

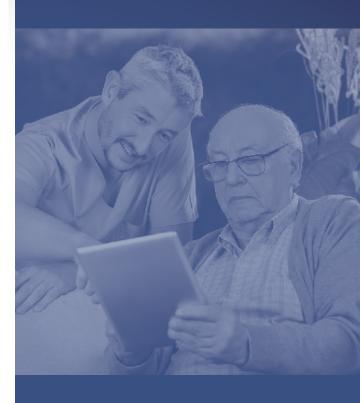




### Contents.

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Mobile technology has dramatically changed how persons with sight loss access information. We commend projects like GARI that facilitate navigating the world of mobile devices and accessibility.

Lui Greco, National Manager of Advocacy.

Canadian National Institute for the Blind (C N I B).





### Background.

The Mobile & Wireless Forum (MWF) established the Global Accessibility Reporting Initiative (GARI) project in 2008 to provide information on the accessibility features within mobile phones and to help consumers identify devices that supported those features.

The GARI site (www.gari.info) features an evolving searchable database that currently has information on more than 110 accessible features in over 1,100 mobile phone models from around the world. The database also now includes information on tablets, accessibility related mobile applications, and as of late 2016, Smart TV's and Wearables.

The objective of GARI is to help people find a device that best suits their needs. GARI does this by providing a central source of information on the accessibility features available in devices and is primarily aimed at seniors, people with disabilities or some functional impairment and their families.

Have a look at the database at www.gari.info.

### 22 international companies.

For manufacturers, GARI provides a central platform to provide information about the increasing number of accessibility features that are being deployed in devices. We expanded the number of participating companies in the GARI project to 22 in 2017 - either a per-model basis or as full members, including Apple, Alcatel Onetouch, Blackberry, Cisco, Coolpad, Editora Positivo, H M D, H P, H T C, Huawei, Kyocera, L G, Microsoft, Mobiwire, Motorola, Motorola Solutions, Oppo, Samsung, Sony, T C L, Telstra and Z T E.



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### Over 300 accessibility features.

The GARI database currently provides accessibility information on:

- 121 features for mobile phones;
- 67 features for tablets;
- · 61 features for Smart TV's; and
- 52 features for Wearables.

These features have been developed in collaboration with the disability community, accessibility experts, industry and national regulators.

The MWF has furthermore committed to regular reviews of the features that GARI reports on, in light of changes in the technology and customer needs.

Every two years, stakeholders with an interest in mobile accessibility are invited to provide comments or suggestions on the features that they would like to see reported on by manufacturers.

In 2017, we carried out our 4th GARI Feature Review involving more than 80 stakeholder organisations from around the world.

### Five product groups and 1,500+ accessible devices.

GARI started out as a simple spreadsheet listing accessibility features available in mainstream mobile phones. Since then, the database has grown to provide information on the accessibility of over 1,100 mobile phones models around the world, over 100 tablet models, over 460 accessibility related apps, and since the end of 2016, almost 300 Smart TV models as well as around 40 Wearables.

### Continuous growth - ever more models.

The GARI database is populated in line with new devices coming to the market. By the end of 2017, the database listed information on the following number of mobile phone models around the world:

Africa	82 Models
Asia Pacific	113 Models
Europe	146 Models
Latin America	245 Models
Middle East	93 Models
North America	366 Models
TOTAL	1045 Models

Due to an increased focus on mobile accessibility in Europe and Latin America in 2016, we saw a significant number of additional models added in those regions, which continued throughout 2017.









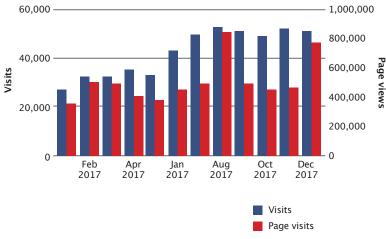
# Accessibility information in 18 national languages.

As important as it is to provide information on the accessibility features in devices, it is equally important to provide the information in an accessible format. For this reason, the GARI website was designed to be usable with screen-readers and includes a collection of American signlanguage videos that explain how to use the site. In addition, the GARI site has been translated into 18 languages allowing consumers to search the database in their preferred language irrespective of where they reside. Languages currently supported on the site includes English, Arabic, Danish, German, Spanish, Swedish, Finnish, French, Hungarian, Italian, Korean, Dutch, Norwegian, Polish, Portuguese, Romanian, Japanese and Chinese.

The MWF is committed to expanding the range of languages that GARI is provided in and is happy to work with partner organisations to help bring this about.

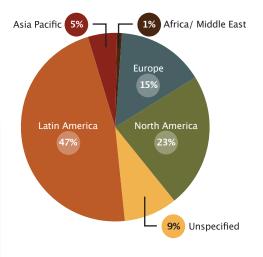
### How many people are using GARI?

In 2017, the GARI website attracted on average over 42,000 unique visits (an increase of over 100% compared to 2016) and over half a million page-views per month (over 50% more compared to 2016). This data only covers the main project site and does not include information on usage from the many organisations that also use the underlying data via direct XML feed.



