第4章　プロジェクトの妥当性の検証

第4章　プロジェクトの妥当性の検証

4－1　プロジェクトの効果

USPは、前述のとおり遠隔地である太平洋島嶼国地域に対しUSPNetを活用した遠隔教育活動を実施している。従って USP の ICT 分野を支援して行く事はプロジェクト目標であるデジタルデバイドの緩和に大きく貢献することになると判断される。

USPへの学生入学希望者は増加の一途で、特にICT、アカウンティング関連の人気が高い。 しかし、コンピュータ科学科は急造した木造校舎にあり、スペース不足に加え学生が使用するコンピュータも不足し設置環境は劣悪な状態である。

本計画の実施により、ICT 環境の緩和は USP の学生のみならず 12 カ国の太平洋島嶼国に裨益効果が及ぶことになる。

本計画が実施されることによる効果は、下記のように整理することができる。

表 4-1　計画実施による効果と現状改善の程度

現状と問題点	本計画での対策 (協力対象事業)	計画の効果・改善程度
太平洋地域は、広大な海洋に島嶼が散在する特異な地理的条件下にあり、この域内における情報格差(デジタル・デバイド)が著しく、また通信インフラ自体が未発達なため、人材育成も困難であり、これまで IT を活用した産業は発達してこなかった。 一方、USP への学生入学希望者は増加の一途で、特に ICT、アカウンティング関連の人気が高い。 しかし、コンピュータ科学科は急造した木造校舎にあり、スペース不足に加え学生が使用するコンピュータも不足し設置環境は劣悪な状態である。	USP のラウザラキャンパスに、300 人の多目的講堂を含む共用部、コンピュータ科学科、IT サービス部、研究・開発部、工学科から構成される ICT センターの施設建設および機材の調達。	・USP のコンピュータ学習環境が整備され、ICT 関連の入学者数、卒業生数、就職者数が増加する。 ・「フ」国(約 84.8 万人)および太平洋島嶼国(約 110 万人)の情報格差が緩和する。 ・直接裨益する USP の学生数は「フ」国を含めた 12 カ国の太平洋島嶼国のキャンパスを合わせた 21,131 人(2006 年)であるが、太平洋島嶼国の情報通信技術の発展による社会経済開発を促進する事が期待される。

なお、評価のタイミングは最終的に施設・機材を引き渡す 2010 年から 2 年経った 2012 年以降が適当と考える。

表 4-2　成果指標

成果指標	2006 年	ICT センター開設後
ICT関連カリキュラム数	63 コース/年間	88 コース/年間
社会人向け ICT 関連コース開催可能時間数	24 時間/週	48 時間/週
USP のコンピュータ科学科の卒業者数	179 名	増加
ICT 関連への就職者数	97 名(2004 年)	増加

1）ICT関連カリキュラム数

ICT センターが整備され、必要とされる実習室が確保されICT 関連のカリキュラム数の増加が可能となる。

2）社会人向け ICT 関連コース開催可能時間数

ICT センターが整備され専用の実習室が増加し、社会人向けコースの増加が可能となる。

3） USP のコンピュータ科学科の卒業者数

ICT センターが整備され、学習環境が改善され卒業者数が増加する。

4） ICT 関連への就職者数

ICT センターが整備され、ICT のスキルを持った卒業者数の増加にともない、ICT 関連への就職者数が増加する。

上記以外に本プロジェクトの実施により、USP には以下の直接効果と間接効果を期待できる。

(1) 直接効果

・増加する入学者、特に ICT、会計関連学生が使用するコンピュータが 402 台から 688 台(ICT センター内 446 台(日本側調達 285 台)、既存施設 242 台)に拡大され、ICT 教育環境が改善される。

・空調効率を上げるため危険な断熱材を使用しているコンピュータ科学科の劣悪な木造校舎のコンピュータ設置環境が改善される。

・コンピュータ実習室が整備され、2006 年現在、コンピュータ科学科の年間 63 コースのカリキュラム数から年間 88 コースへの増加が可能となる。

・300 人の多目的講堂を整備する事により、既存の 242 名収容の講堂の過密状態が改善される。

・社会人向け ICT 関連研修コース開催可能時間が週 24 時間から 48 時間に拡張される。

・IT サービス部のサーバーの機器と設置環境が改善され学内のネットワーク環境の信頼性が増す。

・外部組織と共同研究・開発を行う研究開発部が整備され、研究開発部門が強化される。

(2) 間接効果

・ USP に情報通信技術の中核的教育・研究センターを設置することにより、IT のスキルをもった人材が供給され、大洋州の島嶼国家が世界的な情報社会へ容易に参加できるようになる。

・「フ」国及び大洋州の島嶼国がこのセンターを活用して ICT 分野の指導者の養成と研究開発が促進され、メディアの分野において、人材開発、教育、環境保全、社会・文化の発展に資する ICT の可能性を開発する事が可能となる。

・ 情報通信工学科が新設され島嶼国で不足するこの分野の技術者が供給される。

・ ICT 教育環境が強化され、ICT 関連職種への就職機会が増加することが期待される。

4－2 課題・提言

本プロジェクトの実施による施設建設、機材調達を最大限に活用し、その効果を発揮、持続するために「フ」国政府および USP が取り組むべき課題を以下に示す。

4-2-1 相手国側の取り組むべき課題・提言

(1) 施設・機材のメンテナンス

当大学の財務は赤字体質とはなっておらず、財務体質の健全性は保たれており、光熱費、通信費、保守管理、営繕費の合計額は年間歳出額の約 10％前後が確保されていることに加え、諸施設の維持管理窓口は営繕部（Planning & Facilities）であり、その下に総勢約 70 名の体制となっており、十分な運営・維持管理能力を備えていると判断される。

IT 機材に関しては IT サービス部がすべて対応しており、ICT センターの施設と機材の運営・維持管理能力に問題は見当たらない。

しかし、本施設はコンピュータラボを中心とした施設であり、機材の寿命を考慮した結果、空調面積が施設全体の 60%弱となる。従って、空調機器の保守維持管理を十分に行うことおよび電気使用料を十分確保することを提言する。

(2) USPNet のアップグレード

1990 年初頭には USP が太平洋島嶼国で初めて e-mail システムを導入し、2000 年には JICA の支援により衛星通信を利用した 64Kbps の音声、データ回線と 128kps のビデオ回線を用いる USPNet を完成させ、10～15 コマ/秒の粗い品質ではあるが映像を利用した遠隔教育システムを実施していた。その後、2005 年から 2006 年にかけて衛星通信の IP 化と増速を行い、従来より約 25 倍の速度アップを達成した。

その結果、衛生通信による遠隔教育プログラム(Distance & Flexible Learning)をアウトは4Mbps、インは 3Mbps で双方向の通信(テレビ会議など)で実施可能となった。

しかしながら、マルチセッション(複数サイトの接続)による双方向通信を行うためにはまだ通信速度は不十分である。したがって、本プロジェクトが完成しさらに有効に活用されるためにはより一層の速度アップが望まれる。

(3) インターネット環境

2005 年 3 月 4 日にオーストラリア政府の協力によりサザンクロス・ケーブル経由で AARNET (Australian Academic Research Network)へ接続された結果、インターネット接続環境は1Mbps から 155Mbps に大幅に改善された。

しかしながら、今後のインターネット技術の進歩を鑑みると、ICT センター開設後は更なるインターネット接続環境の増速強化が望まれる。

4-2-2 技術協力・他ドナーとの連携

我が国は 2000 年に無償資金協力により「USP 通信体系改善計画」を実施し、2002 年からは「USP 遠隔・情報通信技術強化プロジェクト」(プロジェクト技術協力)が実施された。2003 年には、日本(JICA)の「USP 遠隔教育・情報通信技術強化プロジェクト」に対しオーストラリアとニュージーランドが

協調した経緯がある。

USPからは本プロジェクト完成後、ICTセンターの運営や講師の派遣と技術サポートに関する専門家やスーパーバイザーの派遣、さらにはカウンターパートの研修などの要望があるので、日本側としてはプロジェクト方式の技術協力実施の検討を視野に入れる必要がある。

4－3　プロジェクトの妥当性

本計画は、以下に述べる(1)～(5)の理由から、我が国の無償資金協力による協力対象事業として妥当であると判断される。

(1)　USPは、1968年に周囲12の島嶼国と地域（フィジー、クック、キリバス、マーシャル、ナウル、ニウエ、ソロモン、トケラウ、トンガ、ツバル、バヌアツ、サモア）が共同設立した域内最高水準の国際高等教育機関で、「フ」国および大洋州全域に裨益する。

(2)　現在、USPはICT関連学科への応募が増加し、講堂、コンピュータ実習室をはじめとした施設不足から学生が満足に学習できない状態にある。本プロジェクトの実施により、ICT 関連学生の学習環境が充実しICT関連学生の卒業生の増加が見込まれる。

(3)　引渡し後の ICT センターは、施設・機材とも特別に高度な技術を必要とするものはなく、現在の要員で運営が可能である。また、USPの過去の予算から判断して、引渡し後の運営予算は無理なく確保される見通しである。

(4)　「フ」国は、デジタル化の推進によりマーケットに潜在する知識・情報が十分に活用された経済と、情報通信能力のある市民により、太平洋において力強くダイナミックな情報通信技術の中心国家となるビジョンを掲げている。「フ」国および南太平洋島嶼国は積極的な協力関係を国家の重要な基本政策としており、当域内での連帯強化を図っている。また人材育成にも熱心なUSPの活動強化に対し、南太平洋島嶼国は「フ」国政府同様強い関心を持っていることから本プロジェクトであるICT センターの建設および機材の調達は、域内の情報格差を緩和し、社会経済開発の促進に資するものである。

(5)　建設地はUSPのキャンパス内の国から1968年に99年間の借地をしている土地で、本プロジェクトの建設には支障がないことを確認している。既存建物撤去工事および整地工事等も USP 側にとって過

度な負担となる金額ではない。インフラ設備もキャンパス内ということもあり支障となる問題は見当たらない。また、「フ」国教育省は我が国の無償資金協力案件を受け入れた経験を有しており、本プロジェクトを我が国の無償資金協力の制度で実施することに特段の困難は見出されない。

4－4　結論

本プロジェクトは、前述のように多大な効果が期待されると同時に、本プロジェクトが「フ」国及び太平洋島嶼国のデジタルデバイド緩和に寄与するものであることから、協力対象事業の一部に対して、我が国の無償資金協力を実施することの妥当性が確認される。さらに、本プロジェクトの運営・維持管理についても、相手国側体制は要員・資金ともに確保する能力は十分であると判断される。

また、人員の確保、施設・機材に対するメンテナンスの実施、予算の確保等が確実に行なえれば、ICT センターの運営は発展し、「フ」国および島嶼国のデジタルデバイドの緩和につながると考えられる。

資　料　編

1. 調査団員氏名、所属
2. 調査行程
3. 関係者（面会者）リスト
4. 事業化調査　ミニッツ
5. 事業化調査概要説明　ミニッツ
6. 事業事前計画表（基本設計時）
7. 参考資料／入手資料リスト
8. 要請機材リスト/計画機材リスト

1. 調査団員氏名、所属

1-1　事業化調査

担　当	氏　名	調査期間	所　属
1）団　長	小林　秀弥	7 月 23 日～7 月 28 日	国際協力機構 無償資金協力部 業務第二グループ
2）業務主任	古池　廣行	7 月 23 日～8 月 6 日	（株）梓設計
3）施工計画／積算	星合　善文	7 月 23 日～8 月 6 日	（株）梓設計
4）ICT 設備計画／調達計画／積算	田島　　薫	7 月 23 日～8 月 6 日	（株）梓設計

