

フィジー諸島共和国

南太平洋大学遠隔教育・情報通信技術

強化プロジェクト実施協議報告書

平成14年7月
(2002年)

国際協力事業団
社会開発協力部

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フィジー諸島共和国
南太平洋大学遠隔教育・情報通信技術
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序 文

南太平洋大学（USP）は、1969年に地域島嶼国12か国がそれぞれ資金を拠出し、共同設立した域内最高水準の高等教育機関である。USPは、フィジー諸島共和国の首都・スバの本校舎に域内各国から留学生を受け入れるとともに、地域の地理的条件から域内各国の半数近くの学生に対し、遠隔教育を実施している。これに対し我が国は1998年、オーストラリア及びニュージーランドと協調した無償資金協力で、衛星通信による遠隔教育ネットワーク（USPNet）の構築に着手し、機材・施設等、ハード面の整備を行った。

しかしながら、遠隔教育コンテンツの内容、配信方法など、USPNetのソフト面における整備が遅れている。このため、地域の社会経済開発にとって、情報通信工学関連の人材育成が重要課題であるにもかかわらず、USPの関連学部・学科の体制整備が進んでおらず、情報通信技術（IT）を社会経済開発に活用する効果的・効率的な研究開発や人材育成が十分行われていないなど、深刻な問題が発生している。

こうした事情を背景に、USP本部のあるフィジー政府は、USPにおけるIT分野の人材育成と、USPNetの強化に向けたプロジェクト方式技術協力を、我が国に要請してきた。

これを受けた国際協力事業団は、2001年8月以降、4回にわたる短期調査を実施して要請の背景と内容、先方の実施体制、プロジェクトの妥当性などを調査するとともに、プロジェクトの立ち上げに向けた協議を重ねてきた。これにより、プロジェクトの骨格が固まったため、今般は2002年6月2日から同8日まで、当事業団フィジー事務所長 友部 秀器を団長とする実施協議調査団を派遣し、フィジー政府及びUSP側と討議議事録（R／D）等を締結した結果、「南太平洋大学遠隔教育・情報通信技術強化プロジェクト」が、2002年7月1日から3年間にわたって実施されることになった。

本報告書はプロジェクトの実施にあたり、各調査団の活動状況を集約するとともに、事業事前評価表、プロジェクトドキュメントを添えたもので、今後のプロジェクトの展開に、広く活用されることを願うものである。

ここに、各調査団員をはじめ、調査にご協力頂いた外務省、文部科学省、電気通信大学、琉球大学、在フィジー日本国大使館など、内外関係各機関の方々に深く謝意を表するとともに、引き続き一層のご支援をお願いする次第である。

平成14年7月

国際協力事業団

理事 泉 堅二郎

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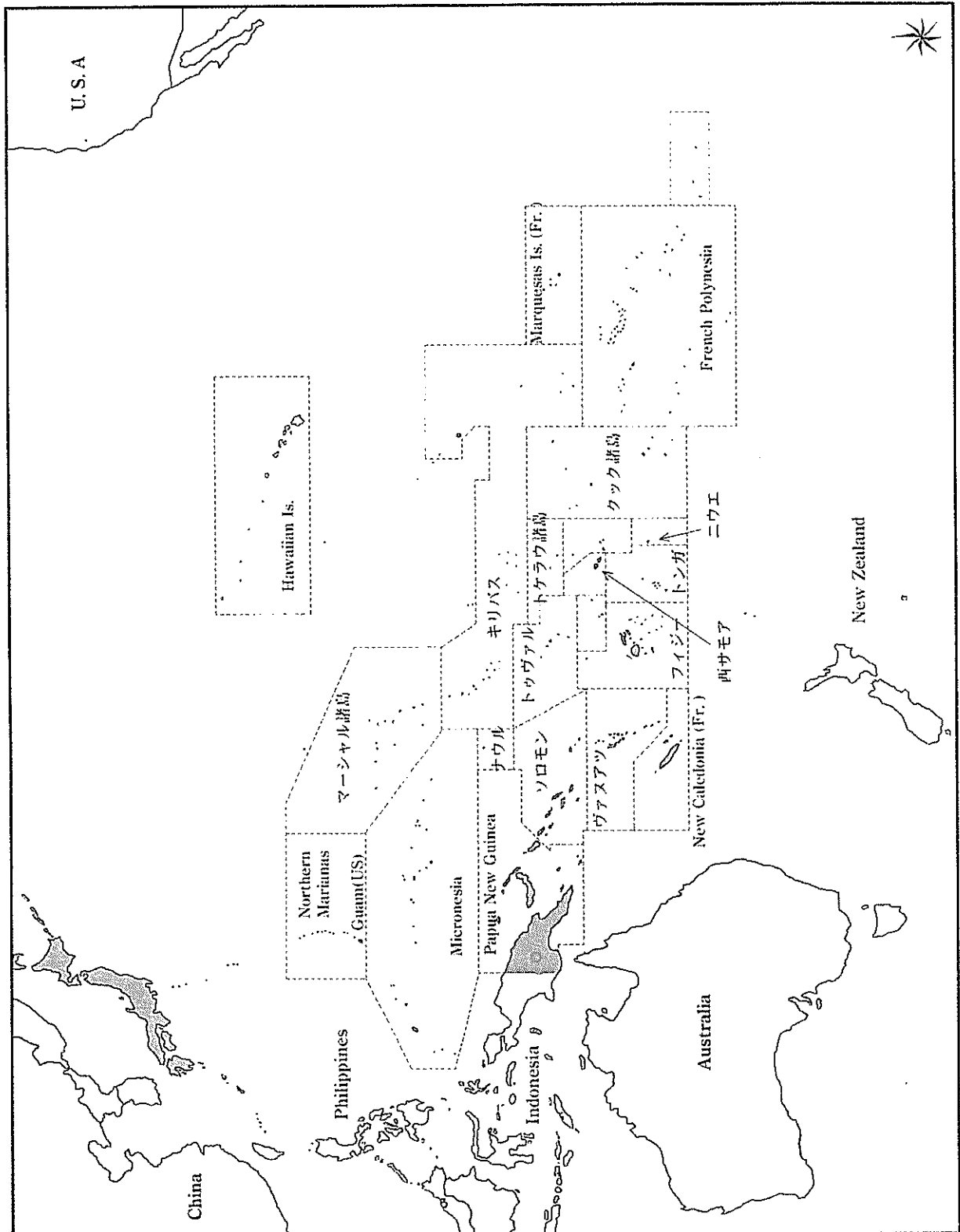
略 語 表

APDIP	Asia Pacific Development Information Program
ATN	Amalgamated Telecom Holding LTD
AusAID	Australian Agency for International Development
AUT	Auckland University of Technology
ANU	The Australian National University
CETC	Community Education Training Centre
CRL	Communication Research Laboratory (独立行政法人 通信総合研究所)
CS	Computing Science
CQU	Central Queensland University
DFL	Distance and Flexible Learning
DFLP	Distance and Flexible Learning Project
DMCS	Department of Mathematics and Computing Science
ESCAP	Economic & Social Commission for Asia & the Pacific
FAVC	Fiji Audio Visual Commission
FCA	Fiji College of Agriculture
FCAE	Fiji College of Advanced Education
FEF	Fiji Employers Federation
FINTEL	Fiji International Telecommunications LTD
FIT	Fiji Institute of Technology
FNPF	Fiji National Provident Fund
FNTC	Fiji National Technology Council
FSM	Fiji School of Medicine
FTIB	Fiji Trade and Investment Bureau
GDN	Global Development Network
GDLN	Global Distance Learning Network
HRD	Human Resource Development
INTV	National Institute of Technology
ICT R&D	Integrated Circuit Technology Research and Development
IT	Information and Communication Technologies
ITC	Information Technology and Computing
ITS	Information Technology Service (USP)

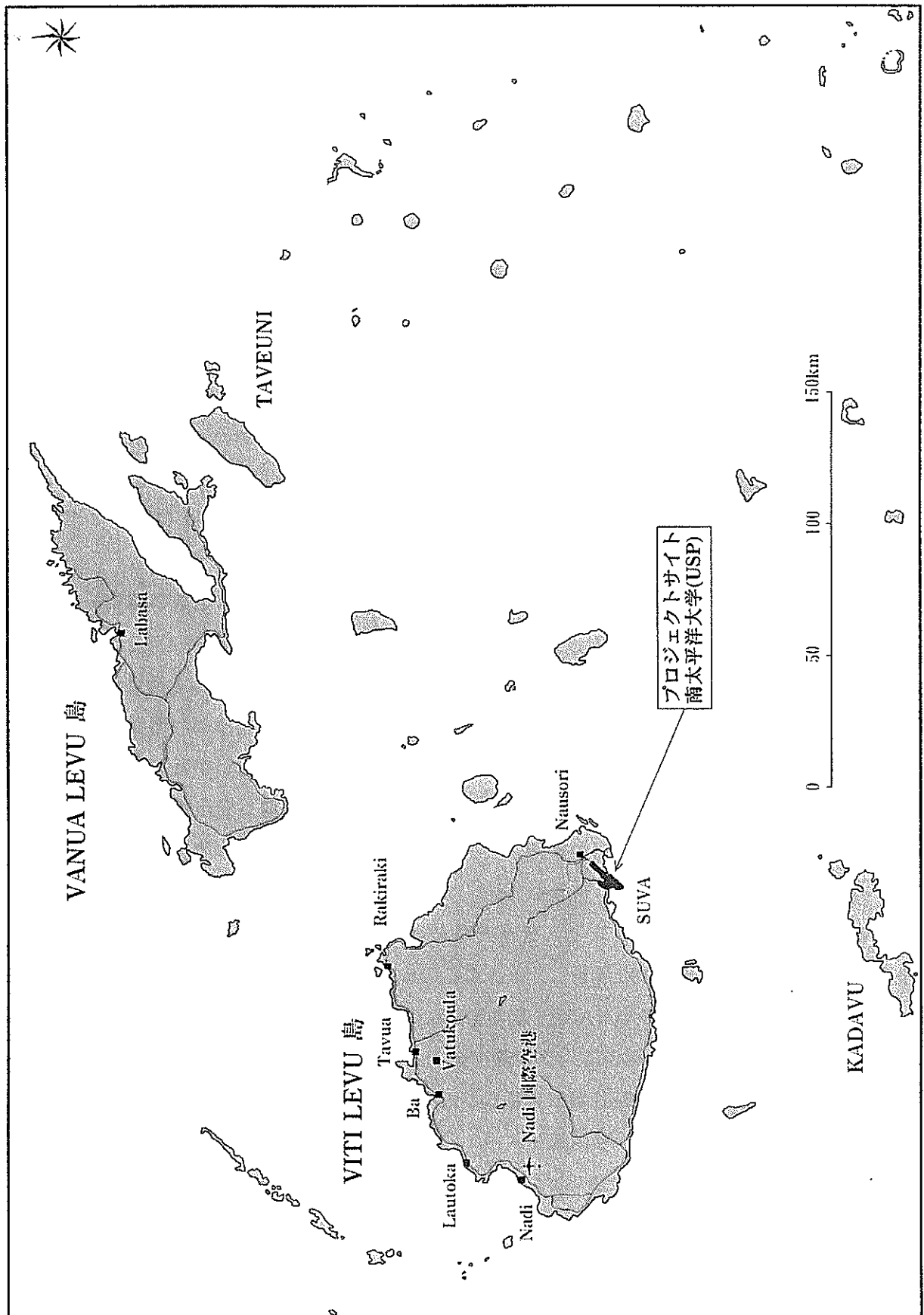
MOE	Ministry of Education
MOF	Ministry of Finance
NIME	National Institute of Multimedia Education (メディア教育開発センター)
NZODA	New Zealand Overseas Development Agency
PALM	Japan-South Pacific Forum Summit Meeting
PIC	Pacific Island Countries
PSC	Public Service Commission
R&D	Research and Development
R&T	Research and Training
SCS	Space Collaboration System (衛星通信大学間ネットワークシステム)
SOPAC	South Pacific Applied Geoscience Commission
SPAS	School of Pure and Applied Science
SPC	Secretariat of the Pacific Community
TFL	Telecom Fiji LTD
UE	University Extension
UEC	University of Electro-Communications (電気通信大学)
UNITECH	Papua New Guinea University of Technology
USP	The University of the South Pacific
VCP	Virtual Colombo Plan
VSAT	Very Small Aperture Terminal
WB	World Bank
WBT	Web Based Training
WG	Working Group

南太平洋大学加盟の島嶼十二か国の位置図

(十二か国の国名は日本語で表記してあります)



フィジー共和国とプロジェクトサイトの位置図



第1章 要請背景

フィジー諸島共和国（以下、「フィジー」と記す）に本部を置く南太平洋大学（The University of The South Pacific : USP）は、1969年に12の島嶼国及び自治領（クック諸島、フィジー、キリバス共和国、マーシャル諸島共和国、ナウル共和国、ニウエ、西サモア、ソロモン諸島、トケラウ諸島、トンガ王国、ツバル、バヌアツ共和国）によって設立された国際機関である。域内最高水準の総合大学として、フィジー校に人文、科学、社会経済の3学部、西サモア校に農学部、バヌアツ校に法学部を開設している。

USPはフィジーの首都・スバの本校舎に域内各国から留学生を受け入れるとともに、設立以来三十余年にわたって遠隔教育を実施してきた。現在も在校生約9,000人の約45%が遠隔教育による授業を受けている。

その遠隔教育は従来、郵送の通信教育に加えて短波による音声チュートリアルを交えた教育方法を採用してきたが、1998年以降は、我が国がオーストラリア、ニュージーランドと協調して実施した無償資金協力「南太平洋大学通信体系改善計画」によって、フィジー本校（ハブ局）を中心とするリモート11局の衛星イントラネット（USPNet）を構築し、2000年3月から運用が開始された。

このハード面の整備により、同時双方向、かつ音声と画像の両方を使った遠隔教育を実施する条件が整った。互いに遠く離れた島国で、しかも人口が決して多くなく、経済力も乏しいという不利な条件を克服するため、先進情報通信技術（Information and Communication Technologies : IT）の果たす役割への期待は大きかった。

しかしながら現状では、技術力や経験の不足から、マルチメディア技術を用いた、より質の高い教育コンテンツが十分に開発されていない。また、南太平洋地域の社会経済開発に重要な情報通信工学関連の人材育成が軌道に乗らず、ITを社会経済開発に活用する効果的・効率的な研究開発や人材育成も十分行われるには至らないなど、USPは多くの問題を抱えていた。