### Where do GARI users come from?

In 2017 for the first time, the majority of visitors to the GARI online portal came from Latin America with 47%, followed by North America with 23% and Europe with 15%. Around 9% of GARI users did not allow for geo-localization and their origin is therefore indicated as 'unspecified'. A few visitors to GARI came also from Asia, Africa and the Middle East.





## What accessibility features are people looking for?

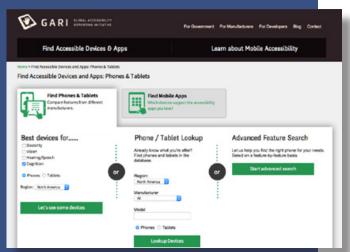
In 2016 the list of the top 10 most searched for features (via the 'Advanced Search' function) were dominated by hearing features. While hearing features are still leading the list, it has become more diverse in 2017:

- Internet Capability;
- Hearing Aid or 'H A C' Setting;
- Hearing Aid T-coil Coupling;
- Supports ability to install; third party applications or apps;
- · Touch Screen;
- External Keyboard Support;
- · Screen Reader
- · Braille Display Support; and
- Easy to Press Keys.

This change can partially be traced back to the strong increase in Latin American users and the difference in market conditions.

The GARI database provides for several different ways of searching for accessible devices - either in general or by specific accessibility features:

- Users can look up a list of all accessible devices listed in the database for a specific region;
- Users can look up specific accessibility features and which devices they can be found on ('advanced search'); and
- Users can choose one or several of the search filters that relate to an area of impairment including 'dexterity' 'vision' 'hearing/ speech' and 'cognition'.



### Regular Feature Reviews: 15 new features in 2017.

In 2017, the MWF carried out a 4th feature review of the GARI database and invited over 80 stakeholders around the world – including organisations of persons with disabilities, senior citizens organisations, consumer organisations, national regulators, government bodies, accessibility experts, academics and industry representatives, to give feedback on the accessibility features listed in GARI as well as on the usability of the GARI user interface.

We received some very good feedback centring around:

- The features listed in GARI;
- The GARI search interface;
- Information on the GARI website;
- Edits on the GARI website; and
- Accessibility of the GARI website.
  As a result, 15 new accessibility features have been added to the GARI database.

For the mobile phone section:

- · Real-time-text capability;
- Personal Assistant / Voice Control;
- · Haptic Feedback;
- · Mono Audio;
- Text-to-Speech / Dictation;
- · Flashlight Notifications;
- Emergency services and location;
- Allows for sign language communication;
- Manufacturer custom overlay of OS;
- · Dedicated and clearly distinguishable volume keys; and
- Dedicated and clearly distinguishable key to lock the screen.

For the Smart TV section:

- Video/Audio description volume control;
- Support for Web Closed Captioning formats;
- Support for Broadcast Closed Captioning Formats; and
- Bluetooth Connectivity.





### What type of apps are listed in GARI?

At the end of 2017, GARI listed over 460 accessibility related apps. These are apps that have been specifically designed to help overcome barriers people face due to disability, injury, illness, old age or disabling environments.

A majority of these apps listed in GARI provide support for users who are blind or have low vision (over 50%). They are followed by apps for hearing and speech support, cognition and dexterity.

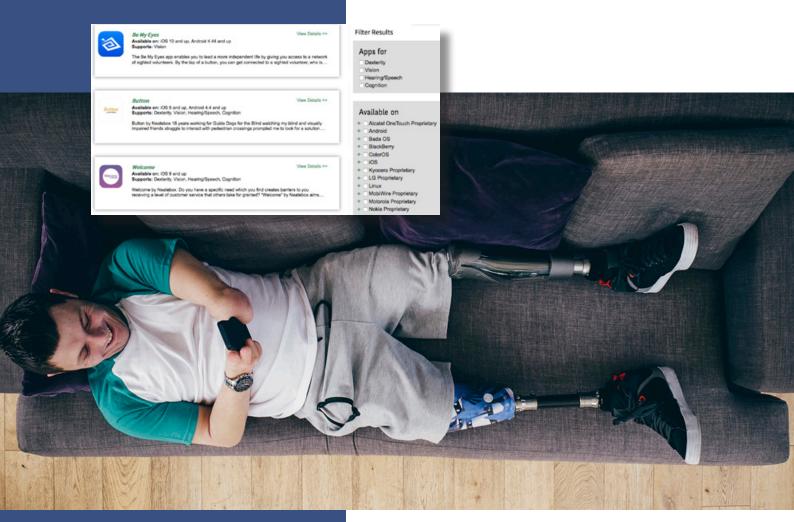
GARI also provides the opportunity to select an app that might be of particular importance or relevance to a user and to search for devices that the app will work on.

### Global harmonization.

Over the recent years, mobile telecommunication devices have become a popular means of accessing ICT services and since 2014 mobile access to internet has overtaken desktop access (footnote 1).

