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INDONESIA PROJECT
EVALUATION PLAN REPORT

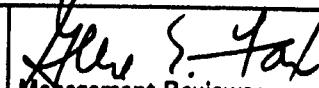
Rural Satellite Program:
Evaluation Management Contract

February 7, 1983

Larry C. Kerpelman, Project Director

Prepared for:

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Contract Technical Monitor
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Rural Satellite Program Evaluation Management Contract

February 7, 1983

Dr. Lawrence Frymire
Manager, Rural Satellite Program
Agency for International Development
Department of State
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RE: Contract No. DPE-5811-C-00-1027-00
Indonesia Project Evaluation Plan

Dear Larry:

Enclosed is the Indonesia Project Evaluation Plan.

I look forward to receiving your comments on both the UWI and Indonesia Evaluation Plans, as well as your approval to proceed with development of data collection instruments, at your earliest convenience.

I shall be taking my vacation February 17-March 10. During my absence, please feel free to discuss any issues regarding the subject contract with the contract Deputy Project Directors, Dr. James Riordan or Dr. Stephanie Wilson.

Sincerely yours,



Larry C. Kerpelman, Ph.D.
Project Director

LCK:bjr
Enclosure

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 <u>THE RURAL SATELLITE PROGRAM AND ASSESSMENT OF THE RSP PROJECT IN INDONESIA</u>	1
2.0 <u>OVERALL PLAN FOR THE EVALUATION</u>	5
2.1 Research Questions	5
2.2 Analytic Framework	9
2.3 Data Collection	11
2.3.1 Data Collectors	11
2.3.2 Sampling Considerations	13
3.0 <u>APPLICATION-SPECIFIC PLAN FOR THE EVALUATION</u>	18
3.1 Administration	18
3.1.1 Question 1: What was the baseline situation before RSP?	18
3.1.2 Question 2: What administrative changes have resulted from installation and operation of the RSP?	19
3.1.3 Question 3: How was the RSP implemented and used for administration?	20
3.2 Dosen Upgrading	25
3.2.1 Question 1: What was the baseline situation before the RSP?	26
3.2.2 Question 2: What changes have resulted from installation and operation of the RSP?	26
3.3 Distance Teaching	27
3.3.1 Question 1: What was the baseline situation before the RSP?	27
3.2.2 Question 2: What changes in distance teaching have resulted from installation and operation of the RSP?	28
3.3.3 Question 3: How was the RSP implemented and used for distance teaching?	30

TABLE OF CONTENTS (Continued)

<u>Section</u>	<u>Page</u>
3.4 Research Support Applications	31
3.4.1 Question 1: What was the baseline situation regarding research support before the RSP?	31
3.4.2 Question 2: What other changes have resulted from installation and operation of the RSP?	32
3.4.3 Question 3: How was the RSP implemented and used for research support purposes?	33
4.0 <u>MEMBERS OF THE EVALUATION CONTRACT TEAM AND THEIR ROLES</u>	34
4.1 Organization of Analytical Component	34
4.2 Organization of Operational Component	35
5.0 <u>RESOURCE SUPPORT FROM THE GOVERNMENT OF INDONESIA</u>	37
5.1 Personnel	37
5.2 Other Resources	39

1.0 THE RURAL SATELLITE PROGRAM AND ASSESSMENT OF THE RSP PROJECT IN INDONESIA

The U.S. Agency for International Development has launched a major program to assess the applicability, reliability, and cost-effectiveness of satellite communications in rural areas of developing countries. AID's Rural Satellite Program (RSP) is a major demonstration to transfer a broad range of appropriate, cost-effective communications technologies to developing nations. The Program will encourage the use of existing satellites to provide domestic communications for rural areas in the developing world. Earth stations in rural areas of RSP countries will make various communications modalities available to support rural development activities in the agricultural, education, and health sectors.

Major segments of the RSP include:

1. Demonstration projects in Indonesia, Peru, and the Caribbean.
2. Investigation of innovative systems designs and technologies.
3. Development of policy studies on satellite services for rural areas of developing countries.
4. Information gathering and dissemination on the RSP and other satellite-related activities.
5. Assessment of the Indonesia and Caribbean projects and of the RSP as a whole.

AID has contracted with Abt Associates Inc. (AAI) to conduct the evaluation activities in Item 5. In accordance with this contract, this report presents an Evaluation Plan for the RSP project to be implemented in Indonesia.

In this introductory chapter of the report, we briefly discuss the relationship between the project in Indonesia and the RSP as a whole. In the course of this discussion, we also outline how our evaluation strategy is guided both by the objectives of the entire program and by the objectives that are specific to the Indonesian application of satellite communications.

From the perspective of the RSP as a whole, the project in Indonesia is one of several pilot demonstrations and, as such, is of

interest not only in its own right, but also as a mechanism for shedding light on the viability of satellite communications as a means of fostering rural development in other developing countries. In this context, then, the Indonesian project is an "experiment," an "experiment" that is being conducted with the conscious intent of learning what "works" under what conditions. In assessing the project in Indonesia, therefore, we must not only account for the extent to which the project meets its own stated objectives; we must also make extrapolative judgments as to the extent to which lessons learned in Indonesia have applicability elsewhere.

In evaluating the RSP as a program, the intent is to go beyond the particulars of the program's component projects and, ultimately, to answer a very straightforward set of questions, namely, "Is satellite technology efficient and effective in facilitating two-way communications for rural development?" "In what ways, settings, and circumstances is it or is it not?" As a way of dramatizing the distinction between the program and its projects, it is important to recognize that this question could be answered affirmatively even if each of the program's projects were assessed as less than completely successful. For example, it is conceivable (though admittedly not very likely) that each RSP project could turn out not to be financially viable but that improved technology available at the end of the life of the program would be powerful and inexpensive enough to make future applications competitive.

The overarching nature of the RSP relative to its component projects must not obscure the non-experimental nature of each of the projects, however. From the perspective of the Government of Indonesia (GOI) -- and AID as well, for that matter -- the Indonesian project is not a "hands-off," "scientific" experiment. It is a real, "live" development project. Although no one is completely certain at this point as to how well different project activities will work, the intent is not to stand dispassionately by and see what happens. Rather, it is in the interest of all parties concerned to see that the project is productive.

The Indonesian project therefore has a life and an importance of its own. This in turn has implications for the manner in which the evaluation of the Indonesian RSP project should be conducted. Although we must assume an objective posture relative to the project, and although

*A: is more
is 2-way
comm. (b) ~~only~~
economically
effective as a
technology
by satellite and
b) if so, least
expensive &
most direct
(i.e.)*

Ne

the desirability of alternative evaluation strategies should be considered in the design and implementation of project activities, the evaluation methods we choose to apply must be sufficiently flexible to adapt to mid-stream changes of course. As a particular case in point, it is imperative that our evaluation design consider "fall-back" options that can be applied as substitutes for assessment methods that may prove infeasible to implement.

As it turns out, the objectives of the Indonesian project are quite consonant with the purposes of the overall Rural Satellite Program, and, thus, the foci for assessing the Indonesian application as an independent project are not really all that different from the foci for evaluating it in the context of the overall Program. As a consequence, we believe that the approach we have designed for the evaluation of the Program as a whole is applicable, at least as a prototype framework, in the Indonesian case. In its main lines, this design consists of the application of three different types of analysis: institutional/social, technological, and economic/financial.

For purposes of presenting our findings, however, we propose to adopt a more topical scheme. As discussed in Chapter 2, we propose to structure our findings in such a way as to answer four basic questions that are of specific and general interest:

- What was the baseline situation before the Indonesian RSP Project?
- How was the Indonesian RSP Project implemented and used?
- What changes have resulted from the installation and operation of the Indonesian RSP Project?
- What has the Indonesian RSP experience taught us about a possible full-scale system embodying current technology?

OK

The remainder of this report puts more flesh on how we shall actually go about answering these questions. In Chapter 2, we lay out the major lines of an overall plan for conducting an evaluation of the Indonesian project. This is followed in Chapter 3 by a delineation of the objectives and data collection requirements for each of the following

proposed applications of the RSP in Indonesia: BKS administration, dosen upgrading, distance teaching, and research applications. In subsequent chapters, we turn to more directly operational issues. Chapter 4 discusses the composition of the evaluation team and the role of each member, and Chapter 5 outlines the resources that we wish to see the GOI provide for the assessment.

