1. History of the efforts made in Japan to claim the right of the visually disabled people to read.

1-1. Current situation with reading of visually disabled people in Japan

The ways visually disabled people read books
- Some visually disabled people read Braille books.
- There are digital books (DAISY books) or having a device containing a text to speech function read the text data aloud.

Measures to guarantee the right to read to the visually disabled people
- Mainly conducted by a welfare organization named "Braille Library".
- Public libraries and educational facilities are lagging behind.

2. The advent of digital books and the golden opportunity it presents

2-1. Agenda to popularize use of accessible e-books in Japan

In Japan, the year 2010 was called "the first year of the digital books".
However, visually disabled people have not been able to reap the benefits of the technological advancement.

- There are many fake companies who use "DAISY" or "e-books" as a marketing gimmick.
- History of changes of the means and the changes of the subject: relationships between them are complicated.

At present, there is need to spread the idea that e-book devices have to be equipped with a read-aloud function.

2-2. Types of e-Books accessible for the visually disabled people

Types of design making e-books accessible for the visually disabled people:

A. Selling digital books without DRM.
B. Selling digital books with DRM.
C. Selling digital books with DAISY format.
D. Selling digital books with DAISY format.
E. Selling digital books with DAISY format.

- In Japan, the assistive technology currently available support this type of e-books.

Measures to ensure this right of the visually disabled people to read have been evolving far away from the ordinary libraries.
We are not sharing the information regarding the ways to access texts, and misunderstandings are hampering the progress.

No universal design that would easily solve the problem.

Development of computer software for the visually disabled people
- Windows "52, "Windows "55" development of computer software for the visually disabled people.
- "52" visually disabled people began attempts to use MS-DOS computers (in the U.S., it was the early 1960s).
- "52" and "55" development of computer software called "AKI Japanese word processor", which contained audio output system.

In the beginning, audio output was merely used as a feedback. But gradually, people started to use audio output as a read-aloud function for texts.

1-2. Problems of the Graphic User Interface (GUI) and attempts to solve them

- The read-aloud technology of MS-DOS computers had reached the level enabling practical use as of Microsoft releases GUI-based operating system "Windows "52".

GUI problem
- GUI problem had to be faced not only in Japan but also in the whole world.
- In the U.S., there are laws enacted to eliminate barriers in information technology.
- Amended Section 508 of the Rehabilitation Act of 1973
- Americans with Disabilities Act
- GUI screen readers were developed since 1989 to accommodate the release of a GUI-based operating system.

In Japan, there were no signs of any GUI screen readers when "Windows "52" appeared (Shihakawa, 1995).
"Windows "55" appearance of a GUI-based operating system, the assistive technology became utterly helpless.
"Windows "55" people kept forgetting about those who cannot see? (Mochizuki, 1998)
- Japan Organization for Employment of the Elderly and Persons with Disabilities" developed a GUI Screen Reader called "95Reader".

- "95System development" released a GUI Screen Reader called "PC-Talker".

Visually disabled people could now get some access to reading materials in Japan by digitizing books and outputting them as Braille or audio.

2. The advent of digital books and the golden opportunity it presents

2-1. Types of e-books available for the read-aloud function

A. "SAPIE" HP (on-line library service)
B. PLEXTALK Link Pocket
C. REGZA Tablet (Toshiba)
D. GALAPAGOS Sharp

The new technology should not be yet another social wall impeding the disabled people.
We have to keep demanding that people developing and selling new technologies are conscious about the concept of universal design.