JAIST Repository

https://dspace.jaist.ac.jp/

Title	コンテクストモデルを用いた住民意識と環境問題の関 係の抽出
Author(s)	武田,雄一
Citation	
Issue Date	2002-03
Туре	Thesis or Dissertation
Text version	author
URL	http://hdl.handle.net/10119/377
Rights	
Description	Supervisor:中森 義輝,知識科学研究科,修士



Developing a Context Model for Evaluation of Environmental Problems by Residents Recognition

Yuichi Takeda

School of Knowledge Science,
Japan Advanced Institute of Science and Technology
March 2002

Keywords: Environmental problems, questionnaire survey, fuzzy modeling, context model.

The BOD value in the river of Ishikawa Prefecture which shows the water quality has satisfied the environmental quality of a country mostly. Many of rivers have rich nature and the living thing. Therefore, it is appropriate to think that there is no problem about the water quality of Ishikawa Prefecture. But, the residents of Ishikawa Prefecture give severe evaluation to the river which is far less than environmental quality. Even if it is the river which fills the environmental quality by the country, residents are not satisfied. Generally, a policy is made based on environmental quality. So, if environmental quality is filled, even if it will not fill residents recognition, it remains as it. In order to solve such a problem, it is necessary to match an administration standard and residents consciousness. However, when treating residents recognition, the variation in consciousness is a big problem. It is a common problem in many researches.

On the other hand, the context model for which evaluation of man depends on a context exists. For example, the subjective evaluation to the height of Japanese people and Americans is considered. It considers the evaluation "John is tall". Suppose that Americans and Japanese people did this evaluation. However, since Japanese average height differs from Americans' average height, the height of actual John differs in two countries. The model which can treat the difference in evaluation depending on a context(the Japanese people and the American in

Copyright 2002 by Yuichi Takeda

an example) is a context model.

In this research, the relation between residents consciousness and an environmental problem is extracted using a context model. The main matters performed by this research are as follows.

- · Questionnaire
- Improvement of the model for actually using a context model
- · Creation of the context model based on a questionnaire result

The main point shown in this paper is as follows.

[About developing a context model]

• The context model which gave identification of a membership function

[About the context model using residents consciousness]

- Water quality evaluation of the area in Ishikawa Prefecture which developed most, and the area which is most behind in development does not have evaluation severer than other areas.
- The water quality evaluation to the point where the BOD value of the residents of Tsurugi, Unoke, Torigoe and Kawachi is low is severe.

As a future subject, construction of the method of dividing a context, development of the technique of pulling out an evaluator's context more, construction of the synthetic water quality valuation modeling which is not caught only by the BOD value, etc. are mentioned.