1-2　事業化概要説明調査

担　当	氏　名	調査期間	所　属
1）団長	三国　成晃	10 月 22 日～10 月 27 日	国際協力機構 フィジー事務所次長
2）業務主任	古池　廣行	10 月 22 日～10 月 27 日	（株）梓設計
3）ICT 設備計画／調達計画／積算	田島　　薫	10 月 22 日～10 月 27 日	（株）梓設計

2. 調査行程

2-1　事業化調査

2007 年 7 月 23 日～2007 年 8 月 6 日(15 日間)

7 月 23 日	月	19:00	FJ303 にて成田出発
7 月 24 日	火	06:45 14:00 15:00 16:00	ナンディ着 JICA フィジー事務所表敬 大使館表敬 USP 表敬、協議
7 月 25 日	水	09:00 11:00 14:00 15:30	各担当とスケジュール調整 USP キャンパス調査 教育省表敬 施設・機材内容、プロジェクトスケジュールの確認
7 月 26 日	木	09:00 11:00 12:30 14:00 16：00	施設・機材内容の確認 IT サービス部と打合せ/サブコン訪問 コンピュータ科学科とカリキュラム打合せ 工学科とカリキュラム打合せ/資材店調査 資料整理
7 月 27 日	金	9:00 10:00 12:00 12:30 13:30 14:00 16:00	ミニッツ協議 ミニッツ署名 JICA フィジー事務所報告 大使館報告 教育省大臣表敬 IT サービス部打合せ/資材店調査 敷地調査
7 月 28 日	土		団内会議 資材店調査/機材代理店調査 官団員帰国
7 月 29 日	日		資料整理
7 月 30 日	月	09:00 10:00 11:15 14:00-17:00	コンピュータ科学科とカリキュラム打合せ 工学科とカリキュラム打合せ 学務部長打合せ 資材店調査

			サブコン訪問
7 月 31 日	火	9:00 10:30 14:00 15:00-17:00	団内会議 IT サービス部と機材の打合せ メディアセンターと AV 機器打合せ 建設資材調査/サブコン訪問
8 月 1 日	水	9:00 10:00 14:00 15:30	財務部長と運営計画の打合せ メディアセンターと AV 機器打合せ/統計局訪問 IT サービス部と機材の打合せ/労働省訪問 消防署訪問
8 月 2 日	木	10:00 11:00 14:30-17:00	環境省訪問 資材店訪問/機材代理店調査 サブコン訪問/IT 機材代理店調査
8 月 3 日	金	10:00 11:30 14:00 14:30 15:30	資材店調査 USP キャンパス調査 JICA フィジー事務所報告 大使館報告 サブコン訪問
8 月 4 日	土		団内会議 資機材調査
8 月 5 日	日		団内会議 ナンディに移動
8 月 6 日	月	10:00 17:00	FJ302 にてナンディ発 成田着

2-2 事業化概要説明調査

2007 年 7 月 22 日～27 日(6 日間)

10 月 22 日	月	19:00	FJ303 にて成田出発
10 月 23 日	火	06:45 14:00 15:00 16:00	ナンディ着 JICA フィジー事務所表敬 JICA フィジー事務所にて内部打合せ ミニッツ案準備
10 月 24 日	水	09:00 10:30 14:00 15:00 16:30	USP 表敬/ドラフトレポートの提出/ミニッツ案の説明 スケジュール調整 財務部長と運営計画の打合せ IT サービス部と機材計画打合せ 団内会議/資料整理
10 月 25 日	木	9:00 10:00 11:30 14:00 16:00	IT サービス部と打合せ 教育省次官補と面談／ミニッツ案提出 営繕部長と敷地のクリアランスに関する確認 コンピュータサイエンス学科との打合せ メディアセンターと打合せ
10 月 26 日	金	09:00 10:00 12:00 14:30 16:00	ミニッツ署名 メディアセンターと打合せ JICA フィジー事務所報告 大使館報告 ｽﾊﾞ→ﾅﾝﾃﾞｨ(陸路)
10 月 27 日	土	10:50 17:00	FJ302 にてナンディ発 東京着

3. 関連者（面会者）リスト

教育省	
Mr. Hon. Netani Sukanaivalu	教育大臣
Mr. Ram Chandara	事務次官補
南太平洋大学（USP）	
Dr. Esther Williams	副学長代理
Dr. Eci Nabalarua	副学長代理
Mr. Walter Fraser	総務部長
Mr. Sam Fonua	副学長顧問
Mr.Mark Lewis	計画部長
Mr. Kevin Davis	財務部長
Mrs. Saane Pongi	計画部職員
Ms. Leigh-Anne Buliruarua	計画部職員
Mr. Jeremy Henderson	営繕部部長
Dr. Jito Vanualailai	数学コンピュータ学科長
Mr. Nitesh Nand	数学コンピューター学科
Prof. Godfrey Onwubolu	エンジニアリング学科長
Mr. V. Ramachandran	物理学科シニア講師
Mr. Josese Ravuvu	IT サービス部長代理
Mr .Fedeti Atalifo	IT サービス部　開発課長
Mr. Simon Greaves	IT サービス部　ネットワーク、システム担当
Mr. Peni Sigabalavu	IT サービス部　ユーザーサービス課長
Mr. Raymond H Lee	IT サービス部
Mr. Irish Lal	メディアセンターUSPnet　エンジニア
Ms. Seini Wainikesa	メディアセンターUSPnet ビデオ技術者
Ms. Linda Austin	メディアセンターコーディネーター
在フィジー　日本国大使館	
滑川　雅士	特命全権大使
松尾　龍志	一等書記官
渡邉　弘	二等書記官
JICA　フィジー事務所	
武下　悌治	所長
三国成晃	次長
池　哲広	次長
若杉　聡	所員
スバ市	
Suva City council	
Mr. Jagdish Singh	技術サービス部長
Ms. Asenaca Nawaqalevu	都市計画家
統計局	
Fiji Island Bureau of Statistics	
Mr. Asikinasa Toga Raikoti	部長代理
Mr. Subra Mani	国家統計課長代理
消防署	
National Fire Authority	
Mr. JHON LOW	消防局長
Mr. Mark Reid	消防課長

環境省	
Ministry of Environment	
Mr. Epeli Nasome	環境部長
気象局	
Meteorological Office	
Mr. Asao Ali	ナウソリ空港担当
建設会社	
LOMAC Construction Co Limited	
Mr. Robin N Maginnity	部長
Downer Construction (Fiji) Ltd	
Mr. Ken Seward	フィジー支店長
J.S .Hill & Associates Ltd	
Mr. Vijay Raj Goundar	積算部長
COPE Construction LTD	
Mr. KITIONE	現場所長 / 積算部長
Mr. SATISH	現場監督
建材会社	
R.C. MANUBHAI & CO.LTD	
Mr. Jittendra M. Patel	役員
Mr. RAKESH LAL	現場所長
VINOD PATEL	
Mr. Govind Sami	家具担当部長
家具	
Samabula furniture	
Mr. Rajan Swamy	常務取締役
Interioz (Fiji) Ltd	
Mr. Aiyub Aziz	販売・生産部長
コンクリートプラント	
Standard	
Mr. Sheik Alam	東部担当営業部長
Metromix Concrete Company Ltd	
Mr. Atish Ram	ラミ担当調達部長
プレキャストコンクリート	
HUME	
Mr. Mosese Natuilagilagi Waqavakatoga	ジェネラルマネージャー
Mr. Aloesi Elder	プロジェクトマネージャー/ 管理部長
アルミサッシ	
Viewtech	
Mr. Patrick Chang	社長
Mr.Samuto Chang	ジェネラルマネージャー
警備会社	
MATRIX Risk Management Ltd	
Mr. Aklesh Kumar	オペレーション担当マネージャ
ADT	
Mr. Ajay Ram	情報技術コーディネータ
Mr. Francis Chand	契約担当
不動産会社	
Raine & Home	
Mr. Ajeet Kumar	上席管理者/賃貸コンサルタント

Jokham Ralators	
Mr. Reginald Jokham	
コンピュータ会社	
VT Solutions	
Mrs. Geeta Ram Mudaliar	セールス主任
Mrs. Christine Taylor	顧客主任

MINUTES OF DISCUSSIONS ON THE IMPLEMENTATION REVIEW STUDY ON THE PROJECT FOR THE CONSTRUCTION OF THE UNIVERSITY OF THE SOUTH PACIFIC INFORMATION AND COMMUNICATION TECHNOLOGY CENTRE IN THE REPUBULIC OF FIJI ISLANDS

In response to a request from the Government of the Republic of Fiji Islands (hereinafter referred to as "Fiji"), the Government of Japan decided to conduct an Implementation Review Study on the Project for the Construction of the University of the South Pacific Information and Communication Technology Centre (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Fiji the Implementation Review Study Team (hereinafter referred to as "the Team"), which is headed by Mr. Hideya Kobayashi, Chief, Education and Vocational Training Team, Project Management Group II, Grant Aid Management Department of JICA, and is scheduled to stay in the country from July 24th to 28th, 2007.

The Team held discussions with the officials concerned of the Government of Fiji and the University of the South Pacific and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described on the attached sheets. The Team will proceed to further works and prepare the Implementation Review Study Report.

Suva, July 27th, 2007

小林秀弥

Mr. Hideya Kobayashi
Leader
Implementation Review Study Team
Japan International Cooperation Agency

Esther Williams

Dr. Esther Williams
Acting Vice-Chancellor
University of the South Pacific

Mr. Ram Chandar
Deputy Secretary Professional
Ministry of Education
Republic of Fiji Islands

ATTACHMENT

1. Objective of the Project

The objective of the Project is to strengthen the capacity of the University of the South Pacific (USP) to deliver quality ICT education, training and related research and development, to more Pacific Islanders through establishment of the Information and Communication Technology Centre (hereinafter referred as "the ICT Centre").

2. Project sites

The site of the Project is at the Laucala Campus of USP as shown in Annex-1.

3. Responsible and Implementing Organization

3-1.The responsible Organization is the Ministry of Education.

3-2.The implementing Organization is USP.

The current Organization chart of USP (with the proposed ICT Centre) is attached as Annex2-1

The Organization chart of project development for the ICT Centre is attached as Annex2-2

The Organization chart of the ICT Centre is attached as Annex2-3

4. Items requested by the Government of Fiji

After discussions with the Team, the items described in Annex-3 were finally requested by Fiji side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

4-1. Construction of the Buildings and Facilities

Details of items are listed in Annex-3-1

4-2. Procurement of the Equipment

Details of items are listed in Annex-3-2

5. Japan's Grant Aid Scheme

Fiji side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Fiji as explained by the Team and described in Annex-4 and Annex-5.

6. Schedule of the Study

6-1.The consultants will proceed to further studies in Fiji until August 6th, 2007.

6-2.JICA will prepare the draft report in English and dispatch a mission in order to explain its contents around the end of October 2007.

6-3.Upon acceptance of the report in principle by the Government of Fiji and USP, JICA will complete the final report and send it to the Government of Fiji by around December 2007.

7. Other relevant issues

7-1. Naming of the ICT Centre

Both sides agreed in principle that the ICT Centre would be named as "Japan-Pacific ICT Centre" for a better cooperation between the Pacific region and Japan.

7-2. Curricula at the ICT Centre planned by Fiji side

In the series of discussions USP explained the curricula, including education, training and related research and development programs, at the ICT Centre. The consultants will confirm the further details of the curricula, and then JICA will assess the appropriateness of the curricula for the achievement of the project objective and confirm the consistency between the curricula and the requested items.

7-3. Procurement of the application software

The Team explained that it is difficult to procure application software which USP wanted because particular software could not be designed in tender. USP recognized and agreed to procure the application software needed for the Project by USP, except for the operating system.

7-4. Operation and maintenance

USP agreed to allocate necessary budget and sufficient number of teaching, technical and administration staff for the proper operation and maintenance of facilities and equipment procured by the Project.

