed and Mobile Telephony companies must offer a CIC with interpreters in Libras for persons with hearing disabilities, able to receive video calls, besides message communication. The service will be free of charge and available twenty-four hours a day (RGA’s Article 14).

2.3.6 Mexico: Towi: app for developing learning capabilities

Towi is a technological platform meant to develop the learning abilities of children with disabilities through videogames in a computer or tablet. The platform initially assesses the cognitive profile of the child taking into account a test of the child and a questionnaire answered by her parents. This initial assessment allows that each child has her own route based on her requirements. The platform collects different metrics as response time, number of achievements, types of errors, level of accurateness, etcetera. Such information may also be consulted by parents, teachers and other professionals. Towi platform has undergone scientific validation, which provides elements for having it as a tool for assessing children’s cognitive status. Among the advantages is that the platform reduces time of testing and is automated.

Towi was created by students from Universidad Panamericana within a Microsoft contest (Imagine Cup). Further support for Towi App was provided by Wayra, an entrepreneur initiative of Telefonica. Currently Towi is being assessed by a group of experts in neurological and psychiatry sciences.

2.3.7 Mexico: IFT Accessible Mobile Handsets: site to find mobile handset with accessibility functionalities

In alliance with the Mobile Manufacturers Forum, the Federal Telecommunications Institute from Mexico created a website where the users can find mobile handsets with accessibility functionalities according with their needs (<http://movilesaccesibles.ift.org.mx>).

2.3.8 USA: Apple Accessibility Features

Apple released a new website promoting the different accessibility features embedded on some of its main products. The Apple Accessibility website shows a set of videos explaining how different devices can be used by PwD. The website is divided into five main sections targeting vision, hearing, mobility and other disabilities. It also includes a section for learning needs and inclusive education.

2.3.9 USA: New accessibility scanner for android app developers

Google launched in March 2016 a tool to help Android developers create more inclusive apps. The new Accessibility Scanner checks applications and suggests potential improvements to suit the needs of the users, such as enlarging touch targets, changing colours and other things. The tool is easy to use and it only requires clicking a button to search through the app and find gaps for accessibility improvements. Since the Accessibility Scanner does not require any technical skills, it is recommended for developers who may wish to check if their designs are accessible. It is also suitable for users to perform scans that will indicate the level of accessibility of the application and thus, the user may further request where necessary its access in an accessible format.

2.4 TELEVISION/VIDEO PROGRAMMING ACCESSIBILITY

2.4.1 Brazil: Assim Vivemos: Disability Film festival

Film Festival devoted to films and audio-visual contents in connection with disabilities. In 2015 the Film Festival received many films regarding autism, persons with Down syndrome and intellectual impairments. Consequently, the theme for 2015 was autonomy and the possibility of independent living. Assim Vivemos is accessible both from a physical perspective to the forum and also through audio description, closed caption. The debates during the festival, were provided with sign language interpretation. Assim Vivemos is organized by the Ministério da Cultura from Brazil with the sponsorship of *Banco do Brasil*.

2.4.2 Canada: Broadcasting accessibility fund enables inclusive access to audio-visual contents in Canada

The Broadcasting Accessibility Fund is a unique independent program approved by the Canadian Radio-television and Telecommunications Commission (CRTC) in 2012. Its main role is to “support and fund innovative projects that provide platform-neutral solutions to promote accessibility of all broadcasting content in Canada.” The Fund announced an award of \$723,500 dollars in grants to be divided between seven projects on accessibility broadcasting chosen by the Board of Directors. By investing in these initiatives, the Canadian government aimed at promoting innovative and cost-effective solutions that use technology to ensure equal content access for PwD.

Since 1995, the [Canadian Radio-television and Telecommunications Commission](#) (CRTC) has mandated some level of closed captioning. In 2007 that requirement became 100% operational in English and French-language programming. In 2011 and 2012, quality standards for closed captioning in French and English programming, respectively, were put into place.

Since 2001, certain amounts of described video – the narrated description of a program's main visual elements, such as settings, costumes, and body language – has been required. As of September 2019, the amount of described video that will be available to Canadians is expected to increase significantly.

