

“Curator’s Voice”

Request for Proposals

Drafted by
Lecturers of Integrated Exercises for Software II
by request of the Fukushima Museum
October 2019

Contents

1	System Description	3
1.1.	Project Background.....	3
1.1.1.	Title of planned system	3
1.1.2.	Background.....	3
1.2.	System Assumptions and Overview.....	3
1.2.1.	Assumptions.....	3
1.2.2.	Overview.....	3
1.3.	Goals	5
1.4.	Relation with Exhibits.....	6
1.5.	Users of the System	6
1.5.1.	Administrators.....	6
1.5.2.	Other users	6
2	Content of Proposal.....	7
2.1.	Extent of the Proposal.....	7
2.1.1.	Scope of the System.....	7
2.2.	System Structure	8
2.2.1.	Application software	8
2.2.2.	Hardware.....	8
2.2.3.	Network architecture.....	8
2.2.4.	Security system	8
2.3.	Quality and performance assumptions	8
3	Requirements on Development.....	9
3.1.	Development period.....	9

1 System Description

1.1. Project Background

1.1.1. Title of planned system

“Curator’s Voice” (tentative title)

1.1.2. Background

At the Fukushima Museum, the number of visitors is expected to increase reflecting the growing number of travelers in the area. Especially, the number of foreign travelers is estimated to increase in these few years as Japan attracts travelers from all over the world as the host of the 2020 Olympic Games. This is a great chance to appeal the cultural heritage and life of people through the exhibits stored in the museum to foreign and Japanese visitors alike.

To respond to such growing interest and improve visitor satisfaction, a new method of providing commentary, visitor guidance, and collecting feedback is necessary. The main feature of the method is to include curator’s voices, a personal and unofficial explanation by individual curators to supplement the official uncolored description, in the commentary. The commentary will be provided in multiple languages in both text and audio as well. The method should also provide guidance and possible enjoyment for the viewers to explore the exhibits proactively.

1.2. System Assumptions and Overview

1.2.1. Assumptions

- The system is assumed to be used for both on-site visitors and on-line viewers. On-site visitors will use the system to view the exhibits on their own devices (smartphone or tablet). On-line users will access the exhibit commentary remotely without visiting the museum (web-browser).
- The commentaries are expected to be updated and added frequently.
- There is potentially a great number of exhibits to be displayed in the museum.

1.2.2. Overview

- A commentary is a set of data to assist the visitor in appreciating an exhibit.
- One commentary is associated with one exhibit. Not all exhibits may have a commentary.
- A commentary is composed of the following data:
 - Id: unique number to identify the exhibit
 - Title: short name of the exhibit
 - Photo: one digital image of the exhibit

- Description: description of the exhibit in words
- Audio: pre-recorded or computer synthesized speech of the Description data
- Voices: optional comments provided by curators (there may be multiple comments provided by multiple curators)

*Note: Title, Description, Commentary are prepared in both Japanese and English (it is not guaranteed that all data is prepared in both languages). The system should provide support for adding additional languages in the future.

