

## Chapter (non-refereed)

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## Final discussion

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### 1 Introduction

The final discussion was led by Professor J T Coppock, with Professor P A Burroughs and M E Taylor on the panel. Professor Coppock opened the discussion by posing a number of major questions to the audience.

- i. What feedback could be obtained from the displays that had been shown at the conference? Were they all displaying the same ideas and techniques?
- ii. What role do academics have in the development of rural information systems?
- iii. How cost-effective are the new developments? Should one develop systems in closed environments, or should they be developed at regional centres?
- iv. To what extent do the existing systems answer questions posed by the planners?
- v. Land values should be included in modern systems. Are data available which reflect changes in land values?
- vi. What action is necessary in relation to:
  - data
  - systems of handling and processing data
  - bridging the gaps between the developers and users of systems?

### 2 The displays

Many of the displays were based on microcomputers which had been used for developing systems over the past 2–3 years. They were all essentially based on raster information and used low-cost systems for their hardware. In contrast, Mr Healey demonstrated his system based on the VAX in the Department of Geography at Edinburgh University; it was accessed via the GPO network.

A general comment emerged that, although each display was interesting in its own right, it was difficult to link them together. A general note synthesizing the various concepts of the displays would have been useful.

### 3 The role of academics

Two positions could be taken when discussing information systems. An individual or organization could either be a 'trail blazer' or a follower waiting for a new development best suited to his needs. Academics were thought to fit into the former role. They were perhaps better able to take the longer

view, being under less day-to-day pressure than, say, someone working in a planning department.

Academics were already working in the new area of data management. Correct data structures and enforced standards were needed to ensure that data could be made more easily available to a wide variety of users. A question that needed addressing was one of access to information stored within a centralized system, or within a regional centre.

Academics were probably in a better position to keep abreast with technological improvements in networking and distributed data bases. Both those concepts would have a profound effect upon the ease with which information systems could be accessed.

At present, the slowest computer was producing results much faster than the human brain could comprehend, so more research was required into how to improve the presentation of information to the user.

One advantage of distributed data bases was that it was possible to send a subset of data over the network and for the processing to be done by the local machine.

### 4 Cost-effective systems

For some Dutch projects, costs were shown to be in the following proportions:

— Collection of data	50–60%
— High-quality plotting	30%
— Computer work	10–20%

These proportions were likely, however, to vary widely according to the objectives of the project.

One of the reasons why the collection of data was so expensive was that it often contained a high element of field work. Often the different parts of an information system were inter-related in such a complex way that it was difficult to make general statements about cost-effective systems. Each individual scheme should be designed to be cost-effective.

Was it cost-effective for each local authority to develop its own information system? Would each local authority be prepared to pay for digitizing the 1:50 000 map information of its own area? For an information system to be cost-effective for a local authority, a rapid return by way of useful results was often required.

### 5 Planners' requirements

The planners amongst the audience expressed regrets that there had been numerous separate developments of information systems taking place at the national level. Professor Coppock mentioned that the Chorley Committee of the House of Lords would attempt to review the current situation. They would be considering digital mapping, remote sensing, and the handling of geographic data: in general, who holds what data and what they are doing with their data bases. It was suggested that the Government was less concerned with rural planning than with urban development; hence, there could be a danger that information systems could have an urban slant.

A planner generally needs information in a hurry, and it is often difficult to locate information. Several organizations might have the information available, but they may well have different timescales about how rapidly they should develop their information systems. They also probably consider that it is cheaper to develop their own systems, as different levels of accuracy will probably be required for different areas and objectives. Different incompatible systems will emerge which may not serve the needs of the planners. However, can organizations be forced to co-operate?

It was suggested that national agencies, once established, work best under constructive tension. An 'information supremo' may not be desirable from the Government's point of view.

### 6 Land values

Most land use changes have to go through planning procedures, even if only consultative, and, although these changes are documented, there is little co-ordinated information available on ownership. It would be valuable to have information readily to hand on land values and ownership so that the consequences of changes in both these areas could be predicted using socio-economic models.

Planners would find it beneficial to try to establish the optimum use of land from both the physical and economic viewpoint. It would be useful to know

what drives land investment decisions by individuals.

No data bases on land holdings and land values have been set up. General national figures are available, but these are of less value in the regional or local setting.

### 7 Conclusions and recommendations

- 7.1 The balance between high technology and low technology approaches was discussed. It was concluded that more appropriate 'good' technology was needed to solve the information needs of the users.
- 7.2 Integrated solutions are required to prevent populations moving away from the rural uplands; the various agencies should collaborate to produce clearly defined objectives. From these objectives will emerge detailed information needs.
- 7.3 Planning systems should provide efficient ways of appealing against decisions. Easily accessible information systems should improve the chances of these appeals taking place.
- 7.4 The technology of networking and distributed data bases is moving ahead at a rapid pace. This development should increase the chances of successful implementation of useful, user-friendly, information systems.
- 7.5 There is a need to produce good catalogues of available data bases.
- 7.6 More thought and effort should be devoted to the new discipline of data management; the importance of defining the accuracy of information should be emphasized.
- 7.7 Exchange of ideas and improved communications between information users, information providers and system developers should be encouraged. Small workshops would be useful, and there was some feeling that the present meeting could be reconvened, say in 2–3 years' time.