7-5. Necessities of Technical Cooperation

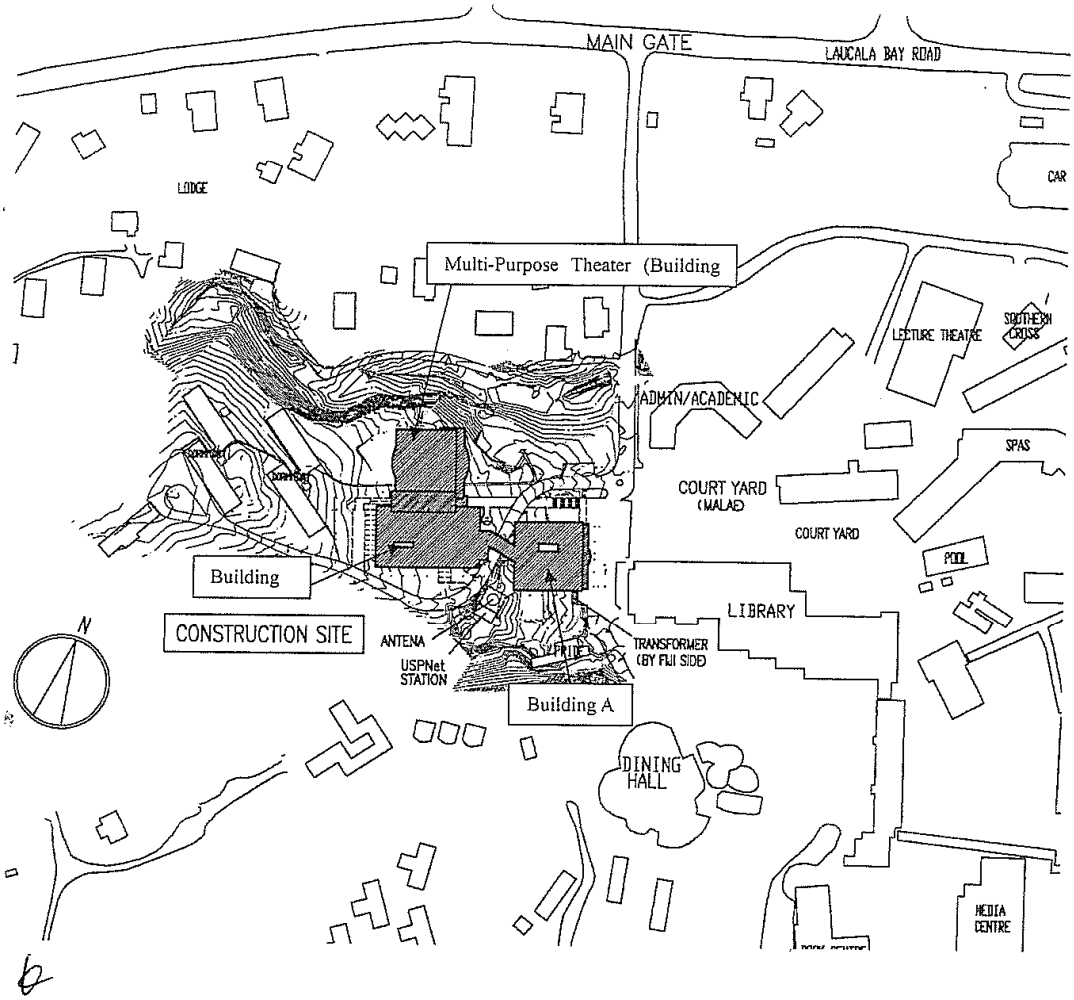
For the sake of the technology transfer on sustainable management of the ICT Centre, the Fiji side pointed out the need for dispatch of Japanese experts as well as technical training of counterpart personnel in Japan.

7-6. Project plans at the ICT Centre financed by any other donors

The Team requested the Fiji side to provide the project plans at the ICT Centre financed by any other donors. The Fiji side promised to submit the report to the Team by the 1st of August 2007.

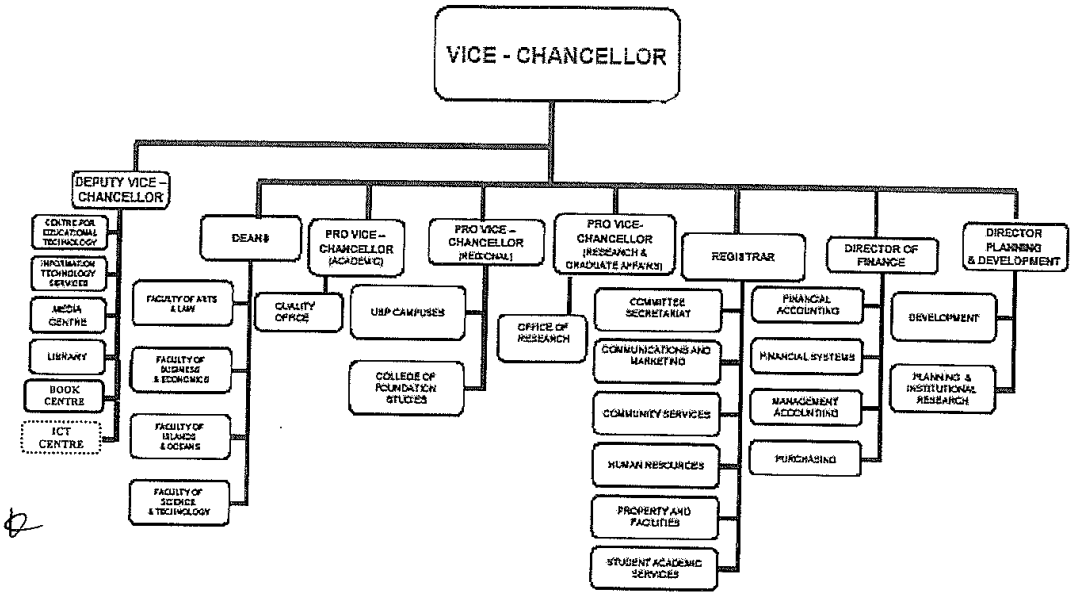
Annex-1: Location map of the Project
Annex-2: Organization chart of USP
Annex-3: Items requested by the Government of Fiji
Annex-4: The Japan's Grant Aid Scheme
Annex-5: Necessary undertakings to be taken by each government
Annex-6: Curricula at the ICT Centre planned by Fiji side

Annex-1 Location Map of the Project and Layout Plan

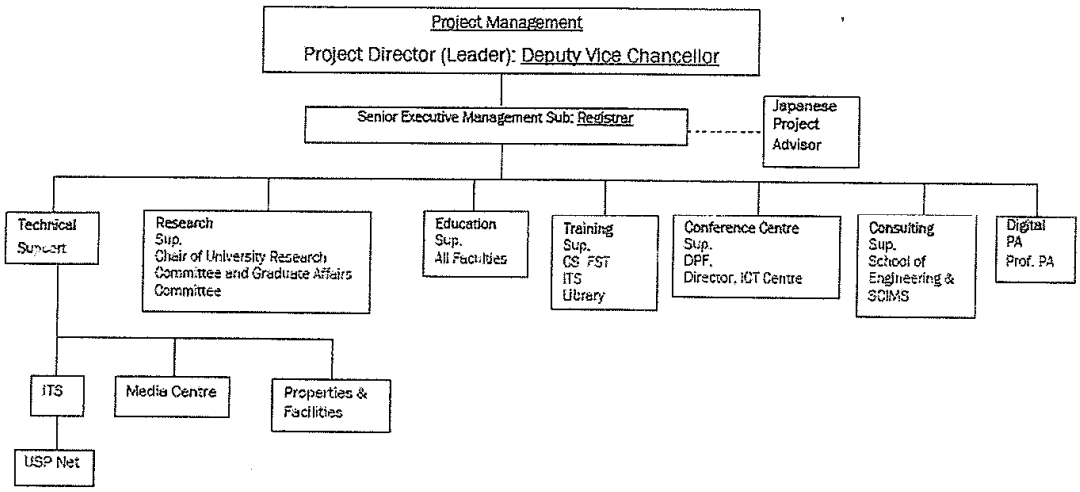


Annex 2.1 – The Current Organization Chart of USP (with the proposed ICT Centre)

USP ORGANISATION STRUCTURE

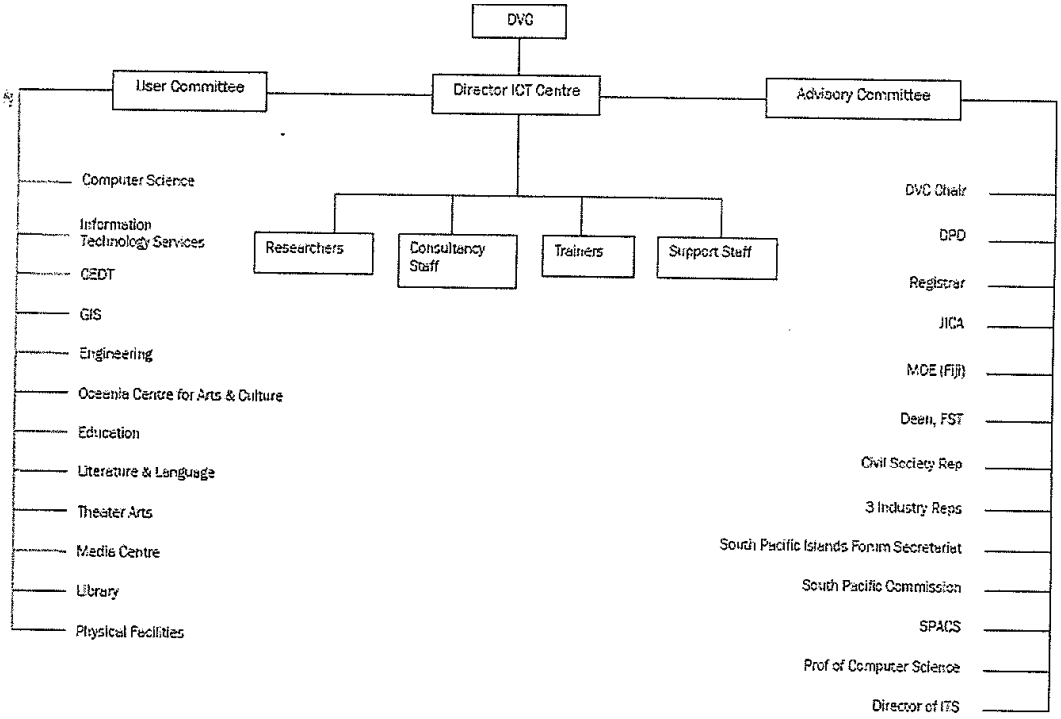


Annex 2.2 – Organization of Project Development for the ICT Centre.



ITS – Information Technology Services, FST – Faculty of Science and Technology, CS – Computer Science, DPF – Director, Physical Facilities, PA – Performing Arts, SCIMS – School of Computing, Information and Mathematical Sciences

Annex 2.3 – Organization Chart of the ICT Centre



DVC – Deputy Vice-Chancellor, CEDT – Centre for Education Development and Technology, GIS – Geographical Information Systems, DPD – Director of Planning and Development, JICA – Japanese International Cooperation Agency, MOE – Ministry of Education, SPACS – South Pacific Computing Society.