他方、我が国は、2000年7月の沖縄サミットに先立ち、ITに関する途上国への包括的な協力案としてODAによる遠隔教育の導入と推進を図ることとし、世界30か所にIT拠点を設置する構想を表明した（J-NET構想）。これを受けて国際協力事業団（JICA）は2001年4月、USPNetとJ-NETとの連携可能性を探るため「J-NET基礎調査」を実施した。この調査では、USPとJ-NETの接続に関する基本合意が確認されるとともに、USPとの協議ではUSPNetの機材システムのアップグレードや、コンピューター科学分野の人材育成ニーズが表明された。

フィジー政府はこうした事情を背景として、我が国にプロジェクト方式技術協力を求めてきたもので、JICAは引き続き、USPに対するIT分野の人材育成と、USPNetの強化に向けたプロジェクト方式技術協力の可能性を検討する短期調査を開始した。この動きについては、2001年の「太

「平洋・島サミット」を受けて開かれた太平洋知的対話ミッション（2001年3月）でも、島嶼国の人的資源開発に対する協力、なかでも USP の IT 分野の教育・研究レベルの向上に対する協力が、南太平洋地域全体に裨益するものとして、強く求められていた。

第2章 調査・協議の経過と概略

国際協力事業団は、USPの要請に基づき、南太平洋地域におけるIT分野の人材育成の拠点であるUSPにおいて、教育の向上、とりわけUSPNetの拡張を含む遠隔教育の強化を図るため、2001年8月以降、4回にわたる短期調査を実施して、プロジェクト方式技術協力の案件形成を進めてきた（それぞれの調査結果報告は付属資料1.～3.参照）。これを踏まえて、2002年6月2日から同8日まで、実施協議調査団が派遣され、プロジェクトの開始に必要な最終協議を行って、討議議事録（R/D）並びにプロジェクト・デザイン・マトリックス（PDM）とプロジェクトドキュメントを含むミニッツ（付属資料5.）の署名を取り交わし、2002年7月1日から3年間にわたる「南大西洋大学遠隔教育・情報通信技術強化プロジェクト」が開始される運びとなった。

各調査の概要は、以下のとおりである。

2-1 第1回短期調査

(1) 調査期間

2001年8月13日～25日

(2) 調査団の構成

担 当	氏 名	所 属
団長／総括	小菅 敏夫	電気通信大学 教授
遠隔教育システム	近藤 喜美夫	文部科学省メディア教育開発センター研究開発部 部長
カリキュラム・シラバス	渡辺 成良	電気通信大学 教授
メディア教材	前川 朝康	日本国際協力センター沖縄支所 視聴覚技術インストラクター
協力企画	向井 直人	JICA社会開発協力部計画課 職員
プロジェクトドキュメント	加藤 真紀	JICA社会開発協力部計画課 ジュニア専門員

(3) 調査結果概要

協力対象分野、プロジェクトコンセプトをはじめ、実施体制、双方の役割等に関する協議を行い、以下の項目について合意した。

- ・ コンピューター科学科の講師不足の解消を目的とした域内出身若手講師の育成
- ・ 遠隔教育の質・量の向上を図るための遠隔教育スタッフの能力強化とUSPNet地球局設備（パラボラアンテナ）の2機増設

2-2 第2回短期調査

(1) 調査期間

2001年11月4日～2001年12月6日

(2) 調査団の構成

担 当	氏 名	所 属
団長／総括	小菅 敏夫	電気通信大学 教授
開発政策	山口 典史	外務省経済協力局技術協力課 課長補佐
学科運営	山城 康正	琉球大学工学部 部長
遠隔教材	宮城 睦	日本国際協力センター沖縄支所 視聴覚技術インストラクター
協力企画	南部 良一	JICA社会開発協力部計画課 職員
計画管理	加藤 真紀	JICA社会開発協力部計画課 ジュニア専門員

(3) 調査結果概要

日本側協力案の説明、活動案、カウンターパート（C/P）、供与機材等に関する協議を行い、具体的なプロジェクトコンセプト、活動案及び実施体制の整備に関し、基本的合意に達した。

2-3 第3回短期調査

(1) 調査期間

2002年2月1日～21日

(2) 調査団の構成

担 当	氏 名	所 属
協力企画	池田 純一郎	JICA社会開発協力部社会開発協力第一課 職員
遠隔機材計画	宮城 睦	日本国際協力センター沖縄支所 視聴覚技術インストラクター
機材計画	糸原 志津夫	アイエスインターナショナル 代表取締役
計画管理	加藤 真紀	JICA社会開発協力部計画課 ジュニア専門員

(3) 調査結果概要

主として USPNet 衛星地球局のラオトカ、ランバサ各センター設置計画、コンピュータ機器等に関する機材計画案策定及び協議を目的としていた。

しかし、USP 側から、第 2 回調査以降、自助努力で機材を整備し、地上回線によってスバから遠隔教育コンテンツの配信を受ける体制を仮設レベルながら整えたとの報告があったことから、急遽地球局設備または地上回線のいずれを採用するかに関する協議を実施したが、地上回線にかかる USP のリカレントコスト負担増など、多くの検討事項があり、合意には至らなかった。

2-4 第 4 回短期調査

(1) 調査期間

2002 年 3 月 23 日～30 日

(2) 調査団の構成

担 当	氏 名	所 属
団長／総括	小菅 敏夫	電気通信大学 教授
協力企画	多田 知幸	JICA 社会開発協力部社会開発協力第一課 課長代理
計画管理	加藤 真紀	JICA 社会開発協力部計画課 ジュニア専門員

(3) 調査結果概要

第 3 回短期調査の検討事項である地球局設備の供与について、地上線の将来性及び増設した地球局の今後の活用に関する問題点を協議し、日本側投入の対象からはずすことについて USP 側の同意を得るとともに、技術協力の趣旨と内容を確認し、技術協力の目的に合致した内容の機材供与と中長期計画作成支援などの協力を行うことで合意した。

2-5 実施協議調査

(1) 調査期間

2002 年 6 月 2 日～8 日

(2) 調査団の構成

担 当	氏 名	所 属
団長／総括	友部 秀器	JICAフィジー事務所 所長
協力政策	山口 典史	外務省経済協力局技術協力課 課長補佐
協力企画	多田 知幸	JICA社会開発協力部社会開発協力第一課 課長代理
計画管理	加藤 真紀	JICAプロジェクト立ち上げ専門家

(3) 調査結果概要

本調査団はUSP、フィジー教育省、同財務省と協議した結果、R／D及びミニッツの署名を取り交わした。これにより、南太平洋大学を実施機関として2002年7月1日から開始される「南太平洋大学遠隔教育・情報通信技術強化プロジェクト」のマスタープランが、以下のとおり確定した。

1) 上位目標

質・量ともに改善された教育を通じて、USPが南太平洋地域における人材育成の中心的役割を果たす。

2) プロジェクト目標

USPの改善された情報通信技術で、より多くの学生が進んだ教育を受けられる。

3) 成 果

- ① より多くの学生が対面及び遠隔教育により、最新かつ多様なコンピュータ・サイエンスコースが受講できる。
- ② より多くの遠隔教育受講者が、情報通信技術の活用により改善されたコースを受講できる。
- ③ 情報通信技術の活用状況及び南太平洋地域の情報格差の調査結果を反映したモデル訓練プログラムが作成される。

4) プロジェクトの管理運営

USPの副学長がプロジェクトダイレクター、副学長代理がプロジェクトマネージャーとなって、プロジェクトの管理・運営にあたる。

5) 日本側投入

長期専門家3名（チーフアドバイザー兼コンピュータ科学、遠隔教育、情報通信技術調査／訓練兼業務調整）と、必要に応じて短期専門家を派遣するほか、USP C／Pの日本研修を受け入れる。またプロジェクトに必要な機材を供与する。

第3章 事業事前評価表

「事業事前評価表」(技術協力プロジェクト)

作成日：平成14年6月7日

担当部署：社会開発協力部 社会開発協力第一課

案件名：南太平洋大学遠隔教育・情報通信技術強化	
対象国：USP加盟12か国（フィジー、サモア、ソロモン諸島、バヌアツ、トンガ、ツバル、ナウル、キリバス、マーシャル諸島、クック諸島、ニウエ、トケラウ）	実施地域：フィジー諸島共和国 首都スバ
実施予定期間：2002年7月～2005年6月	
<p>1. プロジェクト要請の背景</p> <p>南太平洋大学（The University of the South Pacific：USP）は、1969年に地域島嶼国12か国がそれぞれ資金を拠出し共同設立した域内最高水準の高等教育機関である。USPは、フィジーの首都・スバの本校舎に域内各国から留学生を受け入れるとともに、地域の地理的条件に配慮して域内各国の学生に対し遠隔教育を実施しており（現在約9,000人の在校生のうち45%が遠隔教育により授業を受けている）、1998年にはオーストラリア及びニュージーランドと協調した我が国の無償資金協力によって衛星通信による遠隔教育ネットワーク（USPNet）の構築に着手し、機材・施設等の整備を行った。</p> <p>しかしながら現状では、USPは技術力や経験の不足から、マルチメディア技術を用いたより質の高い遠隔教育コンテンツの開発が十分にはなされていない。また、南太平洋地域の社会経済開発にとっては、情報通信工学関連の人材育成と研究開発の推進が重要課題であるが、関連の学部・学科の体制整備が進んでおらず、効果的・効率的な人材育成や研究開発が十分行われていない。この2つの大きな課題の解決のため、USPは、フィジー政府を通じて我が国に対し技術協力プロジェクトの実施を要請してきたものである。</p>	
2. 相手国実施機関 南太平洋大学	
3. プロジェクトの概要及び達成目標	
<p>(1) 達成目標</p> <p>ア 技術協力終了時（2005年）の達成目標（プロジェクト目標）</p> <p>〈目標〉 USPの情報通信技術の向上を通じて、より多くの学生が質の高い教育を享受する。</p> <p>〈指標〉</p> <ol style="list-style-type: none"> 1. 最新かつ実践的な情報通信に関する知識及び技術を習得したUSPの学生が2000年の130名に対し、50%増の195名に増加する。 2. マルチメディア技術を活用した遠隔教育の開発手順が確立され、コースが開発される。 3. 社会経済開発のための情報通信技術の利用に関する調査研究が数多くなされ、調査結果は教育の基準に反映される。 <p>イ 技術協力終了後一定期間を経て達成が期待される目標（上位目標）</p> <p>〈目標〉 質・量ともに改善された教育を通じて、USPが人材育成の中心的役割を果たす。</p> <p>〈指標〉</p> <ol style="list-style-type: none"> 1. 高等教育及び生涯教育への応募者数が増加する。 2. 卒業生に対する求人数が増加する。 3. 国際的学会・研究誌での論文発表数が増加する。 	

(2) 成 果

- ア より多くの学生が対面及び遠隔教育により、最新かつ多様なコンピューター・サイエンスコースが受講できる。
- イ より多くの遠隔教育受講者が、情報通信技術の活用により改善されたコースを受講できる。
- ウ 情報通信技術の活用状況及び南太平洋地域の情報格差の調査結果を反映したモデル訓練プログラムが作成される。

(3) 投入 (インプット)

- ア 日本側：総費用 約 5 億円
長期専門家：3 名 (①チーフアドバイザー兼コンピューター・サイエンス、②遠隔教育、③調査研究支援兼業務調整)
短期専門家：10 名／年 程度
C/P 研修員受入れ：3 名／年 程度
機材供与：約 1 億円 (遠隔教育関連機材、研究室用コンピューター及び関連機材、車両等)
- イ 相手側：施設提供、運営経費、C/P の配置など

(4) プロジェクト実施体制

- ア 先方実施機関：南太平洋大学 (USP)
- イ 国内協力機関：電気通信大学、琉球大学、メディア教育開発センター、通信総合研究所、総務省、文部科学省

4. 評価結果 (実施決定理由)

以下の視点からプロジェクトを評価した結果、協力を行うことは必要、かつ妥当と判断される。

(1) 妥当性

本件は、南太平洋島嶼 12 か国が力を合わせ地域社会発展のための人材輩出の拠点とすべく設立した高等教育機関に対する協力であり、2000 年開催の九州沖縄サミットにおける包括的 IT 活用協力案の表明、同年の島嶼国サミットでの IT の積極的活用による島嶼国人材育成の重要性に関する討議など島嶼国の広域的人材育成推進は我が国の外交政策に合致するものである。

また本件は、フィジー国別事業実施計画方針「地域機関と連携を強化し、島嶼国の国家規模にかんがみ、地域全体を対象とする協力」に沿うと同時に援助重点分野の一つである「教育等の質的向上を通じた地方開発」に関する協力を行うものである。

(2) 有効性

本件プロジェクト活動の重要な要素である遠隔教育の技術的改善は、遠隔教育受講者に裨益するものである。遠隔教育受講者は USP 加盟 12 か国すべてに存在し、USP 学生数の半数近くを占めることから、USP の主要な体制整備に有用であるといえる。一方、コンピューター科学分野における本校のコンピューター・サイエンス・ラボラトリーの整備、長期専門家の講義及び情報通信技術を活用した研究開発支援といった対面教育サービスの向上も図られている。

(3) 効率性

プロジェクトサイトをフィジー国内としながら、裨益対象はUSP加盟 12 か国に及ぶことから効率的といえる。

また、本件協力は 1998 年の無償資金協力による衛星通信を利用した遠隔教育ネットワーク（USPNet）の活用でもあることから、当時協力をを行った日本、オーストラリア及びニュージーランドの援助を更に高めるものである。

(4) インパクト

新たなメディアを活用した遠隔教育は、途上国の教育問題を解決するうえでの有効な手段の一つとして評価されており、本件協力の効果は全加盟国 12 か国に広く及ぶものであることから、インパクトは高いといえる。またデジタル・ディバイド解消に向けた協力を行うことで、我が国が新たな課題に迅速かつ積極的に取り組んでいることをアピールでき、南太平洋地域のメディア及び国民の関心を得るものと考えられる。

加えて、本件協力の成果によって学生が点在する島嶼地域における先進的教育モデルが開発されることから、同様な島嶼地域に与えるインパクトも高いと推察される。

(5) 自立発展性

USPは、設立以来既に三十余年が経過した現在も健全な経営を行っており、本件終了後におけるプロジェクト活動継続のための財政的基盤は十分整っている。

5. 外部要因リスク（外部条件）

(1) 外部条件

- ア フィジーが政治的に安定している
- イ USPが財政的かつ組織的に安定している
- ウ 遠隔教育とIT活用を重視しているUSPの戦略が大きく変わらない

(2) 前提条件

- ア C/PとUSPシニアスタッフの協力が得られる
- イ C/Pの転職が起こらない

6. 今後の評価計画

中間評価（2003 年 9 月ごろ）、終了時評価（2005 年 1 月ごろ）、事後評価（2010 年ごろ）を実施予定

第4章 プロジェクトドキュメント

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List of Acronyms

AusAID	Australian Agency for International Development
CS	Computing Science
DFL	Distance and Flexible Learning
DFLP	Distance and Flexible Learning Project
GDN	Global Development Network
HRD	Human Resource Development
IT	Information and Communication Technologies
JCC	Joint Coordinating Committee
JICA	Japan International Cooperation Agency
NZODA	New Zealand Overseas Development Agency
ODA	Official Development Assistance
OJT	On the Job Training
PALM	Japan-South Pacific Forum Summit Meeting
PDM	Project Design Matrix
PIC	Pacific Island Countries
PO	Plan of Operation
R&D	Research and Development
R&T	Research and Training
SPC	Secretariat of the Pacific Community
USP	The University of the South Pacific
VCP	Virtual Colombo Plan
VSAT	Very Small Aperture Terminal
WB	World Bank
WG	Working Group

1. Introduction

Established in 1968, the University of the South Pacific (USP) is a premier provider of tertiary education in the South Pacific region. USP is an international tertiary education institute having twelve member countries: Cook Islands, Fiji Islands, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

USP regards distance and flexible learning as an indispensable tool for offering their education services. USP established a communication network in 1974, which evolved from radio communication to Peacesat satellite to improve educational services. The governments of Japan, New Zealand, Australia, and member countries of USP assisted to create a new USP-dedicated VSAT telecommunications network (USPNet-2000), which was inaugurated on 30th March 2000.

