

NAFATH

Issue 7 | 2018



Mada Innovation Program presents:

Clicker 7 Arabic

Assistive Technology for Literacy Development

06

Mada trains the elderly on video games

10

MADA AT Portal
Your window to the world of AT and e-Accessibility

22

The role of smart cities in supporting independent living

mada
assistive technology center

To Subscribe

Please send an email to
info@mada.org.qa

or call
00974 4459 4050

www.mada.org.qa

OFFICIAL SPONSOR



الرييل RAIL

GOLDEN SPONSORS

QATAR
القطرية AIRWAYS

AECOM

SILVER SPONSOR

malomatia
excel with IT



Qatar Assistive Technology Center “Mada”

Qatar Assistive Technology Center “Mada” is a private institution for public benefit, which was founded in 2010 as an initiative that aims at promoting digital inclusion and building a technology-based community that meet the needs of persons with disabilities (PWDs) and the elderly in Qatar. The center also works to implement international best practices in the field of assistive technology (AT), and develop a sustainable model for the provision of AT and digital inclusion services for PWDs in the State of Qatar.

Our Vision

All Persons with a Disabilities in Qatar reaching their full potential through Information and Communication Technology.

Our Mission

Unlock the potential of all Persons with Disabilities in Qatar by enabling both individuals and their environment through Information and Communication Technology.

Mada Center serves persons with all types of disabilities including visual, mental, hearing, physical, learning disabilities and various types of disorders along with the elderly and their families.

Mada prioritizes three key areas; education, employment and community. The center also provides

advisory services and policy recommendations to various stakeholders and organizations.

We are committed to promote innovation and the development of new solutions for persons with disabilities, particularly by creating relevant Arabic Language Assistive Technologies, to better serve local and regional needs. We work closely with important AT manufacturers and relevant worldwide private sector entities to develop innovative Assistive Technology solutions and services. Our organization also conducts relevant research studies to keep Qatar and the Arab region updated on the latest breakthroughs and international best practices.

“Nafath” is a quarterly publication issued by Mada Center to be a major source of information on the latest trends and innovations in the field of assistive technology. Our quarterly publication is an information platform and also a discovery tool: we want to bring together the huge domestic and regional appetite for Arabic Assistive Technology products and services with the latest technologies and trends in the whole world.

Like everything we do, we highly appreciate and encourage your contributions and feedback, as readers’ opinion is most valuable to us. This periodical is available in print and digital forms, as well as other accessible formats upon request. ■



mada
Team

c o n t e n t s

06

Mada trains the elderly on video games to enhance brain and memory performance

08

iOS 12: Enhanced Accessibility Features
Reviewed by Mada

10

Mada AT Portal
Your window to the world of AT and e-Accessibility

12

Mada Innovation Program presents:
Clicker 7 Arabic Assistive Technology for Literacy Development

14

Mada e-Accessibility Standards

16

An innovative way to control your computer
Mada reviews «GlassOuse»

18

Grid 3: A solution to Empower People with Disabilities to Communicate
Reviewed by Mada

20

Accessible Information for people with disabilities and the elderly

22

The role of smart cities in supporting independent living
Mada’s Guide for Best Practices

NAFATH



madaQATC



@madaQATC



@madacenter

mada
assistive technology center



Mada trains the elderly on video games to enhance brain and memory performance

Mada Assistive Technology Center is keen to provide international best practices to support older persons through training initiatives and programs, guidelines and partnerships. The Center consulted with international experts and specialists of the Department of Geriatrics at Hamad Medical Corporation to review and evaluate the impact of video games on the elderly.

Information and Communication Technology (ICT) play an important role in the life of the elderly by maintaining

cognitive abilities and refreshing the memory using video games and applications. Recent studies confirmed that playing specific video games could enhance individual skills. It helps improve cognition, brain and memory performance. Various video games, puzzles and applications have been developed specifically for this purpose. They primarily motivate deep thinking and enhance concentration.

In a study at the University of Illinois in the United States, 40 people aged between 60 and 70 years were asked to play a

strategic video game for 24-hour over two months. After the end of the test period, the abilities of those people were improved regarding memory, thinking, perception, planning and approaching ambiguous and multi-tasked subjects.

Many recent studies concluded that brain training -online games- is beneficial for the elderly. Researchers at King's College in London found that mental training kept minds sharp and helped people do daily tasks such as shopping and cooking. Researchers found that those who exercised brain training, thinking games and problem-solving activities -5 times a week for at least six months- retained better cognitive skills better than those who did not.

A study by the University of Cambridge showed that video games improve brain function for those with memory problems that can be a precursor to Alzheimer's disease. Experiments were conducted on a new game application involving 42 patients over the age of 45 with cognitive impairment related to memory loss that could be an introduction or a warning of dementia. The results showed that those who played the game improved their "occasional" memory by about 40%, which helps in daily activities such as remembering where the car keys are or where did the person park his car in a multi-level parking.

