

パプアニューギニア国

開発パートナー事業「ライブ授業放送を利用した遠隔地教育」

事前調査団報告書

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2002年5月

国際協力事業団

アジア第二部

地二南
JR
02-13

パプアニューギニア開発パートナー事業
「ライブ授業放送を利用した遠隔地教育」実施協議調査

1. 派遣期間 平成14年2月18日～2月28日

2. 団員構成

斎藤 克郎 (総括)	JICA パプアニューギニア事務所 所長
下村 博司 (業務主任)	ソニー (株) 国際協力部
張替 和彦 (機材システム設計)	ソニー (株) 国際協力部
吉田 雅巳 (教育メディア開発)	文部科学省メディア教育開発センター
大前 隆之介 (調達計画・積算)	パシフィックインターナショナル (株)

3. 調査内容

① プロジェクト名称変更

旧 : Distance Education by Utilizing Live Broadcasting of Class Room

新 : Distance Education by Utilizing Live Recording of Class Room

② プロジェクト目標

プロジェクト目標を、'95年から PNG 教育省が推進している目玉プロジェクト「Educational Curriculum Reformation」を放送の力を利用して広めることとした。これにより本プロジェクトが教育省全体の活動として位置付けられた。(添付 PNG 教育省組織図参照)

③ RD サイナー、Project Manager の変更

旧 : サイナー : P Mungul (Director of Media Center)

PM : P Mungul (Director of Media Center)

新 : サイナー : P Baki (Secretary, Department of Education)

PM : G Yerua (Assistant Secretary, CDD)

④ 現地 Pilot Project の吸収、一本化

昨年11月よりスタートした PNG 教育省の Pilot Project を本 Project は吸収し、一本化することとした。これにより、無用な混乱を避けられる。一方、本プロジェクトの Scope of Work を多少拡大せざるをえない。

追加事項 : * リモートサイト (20校) の放送受信設備、電源設備

* スタジオスクールの教室拡張工事、サブコントロールルーム建設

⑤ プロジェクト予算

SOW の変更に伴いプロジェクト予算、当初7800万円のところ1億円強程度にアップする見込み。

⑥ スタジオ学校

現状は、JICA 専門家及びスタッフの必死の努力により、個人の力に頼って放送をなんとか継続している状態。本開パト事業で、①機材面での補強、②スタッフトレーニング、③教師トレーニング、④カリキュラム開発局の参画、等を行い、教育放送を継続的に送出することを困難無く行えるようシステム化してゆき、教育放送コンテンツの充実を目指す。

⑦ リモートサイト

当初リモートサイトについては、PNG 教育省の Pilot Project で4地域、40校の受信設備を準備するというので、本開パト事業の Scope には入れていなかった。しかし、現地調査の結果、テレビのサイズ・台数が20インチ・1台/教室と、十分でないこと、電源確保ができてない地方があること、衛星受信用パラボラアンテナの設置が必要などがあること、等わかった。

本開パト事業では、上記の状況を鑑み、リモートサイトを4地域、20校に絞り、そこについては放送受信設備の確保までを Scope に取り込むことにした。(添付資料参照)

⑧ テレビ撮影スタッフ

現状のテレビ撮影スタッフは、

メディアセンター職員 (4名+1名 (=1名、3月に海外研修から帰国予定))

ボランティア 4名 (無給のためいずれ仕事が見つければ辞めてゆく)

JOCV 隊員 1名 (=八田氏) の10名でオペレーションしている。ただしボランティア4名は無給の為いつ辞めるともわからないのであてにできない。

当初開パト事業で4名新規に採用する予定であったが、技術ノウハウの移転という観点から技術スタッフは PNG 教育省で採用するのが筋であるので、本開パト事業では人の採用はしないことにした。

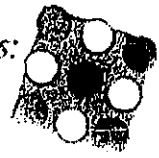
一方、PNG 教育省は Free Education によりスタッフを新規に採用する費用捻出は非常に困難。

→当面は上記メディアセンタースタッフ(5名)に技術トレーニングを施しながら、教育省内他機関(例えば PNG Education Institute)のスタッフを取り込めなにか検討する。