2.4.3 Brazil /Canada/Colombia/USA: Disability Film festivals

There are several film festivals around the world for portraying disability culture, promoting films in the most accessible way, delivering films produced by PwD. Examples of such festivals are: Canada Calgary's "Picture This", Brazil, Assim Vivemos, New York's "Sprout" festival and "Smartic" and "Inclucine" in Colombia. All of them foster the creation of content and short films by PwD.

2.4.4 Colombia: El Movimiento: audio-visual accessible content

El Movimiento is a non-for-profit project that produces audio-visual contents that are accessible. Persons with different types of disabilities are involved along the production process. For example, blind persons and persons with low vision participate in the verbalization of dialogues and other non-visual elements to provide also audio description. Persons with hearing disabilities are involved in filming as camerapersons and also help in translating into sign language all the audio elements of the movies.

2.4.5 Colombia: Cine para Todos: WhatsCine

"Cine para Todos" uses an application named WhatsCine. Through the use of tablets and glasses the app allows a person with visual or hearing disability, to enjoy a movie jointly with family and friends. This project provides audio description in Spanish, which enables persons with visual impairments to listen all the key visual elements of the movie. The movies also have subtitles in Spanish to benefit persons with a hearing disabilities,

"Cine para Todos" is free in selected days and makes available staff for PwD assistance if required. This project was launched by the Ministerio TIC, Fundación Saldarriaga Concha, a non-for-profit organization, and Cine Colombia.

2.4.6 Colombia: Relay Centre

The relay centre takes advantage of several ICTs in order to provide different communication services to deaf, hard of hearing and persons with language disabilities in Colombia. Since 2001 the relay centre has evolved and currently provides: (1) relay services by means of a chat either through text or video; (2) online service of translation from and to sign language through a device with Internet connection and speakers; (3) a tool and a forum that purports to enable Colombians to appropriate ICTs both through sign language and written language; and (4) training to be a sign language interpreter.

The relay center is operated by the Federación Nacional de Sordos de Colombia (FENASCOL) sponsored by the Ministerio de Tecnologías de la Información y las Comunicaciones (MinTIC).

2.4.7 USA: Closed captioning improvements to provide accessible video programming in US

In order to provide users with accessible Television contents, the US Federal Communications Commission (FCC) adopted a series of amendments to its Closed Captioning rules for televised video programming. The document recognizes which institutions are responsible for the delivery of the captions, provides guidance for implementation and explains the accountability mechanisms.

2.5 WEB ACCESSIBILITY

2.5.1 Argentina: Ideaton

The Ministry of Seniors from Buenos Aires, Argentina in collaboration with the Ministry of Smart City organized an "Ideatón" event with the purpose of providing seniors with digital skills. A group of seniors were in charge of

guiding the working teams to enhance and evaluate the solutions. All of the teams presented their ideas to a jury and the best ones were selected to be further developed with the support of the government.

2.5.2 Argentina, Uruguay, USA and Mexico: Creation of capabilities

Web accessibility is impossible to achieve if developers and content creators do not know how to implement the web content accessibility standards. Universities and organizations in Argentina, Uruguay and USA are offering training in web accessibility related issues.

2.5.3 Brazil: Todos@Web (Web Accessibility Recognition Program)

The Brazilian Web Accessibility Recognition Program seeks to increase awareness of the need of PwD to access websites by encouraging website developers and by granting awards to individuals and enterprises. There are three categories for awards under this program, namely, (i) for individuals/enterprises that implement actions to promote web accessibility, (ii) for web projects that follow W3C standards and are creative and usable, and (iii) for apps and assistive technologies developed for non-profit and with open code. This project is led by the Brazilian Comitê Gestor da Internet in partnership with W3C Brazil and other Government entities.

2.5.4 Brazil: Accessible websites

The RGA's article 8º requires that all information provided by the operators in their websites, as well as in any other communication channel, must be in an accessible format, showing functionalities like text-to-speech, large print, apps for translation, among others. Anatel requested operators to use World Wide Web Consortium (W3C)'s standard for accessibility on web site.

