'The Digital Museum Project for the Languages and Cultures of Ryukyu: The Case of Ikema Ryukyuan

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Goals of the Project

• To design a prototype for the web based museum for an endangered language that is easily updatable and extendable,

• to provide a forum in which local people can exhibit their language products, and

• to allow local people more access to their language, and help preserve the language and culture of the local community.
Contents

1. Overview of the language and community
2. Our research group
3. The design features of the museum
4. Some special features of the museum
5. Demonstration
1. Overview of the language and the community

• Ikema is a subdialect of Miyako Ryukyuan, one of the 5 major dialects of Ryukyuan. Ryukyuan is the only language that has been proven to be genetically related to Japanese.

• Most of the dialects of Ryukyuan are endangered. Ikema is not an exception.
Degree of endangerment: Intergenerational Language Transmission

- **safe**: language is spoken by all generations; intergenerational transmission is uninterrupted
- **vulnerable**: most children speak the language, but it may be restricted to certain domains (e.g., home)
- **definitely endangered**: children no longer learn the language as mother tongue in the home
- **severely endangered**: language is spoken by grandparents and older generations; while the parent generation may understand it, they do not speak it to children or among themselves
- **critically endangered**: the youngest speakers are grandparents and older, and they speak the language partially and infrequently
- **extinct**: there are no speakers left

UNESCO Intangible Cultural Heritage - *Endangered languages*
Languages spoken in Japan

Safe: Japanese

definitely endangered: Okinawa, Kunigami, Amami, Miyako, Hachijo

severely endangered: Yaeyama, Yonaguni

critically endangered: Ainu

All the languages except for Ainu are genetically related to Japanese
Ikema Ryukyuan

- Spoken in Ikema Island, Sarahama in Irabu Island and Nishihara/Nishibe in Miyako Island

- Approx. 2000 speakers (fluent speaker are in the 50's or older)
2.1 About our research group

A two-year project (April 2008-March 2010) by a group of linguists and the Contents Production Team, the Department of Digital Content Research, Kyoto University, with help from anthropologists.

First year: Basic design of the proto-type of the exhibition space, rich interfaces

Second year: Construction of the updating system, and display of a full exhibition.
Consultant

• Nakama, Hiroyuki
  – The former principal of Miyako High School
  – Born in Nishihara in 1947

baga naayugyaa nakama tidu ai. taukaa hii mai nakama.
Kyuuya yabitunnnan izyaai yagumi hukarasl munu
• ba=ga naa=yu=gyaa Nakama ti=du ai.
  I=NOM name=ACC=TOP Nakama QT=FOC say
  “My name is Nakama, which means '(keeping) company’”
• taukaa=hii=mai nakama.
  alone=INS=also
  “I am called 'company' although I am alone.”
• kyuu=ya yabitunnnna=n izyaaii yagumi hukarasImunu.
  today=TOP everyone=DAT mee=-CONT very happy
  “I am very happy to meet you.”
2.2 About our research group: Fieldwork

Members: Department of Linguistics (Kyoto University), researchers from UCLA, University of Alberta, Kyusyu University, Stanford University.

• Fieldwork in Ikema, and other dialects in Miyako Islands since January 2006. Over 500 hours of recordings: natural discourse, interviews, elicitation sessions.
2.3 Digital Contents Production Team

• Specialties: Video shooting and editing, Illustration, Web design and Contents direction

• Activities: Support for Digital Contents Production for universities in Japan
  – Teaching Materials
  – Information Materials
    Web, Video, 3DCGI, Poster etc
3. Design features of the Museum

Four layered web-based museum

Open space:
  The exhibit space
  Permanent and special exhibition room

Library and references

Closed space:
  Closed library and archives
  Data storage space
3.1 Closed access space

Closed library and archives:

  Accessed only by closed members.
  House past exhibits.
  Files with transcription and other updated archiving information are stored here.

