

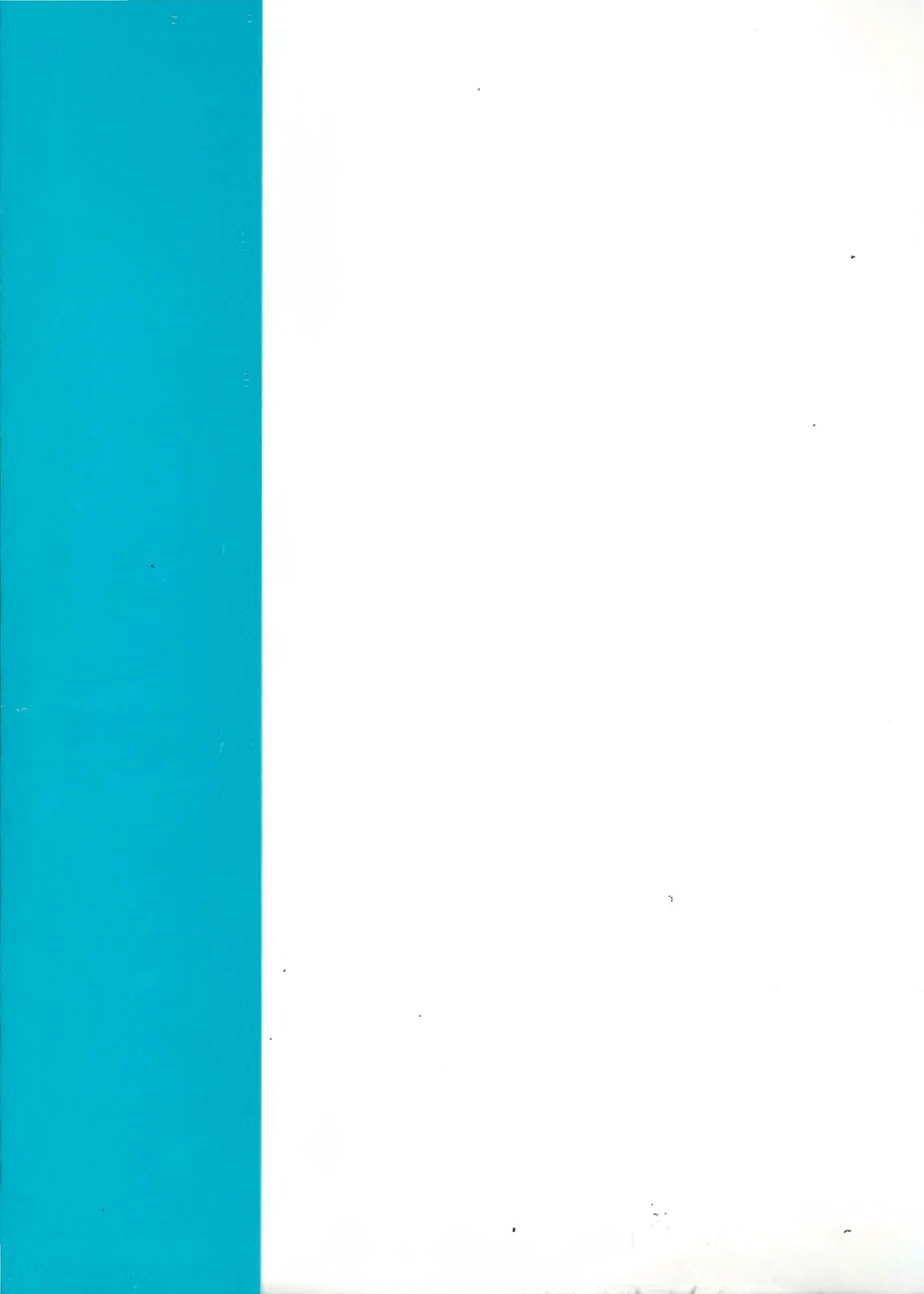
**POLISH ACADEMY OF SCIENCES
SYSTEMS RESEARCH INSTITUTE**

**STRATEGIC
REGIONAL
POLICY**

**A. STRASZAK AND J.W. OWSIŃSKI
EDITORS**

PART I

WARSAW 1985



SYSTEMS RESEARCH INSTITUTE
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STRATEGIC REGIONAL POLICY

Paradigms, Methods, Issues and Case Studies

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editors

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PART I

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I. A REGION AND A FIRM

CONCEPTS AND TOOLS FOR STRATEGIC
REGIONAL COMPANY POLICY

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A B S T R A C T

INTRODUCTION

There are two urgent universal socioeconomic problems which are very directly connected with regional analysis. The first of these is the problem of economic growth irregularity which actually manifests itself in the unevenness of regional development rates.

