

地理情報科学の教授法の確立 —大学でいかに効果的にGISを教えるか—

2007年2月3日
立命館大学文学部地理学教室
矢野桂司

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Contents

- 立命館大学大学院国際先端プログラム
- GISWORKSHOP with GSD, Harvard University
 - 20-23 November 2006
 - Ritsumeikan University, Kyoto

立命館大学大学院国際先端プログラム

- 1996年からHarvard Program
- 1999年から立命館大学大学院国際先端プログラムの5つのモジュール
 - Ethics and Justice
 - Governance and Development
 - GIS
 - Care and Services
 - Special Topics
- 全研究科横断
- 英語による集中講義

GISモジュール

- 2007(予定)
 - Paul Longley
 - Mike Flaxman
 - Carl Steinitz
- 2006
 - Daniel Dorling
 - Mike Flaxman
 - Carl Steinitz
- 2005
 - A. S. Fotheringham
 - Mike Flaxman
 - Carl Steinitz
- 2004
 - Louise Comfort
 - Ruslan Ranis
 - Mike Flaxman
 - Carl Steinitz
- 2003-1996
 - Carl Steinitz

GIS WORKSHOP 2006 International Advanced Program

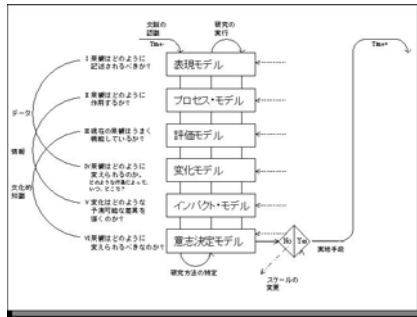
20-23 November 2006
Ritsumeikan University, Kyoto

28 November 2006

Staff

- Carl STEINITZ
(Graduate School of Design, Harvard University)
- Mike FLAXMAN
(Department of Urban Studies and Planning, MIT)
- Keiji YANO
(Department of Geography, Ritsumeikan University)
- Tomoki NAKAYA
(Department of Geography, Ritsumeikan University)

Framework for Landscape Planning by Carl Steinitz



Presentation of Change Plans

- a) Objectives
- b) Major decisions and strategies
- c) Describe plan (Compact, other development and conservation)

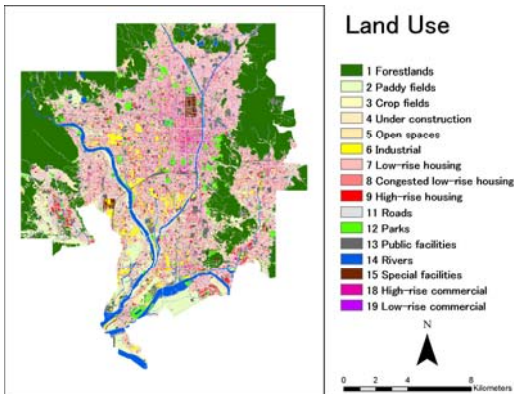
- Team1 [AREA 1]
- Team2 [AREA 2]
- Team3 [AREA 3]
- Team4 [AREA 4]
- Team5 [AREA 5]
- Team6 [AREA 6]

1. Description models

- Kyoto City
- 10 m x 10 m grid cell
- 1800 cells (WE) x 2500 cells (NS)

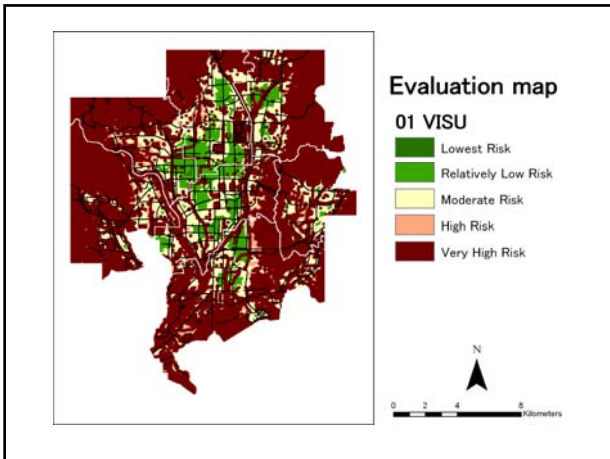
GIS database

- Land use
- Geomorphology
- Building footprints with height
- Land price
- Public facilities
- Zoning
- Population
- Establishment census
- Rail service
- Bus service
- Machiya
- Modern buildings
- Temples & shrines
- Hazard maps
- Aerial photos
- etc