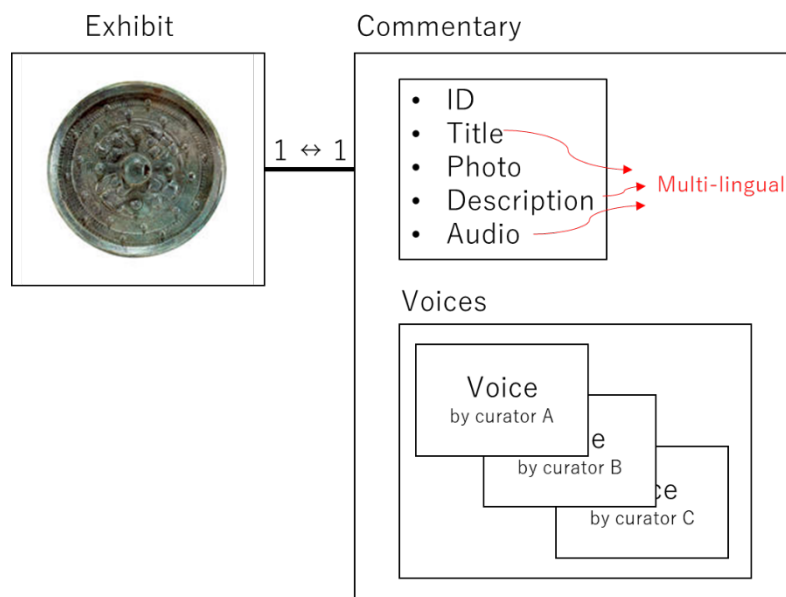


Figure 1 Conceptual structure of a commentary

- A user can specify the id of an exhibit to view its commentary. The id is displayed besides each exhibit in the museum.
- A user can also browse a graphical map of the display area to search for and browse commentary of an exhibit.
- The graphical map is a digital image to which links to commentary can be embedded. In other words, the map is created with in the system by the museum staff according to the current display layout.
- The act of “discovering” adds to the user’s proactive involvement in the browsing activity. Please propose how the links should look like, behave and be selected.

- At the end of the browsing, users should be able to provide feedback on the exhibit item.

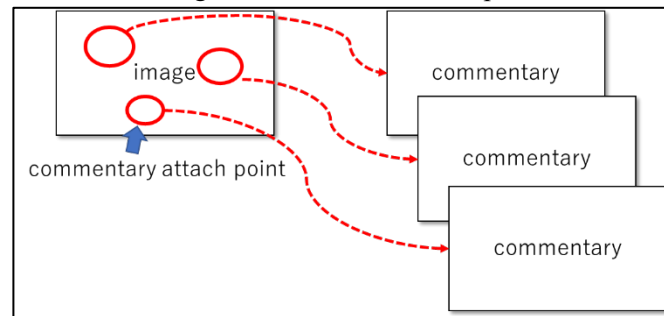


Figure 2 Structure of commentary map

The proposal must include, at least, the following functions:

- Browse commentary
Search commentary, browse a commentary (including all associated voices)
- Edit commentary
Create commentary, edit commentary, add/edit voice
- Edit graphical map
Select background image, edit links
- Feedback input
- Show feedback results and browsing statistics

In addition to the above, please propose any functions that would improve user experience and ease system management.

- To ease management of the system, please use a database to store all related data. The database should be served by an existing MySQL database server.
- Users are expected to use the system at the museum (onsite) or outside the museum (online) using their own devices.
- It is preferable that any potential user may use the system without installation of additional software to their devices but is acceptable if benefits outweigh the costs.
- There are no requirements on libraries and frameworks and the programming language used to develop the system. Please propose adequate combinations to ease operation and maintenance costs.

1.3. Goals

- By providing selective access to multi-lingual, multi-media commentary, users (online & onsite) will be able to proactively explore them and result in improved satisfaction and understanding.
- By adding personal voices of the curators as comments, user will be able to appreciate the exhibits depending on their interests, knowledge, and preferences.

- By collecting feedback on the exhibit experience, it may assist administrators to improve display contents and commentary and provide incentive to add more curator's voices.

1.4. Relation with Exhibits

The exhibits recorded in the system are also on display at the museum. The system will be used in combination with the museum displays to enhance and supplement visitor experience. The user feedback and statistics collected by the system will be used to plan future exhibits.

1.5. Users of the System

1.5.1. Administrators

- Curators (museum staff): edit the commentary, view feedback

1.5.2. Other users

- Museum visitors: browse commentary, input feedback
- Online users: browse commentary, input feedback