The second acute universal problem comprises the contradiction between the economical and social-ecological aspects of national and, to a larger extent, regional development. This problem is manifest more in the social regional unevenness than the economical one. As a result of the common impact of the universal problems described above, numerous "problem areas" have arisen and enforced socioeconomic tensions at national, regional, and local levels.

It is very important that regional economy decline shows itself as a declining of companies' economies and leads to the growth of the average of production funds, deceleration of technological innovation and, finally, to decreasing efficiency, diminishing competitiveness, a

reduction of the market share and employment. And, on the contrary, companies' prosperity always supports the regional economy and leads to successful solution of its socioeconomical problems.

Taking all this together shows the urgent need to build advanced applied analytical methodologies that will take into account the key factors and serve different users when determining their policy under special situations in their dynamics. To support the implementation of advanced methodology, it would be worthwhile to prepare a special Manual for policymakers. Such a Manual should be practical in approach; it should aim to put the various advanced concepts and analytical tools into the actual procedures of strategic policymaking in regional and corporate business centers, as well as into consulting firms and individual experts.

The component parts of the Manual should be:

- Short descriptions of different types of problems and strategic policy studies with the necessary information for application to strategic choices at both regional and company levels. It would be necessary to give here some conceptual recommendation about identification of strategic problems and policy guidelines in special situations that may be faced by different regions and companies;
- Characteristics of the analytical tools of advanced strategic policy methodology: computerized calculation programmes, assessment procedures (market, technology, investment, infrastructure, employment, pollution), data base direction accompanied by more or less detailed explanatory notes, schedules, figures and so on;
- A possible component of the Manual may also be short descriptions of actual case studies, which would illustrate actual strategic choices and implementations,

GENERAL METHODOLOGICAL OUTLINE

It is possible to define the following general outlines of advanced methodology for solving strategic region-company problems:

1. The widespread comprehensive approach to developing local strategies at the level of regions and companies should be expressed in terms of the regional-company economy (RCE) as an integrated system. The RCE approach is able to put into operation more balanced strategic choices -- to find ways of increasing competitiveness while observing social and environmental protection equilibria. It is possible of course, that due regard for mutual region-company interlinking criteria could limit the projected economic growth rate.

2. The acknowledgement that sound RCE strategic development can be achieved only on the basis of a rational spatial-sectoral division of labor, which in turn can be well-grounded by a study of RCE competitiveness. Such a division is formed as a generalization of specific product-line competitiveness of actual companies located in the given region.
3. Modeling interdependent processes between REC and the competitive environment as a basis for structural changes policy management of a strategic nature. Structural change strategies (including technological aspects) could be considered as long-term revitalization programs intended to restore national and international competitiveness of RCE.
4. Interregional analysis of RCE competitiveness of the national and international framework will increase strategic policy validity and create possibilities for more successful spatial public policy.
5. Calculation of strategic action implementation sequences on the basis of establishing problem priorities, resource, and time characteristics.
6. Building the strategic policy aid system based on advanced methods of computerized forecasting of the RCE long-term development to give a new version of the early warning system of competitiveness prospects of the necessity for structural changes.
7. Special attention to consider and search for reliable, sound strategies of RCE development under possible conditions of economic stagnation or other unpredictable circumstances.

The methodological principles given above form the analytical framework of Strategic Regional Company Policy (SRCP). They show that it is necessary to adopt existing regional and strategic management methodologies to ensure a comprehensive view of the impacts of competition conditions on strategic behavior, taking into account the probable product capabilities and the future behavior of other competing systems.

It is very important here to stress the positive role of the competitive mechanism, although many works show the connection between competitiveness and conflict. But if we look deeper we can see that in these cases the real reasons for increasing conflicts lie in some political factors or in the impact of incorrect policy. Moreover, it is necessary to give competitiveness a new nature based on the planned, spatial division of labor organization, and on the development of interregional and intercompany relationships. Only with this approach is it possible to answer the most difficult question: how to find reliable, sound strategies for each RCE under intercompany, interregional and international competitive pressures. The main tool that could help to answer this question can only be modeling of the competitive situation.

