

# **Ubiquitous technologies in mobile DAISY services for the print disabled**

**– A case of the LG Sangnam Library -**

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**WITH THE RIGHT TO READ  
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## Video

- LG DTB Library
  - [The Ubiquitous Library for the Blind and Physically Handicapped](#)



## Introduction

- LG Sangnam Library
  - The first digital library in Korea (founded in 1996)
  - 4500 visitors from over 1000 organizations
  - undertake challenges and innovations in the digital age
- Recently, ubiquitous technology created a demand for innovation in the library field
  - satisfy user's needs to access information easily anytime anywhere
- LG Sangnam Library designed a ubiquitous library model providing Digital Talking Books to the print-disabled via wired and wireless Internet





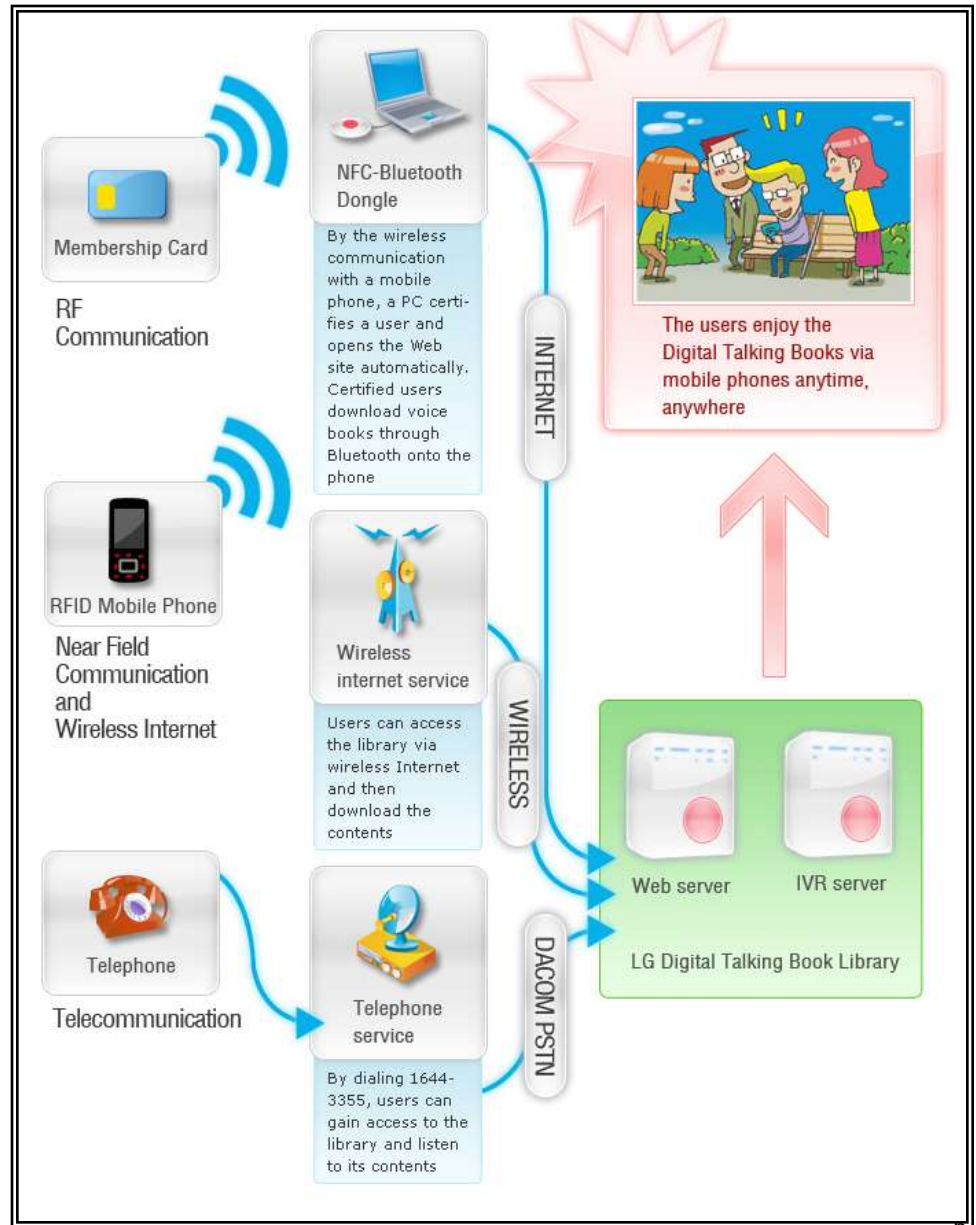
## Why a Ubiquitous Library for the Print-Disabled?