2.0 OVERALL PLAN FOR THE EVALUATION

This evaluation of the Indonesian RSP Project will aim to document answers to four basic policy and operational questions:

1. What was the baseline situation before the Indonesian RSP Project?
2. What changes have resulted from the installation and operation of the Indonesian RSP Project?
3. How was the Indonesian RSP Project implemented and used? OK
4. What has the Indonesian RSP experience taught us about a possible full-scale system embodying current technology?

In this chapter, we provide an overview of our evaluation plans by elaborating these questions and by discussing their implications for data collection, analysis, and interpretation.

Section 2.1 begins by breaking down the four global research questions into smaller, more nearly operational questions. Section 2.2 presents an analytic framework, derived from the research questions and linking technical issues of evaluation to the practical constraints of the Indonesian RSP situation. It discusses the principal problems and issues of evaluation research that arise across the project as a whole and that are not specific to any one of its segments.

Finally, Section 2.3 indicates how, when, and by whose agency we plan to collect the necessary data and which portions of the burden each perspective will bear. Exhibit 2-1 below summarizes the data collection plan.

2.1 Research Questions

The list of research questions and subquestions that undergird our evaluation is not necessarily comprehensive. Other questions may reasonably be posed. We have been guided in selecting these, however, by the objectives of the Rural Satellite Program, by our perception of the needs of the Government of Indonesia, and by budgetary constraints. As we continue refining and operationalizing these questions, we may find that some are not appropriate to the Indonesian context, that some methods

INDONESIA RSP - DATA COLLECTION ACTIVITY MODULES

ID Letter	Description	Personnel Responsible	Dates
A	REVIEW literature and receive BRIEFINGS in the U.S. to enhance evaluation personnel's understanding of baseline operations To gain insights on system use, attitudes toward system, perceived benefits and problems, system-user interactions, system functioning, and cost-effectiveness:	Abt Associates Inc. (AAI) project staff, including subcontractors	Through 1/83
B	VISIT four principal sites and INTERVIEW students, faculty, and administrators	Evaluation Coordinator or outside hire	Pre, During, Post
C	ADMINISTER student questionnaire in all sites	Local Indonesian RSP Coordinator	Pre, During, Post
D	CONDUCT teleconferences among faculty from all sites and among RSP implementers (local RSP coordinators, technicians, and AA's)	AAI Evaluation Coordinator	During, Post
E	CONSULT secondary data sources in Ujung Pandang and Jakarta for insights on system cost-effectiveness CONSULT the project management information system in Ujung Pandang:	AAI project staff	Pre, During
F	For data on system functioning, breakdowns, and maintenance	AAI project staff	During
G	For cost-effectiveness data	AAI Evaluation Coordinator	During, Post
H	VISIT the four principal sites and conduct a REVIEW of the functioning of the operating system	AAI consultant	During

Key: Pre (6-8/83); During (8/83-5/85); Post (6/84-6/85)

OK

of data collection are infeasible, or that we cannot afford to collect all the data we had hoped to get. With varying emphases, however, we expect the final research questions to fit within the general areas of those described above.

The Indonesian RSP incorporates four major activities: administrative inter-campus communications, dosen upgrading, distance teaching, and research support. The research questions and evaluative perspectives apply in various ways and to different degrees in the diverse operational contexts that these activities define. In general, though, we plan to address each of the following questions and subquestions, in an appropriate form, for each RSP activity. In this list, capital letters in parentheses refer to Exhibit 2-1; they indicate the data collection activities by which we plan to address each question.

- I. What was the baseline situation before RSP? (ABCE)
 - A. How was the activity accomplished under the pre-existing system? (AB)
 - B. What resources did it require (labor, money, materials)? (BE)
 - C. What was the workload capacity of the pre-existing system?
 - D. What specific aspects were inefficient or otherwise troublesome? (B)
 - E. How well is the RSP targeted to these areas of ineffectiveness or inefficiency? (AB)
 - F. What do potential users expect from the RSP? (BC)

- II. What changes have resulted from the installation and operation of the RSP? (BCDEGH)
 - A. How is the activity accomplished differently under the RSP? (BCDEGH)
 - B. What different resources (money, labor, materials) does the activity now require? (DEGH)

- C. What changes in workload capacity, or what new capabilities, has RSP brought about? (BDH)
- D. What effectiveness changes has RSP brought about? (BCDH)
- E. What unexpected side effects of the RSP are apparent? (BDH)
- F. What cost/effectiveness ratios characterize the system's modified activities?
- G. How satisfied are the RSP users with each aspect of the telecommunications package?

Good. But all problems solved.

III. How was RSP implemented and used? (BDFGH)

- A. How well were users trained and prepared for the RSP? (BDH)
- B. What technical implementation problems were encountered, and how often? (DFH)
- C. Who solved these problems, how swiftly, and how adequately? (DFH)
- D. What unexpected implementation costs were incurred? (DGH)
- E. Who used the RSP for the various activities, and how often? (DFH)
- F. Who scheduled RSP usage, and how? (BF)
- G. How successful was RSP scheduling in minimizing idle time and in meeting user requests for access? (BDF)
- H. What initial reactions and suggestions did users offer during RSP implementation? (BCD)

IV. What has the Indonesian RSP experience taught us about a possible full-scale system embodying current technology? (BDH)

- A. What future implementations of RSP do system planners and managers recommend? With what modifications to its configuration? (D)
- B. What do system users suggest about future implementations and modifications? (BD)
- C. What are the implications of the observed impacts of the RSP for future implementations of the system? (BDH)

GOOD

2.2 Analytic Framework

For analytic purposes, we separate the telecommunications facilities into three components: telephone, teleconferencing, and other. We separate potential users into three groups as well: administrators of BKS and of local campuses, faculty, and students (the economic/financial and technological analyses will also require data from system operations personnel and from available records). We distinguish four targets of communication: to Jakarta/Bogor, to BKS headquarters in Ujung Pandang, to other campuses in the system, and to other parts of one's own campus. Finally, as mentioned above, we distinguish four principal activities (administration, dosen upgrading, distance teaching, and research support).

These distinctions generate an analytic framework for describing system usage and its consequences:

- How, with what results...
- ...do (administrators/faculty/students)...
- ...use (telephone/teleconferencing/other) facilities...
- ...when communicating with (Jakarta/Ujung Pandang/other campuses/own campus)...
- ...for purposes of (administration/distance teaching/dosen upgrading/research support)?

While this is the framework that guides what follows, we have already noted that users differ in the modes of communication that they use and in the purposes for which they communicate. Our comprehensive analytic framework thus does not presume that all modes, targets, and purposes are equally relevant to each user group. We adopt the framework mainly to reduce the risk that we will fail to detect usage patterns and consequences that differ from our current expectations. Furthermore, we have to be sensitive to the possibilities that usage patterns will evolve over time on a campus and that late-implementing campuses will learn from early-implementing ones.

As our research questions require, and as Exhibit 2-1 indicates, we plan to investigate:

- How the RSP telecommunications facilities are actually used, and how usage patterns evolve with time. We shall assess usage at the beginning and end of the evaluation

period, as well as during it. This is so that we can (a) describe usage levels; (b) document changes in usage; and (c) probe the reasons for any changes. We presume that the three target populations will use the three communications modes in different ways for different -- and sometimes unique -- purposes. Our initial working assumptions are that:

--BKS and local campus administrators will use both the telephone and teleconferencing capacities, and primarily for administrative purposes;

--students will use only teleconferencing, and only for distance learning;

--local faculty will tend to use teleconferencing rather than telephone, and that primarily for distance teaching and perhaps skill-upgrading, but not for administration.

It is important to probe how the various potential user groups actually use the parts of the total system, and to relate such usage to each group's distinctive information needs. Such knowledge will be useful to BKS officials and to local faculty who want to improve use; it will also be useful in developing general propositions about factors that determine how telecommunications are used for higher education in developing countries.