Data Storage Space:

  Accessed only by our research group.
  Raw data files with basic meta-data are stored here.
3.2 Open access space

Exhibit Space:

- Special exhibition room
  Permanent exhibition room

- Design for the permanent room
  Indexing by location
  Indexing by time line
Examples (1)

Indexing by location

Click!

Activities

- Saitui (Shrimp-fishing)
- ngi ru paa azzyuu (Potato leaves dressed with vinegar and miso)

Cash income
- Tamuru (gathering firewood)

Children’s play
- Opening a stall (at the village festivals)
Examples (2)

Indexing by time line
(Life history)

Click!
Examples (3)

Indexing by time line
(A year in Nishihara)

Click!
Why 'museum'?

- Why use the metaphor?
- Why do we need an exhibit space of a museum?
3.3 The purpose of the exhibit space

The purpose of the exhibit space is two folds:

• To provide a forum for local people.

• For the growth of the data files with more meta-data added.
3.3.1 To provide a forum for local people:

- Important events in the community are recorded for exhibits for younger generations to watch and learn, i.e. the recordings serve as manuals for performing the events:

E.g. The shooting of Myaakuzlci, a festival for reporting to deities the names of the new-born babies for the year. 24 hours film edited to 45 minutes with explanations with the help of local people.
• The local people can exhibit their works and performances.
• Eg. Stories of Grandma Kanaru, a bilingual picture book for children written and narrated by Chieko Hanashiro, principal of a nursery school in Nishihara.
• E.g. The founding of Nishihara, a musical drama performed by local people.
3.3.2 Meta-data updating through exhibition

- The file coding made by researchers in one field can be utilized by researchers in other fields for their exhibits.

- Sound or movie files get more meta-data as they go from archives to exhibit space.
Metadata updating through Exhibition at the Museum

The function of the layers

**Open access**
- The exhibit space
- Contents with various interfaces
- Library and references
  - Contents with updated metadata

**Closed access**
- Closed library and archives
- Data, Metadata, Information
- Data storage space
  - Files with Metadata

Making contents for exhibition:
- Transcription, Translation, movie edition, adding comments

Exhibition of the same contents for other purposes

Store used contents with metadata added
4. Some special features of the Museum

• Easy updating

• Use of links
4.1 Updating

• Updating the site will be done through the internet by researchers themselves, by filling in the templates.

• The display is basically independent of the particular programs used.

The web is constructed according to the standards set by W3C (World Wide Web Consortium) as much as possible.
Updating

• Previous methods: manual rewriting of action scripts.
Updating

The method to be adopted for the Digital Museum:
Pages can be updated by filling the form

![HTML file form](image)

- **Contents Title**
- **Explanation**
- **PDF Files**
- **Important Words and Phrases List**
- **Link List**

![Action script Configuration file](image)

- **Movie1**
- **Movie2**
- **Movie3**

[Submit] [Reset]
Updating

• The updated page looks the same as the one made by previous methods
4.2 Use of links

• One file can be used for various exhibits. Links to the same file are made from various places. See demo.

• One and the same file can be shown in different ways at different places. See demo.
4.3 Other characteristics

• The system, once completed, can easily be used for creating sites for other languages and cultures.
5.1 Subtile creation using ELAN

korega ohayoogozaimasu ii

That is used for 'good morning, you see.'
5.2 Subtitle creation using ELAN

- subtitle data using ELAN→.srt
- movie file 1: for subtitle data (.mp4/.mpeg/.mov)
- movie file 2: for showing on the web (.flv)
5.4 Subtitle creation using ELAN

- Change template & HTML create new file upload it to Web server
  1. specification of the player (JavaScript+Flash)
  2. title specification
  3. Caption file
  4. movie file path specification
5. Demonstration
Acknowledgements

• Thanks are due to
  Hiroyuki Nakama, Chieko Hanashiro, Tadashi Nakama and other people of Nishihara Village
  Yuka Hayashi, Chigusa Kurumada, Tusyoshi Ono and Shoichi Iwasaki
  The members of CPT