Researchers from Canada said that 3D computer games can help elderly maintain their mental capability. Where they found an increase of the gray matter in the brain of those who played a certain game for a certain period. It is known that the decline of this gray matter is partly responsible for major diseases such as Alzheimer's.

Based on these studies and research, MADA partnered with the General Retirement & Social Insurance Authority and the Center for the Empowerment and Care of the Elderly (Ehsan) to hold two workshops on "Video Games for Brain Activities" for the elderly. The aim of these workshops was to educate the elderly about problems related to memory impairments, such as Alzheimer. They also learned about the most common signs of memory loss syndrome, and how to prevent poor memory through exercise, physical activity and writing/reading activities.

The Mada Center also invited the international expert Panagiotis Bamidis, Associate Professor of Medical Education at the University of Aristotle, Greece, and a visiting professor at Leeds University in the United Kingdom, to present at a workshop about "Improving the lives of the elderly through innovation and technology". Prof. Bamidis emphasized the important role of video games combined with physical exercises in the development of physical and mental health. Prof. Bamidis highlighted the role of these games in enhancing motor and cognitive functions to support the elderly in their daily activities. He particularly emphasized the importance of video games involving video recording and sensors to help achieve physical balance of the elderly.

Assistive technology offers new ways to help the elderly maintain their mental and physical health. Using a specific video game or application can be a source of entertainment maybe an opportunity to enhance mental health and stimulate memory at the same time.

iOS 12: Enhanced Accessibility Features

Reviewed by Mada

Mada reviews the latest version of the apple operating system launched latest version of the apple operating system was launched in September 2018. This version introduced new features that improve accessibility for people with functional limitations.

New shortcuts have been introduced for users using the VoiceOver feature.

VoiceOver is an accessibility feature built-in to iOS. The feature supports blind and visually impaired users to operate iPhone and iPad.

Another area where iOS12 has made feature enhancements is with personalized 'Siri Shortcuts' for improved voice access for those who need to use their phone or tablet on handsfree using voice commands

VoiceOver allows these functions by screen-reading information about elements like buttons, icons, links, and other interface contents to the user. The feature uses gesture-based commands to navigate and select options within the device. Some shortcuts supported in iOS12 are as follows:

- Go to Home Screen: swipe up from the bottom until you hear the first sound
- Open App Switcher: swipe up from the bottom until you hear the second sound
- Open Control Centre: swipe down from the top until you hear the first sound
- Open Notification Centre: swipe down from the top until you hear the second sound
- Cancel a gesture: slide your finger either to the left or to the right



due to physical or visual impairment. Siri can now automate actions via personalized voice commands. Siri now supports users to record their own voice shortcut to launch custom commands. This is helpful for persons with functional limitations who can access a wider range of functions through Siri using preferred phrases. This can also help demystify the use of Information Communication Technology for elderly users who can use familiar phrases instead of learning specific terminology.

The Measure App allows the measurement of objects in front of the phone for those with disability who cannot handle a measuring tape or ruler due to physical or learning disability. The app uses augmented reality (AR) to measure length using the back camera of the device. This can also be impactful for students in Math to access the curriculum better when the use of a measuring ruler is involved.

In the control center a new feature called "Live Lists" can be activated to turn the

AirPods into an audio amplifier by directly transmitting sounds picked up from devices (e.g. iPhone, iPod, iPad, etc.). This can help users hear a conversation in noisy areas and across short distances. It can also help those with mild hearing loss augment their hearing and better respond to their environment.

In iOS12 the Magnifier feature can be accessed in the control center and can therefore be more easily turned on and off. Additionally under Accessibility, the vision section now includes a button allowing transparency of background images to be reduced thus improving the clarity of the image.

Overall the accessibility feature enhancements introduced in iOS12 raised the bar on mainstream devices to have built-in capabilities to cater to the needs of people with disabilities. Hopefully this could propel the integration of accessibility features within the ICT industry and lead to an improved quality of life for people with varying abilities (e.g. elderly and persons with disabilities). ■

Mada AT Portal

www.madaportal.org

Your window to the world of AT and e-Accessibility



Mada Assistive Technology Center aims at integrating persons with disabilities into society by enabling them to access ICTs using Assistive Technology (AT) and Accessibility services. AT plays a major role in improving the lives of persons with disabilities and supporting their needs in accordance with international best practices by promoting innovation and providing the necessary resources for professionals and others in this field. The Qatar National Vision 2030 addresses the integration of all components of the society and the provision of equal opportunities for all. The “Mada AT Portal” is the first of its kind platform aiming to support people with disabilities in Qatar and the Arab region.

In this purpose, “Mada AT Portal” serves as a leading AT and Accessibility information resource connecting professionals, parents, AT users, and developers to e-Accessibility and assistive technology solutions.