- Problems of usage. Administrators, faculty, and students are in a position that helps them identify problems that prevent or limit use of the telecommunications facilities. Such knowledge has obvious utility for making the system more responsive to user needs. So, some data relevant to this purpose should be collected early in the evaluation, and the results should be made available both on campuses where a particular problem has arisen and on campuses where it has not. Indeed, since it is likely that the implementation of a telecommunication capacity will be staggered -- occurring at some campuses before others -- the identification of implementation problems should be particularly helpful to campuses that implement later, the more so if the identification of problems is explicitly linked to the identification of solutions.
- Perceived benefits of usage. It is intrinsically valuable to probe the ways in which respondents believe that they have benefited from the program: we learn from their responses how well the RSP is accepted socially. This line of questioning also has a more exploratory value, identifying possible effects that may be worth studying in more "objective" analyses -- effects that might not be salient unless a respondent had brought them to our attention.

- Respondents' liking of the RSP. If users of the system like it, they will probably use it more, find unanticipated uses for it, and incorporate it into their way of operating.
- Actual outcomes of RSP for students. In one sense, the RSP's major function in the higher-education setting is to provide educational services to students in remote locations who might otherwise have had fewer learning opportunities. Making more -- or better -- educational services available might increase course completion rates and raise indicators of individual student performance. It might also influence the types of courses for which students enroll and even the types of students enrolling. If any of these outcomes were achieved, they would be important in trying to assess the overall cost-effectiveness of using satellite-based telecommunications for higher education in more remote locations of developing countries.
- Economic/financial implications of RSP. Where possible, we shall investigate the cost-effectiveness of RSP, comparing it to pre-RSP activities with similar purposes. Where RSP has introduced entirely new activities, cost-benefit analysis is the approach to take. We shall investigate cost-benefit sparingly, in view of its difficulty, cost, and inherently controversial character.

*Good - but what does
look like now? (D. Santos)
diff.*

2.3 Data Collection

We discuss methods of data collection under two major headings: Sampling and Experimental Design. The reader should refer to Exhibit 2-2 for an overview and summary of the data collection plan.

2.3.1 Data Collectors

We assume that employees of Abt Associates Inc. or its subcontractors will be able to interview BKS officials as well as the officials responsible for RSP at the four campuses to be studied in detail (see below). We further assume that Abt Associates can retain a half-time Evaluation Coordinator, based in Ujung Pandang, throughout the data collection period.

The responsibility of the AAI Evaluation Coordinator will be to interview faculty face-to-face where this is desired, to conduct some of the first face-to-face interviews with students and persons responsible for maintaining the system, and to set up teleconferences for the purpose

Exhibit 2-2
INDONESIA RSP DATA COLLECTION PLAN

EVALUATION FOCUS	MAIN TOPICS OF INQUIRY	DATA COLLECTION METHOD	WHERE	BY WHOM	WHEN
SOCIAL-INSTITUTIONAL	Use of system, attitudes toward system, perceived benefits, problems	Interviews with students	Four sites	Evaluation Coordinator	Pre, during, post
		Self-administered student questionnaire	All sites	Local RSP Coordinator	Pre, during, post
		Interview with user faculty	Four sites	Evaluation Coordinator	Pre, during, post
		Teleconference among user faculty	All sites	Evaluation Coordinator	During, post
		Interviews (personal or teleconference) among RSP implementors (local RSP coordinators, technicians, AAs)	All sites	Evaluation Coordinator	During, post
		Interviews with BKS administrators	Central sites (Ujung Pandang, Jakarta)	AAI contract staff*	During, post
TECHNOLOGICAL	Systems functioning, breakdowns, maintenance	MIS	All sites (using central Ujung Pandang MIS records)	AAI contract staff*	During
	Review of fully operating system	Site visit	Four sites	AAI contract staff* or consultant	During
	System-user interaction	Interviews/questionnaires	see above under "Social-Institutional"		
ECONOMIC/ FINANCIAL	Cost-effectiveness	Secondary data	All sites (using central Ujung Pandang and Jakarta data)	AAI contract staff*	Pre, during
		MIS	All sites (using Central Ujung Pandang MIS records)	Evaluation Coordinator	During, post
		Interviews-questionnaires	see above under "Social-Institutional"		

*AAI contract staff includes subcontractors.

36

of gathering evaluation data from faculty and system operators on campuses that are not intensively studied. Finally, we assume that the Evaluation Coordinator will be able to conduct interviews with some students and to administer closed-ended questionnaires to others, or to obtain assistance from Indonesian students or faculty members on the BKS campuses to do so.

We thus envisage three types of data collector: the AAI project team, the AAI Evaluation Coordinator, and some form of BKS-provided help in data collection.

2.3.2 Sampling Considerations

Sampling Campuses

Resource constraints dictate that not all of the desired data can be collected at each campus. We propose to collect some data from every campus but additional data from four intensively studied campuses. The all-campus data will consist of (a) closed-ended, self-administered questionnaire data from students; (b) data generated from systemwide teleconferences involving administrators or teaching faculty; and (c) archival data on RSP system use and costs. The remaining types of data will be obtained from the four intensively studied campuses.

Ujung Pandang should be one of the four campuses chosen because (a) it is the center of the BKS system, most of whose administrators work there; (b) the telecommunication facilities are likely to be implemented there first; and (c) it is likely to be the campus where BKS officials and teaching faculty have the closest links.

While Ujung Pandang will receive its telecommunication capacity at an early date, thereby providing an early illustrative case of implementing problems, it would also be useful to include a late-implementing campus, the more so because such campuses are likely to be among the more remote and the less accustomed to higher technology. Manokwari is a possible candidate here: if implementation is successful there, this would speak well for the potential of satellite-based telecommunications in the more remote districts of developing countries.

*Must be done
possible to 1-2
interview before.*

*Ujung Pandang
Observation in
classroom
interviews*

We shall need to examine both early and late implementations in order to draw conclusions about the adaptation of the pre-existing BKS system to the new RSP resources. Our early findings may incidentally serve a formative purpose by helping later sites to learn from early ones. While we shall not try to avoid being helpful in this sense, any formative success that we might have would complicate our summative task: our conclusions will have to take into account whatever distortions (however useful) that we and the Applications Management Contractor may have introduced into BKS' plans for implementing the RSP.

One of the four campus sites sampled should definitely be the one that receives the small mobile earth station that is planned as part of the Indonesian project. Again, the distinctive character of this application of satellite technology gives it an important place in the evaluation.

Selecting Ujung Pandang, a late-implementing site, and the small-station site for their special characteristics leaves only one intensive site to be "representative" of the entire BKS system. If, as suggested above, we want variability in implementation schedule, our choice is further constrained by that criterion. While it is logically impossible to select any site that is formally representative of the diverse population of BKS campuses, it would be well if we could choose one whose profile closely resembles the modal BKS campus -- say, Bandjarmasin -- particularly in terms of variables which are likely to reflect the ways in which telecommunications capacity is used. Our current guess is that the choice should be made in terms of the size of the student body, distance from Ujung Pandang, number of visits from visiting dosen in the past year, expenditure on "higher technology" teaching aids, etc. But the choice of stratification variables is -- we must stress -- largely guesswork and will be determined anyway by the circumstances of RSP implementation and by the judgment of the Indonesia Project Director and of others who know the BKS campuses best.

Finally, while not one of the four intensively studied campuses, nor even a member of the BKS, we would hope to be able to pay some close attention to Bogor because of its distinctive character as a center of academic excellence and as the originating source of many distance-taught courses.

Sampling Persons Within Campuses

There is no sampling issue with respect to BKS administrators: all who have major formal responsibility for RSP coordination will be interviewed, irrespective of whether they are located in Jakarta or in Ujung Pandang. Given their importance, it would be highly desirable to have AAI project staff interview them during, and again toward the end, of the AID-supported RSP implementation.

There is also no sampling issue with respect to faculty who have responsibility for administering or coordinating the RSP at any of the ten campuses: they, too, should be interviewed during and toward the end of the project. It is desirable -- and should be possible -- to gather much more information at the four campuses to be chosen for intensive study. The on-site AAI Evaluation Coordinator should conduct these interviews, if possible. The staggered implementation planned for RSP should make the task manageable. Should it grow too large, the Coordinator should convene a teleconference on the RSP system to obtain the required data, at least from the six campuses that will be studied less intensively. Closely related to this group to be studied are the persons responsible for developing and maintaining the telecommunication system. In addition to the local RSP coordinators, this group includes technicians and administrative assistants who can provide us with important background information about the system performance, user demands, and changes in such demands. In addition to formal interviews, these personnel will participate in case study discussions, to be carried out, in the four intensively studied sites, to investigate the fully operating system.