Annex-3: Items requested by the Government of Fiji (Buildings and Facilities)

3-1 Facility Volume

(m^2)	Area by floor	Building A	Connection bridge	Building B	Multi-purpose Lecture Theatre building		Remarks
					Foyer	Multi-purpose Lecture Theatre	
Building roof	36	18		18		104	Rooftop elevator machine room etc.
Fourth Floor	2,059	774	59	1,122		445	
Third Floor	2,059	774	59	1,102	129	450	
Second Floor	1,752	733		450	119		
First Floor	303	303				999	
Sub Total							
Total	6,659	2,602	118	2,692	1,247		

3-2 Planned Rooms and Area

Name of department	Building	Floor	Name of room	Planned area: Number of rooms	Planned area: Area	Planned area: Total	Nbr of users: Student	Nbr of users: Staff	Remarks (USP Facility Standard)
Common Area (COMM)	T	2,3	Multi-purpose Lecture Theater	1	869.0	869.0	300		2.0m²/person
			Lecture Hall	0		0.0			
	A	3	Office- Director ICT	1	22.0	22.0		1	24m²/person
	A	3	Office- Core Staff	3	12.0	36.0		3	12m²/person
			Office- Senior Staff	0		0.0			
	A	3	Reception/Secretary	1	24.0	24.0		2	12m²/person
	A	3	Visiting Staff Office	3	12.0	36.0		3	12m²/person
			Lecture Room	0		0.0			
	B	3	Video conference Room	1	120.0	120.0	50		2.5m²/person
			Green Room	0		0.0			2.0m²/person
	B	3	Conference Room (50 Parson)	1	90.0	90.0			2.0m²/person
			Interaction Room	0		0.0			
	A	3,4	Common Room for Staff	2	24.0	48.0			
	A	2	ICT-Resource Room	1	24.0	24.0			Combined use
			Digitization Room						
	B	2	Radio Pasifik' Room	1	120.0	120.0	17		
			COMM Sub Total			**1389.0**	**367**	**9**	
Computer Course (CS)	A,B	2,3,4	Academic Staff Office	18	12.0	216.0		18	12m²/person
	B	4	Technical Staff Office	1	24.0	24.0		2	12m²/person
	A	4	Administrative Staff Office	1	24.0	24.0		2	12m²/person
	A	2,3	Tutor Office	8	12.0	96.0		16	6m²/person
	A	4	Research Laboratory	5	30.0	157.0	5 each		6m²/person
	B	3	Dedicated Networking Teaching Laboratory	1	120.0	120.0	40		3.0m²/person
			General Access Laboratory			0.0			
	B	4	Dedicated Computer Teaching Laboratory	4	120.0	480.0	160		3.0m²/person
	B	3	Postgraduate Laboratory	1	60.0	60.0	24		3.0m²/person
			Seminar Room			0.0			
	B	4	Technical Laboratory/Workshop	1	21.0	21.0		2	
			Small Server Room			0.0			
			CS Sub Total			**1198.0**	**249**	**40**	

IT Services (ITS)	A	2	Office- Director ITS	1	24.0	24.0		1	
	A	2	Office- Secretary	1	12.0	12.0		1	
	A	2	General Office	1	126.0	126.0		20	6m²/person
	A	2	Meeting Room	1	24.0	24.0			
	A	4	Laboratory A (Professional & Development Laboratory)	2	75.0	150.0	50		3.0m²/person
	A	3	Laboratory B (General Access Laboratory)	2	162.0	324.0	120		3.0m²/person
			Laboratory C (R&D)			0.0			
			Telephony Workshop			0.0			
	A	2	Computer Workshop	1	35.0	35.0		2	
			Communication Workshop			0.0			
	A	2	Server Room	1	54.0	54.0			
	A	2	Storage (Equipment Warehouse)	1	36.0	36.0			
	A	1	Help Desk & Waiting Area	1	72.0	72.0		3	
			Hub Earth Station Staff Room			0.0			
	B	3	USPNet Control Room	1	180.0	180.0			
			ITS Sub Total			**1037.0**	**170**	**27**	
Research and Development Department (RD)	B	2	Office- Research/Incubator	3	12.0	36.0			12m²/person
	B	2	Test Bed/Incubation	1	120.0	120.0			12m²/person
			Test Bed -2/Incubation						
			RD Sub Total			**156.0**			
Department of Engineering (ENG)	B	3	Office- Engineering	1	24.0	24.0		1	24m²/person
	B	3	Technical Staff Office	1	12.0	12.0		2	9.0m²/person
	B	3	Postgraduate Room	1	12.0	12.0	4		3.0m²/person
	B	3	Computer Laboratory	1	51.0	36.0	12		3.0m²/person
	B	3	Information and communication Engineering Laboratory	1	196.0	196.0	30		8.3m²/person
			Engineering Laboratory-2			0.0			8.3m²/person
			Engineering Laboratory-3			0.0			
	B	3	Storage/Research	1	30.0	30.0			
			Storage/Research-2			0.0			
			ENG Sub Total			**310.0**	**46**	**3**	
Geographic Information Course (GIS)			Office- Director						30m²/person
			Office- Lecturers & Officers						15m²/person
			Postgraduate Room						5.0m²/person
			Geospatial Science Computer Learning Space						4.5m²/person
			Geospatial Database Server Simulation Lab						
			10 Seat Research Laboratory						6.0m²/PC
			Equipment Room						
			Data Warehouse						
			GIS Sub Total			**0.0**			
Other Common area			**Shared toilet and corridor**			**4090.0**			
			Machine Room			**1985.0**			
			Total Floor Area			**217.0**			
			Foyer			**126.0**			
			Total			**6659.0**			

3-3 Stage Settings Specifications

No	Name	Intended use	Stage Settings Specifications	Construction category
1	Traveler / House draw curtain (gold background)	Used to open and close the stage (lectures will be presented with the stage left closed)	22 m wide, approximately 7.5 m high, gold background, electrical motor-driven type	Included in the scope of this project
2	Traveler / House draw curtain (black background)	Used to open and close the stage (and as a scene-change curtain for dramas)	22 m wide, approximately 7.5 m high, black background, electrical motor-driven type	To be constructed separately from this project
3	Borders / Teasers	Curtains hung from the upper part of the stage to cover the stage flyings from the sight of the audience.	22 m wide, approximately 1.5 high, black background, hand-driven type	Included in the scope of this project
4	Side Legs / Curtains at the wings	Curtains hung from the right and the left sides of the stage to cover broadcasters and tools on the stage from the sight of the audience.	3 m wide, approximately 8 high, black background, hand-driven type	Included in the scope of this project
5	Suspension light	Hung from the pipe batten, chiefly to provide lighting effects on the stage.	650W Fresnel lens spotlight, hand-driven type	To be constructed separately from this project (only installation of three pipe battens will be

				included in the scope of this project)
6	Border light	Equipped directly behind the teasers to illuminate the stage.	200W nine-light halogen lamp, hand-driven type	To be constructed separately from this project (Three batten included.)
7	Draw curtain	Used to switch stage scenes.	20 m wide, approximately 6.5 m high, black background, electrical motor-driven type	To be constructed separately from this project
8	Projection screen	A curtain on which an images are projected during lectures.	300-inch white background curtain exclusively for image projection, electrical motor-driven type	Included in the scope of this project
9	Cyclorama	An effect curtain fixed at the innermost section of the stage to project images such as backgrounds	20 m wide, approximately 6.5 high, white background, electrical motor-driven type	Included in the scope of this project
10	Horizon light	A light to illuminate the cyclorama	200W nine-light halogen lamp, hand-driven type	To be constructed separately from this project
11	Ceiling light	Lighting effect equipment illuminating the stage from the upper part of the audience	1KW plane-convex lens spotlight	Included in the scope of this project
12	Gridiron	A work platform to hang curtains, lightings, and so on over the stage	Pulleys and cables will be placed on H-section steels arranged in the shape of lattice	Included in the scope of this project

Note: The above mentioned stage system will include pipe battens, cables, pulleys, and up-and-down/opening/closing mechanism for hanging stage settings.

3-4 Planned Equipment

Code No.	Description	Q'ty
COM-1	LCD Projector (L)	1 unit
COM-2	LCD Projector (S) /w Screen	2 units
COM-5-1	PC (Desktop type)	1 unit
COM-5-2	Desk & Chair for PC	1 set
COM-5-3	PC (Laptop type)	3 units
COM-11	OHC	3 units
COM-13	DVD Player	1 unit
COM-14	VCR	2 units
COM-15	White Board	3 units
COM-16	TV	1 unit
COM-20	Remote Camera (w/Control System)	1 set
COM-26	Audio Speaker	2 sets
COM-100	Audio Control System for Multipurpose Lecture Theater	1 set
COM-101	Video Control System for Multipurpose Lecture Theater	1 set
COM-102	A/V Control System for Video Conference Room	1 set
COM-104	A/V Control System for Conference Room	1 set
CSC-1	Server w/Rack	1 set
CSC-4	Switching HUB	1 set
CSC-6	Patch Panel	1 set
CSC-10	Ethernet Card	40 pcs
CSC-15-1	PC (Desktop type)	150 units
CSC-15-2	Desk & Chair for PC	150 sets
CSC-16	Embedded System Board	4 sets
CSC-17	Oscilloscope	2 units

CSC-24	Printer	2 units
ITS-1	Server (High Level)	6 units
ITS-3	Server (General Level)	14 units
ITS-4	Tape Backup Archive	1 unit
ITS-6	Switching HUB	1 set
ITS-7	UPS	1 set
ITS-15-1	PC (Desktop type)	120 units
ITS-15-2	Desk & Chair for PC	120 sets
ITS-20	Printer	2 units
ITS-22	LCD Projector (S) /w Screen	2 sets
ITS-30	Equipment Rack	1 set
ITS-32-1	PC (Desktop type for Scheduler)	1 unit
ITS-32-2	Desk & Chair for PC	1 set
ITS-33	Work Bench w/Chair	1 set
ITS-35	VCR/CD-DVD Combo Recorder	2 units
ITS-60	A/V System for USPNet Control Room	1 set
ENG-5	Analog Communications	1 set
ENG-6	Analog Communications Training System	1 set
ENG-7	Fiber Optic Communications	1 set
ENG-8	Antenna Training and Measuring System	1 set
ENG-9	Microwave Technology Training System	1 set
ENG-11	Digital Communications 1	1 set
ENG-12	Digital Communications 2	1 set
ENG-13	Digital Communications Training System	1 set
ENG-17	Oscilloscope	10 units
ENG-18	Power Supply	10 units
ENG-19	Signal Generator	10 units
ENG-20	Multimeter	10 units
ENG-21	Soldering Station	10 sets
ENG-22	Tool kits	10 sets
ENG-29	Bread Board Set	10 sets
ENG-33-1	PC (Desktop type)	15 units
ENG-33-2	Desk & Chair for PC	15 sets
ENG-34	Server w/Rack	1 set
ENG-45	Lab. Table w/Chair	10 sets
ENG-46	LCD Projector (S) /w Screen	2 sets
ADD-1	Microfilm/Microfiche Scanner	1 unit
ADD-2	Flat-bed Scanner	1 unit

b

Annex-4: The Japan's Grant Aid Scheme

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedure

1) Japan's Grant Aid Program is executed through the following procedures.

Application (Request made by a recipient country)
Study (Basic Design Study conducted by JICA)
Appraisal & Approval (Appraisal by the Government of Japan and Approval by Cabinet)
Determination of Implementation
(The Notes exchanged between the Governments of Japan and the recipient country)

2) Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA to conduct a study on the request. If necessary, JICA send a Preliminary Study Team to the recipient country to confirm the contents of the request.

Secondly, JICA conducts the study (Basic Design Study), using Japanese consulting firms.

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Programme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

1) Contents of the Study

The aim of the Basic Design Study (hereinafter referred to as "the Study"), conducted by JICA on a requested project (hereinafter referred to as "the Project"), is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

a) confirmation of the background, objectives and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation;

b) evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from the technical, social and economic points of view;

c) confirmation of items agreed on by both parties concerning the basic concept of the Project;

d) preparation of a basic design of the Project; and

e) estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even through they may fall outside of the jurisdiction of the Organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant Organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For the smooth implementation of the Study, JICA uses a consulting firm selected through its own procedure (competitive proposal). The selected firm participates the Study and prepares a report based upon the terms of reference set by JICA.