3. Evaluation models Evaluations of Risk

- Team1 [VISU] LANDSCAPE VISUAL QUALITY:
identify the places having good visibility of natural features
- Team2 [COST] COST OF REDEVELOPMENT:
evaluate the economic cost of converting an area from existing uses
- Team3 [MACH] HISTORICAL ARCHITECTURE QUALITY:
identify important machiya and other historical areas that need to be preserved
- Team4 [HAZA] RISK OF NATURAL HAZARD:
identify places prone to earthquake, fire and flood hazards
- Team5 [NUIS] RISK OF NUISANCE TO EXISTING NEIGHBORHOOD:
evaluate the social costs to existing neighborhoods from major redevelopment (for example noise, traffic and displaced uses)



3. Evaluation models

Evaluations of Attractiveness

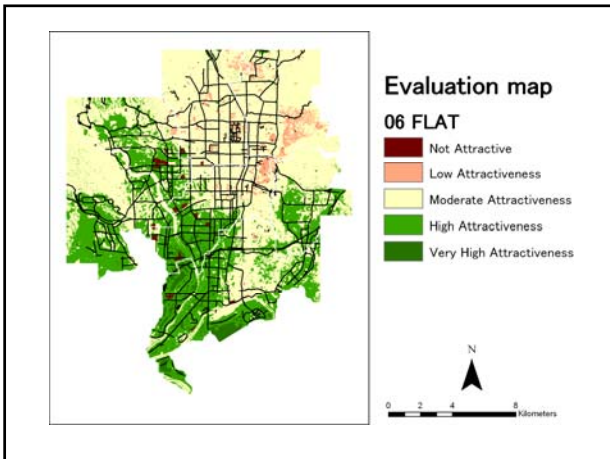
Team6 [FLAT] LARGE SITES FOR MAJOR NEW FACILITIES:
rank the capacity of areas to absorb major new facilities which require large building footprints

Team7 [HIST] HISTORIC STREETS FOR FILMING:
rank areas in terms of their potential for shooting historical period films

Team8 [SCHL] SCHOOL:
rank areas for suitability for a new school for performing arts and media content industries

Team9 [COMH] COMMERCE AND HOTEL:
rank places suitable for high density commerce and hotels

Team10 [ECOL] ECOLOGICAL PROTECTION & RESTORATION:
rank places in terms of their ecological importance, including opportunity for ecological restoration



4. Change models

- Mission
 - New Studio complex
- Study Area
 - Kyoto City
 - 10 m x 10 m grid cell
 - 1800 cells (WE) x 2500 cells (NS)

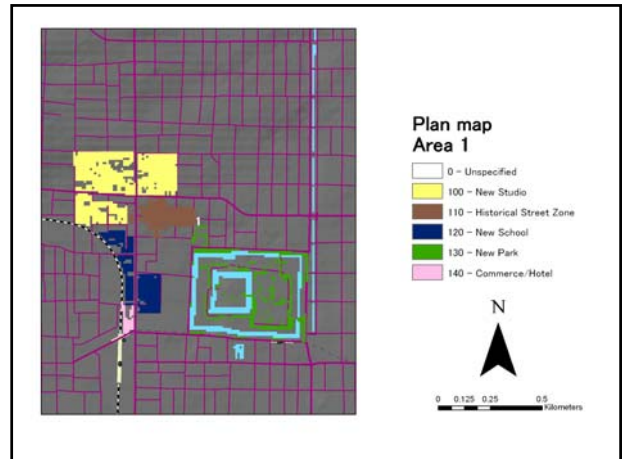
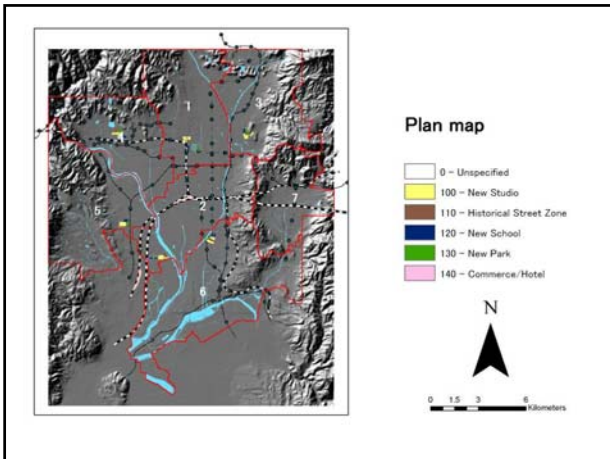
New land use