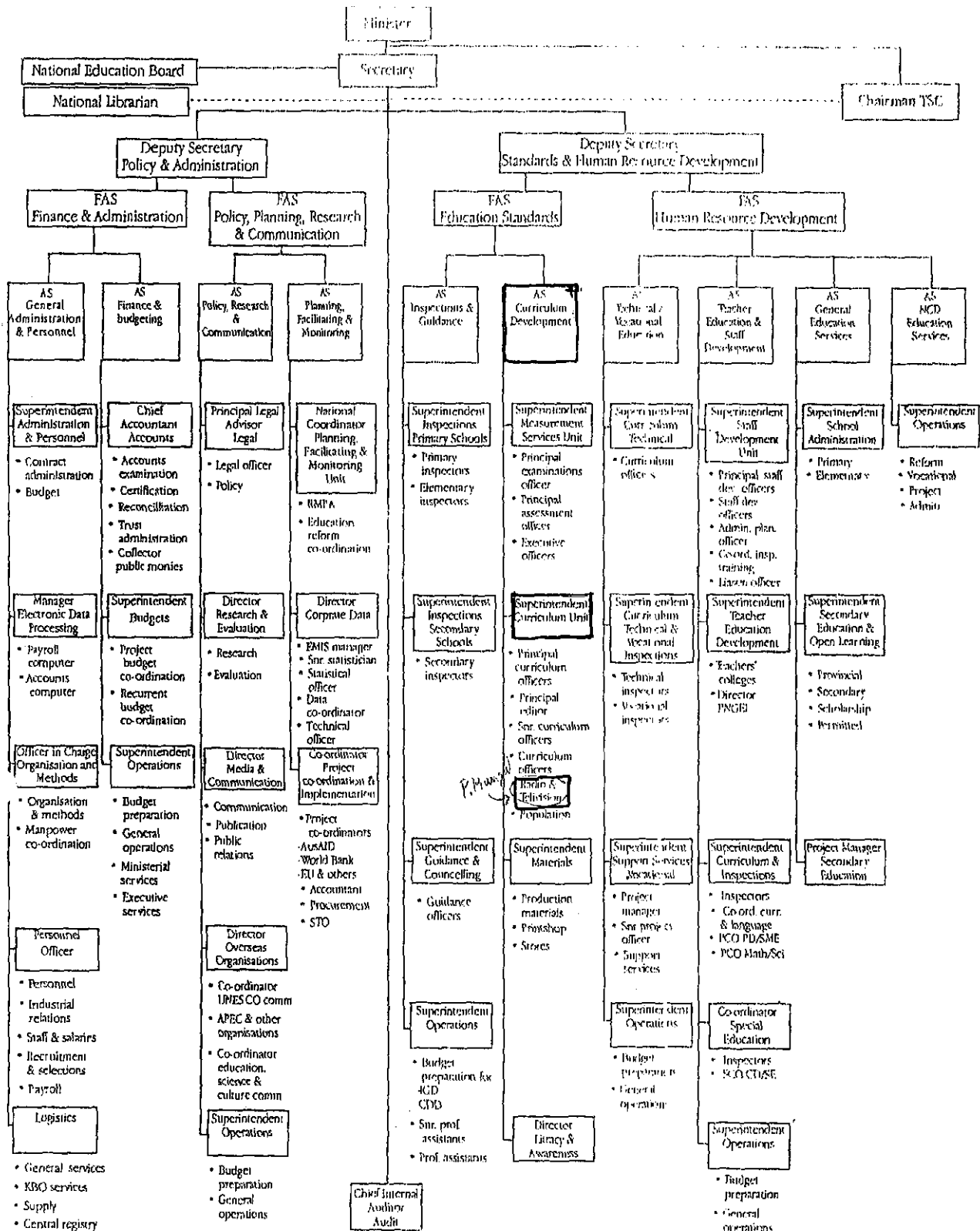
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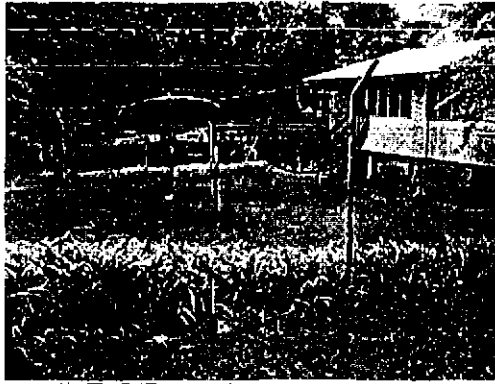