It will not be necessary to sample faculty who use distance teaching in the four intensive-study campuses. Unless RSP distance teaching grows very large indeed (which would be prima facie evidence of success), all faculty users on these campuses can be censused for a personal interview. Teleconferences will gather parallel data from the other six campuses. For each teleconference, we propose to select two faculty users per campus. One of them should be identified as an active and enthusiastic user and the other as a more hesitant but knowledgeable user. This sampling strategy should increase the likelihood of generating

a rich array of perceived benefits and problems. The AAI Evaluation Coordinator will be responsible for convening and conducting these data-collecting teleconferences.

It will be necessary to sample classes and students in some way. In campuses chosen for intensive study, we propose face-to-face interviews with 15 purposively selected students from all classes that use distance teaching in the first semester. Again, this is to help identify implementation problems as early as possible. After the first semester, we propose interviews with 15 students in two of the classes using distance teaching. One class should involve a substantive topic where distance teaching has already been used, and the other should be a topic where distance teaching is being used for the first time. We hope that BKS will provide assistants to interview these students under the close supervision of the AAI Evaluation Coordinator.

All students in the distance-taught courses at the intensively studied sites should also respond to a short, closed-ended, easily scored questionnaire. That instrument will be designed to probe usage, perceived benefits, perceived problems, coordination with other course materials, and student likes or dislikes of the RSP. It makes little sense to develop such an instrument until the first wave of face-to-face interviews with students has been conducted at early-implementing campuses.

At the six remaining sites, we propose to collect from students closed-ended questionnaire data. This will be from all the students in two classes per semester that use RSP facilities. Wherever possible, these should be classes in subject matters that have and have not previously used RSP facilities. We assume that the BKS will provide the personnel resources necessary to hand out, collect, and forward these questionnaires.

A final source of data, albeit not a "person," will be the management information system, or MIS, that will be implemented to coordinate the RSP applications and that will be tapped by the AAI contract staff to provide information on system functioning, malfunctions, and costs.

Sampling Time of Measurement

We propose to interview BKS officials twice: once immediately after the first semester of usage at the first campus to implement, and again toward the end of the evaluation period. The purpose of the first wave is to collect data soon after the officials have become familiar with the system's capabilities, so that general problems of implementation can be identified. We need such data in order to assess the system's adaptation to the RSP. The purpose of the second wave of measurement is to describe how the system is operating after its final shakedown period, to identify the problems that have and have not been overcome, and to identify the perceived benefits of the RSP.

We propose to interview campus RSP administrators at the end of the first year and then at the end of the evaluation period. In the first interview, we propose to be particularly open-ended, providing information about what we have learned at other campuses that implemented earlier. In the second and final waves, we will function in more traditional data-collection roles, so as to examine levels of implementation, changes in implementation, and reasons for any changes that there might be.

Interviews with faculty users of the RSP at the four intensively studied campuses will be conducted at the end of any semester when distance teaching is carried out. We shall thus organize a continuous schedule of twice-yearly measurement of faculty perceptions, with the measurement occurring at the end of the semester, when the teachers' experiences and reflections are both fresh and well-grounded. Teleconference interviews with user faculty will also take place twice yearly, just before the end of a semester. This is so that the discovery-based knowledge gained from the teleconference can be used to supplement the face-to-face interviews on the four major study campuses.

Interviews with students at the four main sites should take place at the same time as the face-to-face interviews with faculty, so that the faculty and students from a particular class are more likely to be referring to the same set of curriculum materials and experiences when they give their responses.

3.0 APPLICATION-SPECIFIC PLAN FOR THE EVALUATION

Proposed applications of the Indonesian RSP include BKS administration, dosen upgrading, distance teaching, and research information exchange. For each of these applications, this chapter identifies the kinds of information needed to answer the first three of the four research questions stated in Chapter 2 and describes how we plan to obtain the information. In particular, the discussion addresses the potential impacts of the RSP in each application area along four dimensions: changes in pre-existing communication procedures, workload capacity, quality of communication, and costs of communication. Since the Indonesian RSP project will be an evolving activity, the plans described here are, of course, subject to change as the project evolves and as we become more intimately involved in it.

3.1 Administration

The administrative applications fall into three general categories: meetings among the BKS campuses using the audioconferencing and audiographic equipment, simple bilateral communications using the audioconferencing and audiographic equipment, and written communications using the facsimile equipment.

The effectiveness of the BKS has been limited in part by poor communications. Up to now, only the rektors and Pembantu rektors have been able to meet, and they have only met once or twice each year. The satellite link will allow the senior administrators of the universities and IKIPs to meet more frequently, and it will also allow the deans and some of their staff to meet on a regular basis. These meetings and other forms of communication facilitated by the satellite link should help to build the BKS into a more cohesive and effective association.

3.1.1 Question 1: What was the baseline situation before RSP?

For BKS administration, our objectives in addressing this question are (a) to prepare a profile of pre-existing administrative activities relating to face-to-face, telephone, and written communications; (b) to identify troublesome or inefficient aspects of administrative communications; (c) to determine the awareness, and perceptions, of the BKS

organization among administrators and dosen; and (d) to assess the climate of receptivity towards the RSP among administrative staff.

Most of the information needed to meet these objectives will be obtained through informal interviews with BKS administrators (deans, dosen, and rektors) during initial visits to each campus, combined with existing documentation describing administrative meetings, reports, and procedures. The interviews will be conducted by AAI staff in an exploratory style, inquiring about each respondent's daily work routine, communication problems, awareness of what the BKS is and what it does, and expectations concerning the RSP administrative application. In addition to bilateral communications within the BKS, the interviews will address information flows between the BKS and other organizations or ministries in Jakarta or Bogor.

3.1.2 What administrative changes have resulted from installation and operation of the RSP?

The evaluation objectives in addressing this question are to measure the impacts of the RSP on (a) pre-existing administrative procedures, including information flows, record-keeping, and decision making; (b) administrative capacity, including the number of meetings held or reports processed per semester; (c) quality of administration, including the timeliness and completeness of communications and the overall cohesiveness of the BKS; and (d) costs of administration, including staff time and materials required per semester.

Changes in administrative procedures are expected to include more frequent and informal bilateral communications, use of facsimile equipment rather than regular mail for written communications, increased participation in monthly meetings and guided group discussion via the satellite link, and less travel for administrative purposes within the BKS (for deans and rektors) and between Jakarta and the BKS campuses (for Ministry of Education and other government officials). Changes in administrative capacity are expected to include teleconferences within BKS and between BKS and Jakarta or Bogor, and increases in the frequency and duration of administrative meetings and written communications. Changes in the quality of administration are expected to include increased integration

travel

17

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and coordination of the BKS and improvements in the efficiency, accuracy, and completeness of information flows. Changes in the costs of administration are expected to include reduced travel costs for BKS and government officials, reduced photocopying costs, reduced telephone costs, and reduced standard labor costs per administrative activity. *alibi*

The following methods will be used to measure the post-implementation impacts of the RSP on BKS administration: direct observation and comparison by multi-site, bilateral, and written communications with and without the involvement of RSP components; personal interviews with senior BKS administrators and selected government officials; teleconferences with other deans, rektors, and dosen at remote campuses; and system usage logs for telephone, teleconference, and facsimile equipment. Interviews and teleconferences will be conducted by AAI staff with the assistance and participation of the AAI Evaluation Coordinator, and system usage logs will be compiled by RSP technicians and senior BKS administrators assigned responsibility for RSP scheduling and forwarded to our Evaluation Coordinator.

Changes in administrative costs resulting from the RSP will be measured as part of an overall financial analysis. Towards the end of the project evaluation period, a detailed examination of accounting records will be made, to ascertain equipment and operational costs associated with the teleconferencing system. This will be supplemented by interviews with selected faculty, technical, and administrative personnel to estimate the professional time and costs associated with administrative use of the system. These data will be analyzed to produce, to the extent possible, a financial accounting of the use of teleconferencing facilities for BKS administration. Exhibit 3-1 shows the categories of data required.