2.5.5 Chile: Technical Norm about State Systems and Web Sites

The Chilean government presented in March 2015 the "Technical Norm about State Systems and Web Sites." The main objective of this regulation is to standardize the creation of accessible systems and web pages that allow PwD to equally interact with public services. It also requires government web sites to be designed and developed to guarantee full accessibility.

2.5.6 Ecuador: accessibility analyzer

The Ecuadorian government together with the Universidad Politécnica Salesiana developed an accessibility analyzer an online free tool that helps to identify accessibility problems in websites according to the Web Content Accessibility Guidelines.

2.5.7 Mexico: Web accessibility workshops

Last November 2015, at the "Accessible Americas II: Information and Communication for ALL" event in Medellin, the International Telecommunication Union (ITU) provided regional leaders with training on web accessibility policies. The workshop encouraged eliminating the barriers faced by PwD when accessing webpages. The policy framework suggested by ITU is to support governments in developing accessible digital platforms to provide equal services for PwD.

Recommendations include:

- Following international web accessibility standards
- Identifying and evaluating government websites
- Training web designers and encouraging private entities to elaborate accessible content

To encourage such developments Telefonica Mexico and start up accelerator Wayra have partnered with HearColors to teach Mexican developers how to create accessible web content.

2.5.8 Mexico: Puntos de Accesibilidad Web (PAW)/ HearColors

Web accessibility points (Puntos de Accesibilidad Web, PAW) is a project that creates laboratories in universities whereby students are first introduced to digital inclusion. Then students are trained with a special methodology so that they are able to perform website assessments pursuant to W3C accessibility standards. The first laboratory was opened at the Instituto Tecnológico Autónomo de México in November 2015, the second opened at the UNAM in November 2016, the biggest public university in Mexico. This project has been created and is being implemented by HearColors, which is an entity who aims to promote accessible websites through different actions and projects.

2.5.9 USA: Companies to create assistive devices to target the needs of PwD

During the last International Technology and Persons with Disability Conference in 2016, different companies presented their solutions for targeting the needs of PwD. Some of the new products that were presented included the Orbit Reader, which is a note taker with an eight-dot display where users can type. Other options were BrailleNote Touch by HumanWare that provides a touchscreen that determines where the user's fingers are on the screen and figures out the dot combination the user inputs.

2.5.10 USA: Web Accessibility Toolkit for Research Libraries

This project aims towards helping research libraries achieving digital accessibility by connecting research libraries with tools, peoples and examples. This project commits in making digital resources usable and accessible in research libraries. The toolkit provides explanation of standards, best practices, principles, as well as a step-by-step process to making an institution accessible. The toolkit was developed by a program of the Library of Congress in partnership with the Institute of Museum and Library Services.

2.5.11 USA: Social Media Accessibility Toolkit

The Social Media Policy Toolkit intends to help government agencies evaluate the accessibility of their social media programs, identifying areas for improvement, and provides an environment to share ideas and recommendations. This toolkit is a joint effort by US government agencies, which is enriched by collaborators and users both from public and private sector that share best practices for social media accessibility for public service. The toolkit provides reference to main social media, tips, examples and best practices. The toolkit is a living document, which enables it to be easily updated.

2.5.12 USA: Facebook uses artificial intelligence to address the needs of persons with vision disabilities

Facebook's automatic alternative text (Alt text) or image descriptions are generated with object recognition technology that determines the main objects that appear in a picture. This list is read to the users when they watch images on their newsfeeds: "Image may contain people, smiling, outdoors".

2.5.13 USA: New feature in Twitter for persons with vision disabilities

According to Twitter's blogpost from March 29, 2016, a new accessibility feature has been added to the application in order to "empower customers and publishers to make images on Twitter accessible to the widest possible audience." This new functionality allows users to add descriptive information or alternative text (alt text) to the images they tweet so that it can be picked up by mobile assistive technologies that support persons with vision disabilities.

2.5.14 Colombia: Convertic accessible websites

The government of Colombia has been training web developers in Web Content Accessibility Guidelines and is revising the accessibility of more than 500 websites.

2.6 ACCESSIBLE ICT PUBLIC PROCUREMENT

2.6.1 Brazil and Mexico: Procurement policy

The Mexican Public Function Ministry, in charge of all the procurement policies, has signed a Memorandum of Understanding (MoU) with G3ict to incorporate accessibility obligations in the government procurement policies.