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The national administrative structure (approved in April 1999)





Buka 衛星受信アンテナ



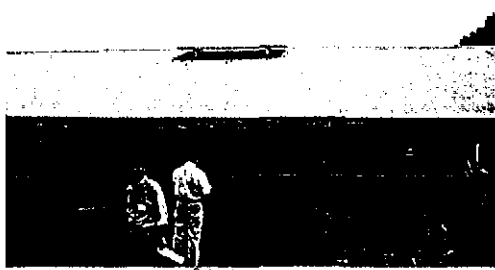
GOROKAテレビ修理会社 (Brian-Bell)



GOROKAテレビ修理会社



GOROKAリモート会社学校



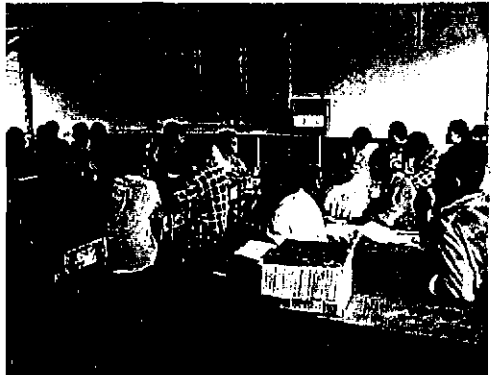
GOROKAソーラーパネル



ソーラー用バッテリー



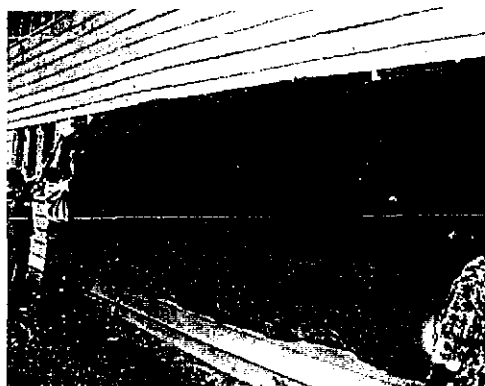
GOROKAリモート学校



GOROKAリモート学校



GOROKAリモート学校



スタジオスクール(PRIMARY)



スタジオスクール(PRIMARY)



GOROKAリモート学校



PL握手



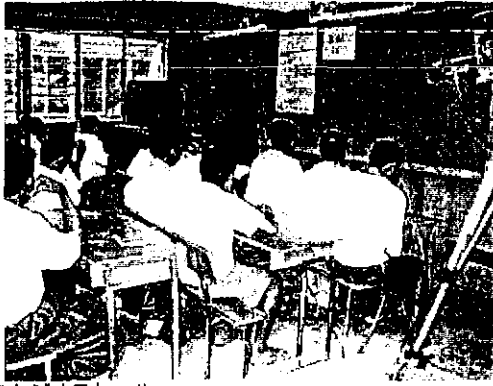
BUKAリモート学校



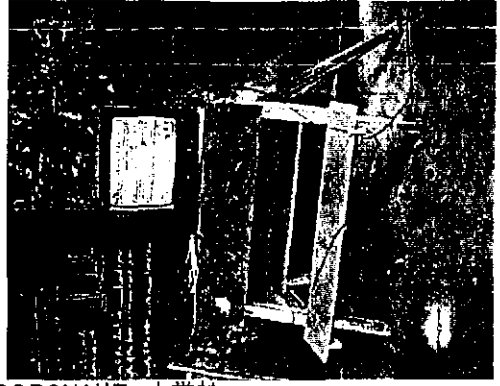
スタジオスクール(PRIMARY)