In accordance with advanced methodology requirements, a region should be considered not in the routine sense, but as a multiproduct line company and/or a set of companies whose strategic behavior depends on interactions of internal (economic structure, social-ecological balance) and external (competition environment) factors. In order to capture the impact of the competitive environment on the region-company system, it is necessary to build a methodology that closely connects the region-company internal structure with the interregional trade flow structure. The actual purpose of strategic analysis here is not only to take into account the competition conditions but also to use given knowledge to develop the capacity of the companies to restore (independently or in cooperation with state agencies/other regions/other companies) their competitive efficiency through product, technology, market and organization strategies during all stages of the long-term perspective.

It is rewarding to study SRCP at four basic levels of methodological knowledge: philosophical, conceptual models, tool models, and case studies (see Figure 1). This procedure can contribute to translating a promising methodological system into a practical problem-solving approach.

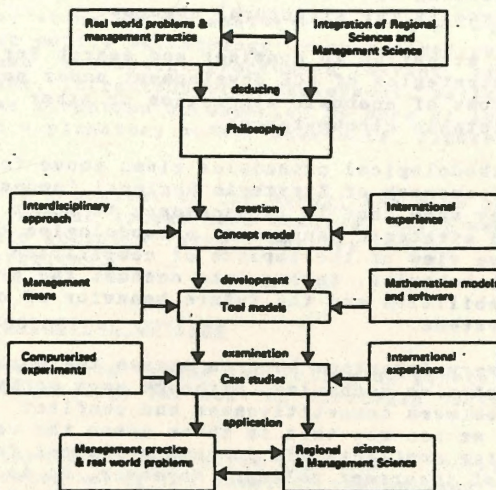


FIGURE 1. Application of Systems Analysis Methodology to the Solution of Regional Company Problems.

BASIC PHILOSOPHY

The basic hypothesis of the IIASA approach is that a successful SRCP depends to a significant extent on the key characteristics of the relationships (interaction processes) between the environment and organizations (business and social strategic units) in the regions concerned. The nature of the interaction process requires us to explore and model it not at the level of a separate region or company but at a higher level that embraces both the regional-company systems and the external environment in which they function.

To give such a hypothesis a more constructive character, it is worthwhile to support it with some basic philosophical principles, that could be considered as axioms. The following basic philosophical axioms can be formulated:

- The dual consideration of SRCP,
 - (1) as a joint subsystem of strategic national and international management, and
 - (2) as relatively separate information systems.
- The need for correspondence between the complexity or diversity of the subject and object of SRCP, in other words, between the system itself and models of the system, between the concrete goals of policy and the methods chosen to achieve them, etc.
- The realization that incomplete formal descriptions may be supplemented by using expert examinations and policymaker's decisions;
- The consideration of apparent contradictions as the driving forces behind socioeconomic development of regional-company systems;
- The multi-structured nature of regional-company systems, and the need to humanize the development of production, organization, social, and ecological structures that they encompass;
- The genetic program approach: building strategies as evolutionary steps for the long-term goals of the company, within the framework of regional, national and international environmental constraints;
- The learning approach: achievement of strategic flexibility of regional system behavior through learning actions directed toward increasing management capability.

CONCEPT MODE

The general scheme of the conceptual model for SRCP may be described by the following principles:

- Taking into account the determinant role of technological factors in raising regional-company economic competitiveness;
- Making international, national, regional, and company strategic policies consistent with one another on the basis of the spatial division of labor;
- Achieving long-term economic, social, and ecological balance in the framework of regional-company systems;
- Achieving strategic, tactical, and operational balance;
- Adapting promptly to changing strategic priorities of objectives and means;
- Integrating informative, economic, social, organizational, and legal strategic management mechanisms;
- Combining direct and indirect strategies;
- Integrating strategic policymaking and implementation;
- Designing cooperative systems strategically.

These conceptual principles taken together describe the normative behavior of region-company systems, and should create the conditions for achieving competitive advantages for a given system in accordance with the available resources and policy capability.

According to these principles the key problem for SRCP is to establish the correct interaction between economic investment-production-product-market and technological changes, taking into account as much as possible the range of social-ecological consequences of this interdependence.