Brazil, specifically the Sao Paulo Government has also been working closely with this organization.

2.7 OTHER ICT ACCESSIBILITY PROJECTS

2.7.1 Brazil: Accessibility performance index

Anatel will disclose a comparative classification of the operators, according to their actions for promoting accessibility. A performance index will be created by Anatel aiming to improve telecommunication services for PwD (RGA's Art. 32).

2.7.2 Colombia: Ayudas para Todos: low cost assistive technology

Ayudas para Todos is a project by a non-for-profit organization, which is committed towards providing accessible assistive technologies for different types of disabilities, at a very low cost. This project identifies a need of a person with disability and provides an alternative solution to commercially available technologies, using ordinary and low cost materials. It also delivers training to schools, communities and interested groups to demonstrate how assistive technologies may be created by anyone and at a very low cost and may provide the needed usable device to the PwD.

Ayudas para Todos websites shares for free over 10,000 resources meant to enable PwD perform their activities without barriers. It also shows how to access and use open source software. This project has received support from public institutions and operators

2.7.3 USA: Fund for the acquisition of equipment for death-blind persons with low income

Through ICanConnect.org persons with certain disabilities and low income can acquire assistive technology.

2.7.4 USA: Cooperative understanding

Cooperative Understanding promotes the cross-combination of ideas, cultures, backgrounds, and perspectives, while empowering employees of all different abilities to achieve meaningful success. It brings about a strengths-minded corporate culture that appreciates and values all employees for what they contribute to the team, without scrutinizing how they perform their work. Achieving "Harmony at Work" through "Cooperative Understanding" is conducive to diversity, inclusion, productivity, and innovation as it focuses on what works well and continuously builds on those successes to make all aspects of the organization work even better for everyone.

3. CONCLUSION

Although the richness and diversity of native cultures and languages prevail in most of the Americas, several countries have the same official language, either English, French, Portuguese or Spanish. As the countries of the Americas share a common historical and social background they can replicate certain practices within ICT accessibility to promote social inclusion of PwD.

Some good practices were identified as potential sources of inspiration to be shared among the region.

- a) It's important that governments can serve as example of web accessibility and it should consider the use of social media as effective tool to spreading information to the public.
- b) It's important that governments establish progressive commitments and milestones to achieve web accessibility in governmental web sites.

- c) Provide guidance and support for achieving accessible social media by government entities, private entities, academia, NGOs and all related stakeholders. Toolkits, good practices, tips and examples of know how in accessible social media are important to be shared.
- d) It is fundamental to have collaborative efforts among public and private sectors and society in all activities and projects developed for PwD.
- e) Universities are important allies for mainstreaming progress and education on accessibility issues.
- f) Active participation of PwD and groups representing PwD is essential.
- g) ICT operators and manufactures have a key role to play in promoting the development of accessible services and equipment for PwD and for fostering entrepreneurial innovation in ICT accessibility.
- h) Recognition and awards are recommended to promote ICT accessibility and act as incentives to leverage the right to communicate to all.
- i) Promoting open source creation to make accessible apps and reducing their cost, will make such services available and affordable for PwD.
- j) When open source is not an alternative, governments could negotiate a nation-wide license.
- k) Audiovisual contents are a way of expressing and generating awareness on ICT accessibility.
- l) Film festivals are an interesting forum to address PwD rights and to disseminate productions and materials developed by PwD.

4. FOOD FOR THOUGHTS: COLLECTIONS OF PARTICIPANT'S FINAL COMMENTS

1. Collaboration is crucial for promoting ICT accessibility: including PwD, governments, operators, manufacturers, universities and all related stakeholders: "Nothing about us without us".
2. We need to think accessibility as an ecosystem where we all participate and bring our contribution to make it a reality.
3. Consider the use of ICTs as a tool for education and employment of PwD as well as an enabler for social and economic development and independent living.
4. Consider disability as a social condition rather than a medical one to promote accessibility and achieve an inclusive society.
5. Create capabilities within end users to enable them to use the available accessibility functionalities so they can benefit from web accessibility, equipment and apps.
6. Understanding the Disability Market Value.
7. Promote and spread information regarding ICT accessibility in native and national languages.
8. Share successful experiences among countries from the Americas region.
9. Ensure follow up and monitoring results of implementation of the discussed accessibility issues.
10. Encourage delegations to include one PwD or a person working in a NGO working for PwD in the next Accessible Americas events.

