Egypt

Biblioteca Alexandrina (the Library of Alexandria)

Collaboration Program with the Private Sector for Disseminating Japanese Technologies for Accessible Multimedia DAISY Production Software for Persons with Print Disabilities in Egypt

Final Report

July 2019

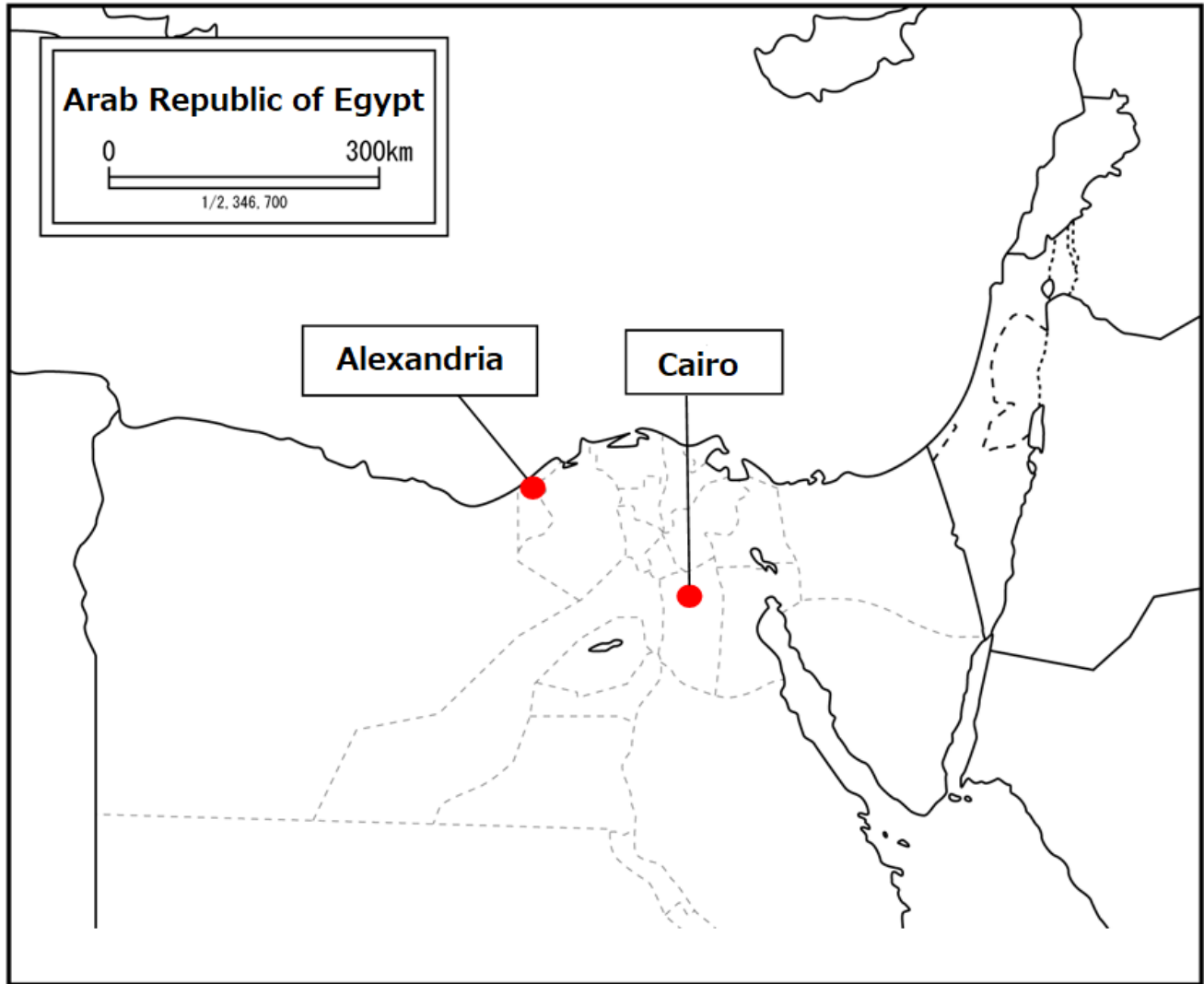**Japan International Cooperation Agency (JICA)**

Shinano Kenshi Co.,Ltd.