TOOL MODELS

Since SRCP is necessarily oriented toward problems some way into the future, specific types of analytical techniques and approaches are required.

The key question regarding SRCP tools is how to integrate the necessary strategic variables. In addition to logic and experience, some quantitative set of tradeoffs must be developed, always bearing in mind that quantitative evaluation cannot hope to be precise over the long-term and should be used mainly as a guide to the choice of actions. But of course only the quantitative modeling approach to integration permits one to identify the appropriate combination of strategic behavioral characteristics for a given system. This underlines the crucial role of computerized tools in analyzing strategic alternatives.

Therefore, it is worth considering the tool models for SRCP as an essential part of the Strategic Policy Aids System (SPAS) which has been developed by IIASA and can be used for REC analysis purposes.

Based on the module approach, SPAS, apart from including a concept model, involves two main programs (covering the decision-making and implementation stages), a data base, and some subsidiary models. The first program incorporates modules for the decision-making procedures of the ISSMI program (Integrated Strategies of Structural and Market Improvement).

The other basic program of SPAS is the SATROS, which denotes 'Strategic Action, Time, Resources, Organization, Succession'. This program should involve modules for the policy-implementation process.

CASE STUDIES

In accordance with the basic logical scheme of systems analysis methodology, case studies are necessary to test hypothetical conceptual models as well as experimental results generated in the course of computerized calculation. Many RCE now face the problem of urgent structural change. Some meet this challenge successfully, while other fail. Analyzing the probable causes of such divergent outcomes therefore contributes significantly to our understanding of the nature of sound SRCP. But of course, the most substantial contribution could be received from the comparative studies of the strategic policy in the most profitable and well-managed companies, functioning in the framework of some forward-looking industries and certain RCE. There is interesting experience about reasons of failure, in the competitiveness between European firms (and RCE) in comparison with Japanese and American competitors in the 70's and 80s (Porter (1983), Stoneman (1983), Vernon (1982)).

The American Strategic Policy experience also expressed the key role of technological innovation in RCE activity (Knop (1974), Fridlanger (1976), Fuwaites (1978), Kelly (1979), Ewers and Wettman (1980), Peters and Waterman (1982), Clarek (1983)). American experience shows the different role of various factors in the location of plants with different technological levels of production.

The extensive experience of regional-company strategic management under conditions of a centralized planning system is accumulated in the USSR and other Eastern European countries (Kochetkov (1977 and 1982), Aganbegjan (1979), Bandman (1981), Granberg (1981), Kiselnikov (1984)). Soviet experience states that high efficiency can carry out regional structural change on the basis of complex objective programs which are developed by special teams.

The main task of research carried out at IIASA is to generalize all of the above experiences so as to produce methodological approaches of widespread application and value.

DISCUSSIONS*

Paper by A. Kochetkov

Discussion participants, in chronological order: P. Joynt, R. Bolton, U. Loeser, R. Kulikowski, A. Straszak, L. Kajriukstis, A. Kochetkov.

Questions raised concerned the kinds of models implied in the paper, ways of compensation for regional company activities, the leading mechanism of these activities and the course of the IIASA project considered.

With regard to models two types were said to be distinguished, namely conceptual and quantified models. Compensation was said to be made out of a special fund, not excluding a form of subsidy. Other potential compensation mechanisms were pointed out: economic, organizational or legal.

As far as driving forces are concerned - both planning and market should be accounted for in a due harmony, notwithstanding difficulties in its attainment. This harmony should extend further to such fields of development as economic, social and environmental.

The course of the IIASA project was said to contain a number of future meetings and a closure in 1986, after major directions of work would have been explored.

Paper by R. Bolton

Discussion participants: K. Polenske, S. Dresch, D. Boekemann, G. Bianchi, R. Bolton.

At the beginning discussion centred around the shape of indifference curves and the riskwise attitudes, which was explained by referring to assumptions made in the paper. This discussion, however, led to other, more general questions, related to modelling of utility in cases when income does not account for all of it and when political considerations enter the scene.