The portal provides the necessary information and data about various devices and programs that people with disabilities can use. All assistive technology products were classified according to disabilities: visual, hearing, physical, communication and learning disabilities. In addition, the portal provides detailed information on the

AT solutions suppliers, beneficiaries, latest updates, and approximate prices.

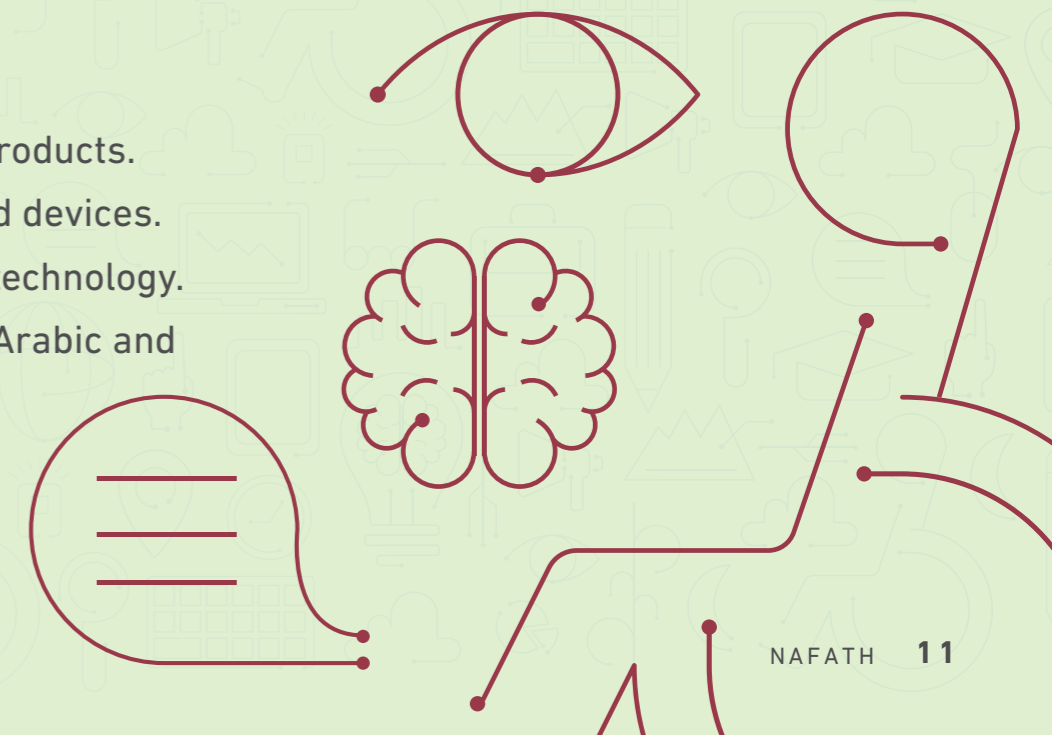
Through the portal, we can access additional resources related to assistive technology, including factsheets, case studies, educational videos, and a collection of blog articles. Moreover, a unique glossary of assistive technology terminology in Arabic and English is provided to better understand terms related to accessibility and disability in general.

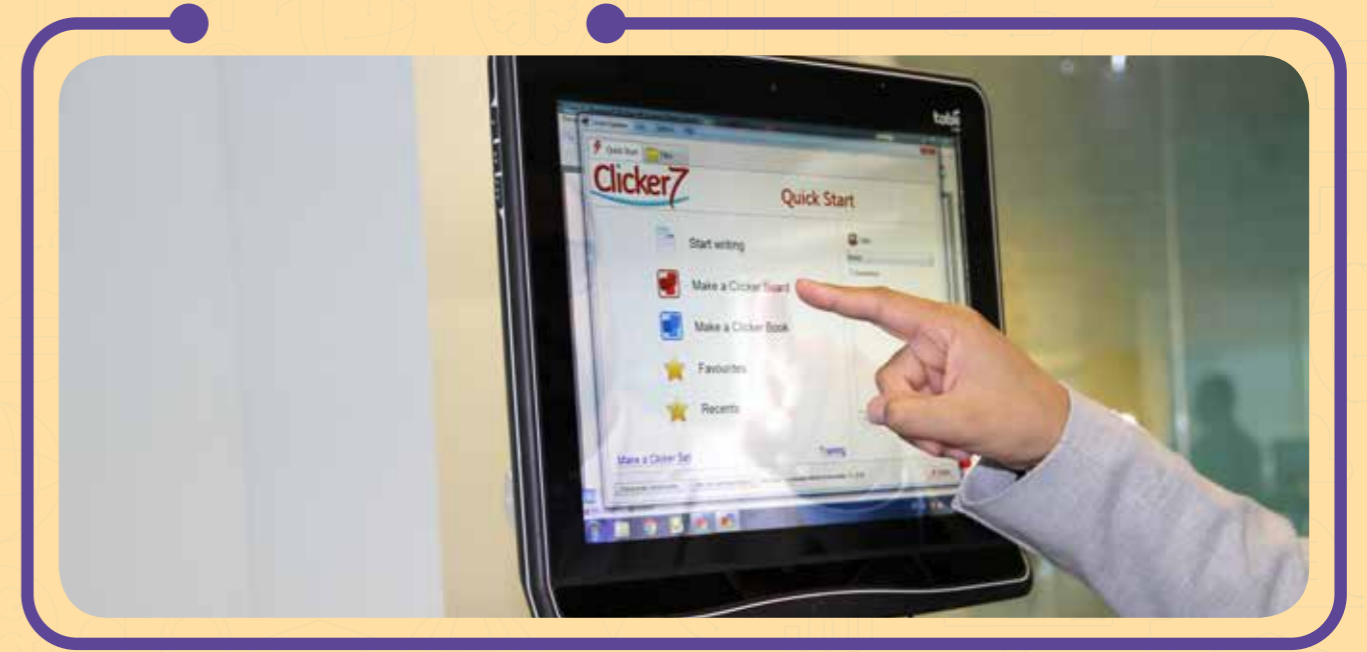
The portal also offers a set of tools (user interfaces web components) and user experience guidelines on the ease of use of websites for people with disabilities. The set of tools is dedicated to developers and webmasters. For example, a specialist can download software and tools free of charge, such as font magnifier and screen readers, which can help him to develop and find out the level of accessibility of his website.