3.1.3 Question 3: How was the RSP implemented and used for administration?

The evaluation objectives in addressing this question are to identify and examine (a) problems of implementation, including those arising from technical malfunctions, user resistance, or inadequate user training and preparation; and (b) patterns of system usage by administrators during and after the implementation period, including planned versus

Exhibit 3-1

PRELIMINARY DRAFT QUESTIONNAIRE
FOR DATA ON SYSTEM COST ITEMS

A. SYSTEM COSTS

Estimate the following costs associated with the UWIDITE system:

1. Capital Costs

CATEGORY	YEAR 1	YEAR 2	YEAR 3
Electronics			
Studios			
Transmission facilities			
Other: _____ _____ _____			

2. Operating Costs

CATEGORY	YEAR 1	YEAR 2	YEAR 3
Telecommunications charges			
Maintenance			
Parts			
Technicians* (fully loaded)			
Other: _____ _____ _____			

*If fully loaded costs not available, give wage cost only and estimate overhead ratio (accounting for benefits, supervision costs, equipment and vehicle costs, etc.).

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Exhibit 3-1 (continued)

B. PERSONNEL TIME AND COSTS

1. Enter estimated time saved (or, in brackets, additional time needed) by each category of personnel for each major application of the RSP system.

APPLICATION	HOURS SAVED PER YEAR (Use brackets to indicate additional hours needed, if appropriate)			
	Senior Faculty	Junior Faculty	Professional Administrators	Clerical Administrators
1. _____				
2. _____				
3. _____				
4. _____				

2. Estimate wage and fully loaded hourly costs for each category of personnel.

APPLICATION	Senior Faculty	Junior Faculty	Professional Administrators	Clerical Administrators
A. Average wage (annual)				
B. Effective hours normally worked per year				
C. Overhead ratio*				
D. Fully loaded hourly cost (A x C ÷ B)				

*Ratio of total costs (including wages, benefits, offices, supplies, etc.) to wage cost.

But I am not sure about the system and the people.

HL

Exhibit 3-1 (continued)

C. OTHER COSTS

Identify extent of other cost increases or reductions associated with use of RSP system (first two row are pre-entered for illustration; please be certain that all cost increases or reductions other than those covered in A and B above are included).

NATURE OF COST INCREASE OR REDUCTION	COST INCREASE (explain)	COST REDUCTION (explain)
1. Use of class-rooms		
2. Utility costs		
3. _____		
4. _____		
5. _____		
6. _____		

47

actual usage, number and mix of users, and frequency and purpose of usage.

Direct observation of administrative activities involving the RSP and informal interviews with administrators during system implementation will be combined with information provided by the system usage logs and AED formative evaluation material to examine technical issues associated with the adoption of the RSP by BKS administrators.

Administrators should be asked about problems they have had communicating (a) with Jakarta or Bandung; (b) with peripheral campuses; and (c) with their own campus when they used (a) the telephone; (b) teleconferencing; or (c) some other system capability, for purposes of (a) administration or (b) something else. They can also be asked (a) how they recognized the problem was occurring; (b) what they did about it; (c) how successful they (or someone to whom they turned for help) were; and (d) what they would now do to solve the problem in light of more recent experience. We presume that the problems experienced can be (a) technical -- involving, for instance, when equipment is available and functioning, how clear reception is, etc.; (b) institutional/social -- involving, for instance, getting others to use the system as administrators, teaching faculty, or students; and (c) administrative -- involving, for instance, receiving any reimbursement or matching funds that might be implicated.

Patterns of RSP usage by administrators will be determined by combining data from system usage logs with personal interviews asking senior administrators questions about their communication with a given reporting period (say, the last two months) (a) to Jakarta; (b) to the campuses outside of Ujung Pandang; and (c) within the Ujung Pandang campus. We would find out about (a) the frequency and (b) the purpose of contacts with each of these groups using (a) the telephone; (b) teleconferencing; or (c) some other system capability. As well as (a) the usage made, we would also probe (b) changes in usage over a prior reporting period, and (c) the reasons offered for any changes noted. For BKS administrators, we presume that most of the questions will be about the administration of the university rather than about how the system was actually used for teaching, though plans for the use of the system in

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history
book

48

teaching and faculty upgrading are clearly part of the administrator's responsibilities, as is the general monitoring of how the telecommunication facilities are used. Thus, administrators also need to be asked questions about planning and monitoring the use of the telecommunication facilities.

We presume that administrators at campuses other than UNHAS need to communicate with (a) BKS administrators in Ujung Pandang; (b) with administrators at other campuses; (c) with other administrators on their own campus; and (d) with the teachers of courses where distance teaching is used. We would want to probe (a) the frequency and (b) the purpose of contacts within each of these groups using (a) telephone, (b) teleconferencing, or (c) some other mode of communication. As well as (a) the usage mode, we would also probe (b) changes in usage and (c) the reasons offered for these changes. Of prime interest is use for general university administration, but use for administering the telecommunication facilities should not be overlooked.

3.2 Dosen Upgrading

There is now a major program for 2,000 dosen within the BKS to upgrade their instructional skills and a move afoot to upgrade junior high school teachers. In the dosen upgrading program (AKTE-V), the dosen study self-learning modules and are assisted by trained tutors. The satellite link will be used both for the training of the tutors and for the direct instruction of the dosen. In addition, the system will be used to allow the various faculties to run their own upgrading programs focused on subject matter. The goal of the system in this application is to improve the professional and academic skills of the dosen of the BKS. The project will also produce models for advanced level content area upgrading. Senior faculty members will present teleconferencing programs that focus on their specialty (e.g., soil science, agronomy, forestry) using the audioconferencing and audiographic equipment. These courses should help dosen who are not expert in that specialty but who do have degrees in agriculture to upgrade their knowledge.

Because the junior high school teacher program is less operational, more decentralized (in being off the BKS campuses), and includes, we presume, a much greater number of participants, we shall regretfully be unable to examine that upgrading program. Rather, we shall focus upon dosen upgrading.

3.2.1 Question 1: What was the baseline situation before the RSP?

For dosen upgrading, our objectives in addressing this question are (a) to prepare a profile of AKTE Lima and other pre-existing upgrading programs; (b) to identify troublesome or inefficient aspects of non-RSP upgrading methods; (c) to examine the scarcity of the dosen as an academic commodity and the proportion of time a dosen spends teaching; and (d) to assess the climate of receptivity towards the RSP among senior dosen.

Most of the information needed to meet these objectives will be obtained through informal interviews with senior dosen in the basic sciences during initial visits to each campus, combined with existing documentation describing upgrading criteria, schedules, and procedures. The interviews will be conducted by AAI staff in an exploratory style, inquiring about all aspects of upgrading activities and expectations concerning the use of the RSP for dosen upgrading. Particular attention will be given to the issue of teacher/student ratios and demand for skilled dosen in the basic sciences and other fields.

3.2.2 Question 2: What changes have resulted from the installation and operation of the RSP in the area of dosen upgrading?

The evaluation objectives in addressing this question are to measure the impacts of the RSP on (a) pre-existing upgrading procedures, including upgrading criteria, schedules, type of dosen, location, and associated teaching and travel time; (b) upgrading capacity, including the total number of dosen upgraded per semester in each discipline and new upgrading activities; (c) quality of upgrading, including the average skill level and teaching responsibilities of BKS dosen; and (d) costs of upgrading, including staff time, travel, and materials required per semester.

Changes in upgrading procedures are expected to occur in content areas common to all of the campuses in the fields of the basic sciences and advanced level agriculture. Upgrading courses for specific fields (math, chemistry, economics, etc.) will be implemented. This will produce several model programs with prototype materials and a manual of instruction that can be adapted to any basic content area course.

3.3 Distance Teaching

The distance teaching segment of the RSP will attempt to alleviate two problems within the BKS. First, there are too many students for too few dosen. The satellite link will be used to experiment with ways of allowing one teacher to serve effectively more students. Second, for specialized courses, the teaching resources do not exist at each campus. The BKS has been bringing dosen in from other campuses, but these dosen usually can visit for only a few weeks. This causes disruption in the regular semester schedule since students must stop their other studies and focus all of their attention on the course taught by the visiting dosen. The goal of the RSP in this application is to augment the teaching resources of the various BKS campuses and other campuses in Indonesia through regular distance learning courses and through occasional guest lectureships.