GOROKAリモート学校



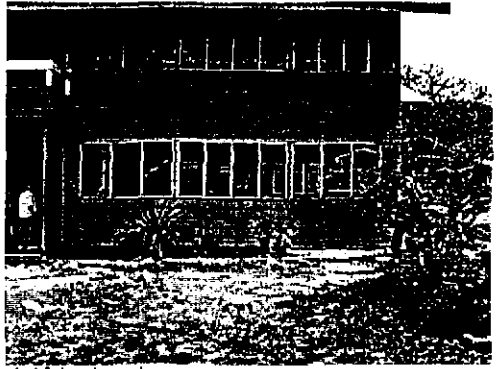
スタジオスクール



GOROKAリモート学校



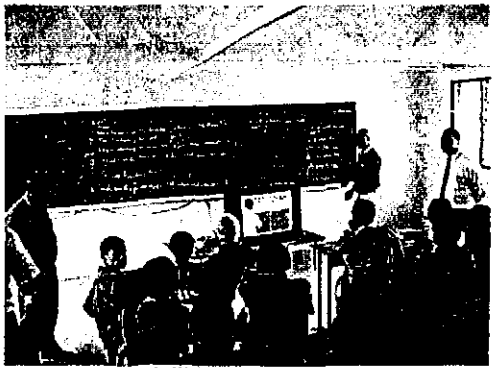
中継車



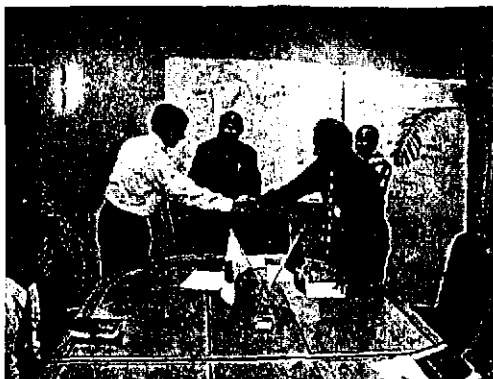
スタジオスクール



スタジオスクール



GOROKAリモート学校



RD調印式



スタジオスクール(SECONDARY)

RECORD OF DISCUSSIONS
BETWEEN
THE JAPAN INTERNATIONAL COOPERATION AGENCY
AND
THE DEPARTMENT OF EDUCATION OF PAPUA NEW GUINEA
ON
JAPANESE TECHNICAL COOPERATION
UNDER
JICA PARTNERSHIP PROGRAMME WITH NGOS, LOCAL GOVERNMENTS AND INSTITUTES
FOR
DISTANCE EDUCATION BY UTILIZING LIVE RECORDING OF CLASSROOM

The Japanese Preliminary Study Team organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Katsuro Saito, Resident Representative of JICA in Papua New Guinea, visited the Independent State of Papua New Guinea from 18th February to 27th February, 2002 for the purpose of working out the details of activities concerning *Distance Education by Utilizing Live Recording of Classroom* (hereinafter referred to as the "Project") under the JICA Partnership Programme with NGOs, Local Governments and Institutes.

During its stay in Papua New Guinea, the Team exchanged views and had a series of discussions with the authorities concerned of Papua New Guinea with respect to measures to be taken by JICA and the Department of Education for the smooth implementation of the Project.

As a result of the discussions, both sides agreed to implement the Project efficient and effectively on the condition referred to in the document attached hereto.

Port Moresby, 27 February 2001



Mr. Katsuro Saito
Leader of Japanese Preliminary Study Team/
Resident Representative of JICA Papua
New Guinea Office

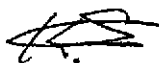


Mr. Peter Baki
Secretary,
Department of Education

Witnessed by



Mr. Philip Kikala
Secretary,
Department of National Planning and Monitoring



ATTACHED DOCUMENT

I. Implementation of the Project

1. JICA, an official agency established by Japanese law for the purpose of implementing Japanese governmental technical cooperation, will implement the Project under the JICA Partnership Programme with NGOs, Local Governments and Institutes based on the Note Verbal exchanged on 7th December, 2001 between the two governments to endorse the implementation of the Project, which is given in Annex I.
2. The Project will be implemented in accordance with the Implementation Plan, which is given in Annex II.

II. Measures to be taken by JICA

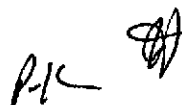
1. To implement the Project efficient and effectively, JICA will organize and supervise the overall implementation of the Project, and will contract with and entrust the actual implementation of the Project to Sony Corporation.
2. JICA will bear only those expenses considered necessary and crucial for the implementation of the Project.

III. Measures to be taken by the government of Papua New Guinea

1. The authorities concerned of Department of Education will cooperate in assuring the successful implementation of the Project by Sony Corporation.
2. The authorities concerned of the government of Papua New Guinea will provide Sony Corporation and JICA with necessary information (such as security conditions, etc.) that will allow efficient and effective implementation of the Project.

IV. Administration of the Project

1. The Secretary, Department of Education of Papua New Guinea and the Head, International Cooperation Department, Sony Corporation will jointly bear the overall responsibility for the implementation of the Project.