Since the launch of the Mada AT Portal, its role has been to promote the development of Arabic digital content, introduce assistive technology, and encourage Qatari and Arab innovators to develop unique innovations that have greatly contributed to the empowerment of people with disabilities in all domains at the national and regional levels. ■

Portal Contents

- Assistive technology products.
- Localized software and devices.
- Ways to use assistive technology.
- Training resources in Arabic and English.
- Blogs and articles.
- En-Ar glossary.





Mada Innovation Program presents:

Clicker 7 Arabic

Assistive Technology for Literacy Development

Mada Assistive Technology Center seeks to support 80% of students with disabilities in Qatar in accessing quality mainstream education by the end of 2018 by providing the latest innovations through the Mada Innovation Program. The program aims to encourage innovators to create and increase the number of Arab technological solutions for persons with disabilities through three types of grants. The grants are given to individuals and institutions that provide services and innovative technological products in Arabic. These awards include competitions, entrepreneurship support and technology localization, and the Arabic version of CLICKER 7 was the latest of its achievements.

Mada collaborated with Crick Software to come up with an Arabic learning solution to improve writing and reading skills among students with learning disabilities. In 2016, Mada Center localized Clicker 5 and provided licenses for (54) schools and (4) specialized centers in Qatar.

In 2017, Mada Center adopted and supported the localization of "Clicker 7", and in GREAT 2018, Crick Software launched the Arabic version of Clicker 7.

What is Clicker 7 Arabic?

Clicker 7 is an award-winning, innovative reading and writing tool designed to help students of all abilities to achieve rapid and permanent gains in their literacy skills. It is aimed at children from 5 - 11 years old, and those with special needs. Clicker is developed by Crick Software a UK based company specializing in developing ICT based literacy solutions for students with disabilities.

Clicker 7 Arabic includes an assistive word processor. While most word processors are designed for literate adults, Clicker 7 Arabic is designed for children who are learning to read and write.

Children benefit from acclaimed Clicker support features including:

Speech feedback - Each time a sentence is completed, it is automatically read aloud.

Word prediction - Clicker's predictor enables children to give their full attention to what they want to write and encourages them to use more adventurous vocabulary.

Voice Notes – this tool enables pupils to record their own audio notes before they write. It gives them an opportunity to rehearse their sentences, and offers a powerful way to capture their initial thoughts and ideas.

Clicker Sets – give students point-and-click access to whole words, phrases and pictures, helping them work more independently. Clicker Sets includes Talk Sets, Clicker Books and grids for writing support which are as follows:

Talk Sets – helps develop speaking and listening skills.

Clicker Books – promotes reading and allows the user to write their own versions of the books.

Sentence sets, Connect Sets and Word Banks – takes the user on a journey from creating their first sentence to writing advanced compositions.

Grid creation tools in Clicker 7 Arabic allow practitioners to swiftly create resources to support the user. The brand-new Clicker Board allows the user to organize ideas – the vital first step in the writing process. Clicker Board provides a built-in planning tool to help children prepare for writing.

Universal Design for Learning
Clicker 7 Arabic uses the principles of Universal Design to cater for all learners – including those

who cannot use a keyboard and mouse. Clicker 7 Arabic is switch accessible, touch-screen enhanced and has been optimised for use with Eye-Gaze systems.