At the Kyusyu Okinawa summit in July 2000, the government of Japan announced a comprehensive Information Technology (IT) cooperation plan that Japanese ODA would set up 30 Information Technology centers over the world to develop human resources through networks (J-Net Plan). Responding to the initiative, JICA study team was dispatched to USP in April 2001 to research a possibility of connection between USPNet and J-Net. The team and USP representatives discussed the needs of cooperation to enhance IT capacity at USP.

Based on the result of the J-Net study team, project preparatory study teams were dispatched in August 2001, November 2001, February 2002, and March 2002, and they discussed with USP staff the cooperation for institution building of USP using IT, especially in Computing Science (CS), Distance and Flexible Learning (DFL), and IT Research and Training (R&T) areas.

2. Background

2-1. Socio-economic situation of the South Pacific region

Pacific Island Countries (PIC) have problems they have in common such as great distances among relatively small countries and low diversity of economic activities. IT has a potential for PIC to offset these disadvantages because of its characteristics like advanced data transmission.

PIC are scattered in 33 million square kilometers of the South Pacific. A map is presented in Annex 1. Because of inherent disadvantages such as isolation, transportation and telecommunication are essential for people in PIC. Consequent to geographical and historical background, their economies are small in size, distant from major markets, and vulnerable depending on a primary industry like fishery, sugarcane plantation, or remittance (Annex 2).

Considering both the advantages of IT and the struggles PIC have in common, IT will be a tool for people in PIC to overcome their disadvantages. IT would enable people to communicate easily, provide access to knowledge globally, and engage them in new jobs related to IT industry.

2-2 Description of the sector/sub-sector

Based on the analysis of the socio-economic situation of PIC and advantages of IT, IT utilization is fundamental in the region to overcome various difficulties. In order to utilize it appropriately, IT skill and knowledge is indispensable. Though basic information literacy has to be spread over any level of personnel in the region including both adults and children and children are enthusiastic about absorbing new technology, higher level of educational services should be strengthened to generate trainers at first.

Annex 3 shows major higher educational institutions that provide certificates or degrees related to IT/CS in Fiji, which is a hub country in the region. Though more than 500 students who learn IT/CS graduate every year, highly skilled IT engineers and computer system analysts tend to migrate to developed countries such as Australia, New Zealand, and North America. Therefore, IT/CS graduates are always in demand in any society of the region as potential computer engineers or educators.

Annex 4 presents a list of higher educational institutions in the region. In the South Pacific region, USP has been one of a few universities that offer a degree; however, other universities such as private universities from overseas or universities established by the PIC governments are gradually planning to start educational services or are already operating. Even with the appearance of other institutions, however, USP still has their mission to provide qualified higher education services and become a catalyst of socio-economic development through Human Resource Development (HRD) for the region.

2-3 Regional strategy on IT development

There are both regional and Fiji national strategies to utilize IT for development. Secretariat of the Pacific Community (SPC) regards IT as a tool to bring PIC potential benefit, and it plans to have a regional IT development center. The government of Fiji, host country of the project, has identified Telecommunications and Information Technology as one of five key development areas that require special attention.

The government of Fiji also has two projects related to IT. First one is a "Studio City Project" that has been characterized as a mixture of Silicon Valley and Hollywood and proposed by the Audiovisual Commission, and the Ministry of Commerce, Business Development and Investment. The proposal would encourage investment in audio video development which would have a significant IT component. Second one is to create "IT enabled services industries" initiated by the Fiji Trade and Investment Bureau, Telecom Fiji, FINTEL and the Ministry of Finance and National Planning. The plan focuses on back office information processing such as call centers in the immediate future.

In order to implement the project stated above successfully, educational institutions are required

where people can acquire advanced IT knowledge and skills and also can research and develop (R&D) IT adoption for local development.

2-4 Prior or ongoing assistance

There are several prior or ongoing assistance related to the project as follows:

(a) Network Academies and ICT R&D Grants Program (on going)

UNDP Asia Pacific Development Information Program (APDIP) started network academies in partnership with Private Network Company, Cisco Systems. This program aims to educate students in Asia Pacific with up-to-date IT curricula to fulfill demands of building and maintaining the online network. In the South Pacific region, the program includes Papua New Guinea University of Technology (UNITECH) in Lae, Papua New Guinea and Fiji Institute of Technology (FIT) in Suva, Fiji.

APDIP also has the ICT R&D Grants Programme. Its objective is to build institutional research capacity in the developing countries of the Asia-Pacific region, in the area of Internet networking. The scope is to research and develop innovative and practical ICT and networking solutions and applications.

(b) USPNet-2000 (prior)

The governments of Japan, New Zealand and Australia assisted to create USPNet-2000 as a grant aid cooperation (See Annex 5). Each extension center in all of the twelve member countries got a satellite antenna to make students receive interactive audio-visual courses from campus. For USP external students, USPNet provides the opportunity to access a variety of educational services on the same network. These services may include the opportunity to participate in audio tutorials that is conducted from their three campuses, communicate by e-mail with a lecturer/tutor or another student, access the World Wide Web, watch a live video broadcast of a lecture from any of the three campuses and take part in video conferences (and tutoring) with the Laucala Campus in Suva.

(c) USP School of Law (on-going)

USP School of Law in Vanuatu has two projects related to IT. One is online course development funded by Sasagawa foundation. Today, students can take audio live class through Internet taught by lecturers from overseas such as New York or New Zealand. The other is Law database development project funded by NZODA. The staff of the law school created a law database that accumulates background or precedents of laws in PIC that can be accessed by the public.

(d) Virtual Colombo Plan (VCP) (planning)

AusAID and World Bank (WB) announced a \$1.5 billion Virtual Colombo Plan (VCP) in 2001 that aims to improve education and access to knowledge across the developing countries using IT as a tool for distance and flexible learning. VCP will initially focus on basic education and teacher education in partnership with Australian universities. AusAID will connect USPNet with Global Development

Network (GDN). Though USP and WB had already started discussing the connection, some issues still remain to be resolved such as USP's annual contribution to WB and technical problems associated with linking the two networks.

3. Problem to be addressed, the current situation

3-1 Institutional framework of USP

USP offers undergraduate and postgraduate study programs through five schools: agriculture, humanities, law, pure and applied science, and social and economic development. School of Agriculture is in Samoa and School of Law is in Vanuatu, and others are based in Suva, Fiji. An organizational chart of USP is presented in Annex 6.

(a) Students at USP

The number of students have been steadily increasing in both internal and external mode (Annex 7). In 2000, 46% (4204 students of total 9118) students enrolled as external students.

(b) External students

Full time on-campus students usually get their bachelor degrees within 3 years, and 80% of on-campus students are full time. On the other hand, more than 90% of external students are part-time students. Hence they need longer period to finish their programs compared to internal students. In addition to the longer period of studying at university centers, external students need to spend their last semester(s) on campus.

(c) USP strategic plan

The USP strategic plan developed in 1998 highlights the increase in student numbers. It aims to increase especially the enrollment of external students. According to the plan, almost 4,500 external students in full-time counts are expected to enroll in USP in 2007. This is about twice as many as the number of students in 2000.

(d) USP financial situation

Its financial strategy plans to reduce funding from member countries, which is approximately 70% of budget in 2000. Annex 8 presents USP financial situation. Statistics show little financial problem, but the economic slowdown in PIC influences funding from the member countries.

3-2 Problem to be addressed: the present situation

USP has been a major provider of higher education in the region for more than 30 years, and they have to promote the HRD and R&D responding to the regional needs for IT. However, they have some issues to pursue to fulfill these needs, such as 1) enhancement of DFL course development to provide better education opportunities, 2) enhancement of CS program to comply with the demands of more qualified engineers, and 3) development of R&D mechanism in order to utilize IT for socio-economic development in the region.

4 Project strategy

4-1 Project strategy

a) Basic design

Adding to the above problem analysis, three fields are prioritized because of emergent needs and potential impact: Computing Science (CS), Distance and Flexible Learning (DFL), and IT Research and Training(R&T).

Though we could have selected just one or two component instead of having three components, we decided to have all three fields because they are intertwined with each other. For instance, staff at CS could provide technical advice to the whole of USP. DFL could expand USP's educational service including CS courses developed by the project. R&T might also create model courses that could be done at extension centers.

b) Project period

The project period is 3 years. Considering the rapid speed of IT development, it is not easy to plan IT utilization beyond three years. On the other hand, institution building of a university usually takes time. For instance, acquisition of higher degrees such as master or Ph.D. takes 2 to 3 years or more. Thus, the project period should be reconsidered from these various points at the final evaluation.

c) Project site

In the initial stage, the project focuses on Fiji, one of 12 member countries of USP, not to spread the efforts too thinly in the region. Gradually, however, the regional activities such as equipment provision and seminars including education sessions or workshops for staff at other university centers could be included into the project.

d) Problem analysis of each component and alternative project strategy is as follows:

1) Computing Science (CS)

The number of students who study CS as their major or as basic computer literacy is rapidly increasing, but students cannot take the advanced CS courses in both face-to face and distance and flexible learning mode. The major reason of the problem is severe shortage of teaching staff after the coup d'etat of Fiji in May 2000. According to requests from USP, there are just two full-time lecturers for 1500 students registered in CS classes. Severe shortage of teaching staff also influences development of CS extension courses. Today, just one CS course is offered in distance mode (Annex 9 USP CS curriculum and staff in 2000).

2) Distance and Flexible Learning (DFL)

USP regards DFL as a fundamental and important education approach to service provision. DFL can be improved using IT for digital course development or management. The major problem of DFL is as follows:

2-1) Efficiency and effectiveness of DFL

Staff of University Extension (UE) is accustomed to develop and deliver “paper based” extension courses. Though it is clear that appropriate digitalization might improve efficiency and effectiveness of DFL, for instance improvement of turn around time of assignment using digital network, UE staff are not ready to fully utilize digital technology.

2-2) Education opportunity

USPNet2000 provided an antenna for each USP center in member country. Fiji got one antenna at Laucala campus, but it has three extension centers where 70% of USP external students are studying; Raiwaqa, Lautoka, and Labasa centers. The Raiwaqa center is located near Laucala campus, so that the students could go to the main campus. On the other hand, students studying at Lautoka and Labasa centers could not access interactive and two-way classes (See map of Fiji in Annex 10).

USP had hoped to have two earth stations at Lautoka and Labasa centers as other centers have, and they have managed tentatively to deliver interactive and two-way classes from Suva through terrestrial line since February 2002. Therefore, the project will support Lautoka and Labasa centers in receiving DFL courses permanently and use them as monitoring points to develop DFL courses.

3) IT research and training (R&T)

The socioeconomic effect of rapid advances in information technology is not well understood in the region. For example, the impact on government policies or on local cultures. Also, it is not well understood how IT might help solve problems in the region such as education systems.

USP initially requested a “Centre for IT” that aims to provide broad research, education and training, because USP currently does not have resource and mechanism to implement the plan. The proposal, however, included the construction of building. As a leading R&D institution in the region, USP has interests in a catalytic role both in socio-economic development using IT and in inquiring about a way to narrow the socio-economic gap accelerated by the digital divide.

This project prioritizes development of model IT research and short-term model training courses over construction of a building. Successful outputs of the project will make stakeholders notice the importance of these activities. That is also expected to link with other projects such as J-Net or basis to invite another new project.

4-2 Coordination arrangements

AusAID is expected to fund a project titled “Distance and Flexible Learning Project (DFLP)” in

parallel with the JICA project. DFLP aims to improve the access, equity, efficiency and quality of the provision of distance and flexible learning at the USP.” In order to avoid duplication of assistance, the donor representatives of both projects are expected to participate in each other’s coordination committee.

5. Project design

There are some documents that show project design. Annex 11 shows Project Design Matrix (PDM). Annex 12 shows Plan of Operation (PO). The background of project design is explained in detail as follows:

5-1 Overall goal

The overall goal of the project is defined as:

“USP is enhanced as a center of excellence for human resource development to assist the socio-economic development of the South Pacific Region.”

USP is already “a center of excellence” in education for the region. With further provision of regional focused education services, however, USP should be revitalized in the environment of global competition accelerated by IT.

Based on the enhancement of DFL, USP Centres will be improved in each country in line with USP’s strategic plan. This de-centralization of university extension will improve the image of Centres by local residents and help become local “Centres of Learning” by improving access to education at all levels.

5-2 Project purpose

The project purpose is defined as:

“More students can receive improved education service through the enhanced IT capacity of USP.”

For PIC, DFL is a vital tool to popularize higher education in the region. At the same time, in order to improve basic human lives in PIC based on public health care or environment protection, the way of telecommunication needs to be examined. Therefore, qualified IT engineers, related R&D, and educational program to raise consciousness of stakeholders are demanded.

The indicators are setup as 1) the number of CS graduates that will increase after enhancement of CS programs, 2) the number of model DFL courses developed using multimedia technologies, and 3) the number of IT research and short-term model training courses developed in the project.