In order to facilitate sharing good practices and achievements in the area of ICT accessibility, the interested parties are requested to send to "Americas.accessible@itu.int " mail box the following information latest by two months before the Accessible Americas IV, 2017 event:

- Indicate country and area of ICT accessibility that you refer to in accordance with sections of this document
- A blurb (5 to 7 lines) describing your contribution
- Web link related to your contribution for more information

The contributions will be duly evaluated and if found relevant will be included in the Good Practices and Achievements in ICT Accessibility in the Americas Region document 2017.

APPENDIX I: ADDITIONAL RESOURCES

Available resources and tools for ensuring promotion and implementation of telecommunications and ICT accessibility policies, strategies and guidelines:

1. Model ICT Accessibility Policy Report (Arabic, Chinese, English, French, Russian, Spanish, e-book version) - Accessibility of PDF report checked and edited by BarrierBreak (<http://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Documents/ICT%20Accessibility%20Policy%20Report.pdf>)
2. Making mobile phones and services accessible (<http://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Pages/Persons-with-Disabilities.aspx>)
3. Making TV Accessible (<http://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Pages/Persons-with-Disabilities.aspx>)
4. Online training for Public Procurement Products and Services (available through ITU Academy)
<https://www.google.com/url?q=http://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Events/2015/OnlineTraining/OnlinetrainingonPublicProcurementofaccessibleICTproductsandservices.aspx&sa=U&ved=0ahUKEwi-wq38sOTQAhUJwiYKHazED7UQFggEMAA&client=internal-uds-cse&usg=AFQjCNFDW-rOByBMMfatHnc6U3aDSCuVqQ>
5. ITU G3ict: e-Accessibility Policy Toolkit for PwD (<http://www.e-accessibilitytoolkit.org/>)

Available training courses and workshop

The ITU has developed an online course “**Online Training on Public Procurement of Accessible ICT Products and Services.**” This e-learning training aims to provide learners with the knowledge, understanding and skills required to specify accessibility for PwD in the public procurement of information and communication technology (ICT) products and services. The training will enable learners to address accessibility issues during all stages of the public procurement process, and will provide learners with a solid understanding of the relevant international standards for accessible ICT.

<http://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Events/2016/PPOT/PublicProcurement.aspx>

The ITU has developed a 4 days “**Training Course on Web Accessibility**” based on the Web Content Accessibility Guidelines (WCAG 2.0) and the ICT Accessibility Policy Model published by ITU Development Bureau (BDT). This training course is aimed for regulators, developers, designers, digital content creators as well as anyone interested in implementing digital inclusion projects within any organization or in a website. The training focuses on two fundamental aspects of digital accessibility: the definition of what is web accessibility and, the creation of capabilities for developing and designing accessible websites.

Additional sources on accessibility for enabling an inclusive society

1. Accessibility Resolutions
 - a. ITU-Plenipotentiary Conference RESOLUTION 175 (Rev. Busan, 2014)
 - b. PP14 Resolution 144 Busan
 - c. ITU-T Resolution 70 Telecommunication/information and communication technology accessibility for PwD
 - d. ITU-D RESOLUTION 58 (Rev. Dubai, 2014)
 - e. ITU- R Resolution 67 Geneva 2015 of RA, Recommendation ITU-R M.1076 - Wireless communication systems for persons with impaired hearing
2. Accessibility terms and definitions
 - a. ITU-T F.791: Accessibility terms and definitions
3. Guidelines
 - a. Accessibility guidelines: ITU-T Recommendation F.790