The Impact of Clicker 7

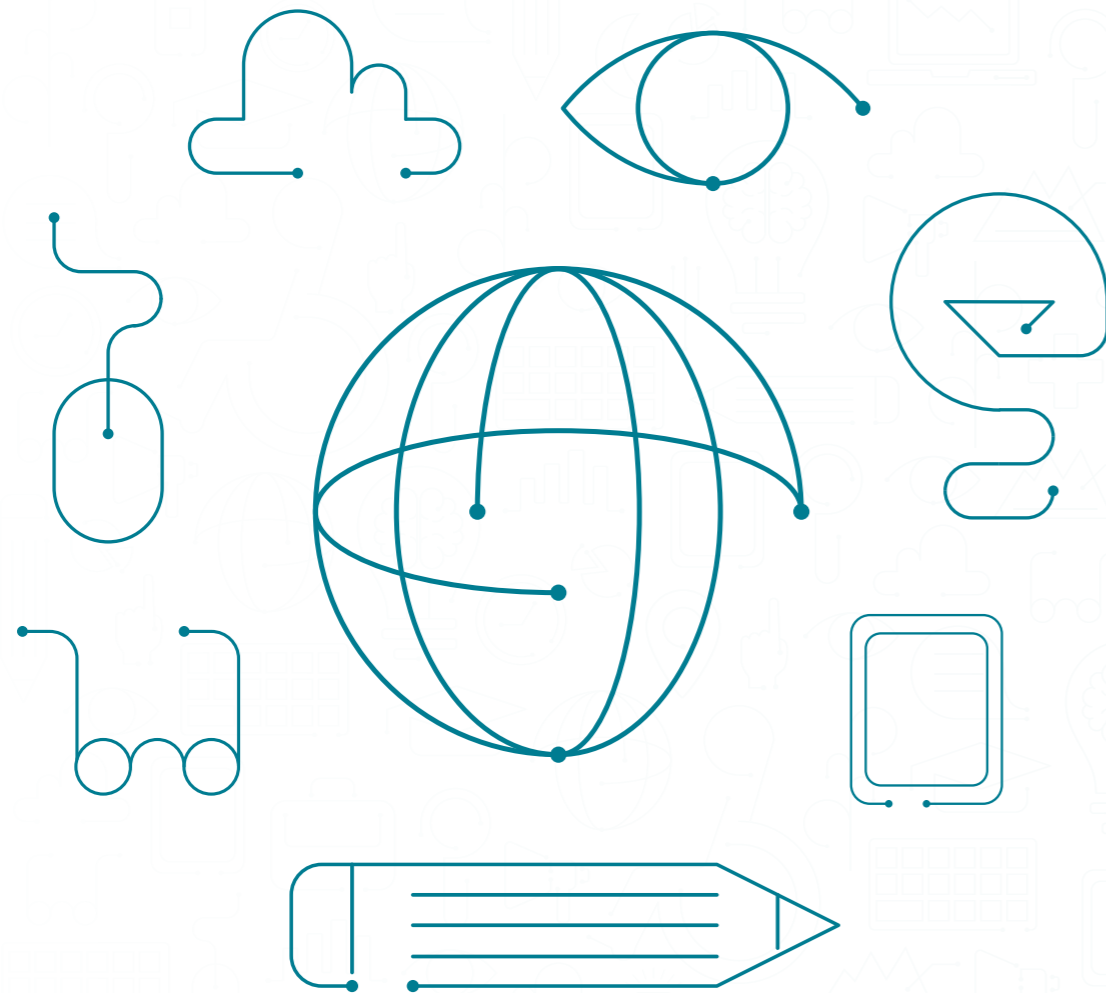
Research shows that use of Clicker 7 results in a significant drop in grammar and spelling errors in students' work. Students using Clicker 7 worked more independently, with less reliance on additional teacher support.

Clicker 7 won a prestigious British Educational Training and Technology Show (BETT) Award in 2018 – the judges commented "Clicker 7 sets the standard for inclusive software. It can be used by any pupil including those with a diverse range of learning difficulties. It is highly versatile, offering support tools that enable pupils to work independently at an appropriate level right across the curriculum."

Clicker 7 makes the curriculum more accessible, engaging and achievable for students with special educational needs, and makes lesson planning / resource creation much easier for teachers.

Through such innovation initiatives Mada helps to offer the latest accessibility solutions to the disabled community in Qatar and the Arab region. With the release of Clicker 7 Arabic, students with disabilities in Qatar can benefit from this innovative tool to support their learning needs in both English and Arabic.

Mada e-Accessibility Standards



Mada Center has worked to localize international digital e-Accessibility standards and make them available for all institutions and organizations in Qatar to be used as a guide to apply these standards on various digital platforms. Persons with disabilities are an integral part of society, with duties and rights. E-Accessibility is one of their key rights under the UN Convention on the Rights of Persons with Disabilities (Article 9 - Accessibility). E-Accessibility can be defined as the ease of use of ICT by persons with disabilities. In this context, ICT is divided into six main domains: Websites, mobile applications, electronic kiosks and ATMs, electronic documents, media content and text and video communication services for the deaf. In this article we will discuss the first three domains.