- Who will benefit most from the use of ubiquitous technology?
  - 1) The hi-technology the ubiquitous library generates is expected to help the disabled
  - 2) Extensive improvement of information environment for the print-disabled is urgently required in South Korea
- The best users for this technology would be the print-disabled, including the vision-disabled and those who have physical handicaps that impede their reading



# The Frame of the Library Services

- Access via mobile phones, PCs, and telephones
- When touch the NFC-Bluetooth dongle connected to a PC with a NFC reader- equipped mobile phone, the communication between the PC and the mobile phone is activated
- Users can access the library services at anytime from anywhere using various devices





## The Service Systems of the Library

### A. The Web Service – ①

- The actions order of connecting the web service
  - 1) A user connects a NFC-Bluetooth dongle to the computer
  - 2) and then equips a mobile phone with a NFC reader
  - 3) When the user touches the dongle with the mobile phone,
  - 4) the Library activates user identification and automatically opens the web site
  
- The first web menu
  - ‘My library’ or
  - ‘Member registration page’
  
- After accessing the web page
  - search books
  - listen to the talking books
  - and download the books via their mobile phone





# The Service Systems of the Library

## A. The Web Service - ②

- The web site(<http://voice.lg.or.kr/>) follows “Korean Web Content Accessibility Guidelines 2.0”

- Site menus

- 1) Voice Library
- 2) My Library
- 3) Community Room
- 4) Information Room
- 5) About the Library
- 6) Guidelines