5-3 Outputs and Activities

5-3-1 Computing Science (CS) Component

a) Outputs

The objective of this component is defined as “more students can take various up-to-date CS courses with the right number of capable lecturers both in distance and face-to-face mode.” The right number of CS teaching staff, as one of the outputs of the component, will solve an immediate shortage of CS lecturers. It will also support activities in other components technically, for instance, providing technical advice for network improvement in both DFL and IT R&T component in order to expand the impact.

b) Activities

The activities of this component are as follows:

- 1) To nurture less experienced CS lecturers from member countries through on the job training (OJT) and short/long term training in Japan. Long term expert mentors less experienced lecturers through demonstration of model courses and OJT.
- 2) To increase a variety of courses at Laucala campus in Suva both in face-to-face mode and through networks from Japan. There are some procedures to increase varieties: 1) courses offered by lecturers educated through Activity1), 2) model courses offered by JICA long and short term experts, and 3) courses delivered from Japanese universities via digital networks. Through these activities, USP students could take more various up-to-date CS courses both in distance and face-to-face modes.
- 3) To develop model extension CS courses and research the institution that provides CS extension courses to USP. Today, just one CS course (CS121) is offered and three more (CS100, CS122, CS112) are planned. Short-term experts will work to create distance courses with University Extension (UE) and CS staff as well as long-term experts.
- 4) To enhance CS laboratories to utilize the latest software. PCs in the CS laboratories are too old and small in capacity to utilize the latest software necessary to offer the up-to-date, advanced level CS courses. In order to develop CS model course using centers at Lautoka and Labasa as monitoring point, laboratories at these centers also need to be enhanced.

5-3-2 Distance and Flexible Learning (DFL) Component

a) Outputs

The objective of this component is defined as “more external students can take better DFL courses, particularly using IT.” University Extension staff educated in the project could work with CS teaching staff in order to create model distance CS courses. Improvement of DFL also would contribute to expand the impact of model training course in IT R&T.

b) Activities

The activities of this component are as follows:

- 1) To educate staff who develop DFL courses through on the job training and short/long term training in Japan. Long-term expert educates staff through OJT or workshop. Through these activities, staff is expected to develop DFL courses with appropriate multimedia mix by themselves by the end of the project.
- 2) To improve mechanism of the operational course development management system. At first, long-term experts and counterparts assess the current mechanism and they prioritize critical service with big impact to improve the DFL. Then, they create the prototype system to develop model courses.
- 3) To develop model DFL course, Based on the Activity2), experts and counterparts will prioritize the area of courses and the most appropriate media, and they develop a few model courses.
- 4) To enhance and expand USPNet into Lautoka and Labasa centers. There are three activities to improve the accessibility of USPNet; 1) to expand USPNet into Lautoka and Labasa centers using terrestrial line, 2) to support planning the future upgrade and design of USPNet, and 3) to enhance USPNet hub station such as improving the availability of the hub during local power failures. Concerning about the 2) activities, the short-term expert will work with USP counterpart, and counterparts will be educated in Japan.

5-3-3 Information and Communication Technologies (IT) Research and Training Component

a) Outputs

The objective of this component is defined as “Short-term model training courses are implemented based on research on IT utilization and digital divide in the South Pacific Region.” Through the activities, institutional research capacity of USP to utilize IT in various areas will be built. In addition to generating awareness on USP’s IT research capacity, it should be raised among participants of short-term model training courses.

b) Activities

The activities of this component are as follows:

- 1) To establish mechanism for research and short-term model training courses. USP needs to establish a management structure to “institutionalize” research and training to utilize IT for socio-economic development. USP will initiate this activity with support from JICA expert.
- 2) To conduct research through the mechanism established by Activity 1). Working Group (WG) consisted of JICA long-term expert and counterparts will decide application procedures, conditions for research funding, and criteria for the assessment of applications. Then, the grant programs are publicized and research proposals are collected from the entire USP. The WG will also research activities and training needs of other institutions.
- 3) To implement the short-term model training courses. Based on the research done in Activity 2),

the target and contents of training should be identified. Following the mechanism established by activity 1), the WG will plan, conduct, and evaluate the short-term model training courses. Depending on the contents, short-term model training courses could be available from the well established JICA training modules.

5-3-4 Project Management Component

a) Outputs

Objective of this component is defined as "The project is managed and operated smoothly." There are three procedures in this component: establishment of monitoring and evaluation system, establishment of regular meeting system, and publicity.

b) Activities

1) Establishment of monitoring and evaluation system

To establish planning, monitoring, evaluation, and reporting mechanism. The long-term experts and USP counterparts are responsible to plan the annual activities and monitor their progress. They need to document the monitoring record and report their progress to the Joint Coordinating Committee (JCC) every six months.

2) To have Joint Coordinating Committee (JCC) and Operations Committee regularly

a) JCC (Annex 17)

The JCC will be established for smooth and effective implementation of the project. JCC will monitor the progress of the project and appraise the annual plan. Participants are experts and representative from JICA, USP sides, and the concerned government personnel of Fiji. Representative of AusAID will also be requested to participate in the committee, in order to avoid duplication of assistance. The JCC will meet every six months.

b) Operations Committee

Operations Committee, which consists of JICA experts, USP counterparts, and other people involved, will be held on a monthly basis. JCC is a decision-making committee at the project side; on the other hand, Operations Committee is for practical use like information exchange.

3) Publicity

To publicize the project through various media such as Internet, local dailies, or newsletters. The JICA experts and counterparts plan how to demonstrate the project, and they decide the contents and media of publicity. That publicity work is for both local community in PIC and taxpayers in Japan. The project will arrange local personnel for publicity activity.

5-4 Inputs

5-4-1 Inputs from Japanese side

a) Experts

1) Long-term experts

Long-term experts will be three; Computing science/chief advisor of the project, DFL, and IT research and training/Project coordinator. Their qualification and terms of reference (TOR) are presented in Annex 13.

2) Short-term experts

Short-term experts will be dispatched in accordance with the needs for the effective implementation of the project. They play the supplementary role of long-term experts. The number and TOR of short-term experts shall be determined annually based on the discussions by both sides, but a tentative list is presented in Annex 13.

b) Provision of the equipment

Major equipment is equipment both for DFL improvement and for CS laboratories in Suva, Lautoka, and Labasa. The number, specification, and cost of the equipment is presented in Annex 14.

c) Training in Japan

Though training shall be determined annually based on the discussions by both parties, tentative plan is presented in Annex 15.

1) Short-term training in Japan

Some counterpart personnel can be trained in Japan. Short-term training in Japan could be suitable for the case that University Extension staff needs practical training by several lecturers for a few months or researchers who implemented the best researches at IT R&T component learn the latest research and create networks with Japanese scholars.

2) Scholarship for the acquisition of higher degrees (Long-term training)

JICA may accept counterparts for the acquisition of higher degrees in Japan. In order to nurture young CS lecturers, scholarship at graduate schools could be more appropriate than short-term training.

3) Regulations for the trainees and scholarship grantees

Some regulations to trainees or scholarship grantees are necessary, in order for them to continue the activities at USP, after the training or study in Japan. The project will use usual USP procedures, which require recipients to sign the bond for years equivalent to years of study in Japan.

5-4-2 Inputs from the counterpart organization

a) Staff allocation (See Annex 16 in regards to name and position of counterparts)

1) CS component:

USP counterparts will be 2-to-5 less-experienced lecturers, considering high turn over rate of IT engineer in Fiji. While these counterparts are studying at Japanese universities as long-term trainees, USP might provide substitute counterparts for experts.

2) DFL Component

(Counterparts will be current UE staff; five staff has been identified for training.)

3) IT R&T component

Tentatively, counterparts include a director of Planning and Development and a head of Accounting and Financial Management.

4) Project Management

Japanese side coordinator will manage finance of the project assisted by JICA, but USP should arrange at least one person who is responsible for administration of the project and finance at USP.

b) Buildings, facilities and equipment necessary for the project activities

1) Renovation of offices to house new equipment

Renovation of existing laboratories could be necessary to house new equipment especially for CS labs and DFL development areas.

2) Office facilities and others

Office space and facilities for JICA long/short-term experts will be provided by USP.

c) Budget

USP undertakes to prepare budget necessary for implementation of the project.

5-5 Important assumptions and risk analysis

a) Important Assumptions

- 1) The host country is stable politically; therefore students can continue studying at main campus in Suva.
- 2) USP is stable financially and operationally, so they could implement the project.
- 3) Policy and strategy of USP prioritizing DFL and IT utilization does not change drastically

b) Pre-conditions

- 1) The commitment/willingness of USP staff to support and participate in the project. JICA experts need to educate less experienced staff, so that availability and commitment/willingness of USP counterparts is vital for the project. The project may also confront complex management or regulation matters, which needs organizational support, especially from senior or administrative

staff.

- 2) Turnover of counterparts at USP, especially young CS lecturers mentored by JICA experts. CS professionals are said to continue working at the same place for three years on average in Fiji. Since USP counterparts are expected to keep and expand effects of the project, their resignation might damage not only sustainability but also implementation of the project itself. Therefore, countermeasures should be taken such as recruitment of extra staff or use of bond system.

5-6 Implementation Structure

A chart of implementation structure is presented in Annex 17.

- 1) Person responsible for project management
USP: Deputy Vice Chancellor
JICA side: Project chief advisor
- 2) Person or agencies responsible for project supervision
USP: Vice Chancellor
JICA side: Representative of JICA Fiji office
- 3) All the national and international organizations which will participate in the project and their roles and responsibilities.
Fiji Ministry of Education and other related Ministry: membership in JCC
Japanese Embassy in Fiji: membership in JCC
AusAID: membership in JCC

5-7 Monitoring and evaluation

5-7-1 Monitoring

Long term experts and counterparts are responsible for regular monitoring of the project on a monthly basis. Monitoring is for improving the project. Therefore, the result should be applied for modifying the plan and activities, and the data should be recorded to evaluate the project. JCC could monitor the progress of the project through the reports based on monitoring.

JICA experts and USP counterparts will discuss monitoring at the planning stage: how to monitor, indicators, and timing to monitor the progress of the project (Annex18). Monitoring procedures need to be reviewed following a change of project design.

5-7-2 Evaluation:

Based on PDM, evaluation is done three times: pre-evaluation, mid-term evaluation, and final evaluation. The objective of pre-evaluation is to analyze justification, to collect baseline data, and to formulate the project. Objective of mid-term evaluation is to improve the project during the second half of the period, and that of final evaluation is to advise decision-makers whether the project should

be continued, terminated, or followed up by a new project.

Usually, at these evaluations, the project is appraised together by the project participants including USP staff, Japanese experts, and a team dispatched by JICA HDQ. The project will be evaluated from five points of view; effectiveness, impact, efficiency, rationale, and sustainability.

Major points of evaluation are presented in Annex 19. Target beneficiaries of the project are people who learn at USP; therefore, improvement of students achievement should be evaluated, not just practical IT utilization.

6. Project Justification

6-1 Efficiency

a) Experts

One long-term expert will be dispatched for each of the three components. Considering the project purpose and output, the number of long-term experts sounds small. However, short-term experts will be dispatched to supplement the work of long-term experts, and alternatives such as TV conference or workshop through digital networks will be implemented. In conclusion, the input of experts will be fully utilized.

b) Others

b-1) CS component

The major inputs for CS component are scholarships and CS lab equipment besides experts. The main activity of this component is to mentor young lecturers. Scholarships to acquire higher degree are necessary to educate young lecturers at university.

The latest equipment in CS laboratory is fundamental for experts to teach up-to-date CS courses valuing practice in the laboratory. The project will set up both right number and purchase timing of PCs, considering maintenance and financial ability of USP to renew and maintain equipment after the project.

b-2) DFL component

The major input of DFL component is equipment both for DFL course development and for video conference and broadcasting systems through terrestrial line to implement DFL at Lautoka and Labasa centers. Compared to the installation of two earth stations at these centers, the cost effectiveness of this input is higher than that of earth stations.

6-2 Effectiveness

a) Logical structure

Activities at three components improve the mechanism of educational service based on regional

needs. Based on the enhancement of the mechanism, USP could provide better educational service qualitatively and quantitatively. As a result of the enhancement, the status of USP will be revitalized as a Center for Excellence.

b) Level of project purpose

Project purpose is enhancement of higher education using IT. Cooperation utilizing IT is relatively new topic of JICA cooperation. At the same time, institution building of an international university is also ambitious. Thus, this purpose is challenging but still realistic, because of mechanism to support the project both in Fiji and Japan.

6-3 Impact

a) Beneficiaries

Direct and target beneficiaries of each component are estimated below. Though the number of direct beneficiaries is small, if we consider the role of USP graduates such as educators for other educational institutions, we will find quite large impacts of the project to people in PIC.

Component	Direct beneficiaries(number)	Target beneficiaries (number)
CS	Young CS lecturers from member countries who are mentored or receive scholarships (2-5) Students who take CS course as their major(400)	Enrollments of CS courses in both face-to-face and distance mode(1500)
DFL	University Extension staff(5)	External students (4000)
IT research and training	Researchers and trainers(15) Participants of model training courses(50)	Based on the research, the target beneficiaries will be determined

In the CS component, there were about 1,500 CS/IS course enrolments at semester 2, 2001. The number of CS course enrollments is increasing rapidly. CS of USP also plays the role as a provider of IT educators in the region.

The improvement of DFL will benefit more than 4000 external students today and contribute to achieve the goal of USP's strategic plan, which aims to double the number of external students enrolled by 2007. DFL has also the potential to expand other education services of USP such as teacher education services.

b) Effects on policy both at national and local level

The project might include education of policymakers through the model courses developed in IT research and training component. It will raise their awareness to utilize IT for local needs.

c) Enhancement of the status of women, violation of human rights, widening of the gap between rich and poor.

1) Enhancement of the status of women

Female students intend to take tertiary education in distance mode compared to male students (the ratio of female to male students: on-campus (45%: 55%), off-campus (51%: 49%)). It is said that distance and flexible learning could benefit disadvantaged groups including women, accordingly the improvement of distance and flexible learning is expected to increase better learning opportunities for women. It leads to enhance the status of women who are primary care givers for families and are sometimes discriminated in formal education. Increase of CS DFL course might give chance to women to learn the latest and advanced CS.

2) Widening of the gap between rich and poor

Improvement of CS program might produce more qualified IT professionals to meet local demands in the region. This will fill in gap between advanced countries and PIC. On the other hand, it might accelerate more digital divide within the region because there is little linkage between IT professionals and people having no access even to phone line (See IT infrastructure in Annex 20). Thus, internal digital divide could widen the gap between rich and poor for a while. However, IT R&T component of the project could raise awareness of stakeholders and inquire the way to solve the problem of socioeconomic gap followed by widening digital divide in the region.

d) Effects on related organizations and groups, changes of laws and regulations, etc.

Enhancement of CS program could improve IT education in the region, because USP generates IT educators for other institutions.