Websites

Web Accessibility means the ability of persons with disabilities and the elderly to access, understand, browse, interact with the Internet, and contribute to the enrichment of digital content. This is the primary and more straightforward definition of web accessibility. Web Content Accessibility Guidelines (WCAG 2.1) provide a wide range of recommendations to ensure the accessibility of Web content which often lead to making it more usable for all users.

In order to support the access of persons with disabilities and older persons to various digital platforms in accordance with international standards, Mada Assistive Technology Center has launched a national program entitled “E-Access to Government Websites in Qatar” aimed at improving the accessibility of websites in the country, and increasing the rate of e-Accessibility for persons with disabilities and the elderly. Since the start of the program, 77 capacity building sessions were offered to 134 web developers working in Qatar. The positive impact of this program was reflected in the rate of e-Accessibility rising from 83% in 2016 to 94% in 2018.

Mobile Phone Apps

A wide range of portable electronic devices are commonly used by us, but mobile phones are the most widely used devices, as they combine a range of technologies including voice and video calling, answering machines, clocks and alarms.

The UN Convention on the Rights of Persons with Disabilities imposes general and special access requirements. Mobile devices must fit everyone, including the elderly, persons with disabilities and others. Developers of these products, systems, and applications must therefore take into account the full range of user needs when designing a mobile device and its applications. Web Content Accessibility Guidelines (WCAG 2.1) and other guidelines,

recommendations and tools can be used to develop accessible mobile phones.

Mada’s role in the field of mobile applications development is reflected in ensuring accessibility. For example, Mada’s cooperation with the Qatari Ministry of Interior in the development of “Metrash” application has resulted in that “Metrash” now is in line with the standards of accessibility and thus its various and vital services are accessible by to all.

Electronic Kiosks and ATM

Self-service machines are an important platform for everyone. Self-service machines can be found widely in business, public places and government buildings. Common types are ticket kiosks, registration kiosks, health care, and ATMs. However, we often note that they lack accessibility for persons with disabilities.

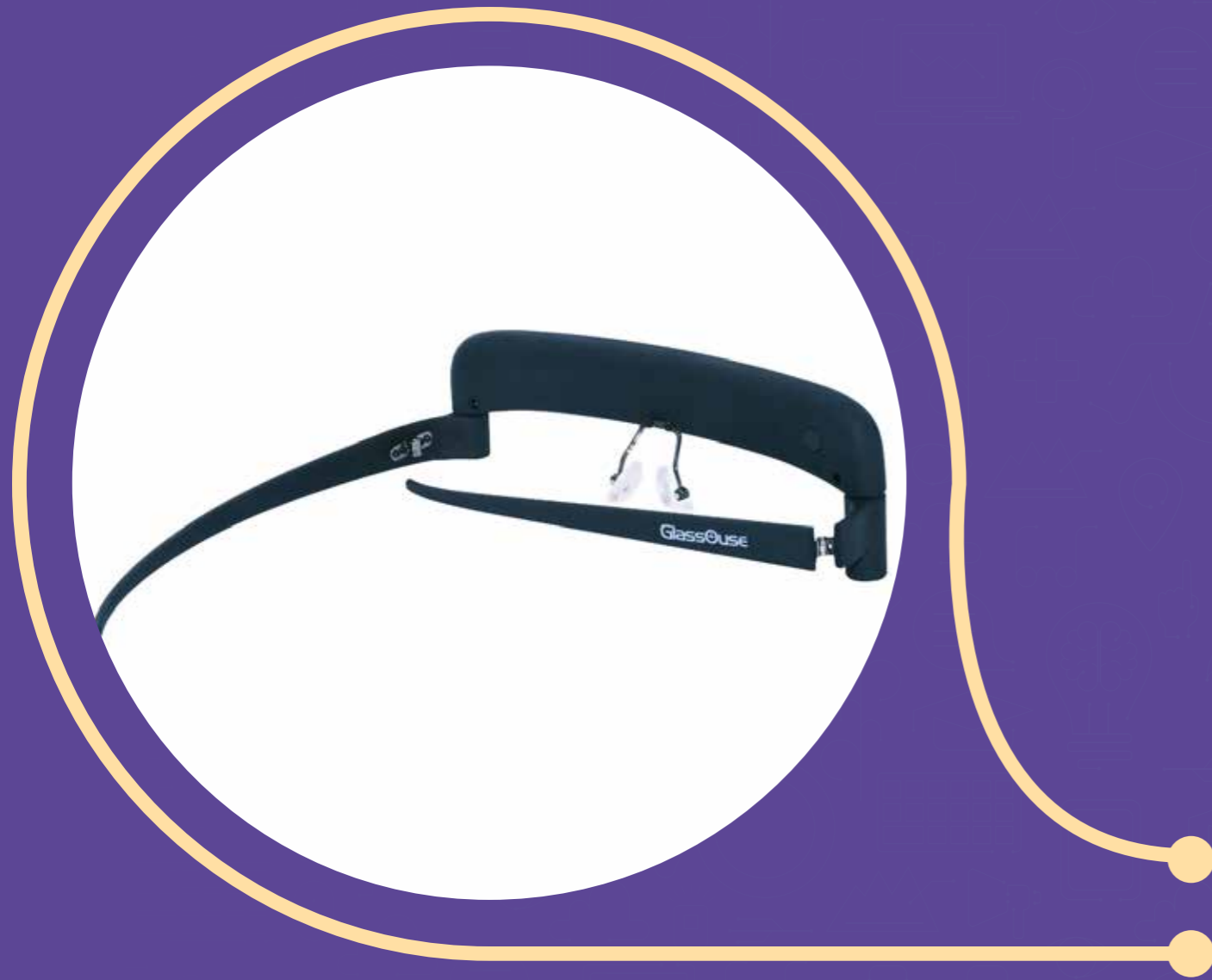
Web Content Accessibility Guidelines (WCAG 2.1) address accessibility requirements for electronic kiosks and ATMs. In addition, ADA aims to design and prepare devices that are accessible to everyone with no exceptions.