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Map

Reference: http://www.freemap.jp/

Glossary

Term	Description
Accessibility	The extent to which information, services, and software are available to a wide range of people. In particular, it is used to indicate how easy it is to use for the elderly and disabled.
Multimedia	A technology or system that uses a computer to express multiple media such as text, voice, and images. By combining these media and handling them electronically, a variety of expressions are possible.
DAISY	An abbreviation for Digital Accessible Information System, an international standard for accessible electronic books, which was developed in 1996 by a library group in Japan and Sweden to meet the needs of people who cannot read conventional publications. Because it is free and highly interoperable, products based on the standard are widely available on Windows, iOS, Android, Linux, and mobile phones. The DAISY Consortium (http://www.daisy.org/) is an international non-profit organization based in Switzerland consisting of national libraries and disability advocacy groups that develops and maintains the standard. The U.S. federal government requires all publishers of more than 27,000 types of print textbooks from kindergarten to high school to provide electronic versions of the DAISY standard for textbooks, guaranteeing access to textbooks and teaching materials for children who have difficulty reading.
EPUB	The IDPF (International Digital Publishing Forum) (http://idpf.org/) develops and maintains the international standard for e-books. When the standard was updated to EPUB3 in October 2011, all the accessibility features of EPUB3 were incorporated and adopted as the distribution format for DAISY4.
PDF	Electronic file format developed by Adobe Systems. It is ISO specification as ISO32000: 2008 from 2008. While it has the advantage of being able to completely maintain and preserve the same layout as paper, it tends to be inaccessible data, as there is no guarantee of text order and it is difficult to read aloud. The horizontal and vertical sizes are the same as paper, and the text is smaller on the mobile screen. When a character is enlarged, the text area extends beyond the screen, so it is necessary to scroll up, down, left, and right in order to advance reading, and it is particularly difficult for a person having difficulty in reading, including a visually impaired person.
Print Disability	A variety of disorders that interfere with reading printed materials, including visual impairment, dyslexia, ADHD, autism, intellectual disability, upper limb disorder, cerebral palsy, congenital hearing impairment, Parkinson's disease, and others. the "Marrakesh Treaty for promoting access to the publications of the blind and other people with print disabilities" entered into force in September 2016. On October 1, 2018, the Government of Japan deposited its instrument of accession to the Marrakesh Treaty to World Intellectual Property Organization (WIPO) and the Treaty entered into force in Japan on January 1, 2019[1].
Dyslexia	A type of learning disorder that has significant difficulties in reading and writing characters despite having no particular abnormality in intellectual ability and general understanding ability.

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[1] https://www.mofa.go.jp/press/release/press4e_002177.html

Abbreviations

Abbreviation	Definition
BA	Bibliotheca Alexandrina (the Library of Alexandria)
EJUST	Egypt-Japan University of Science and Technology
GDP	Gross Domestic Product
GEM	Great Egyptian Museum
ITU	International Telecommunication Union
JICA	Japan International Cooperation Agency
MCIT	Ministry of Communications and Information Technology
NGO	Non-government Organization
NL	National Library
ODA	Official Development Assistance
SDGs	Sustainable Development Goals
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WIPO	World Intellectual Property Organization

1. Program Outline

1.1. Background

Although Egypt's GDP is growing steadily, 27.8% of the populations are reported to live on less than national poverty lines. Consequently, improving the living standards of the poor in particular has been a top priority in achieving the SDGs (Sustainable Development Goals).

Furthermore, the rate of dropping out of elementary education is as high as 20%, which creates a problem in education especially because they eventually become illiterate. Since the illiteracy rate in Egypt in 2012 is 24.9%. In addition, support for the education of visual/hearing-impaired persons is gradually being provided through various projects. However, there is almost no support for persons with learning disabilities or various other reading difficulties.

