

A FIELD MUSEUM FRAMEWORK USING THE INFORMATION AND COMMUNICATION TECHNOLOGIES - “TANOKAN (OUTDOOR STONE STATUE) PROJECT” IN JAPAN-

H. Kamei^a, T. Hashimoto^a, T. Ako^{a,*}, A. Okamoto^b, Ibusuki City Board of Education

^a Tokyo Institute of Technology, 2-12-1 O-okayama, Meguro-ku, Tokyo, Japan - (kamei, ako)@archaeo.cs.titech.ac.jp

^b Tohoku University of art & design, - aokamoto@aga.tuad.ac.jp

Commission C-5: Education, training and communication

KEY WORDS: Field-Museum, Eco-museum, ICT, Outdoors cultural properties, *TANOKAN* (outdoor stone statue), e-Learning

ABSTRACT:

Many field museums, which have outdoor cultural properties, exist in each place. A field museum has some problems unlike a usual museum. These problems are monitoring and conservation, method to provide information and management the ordinary life and museum activities. The authors are looking for ways to solve foregoing problems using ICT. "TANOKAN Project" is the one of the application case. TANOKAN is the characteristic stone statue, which is symbol of rice cultivation and fertility. About 2,000 TANOKAN were identified, and these are located only in Kagoshima and a part of Miyazaki prefecture in Japan. Even now, TANOKAN is the symbol of religious belief ingrained in local culture. Therefore, it is not suitable to set up an expository board for visitors. This "TANOKAN Project" is working towards a new field museum framework using IC tags, mobile devices and so on, and maintaining the landscape.

1. INTRODUCTION

In general, it is considered that a museum is a building housing cultural resources. Visitors are able to see valuable treasures in an exhibition room. However, there are a lot of natural and cultural heritage. These are also our valuable resources, although visitors have to go to each spot in order to see it. The eco-museum is activities that preserve outdoor natural and cultural articles in the locale and aim to use it together. You can visit cultural articles and feel the area like one museum space. It is called the field museum, the open-air museum, etc., because these intended articles often exists in outdoors. In 1971, Rivière advocated the word "Ecomuseum", and the evolutionary definition of eco-museum was announced at the ICOM (International council of Museums) in 1980.

In the words of Rivière (Rivière, 1985),
"The ecomuseum is an instrument that a power and a population conceive, manufacture and use together.

- A mirror in which the people watch themselves.
- An expression of man and nature.
- An expression of time.
- An interpretation of space.
- A laboratory in the measure in which it contributes to the study of history and present of this population and its environment, stimulating the formation of specialists in these fields, in cooperation with external research organizations.

- A place for storage, which contributes to guarding and giving value to natural and cultural heritage of the population.
- A school. Laboratory, museum, school is not locked in themselves, receive and give."

Some eco-museums that suit regional specialities around Europe have been established following his proposal. Similarly in Japan, the eco-museums, which focus on the regional nature and culture, have been established. These eco-museums are divided into four types.

- Town development on a regional scale for lifelong learning
- Town development for activation of local industrial
- Environment education for harmonious coexistence of man and nature
- Promotion of networking between the local community and museum.

These eco-museums have successful results. On the other hand, all type eco-museum have the following problems that are different from the general museum.

1. How to monitor and conserve for outdoor cultural properties?
2. How to provide information about cultural properties for visitors?
3. How to manage the ordinary life and museum activities?

The authors are looking for ways to solve foregoing problems using ICT (Information and Communication Technology). "TANOKAN Project" is the one of the application case.

* Takayuki AKO, Tokyo Institute of Technology Centennial Hall, 2-12-0-L1 O-okayama, Meguro-ku, Tokyo, Japan,
E-mail: ako@archaeo.cs.titech.ac.jp, Phone: +81-3-5734-3340, Fax: +81-3-5734-3348

TANOKAN is the characteristic stone statue, which is symbol of rice cultivation and fertility. About 2,000 TANOKAN were identified, and these are located only in the domain of Satsuma (Kagoshima and a part of Miyazaki prefecture in Japan). Even now, a lot of TANOKAN are the symbol of religious belief ingrained in local culture. Therefore, it is not suitable to set up an expository board for visitors. This "TANOKAN Project" is working towards a new field museum framework using IC tags, mobile devices, etc. and maintaining the landscape.