IT utilization to improve DFL could benefit other institutions such as SPC or Ministry of Education in Fiji, who are planning to improve their own distance and flexible learning or expand their face-to-face education to reach more participants in distance mode. The best results of DFL should be demonstrated to people who are interested in the area.

e) Economic benefits to project participants related organizations and local community, etc.

The purpose of the project is institution building of higher education, and there is little direct economic benefit for participants in the project. However, there are demands for IT education and consultation, so that the project has a potential to provide alternatives of income generation at USP and the community.

6- 4 Relevance

a) Relevance to Japanese diplomatic policy and JICA regional strategy

1) Relevance to Japanese diplomatic policy

Japanese government hosted the Second Japan-South Pacific Forum Summit Meeting (PALM 2000) in Miyazaki City in April 2000. The leaders discussed the current situation of Pacific and shared mid-to-long term priorities such as capacity building through active use of IT.

Dialogues both at government and grassroots levels followed PALM 2000, and the third summit is also planned in 2003. Therefore, this project is assumed to match with Japanese diplomatic policy.

2) Relevance to JICA regional strategy

JICA has development strategy for Fiji and Samoa. Development strategy of Fiji prioritizes the support towards education in countryside, and that of Samoa is HRD including IT education. JICA also weights South Pacific regional cooperation rather than assisting each country separately because of cost-effectiveness.

b) Relevance to the region

1) USP needs

All contents of the project is in line with the needs of USP. CS is a rapidly demanding field at USP judging from the drastic increase of CS course enrollments. USP also sees DFL as vital in their strategic plan, and it is enthusiastic to take initiative in IT research and training in the region.

2) Host country's government needs

As stated in the section 2-3 Regional strategy on IT development, the Government of Fiji has identified IT as one of five key development areas and planned two national level projects related to IT.

3) Social needs

Both CS and DFL help meets needs of societies especially in the areas of DFL and IT R&T. The results of interview research in 2001 show high demands for qualified CS graduates in government, private sector, and educational institutions in Fiji.

It is difficult to show the demands of DFL qualitatively, but there are some quantitative examples to show it. The number of students of USP Fiji Center Northern doubled from 414 in semester 2, 2000 to 867 in semester 2, 2001. Almost 25% of students in 2001 study at different places out of USP Fiji Center Northern. Some students even learn in the place where people have no phone line. That shows one example of strong demands of DFL in Fiji.

6-5 Sustainability

a) Organizational capacity

The project will establish mechanism and model contents. It might be core prototype for future activity at USP. The process to establish the mechanism and develop the model is also expected to be

institutionalized even after the project finishes. Considering their experience working with a few aid agencies and NGOs, USP has appropriate organizational capacity enough to start the project and keep the output sustainable.

b) Financial capacity

USP has healthy financial report in 2000 stated in Annex 8. Both AusAID and NZODA, which donate 7 % of USP budget, prioritize basic education to higher education recently. However, they recognize the importance of USP in the region and express their support as before.

The biggest donor of member countries is the Fiji government, which donates almost 50% of the whole budget of USP. The Fiji government sees IT as a key area, so that they might support retaining outputs when they recognize effective HRD for them. The project needs to plan, document, and demonstrate the good practices and successful results for governments.

c) Socio-economic and technical acceptance

1) CS component

CS program is in severe shortage of staff because of Fiji coup detat and rapid increase of students. Before that, USP offered a stable program. If the project support fills in the shortfall up to pre coup detat levels, CS has the potential to continue their programs by themselves. Networks created by the project between USP and Japanese universities will benefit to sustain a vibrant level of CS program.

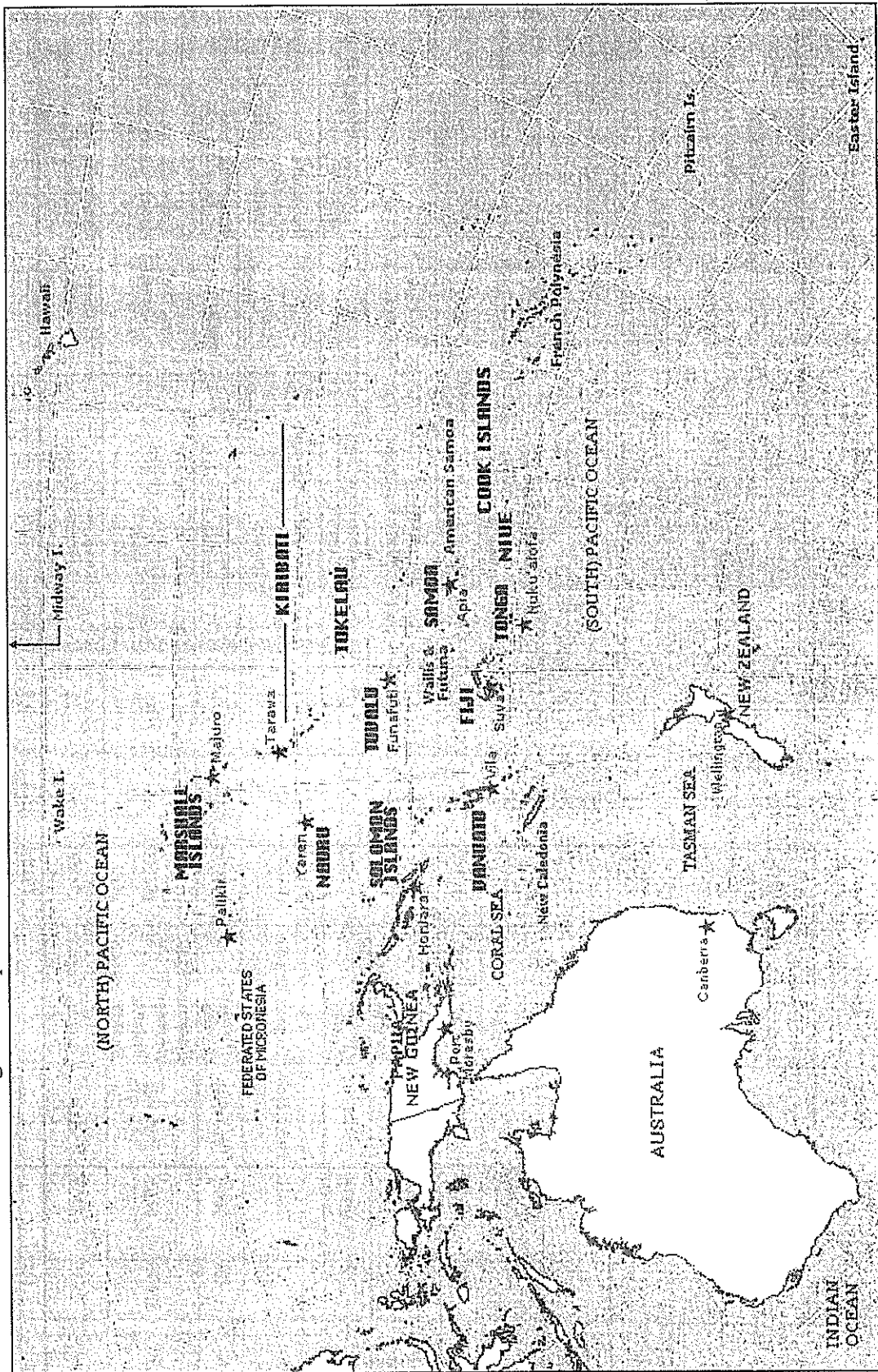
2) DFL component

The technology of DFL developed through the project targets people working at the university. When creating several models to diffuse technology towards people at different institutions, USP staff needs to consider how people at different organization could accept the model technically and financially.

6-6 Conclusion

The implementation of the project is targeting USP as the premier higher education provider in the Pacific region, established as provider of HRD and R&D for regional development by twelve PIC. Considering the broad impact of the project, the cooperation with USP is significant. Regional cooperation utilizing IT is in line with Japanese diplomatic policy to promote the socio-economic development of the South Pacific region. The project goal is clearly defined in terms of specific indicators. The project input is made accountable by targeting specific needs stipulated by the project, while considering USP's self-help and funding from other international aid agencies. Judging from financially sound operation funded by member countries for more than 30 years, USP is expected to make the project output sustainable.

ANNEX1 South Pacific regional map



Annex2. Economic Outline

Country	Land Area (Km ²)	Exclusive Economic Zone (Km ²)	Capital City	Languages	Population	Life Expectancy at Birth	Infant Mortality (no. per 1000 births)	GNP per Person (US\$)	Main Economic Activity	Exports	Imports
Cook Islands	237	1830 K	Avarua	Maori dialects, English	16500	72	11	—	Tourism, Remittances	Tourism, Pearl shell, Pearls, Bananas, Vegetables, Clothing	Foodstuffs, Manufactured goods, Machinery petroleum product, Building materials
Fiji	18272	1290 K	Suva	Fijian, Hindi, English	797800	67	16	2110	Sugar cane, Tourism, Gold mining, Fishing, Forestry, Copra, Manufacturing	Sugar, Tourism, Gold, Fish, Timber, Coconut oil, Garments	Foodstuffs, Manufactured products, Machinery, Motor vehicles, Petroleum products
Kiribati	811	3550 K	Tarawa	I-Kiribati, English	85100	62	67	1180	Fishing, Agriculture, Remittances, Copra	Fish, Copra	Foodstuffs, Machinery, Manufactured goods, Building materials, Petroleum products
Marshall Islands	181	2131 K	Majuro	English, Marshallese, Many dialects	61100	65	63	1540	Government services	Fish, Copra	Foodstuffs, Manufactured goods, Building materials, Petroleum products
Nauru	21	320K	Yaren	Nauruan, English, Yaren	11500	58	11	—	Phosphate mining, Financial services, Coconuts	Phosphates, Coconuts	Foodstuffs, Manufactured goods, Building materials, Petroleum products
Nine	259	390 K	Alofi	Niuean, English	2100	74	18	—	Remittances	Vegetables, Fruits, Copra, Craft	Foodstuffs, Manufactured goods, Building materials
Solomon Islands	28330	1340 K	Honiara	Numerous local languages, English, Pidgin	417800	65	38	750	Fishing, Forest products, Plantations	Fish, Timber, Copra, Palm oil, Cocoa	—
Tokelau	12	290 K	—	Tokelauan, English	1500	—	—	—	Coconut, Copra, Pigs, Woodwork	Stamps, Copra, Handicrafts	Foodstuffs, Building materials, Petroleum products
Tonga	747	700 K	Nuku'alofa	Tongan, English	98000	68	19	1690	Remittances, Coconut oil, Manufacturing, Tourism	Squash, Coconut oil, Bananas, Vanilla, Clothing, Light manufactures, Tourism	Foodstuffs, Petroleum products, Manufactured goods, Motor vehicles, Building materials
Tuvalu	26	900 K	Funafuti	Tuvaluan, English	11000	67	51	—	Fishing fees, Remittances, Copra	Copra, Handicraft	Foodstuffs, Petroleum products, Building materials
Vanuatu	12190	680 K	Port Vila	Numerous local languages, Bislama, English, French	182500	66	45	1270	Plantations, Fishing, Tourism	Copra, Cocoa, Beef, Fish, Kava, Tourism, Timber	Foodstuffs, Petroleum products, Motor vehicles, Manufactured goods, Building materials
Samoa	2935	120 K	Apia	Samoan, English	174800	67	22	1020	Remittances, Agriculture, Tourism, Light industry	Coconut oil, Cocoa, Tourism, Vegetables, Minor manufactures	Foodstuffs, Petroleum products, Manufactured goods, Motor vehicles, Building materials
Australia	7.7M				19.0M	78.8	4.9	20650			
New Zealand	270K				3.8M	77.4	5.2	15830			

Source : AusAID, 'Pacific Program profiles 2000-01', except the figures for Australia and New Zealand.

* 'K' stands for 'kilo', 'M' stands for 'million'.

Annex3

IT/IS courses as offered by the Fiji based universities.

Educational Institute	Average number of IT/IS graduates per year ¹	IT/IS Qualifications currently offered
University of the South Pacific	130 graduates per year	<ul style="list-style-type: none"> ▪ Certificate in Computer Science(CS) ▪ Diploma in CS ▪ Diploma in IS <p>As part of a BSc or BA degree program:</p> <ul style="list-style-type: none"> ▪ Single major in CS ▪ Double major in CS ▪ Double major in IS ▪ Minor in CS ▪ Minor in IS ▪ Post graduate studies in IT/IS are also available
Central Queensland University Fiji International Campus	70 graduates per year	<ul style="list-style-type: none"> ▪ Advanced Certificate in IT ▪ Advanced Diploma in IT ▪ Bachelor of IT ▪ Bachelor of Informatics ▪ Bachelor of IT/Bachelor of Science ▪ Bachelor of Electronic Commerce ▪ Graduate Diploma of IS Management ▪ Master of IS
Fiji Institute of Technology	120 graduates per year	<ul style="list-style-type: none"> ▪ Certificate in Applied Computing ▪ Diploma in Applied Computing
New Zealand Pacific Training Center	100 graduates per year	<ul style="list-style-type: none"> ▪ Certificate level Computer Course ▪ Advanced level Computer Course ▪ Diploma in IT(Software Development)
Fiji National Training Council	100 graduates per year	<ul style="list-style-type: none"> ▪ Certificate IV in IT administration ▪ Diploma in IT ▪ PC Hardware servicing, repair and maintenance ▪ Programming in Visual Basic

¹ the numbers do not include other programs where IT/IS is not the main component, eg. Bachelor of Business in IS. The numbers primarily reflect full time students.