1.2. Target Technology

In order to lift illiterate people and persons with disabilities out of poverty, it is crucial to provide appropriate access to knowledge and information throughout their lives. Accessible DAISY[2] complying with international standards (DAISY/EPUB) can ensure such access to knowledge, information and culture for persons with print disabilities (including visual impairments, cognitive disabilities such as dyslexia, illiterate people without adequate learning opportunities, people using minority languages and indigenous people using language without its own written script) by presenting text, audio and images in synchronization.

To transfer above technology, PLEXTALK Producer software is localized to adapt Arabic language, and 4 sets of licenses were handed over to the Bibliotheca Alexandrina (the Library of Alexandria, BA) in the program.

< About PLEXTALK Producer >
PLEXTALK Producer, which is developed by Shinano Kenshi, is software for producing accessible multimedia contents and is most widely used in Japan.

< Functions of PLEXTALK Producer >
(1)   Complying with international standards (DAISY/EPUB)
(2)   Audio importing, audio recording, audio editing
(3)   Text/image importing, text editing
(4)   Import from PDF data
(5)   Section / page / bibliographic information editing
(6)   Table editing

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[2] Digital Accessible Information System

Features of accessible multimedia

With the functions listed below, access to knowledge, information and culture can be ensured for persons with print disabilities including persons with visual impairment, dyslexia or illiteracy and people using minority languages.

Example of a display of PLEXTALK Producer

- Users can highlight the part being read
- Users can change the font, line spacing, size and color
- Users can navigate quickly by using the table of contents, page and headline
- Automatic layout according to letter size
- With standards meeting needs unique to non-Western languages
- Users can listen to sentences being read while watching images/tables
- Users can change the reading speed, pause, etc.
- Users can present text, images and tables in order of reading

1.3. Program Objective

The Program, in cooperation with the BA, the world-famous center for collecting Internet information as well as the knowledge and information distribution center in Egypt, and Shinano Kenshi with the support of Japan International Cooperation Agency (JICA), aims to build an environment which ensures access to knowledge, information and culture for persons with print disabilities and establish business scheme to ensure the sustainable dissemination of accessible multimedia in Egypt and Arab countries, by promoting understanding of the utilization of advanced accessible multimedia, establishing a pioneering model and sustainably providing our outstanding technology and know-how for the inclusive dissemination of information essential to inclusive and sustainable growth of the country.

1.4. Schedule

Activity	Schedule	City	Contents
Activities in Egypt (1st visit)	2018 Jun 24 - 2018 Jul 8 (15 days)	Cairo / Alexandria	• Individual interviews with government and municipal officials, representatives from groups of persons with disabilities and relevant international organizations. • Organizing 1st accessible multimedia seminar. • Collecting requests from the BA for local adaptation of "Producer".
Activities in Japan	2018 Oct 22 - 2018 Nov 1 (11 days)	Osaka / Gifu / Nagano / Tokyo	• Visit to examples of utilization in Japan while fostering better understanding of the wide range of support for people with print disabilities. • Evaluate local adaptation of "Producer".
Activities in Egypt – (2nd visit)	2018 Dec 14 - 2018 Dec 28 (15 days)	Cairo / Alexandria	• Organizing 2nd accessible multimedia seminar. • Introduce implementation of Arabic localized "Producer". • Individual interviews with government and municipal officials, representatives from groups of persons with disabilities and relevant international organizations.

2. Activities

2.1. Activities in Egypt (1st visit)

■ **Date:** 24 June 2018 for 15 days

■ **Location:** Cairo and Alexandria

(1) Individual interviews

Visits / Meetings	Details
Bibliotheca Alexandrina (BA)	・ Introduction of the outline of the Project / Purpose of the visit / Exchange ideas on the Study tour in Japan / BA's expectation for the Project ・ Introduction of "Producer" / Needs for accessible multimedia in Egypt ・ Tour in the BA / Exchange ideas with person in charge of each facility ・ Gathering requests regarding the installation and local adaptation of "Producer" (Interview of persons in charge of audio book production /Review of Specific Arabic Issues), and exchanging opinions with the persons in charge
Ministry of Communications and Information Technology (MCIT)	・ Introduction of the outline of the Project and exchange ideas

International Telecommunication Union (ITU)	・ Introduction of the outline of the Project / Collecting information of ongoing projects of ITU / Exchange ideas on possible collaboration
Japan Foundation Alexandria Course	・ Demonstration of DAISY / interview and exchange ideas on the needs for accessible multimedia in Egypt
National Library (NL)	・ Tour in the NL / Needs for accessible multimedia in Egypt

(2) Organizing 1st accessible multimedia seminar.