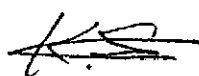
2. The Assistant Secretary, Curriculum Development Division, Department of Education, as the Project Manager, will be responsible for administrative and managerial matters of the Project.
3. The Japanese Chief Advisor will provide necessary recommendations and advice on technical and administrative matters concerning implementation of the Project to the Project Manager.
4. A Joint Coordinating Committee (hereinafter referred to as "JCC") will be established for the effective and successful implementation of the Project, whose functions and composition are described in Annex III.
5. Throughout the Project implementation period, JICA reserves the ownership of the equipment to be procured through its funding for the implementation of the Project. The ownership of the equipment after the completion of the Project will be determined, for the sake of the sustainable and effective continuation of the Project, through consultation among parties concerned during the last three months of the implementation period.

V. Duration

The duration of the Project under this Attached Document will be two (2) years from 1st June 2002.

VI. Mutual Consultation

Any major issues that may arise from or in connection with this Attached Document shall be resolved by mutual consultations among parties concerned.



ANNEX I. NOTE VERBAL



EMBASSY OF JAPAN

P. O. BOX 1040
PORT MORESBY

Note No. 185/01

The Embassy of Japan presents its compliments to the Department of Foreign Affairs of the Independent State of Papua New Guinea, and has the honour to propose the following:

1. The Government of Japan will implement the Distance Education by Utilizing Live Broadcasting of Class Room as "JICA Partnership Programme with NGOs/Local Governments/Institutes" (hereinafter referred to as "the Project") in accordance with the relevant laws and regulations of Japan.
2. The Government of the Independent State of Papua New Guinea will:
 - (1) exempt members of the Project team dispatched for the implementation of the project (hereinafter referred to as "the Project Team Members") from the payment of income tax and charges of any kind imposed on or in connection with any allowance to be remitted from overseas;
 - (2) exempt the Project Team Members from the payment of customs duties and charges of any kind imposed on or in connection with the importation of equipment, machinery, materials and medical supplies as well as personal and household effects belonging to the Project Team Members and their families;



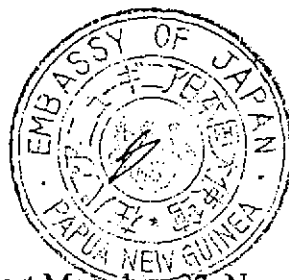
- (3) exempt the Project Team Members from the payment of customs duties and charges of any kind imposed on or in connection with the importation of one (1) motor vehicle per each of the Project Team Members in case no motor vehicle is provided to him/her by the Government of the Independent State of Papua New Guinea;
- (4) bear claims, if any arises, against the Project Team Members, resulting from, occurring in the course of or otherwise connected with the discharge of their duties, except when the relevant authorities of the two Governments agree that such claims arise from gross negligence or willful misconduct on the part of the Project Team Members; and
- (5) exempt equipment, machinery and materials from customs duties and charges of any kind imposed on or in connection with the importation of the equipment, machinery and materials in case the equipment, machinery and materials are provided to the Government of the Independent State of Papua New Guinea.

3. The details and procedures for cooperation in the present arrangements shall be provided for in the implementing arrangements to be made between the Japan International Cooperation Agency and the Media Center, Curriculum Development Division of the Department of Education.



The Embassy of Japan has further the honour to propose to the Department of Foreign Affairs that this Note and the Department's Note in reply accepting on behalf of the Government of the Independent State of Papua New Guinea the foregoing proposal shall be regarded as constituting an agreement between the two Governments.

The Embassy of Japan avails itself of this opportunity to renew to the Department of Foreign Affairs of the Independent State of Papua New Guinea the assurances of its highest consideration.



Port Moresby, 27 November 2001



Note No: 1301/01

The Department of Foreign Affairs of the Independent State of Papua New Guinea presents its compliments to the Embassy of Japan, and has the honour to acknowledge the receipt of the Embassy's Note No. 185/01 dated 27 November, 2001, concerning the Distance Education by Utilizing Live Broadcasting of Class Room.

The Department of Foreign Affairs of the Independent State of Papua New Guinea has further the honour to accept on behalf of the Government of Papua New Guinea the proposal set forth in the above-mentioned Note and to agree that the Embassy's Note and this Note shall be regarded as constituting an agreement between the two Governments, which will enter into force on the date of this Note.