At the beginning of implementation after the Exchange of Notes, for the services of the Detailed Design and Construction Supervision of the Project, JICA recommends the same consulting firm which participated in the Study to the recipient country, in order to maintain the technical consistency between the Basic Design and Detailed Design as well as to avoid any undue delay caused by the selection of a new consulting firm.

3. Japan's Grant Aid Scheme

1) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

2) "The period of the Grant" means the one fiscal year which the Cabinet approves the project for. Within the fiscal year, all procedure such as exchanging of the Notes, concluding contracts with consulting firms and contractors and final payment to them must be completed.

However, in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

3) Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However, the prime contractors, namely consulting, contracting and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be verified by the Government of Japan. This "Verification" is deemed necessary to secure accountability of Japanese taxpayers.

5) Undertakings required to the Government of the recipient country

a) to secure a lot of land necessary for the construction of the Project and to clear the site;

b) to provide facilities for distribution of electricity, water supply and drainage and other incidental facilities outside the site;

c) to ensure prompt unloading and customs clearance at ports of disembarkation in the recipient country and internal transportation therein of the products purchased under the Grant Aid;

d) to exempt Japanese nationals from customs duties, internal taxes and fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts;

e) to accord Japanese nationals whose services may be required in connection with the supply of the products and services under the verified contracts such as facilities as may be necessary for

their entry into the recipient country and stay therein for the performance of their work;

f) to ensure that the facilities constructed and products purchased under the Grant Aid be maintained and used properly and effectively for the Project; and

g) to bear all the expenses, other than those covered by the Grant Aid, necessary for the Project.

6) "Proper Use"

The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign the necessary staff for operation and maintenance of them as well as to bear all the expenses other than those covered by the Grant Aid.

7) "Re-export"

The products purchased under the Grant Aid shall not be re-exported from the recipient country.

8) Banking Arrangement (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the verified contracts.

b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an Authorization to Pay (A/P) issued by the Government of recipient country or its designated authority.

9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commission to the Bank.

Annex-5: Necessary undertakings to be taken by each government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	To construct gates and fences in and around the site		●
4	To construct the parking lot	●	
5	To construct roads		
1) Within the site		●	
2) Outside the site			●
6	To construct the building	●	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
1)Electricity			
a. The distributing line to the site			●
b. The drop wiring and internal wiring within the site		●	
c. The main circuit breaker and transformer		●	
2)Water Supply			
a. The city water distribution main to the site			●
b. The supply system within the site (receiving and/or elevated tanks)		●	
3)Drainage			
a. The city drainage main (for storm, sewer and others) to the site			●
b. The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site		●	
4)Gas Supply			
a. The city gas main to the site			●
b. The gas supply system within the site		●	
5)Telephone System			
a. The telephone trunk line to the main distribution frame / panel (MDF) of the building			●
b. The MDF and the extension after the frame / panel		●	
6)Furniture and Equipment			
a. General furniture			●
b. Project equipment		●	
8	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
1) Advising commission of A/P			●
2) Payment commission			●
9	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
1) Marine(Air) transportation of the products from Japan to the recipient country		●	
2) Tax exemption and customs clearance of the products at the port of disembarkation			●
3) Internal transportation from the port of disembarkation to the project site		(●)	(●)

10	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
11	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
13	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		●

Annex 6 - Curricula at the ICT Centre planned by Fiji side

Curriculum (Computer Science: Information System Majors 2007 -)

			1st Semester				2nd Semester			
			Lec.	Tut.	Lab.	Total	Lec.	Tut.	Lab.	Total
Sem. I	CS111	Introduction to Computing Science	3	1	F (G)	20				-
	MA111	Calculus I	3	1	-					
	ST102	Probability & Statistics	3	1	-					
	IS121	Information Systems I								
	LL114	English	3	1	-					
	-	Minor Course	3	1	-					
Sem. II	CS112	Data Structures and Algorithms				-	3	1	F (G)	20
	MA112	Calculus II					3	1	-	
	MA161	Discrete Mathematics					3	1	-	
	UU104	Introduction to Pacific Studies					3	1	-	
	-	Minor Cource					3	1	-	
Sem. III	CS215	Data Communications	3	1	F (N)	16				-
	CS222	Database Management System (for Computer Science)	3	1	F (S)					
	CS240	Software Engineering I	3	1	F (G)					
	-	Minor Course	3	1	-					
Sem. IV	CS211	Computer Organization				12	3	1	F (G)	16
	CS214	Design and Analysis of Algorithms					3	1	F (G)	
	CS2xx	Software Engineering II					3	1	F (G)	
		Minor Course					3	1	-	
Sem. V	CS311	Operating Systems	3	1	F (S)					-
	-	Two from following Electives	6	2	F (G/S)					
		Elective								
	CS318	Artificial Inteligence	3	1	F (G)					
	CS3xx	Multimedia System	3	1	F (S)					
	CS3xx	Digital Image Processing	3	1	F (S)					
	CS391	Topics in Computer Science	3	1	F (G)					
	-	Good Governance	3	1	-					
Sem. VI	CS312	Computer Networks			-		3	1	F (N)	12
	-	Two from following Electives					6	2	F (S/G/N)	
		Elective								
	IS332	Advanced Web Application Developments and Networks					3	1	F(S)	
	CS316	Principles of Programming Languages					3	1	F(G)	
	CS3xx	Theory & Practice of Compilers					3	1	F(G)	
	CS3xx	Human Computer Interaction					3	1	F(G)	
	CS317	Computer and Network Security					3	1	F(N)	
	IS314	Computer Project					3	1	F(G)	
	CS392	Topics in Computer Science					3	1	F(S)	
Total			51	17	-	48	57	19	-	48

Curriculum (Computer Science : Information System Majors 2007 -)

			1st Semester				2nd Semester			
			Lec.	Tut.	Lab.	Total	Lec.	Tut.	Lab.	Total
Sem. I	IS121	Information Systems I	3	1	F (G)	12				-
	LL114	English	3	1	-					
	-	Minor Course	3	1	-					
Sem. II	IS122	Information System II				-	3	1	F (G)	12
	UU104	Introduction to Pacific Studies					3	1	-	
	-	Minor Cource					3	1	-	
Sem. III	IS221	Distributed Information System Theory and Application	3	1	F (S)	12				-
	IS222	Database Management System (for Information System)	3	1	F (S)					
	-	Minor Course	3	1	-					
Sem. IV	IS224	Advanced Database Systems				-	3	1	F (S)	8
	-	Minor Course					3	1	-	
Sem. V	IS323	Information Systems Analysis & Design	3	1	F (G)	12				-
	IS328	Data Mining	3	1	F (S)					
	-	Good Governance	3	1	-					
Sem. VI	IS332	Advanced Distributed System & Information Systems Networking				-	3	1	F (S)	8
	IS333	Project Management					3	1	F (S)	
Total			27	9	-	36	21	7		28

Curriculum (Electrical/Electronics 2008 -)

			1st Sem.				2nd Sem.			
			Lec.	Tut.	Lab.	Total	Lec.	Tut.	Lab.	Total
Sem. I	PH102	Classical Physics	1	3	3 (O)	24				-
	MM101	Engineering Graphics	1	3	3 (P)					
	LL114	English for Academic Purposes	1	4	-					
	MA111	Calculus I & Linear Algebra I	1	4	-					
Sem. II	EE102	Electrical & Electronics Tech				-	1	3	3 (NL)	26
	MM103	Engineering Mechanics					1	3	3 (O)	
	CS102	Computing for Science & Tech.					1	3	3 (P)	
	MA112	Calculus II					1	4	-	
Sem. III	MA211	Advanced Calculus	1	4	-	23				-
	EE211	Electrical Machines	1	3	3 (NR)					
	EE212	Analog Electronics	1	3	3 (NR)					
	CS211	Computer Organization	1	3	3 (NC)					
Sem. IV	MA272	Engineering Mathematics IV				-	1	4	-	26
	EE221	Power System Analysis					1	3	3 (P)	
	EE222	Digital Electronics					1	3	3 (NR)	
	EE223	Power Electronics & Drives					1	3	3 (NR)	
Sem. V	EE302	Electrical Comm & Inst	1	3	3 (NR)	28				-
	EE312	Control System Engineering	1	3	3 (NL)					
	EE313	Microprocessor Applications	1	3	3 (NR)					
	EE314	Electrical Systems Design-Bld Serv	1	3	3 (NL)					
Sem. VI	EE300	Engineering Project				-	1	3	3 (N/O)	26
	EE323	Digital Control Systems					1	3	3 (O)	
	EE301	Energy Supplies					1	3	3 (NC)	
	MG306	Management for Technology					1	4	-	
Total			12	39	24 (18)	75	12	39	27 (15)	78

(O) : Existing Laboratory

(P) : PC Laboratory

(NR) : New (Electronic) Laboratory

(NL) : New (Electric) Laboratory

(NC) : New (Communication) Laboratory

(NM) : New (Mechatronics) Laboratory

Curriculum (Communications 2010 -)

			1st Sem.				2nd Sem.			
			Lec.	Tut.	Lab.	Total	Lec.	Tut.	Lab.	Total
Sem. I	EN106	Engineering Mechanics	1	3	3 (O)	24			-	
	EN102	Engineering Graphics	1	3	3 (P)					
	LL114	English for Academic Purpose	1	4	-					
	MA1xx	Mathematics I	1	4	-					
Sem. II	EN221	Electrical Engineering Science				-	1	3	3 (NL)	26
	EN1xx	Material Science					1	3	3 (O)	
	CS102	Computing for Science & Eng					1	3	3 (P)	
	MA1xx	Mathematics II					1	4	-	
Sem. III	MA2xx	Mathematics III	1	4	-	24			-	
	UU104	Pacific Studies	1	4	-					
	EN2xx	Circuits & Systems	1	3	3 (NR)					
	EN2xx	Fundamentals of Communication Eng	1	3	3 (NC)					
Sem. IV	MA2xx	Mathematics IV				-	1	4	-	26
	CS211	Computer Org					1	3	3 (P)	
	CS2xx	Data Communication					1	3	3 (P)	
	EN2xx	Signals and Systems					1	3	3 (P/NR)	
Sem. V	EN3xx	Microprocessor Applications	1	3	3 (NR)	28			-	
	CS3xx	Internet Computing	1	3	3 (P)					
	EN3xx	Analog Electronics	1	3	3 (NR)					
	CS3xx	Network Security	1	3	3 (P)					
Sem. VI	EN3xx	RF & Photonics				-	1	3	3 (P/NR)	26
	CS3xx	Multimedia Communication					1	3	3 (P)	
	EN3xx	Teletraffic					1	3	3 (P)	
	-	Ethics & Governance					1	4	-	
Sem. VII	EN4xx	Engineering Project I	-	-	3 (P/NC)	24			-	
	EN4xx	Digital Signal Processing	1	3	3 (P/NR)					
	EN4xx	Satellite Com	1	3	3 (P/NC)					
	-	Elective (any 1 from I/II)	1	3	3 (P/N)					
Sem. VIII	EN4xx	Eng Project II				-	-	-	3 (P/NC)	22
	EN4xx	Wireless Com					1	3	3 (P/NC)	
	EN4xx	Eng Business Studies					1	4	-	
	-	Elective (any 1 from I/II)					1	3	3 (P/N)	
Total			15	49	36 (24)	100	15	49	36 (18)	100