"Access to Information for Persons with Print Disabilities" seminar was co-organized by the BA and JICA at the BA Conference Centre (Delegates Hall) from 10:00 am to 16:30 pm on July 3, 2018.

Seminar audience
（3 July 2018）

Demonstration of "Producer"
（3 July 2018）

The seminars were conducted under the following programs, and approximately 80 people from government and local government officials, international organizations, disability groups, etc. participated. Of the participants, 22 were visually impaired.

Time	Program	Speaker	Organization, title
09:30 - 10:00	Registration		
10:00 - 10:10	Welcome Speech	Ms. Lamia Abdelfattah	Head of Library Sector, BA
		Mr. Yoshifumi Omura	Chief Representative, JICA Egypt Office
10:10 - 10:50	Opening session	Dr. Howayda Kamel	Director General, Public and International
		Dr. Paul Hector	Advisor for Communication & Information, UNESCO[3]
		Dr. Inas Hegazi	ECD Manager and Focal Point for Disabilities, UNICEF[4]

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[3] United Nations Educational, Scientific and Cultural Organization
[4] United Nations Children's Fund

Time	Program	Speaker	Organization, title
10:50 - 11:10	Keynote Presentation: Library Services to Persons with Print Disabilities - Global View	Mr. Hiroshi Kawamura	DAISY Consortium, Japan
11:10 - 11:40	Coffee break		
11:40 - 12:40	Session One: Print-disabled Community in Egypt: Current Situation and Issues	Mr. Khaled Hanafy	Parliament Member, Egypt
		Dr. Sherifa Massoud	Executive Director, Educational Foundation for Early Intervention and Capacity Building
		Dr. Doaa Mabrouk	Founder/Executive Director, Baseera Foundation for Special Needs.
12:40 - 13:40	Lunch break		
13:40 - 14:40	Session Two: Current Solutions and Good Practices of Support for Information Access in Egypt	Dr. Ahmed Adam	Director, Department of Special Education, Ministry of Education
		Mr. Ahmed Elmaraghy	Editor in Chief, Akhbar Braille, Akhbar El Yom
		Ms. Marwa El-Gharabawy	Director, Specialized Libraries Department, BA
14:40 - 15:10	Coffee break		
15:10 - 15:50	Session Three: DAISY: A Gateway to Information Access - What is DAISY? Best Practices from Japan - PLEXTALK Producer Development	Ms. Mayu Hamada	Assistive Technology Development Organization
		Mr. Takuro Shiroki	Shinano Kenshi Co., Ltd.
15:50 - 16:00	Closing Session	Ms. Lamia Abdelfattah	Head of Library Sector, BA

In the keynote speech, Mr. Hiroshi Kawamura of the JICA Study Team who is a director of the DAISY Consortium provided a talk on global trends in library services for the disabled, as well as on the effectiveness of domestic initiatives in Egypt in response to World Intellectual Property Organization (WIPO) activities in ratifying the Marrakesh Convention.

In "DAISY, gateway to information access" Ms. Makio, a member of the JICA Study Team, demonstrated the Multimedia DAISY book and introduced good examples in Japan, followed by Mr. Shiroki, who demonstrated the production of Multimedia DAISY by "Producer".