The role of Mada is shown in cooperation with Qatar Central Bank and others banks institutions through the “Accessible ATM” program. A team from Mada Center, in collaboration with Qatar Central Bank, evaluated the ATMs and prepared a report outlining the weaknesses to be developed and the creation of accessible ATMs to be used by all.

Mada AT Center is active in this area through its cooperation with Qatar Central Bank and other banks operating in the country through the “Accessible Banking Services” program. A team from Mada Center and a team from Qatar Central Bank, assessed various ATMs and prepared a report explaining the areas which need to be developed in order to have ATM machines that are accessible to everyone. ■

Mada reviews «GlassOuse»

An innovative way to control your computer



GlassOuse is a wearable Bluetooth mouse that sits on your face like glasses. It has a built-in motion sensor that tracks your head movements and mouse clicks are activated by bite/click switch in the mouth. This allows for completely hands-free mouse access to the computer and all features accessed by this, including an on-screen keyboard as required.

The V1.2 version launched in February 2018 allows for three options of switch control making it even more adaptable for persons with varying disability and functional levels. These options are Bite, Sip/Puff and finger switch. While there are other adaptive or alternative mice available this has several unique features that enable greater access for people with specific functional limitations.

For some people ergonomic mouse to improve arm or forearm position can facilitate greater ease of use of the computer. Inverted mouse or rollerball mouse can bypass the need to move the mouse around the table instead allowing it to be used in a stationary manner.

However, for others with physical disability they may not have the ability to reach a table top, the finger range or movement to move a roller ball or the power to select or press a button to select. For these, the Glassouse requires only slight movement of the head to enable movement of the mouse around the screen.

Other options like eye gaze are also available to enable use of the computer with the eyes only, however, this is a much more expensive alternative and more bulky. The Glassouse is light, wireless and small. It can easily be brought anywhere with the person and enables access of standard computers in many environments. ■



Grid 3: Empowering PWDs to communicate

Reviewed by Mada



What is Grid 3?

Grid 3 is a comprehensive communication solution that enables people with disabilities to communicate, learn, use different applications on their computers that are made accessible, and control their environment. It supports many forms of alternative access including eye gaze, switches, touch, and pointing devices. Additionally, it offers great learning and activity tools that can be tailored to the specific user needs and offer unique opportunities for skills development. Grid 3 is available with full support for Arabic language.



Why Grid 3?

The solution offers many accessible applications for the user which includes phone, messaging, web browsing, social media apps, and multimedia apps. Moreover, it can be expanded to include new additional applications.

Grid 3 offers a symbol-based communication solution, for the use as an alternative and augmentative communication (AAC) for different levels of users, with attention to those who are new to AAC. It supports multiple approaches to vocabulary. Furthermore, it offers a large library of symbols from PCS, Widgit, Tawasol, and Symbol Stix. The solution supports alternative access, including eye gaze, switches, and touch devices, with emphasis on ease of setup of all kinds of access. The symbol communication solution offers multiple

libraries of voices in many languages, including Arabic.

Grid 3 offers a text communication tool with a variety of keyboards, predictable typing, and text to speech capabilities in many languages, including Arabic.

Grid 3 offers many highly customizable, animated learning and activity tools, supported by graphics and animations. Such activities include challenges, cause and effect exercises, interactive scenes, and tailored learning activities.