3.3.1 Question 1: What was the baseline situation before the RSP?

Our objectives in addressing this question revolve around two major issues: the amount and type of distance teaching done before the RSP, and the instructional goals of the teaching. Regarding the first issue, we shall ask (a) what distance teaching was done before RSP, how was it done, and at what costs in money and in disruption of normal procedures; (b) what was inefficient or otherwise troublesome about pre-RSP distance teaching; (c) what might one expect to save under RSP; (d) what new distance-teaching functions might RSP make possible, and if they were available, in what ways would the university function better; and, finally, (e) who benefited from the status quo, in what ways, and to what extent?

With respect to the instructional goals that RSP aims to support, we shall explore how well BKS was performing before RSP by asking (a) how many students were enrolled in each course each term, how many passed, under what standards of proficiency; (b) how many tried and failed; (c) what kinds of students (sex, age, geographical origin, level of preparation) enrolled and succeeded; (d) how many students could a dosen instruct before RSP; and (e) what changes in enrollment, success, student/dosen ratios, and student demographics does RSP aim to effect?

3.3.2 Question 2: What changes in distance teaching have resulted from installation and operation of the RSP?

Past research has shown effective distance teaching requires very important institutional changes, even more perhaps than changes in communications technology. Is the RSP used to teach courses from one campus to another? Which campuses are the senders and which the receivers? Does the flow tend to be one way or do the campuses reciprocate? Are certain disciplines or departments particularly eager to hold or receive "telecourses"? To what extent are the instructors and students satisfied (or dissatisfied) with the telecourses? Do the institutions provide adequate support systems for the off-site (i.e., on another campus) learner? What can we learn from the evaluation that will help us to understand the institutional uses of the satellite system for instruction? What changes in attitudes and perceptions are there as the project progresses? To what can we attribute these changes?

Inferring the causal consequences of distance teaching will be easier if the university archives contain data on (a) the number of students enrolling in courses; (b) the number dropping out (or some equivalent such as the difference between the number originally enrolling and the number taking the final examination); and (c) the grades earned by students who complete the course. Most of the discussion that follows assumes data of reasonable quality on these issues.

In some cases, it may be possible to infer the causal effects of distance teaching by comparing courses distance-taught via the RSP (a) with different sections of the same course taught on the same campus in the same year that are not taught this way; (b) with the same course

taught on the same campus in prior years when distance teaching was not used; (c) with the same course taught in the same year on a different but somewhat similar campus; or (d) with a different but related course taught in the same year on the same campus. These options are listed in order of presumed closeness of comparison with a course that uses distance teaching, though not necessarily in order of presumed feasibility. Indeed, option (a) may be a rare event, though the others are more likely.

If one chooses to compare the same-titled courses across different campuses in any one year, an important advantage is offered if one knows reasonably well the planned schedules for introducing a telecommunication capacity to the different campuses. One can then use a design in which the original no-treatment comparison campuses later become "treatment" campuses. That is, one can compare a course taught with distance teaching at Campus A with a course of the same title taught without distance teaching at Campus B and C; at a later date, after Campus B gets distance teaching, one can compare Campus B with Campus C; and if Campus C gets distance teaching at an even later point, one can then contrast the same course for two years before distance teaching with the one year after it. Such a design permits multiple replications of a possible treatment effect and hence more stable estimates for a cost-effectiveness analysis. Stability is also provided, of course, by any replication across course titles as well as across campuses and across years (or semesters).

At this point, it does not seem reasonable to go into detail about further distance teaching evaluation design issues. That must await more detail about the state of BKS records and about the detail of plans for implementing distance teaching across campuses and across courses within campuses. But how does one evaluate the effects of distance teaching or student performance if adequate records are not available and the only recourse is a necessarily limited primary data collection effort?

At some time early in a course, faculty members will either receive a list of enrollees or will generate a head count. On the assumption that final examinations are given, it is also likely that teachers will be able to ascertain how many students take the final examination and what grade each student receives on it. For the subset of

students exposed to a distance-teaching capacity who enter our sampling frame (see section on "Sampling Considerations" above), it should be possible for the AAI Evaluation Coordinator to gather enrollment and outcome data directly from the instructor without having to make up knowledge tests or conduct head counts himself or herself.

3.3.3 Question 3: How was the RSP implemented and used for distance teaching?

The satellite link itself will not be sufficient to meet all of the instructional needs of these courses, and so it will be supplemented by recorded lectures, video tapes, self-instructional materials and local tutorials. The project, therefore, will use existing materials (for example, radio classes developed by IKIP Bandung and video tapes developed at several campuses in Indonesia) and will develop special materials for the courses with technical assistance from TKPK.

As mentioned above, the distance teaching courses will focus on the basic sciences and advanced agricultural subjects. To reach those objectives, several different instructional options will be tried. From this experimentation will come detailed instructional models with curriculum, methods, and materials that can be used later by the university system to teach these and other subjects.

The problems that faculty experience in distance teaching will presumably be (a) technical and (b) institutional/social in nature. In addition, there may be (c) some more pedagogical problems associated with, say, coordinating teleconferencing and classroom activities, getting access to reference materials mentioned in a session, etc. For every identified problem, attempts should be made to probe (a) how often it occurred; (b) if it was resolved; (c) how it was resolved; (d) and how the respondent would now go about solving or avoiding the problem. Since faculty may on some campuses have access to a telephone as well as a teleconferencing capability, they should be asked about (a) each mode and (b) the purposes for which they used each mode.

Students will be interviewed about the technical, institutional/social, and pedagogic problems they encountered in using the system and about how prevalent the problems were and how they were solved, if they indeed were solved.

Faculty can presumably use the telecommunications possibility to contact (a) faculty at other universities who produce satellite-transmitted teaching materials; (b) faculty at other universities who consume distance teaching materials; and (c) students in the classes they teach. We would want to probe (a) the frequency and (b) the purpose of usage within each of these populations and also whether the communication used (a) the telephone, (b) teleconferencing, or (c) some other capability. As always, we would probe (a) what the faculty did during the preordained reporting period; (b) what changes these activities represent; and (c) why these reported changes came about.

For students, there is little need to ask about links to BKS and other campuses; and we do not need to ask about the telephone. Instead, we could probably limit the data collection to issues of (a) what they were taught using the satellite-based capacity; (b) how clear the transmission was; (c) how adequate the materials were; and (d) how the teleconferencing was followed up in classwork. Also, questions could be asked about (e) changes in the frequency and (f) nature of distance-taught materials, and students could also be asked (g) to estimate why they think these changes have occurred.

3.4 Research Support Applications

Dosen involved in research will be allowed to use the system to contact colleagues at other BKS campuses, IPB, AARD, and other institutions in the BKS region, Bogor, and Jakarta. Researchers will be able to use the system to ask advice of staff from other campuses, search for relevant references, train research assistants, and monitor research activities. The project will encourage dosen to broaden their research to cover more than one site in the region, and the traditional research links to Bogor and Jakarta should be made more effective by improved communications.

3.4.1 Question 1: What was the baseline situation regarding research support before the RSP?

For academic research activities, our objectives in answering this question are to determine (a) how much inter-campus research in basic science and agriculture was being conducted and by whom; (b) how

such research is conducted in the absence of satellite communications and at what cost; (c) what specific aspects of these activities were inadequate or inefficient; and (d) what were the expectations towards the RSP of individuals engaged in research?

Informal on-site interviews with BKS dosen and graduate students engaged in research, combined with official records of research in progress and requests for research assistance, will be the primary methods applied to answer Question 1. For the four intensively studied campuses, we shall also develop individual profiles of several senior dosen to obtain an understanding of how much time such dosen devote to such activities and how the RSP might be expected to improve their overall effectiveness and productivity. Particular attention will be paid to the use of centers of academic excellence in Bogor and Jakarta as resources for faculty and graduate students on BKS campuses.

3.4.2 Question 2: What other changes have resulted from installation and operation of the RSP?

The evaluation objectives in addressing this question are to measure the impacts of the RSP on research activities with regard to the flows of information, workload capacity, quality, and costs. Impacts on research activities are expected to include more efficient and complete document search procedures, new opportunities for multi-site consultation, more frequent BKS contact with technical experts in Bogor and Jakarta, more effective use of time for senior dosen, and reduced travel costs.