2.2. Activities in Japan

- **Date:** 22 October 2018 for 11 days

- **Location:** Osaka, Kyoto, Gifu, Nagano and Tokyo

- **Visitors to Japan:** Two technical staff of the Digital Recording Department of the BA
  (Ms. May Nagy and Ms.Yasmine Youssef)

(1) Visits and Meetings

Visits / Meetings	Details
Nippon Lighthouse (Osaka Prefecture)	・ Use case of "Producer" at an organization for visually impaired.
Osaka City Board of Education	・ Use case of DAISY textbooks at public school.
Osaka Kyoiku University	・ Courtesy call to the President of the University ・ Visit to and introduction to the university library ・ Exchange of opinions with university librarians
Osaka Castle	・ Barrier Free Tourism
Osaka Prefectural Library (Osaka Prefecture)	・ Best practice of services for people with print disabilities at public library ・ Meeting library staff with disability and learn his role.
Courtesy visit Kansai-kan of the National Diet Library	・ National level policy of information service for people with print disabilities
Conference of the National Association of Institutions of Information Service for Visually Impaired Persons (NAIIV) Assistive Technologies Exhibition at the Conference of NAIIV	・ Use case of "Producer" as standard DAISY production tool at the National Association of Institutions of Information Service for Visually Impaired Persons (NAIIV) ・ Experience the latest assistive technologies in Japan
Support for university students, Meeting with Professor. Jun Ishikawa (Chairperson of Associate Higher Education Disability Students)	・ Role of DAISY/EPUB in information accessibility support for university students in Japan
Chofu City Central Public Library Chofu City Citizen Plaza Akros （Exchange with Chofu DAISY）	・ Tour of services for people with disabilities and volunteer activities at small/medium scale public library
INTERCOMMUNICATION CENTER (ICC)	・ Barrier Free Tourism
Maruko Junior High School, etc. (Nagano Prefecture)	・ Use case of "Producer" at school

Japan Lighthouse
（23 October 2018）

Audio DAISY production
（24 October 2018）

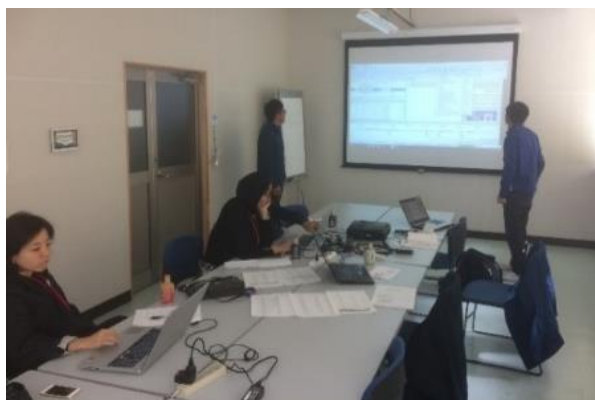
Assembly of the National Association of
Institutions of Information Service for Visually
Impaired Persons
(Mr. Shiroki explaining at the conference)
（26 October 2018）

Ueda Maruko Central Primary School
（29 October 2018）

(2) Evaluate local adaptation of PLEXTALK Producer

During the 2 days from October 29, 2018 to 30th, Mr. Shiroki gave practical instruction on how to operate "Producer". Ms. May and Ms. Yasmine confirmed the operation of the Arabic version of "Producer", and exchanged opinions on improvements and requests. Ms. Makio of ATDO, an expert of DAISY production guidance, participated in the work and confirmed advanced functions such as diagram processing.

Confirmation work of Arabic version of "Producer"
（28 – 30 October 2018）

2.3. Activities in Egypt (2nd visit)

■ **Date:** 2018 Dec 14 for 15 days

■ **Location:** Cairo and Alexandria

(1) Training program of PLEXTALK Producer

After the preparation of the workshop on 18 – 21 December 2018, 5-days training from 23 – 27 was conducted for 6 persons (one person from the administration department and one manager from the digital recording library department also participated as observers), including 4 DAISY production technical staff in the digital recording library department of the BA and 2 interns. In the training, confirmation work of Arabic version of "Producer" was also conducted.

Training at BA（23 December 2018）

Recording work at the training
（24 December 2018）

(2) Organizing 2nd accessible multimedia seminar

On December 19, 2018, at the BA Conference Room (Delegates Hall), "Information Accessibility: The Way Forward" seminar jointly with the BA and JICA was conducted.