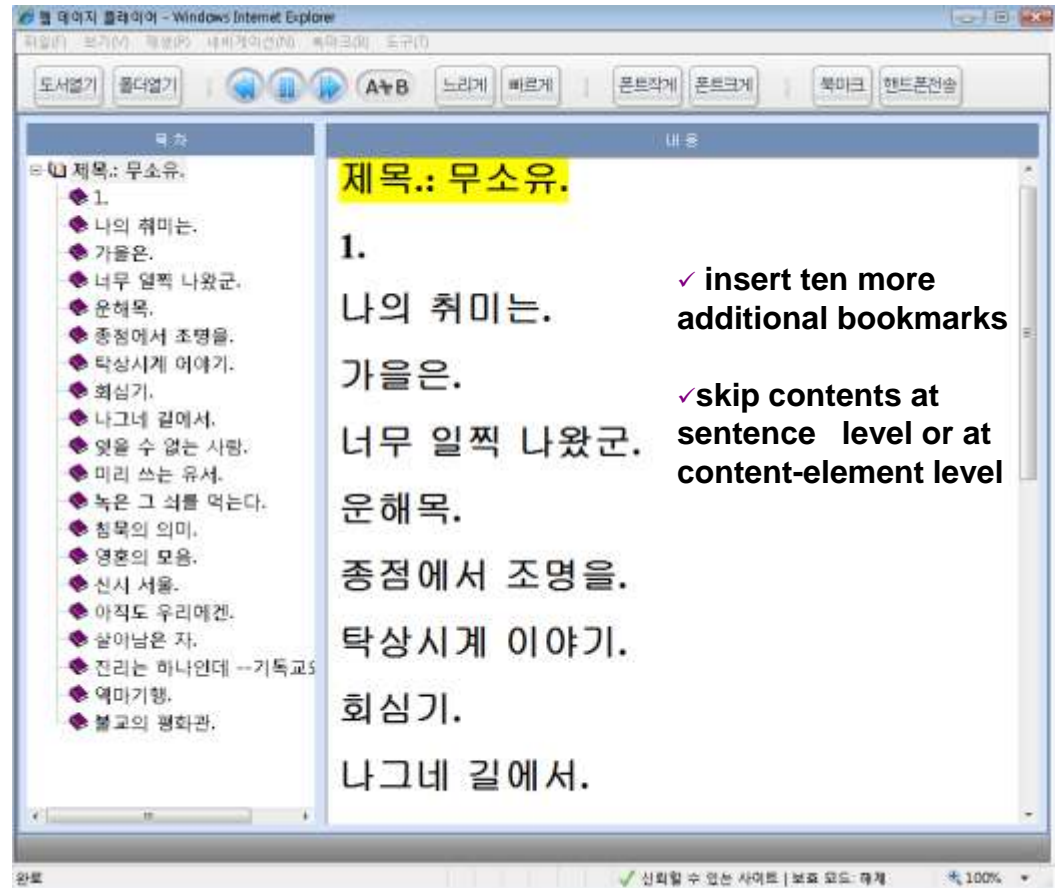




# The Service Systems of the Library

## A. The Web Service - ③

- Download the contents onto the computer
  - To control the downloaded digital talking books in detail, users can use the web-based DTB (Digital Talking Book) player
- Download the contents onto the mobile phone
  - The downloaded talking books on the DTB player can be transferred to a mobile phone again



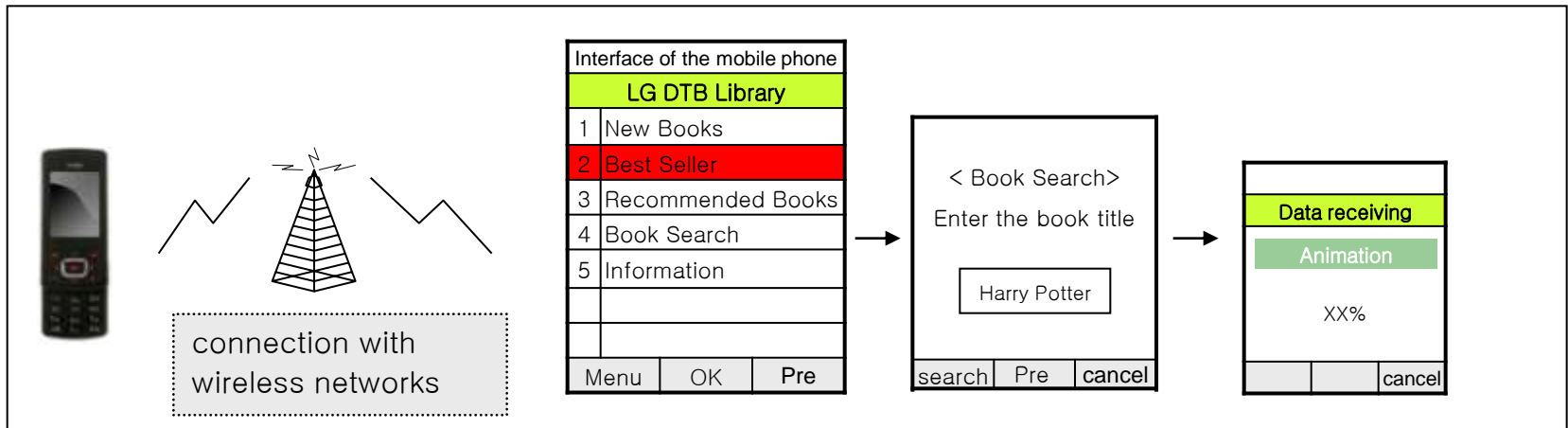
<The interface of DTB (Digital Talking Book) Player>