Cont'd

			1st Sem.				2nd Sem.				
			Lec.	Tut.	Lab.	Total	Lec.	Tut.	Lab.		Total
Electives I	EN4xx	Microwave Circuit Design	1	3	3 (P/NC)		1	3	3	(P/NC)	
	EN4xx	Advanced DSP	1	3	3 (P/NR)		1	3	3	(P/NR)	
	EN4xx	Control Theory	1	3	3 (P/NL)		1	3	3	(P/NL)	
Elective II	EN4xx	Embedded Systems	1	3	3 (P/NR)		1	3	3	(P/NR)	
	EN4xx	Communication Networks	1	3	3 (P/NC)		1	3	3	(P/NC)	
	EN4xx	Microprocessor Based Systems	1	3	3 (P/NR)		1	3	3	(P/NR)	

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(NM) : New (Mechatronics) Laboratory

Curriculum (Mechatronics 2010 -)

			1st Sem.				2nd Sem.			
			Lec.	Tut.	Lab.	Total	Lec.	Tut.	Lab.	Total
Sem. I	EN106	Engineering Mechanics	1	3	3 (O)	24			-	
	EN102	Engineering Graphics	1	3	3 (P)					
	LL114	English for Academic Purpose	1	4	-					
	MA1xx	Mathematics I	1	4	-					
Sem. II	EN221	Electrical Engineering Science				-	1	3	3 (NL)	26
	EN1xx	Material Science					1	3	3 (O)	
	CS102	Computing for Science & Eng					1	3	3 (P)	
	MA1xx	Mathematics II					1	4	-	
Sem. III	MA2xx	Mathematics III	1	4	-	24			-	
	UU104	Pacific Studies	1	4	-					
	EN2xx	Circuits & Systems	1	3	3 (NR)					
	EN2xx	Fundamentals of Communication Eng	1	3	3 (NC)					
Sem. IV	MA2xx	Mathematics IV				-	1	4	-	26
	CS211	Computer Org					1	3	3 (P)	
	CS2xx	Data Communication					1	3	3 (P)	
	EN2xx	Signals and Systems					1	3	3 (P/NR)	
Sem. V	EN3xx	Microprocessor Applications	1	3	3 (NR)	28			-	
	CS3xx	Internet Computing	1	3	3 (P)					
	EN3xx	Analog Electronics	1	3	3 (NR)					
	CS3xx	Network Security	1	3	3 (P)					
Sem. VI	EN3xx	RF & Photonics				-	1	3	3 (P/NR)	26
	CS3xx	Multimedia Communication					1	3	3 (P)	
	EN3xx	Teletraffic					1	3	3 (P)	
	-	Ethics & Governance					1	4	-	
Sem. VII	EN4xx	Engineering Project I	-	-	3 (P/NC)	24			-	
	EN4xx	Digital Signal Processing	1	3	3 (P/NR)					
	EN4xx	Satellite Com	1	3	3 (P/NC)					
	-	Elective (any 1 from I/II)	1	3	3 (P/N)					
Sem. VIII	EN4xx	Eng Project II				-	-	-	3 (P/NC)	22
	EN4xx	Wireless Com					1	3	3 (P/NC)	
	EN4xx	Eng Business Studies					1	4	-	
	-	Elective (any 1 from I/II)					1	3	3 (P/N)	
Total			15	49	36 (24)	100	15	49	36 (18)	100

Cont'd

			1st Sem.					2nd Sem.				
			Lec.	Tut.	Lab.		Total	Lec.	Tut.	Lab.		Total
Electives I	EN4xx	Systems Modeling	1	3	3	(NM)		1	3	3	(NM)	
	EN4xx	Robot & Computational Mechanics	1	3	3	(NM)		1	3	3	(NM)	
Elective II	EN4xx	Process Control Systems	1	3	3	(NM)		1	3	3	(NM)	
	EN4xx	Industrial Automation	1	3	3	(NM)		1	3	3	(NM)	

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5. 事業化概要説明 ミニッツ

MINUTES OF DISCUSSIONS
ON THE IMPLMENTATION REVIEW STUDY
ON THE PROJECT FOR CONSTRUCTION OF INFORMATION AND COMMUNICATION
THECHNOLOGY CENTER AT THE UNIVERSITY OF THE SOUTH PACIFIC

(EXPLANATION ON DRAFT REPORT)

In July 2007, the Japan International Cooperation Agency (Hereinafter referred to as "JICA") dispatched a Implementation Review Study Team on the Project for Construction of Information and Communication Technology Center at the University of the South Pacific (hereinafter referred to as " the Project") to the Government of the Republic of Fiji Islands (hereinafter referred to as "Fiji"), and through discussion, field survey, and technical examination of the results in Japan, JICA prepared a draft report of the study.

In order to explain and to consult with the Government of Fiji on the components of the draft report, JICA sent to Fiji the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Nariaki Mikuni, Deputy Resident Representative of JICA Fiji Office and is scheduled to stay in the country from 22nd Oct 2007 to 27th Oct 2007.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Suva, 26th Oct 2007

Nariaki Mikuni

Mr. Nariaki Mikuni
Leader
Basic Design Study Team
Japan International Cooperation Agency

Eci Nabalarua

Dr. Eci Nabalarua
Acting Vice-Chancellor
University of the South Pacific

Mr. Ram Chandar
Deputy Secretary Professional
Ministry of Education
Republic of Fiji Islands

ATTACHMENT

1. Components of the Draft Report

The Government of Fiji agreed and accepted in principle the components of the draft report explained by the Team and described in the Minutes of Discussions signed by all parties on 27th July 2007.

(1) The facilities are listed in Annex -1

(2) The equipment is listed in Annex-2

2. Japan's Grant Aid Scheme

Fiji side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of Fiji as Explained by the Team and described in Annex-4 and Annex-5 of the Minutes of Discussions signed by all parties on 27th July 2007.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed item and send it to the Government of Fiji by December 2007.

4. Other relevant issues

4-1. The items or works to be borne by USP

Fiji side understands the items or works to be borne by USP based on the Basic Design Report dated January 2006.

4-1-1 To demolish existing buildings

There are some existing buildings on the Project sites. USP agreed to demolish the existing buildings prior to the commencement the Project.

4-1-2 To clear, and reclaim the site

There are some facilities and trees in the Project site. USP agreed to clear and reclaim (if necessary), the site prior to the commencement the Project.

4-1-3 To move the power receiving station

There is an existing power receiving and generator station in the Project site. USP agreed to move the existing station to a suitable place on the Project site and to relocate it cover the demand for the Project.

4-1-4 To move the water tanks and containers.

There are an existing water tanks and containers in the Project site. USP agreed to move them to a suitable place out of the Project site.

4-1-5 Exterior construction (Landscape, Planting and Parking lot)

USP agreed to suitably landscape the project site and to construct the parking lot for the Project.

4-1-6 Equipment

USP agreed to provide the equipment requested but not included in the Project.

4-1-7 Furniture

USP agreed to provide the general furniture and the special furniture requested but not included in the Project.

4-1-8 Theatre equipment

There is special theatre equipment to be designed for the Multi-Purpose Theatre. Both sides agreed that Japanese side would include the equipment necessary for lectures. USP side agreed to provide the equipment for multi-purpose uses (like theatre and international conference facilities).

4-1-9 Network cabling in the Project

Both sides agreed that Japanese side would set up cabling channels and USP would install computer and audio-visual network cabling in the Project.

4-1-10 Telephone work

Both sides agreed that Japanese side would include the telephone piping work and USP would provide telephones, cabling and connecting works.

4-1-11 Existing equipment and furniture for the Project

USP agreed to move and set up necessary existing equipment and furniture in the Project.

4-2. Proper Maintenance

Fiji side promised to allocate necessary budget and manpower for the proper maintenance and utilization of the equipments and facilities to be provided under the Project.

4-3.Confidentiality of the Project Cost Estimation

The Team explained the cost estimation of the Project as described in Annex-4. Both sides agreed that the Project Cost Estimation should never be duplicated or released to any outsides parties before signing of all the Contract(s) for the Project. Fiji side understood that the Project Cost Estimation attached as Annex-4 is not final and is subject to change.

Annex-1 Facility list

Annex-2 Equipment list

Annex-3 Layout plan

Annex-4 Project Cost Estimation

Annex-1 Facility List

Annex- 1 - 1 Facility Volume

(m^2)	Area by floor	Building A	Connection bridge	Building B	Multi-purpose Lecture Theatre building		Remarks
					Foyer	Multi-purpose Lecture Theatre	
Building roof	36	18		18		104	Rooftop elevator machine room etc.
Fourth Floor	2,059	774	59	1,122		445	
Third Floor	2,059	774	59	1,102	129	450	
Second Floor	1,752	733		450	119		
First Floor	303	303				999	
Sub Total							
Total	6,659	2,602	118	2,692	1,247		

Annex- 1 -2 Planned Rooms and Area

Name of department	Building	Floor	Name of room	Planned area			Nbr of users		Remarks (USP Facility Standard)
				Number of rooms	Area	Total	Student	Staff	
Common Area (COMM)	T	2,3	Multi-purpose Lecture Theater	1	869.0	869.0	300		2.0m²/person
			Lecture Hall	0		0.0			
	A	3	Office- Director ICT	1	22.0	22.0		1	24m²/person
	A	3	Office- Core Staff	3	12.0	36.0		3	12m²/person
			Office- Senior Staff	0		0.0			
	A	3	Reception/Secretary	1	24.0	24.0		2	12m²/person
	A	3	Visiting Staff Office	3	12.0	36.0		3	12m²/person
			Lecture Room	0		0.0			
	B	3	Video conference Room	1	120.0	120.0	50		2.5m²/person
			Green Room	0		0.0			2.0m²/person
	B	3	Conference Room (50 Parson)	1	90.0	90.0			2.0m²/person
			Interaction Room	0		0.0			
	A	3,4	Common Room for Staff	2	24.0	48.0			
	A	2	ICT-Resource Room	1	24.0	24.0			Combined use
			Digitization Room						
	B	2	Radio Pasifik' Room	1	120.0	120.0	17		
			COMM Sub Total			**1389.0**	**367**	**9**	
Computer Course (CS)	A,B	2,3,4	Academic Staff Office	18	12.0	216.0		18	12m²/person
	B	4	Technical Staff Office	1	24.0	24.0		2	12m²/person
	A	4	Administrative Staff Office	1	24.0	24.0		2	12m²/person
	A	2,3	Tutor Office	8	12.0	96.0		16	6m²/person
	A	4	Research Laboratory	5	30.0	157.0	5 each		6m²/person
	B	3	Dedicated Networking Teaching Laboratory	1	120.0	120.0	40		3.0m²/person
			General Access Laboratory			0.0			
	B	4	Dedicated Computer Teaching Laboratory	4	120.0	480.0	160		3.0m²/person
	B	3	Postgraduate Laboratory	1	60.0	60.0	24		3.0m²/person
			Seminar Room			0.0			
	B	4	Technical Laboratory/Workshop	1	21.0	21.0		2	
			Small Server Room			0.0			
			CS Sub Total			**1198.0**	**249**	**40**	