In measuring the impacts of the RSP on administration, dosen upgrading, and distance teaching, many of the dosen and other individuals we plan to survey during the post-implementation period will be involved in academic research activities. For the most part, it will therefore be possible for us to examine the impacts of the RSP in the latter area without designing new data collection forms or procedures. Instead, questions specific to research support will be asked as part of the post-implementation faculty interviews and teleconferences. One exception to the insertion of question modules into planned interviews for evaluating RSP impacts on research activities will be the design of structured interviews to be conducted with senior staff at the centers of excellence in

Bogor and Jakarta. Since a significant impact of the RSP on the BKS is expected to be an increased reliance on technical experts located in Bogor and Jakarta, personal interviews will be designed specifically to assess this impact. Data from these interviews will be paired with RSP MIS data (showing the frequency of communication between technical resource centers in Bogor or Jakarta and BKS campuses) to draw conclusions about changes in the use of outside experts in response to improved communications.

3.4.3 How was the RSP implemented and used for research support purposes?

For academic research, our objectives in addressing this question are to (a) determine the extent to which dosen were oriented to the potential research support applications of the RSP; (b) prepare a history of the technical problems and resolution of problems encountered while using the system for this purpose; and (c) prepare a profile of RSP usage patterns for research, including frequency of usage, type of user, and number of sources or experts consulted.

System usage and maintenance logs built into the RSP management information system should provide the evaluation team with much of the data needed to estimate the proportion of time the RSP is being used in a trouble-free mode for applications beyond administration, dosen upgrading, or distance teaching. Informal interviews with senior dosen and others likely to be engaged in research are already planned during the implementation period to inquire about RSP performance in dosen upgrading and distance teaching. We shall incorporate questions about research assistance into these dosen interviews. In addition, we should be able to gather information on patterns of system usage and performance in the area of research by holding teleconferences among those active in research interchange using the RSP system.

What Project is excellent - beautiful, practical, useful.

*Q. - will it give what we need at the end. In next session
Is there enough on the strength of the institution?
Re. ind. (publ.) + on the all other (lab) +
Is the support process, cases, pub. not 57*

4.0 MEMBERS OF THE EVALUATION CONTRACT TEAM AND THEIR ROLES

The Indonesian RSP assessment must integrate the activities of various organizational units, both in the U.S. and in Indonesia, in order to accomplish the types of evaluation activities discussed in Chapter 3. The approach we take to this complex problem is to have specific tasks that are part of the Indonesian RSP assessment assigned to specific individuals or organizational units who have strengths in the specific topic in question. The tasks are not only analytical tasks, as discussed in Chapter 3, but also operational ones. The careful interweaving of these tasks and task coordinators is required to make the Indonesian RSP project evaluation move forward and achieve its objectives. This chapter discusses that organizational arrangement. It focuses primarily upon the Abt Associates contract team: organizational interactions between the contract team and GOI colleagues are discussed in Chapter 5.

4.1 Organization of Analytical Component

As shown in Exhibit 4-1, the Indonesian RSP project assessment is under the overall direction of the contract's Project Director. In recognition of the necessity to have both analytical and operational components function smoothly, we have a Deputy Project Director for each of these major components reporting to the Project Director. Under the Deputy Project Director for Design and Analysis, each of the three major analytical components is arrayed. The organization of the analytical components of the Indonesian RSP project along these lines allows for a division of operational responsibility that matches the diverse strengths of Abt Associates and its subcontractors. Although there will naturally be areas of overlapping responsibility (and we shall continue to encourage overlap), the lead responsibility for each analytical component of the assessment will lie clearly with the individual and organization that has predominant capability in the area in question.

In accordance with this scheme, Abt Associates Inc. will assume the lead responsibility for the economic and technological analyses. It will be assisted on the former by Communications Studies and Planning International, Inc. and on the latter by MIT's Research Program on Communications Policy. Cook and Cook, Inc. will assist in evaluation

research issues and design and take the lead in performing the assessment's institutional-social analysis. Naturally, Abt Associates will have primary responsibility for integration of the Indonesian RSP project evaluation's analyses and findings.

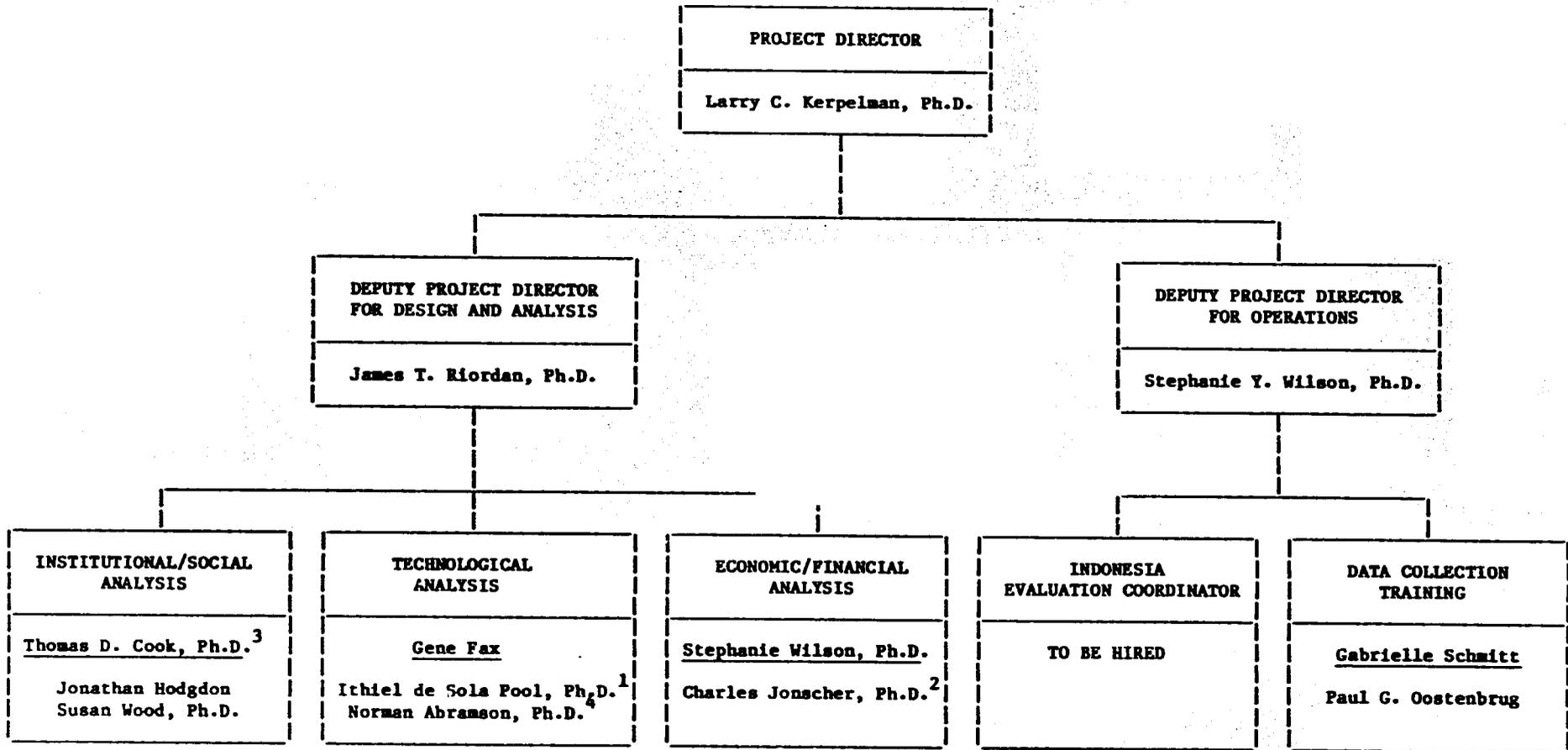
One danger in summarizing our analytical approach in this discipline specific way is that it may create the false impression that each type of analysis is so idiosyncratic that our findings will be incomparable across disciplines and that it will be impossible to integrate the results of the Indonesian project evaluation in the end. That is why we have taken pains to organize the overall assessment plan, as described in Chapter 2, to answer relevant research questions rather than to address strictly discipline specific issues.