Finally, it allows for the control of the environment around the user, such as controlling the TV, lights, doors, and many other devices. The Servus environment control devices expand those abilities, and enable full control of the home as well as offer programmable capabilities that can be customized to the user's needs. ■



Accessible Information for people with disabilities and the elderly

Access to information is a vital part of daily life in today's world. With the advent of Information and Communication Technology (ICT) has revolutionized the various mediums of information distribution. These visually rich multimedia-based mediums enable to engage wider audience however, it can often be challenging for people with disability to process information if not presented

in an accessible manner. Accessible information ensures that everyone (elderly and persons with disabilities) can access and understand the information they are given. These accessible information are presented in various ways which may require assistive technology solutions to be read. Following are some examples of formats and assistive technology solutions that can be used to convey information to the concerned disability areas:

Persons with Visual Impairment

- Large Print
- Audio Books
- Braille or Tactile forms
- Electronic Documents
- DAISY Readers
- Desktop/Handheld Magnifiers for Print Materials
- Screen Readers for Computer-Based Content

Persons with Deaf or Hearing Impairment

- Closed Captions
- Sign Language Videos
- Text Messages
- Email
- Hearing Aid Compatible Surroundings
- Audio Amplifier Devices

Persons with Learning Difficulties

- Clear Text Font
- Screen Readers with Text Highlighting
- Visual Signages
- Audio/Video Books
- Daisy Readers
- Augmentative and Alternative Communication (AAC) Aids

Persons with Physical Disabilities

- Electronic Documents
- Kiosks Screens at Wheelchair Accessible Height
- Switch or Eye-Gaze Controlled Digital Interactive Screens

Elderly

- Large Print
- Clear Text Font
- Audio Amplifier Devices
- Desktop/Handheld Magnifiers for Print Materials
- Screen Readers with Text Highlighting
- Visual Signages

In today's world it is vital to ensure equal access to information for all segments of society including the elderly and people with disabilities. The advent of ICT has revolutionized the possibilities of presenting and providing information to a wider range

of audience. Access to information is critical at all stages of life including schooling, employment, etc. hence providing accessible information ensures individuals to have the right to information throughout their life cycle. ■

The role of smart cities in supporting independent living

Mada's Guide for Best Practices

Mada Center believes that smart technology plays a significant role in improving the lives of people with disabilities, and this has been reflected in Mada's strategic objectives. Mada conducted a specified best practice report on supporting independent living for people with disabilities, and part of it has focused on the role of Smart Cities.

People with disabilities face some challenges and constraints including barriers to accessing services such as (health, education, employment, transportation) and limited opportunities.

There is a noticeable rapid growth in Smart Cities worldwide, but the speed of such growth could lead to a new digital divide for people with disabilities and the aging population. To ensure that all citizens including people with disabilities and the elderly can benefit from the opportunities that such initiatives bring we need to make sure that accessibility and universal

design are integrated into Smart Cities programs. If accessible technology is properly deployed in such initiatives there will be more innovative, equitable and impactful results across key areas, including education, healthcare, and transportation. Technology companies must seek to provide products and solutions that support rich, personalized, citizen-centric services that serve a broader population and are usable in a wider variety of environments.

G3ICT launched the "Smart Cities for All" Toolkit in efforts to define the state of Information Communication Technologies (ICT) accessibility in smart cities around the world. The toolkit contains four tools to help Smart Cities worldwide include a focus on ICT accessibility and the digital inclusion of persons with disabilities and older persons.

Smart Cities and Independent Living
Smart cities seek to leverage digital data gathered by a wide range of

connected sensors to automate many of the time-consuming tasks that are undertaken. For example, personal data would inform us of the average length of time it takes for a person to get from their home to the metro station; and public data would inform them of when the next metro will reach their stop, allowing them to plan precisely when to leave home reducing waiting hours at the metro station. Similarly, if using personal transport technology, the combination of personal and public data could allow a driver to find where the nearest accessible parking spot is to their location and even book that space in advance.

Such technologies reduce congestion and frustration thus improving quality of life. If we add autonomous vehicles into the equation, the disabled "driver" could be taken directly to an accessible parking spot within easy reach of the building they wish to access simply by entering a desired destination into an app.

Some of the concepts underpinning a smart city are already in place. Boarding passes are delivered to your phone, reducing

time spent in airport queues; notifications that your restaurant table is available arrive by SMS; and the arrival of your taxi is announced by an app.

Providing an accessible digital interface or technological solution to daily tasks will benefit people with disabilities and the elderly. If these solutions aren't accessible however, this may act as a barrier to independent living.

MADA has also worked with MOTC to conduct research on the disabled community and on improving the accessibility of Qatar transportation systems. MADA contributed in organizing focus groups with people with various disabilities to discuss this topic.

Additionally, Qatar's Digital Access and Web Accessibility Policy was implemented at the national level in 2011, and Mada center has assisted in the implementation of this policy through the provision of services, consultation, training and evaluation to enable access to all digital platforms on an equal basis with others. ■