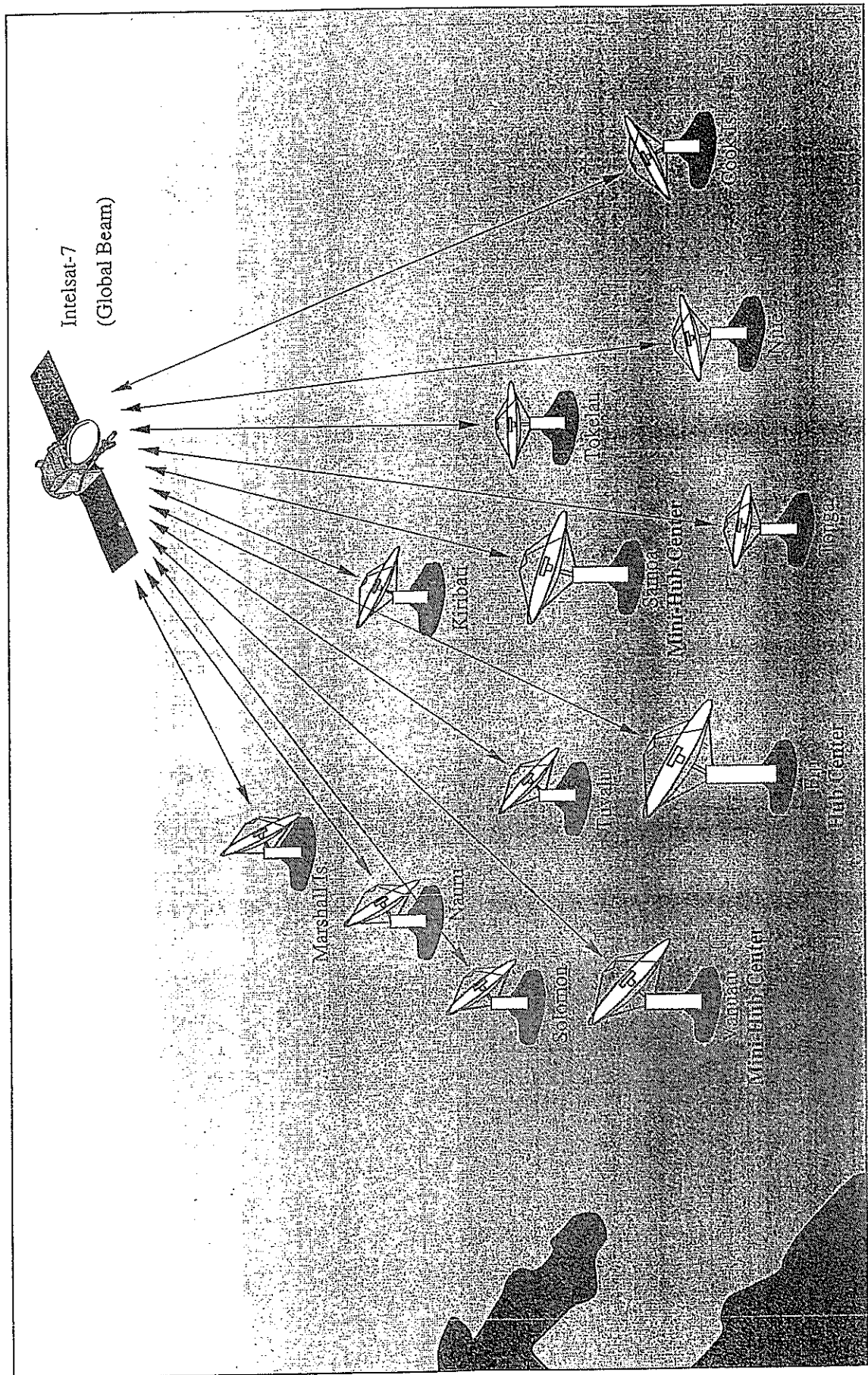
Annex 4 Higher Educational Institutions in the Region

Country	Classification	Institution	Place	Date of Foundation	Main Divisions of Study
Fiji	Universities	University of the South Pacific	Suva	1970	Pure and Applied Sciences, Humanities, Social and Economic Development, Agriculture (Samoa), Law (Vanuatu)
	Other Institutions	Corpus Christi Training College	Suva	1958	
	"	Lautoka Teachers' College	Lautoka	1977	Teacher Training
	"	The Fiji Institute of Technology	Suva	1963	Technology
	"	The Fiji School of Agriculture	Koronivia	1954	Agriculture
	"	The Fiji School of Medicine	Suva	1883	Medicine
Tonga	"	The Fiji School of Nursing	Suva	-	Nursing
	Universities	University of the South Pacific	Nuku'alofa	1971	
	Other Institutions	'Atenisi Institute	Nuku'alofa	1966	
	"	Maritime Polytechnical Institute	Nuku'alofa	1985	Maritime Studies
Vanuatu	"	Teachers' Training College	Nuku'alofa	1944, 1986	Teacher Training
	Universities	University of the South Pacific	Port Vila		Law
Samoa	Universities	University of the South Pacific	Apia	1977	Agriculture
	Universities	The National University of Samoa	Apia	1984	Arts, Science, Nursing, Computer Training, Accounting
	"				Accountancy and Business Administration, Agriculture, Architecture and Building, Civil Engineering, Electrical and Communications Studies, Mechanical Engineering, Mining Engineering, Forestry, Mathematics and Statistics, Applied Physics, Applied Science, Surveying and Land Studies, Language and Communication Studies
Papua New Guinea	Universities	Papua New Guinea University of Technology	Lae	1965, 1973	Arts, Education, Law, Medicine, Science, Health Sciences (Continuing and Distance Education, National Sports)
	"	University of Papua New Guinea		1966	Business Studies, Communication Arts, Religious Studies, Liberal Arts
	Other Institutions	Divine Word Institute	Madang	1980	Agriculture, Commerce, Education, Science and Mathematics, Theology, Extension Services
	"	Pacific Adventist College	Boroko	1984	Law, Humanities and Literature, Languages, Sciences, Biology
New Caledonia	Universities	University Center of New Caledonia	Nouméa Cedex	1987	
	Other Institutions	Centre Régional Associé du C.N.A.M	Nouméa Cedex	1971	
	"	Institut Universitaire de Formation Des Maîtres	Nouméa	1993	
French Polynesia	Universities	French University of the Pacific Papeete	Tahiti	1987	
	"	University Center of French Polynesia	Tahiti	1988	Law, Science, Letters

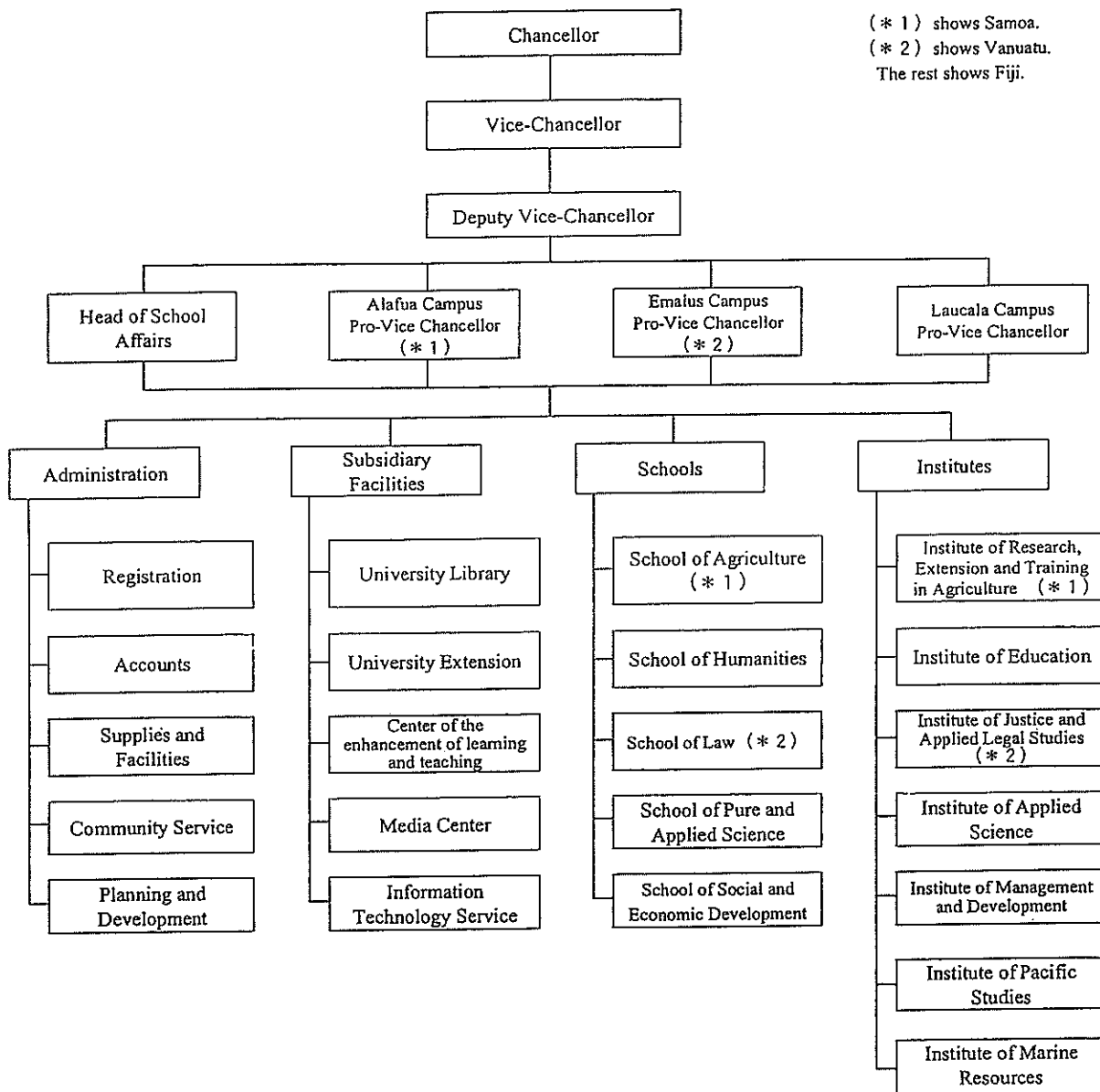
Source : World List of Universities and Other Institutions of Higher Education, The International Association of Universities (IAU)/UNESCO Information Center on Higher Education, International Universities Bureau, 1997

Annex 5

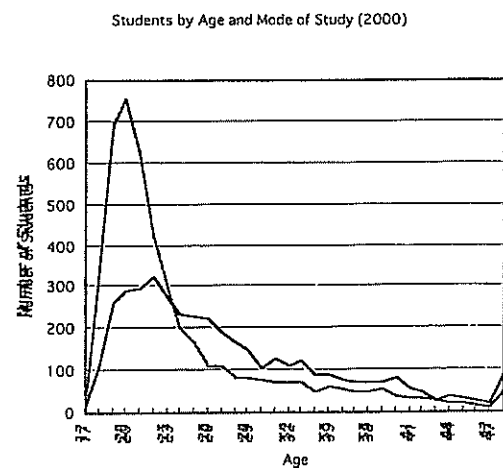
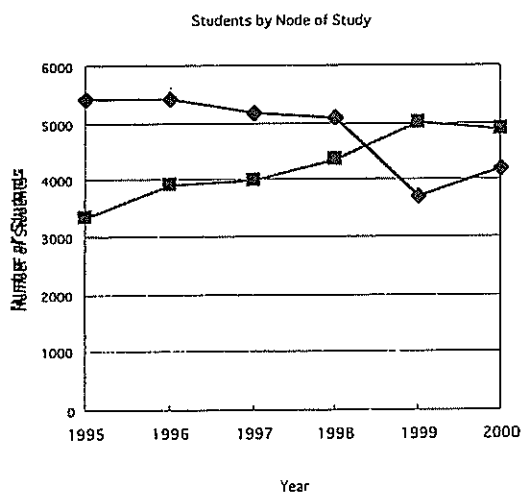
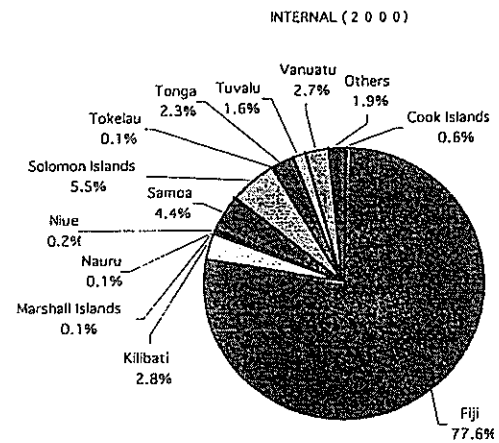
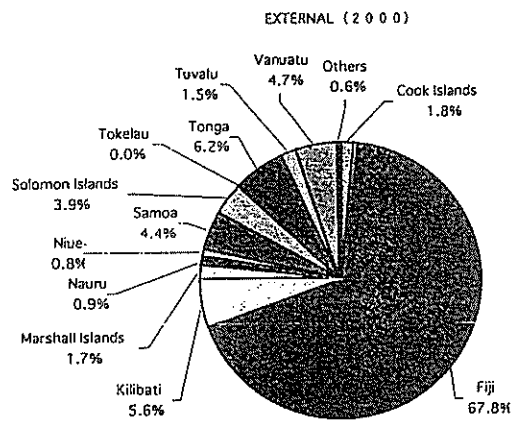
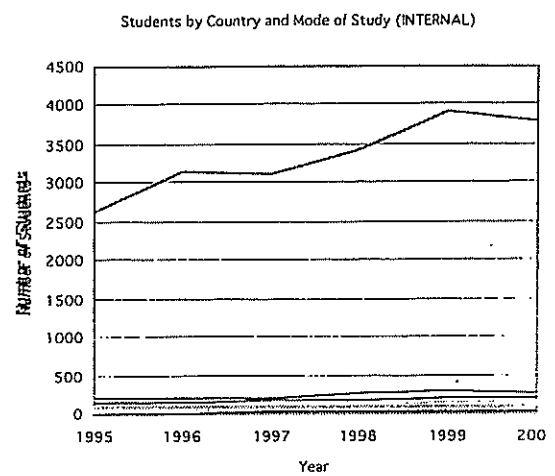
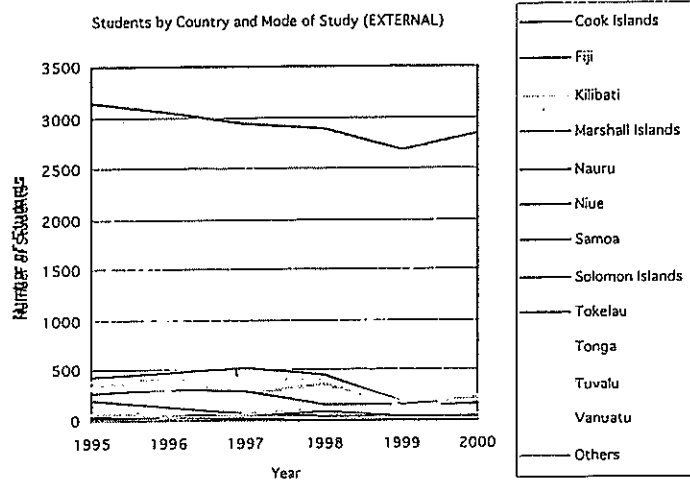
Structure of USP-Net System