- i. Telecommunications accessibility guidelines for older persons and PwD
 - b. Guidelines for supporting remote participation in meetings for all - technical paper
 - i. ITU-T 2015 FSTP-ACC-RemPart: Guidelines for supporting remote participation in meetings for all
 - c. Guidelines for accessible meetings - technical paper
 - i. ITU-T 2015 FSTP-AM - Guidelines for accessible meetings
4. Useful links
- a. ITU-D: <http://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Pages/Persons-with-Disabilities.aspx>
 - b. ITU-T: <http://www.itu.int/en/ITU-T/accessibility/Pages/default.aspx>
<http://www.itu.int/en/ITU-T/studygroups/com16/accessibility/Pages/default.aspx>

APPENDIX II: TABLE OF REFERENCES

Module	Country	Description	Link
ICT accessibility legal, policy, and regulatory framework	Mexico	Latest Mexican Developments on accessibility and ICTs	http://digitalinclusionnewslog.itu.int/2015/12/15/latest-mexican-developments-on-accessibility-and-icts/
	USA	UMASS Medical School researches text simplification	http://digitalinclusionnewslog.itu.int/2016/09/19/umass-medical-school-researches-text-simplification-to-make-websites-more-accessible-for-persons-with-cognitive-disabilities/
	USA	Convention on rights of PwD discussed in New York	http://digitalinclusionnewslog.itu.int/2016/06/30/convention-on-rights-of-persons-with-disabilities-discusses-accessibility-to-information-and-technology-as-a-key-driver-for-development/
	USA	Perkins Access initiative to support educational institutions in complying with US federal accessibility regulation	http://digitalinclusionnewslog.itu.int/2016/03/22/perkins-access-to-support-educational-institutions-for-complying-with-us-federal-accessibility-regulation/
ICT accessibility framework on public access	Argentina	Seniors in San Luis	http://digitalinclusionnewslog.itu.int/2016/10/24/algarrobo-abuelo-will-provide-access-to-digital-technologies-for-seniors-in-san-luis-argentina/
	Canada	Mapping to pinpoint accessible locations	http://digitalinclusionnewslog.itu.int/2015/12/08/mapping-app-to-pin-point-accessible-locations/
	Colombia	Convertic: Screen readers and magnifiers	www.vivedigital.gov.co/convertic
	Colombia	AyudApps: Technological solutions to needs and barriers for PwDs	https://apps.co/inscripciones/convocatoria/ayudapps-2015/
	Colombia	MappAcc: Accessible locations app	http://mappaccesible.com
	Peru	Peruvian women and vulnerable population ministry to support digital inclusion for PwD	http://digitalinclusionnewslog.itu.int/2016/06/22/peruvian-women-and-vulnerable-population-ministry-to-support-digital-inclusion-for-persons-with-disabilities/
	Latin America	Launching People – Mixed Talents	http://digitalinclusionnewslog.itu.int/2016/06/01/creative-marathon-to-promote-children-digital-inclusion-in-latin-america/
	USA	Programming and computer science to better prepare students with disabilities	http://digitalinclusionnewslog.itu.int/2016/05/14/programming-and-computer-science-to-better-prepare-students-with-disabilities/
	USA	TalentWorks online tool to guide accessible e-recruitment practices	http://digitalinclusionnewslog.itu.int/2016/04/22/talentworks-online-tool-to-guide-accessible-e-recruitment-practices/