In this study, this project concentrates on the historical and cultural properties in the outdoor field than the nature. Therefore, the authors don't use "Eco-museum" but "Field museum" in this paper.

2. TANOKAN (OUTDOOR STONE STATUE)

TANOKAN is the characteristic stone statue in Japan, which is symbol of rice cultivation and fertility. Figure 1 shows some TANOKAN photographs. About 2,000 TANOKAN have been identified, and these are located only in the domain of Satsuma (Kagoshima and a part of Miyazaki prefecture in Japan). These statues are the symbol of the religious belief from 18th century. Even now, a lot of TANOKAN are the symbol ingrained in local culture. Community residents offer these statues a flower or water day by day, and festival is regularly held.

The styles of these statues are like a Buddha's image, a Buddhist monk, a Shinto priest, a farmer and so on. It has been recognized that this styles differ depending on location or date, but it is not clear these systematic classification and transition. These usually exist beside the rice paddy or road. Nowadays, several statues have been moved to another places that are a community centre, museum, etc., because original place had been influenced by land improvement and consolidation.



Figure 1. Photographs of TANOKAN (top-left: NIGATSUDEN, top-right: KARIYA, bottom: SEZAKI)

3. STUDY OF THE TANOKAN IN IBUSUKI CITY

3.1 Study area and Result

Ibusuki city locate at the southernmost tip of the Satsuma peninsula. There are many TANOKAN in this city, and Ibusuki City Board of Education is studying the TANOKAN. In addition, cultural lessons and trial lectures have been held in order to plan the Ibusuki field museum. However, the professional staffs of the cultural properties are very few. Therefore, they cannot manage the outdoor natural and cultural heritage like other museum staff. This is the typical situation on Japanese field museum, and this area is the most appropriate area for the proposed project.

The survey of existing conditions for the TANOKAN was carried out in Ibusuki City, Kagoshima prefecture in 2009. The main task of this survey is to check the difference from the condition based on the 1997 survey report (Yutaka, 1997). Iwasaki and Inoue of the Ibusuki City Board of Education wrote this report. The 51 statues were identified in this survey. Twenty-one of them locate in the IWASAKI hotel. Moreover, there were taken a photo of the current condition, and these location were measured using the handy GPS. (GPSMAP60CSx from Garmin inc.). Figure 2 shows the distribution map of these statues, and Appendix A is the list of identified them.

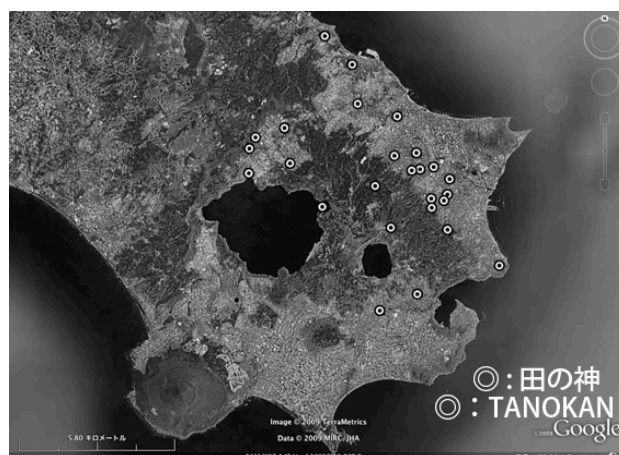


Figure 2. Distribution map of TANOKAN

3.2 Arrangement of the Issue

The result of this survey shows some issues about the TANOKAN in Ibusuki City.