IT Services (ITS)	A	2	Office- Director ITS	1	24.0	24.0		1	
	A	2	Office- Secretary	1	12.0	12.0		1	
	A	2	General Office	1	126.0	126.0		20	6㎡/person
	A	2	Meeting Room	1	24.0	24.0			
	A	4	Laboratory A (Professional & Development Laboratory)	2	75.0	150.0	50		3.0㎡/person
	A	3	Laboratory B (General Access Laboratory)	2	162.0	324.0	120		3.0㎡/person
			Laboratory C (R&D)			0.0			
			Telephony Workshop			0.0			
	A	2	Computer Workshop	1	35.0	35.0		2	
			Communication Workshop			0.0			
	A	2	Server Room	1	54.0	54.0			
	A	2	Storage (Equipment Warehouse)	1	36.0	36.0			
	A	1	Help Desk & Waiting Area	1	72.0	72.0		3	
			Hub Earth Station Staff Room			0.0			
	B	3	USPNet Control Room	1	180.0	180.0			
			ITS Sub Total			**1037.0**	**170**	**27**	
Research and Development Department (RD)	B	2	Office- Research/Incubator	3	12.0	36.0			12㎡/person
	B	2	Test Bed/Incubation	1	120.0	120.0			12㎡/person
			Test Bed -2/Incubation						
			RD Sub Total			**156.0**			
Department of Engineering (ENG)	B	3	Office- Engineering	1	24.0	24.0		1	24㎡/person
	B	3	Technical Staff Office	1	12.0	12.0		2	9.0㎡/person
	B	3	Postgraduate Room	1	12.0	12.0	4		3.0㎡/person
	B	3	Computer Laboratory	1	51.0	36.0	12		3.0㎡/person
	B	3	Information and communication Engineering Laboratory	1	196.0	196.0	30		8.3㎡/person
			Engineering Laboratory-2			0.0			8.3㎡/person
			Engineering Laboratory-3			0.0			
	B	3	Storage/Research	1	30.0	30.0			
			Storage/Research-2			0.0			
			ENG Sub Total			**310.0**	**46**	**3**	
Geographic Information Course (GIS)			Office- Director						30㎡/person
			Office- Lecturers & Officers						15㎡/person
			Postgraduate Room						5.0㎡/person
			Geospatial Science Computer Learning Space						4.5㎡/person
			Geospatial Database Server Simulation Lab						
			10 Seat Research Laboratory						6.0㎡/PC
			Equipment Room						
			Data Warehouse						
			GIS Sub Total			**0.0**			
Other Common area			**Shared toilet and corridor**			**4090.0**			
			Machine Room			**1985.0**			
			Total Floor Area			**217.0**			
			Foyer			**126.0**			
			Total			**6659.0**			

Annex-1-3 Stage Settings Specifications

No	Name	Intended use	Stage Settings Specifications	Construction category
1	Traveler / House draw curtain (gold background)	Used to open and close the stage (lectures will be presented with the stage left closed)	22 m wide, approximately 7.5 m high, gold background, electrical motor-driven type	Included in the scope of this project
2	Traveler / House draw curtain (black background)	Used to open and close the stage (and as a scene-change curtain for dramas)	22 m wide, approximately 7.5 m high, black background, electrical motor-driven type	To be constructed separately from this project
3	Borders / Teasers	Curtains hung from the upper part of the stage to cover the stage flyings from the sight of the audience.	22 m wide, approximately 1.5 high, black background, hand-driven type	Included in the scope of this project
4	Side Legs / Curtains at the wings	Curtains hung from the right and the left sides of the stage to cover broadcasters and tools on the stage from the sight of the audience.	3 m wide, approximately 8 high, black background, hand-driven type	Included in the scope of this project
5	Suspension light	Hung from the pipe batten, chiefly to provide lighting effects on the stage.	650W Fresnel lens spotlight, hand-driven type	To be constructed separately from this project (only installation of three pipe battens will be included in the scope of this project)
6	Border light	Equipped directly behind the teasers to illuminate the stage.	200W nine-light halogen lamp, hand-driven type	To be constructed separately from this project (Three batten included.)
7	Draw curtain	Used to switch stage scenes.	20 m wide, approximately 6.5 m high, black background, electrical motor-driven type	To be constructed separately from this project
8	Projection screen	A curtain on which an images are projected during lectures.	300-inch white background curtain exclusively for image projection, electrical motor-driven type	Included in the scope of this project
9	Cyclorama	An effect curtain fixed at the innermost section of the stage to project images such as backgrounds	20 m wide, approximately 6.5 high, white background, electrical motor-driven type	Included in the scope of this project
10	Horizon light	A light to illuminate the cyclorama	200W nine-light halogen lamp, hand-driven type	To be constructed separately from this project
11	Ceiling light	Lighting effect equipment illuminating the stage from the upper part of the audience	1KW plane-convex lens spotlight	Included in the scope of this project
12	Gridiron	A work platform to hang curtains, lightings, and so on over the stage	Pulleys and cables will be placed on H-section steels arranged in the shape of lattice	Included in the scope of this project

Note: The above mentioned stage system will include pipe battens, cables, pulleys, and up-and-down/opening/closing mechanism for hanging stage settings.

Annex-2 Equipment list

Code No.	Description	Allocation											Q'ty
		COM				CSC		ITS			ENG		
		1	9	11	14	6	8	7	10	14	4	5	
	Numer of Room	(1)	(1)	(1)	(1)	(1)	(4)	(2)	(1)	(1)	(1)	(1)	
	Capacity(Number of person)/Room	300	50	50	-	40	40	60	-	-	12	30	
COM-1	DLP Projector (L)	1											1 unit
COM-2	LCD Projector (S) /w Screen		1	1									2 sets
COM-5-1	PC (Desktop type)				1								1 unit
COM-5-2	Desk & Chair for PC				1								1 set
COM-5-3	PC (Rack mount type)	1	1	1									3 units
COM-11	Presenter	1	1	1									3 units
COM-13	DVD Player				1								1 unit
COM-14	HDD/DVD recorder				1					1			2 units
COM-15	White Board	1	1	1									3 units
COM-16	LCD TV				1								1 unit
COM-20	Remote Camera (w/Control System)		1										1 set
COM-26	Audio Speaker		1	1									2 sets
COM-100	Audio Control System for Multipurpose Theater	1											1 set
COM-101	Video Control System for Multipurpose Theater	1											1 set
COM-102	A/V Control System for Video Conference Room		1										1 set
COM-104	A/V Control System for Conference Room			1									1 set
CSC-1	Midrange Server w/Rack					1							1 set
CSC-4	Switching Hub					1							1 unit
CSC-6	Patch Panel					1							1 unit
CSC-10	Ethernet Card					40							40 pcs.
CSC-15-1	PC (Desktop type)					40	110						150 units
CSC-15-2	Desk & Chair for PC					40	110						150 sets
CSC-16	Embedded System Board					4							4 sets
CSC-17	Oscilloscope					2							2 units
CSC-24	Printer					1	1						2 units

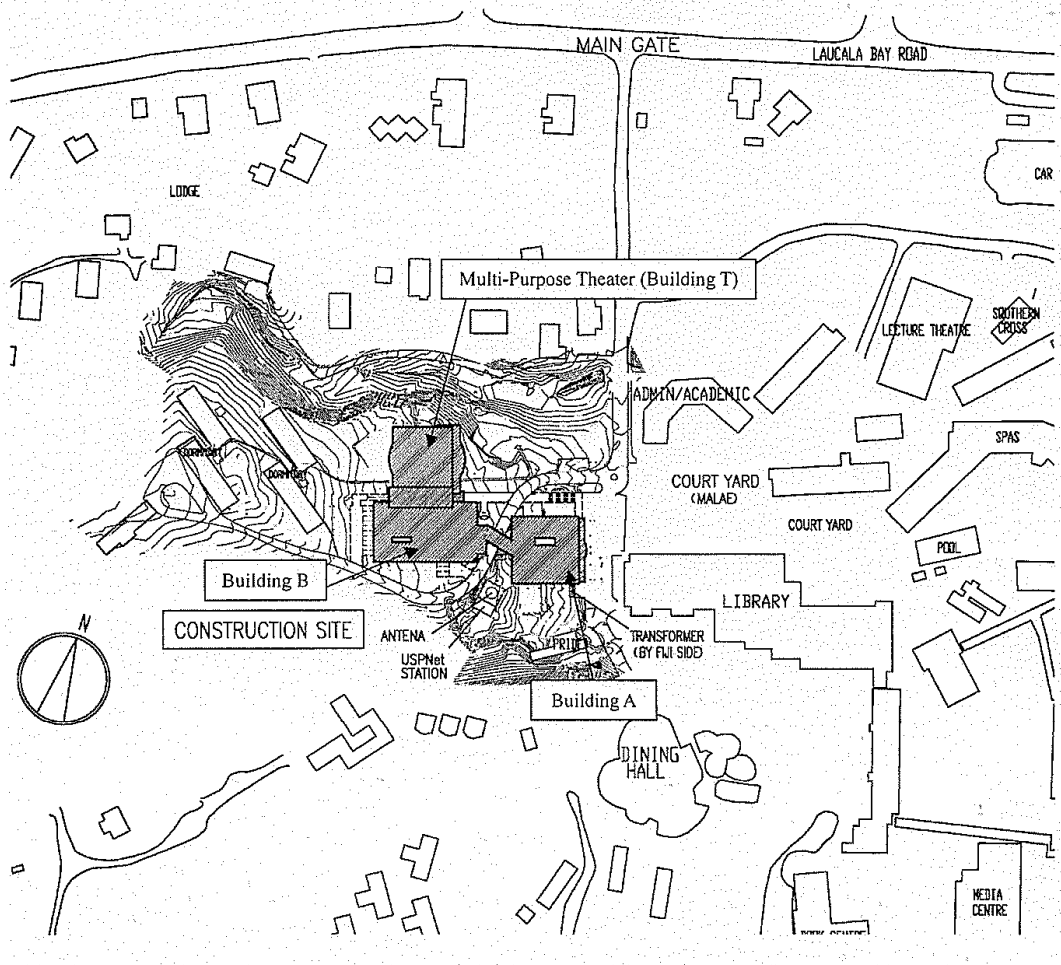
Code No.	Description	Allocation											Q'ty
		COM				CSC		ITS			ENG		
		1	9	11	14	6	8	7	10	14	4	5	
	Numer of Room	(1)	(1)	(1)	(1)	(1)	(4)	(2)	(1)	(1)	(1)	(1)	
	Capacity(Number of person)/Room	300	50	50	-	40	40	60	-	-	12	30	
ITS-1	High end Server								6				6 units
ITS-3	Midrange Server								14				14 units
ITS-4	Tape Backup Archive								1				1 unit
ITS-6	Switching Hub								1				1 set
ITS-7	UPS								1				1 set
ITS-15-1	PC (Desktop type)							120					120 units
ITS-15-2	Desk & Chair for PC							120					120 sets
ITS-20	Printer							2					2 units
ITS-22	LCD Projector (S) /w Screen							2					2 sets
ITS-30	Equipment Rack								1				1 set
ITS-32-1	PC (Desktop type for Scheduler)									1			1 unit
ITS-32-2	Desk & Chair for PC									1			1 set
ITS-33	Workbench w/Chair									1			1 set
ITS-35	HDD/DVD recorder									2			2 units
ITS-60	A/V System for USPNet Control Room									1			1 set
ENG-5	Analog Communications											1	1 set
ENG-6	Analog Communications Training System											1	1 set
ENG-7	Fiber Optic Communications											1	1 set
ENG-8	Antenna Training and Measuring System											1	1 set
ENG-9	Microwave Technology Training System											1	1 set
ENG-11	Digital Communications 1											1	1 set
ENG-12	Digital Communications 2											1	1 set
ENG-13	Digital Communications Training System											1	1 set
ENG-17	Oscilloscope											10	10 units
ENG-18	Power Supply											10	10 units

Code No.	Description	Allocation											Q'ty
		COM				CSC		ITS			ENG		
		1	9	11	14	6	8	7	10	14	4	5	
	Numer of Room	(1)	(1)	(1)	(1)	(1)	(4)	(2)	(1)	(1)	(1)	(1)	
	Capacity(Number of person)/Room	300	50	50	-	40	40	60	-	-	12	30	
ENG-19	Signal Generator											10	10 units
ENG-20	Multimeter											10	10 units
ENG-21	Soldering Station											10	10 sets
ENG-22	Tool kits											10	10 sets
ENG-29	Bread Board Set											10	10 sets
ENG-33-1	PC (Desktop type)										12	3	15 units
ENG-33-2	Desk & Chair for PC										12	3	15 sets
ENG-34	Midrange Server w/Rack											1	1 set
ENG-45	Workbench w/Chair											10	10 sets
ENG-46	LCD Projector (S) /w Screen										1	1	2 sets
ADD-1	Microfilm Scanner				1								1 unit
ADD-2	Flat-bed Scanner				1								1 unit

Room List

COM-11 : Conference Room
COM-14 : ICT Resource Room
CSC-6 : Dedicated Networking Teaching Lab.
CSC-8 : Dedicated Computer Teaching Lab.
ITS-7 : Laboratory B (General Access)
ITS-10 : Server Room
ITS-14 : USPNet Control Room
ENG-4 : Computer Lab.
ENG-5 : Engineering Lab.I

Annex-3 Layout plan



Annex-4 Project Cost Estimation

The total project amount in case this project will be implemented through grant aid cooperation from Japan is estimated to be 2,491.2 million yen and the breakdown of the cost to be borne by Japan and Fiji is estimated as follows, according to the condition in the article(3)below. This cost estimate is provisional and would be further examined by the Governments of Japan for the approval of Grant.