Presentation & Demonstration on DAISY
（19 December 2018）

Audience of the Seminar
（19 December 2018）

The seminar was attended by approximately 80 participants from national and local governments, international organizations, and organizations for persons with disabilities. Of the participants, 10 were visually impaired and 2 were physically disabled.

Time	Program	Speaker	Organization, title
09:30 - 10:00	Registration		
10:00 - 10:15	Opening Session	Ms. Manal Amin	Acting Head of Library Sector, BA, Egypt.
		Mr. Yoshifumi Omura	Chief Representative, JICA Egypt Office
		Mr. Hosam Abouelseoud	Minister's Advisor for Social Responsibility and Services, Ministry of Communications and Information Technology, Egypt.
Keynote Speeches			
10:15 - 10:55	Inclusive Education in Egypt	Ms. Ingy Mashhour	Minister's Advisor for Special Needs, Ministry of Education, Egypt.
	Progress in Global Networking of Libraries Serving to Persons with Print Disabilities	Mr. Hiroshi Kawamura	Founder/Board member, DAISY Consortium, Japan.
Session One			
10:55 - 12:00	Demonstration of DAISY book	Ms. Mayu Makio	Chief, R&D and Training, Assistive Technology Development Organization, Japan.
		Mr. Ahmed Raouf	Digital Talking Books Production Specialist, BA, Egypt.

Time	Program	Speaker	Organization, title
	PLEXTALK Producer Development	Mr. Takuro Shiroki	Business Planning and Sales Manager, Shinano Kenshi Co., Ltd., Japan.
	Japanese Experience with Information Access to Print Disabled	Ms. May Nagy	Digital Talking Books Production Specialist, BA, Egypt.
12:00 - 12:30	Coffee Break		
Session Two			
12:30 - 14:10	Know me Accept me Initiative: Using Social Media to spread knowledge about Persons with Disabilities	Ms. Eglal Shenouda	CEO, Caritas, Egypt
	Dyslexia in Arabic	Dr. Gad Elbeheri	Managing Director, Global Educational Consultants, Egypt.
	4 years of Volunteering and Challenges	Dr. Marwa Rashed	Database and Archiving Manager, Alkutub, Egypt.
	Assistive Technology for the Inclusion of Arab Child in Education and Society	Ms. Amal Ezzat	HOPE CITY – Chairperson of the Board Arab Council for Childhood and Development, Speech and Language Therapist,
	Society Without Barriers	Mr. Ramez Maher	Founder and Managing Director, Helm, Egypt.
14:10 - 14:20	Closing Session	Ms. Manal Amin	Acting Head of Library Sector, BA, Egypt.
14:20 - 15:10	Lunch Break		

In "Demonstration of DAISY book" of Session 1, there was demonstration of an Arabic DAISY Book which the BA staff produced by using "Producer". Also, Mr. Shiroki demonstrated the production of multimedia DAISY in Arabic using the Arabic version of "Producer".

(3) Individual interviews

The interviews were conducted between 16th and 27th December in Cairo City and Alexandria City as described in the table below:

Visits / Meetings	Details
Embassy of Japan in Egypt	・ Exchanged views on Egyptian issues that could be solved by the spread of DAISY multimedia, and confirmed the importance of educational activities using video and SNS
The Grand Egyptian Museum (GEM)	・ Introduction of DAISY / exchange ideas
Individual interviews with NGOs etc.	・ Introduction of DAISY / exchange ideas
Egypt-Japan University of Science and Technology (EJUST)	・ Lecture on usecase of DAISY multimedia book
MCIT	・ Sharing the progress of the Project
National Library	・ Sharing the progress of the Project

3. Achievement and Business Development

3.1. Program Achievement

The results obtained through this project are as follows.

Contribution to development issues

• Completed the local adaptation of the "Producer" in collaboration with the 2 technical staff who have experience in producing and providing DAISY talking books in the BA and provided support including the version upgrading of "Producer" by reflecting the requests and improvements received from the technical staff.