4.2 Organization of Operational Component

The operational component consists primarily of seeing that the appropriate project evaluation data are collected over the life of the Indonesian RSP project. The operational component is under the purview of Abt Associates' Deputy Project Director for Operations. For the Indonesian RSP project, we intend to hire, on a part-time consultant basis, an Indonesia Evaluation Coordinator. This person, who will be located in Ujung Pandang, will serve as the interface between the U.S.-based assessment team and the BKS. The Evaluation Coordinator will collect data or arrange for the collection of project assessment data, and he or she will monitor the progress of the evaluation data collection activities. He or she will report to the Deputy Project Director for Operations. For a description of the qualifications of the Case Study Coordinator, see Exhibit 5-2 in Chapter 5.

As with any large-scale data collection operation, careful training of data collectors is necessary to insure that data are of high quality, are collected in a consistent fashion, and are obtained and submitted in a timely manner. The considerable amount of data to be collected, and the frequency of its collection (see Exhibits 2-1 and 2-2) dictate that intensive and frequent training of data collectors take place. Abt Associates' Data Collection Training Coordinator will insure that this evaluation training is well-planned and carefully executed. She will report to the Deputy Project Director for Operations.

ORGANIZATION CHART, ABT ASSOCIATES INDONESIAN RSP PROJECT ASSESSMENT



36

¹Massachusetts Institute of Technology, Center for International Studies, Research Program in Communications Policy.
²Communications Studies and Planning International, Inc.
³Cook and Cook, Inc.
⁴Consultant

60

5.0 RESOURCE SUPPORT FROM THE GOVERNMENT OF INDONESIA

The Government of Indonesia is fully committed to participating in the Indonesian RSP project (see Letter of Agreement for a Rural Satellite Project in Indonesia between the Government of Indonesia and the United States of America). Along with the GOI commitment to implement the project and participate in its operations is a commitment to participate as well in evaluating the project. By serving as colleagues in the assessment of the RSP pilot project in Indonesia, the GOI will help other developing nations and the world at large benefit from Indonesia's pioneering experience in the Rural Satellite Program.

Accordingly, the GOI may be expected to provide support for the evaluation activities. This chapter discusses the levels of support for the evaluation which it is hoped that the GOI will provide in order for the evaluation to run smoothly. Section 5.1 discusses the structure and organization of the AAI-GOI partnership arrangement for the Indonesia project evaluation, and Section 5.2 discusses the support functions which the GOI can be expected to provide.

5.1 Personnel

Exhibit 5-1 shows the organizational structure of the project's evaluation component. On the left side are shown all of the organizational components of the project assessment effort which are employed by Abt Associates Inc. (and their location). On the right side are shown the GOI colleagues who we hope will contribute to the evaluation effort and their locations. The dashed lines connecting each equivalent level denote that interactive lines of communication are expected to be developed in the evaluation effort between these organizational units.

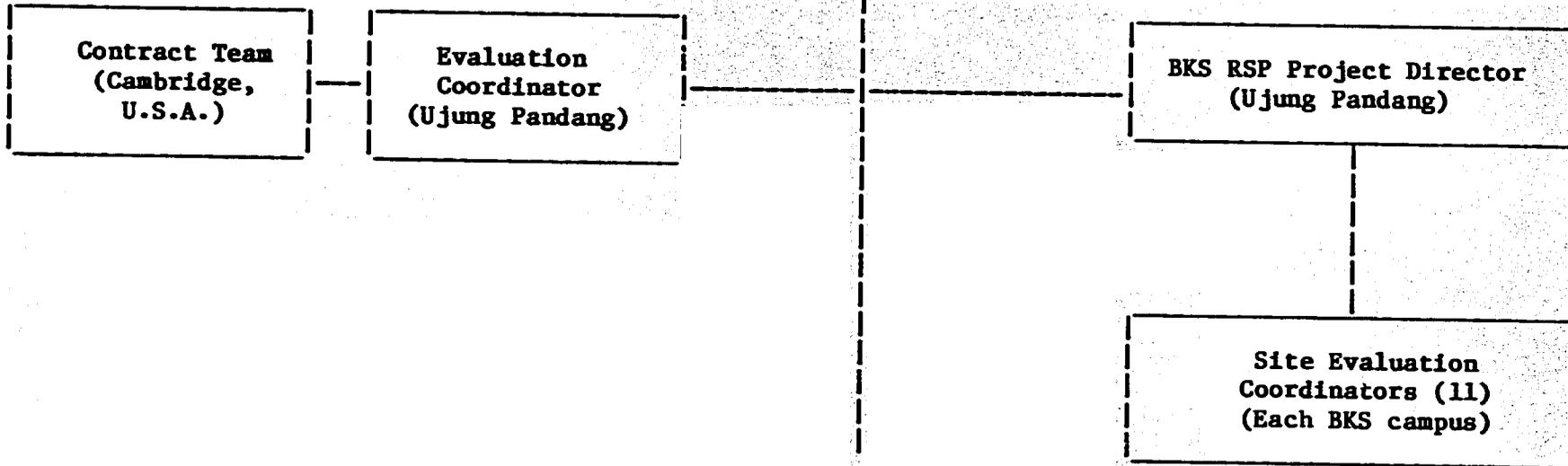
The daily operation of the assessment activities will require that the AAI Evaluation Coordinator (to be hired) and the BKS Project Director (Dr. Anwar Hafid) be in close and frequent contact. They will cooperatively plan the project evaluation activities, coordinate and schedule them, and monitor the progress of these activities on an ongoing basis. The location of both of these individuals in Ujung Pandang will greatly facilitate their interaction. In addition, the individuals occupying these two positions will serve in a central receiving role for all project-related evaluation data; they will, in turn, forward these

Exhibit 5-1

ORGANIZATIONAL STRUCTURE OF THE INDONESIAN RSP PROJECT EVALUATION

Employed by Abt Associates

GOI Colleagues



62

data to AAI in Cambridge for analysis. The qualifications for AAI's Evaluation Coordinator are shown in Exhibit 5-2.

Working under the BKS RSP Project Director are a set of individuals on each campus who have responsibilities for the RSP on their campus. Based upon discussions held in Washington between the RSP Project Director, Dr. Hafid, and the AAI Project Director, Dr. Larry Kerpelman, we understand that there are three persons on each campus who have these responsibilities: a full-time site technician, a part-time local coordinator (such as a faculty member or campus administrator), and a part-time administrative assistant. Our evaluation plan calls for most of the evaluation data to be gathered by AAI contract staff or the AAI Evaluation Coordinator. Some element of the data collection, such as the self-administered student questionnaires, requires a periodic presence of someone on each campus to pass out and receive questionnaires to students in various courses. Another element, the collection of some technologically related data on system performance and usage, also requires a presence on-site of someone able to gather and forward this information. We hope that we may be able to access the services of one of the Indonesian site-based RSP persons on each campus to provide us with that data collection capability and to serve thereby as a Site Evaluation Coordinator. Their time involvement will not be great, since they already are involved in the Indonesian RSP, but their contribution to its evaluation will be significant.

5.2 Other Resources

In the aforementioned Letter of Agreement, the GOI has agreed to provide both office space and support staff (i.e., secretaries and drivers) for the Evaluation Management Contractor, as well as permission to collect data for the RSP project assessment. In addition, certain other support for the GOI colleagues who will contribute to the assessment will be necessary. Specifically, this takes the form of transportation and per diem for sending the 11 Site Evaluation Coordinators to Ujung Pandang for training in the purposes and practices of the assessment data collection. Training in data collection techniques of two days' duration will be required at the beginning of the Indonesian RSP project and again during the course of the project.

Exhibit 5-2
QUALIFICATIONS OF
AAI'S INDONESIA EVALUATION COORDINATOR

Required

- Available one-half time from March 1983 to September 1985 (heavier involvement at beginning and end of time period).
- Fluent (reading, writing, speaking) in Bahasa and English.
- Live in, or willing to relocate to, Ujung Pandang for duration of effort.

Desirable

- Social science research training/background.
- Familiarity with higher education system in Indonesia.
- Knowledgeable about persons in the Ministries of Education, Communications.