# The Service Systems of the Library

## B. The Mobile Service - ①

- The mobile access using the mobile phone software
  - 1) When a user pushes “OK” button in the middle of the keypad of a mobile phone,
  - 2) the software for wireless communication runs immediately
  - 3) The user searches books in connection with wireless Internet networks
  - 4) and downloads the retrieved contents onto his or her mobile phone
  - 5) The downloaded contents are text-file-formed DTB(Digital Talking Book) files
  - 6) Then, a TTS (Text to Speech) engine embedded in the mobile phone plays the voice files

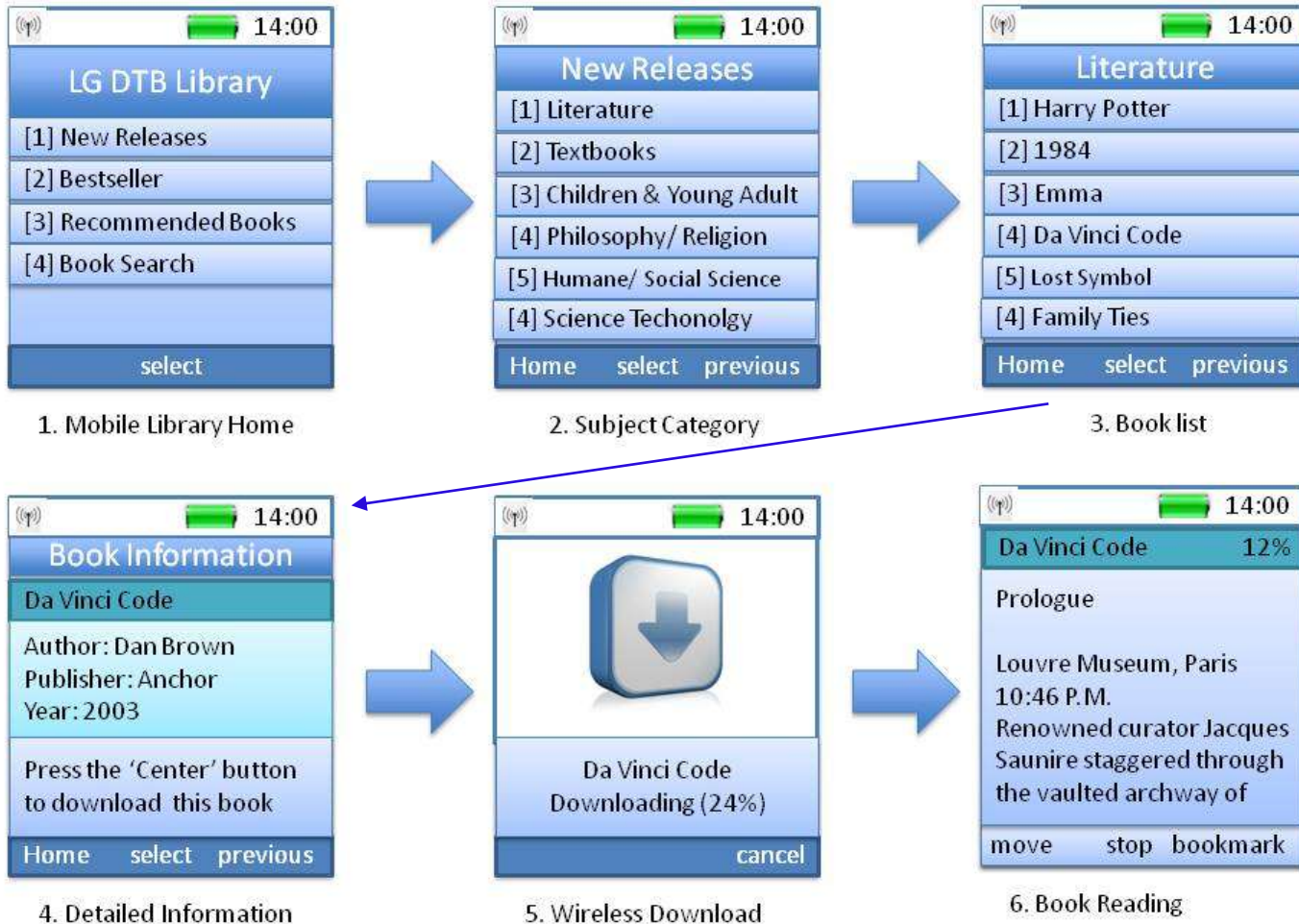




# The Service Systems of the Library

## B. The Mobile Service - ②

- The interface of Mobile library service



# \* The Service Systems of the Library

## B. The Mobile Service - ③

### ■ The Mobile Phone for the Print-Disabled

- Built-in functions including voice recognition, voice synthesis, and voice menu guide



[LG-LF1300S, 2006. 9.]



[LG-LB2900S, 2008. 7.]



[LG-LH8600S, 2009. 12.]