USP organizational Chart

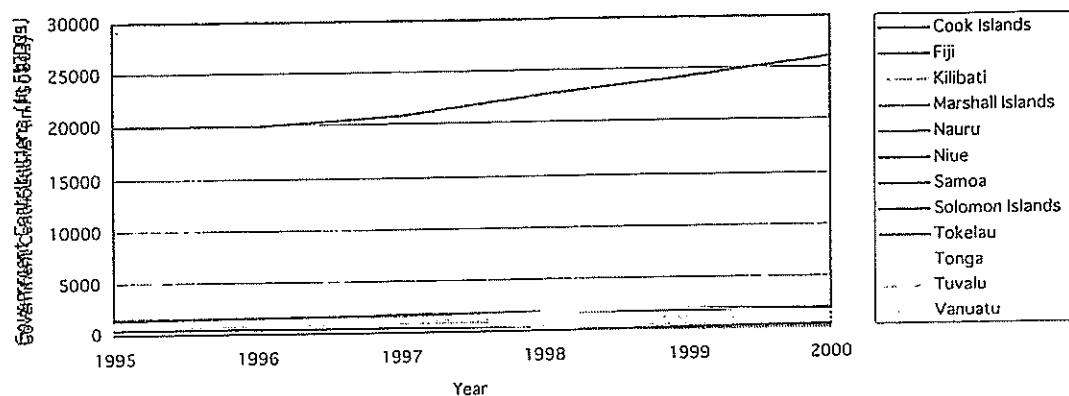


Annex 7. Enrollments of USP

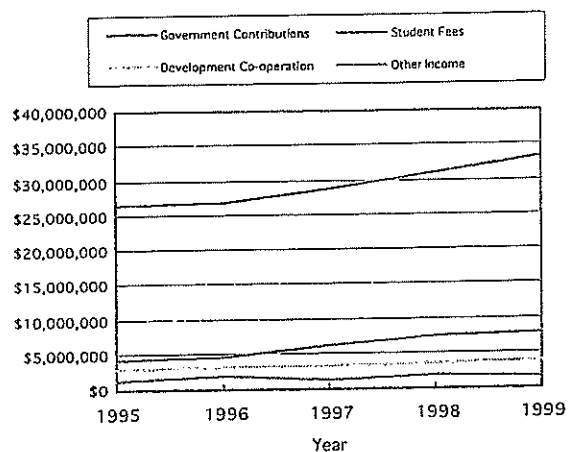


Annex 8. USP Financial Situation

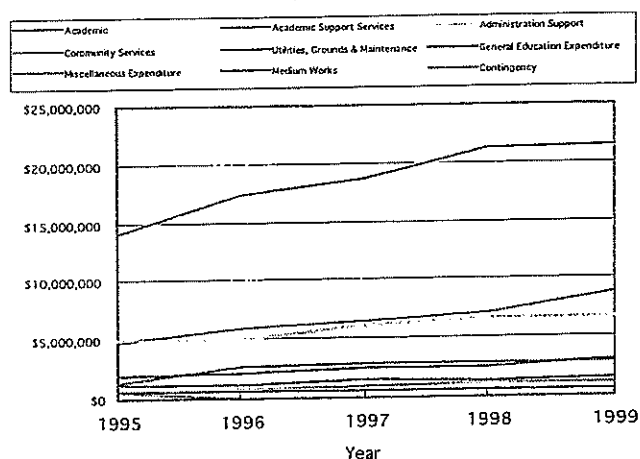
Government Contributions



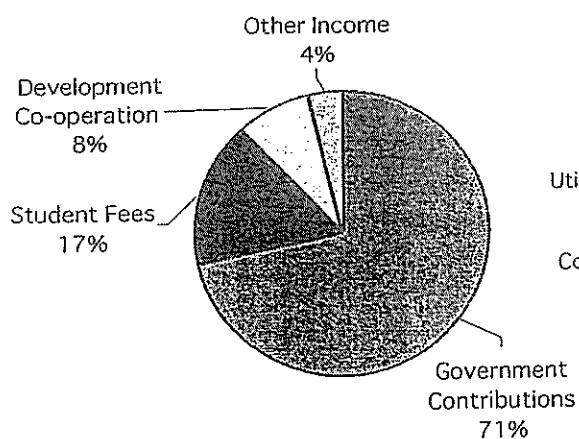
Income



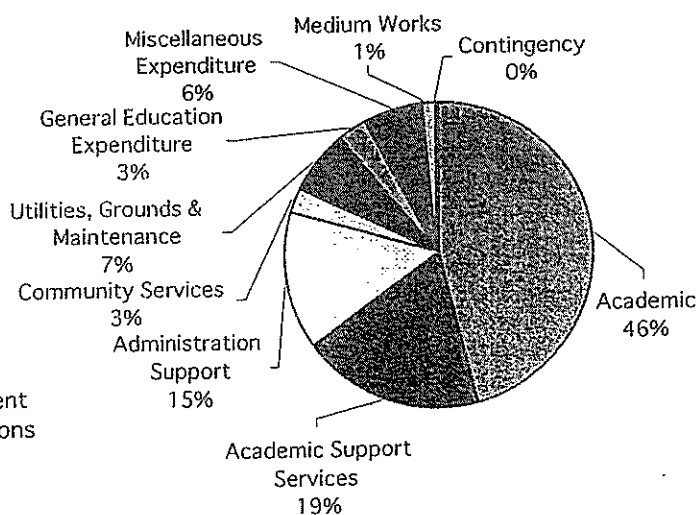
Expenditure



Income (1999)



Expenditure (1999)



Annex 9 CS lectures and academic career

Area	Post	University that earned PhD	Name of country	University from that earned master	Name of country	University from that earned bachelor	Country
Area • CS	Head of School	UC Berk	US	UC Berk	US	Cal Tech	US
Math	Professor	Kiev	?	Kiev	?		
	Visiting Professor	Tokyo	Japan	Tokyo	Japan	Niigata	Japan
	Senior Lecturer	—	—	USE	SP	Auckland	NZ
	Senior Lecturer	Hull	?	Lond	?	Ghana	
	Senior Lecturer	Camb	(UK)	Camb/Wales	(UK)		
	Senior Lecturer	Kam	?	Mys	?		
	Senior Lecturer	Kobe	Kobe	Ryukyu	Japan	USE	SP
	Lecturer	Open	(UK)	Suss	(UK)	USE	SP
	Lecturer	Antwarp	Bergy			Nanchang	
	Assistant Lecturer	—	—	USE	SP	USE	SP
	Assistant Lecturer	—	—	USE	SP	USE	SP
	Tutor	—	—	USE(PGDip)	SP		
	Assistant	—	—	—	—	USE	SP
	Assistant	—	—	—	—	USE	SP
	Assistant	—	—	—	—	USE	SP
CS	Professor	Manc	(Aus)	Manc	(Aus)		
	Senior Lecturer	Wales	?	Wales	?	Col	?
	Senior Lecturer	—	—	Open/Qld	(UK)		
	Senior Lecturer	ANU	Aus	USE	SP	USE	SP
	Lecturer	—	—	—	—	USE	SP
	Lecturer	—	—	—	—	USE	SP
	Lecturer	—	—	Lond	(UK)	Leic	?
	Lecturer	—	—	USE	SP	Cant	NZ

Source : School of Pure and Applied Sciences Degree Handbook2001

2001 Semester 1 Number of registrations

Course	Title	Number of students
CS100	Computing Fundamentals	219
CS111	Introduction to Computing Science	443
CS121	Information Systems I	502
CS211	Computer Organization	152
CS311	Operating Systems	108
CS313	Software Engineering	90
CS323	Information Systems Analysis and Design	134
CS491	Advanced Topics in Computing Science	18

2001 Semester 1 Number of registrations

Course	Title	Number of students
CS112	Data Structures and Algorithms	247
CS122	Information Systems II	514
CS214	Design and Analysis of Algorithms	105
CS222	Database Management Systems	287
CS312	Data Communications and Computer Network	212
CS392	Special Topics in Computing Science	91
CS492	Advanced Topics in Computing Science	5
CS494		1

THE COURSES FOR EACH PROGRAMME IN COMPUTING SCIENCE AND INFORMATION SYSTEMS

DEGREE STRUCTURES

	Single Major in Computing Science			Double Major in Computing Science			Double Major in Computing Science and Information Systems			Minor in Computing Science			Double Major in Information Systems			Minor in Information Systems		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
CS111	○			○			○			○								
CS112	○			○			○			○								
CS121							○						○			○		
CS122							○						○			○		
CS211		○			○			○			②							
CS214		○			○			○			②							
CS222		○			○			○			②			○			○	
CS311			④			②			②			①						
CS312			④			②			②			①			①'			
CS313			④			②			②			①			①			
CS314			④			②			②			②						
CS316			④			②			②			①			①			①
CS323																		
CS391			④*			②*			②*			①			①'			
CS392			④*			②*			②*			①			①'			
MA101	S①			S①			S①			S①								
MA102	S①			S①			S①			S①								
MA111	S①			S①			S①			S①								
MA131							○						○			○		
MA231								S						S				
MA261		S			S						S							
SE100																		
AF302											○			○				①

○ shows a compulsory subject.

S shows a service subject.

① shows that any one subject can be chosen from subjects with ①.

①' shows that any one subject can be chosen from subjects with ①'.

② shows that any two subjects can be chosen from subjects with ② or ②*.

③ shows that any four subjects can be chosen from subjects with ③ or ③*.

○* shows the subject can not be chosen with another subject with ○*.

ANNEX10 Map of project sites in Fiji



PROJECT DESIGN MATRIX (PDM) VERSION 1

Project title: IT Capacity Building at the University of the South Pacific(USP), Period: (2002, June-2005, June)

Targeted area: Fiji, however benefit to other member countries of USP, Target group: USP CS, DFL, R&D staff, Beneficiaries: students Version 1 Date: 02.6.1

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
<p>Overall Goal: USP is enhanced as a center of excellence for human resource development through the qualitative and quantitative improved education service</p> <p>Project Purpose: More students can receive improved education service through the enhanced IT capacity of USP.</p>	<ol style="list-style-type: none"> Increase in the number of applicants for both higher education and continuing education Increase in the number of offering of the qualified jobs for graduates Increase in the number of papers read at international meetings and published with international academic journal Increase in the number of qualified graduates who have up-to-date and practical IT knowledge and skills 130 graduates/year in 2000 : 195 graduates/year in 2005 (50% increase) Development of capacity of Distance and Flexible Learning course development utilizing multimedia technology (Procedure of DFL development is established and courses are developed just by staff) Development of capacity of IT research and training (Many qualified research proposals inquiring utilization of IT for socio-economic development are collected at USP, and the result of researches are publicized successfully and utilized for education modules.) 	<ol style="list-style-type: none"> Questionnaire and interview USP statistics Questionnaire and interview USP statistics Project record 	<ol style="list-style-type: none"> Fiji will be politically stable The budget of USP will not decrease drastically Policy and strategy of USP will not be changed drastically

<p>Outputs</p> <p>1. Computing Science (CS) Component More students can take various up-to-date CS courses by right number of capable lecturers both in distance and face-to-face mode</p> <p>2. Distance and Flexible Learning (DFL) Component More external students can take better DFL courses, particularly using IT</p> <p>3. Component of IT Research and Training (R&T) Model training programs are implemented based on research on IT utilization and digital divide in the South Pacific Region</p>	<p>1. Computing Science Component 1) Improvement of quantity and quality of CS lecturers Quantity: number of lecturers from member countries (1 in 2001: 3 in 2005) Quality: academic background of lecturers (1 Msc in 2001 : 2 Msc and 1 PhD in 2005) 2) Improvement of quantity and quality of CS courses at Fiji main campus Quantity: number of CS courses (18 in 2001: 21 in 2005) Quality: number of enrollments (1500 in 2001: 2200 in 2005), Evaluation by students and staff 3) Improvement of quantity and quality of CS courses in distance mode Quantity: number of CS courses (1 in 2002: 3 in 2005) Quality: number of enrollments (273 in 2001: 375 in 2005), Evaluation by students and staff 4) Improvement of computer laboratory (accessibility) Operation hour using the latest software 2. Distance and Flexible Learning Component 1) Establishment of operational course development management system System is established by October 2002 2) Improvement of quantity and quality of DFL model course development Quantity: number of model courses (4 in 2005) Quality: Evaluation by students and staff, Pass rate (65% in 2005 (55% in international measurement), Completion rate (85% in 2005 (75% in international measurement), number of registration, turn around time for assignment (average 1 week by the end of 2004) 3) Improvement of the access to the USPNet by external students Quantity: number of students who will take courses through the USPNet (visual usage 618 in 2001: 1200 in 2005, webCT usage 400 in 2001: 2000 in 2005), number of courses that could be offered through USPNet (15 in 2002: 40 in 2005) Quality: Operation hour, 3. Component of IT Research and Training 1) Mechanism of R&T is established by October 2002 2) The first 3 research reports are completed by Jun 2003 3) The first 2 education programs are implemented by February 2004 Evaluation by participants of model training courses</p>	<p>1) Project record 2) Questionnaire and interview 3) USP statistics</p>
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Activities	Input Japanese side:	USP side	Pre-conditions 1. Commitment willingness of participants 2. Low turnover of counterparts
1. CS Component 1) To nurture less experienced CS lecturers from member countries through on the job training and short/long term training in Japan 2) To increase a variety of courses at Suva main campus both in face-to-face mode and through networks via satellite from Japan 3) To develop model DFL CS courses and research the acquisition of courses with University Extension 4) To enhance CS laboratories to utilize the latest software	1. Computing Science Component 1) Dispatch of long-term and short-term experts 2) Long-term and short-term education of counterparts in Japan 3) Equipment of CS laboratories (Suva, Lautoka, and Labasa) 2. Distance Learning Component 1) Dispatch of long-term and short-term experts 2) Long-term and short-term education of counterparts in Japan 3) Equipment necessary for development and management of courseware 4) Video conference/broadcasting audio systems and related equipment at Lautoka and Labasa centers 5) Equipment necessary for enhancement of USPNet	1) Counterparts 2) Trainees 3) Necessary space for equipment of CS laboratory 1) Counterparts 2) Trainees 3) Operational and maintenance costs 4) Operational and maintenance costs 5) Operational and maintenance costs	
3. IT R&T Component 1) To establish mechanism for research and model training programs 2) To conduct research to identify the contents of training programs 3) To implement the model education modules 4. Project Management 1) To establish a coherent mechanism for planning, monitoring, evaluation, and reporting of the project 2) To have Joint Coordination Committee (JCC) and Operations Committee regularly 3) To publicize through various media such as Internet or newspapers	3. IT Research and Training Component 1) Dispatch of long-term and short-term experts 2) Necessary equipment to conduct research and education modules 3) Training materials <u>*Evaluation by students and staff</u> Indicators could be "more than 80 % students evaluate the course "satisfactorily" (more than 4 in the 5 ranking)"	1) Counterparts	

PLAN OF OPERATION (PO) FOR THE WHOLE PROJECT PERIOD

Date: June 2002 Annex 12.