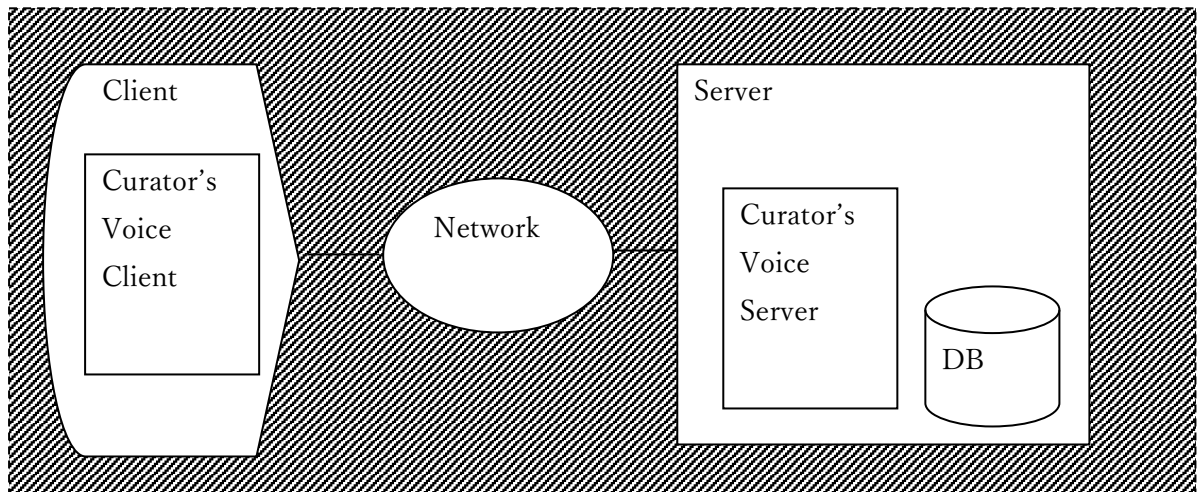
2 Content of Proposal

Please clarify assumptions if any. In case your proposal does not satisfy the requirements, or you have a better proposal, please explain their differences.

2.1. Extent of the Proposal

The scope of the system to be proposed is as described in the previous section “System Description”. Please propose appropriate functions for the system using the following information as a guide. Note that this is only for general orientation and is not intended as a limitation.

2.1.1. Scope of the System

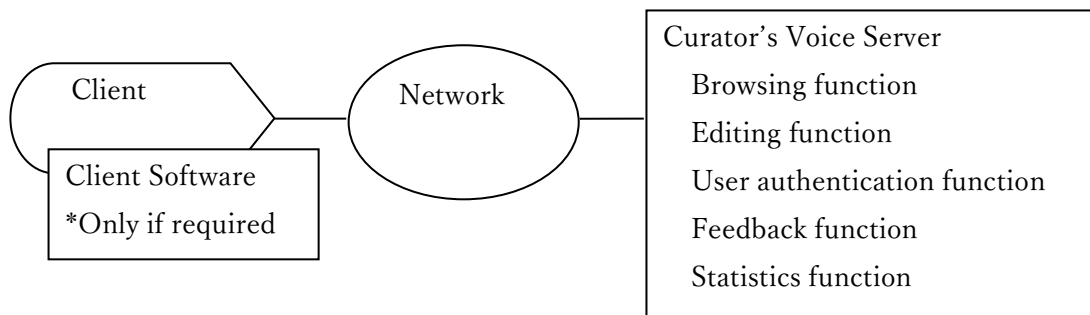


*The inclusion of the client software is up to the decision of developer.

2.2. System Structure

Please devise an adequate system architecture and propose requirements for the following items. The architecture should support viewing and management of the exhibit commentary with reasonable reliability. Preferably, the system should be reasonably cost-effective and support future enhancements.

2.2.1. Application software



2.2.2. Hardware

Please propose requirements for the server and client hardware as necessary.

2.2.3. Network architecture

Please propose a sufficient network environment for the system.

2.2.4. Security system

There are no specific requirements so please propose a configuration if necessary.

2.3. Quality and performance assumptions

Please propose the quality and performance assumptions for the proposed system.

3 Requirements on Development

Conditions of system development are as follows.

3.1. Development period

- Beginning of development : Oct. 16, 2019 (after approval of plan)
- Date of delivery : Feb. 5, 2020 (final class)