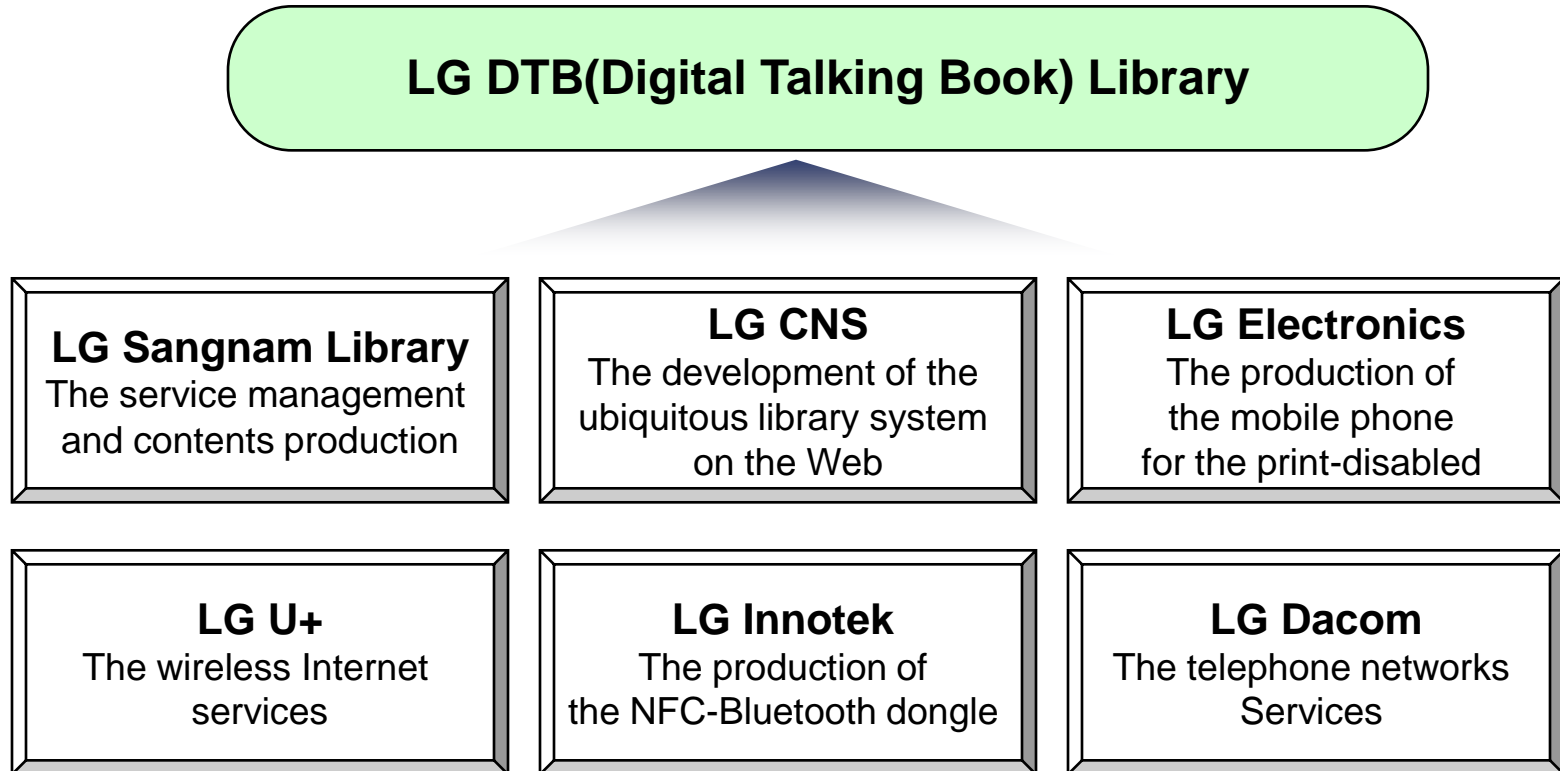
## \* The E-Collection of the Library

- DAISY(Digital Accessible Information System) standard
  - The international standards of Digital Talking Book
  - Users can examine the book by page, section, or chapter, or use a table of contents and an index
- DRM (Digital Rights Management) System
  - The digital contents service of the LG DTB Library is only offered to the print- disabled