Project title: Information and Communication Technologies(IT) Capacity Building at the USP Project Period: 1 July 2002 ~ 30 June 2005 1/1

Activities	2002				2003				2004				2005			
	July				July											
1. CS Component																
1)To nurture less experienced CS lecturers from member countries through on the job training and short/long term training in Japan																
2)To increase a variety of courses at Suva main campus both in face-to-face mode and through networks via satellite from Japan																
3)To develop model DFL CS courses and research the acquisition of courses with University Extension																
4)To enhance CS laboratories to utilize the latest software																
2. DFL Component																
1)To educate staff who develop multimedia resources for DFL through on the job training and short/long term training in Japan																
2)To improve mechanism of the operational course development management system																
3)To develop model DFL courses																
4)To enhance and expand USPNet into Lautoka and Labasa centers																
3. IT R&T Component																
1)To establish mechanism for research and short-term model training courses																
2)To conduct research to identify the training needs																
3)To implement the short-term model training courses																
4. Project Management																
1)To establish a coherent mechanism for planning, monitoring, evaluation, and reporting of the project																
2)To have Joint Coordination Committee (JCC) and Operations Committee regularly																
3)To publicize through various media such as Internet or newspapers																

Term of Reference (TOR) for the long-term Japanese experts

1. Computing Science

- 1) Plan, monitor, and evaluation of the activity with counterpart
- 2) Mentor young CS staff from member countries such as tutor or assistant lecturers
- 3) Support for development of CS distance learning courses including development of courseware
- 4) Give lectures as model undergraduate and postgraduate courses with unit both on campus and through the extension mode
- 5) Any other responsibilities necessary to enhance the project

2. Distance and Flexible Learning

- 1) Plan, monitor, and evaluation of the activity with counterpart
- 2) Educate UE staff to develop and manage external courses using IT such as streaming media or web based multimedia database
- 3) Support UE staff to establish the mechanism of evaluation of multimedia material
- 4) Support for development of CS distance learning courses including development of courseware
- 5) Any other responsibilities necessary to enhance the project

3. IT research and training

- 1) Plan, monitor, and evaluation of the activity with counterpart
- 2) Support USP staff to establish the mechanism of IT research and training
- 3) Support and implement the research with short-term experts and USP counterparts
- 4) Support and implement the model training course with short-term experts and USP counterparts
- 5) Any other responsibilities necessary to enhance the project

List of Equipment for 2002 (TENTATIVE) ANNEX14

No	Item	Reference
1	<u>Computing Science</u> Computer at Suva	Gateway Performance 1500, equivalent or more
2	Computer at Labasa	Gateway Performance 1000CSE
3	Computer at Lautoka	Same as above
4	Software at Lautoka and Labasa	
5	Printer at Lautoka and Labasa	Epson LP-2200
6	Hub	PCI FMX-48NX
7	<u>DFL (Lautoka and Labasa)</u> TV Conference system(Codec)	Polycom 1s ViewStation V.35 or compatible/equivalent.
8	Monitor	
9	Projector	compatible with ViewStation V.35 (Polycom).
10	Multimedia Computer	Same as No1
11	Set of microphone	
12	Screen	
13	Set of speaker	YAMAHA NS-10N or equivalent
14	Vhicle	
15	<u>DFL (Course Development)</u> Set of Server for Database	PowerEdge 2500 Raid 5 + Hot spare model
16	Set of Server for Streaming media	PowerEdge 2500 Raid 5 +Hot spare model
17	Streaming server software	RealSystem Server Plus 8.0
18	Computers	Dell Dimension 8200
19	Set of Multimedia software	Adobe Premiere_ 6.0, Adobe Photoshop 7.0, Macromedia Dreamweaver 4, Syntrillium Cool Edit Pro 2.0, Cleaner 5, Swish 2.0
20	Black and White Printer(Desktop page printer)	Epson LP 8100
21	Colour image scanner	Epson GT-8200UF
22	DVCAM VTR	DSR-11
23	Set of LCD Projector	EPL-7700
24	Lamp for LCD Projector	ELPLP12
25	ET cartridge	LPA3ETC7
26	Headfone	K240 Monitor
27	Set of Digital Camera	FinePix 6900 Zoom
28	Set of Digital Video Camera	DSR-PD150P
29	Degital Video tape	PDVM-40N
30	Computer for Streaming media	Dell Dimension 8200
31	Non-liner video edit machine	Power Mac G4B, Final Cut Pro
32	Set of microphone	ECM-77BMP, WRT-805A, WRR-810A
33	Set of sound library	Digital effects library 6000

Tentative list of Staff Training in Japan (Japanese Fiscal Year 2002) Annex 15

No	Contents	Candidates	Period (month)
1)	Visit for higher education institution utilizing Multimedia	Project Director	0.5
2)	Multimedia Production for education and communication	Staff at UE	5
3)	Network Development	Staff at ITS/USPNet or related	3
4)	Computing Science	Counterpart at CS	3

USP counterparts

Name(position)

CS:

Maletino Hola (tutor, CS)

Dinesh Kumar (Assistant Lecturer, CS)

Sunil Lal (Assistant Lecturer), CS

DFL:

Valentine Hazelman (Course Development Assistant, University Extension)

Alanieta Lesuma (Course Development Assistant, University Extension)

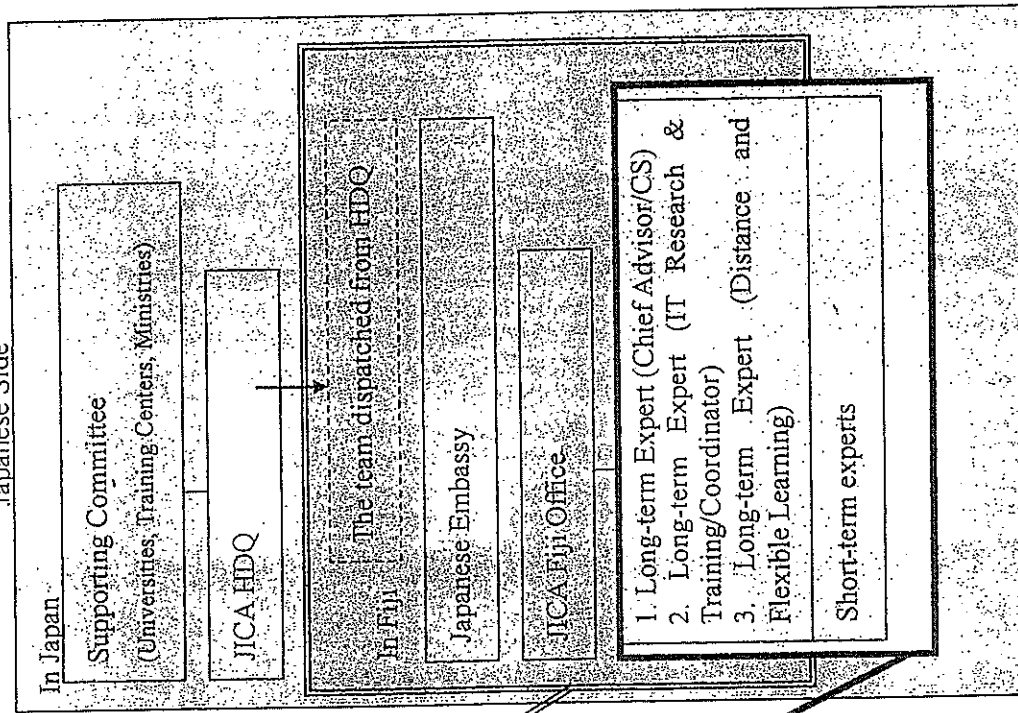
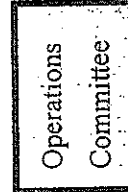
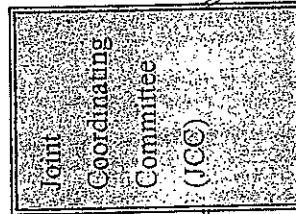
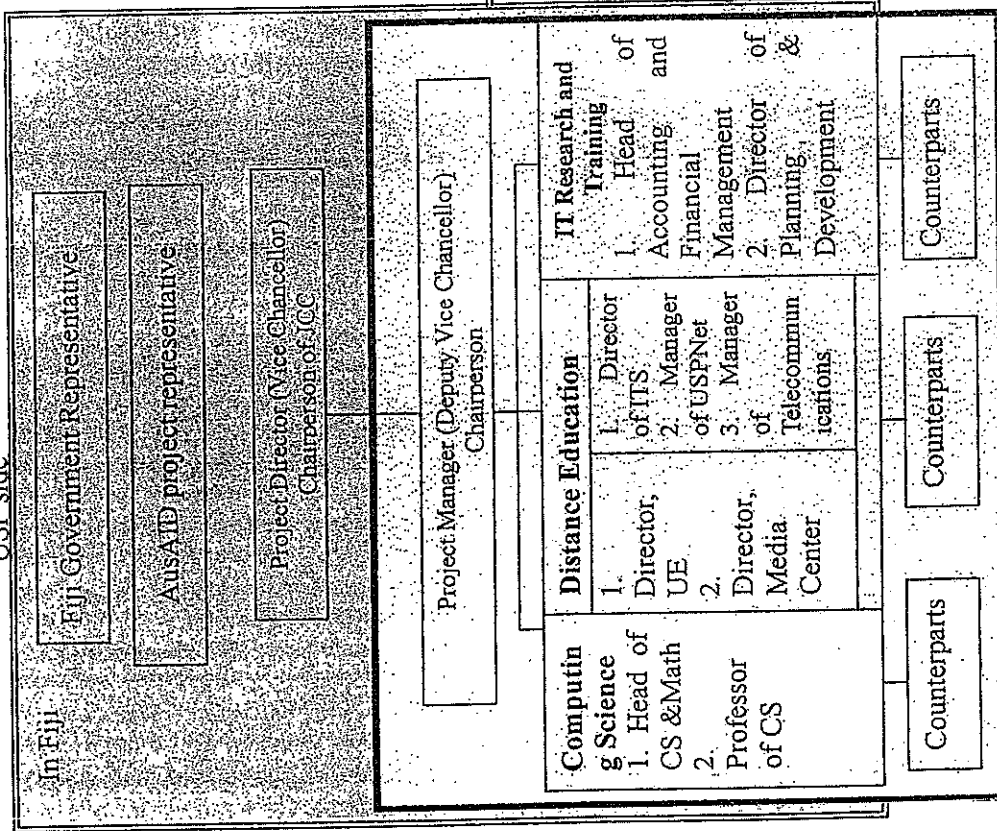
Seni Nabou (Senior Textprocessor, University Extension)

(to be decided later)

IT R&T

(to be decided later)

USP side



* Additional members of Operations Committee can be co-opted.

Example of Monitoring

1. Planning

In the initial stage of the project, USP counterparts and JICA experts in each component will make a Plan of Operation (PO) based on PDM for both 3 years and the first year, which should include indicators of achievement. Then, they will breakdown the first year PO into weekly level.

2. Monitoring

Considering evaluation, USP counterparts and JICA experts will decide the way of monitoring and documenting such as person in charge, frequency, and the way of documenting.

3. Reviewing

USP counterparts and JICA experts will report the progress of the activity based on monitoring record.

4. Utilizing

Monitoring record will be utilized to examine mainly the PDM and PO. If monitoring record shows the gap between plan and actual achievement, USP counterparts and JICA experts will need to review the plan and change it if necessary

Mid-term evaluation

Main intended users: Project staff (USP C/P and experts) and JICA staff

Main intended use: Facilitating improvement of the project

Final evaluation

Main intended users: JICA staff and Project staff (USP C/P and experts) and

Main intended use: Generating knowledge, overall judgement, and responsible for accountability

Example of evaluation

Evaluation item	Study item	Necessary information/data	Information or data resources	Study method
Achievement	Possibility of achievement of overall goal	Refer to PDM	Refer to PDM	*1
	Possibility of achievement of project goal	Refer to PDM	Refer to PDM	*1
	Achievement of output	Refer to PDM	Refer to PDM	*1
	Achievement of input	<ul style="list-style-type: none"> • Number of experts • Equipment • Cost 	<ul style="list-style-type: none"> • Monitoring report • Project record 	Report review
Implementation process	Progress of activity	Refer to PDM	Monitoring report	Report review Interview
	Implementation of monitoring	<ul style="list-style-type: none"> • Mechanism of monitoring • Change of activity 	Monitoring report	Report review
	Relationship between C/P and experts	<ul style="list-style-type: none"> • Communication • The way of problem solving • Change of C/P 	Monitoring report	Report review Interview
	Activity for targeting beneficiaries	Raising awareness	Monitoring report	Report review Interview
	Ownership of USP	<ul style="list-style-type: none"> • Participation • Budgetary allocation • Appropriateness of C/P 	<ul style="list-style-type: none"> • Taking initiative or participation for meeting or activity • Project record 	Report review Interview
Efficiency	*1	*1	*1	*1
Effectiveness	*1	*1	*1	*1
Impact	*1	*1	*1	*1
Relevance	*1	*1	*1	*1
Sustainability	*1	*1	*1	*1

*1 It should be discussed in the project later

Annex20 Telecommunication Infrastructure of PIC (1998)

Countries	Main landline telephone per 100 people (k)	Mobile phone per 100 people (k)	Number of Internet host per 10,000 people	Number of TV per 100 people (k)	Number of radio per 100 people (k)
Fiji	76.9 (9.76)	8.0 (1.02)	214 (2.71)	80 (10.13)	490 (61.5)
Kiribati	2.8 (3.44)	—	—	2 (2.5)	17 (21.3)
Marshall Islands	3.7 (6.24)	0.3 (0.57)	—	—	—
Nauru	1.7 (14.98)	0.9 (7.49)	—	—	6 (58.2)
Samoa	8.5 (4.87)	3.0 (1.72)	2 (0.12)	9 (5.29)	175 (105.4)
Solomon Islands	7.9 (1.89)	0.7 (0.17)	20 (0.48)	6 (1.43)	55 (14.1)
Tonga	7.8 (7.90)	0.3 (0.31)	—	5 (5.00)	60 (61.2)
Tuvalu	0.6 (5.50)	—	—	—	4 (40.0)
Vanuatu	5.2 (2.84)	0.2 (0.12)	—	2 (1.11)	60 (34.5)
Australia	9540.0 (50.93)	5342.0 (28.52)	792000 (422)	13200 (70.40)	25000 (138.5)
New Zealand	1868.0 (49.05)	790.0 (20.74)	137000 (360)	1950 (51.19)	3700 (102.7)

Source : World Telecom and Visual databook 2001, Japan ITU * K is 1,000

(AusAID)

<http://www.ausaid.go.au>

(JICA)

<http://www.jica.go.jp>

(USP)

<http://www.usp.ac.fj>

University Extension Annual Report 2000 (2000)

USP Statistics (2000)

USP Strategic Plan (1997)