The Department of Foreign Affairs of the Independent State of Papua New Guinea avails itself of this opportunity to renew to the Embassy of Japan the assurances of its highest consideration.



7 December, 2001
WAIGANI, NCD

The Embassy of Japan
PORT MORESBY, NCD

A handwritten signature in black ink, appearing to be "KS".

A handwritten signature in black ink, appearing to be "JA".

A handwritten signature in black ink, appearing to be "ED".

ANNEX II. IMPLEMENTATION PLAN OF THE PROJECT

1. THE PROJECT OUTLINE

1) **Country Name:**

Papua New Guinea

2) **Project Name:**

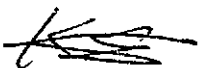
Distance Education by Utilizing Live Recording of Classroom (Formerly named as "Distance Education by Utilizing Live Broadcasting of Class Room")

3) **Background:**

In Papua New Guinea, the enrollment ratio of the primary and secondary education is improving. According to the 1998 statistics, however, the enrollment ratio of the primary and secondary education is still 55.8% and that of the higher education is 9.2%. In 1995, the Department of Education has launched Education Reform which introduced additional curriculum to primary and secondary schools. As the schools had to provide additional classes, namely Grade 7 and 8 at primary and Grade 11 and 12 at secondary schools, shortage of qualified teachers became obvious, especially in remote areas. Besides, teaching materials as well as appropriate teaching skills for these classes according to the new curriculum under Education Reform are yet to be developed. There is an urgent need to develop and establish model lessons for newly added classes and to disseminate them nationwide.

4) **Objective:**

Objective of the Project is to create an institutional setup in the Department of Education for continuous improvement and efficient dissemination of model lessons for Grade 7 and Grade 11. In order to achieve this objective, classroom lessons in Grade 7 and 11 will be video recorded at model schools in Port Moresby and transmitted to pilot educational through TV broadcasting system on experimental basis. Through preparation, recording and transmission of classroom lessons on day-to-day basis, video engineers, model schoolteachers and education officials as a team will efficiently gain experiences on how to improve classroom lessons basing on the Education



Reform curriculum. Transmission of such video programme through TV broadcasting system will enable the Project staff to receive reactions from larger number of students and teachers. Project can also identify, through its experience and analysis, merits and constraints of distance education utilizing transmission of live classroom recordings.

5) **Target group:**

The teachers at model schools, education officials and video engineers are the primary targets of the Project.

Students, teachers and facilitators at the pilot educational institutions are the secondary beneficiaries.

6) **Pilot educational institutions:**

A tentative list of pilot educational institutions to be covered by the Project is attached in this Annex.

2. **MAIN ACTIVITIES**

To systematize recording procedures of model lessons

To train engineers on recording skills and technique

To design and install suitable receiving equipment at pilot educational institutions, when necessary

To develop monitoring system of receiving equipment

To hold training workshop for engineers on production of educational programmes

To hold training workshop for model school teachers on instructional skills

To promote daily communication among educational officers, model schoolteachers and engineers

To hold training workshop for facilitators on facilitation skills

To analyze learning achievements

To develop indicators for monitoring and evaluation of learning achievements

To analyze the feasibility of distance education utilizing transmission of live classroom lessons



3. EXPECTED OUTCOMES

- 1) Recording, transmitting and receiving of model lessons are implemented continuously
- 2) Teamwork among model teachers, educational officers and recording engineers is established for creating better model lessons
- 3) Facilitation for learning from transmitted programmes is effectively conducted
- 4) Appropriate indicators for monitoring and evaluation of learning achievements are developed
- 5) Feasibility of distance education utilizing live classroom recordings is examined

4. DURATION OF THE PROJECT

1st June 2002 to 31st May 2004 •

5. IMPLEMENTING ORGANIZATION

- 1) Curriculum Development Division, Department of Education, Papua New Guinea
- 2) International Cooperation Department, Sony Corporation, Japan

6. PROJECT DESIGN MATRIX (PDM)

The Version 1 of the Project Design Matrix (PDM), which is attached in this Annex, will be used as a guideline for implementation, monitoring and evaluation of the Project. When necessity arises, the PDM could be modified with an agreement of JCC.