  - The print-disabled who are formally certified can use these contents
- Focusing on producing DAISY contents of new publications quickly
  - Literatures, science, philosophy, history and vocational program resources
  - Plan to produce course textbooks and provide them for the print-disabled students



## The Participant of the Library Project

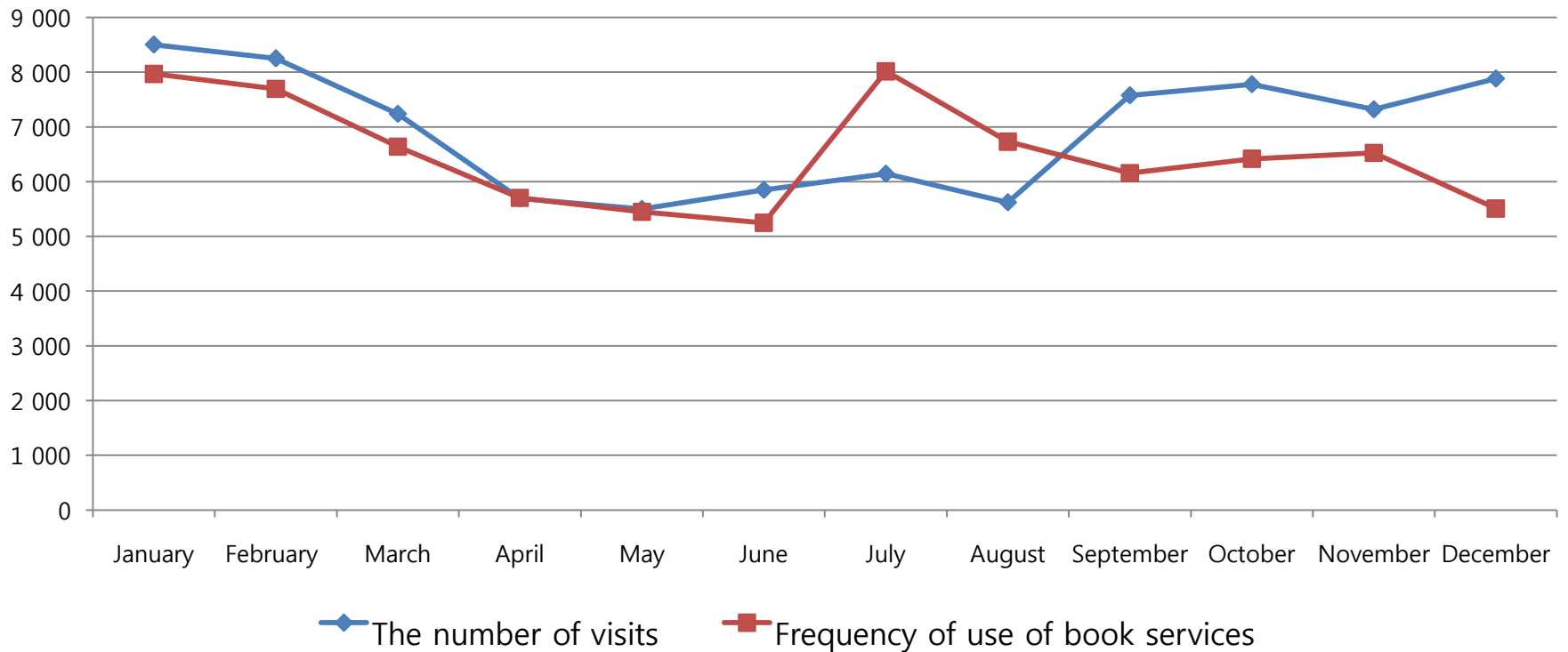
- The 6 subsidiary companies of LG Group



