Institute for Areal Studies, Foundation
Tokyo, Japan
Nov. 2, 2005
Based in KEIO University, Tokyo

To construct the basic information tool for recording various events, researching and analyzing social phenomena based on the conceptual model of Reki-Show.

Spatiotemporal studies in humanities based on Reki-Show database and Authoring Tool.

Implementation and evaluation of Reki-Show Authoring Tool.
Spatiotemporal Descriptive Information

Temporal Dimension  “When”
Spatial Dimension  “Where”
Attribute Dimension  “Who”
  “What”
  “How”…
Usually, social science data is represented as spatiotemporal multidimensional information. The number of dimension vary by the field of concern.

To handle spatiotemporal information by using legacy software (e.g. Microsoft Access, Excel, Lotus Approach), we have to prepare Macro Scripts or Custom Programs case by case. Because, those legacy software are not fitted for multidimensional data handling. It is not impossible, but is annoying.

A tools designed for handling spatiotemporal multidimensional information is required.
Various types of visualization

- **Chronology**
  - Usually, descriptive information is presented as a chronology. In this type, Temporal Dimension has priority.

- **Chart**
  - For statistical (numerical) data, time-serial chart is applied. In this type, Attribute Dimension has priority.

- **Map**
  - Various types of map are applied into geographical and historical research. In this type, Geo-spatial Dimension has priority.

- **Picture/Movie**
  - “Image” is important information for most of spatiotemporal phenomena as well as descriptive information.
System Overview of Reki-Show Authoring Tools

Reki-Show Server
Shared Database (SQL2000 Server)
Web Server
Web Database Application

Internet

Out-Campus Network

Local Database
Data Inquiry
CO-set Editor
Crono-Matrix Viewer
GS Interface

In-Campus User

Reki-Show Client (Windows Application)

iLias
Geographic Information System

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Disk space for installation: 16MB (without data files)

Ready for SHAPE file

Direct access to Excel spreadsheet, Access file and DBF file

Basic mapping functions

No 3D

No spatial analysis functions
In the late of Edo-era (1840~1868), peasant riots occurred frequently in every part of Japan.

We categorized the cause of riot as follows:
- Market originated (unfair pricing, corner, etc.)
- Heavy tax
- Other reason

Also classified the level of violence as follows:
- Direct Appeal (non violent)
- Direct Appeal (violent)
- Escape
- Riot
- Uprising

Data source:
Yukichi Fukuzawa (1935-1901) is one of the famous enlightenment person in 19th century of Japan. He wrote a lot of books for young people and translated various western books. He also founded KEIO University.

Fukuzawa went a round trip to Europe in 1862 as a translator of embassy. He wrote a detailed logbook of the travel, “Seiko Nisshi”.

This logbook is a good example of spatiotemporal descriptive information.
Historical data; Seismic centers of earthquakes over magnitude 6.0

Time-serial visualization by Crono-Matrix Viewer and geographical visualization by ILIAS
Software will be downloaded from our Web site.

Evaluate KML interface for Google Earth.

Provide Reki-Show data via Web Map Server (WMS) standardized API.