7. PLAN OF OPERATIONS FOR THE WHOLE PERIOD (PO)

On the basis of the Plan of Operations for the Whole Period (PO), which is attached in this Annex, JCC would formulate the Annual Plan of Operation for each Japanese Fiscal Year.



PROJECT DESIGN MATRIX (PDM) FOR THE DISTANCE EDUCATION BY UTILIZING LIVE RECORDING OF CLASSROOM

Version 1 27 February 2002

Narrative summary	Objectively verifiable indicators	Means of verification	Important assumptions
Overall Goal More students can have access to lessons based on the Educational Reform Curriculum nationwide	(to be identified in the course of the Project implementation)		
Project Purpose Institutional setup is created in the Department of Education for continuous improvement and efficient dissemination of model lessons for G7 and G11 based on the Educational Reform Curriculum	1. Recommendations by the working group are adopted for improvement of model lessons by DOE 2. Positive changes are observed on indicators of learning achievements 3. Merits and constraints of distance education utilizing live classroom recordings are identified and reflected for improvement by the DOE	1. Evaluation Report 2. Evaluation Report 3. Evaluation Report	
Outputs 1. Recording, transmitting and receiving of model lessons are implemented continuously. 2. Teamwork among model teachers, educational officers and recording engineers is established for creating better model lessons 3. Facilitation for learning from transmitted programmes is effectively conducted 4. Appropriate indicators for monitoring and evaluation of learning achievements of model lessons are developed 5. Feasibility of distance education utilizing live classroom recordings is examined	1-1 All model lessons are properly recorded and transmitted 1-2 More than 80% of model lessons are properly received at educational institutions 1-3 A monitoring system for receiving equipment conditions is developed 2-1 A working group is organized and held regularly for daily communication among project staff 2-2 At least one original instructional material is used in one model lesson 2-3 Recommendations on model lessons improvement are presented by the working group 3-1 At least one facilitator for each subject from each educational institution receive facilitation training 4-1 At least 5 indicators are identified 5-1 A feasibility study report is prepared	1-1 Project record 1-2 Project record 1-3 Project record 2-1 Project record 2-2 Project record 2-3 Recommendation report 3-1 Project record 4-1 Project record 5-1 Feasibility study report	

Activities	Inputs	Preconditions
1-1 To systematize recording procedures of model lessons 1-2 To improve model classroom facilities 1-3 To train engineers on management and maintenance of recording equipment 1-4 To train engineers on recording skills and technique 1-5 To send recorded tapes to EMTV daily 1-6 To design and install suitable receiving equipment at pilot educational institutions, when necessary 1-7 To develop monitoring system of receiving equipment	PNG Japan	- Classrooms are available for model classes during the project period - EMTV transmits the programme free of charge
2-1 To hold training workshops for engineers on production of educational programmes 2-2 To hold training workshops for model teachers on instructional skills and method for developing instructional materials 2-3 To promote daily communication among educational officers, model teachers and engineers 2-4 To assist curriculum officers in producing educational materials 2-5 To develop power point slides for all model lessons 2-6 To conduct study tour to Thailand for project staff		
3-1 To hold training workshop for facilitators on facilitation skills 4-1 To analyze learning achievements of model lessons at pilot educational institutions 4-2 To develop indicators for monitoring and evaluation of learning achievements 5-1 To analyze the feasibility of distance education by transmitting live classroom recordings		

PLAN OF OPERATIONS (PO) FOR THE DISTANCE EDUCATION BY UTILIZING LIVE RECORDING OF CLASSROOM

Version 1 27 February 2002

Items of activities	Schedule								Person in charge	Inputs
	2002			2003			2004			
	II	III	IV	I	II	III	IV	I		
1-1 To systematize recording procedures of model lessons			---	---						
1-2 To improve model classroom facilities		---								
1-3 To train engineers on management and maintenance of recording equipment				---						
1-4 To train engineers on recording skills and techniques				---						
1-5 To send recorded tapes to EMTV daily					-----			-----		
1-6 To design and install suitable receiving equipment at pilot educational institutions, when necessary		---								
1-7 To develop monitoring system of receiving equipment				---						
2-1 To hold training workshops for engineers on production of educational programmes				---						
2-2 To hold training workshops for model teachers on instructional skills and method for developing instructional materials					---			---		
2-3 To promote daily communication among educational officers, model teachers and engineers		-----						-----		
2-4 To assist curriculum officers in producing educational materials				---						
2-5 To develop power point slides for all model lessons					-----			-----		
2-6 To conduct study tour to Thailand for project staff				---						
3-1 To hold training workshop for facilitators on facilitation skills						---				
4-1 To analyze learning achievements of model lessons at educational institutions		---						---		
4-2 To develop indicators for monitoring and evaluation of learning achievements		---						---		
5-1 To analyze the feasibility of distance education by transmitting live classroom recordings								-----		