Firstly, about monitoring and conservation, there are too few professional staffs of the cultural properties to survey and check the TANOKAN, although Ibusuki City expanded in association with Yamagawa-cho and Kaimon-cho. Figure 2 shows the distribution of TANOKAN is biased toward old Ibusuki City. Because it is clear that professional staffs cannot survey over the area, it is necessary to cooperate with local residents.

The second issue is deterioration of the TANOKAN. Most of these statues in Ibusuki city are made from the YAMAGAWA stone. This stone is a beautiful yellow tuff, and this is easy to engrave. On the other hand, this is easy to lose substance and covered in moss. We need check the daily situation.

Finally, the TANOKAN have possibilities to move to another place. As a result, some statues have been moved though only

ten years pass. The main reason of move is a change of surrounding environment. The other reason is closely tied to local ceremony. Some communities get the statue from another rich harvest in order to be affected by rich harvest for themselves. So, folklores about TANOKAN are very important information.

4. "TANOKAN PROJECT" STRATEGIES

4.1 Data aggregation

This project proposes to solve the above-mentioned issues using ICT and regional collaboration. Currently, the new report based on the survey has been edited, and the web site of the TANOKAN information through photograph has been developing. In the field museum, we should be kept the environment around the cultural properties in situ. Therefore, it is not suitable to set up an expository board for visitors. These become core information about TANOKAN.



Figure 3. Written image of the new report



Figure 4. Screenshot of the web site

4.2 New monitoring by photo data

This project produces new monitoring system by the photo data sent from local residents and visitors. Currently many people have a digital camera or a mobile phone with camera. Moreover, many photo album services are running on the Web. The new monitoring system is consists of digital photo data, web album service and RSS (RDF Site Summary or Really Simple Syndication) technology. It is very simple and low cost system. For example, someone take a photo of a TANOKAN and upload the photo data to a personal web album. If he allows the RSS delivery service for the public web site of the TANOKAN,

the photo data is automatically sent to public web site whenever he uploads the photo to the personal web album. They don't have to send the data to the public web site. In addition, professional staff can get new photo about the TANOKAN without expensive hardware and knowledge of computer software. Now, the authors are developing a handling interface for many photo data.

4.3 e-learning

Ibusuki City Board of Education proposes the "IBUSUKI MAGUGOTO Museum (in Japanese)", which means the field museum of the Ibusuki city. The cultural lessons and trial lectures have been held at the Ibusuki archaeological museum and volunteers for museum activities have increased. In the future, interactive exhibit, e-learning class and so on for local residents and visitors are planning in order to establish a new field museum.

References:

Chikayuki Satomi, 2008. Ecomuseum of Japan and World (2008), *Bulletin of the Mizunami Fossil Museum*, No.35, p.73-81

Georges Henri Riviére, 1985. *LA MUSÉOLOGIE, l'Association des amis de.*

Ibusuki archaeological museum, 2009. "Event table", Kagoshima, Japan. <http://www.minc.ne.jp/cocco/bunkazaipage/bunkazai2page.htm> (accessed 25 Aug. 2009)

Ibusuki archaeological museum, 2009. "Map of the natural and cultural heritage in Ibusuki city", Kagoshima, Japan. <http://www.minc.ne.jp/cocco/bunkazaipage/bunkazai2page.htm> (accessed 25 Aug. 2009)

Nabais A, 1985. The development of ecomuseum in Portugal. *Museum* 148.