## \* Service usage statistics - ①

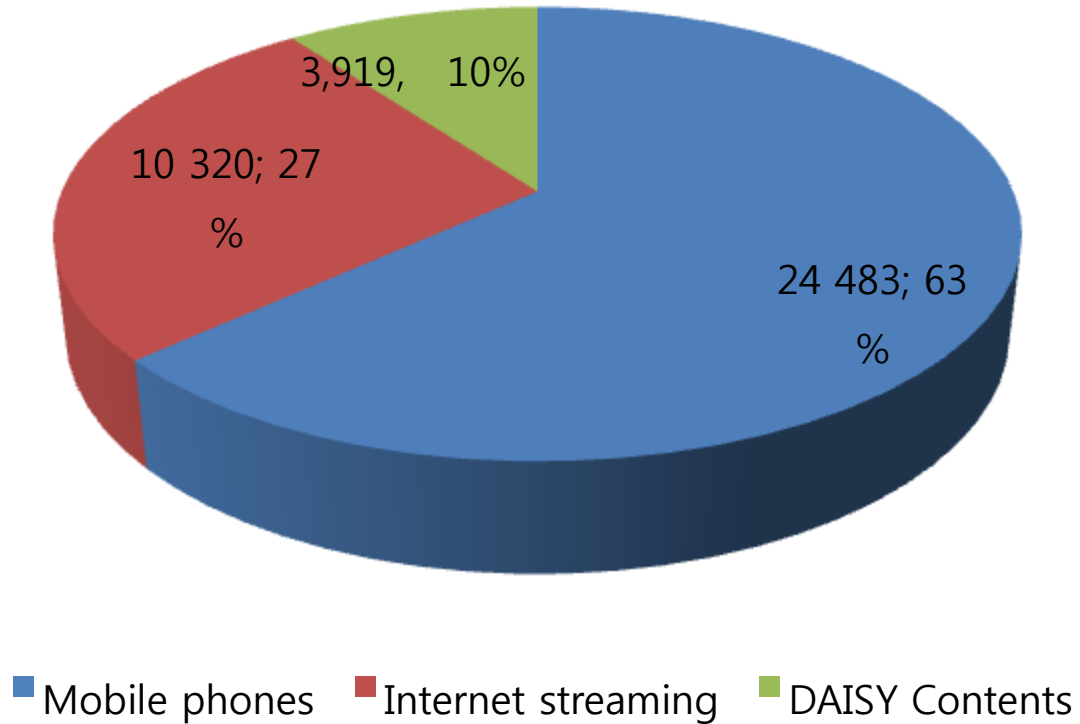
### ■ Usage of Digital Talking Books

- Visit web site 6,950 times and use digital talking books 6,500 times a month
- total members of the library : 5,400 members