Module	Country	Description	Link
ICT accessibility framework on public access	USA	Bookshare: free accessible online library for US students	http://digitalinclusionnewslog.itu.int/2016/03/09/bookshare-free-accessible-online-library-for-us-students/
	USA	New full page braille reader under development	http://digitalinclusionnewslog.itu.int/2016/01/28/new-full-page-braille-reader-under-development/
	USA	New gadget to help the visually impaired	http://digitalinclusionnewslog.itu.int/2016/02/01/a-new-gadget-to-help-the-vision-impaired/
	USA	Indoor navigation system for the visually impaired	http://digitalinclusionnewslog.itu.int/2015/11/18/an-indoors-navigation-system-for-the-visually-impaired/
Mobile communications accessibility policy framework	Argentina	Nahual and DANE	http://digitalinclusionnewslog.itu.int/2016/06/16/nahual-and-dane-projects-to-promote-digital-inclusion-in-argentina/
	Brazil	Hand Talk smart phone app	http://digitalinclusionnewslog.itu.int/2016/10/04/a-mobile-app-gives-deaf-people-a-sign-language-interpreter-they-can-take-anywhere/
	Mexico	Towi: app for developing learning capabilities	www.towi.com.mx
	Mexico	Accessible Mobile Handset	http://www.movilesaccesibles.ift.org.mx
	USA	Apple Accessibility Features	http://digitalinclusionnewslog.itu.int/2016/11/15/new-website-promotes-apple-accessibility-features/
	USA	New accessibility scanner for android app developers	http://digitalinclusionnewslog.itu.int/2016/04/05/new-accessibility-scanner-for-android-app-developers/
	USA	Accessible text-to-911 service to support people with hearing disabilities in Ottawa	http://digitalinclusionnewslog.itu.int/2016/03/03/accessible-text-to-911-service-to-support-people-with-hearing-disabilities-in-ottawa/
Television/video programming accessibility policy framework	Brazil	Assim Vivemos: Disability Film festival	www.assimvivemos.com.br
	Canada	Broadcasting accessibility fund enables inclusive access to audio-visual contents in Canada	http://digitalinclusionnewslog.itu.int/2016/02/09/broadcasting-accessibility-fund-enables-inclusive-access-to-audiovisual-contents-in-canada/
	Canada/Brazil/USA	Disability Film festivals	http://otherfilmfestival.com/
	Colombia	El Movimiento: audio-visual accessible content	https://www.facebook.com/El-Movimiento-914281131998845/
	Colombia	Cine para Todos: WhatsCine	www.vivedigital.gov.co/cineparatodos
	Colombia	Relay centre	www.centroderelievo.gov.co
	USA	Closed captioning improvements to provide accessible video programming in US	http://digitalinclusionnewslog.itu.int/2016/04/13/closed-captioning-improvements-to-provide-accessible-video-programming-in-us/

Web accessibility policy framework	Argentina	Ideaton	http://digitalinclusionnewslog.itu.int/2016/06/23/argentinas-ideaton-to-promote-accessible-design-for-enabling-seniors-to-go-digital/
	Brazil	Todos@Web (Web Accessibility Recognition Program)	www.ceweb.br
	Chile	Technical Norm about State Systems and Web Sites	http://digitalinclusionnewslog.itu.int/2016/03/10/web-accessibility-ruling-for-government-institutions-in-chile/
	Mexico	Web accessibility workshops	http://digitalinclusionnewslog.itu.int/2016/03/14/web-accessibility-workshops-in-mexico-and-the-americas/
	Mexico	Puntos de Accesibilidad Web (PAW) / HearColors	www.hearcolors.com.mx
	USA	Companies to create assistive devices to target the needs of PwD	http://digitalinclusionnewslog.itu.int/2016/08/05/companies-create-assistive-devices-to-target-the-needs-of-persons-with-disabilities/
	Ecuador	Accessibility analyser	http://observatorioweb.ups.edu.ec/oaw/index.jsf
	USA	Web Accessibility Toolkit for Research Libraries	www.accessibility.arl.org
	USA	Social Media Accessibility Toolkit	https://www.digitalgov.gov/resources/improving-the-accessibility-of-social-media-in-government/
	USA	Facebook uses artificial intelligence to address the needs of persons with vision disabilities	http://digitalinclusionnewslog.itu.int/2016/04/19/facebook-uses-artificial-intelligence-to-address-the-needs-of-persons-with-vision-disabilities/
	USA	New feature in Twitter for persons with vision disabilities	http://digitalinclusionnewslog.itu.int/2016/04/18/new-feature-in-twitter-for-persons-with-vision-disabilities/
Accessible ICT public procurement policy framework	Colombia	Ayudas para Todos: low cost assistive technology	www.ayudasparatodos.org
	Mexico	Latest Mexican Developments on accessibility and ICTs	http://digitalinclusionnewslog.itu.int/2015/12/15/latest-mexican-developments-on-accessibility-and-icts/
Others	Brazil	Anatel	http://www.anatel.gov.br/institucional/
	USA	Cooperative Understanding	http://www.helixopp.com/cooperative-understanding.html