Tansei Institute, 1993. *ECOMUSEUM* (in Japanese)

Yutaka Iwasaki and Eiichiro Inoue, 1997. *Isbusukishi no tanokan*, Ibusuki city board of education, Kagoshima, Japan. (in Japanese)

APPENDIX A: LIST OF TANOKAN IN IBUSUKI CITY

ID	Name	Location Latitude (WGS84)	Location Longitude (WGS84)	Altitude	Measurement date	Direction
1	IWAMOTO-FUMOTOKAMI 岩本麓上	N31 17 23.7	E130 35 51.2	10 m	2009.3.10 11:35	Northeast
2-1	SESAKI 1 瀬崎 1	N31 17 58.8	E130 35 13.0	28 m	2009.3.10 11:07	North
2-2	SESAKI 2	N31 17 58.8	E130 35 13.0	28 m	2009.3.10 11:07	North
3	SHIMOKADO 下門	N31 16 07.7	E130 34 14.4	94 m	2009.3.9 11:25	Southeast
4	HORIKIRIEN 堀切園	N31 15 56.6	E130 33 33.3	115 m	2009.3.9 14:17	South
5	ISHIMINE 石嶺	N31 15 24.5	E130 34 21.8	122 m	2009.3.9 11:39	North
6	KARIYA 仮屋	N31 15 43.1	E130 33 24.5	104 m	2009.3.9 14:02	Southwest
7	OOSAKO 大迫	N31 15 13.1	E130 33 23.3	75 m	2009.3.9 13:37	East
8	SHINNAGAYOSHI 1 新永吉 1	N31 14 31.7	E130 35 09.7	91 m	2009.3.9 15:06	South
9	SHINNAGAYOSHI 2	N31 14 31.1	E130 35 07.4	84 m	2009.3.9 15:09	West
10	SHINNAGAYOSHI 3	N31 14 31.3	E130 35 06.6	82 m	2009.3.9 15:10	West
11	NAKAKOUJI 中小路	N31 14 01.8	E130 38 03.3	31 m	2009.3.10 15:42	Northeast
12	MINAMISAKO 南迫	N31 14 28.6	E130 37 41.3	37 m	2009.3.10 16:09	Northeast
13	YANAGITA community center 柳田公民館	N31 14 37.2	E130 37 58.7	16 m	2009.3.10 16:36	South
14	MUTASAIRE 牟田砂入	N31 15 03.3	E130 38 07.1	12 m	2009.3.9 10:03	East
15	TAMARI 玉利	N31 14 39.9	E130 37 40.8	26 m	2009.3.10 16:21	South
16	NIGATSUDEN 二月田	N31 15 18.2	E130 37 44.7	14 m	2009.3.9 10:17	North
17-1	OOTSUBOJIRI 1 大坪尻 1	N31 15 35.6	E130 37 20.6	20 m	2009.3.9 10:53	South
17-2	OOTSUBOJIRI 2	N31 15 35.6	E130 37 20.6	20 m	2009.3.9 10:53	South
18	MIYA 宮	N31 15 15.6	E130 37 25.4	22 m	2009.3.9 10:30	Northeast
19	KINOSHITA 木ノ下	N31 15 14.3	E130 37 13.7	21 m	2009.3.9 10:38	East
20	NAKAFUKURA 1 中福良 1	N31 15 32.4	E130 36 49.4	14 m	2009.3.9 16:33	Southwest
21	NAKAFUKURA 2	N31 15 32.4	E130 36 49.4	14 m	2009.3.9 16:33	Southeast
22	NAKAGAWA community center 中川公民館	N31 16 20.2	E130 36 54.1	29 m	2009.3.10 12:15	West
23-1	WATASE community center 1 渡瀬公民館 1	N31 16 36.1	E130 35 58.4	43 m	2009.3.9 11:10	South
23-2	WATASE community center 2	N31 16 36.1	E130 35 58.4	43 m	2009.3.9 11:10	South
24-1	NARIKAWA 1 成川 1	N31 12 43.9	E130 37 19.5	29 m	2009.3.10 8:56	West
24-2	NARIKAWA 2	N31 12 43.9	E130 37 19.5	29 m	2009.3.10 8:56	West
25	MORIMATSU 森松	N31 12 24.6	E130 36 26.2	93 m	2009.3.10 9:16	South
a	MediPolice メディポリス	-	-	-	-	-
b	IWIASAIKI Hotel 指宿岩崎ホテル	N31 13 17.5	E130 39 15.9	18 m	2009.3.10 13:18	-