The proliferation of mobile phone use and the panoply of features that modern devices can offer, make it possible for mobile telecommunications devices to become the gateway to a more accessible society and 'to promote access for persons with disabilities to new information and communications technologies and systems, including the Internet' as committed to by all signatories to the UN Convention on Rights for Persons with Disabilities (footnote 2).

In 2017, the MWF promoted GARI as a ready-made tool to advance mobile accessibility on national level in over 40 countries and contributed to public consultations and stakeholder meetings in order to provide an international perspective and promote a globally harmonised approach.



 $Footnote\ 1: http://www.un.org/disabilities/documents/convention/convention\_accessible\_pdf.pdf\\ Footnote\ 2: http://www.un.org/disabilities/documents/convention/convention\_accessible\_pdf.pdf\\$ 



### Working with 80+ organisations around the world.

GARI's mission is to raise awareness about existing accessibility features and to help consumers find a device that best suits their needs. A number of organisations around the world have joined this effort by either facilitating access to the GARI database via their own websites or by spreading the word about mobile accessibility in general and GARI in particular among their members, stakeholders and constituency. Many of these organisations also actively contribute to improving GARI by participating in the regular feature reviews and providing us with user feedback.

The Mobile & Wireless Forum also makes the GARI dataset available for organizations wishing to feature GARI within their own sites. The dataset is available as an XML file that is updated on a daily basis. The dataset is licensed under a Creative Commons License (footnote 3).

Footnote 3: See http://www.gari.info/download-gari-db.cfm for more information and the terms of the Creative Commons License.



The links to many of the organisations already using GARI can be found on the 'Examples of GARI in use' page: http://gari.info/examples-of-gari-in-use.cfm.

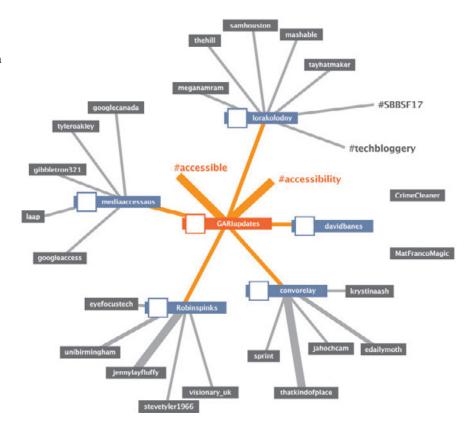
### Spreading the word.

As part of our efforts to demonstrate the global commitment of the industry towards addressing the needs of users with accessibility issues, the MWF engages in continual outreach to stakeholders.

In 2017, the MWF was pleased to present GARI at the following events:

- Bitkom Technical Meeting;
- M-Enabling Summit Washington 2017;
- M-Enabling Forum at the CTIA/GSMA Mobile Congress in San Francisco; and
- · Accessible Americas IV.

Since one of our biggest challenges is to get the right information about available accessibility solutions in the market today to the consumers who would benefit most, the MWF engages via many different communication channels to spread the word and raise awareness, including the GARI Blog, Twitter, Facebook, and LinkedIn.





### How can GARI benefit different stakeholders?

GARI provides benefits for different stakeholders in different ways:

#### Manufacturers.

- An opportunity to provide a comprehensive guide to the accessibility features within a device with widespread acceptance of the resulting reports.
- Being part of a voluntary industry initiative that enjoys high credibility with regulators, organisations of persons with disabilities, network operators and consumer organisations.
- Remaining up to date with regulatory developments across the world.

GARI has certainly benefited from the widespread support of many stakeholders and of course the participating manufacturers.

#### Consumers.

- A comprehensive searchable database of accessible devices in multiple languages.
- A central source of information for accessibility features in mainstream devices.

Several organisations of persons with disabilities provide a link to GARI via their website as a service to their members and publish regular updates about GARI's progress in their newsletters. Other entities referencing GARI include universities, health platforms and app developers.

#### Governments.

- A set of accessibility features that is far more extensive than any country's existing requirements.
- A tool that can help fulfil obligations under the UN Convention on Rights for Persons with Disabilities (U N C R P D).
- A database to demonstrate product compliance with national regulations.
- An easy to use gateway to provide consumers with information regarding the accessibility features of devices available in-country.
- A tool to encourage greater awareness of accessibility within industry as well as amongst the public.

IO government bodies from nine countries are providing access to the GARI database via their websites:



### Network operators and device retailers.

• An overview of the accessibility features in devices allowing retail and help-desk operators to easily assist customers.

Currently 14 network providers and industry bodies in 10 countries are using GARI to train their staff on how to search for appropriate devices to meet consumer needs. Several more network providers use GARI for the selection of accessible devices for their product portfolio.











### Get in touch.

We would welcome the opportunity to discuss how we could further promote awareness of the accessibility features in devices or about the GARI project itself. Our contact details are as follows:

#### Mobile & Wireless Forum

Email accessibility@mwfai.org

Web www.mwfai.orgTwitter @GARlupdates





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