• The 4 staff members of the Digital Recording Department of the BA and 2 interns learned how to create accessible multimedia using "Producer", and thus a leading model case of a sustainable multimedia production environment was created. 11 titles of Multimedia DAISY were produced during the project and staff and users of the BA gave positive feedback about the use of DAISY.

• Understanding the fact that providing accessible multimedia is an effective support measure for the people who have various reading difficulties was promoted among stakeholders including the BA, national and local government officials, disability organizations, relevant international organizations, etc.

Business side

• Local adaptation of "Producer" was completed by reflecting the results of evaluation by the BA, which has 7 years of experience in producing and providing recorded copies of the DAISY standard.

• "Producer" has used as a leading model case for accessible multimedia production technology in the world's well-known BA, and it has become an effective example that leads to the introduction and deployment of "Producer" in Egypt and abroad.

- In the local adaptation, the license management function of "Producer" was optimized, and the price of JPY 105,000 (the price in USD is also available upon request) was set. Shinano Kenshi started sales of "Producer" in Egypt directly to clients not through an agent.

- Through seminars and individual interviews conducted in the field, awareness of DAISY and "Producer" increased, and participants from the disability sector (NGOs and assistive technology consulting companies) and international organizations (UNESCO, UNICEF and UNHCR [5]) showed their interest to use "Producer". There were 8 inquiries regarding the utilization of the technologies, learning methods, and introduction costs.

3.2. Business Development Prospect

Through this project, the basis of the business development was established in Egypt, and the sales of the Egyptian version of 'Producer' was started. In the future, Shinano Kenshi will promote business development by selling to international donor organizations including JICA, NGOs, and local government organizations through public procurement.

With the expansion of the use of accessible multimedia, it is expected that the introduction of "Producer" in Arabic-speaking countries around Egypt and the sales of Shinano Kenshi's DAISY player and software will be expanded.

Shinano Kenshi decided to start sales of the Product in Egypt because of the outcomes obtained by this project as listed below:

- Among the DAISY production tools currently available on the market, "Producer" has become a proven product that supports Arabic and that technical support is provided to.

- The local adaptation of the "Producer" in collaboration with the technical staff who have experience in producing and providing DAISY talking books in the BA, made it possible to establish an accessible multimedia production environment in Egypt that was optimized for the production procedure using "Producer". This made the introduction of "Producer" easier, and gained an advantage in subsequent business.

- Interests were received from the disability sector and international organizations, and there were inquiries regarding usage, procurement and the cost of "Producer".

- While aiming at sales to international donor agencies for future business development, 22 sets of "Producer" was procured by JICA for the Technical Cooperation Project: "Project for Improvement of Inclusion of Persons with Disabilities through Improvement of Information Accessibility".

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[5] United Nations High Commissioner for Refugees

3.3. Remaining Challenges and Counterplan for Business Development

Establishing and expanding continuous support for people with reading difficulties using accessible multimedia is the most important factor in business development. It is necessary to maintain relationships with stakeholders developed through this project and provide continuous technical support.

As a matter of concern to the Egyptian government, the ratification of the Marrakesh Convention by the Egyptian government and the establishment of a copyright law are expected to facilitate the production and use of accessible multimedia and encourage its further dissemination. In this regard, the further development of the policy frakework is expected with support by the Egyptian government as well as disability organizations, in particularly by the activities of the "Technical cooperation project" by JICA launched in March 2019.

3.4. Collaboration Possibility with ODA

For further dissemination of "Producer", it is considered most realistic and effective to develop cooperation with other ODA project schemes, centering on cooperation with the technical cooperation project already in place.

The ODA project schemes that are expected to have beneficial synergies are shown below.

- Project for Improvement of Inclusion of Persons with Disabilities through Improvement of Information Accessibility in Egypt (Technical Cooperation Project)
- The Grand Egyptian Museum Project
- The Project for Creating Environment for Quality Learning
- Egypt-Japan Education Partnership: EJEP
- JICA volunteer program
- Cultural Grant Assistance