Code	description	required cell
100	Studio Site	1,000 cells
110	Historic Filming historical street + 5 cell (50 m) buffers	40 cells of
120	School	400 cells
130	New Park	400 cells
140	Hotel & Commerce	50 cells

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- Objectives
- Major decisions and strategies
- Describe plan (Compact, other development and conservation)

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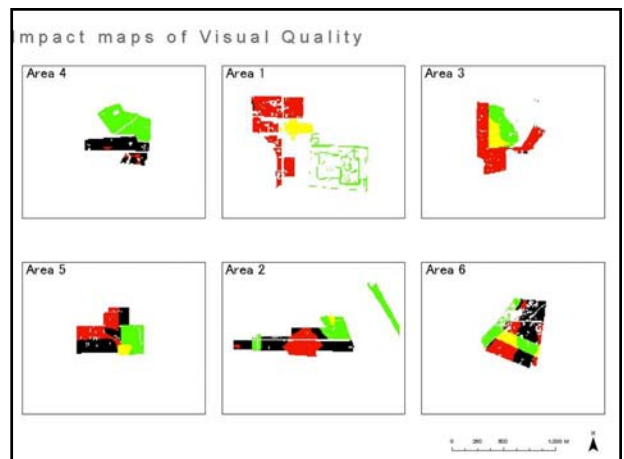


5. Impact models

a) Impact Maps of 1-6 plans

b) Which plan is worst?
- Why? (map & bar chart)

c) Which plan is best?
- Why? (map & bar chart)



6. Decision models

Questions and comments from Reviewers

9. Decision by Reviewers (Jurors)

Prof Kei MIZUNO (GS of Global Environmental Studies, Kyoto Univ.)

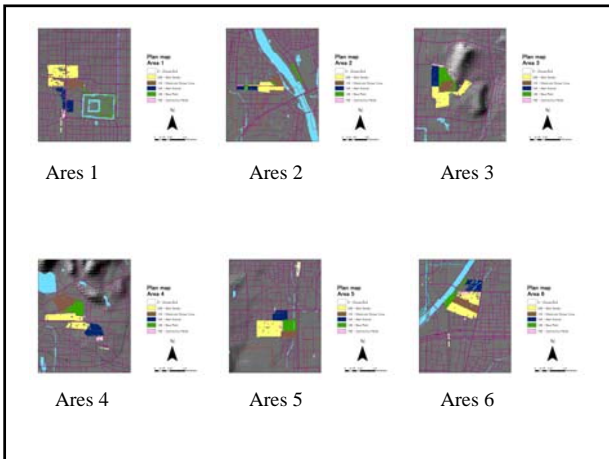
Prof Kan-ichiro MATSUMURA (Dept of Policy Science, Kwansai Gakuin Univ.)

Professor Takahiko OHTANI (NPO Machiya)

Mr Katsuhide TAKAGI (Landscape & Town management Center)

Mr Hiroshi KAWAGUCHI (Kyoto City Office)

Ms Tess CANFIELD (Foreign Tourist)



あなたが選ぶ、計画は？

10 evaluations (Risk/Attractiveness)

Ares 1										
Ares 2										
Ares 3										
Ares 4										
Ares 5										
Ares 6										

Study areas

