ABSTRACT. A new type of rural development information system is described. It is based on two recently introduced low-cost technologies; microcomputers and the informant survey. When the informant data from the universe of subdistricts in a region are analyzed with modern multivariate techniques, it is possible to derive comprehensive measures of institutional structure as well as five measures of rural progress. The latter are: a level of living scale based on housing characteristics, a measure of inequality derived from the difference between the housing of irrigated and dryland farmers, an estimate of agricultural productivity, a score of ecological problems, and a measure of status group restrictions, specifically restrictions on females. These and similar measures of social structure constitute the 'macrosocial accounting' file. In addition this information system includes project monitoring and administrative accounting files. The uses of this system are familiar — comparative description, monitoring and evaluation — but in this integrated and upgraded form, the potential problem solving capacity of rural development agencies should be significantly enhanced.

I. INTRODUCTION

The term 'information system' is a contemporary phrase that has many meanings and is realized in a variety of forms. It refers to the computerized storage, processing and display of information needed by complex organizations. Thus, the airline reservation system is an information system, as is corporate cost-accounting, the computerized retrieval and analysis of library books, student records in universities or data files for research, to name a few.

What is new is the call for an information system that is relevant to rural development. The system should be pertinent to rural development, simple to maintain, inexpensive, and it should be relatively independent of the specialists and equipment in the capital city. Developing a rural development information system, then, is a matter of adapting a known technology to the special problems of work in the hinterland. In this context, information systems may also be defined as the organization of data relevant to understanding, planning for, monitoring and evaluating a rural development effort, usually a large one. This definition introduces several substantive emphases, and they turn out to be central to the concerns of this paper.
I. Rationale for Rural Development Information Systems

The drive for codifying the information of rural projects has several motivations. Technical assistance agencies are now demanding more objective and analytical evaluations. The qualitative reviews produced by short-term teams on the basis of hurried interviews and rapidly-read reports are inappropriate to the expenditure of millions of dollars. Something more is required and assistance agencies are hoping that comprehensive information systems will facilitate the evaluation and cumulative improvements that are everywhere demanded.

A second pressure for information systems is the quest for a more effective link between research and implementation. In the typical case, a project will have a stack of consultants' reports that review specific problem areas and make proposals. Often these proposals provide a satisfactory basis for initiating work. But what happens if a problem is not covered by a consultant report? And what if the host country agency wants an independent basis for assessing the consultants' reports or, better, for generating its own initiatives? In that case, which is increasingly the norm in developing countries, the host country agency needs its own information system. Such a system is no substitute for trained people and the experience of experts, but it at least provides an alternative basis for discussions.

The third motivation for information systems is general but quite important. Some way of handling the sheer quantity and complexity of information must be found. Even small rural development projects accumulate an astonishing number of reports, and the daily work involves a bewildering variety of information, including but not limited to costs and personnel. These data quickly get out of control and are often lost or scattered. And yet a project cannot function without it nor is the donor agency satisfied after the project has run its course to have to depend on tedious archival research in an attempt to find out what happened.

The further question is why these new pressures for rural development 'efficiency' have appeared only recently. Why is it not now possible to let rural development programs operate as they did in the past? The situation is precisely analogous to current developments in automobile manufacturing. Under new pressure to reduce fuel consumption and pollution, automobile manufacturers have been forced to turn to electronic sensors and controls — using the very same chips that the new microcomputers use — because mechanical devices are simply not up to the job.