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TENTATIVE LIST OF PILOT EDUCATIONAL INSTITUTIONS

NORTH SOLOMON PROVINCE PILOT SITE

	Name of institutions	Target Grade
1	Hamatana Primary School	Grade 7
2	University Centre	Grade 11
3	CODE Study Centre	Grade 7
4	Hahela Primary School	Grade 7
5	Hutjena Secondary School	Grade 11
6	Sohano Primary School	Grade 7
7	Tralena Secondary School	Grade 11
8	Malasang Primary School	Grade 7
9	Petis Primary School	Grade 7
10	Lemanmaam study centre	Grade 7

EAST HIGHLANDS PROVINCE PILOT SITE

	Name of institutions	Target Grade
1	Goroka Secondary School	Grade 11
2	YC study center School	Grade 7 &11
3	Ketarobo Primary School	Grade 7
4	Asaro Primary School	Grade 7
5	Siokei Primary School	Grade 7
6	Asaroka high school	Grade 7
7	East Goroka Primary School	Grade 7
8	Funiufa Primary School	Grade 7
9	West Goroka Primary School	Grade 7
10	Iufi Ufa Primary School	Grade 7

CENTRAL PROVINCE PILOT SITE

	Name of institutions	Target Grade
1	Kwikila Secondary School	Grade 11
2	Mt.Diamond Secondary School	Grade 11
3	Sogeri Primary School	Grade 7
4	Porebada Primary School	Grade 7
5	Iobuna Koupa Primary School	Grade 7
6	Iarowari High School	Grade 7
7	Laloki High School	Grade 7
8	Redscar High School	Grade 7
9	Ruatoka Primary School	Grade 7
10	Kwikila Vocational School	Grade 7

EAST SEPIK PROVINCE PILOT SITE

	Name of institutions	Target Grade
1	Brandi Secondary School	Grade 11
2	Uni Centre / CODE	Grade 7 &11
3	Passam Primary School	Grade 7
4	Dagua Primary School	Grade 7
5	Hawain Vocational School	Grade 7
6	St. Mary's Primary School	Grade 7
7	Balik Primary School	Grade 7
8	Bishop Leo Secondary School	Grade 11
9	Walis Koupa Primary School	Grade 7
10	Wokeo Primary School	Grade 7

ANNEX III. JOINT COORDINATING COMMITTEE (JCC)

JCC, which will consist of personnel from both the Japanese and PNG sides, will be established for the smooth and effective implementation of the Project.

1. FUNCTION

JCC will meet at least once a year, or whenever necessity arises, in order to fulfil the following functions:

- 1) Formulate the Annual Plan of Operation of the Project,
- 2) Review a) the overall progress of the Project and b) achievement of each activity of the Implementation Plan and that of the Annual Plan of Operations,
- 3) Review and exchange views on major issues arising from or in connection with the Project.

2. COMPOSITION

1) Chairperson

Chairperson: Secretary, Department of Education

Co-Chairperson: Head, International Cooperation Department,
Sony Corporation, Japan or his representative

2) Members

a) PNG side

1. First Assistant Secretary – Education Standards
2. Project Manager - Assistant Secretary, Curriculum Development Division (CDD)
3. Assistant Secretary – Education –EHP (East Highlands Province)
4. Assistant Secretary – Education – Central (Central Province)
5. Assistant Secretary – Education – NS (North Solomon Province)
6. Assistant secretary – Education – ES (East Sepik Province)
7. Superintendent – CDD
8. Senior Aid Coordinator (Japan Desk) – Department of National Planning and Monitoring
9. Director – Media Section, CDD
10. Other Appointee by Chairperson

b) Japanese side

1. Chief Advisor of the Project
2. Representative of JICA PNG Office
3. Other Appointee by Co-Chairperson

Note; Official (s) of the Embassy of Japan may attend JCC as observer (s)