## \* Service usage statistics - ②

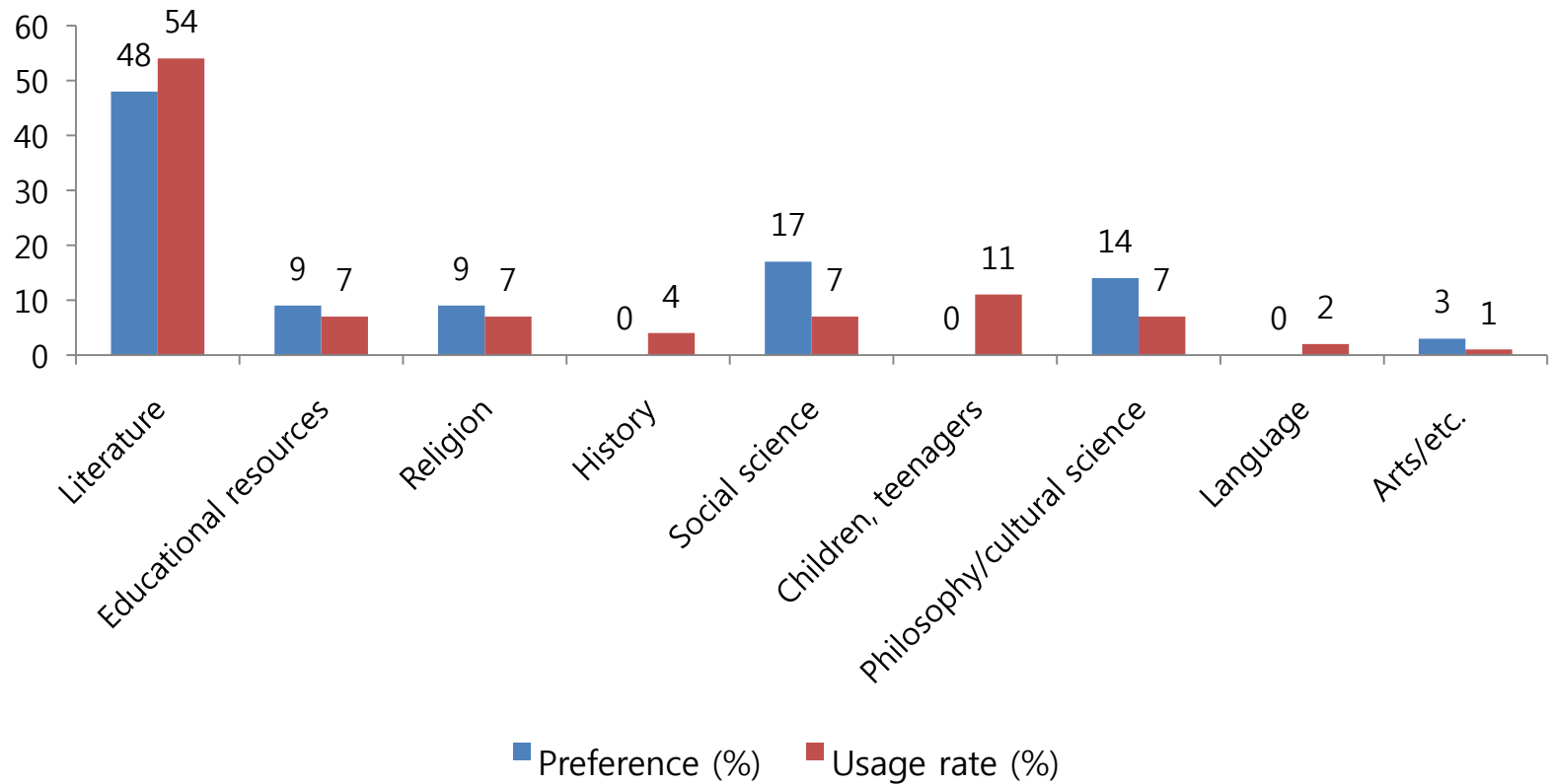
- Using Path
  - Mobile : Web : DAISY = 6 : 3 : 1





## \* Service usage statistics - ③

- Preferred subject areas and actual usage statistics





## Conclusion

- Barrier-free information service for the print-disabled
- The Library will make an effort to develop the collection of learning materials by cooperating with various related institutions
- We hope that this library can function as a future-oriented model contributing to the public with ubiquitous technology