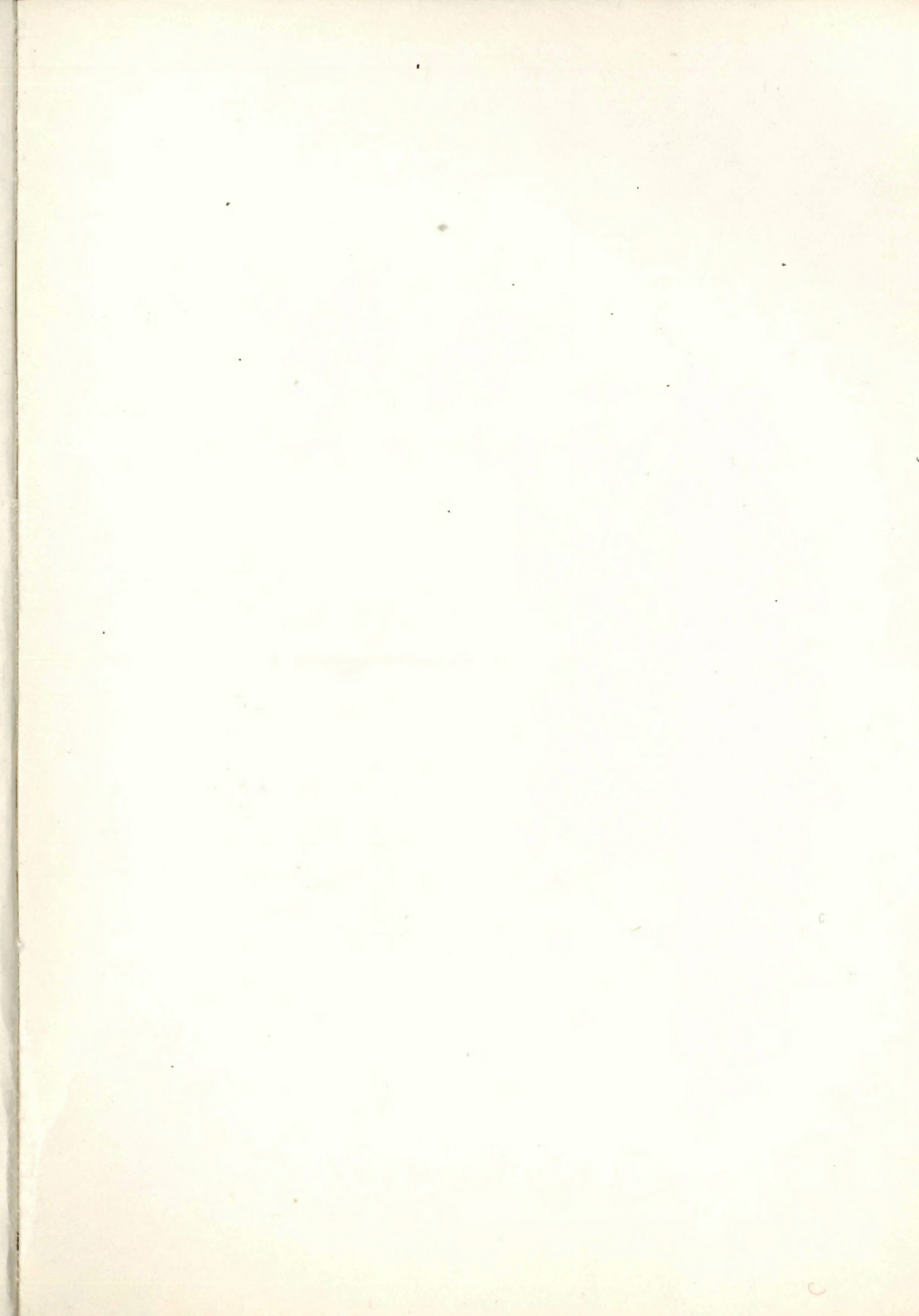
* as indicated, for the sake of shortness and clarity discussions shall be presented in summarized form (eds.).

The paper, of course, does not consider these questions, but the approach can be extended to encompass some additional aspects, e.g. in the case of distinct multi-subregional planning, through treatment of each subregion as an asset in a national portfolio.

Paper by R. Espejo

Discussion participants: A. Kochetkov, S. Dresch, G. Bianchi, U. Loeser, R. Espejo.

Discussion focussed on the rules of application of the recursive scheme and its details. References were made to works by S. Beer and by R. Espejo, where deployment of the scheme is shown in more detail. Discussion participants have shown interest in the software developed and in its practical applications. One such application, other than described in the paper, was roughly outlined.



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