(1) Cost Estimation to be borne by the Japan side

Cost Estimation App.2,287.9 million Japanese Yen
3 buildings and total floor area 6,659 m²

Table 2-30 Cost Estimation to be borne by the Japan side

Item	Cost Estimation (million Japanese Yen)		
(1) building		1,915.5	2,132.8
Building A (ITS, Computer Labs)	696.0		
Building B (Computer Labs, Conference, etc and Connection bridge)	713.6		
Building T (Multi-purpose Lecture Theatre)	449.8		
Landscaping & Others	56.1		
(2) Equipment	217.3		
(3) Detail Design, Supervising			155.1

(2) Cost Estimation to be borne by Fiji side

Table 2-31 Cost Estimation to be borne by Fiji side

		(FJ $)	(million Japanese Yen)
	Total	2,687,000	203.3
1)	Demolition of Existing Building	401,000	30.3
2)	Leveling of Construction Site	26,000	2.0
3)	Move of Power Receiving Station	40,000	3.0
4)	Move of Water Tank	40,000	3.0
5)	Landscaping	261,000	19.7
6)	Parking	200,000	15.1
7)	Planting	32,000	2.4
8)	Equipment	472,000	35.7
9)	Furniture	180,000	13.6
10)	Theatre Equipment	734,000	55.5
11)	Power Receiving Equipment	301,000	22.8

* Networking, Telephone calling, Moving Expenses are not included in the cost estimation above.

6. 事業事前計画表（事業化調査時）

1. 案件名
フィジー諸島共和国 南太平洋大学情報通信技術センター整備計画
2. 要請の背景（協力の必要性・位置付け）
フィジー諸島共和国（以下「フ」国）に本部を置く南太平洋大学（以下、「USP」）は、1969 年に周囲 12 の島嶼国（約 190 万人）と地域（フィジー、クック、キリバス、マーシャル、ナウル、ニウエ、ソロモン、トケラウ、トンガ、ツバル、バヌアツ、サモア）が共同設立した域内最高水準の国際高等教育機関である。 大洋州地域は、広大な海洋に島嶼が散在する特異な地理条件から情報格差が著しく、人材育成も困難な事から、これまで IT を活用した産業は発達してこなかった。2002 年に日本で開催された太平洋・島サミットにおいても、大洋州 IT 推進プロジェクトが島嶼国のデジタル・デバイドを解消し、大洋州地域の発展に重要であるとの認識が示された。 大洋州地域で ICT 教育の中心である USP は、1968 年に高度な教育ニーズを満たすため、12 の島嶼国・地域と地域が共同設立した域内最高の国際高等教育機関で、2000 年に JICA の支援により衛星通信による USP ネットを完成させ、遠隔教育を実施している。 USP の ICT 関連学科の学生数は 2002 年では約 9000 人であったが 2005 年には 1 万人を越え、コースの増設や施設や機材が追いつかない状況である。特にコンピュータ科学科は、急造の木造校舎でコンピュータ実習室が絶対的に不足（充足率約 60%）していて、ICT 教育環境の質・量ともに改善が求められ、講堂も過密状態である。 IT サービス部が運営管理するサーバー室は狭隘で増設が困難な状態であり、学内のネットワークの信頼性向上が切望されている。 外部の企業との共同による研究・開発部門のニーズが高いにもかかわらず、学内には十分な施設がないのが現状である。 本プロジェクトは、遠隔地である大洋州島嶼国地域に対し USP ネットを活用した遠隔教育活動を実施している USP の不十分な ICT 教育・研修機能の改善を行うとともに新たに ICT 分野の研究・開発環境を整備する事により、「フ」国および大洋州島嶼国における ICT 分野の人材確保を目的とする。 本プロジェクトの協力対象事業は USP の ICT 関連施設が不十分で、急増する ICT 関連学科への入学希望学生のニーズに十分対応できない状況を改善するため、300 人の多目的講堂を含む共用部、情報通信技術センター（以下、ICT センター）の中核をなすコンピュータ科学科、学内の ICT 環境のサポートと USP ネットの運営管理を行う IT サービス部、外部の組織と共同研究・開発を行う研究開発部、通信・コミュニケーションコースを主体とした工学科からなる ICT センターの施設を建設し、これら施設に必要な機材の調達するものである。
3. プロジェクト全体計画概要
(1)プロジェクト全体計画の目標（裨益対象の範囲および規模） ・USP のコンピュータ科学科を中心とした ICT 関連学生および「フ」国ラウザラキャンパスを含めた 12 カ国の大洋州島嶼国のキャンパスを合わせた 21,131 人（2006 年）の学生への ICT 教育・研修環境の改善。 ・「フ」国及び大洋州島嶼国内の ICT 関連企業への人材供給に繋がる ICT 関連の研究・開発環境の整備 (2) プロジェクト全体計画の成果: ・USP の情報通信技術センターが整備され、必要な機材が調達される。 ・ICT センターが設立され、ICT に関する教育・研修と研究・開発体制が整備される。 (3) プロジェクト全体計画の主要活動 ア.「フ」国および USP はプロジェクト実施のために建設予定地を準備する。 イ. 日本側は ICT センターの施設・機材を整備する。 ウ. USP は ICT センターの施設・機材を運営する人員配置、予算措置を行う。

エ. USP は整備された施設および調達された機材を使用して「フ」国および大洋州島嶼国のキャンパスへの情報通信サービス活動を実施する

(4)投入(インプット)

ア. 日本側(=本案件):無償資金協力 2,276.9 百万円

イ. 相手国側:

(ア)必要な人員:78 名

(イ)施設・機材の運営・維持管理に係る経費:1,990.9 千 FJ$(約 150.6 百万円)

(5)実施体制:

・主管官庁:教育省

・実施機関:USP

4. 無償資金協力案件の内容

(1)サイト

「フ」国 USP キャンパス内

(2)概要

USP の ICT センターの建設および関連する部門の機材の調達。

(3)相手国負担事項

既存施設の撤去、建設予定地の整地

(4)概算事業費

概算事業費 2,482.5 百万円(日本側無償資金協力 2,276.9 百万円、「フ」国側負担 205.6 百万円)

(5)工期

詳細設計は入札期間を含め 7.0 ヵ月、施工・調達期間は 18.0 ヵ月、合計 25.0 ヵ月

(6)貧困、ジェンダー、環境及び社会面の配慮

なし

5. 外部要因リスク

・「フ」国及び大洋州島嶼国の経済状況および友好関係が悪化しない。

6. 過去の類似案件からの教訓の活用

・特になし。

7. プロジェクト全体計画の事後評価に係る提案

(1)プロジェクト全体計画の目標達成を示す成果指標

成果指標	2006 年現在	ICT センター開設 2 年後(2012 年以降)
ＩＣＴ関連カリキュラム数	63 コース/年間	88 コース/年間
社会人向け ICT 関連コース開催可能時間数	24 時間/週	48 時間/週
USP のコンピュータ科学科の卒業者数	179 名	増加
ICT 関連への就職者数	97 名 (2004 年)	増加

(2)その他の成果指標

特になし。

(3)評価のタイミング

ICT センター開設後

7. 参考資料/入手資料リスト

資料名	発行	備考
Public Health (National Building Code) Regulations 2004	Ministry of Health	
Fiji Brief	Ministry of Information, Communications and Media relations.	
20 Year Development plan (2001-2020) For the enhancement of participation of indigenous Fijians and Rotumans in the socio-economic development of Fiji.	Ministry of Finance and National Planning	
Forum Communication Policy Ministerial Meeting Action plan 26 April 1999	Pacific Islands Forum Secretariat	
Rebuilding confidence for stability and growth for a Peaceful, Prosperous Fiji Strategic development plan: 2007-2011 November 2006	Fiji Government	
Rebuilding confidence for stability and growth for a Peaceful, Prosperous Fiji Strategic development plan: 2003-2005 November 2002	Fiji Government	
Policy directions and strategies for the development and growth of information and communication technology.	Fiji Government	
National ICT strategy plan 2003-2005 & E-government cornerstone Program	Fiji Government	
The Fiji Government information technology policies and principals Version 2.00.00	Fiji Government	
Health and safety at work(general workplace conditions) regulations 2002	Ministry of Labor industry relations & Productivity	
An act to amend the health and safety at work act 1996	Ministry of Labor industry relations & Productivity	
Information and communication technologies for development in Pacific islands developing countries. 6-9 December 2004	USP Symposium summary	
Sub-regional symposium on ICTs for Development in Pacific islands developing countries. 6-9 December 2004	USP Symposium summary	
Pacific islands regional ICT consultation 9-11 April 2003	USP Symposium summary	
Summary of a number of Pacific Countries' policy in respect of ICT	Member countries governments	
Pacific islands Information and Communication Technologies Policy and Strategic Plan. April 2002	CROP ICT working group	
USP 2005 calendar	USP	

資料名	発行	備考
USP 2006 calendar	USP	
USP 2007 calendar	USP	
Building space audit. University of south pacific	USP	
USP Annual 2003 report	USP	
USP Net 2000	USP	
USP strategic 2003 achievements	USP	
Development 2004 @ USP School of social economic development	USP	
Standards & Specification	USP	
A regional University of Excellence Weaving past and present for the future A vision to the year 2020	USP	
USP financial 2003 statements	USP	
SEED annual report 2003	USP	
USP Strategic Plan 2006-2010	USP	
Council paper Graduates Completion 2004 to2006	USP	
2006 Annual report	USP	
University Grants Committee for University of the South Pacific	USP	
2005 Financial Statements	USP	
Financial Statements for the year ended 31 December 2004	USP	
Annual report 2004	USP	
Government strategic plan	Data#3 Group	
ATH annual report 2004	ATH	
Key Statistics June 2007	Fiji islands Bureau of statistics	
Statistical News Building Material Price Index Quarter 2,2007　4 July 2007	Fiji islands Bureau of statistics	
Economic Surveys Construction 2003	Fiji islands Bureau of statistics	
Wages regulation Building and Civil and Electrical engineering trades order 2007	Ministry of Labour	
Statistical News Consumer price index December 2004	Fiji islands Bureau of statistics	
気象データ	Fiji Meteorological Services	
Register of Rain fall in 2006 and 2007	Fiji Meteorological Service	
Climatological summary for Laucala Bay Suva 29 March 2004	Fiji Meteorological Service	
The Climate of Fiji 28 August 1995	Fiji Meteorological Service	
Last Tropical cyclones affecting Fiji from 1830 to 2000 seasons	Fiji Meteorological Service	
電話、上下水、電力供給図面	Public Works Department	
地震・津波データ	Seismology section Ministry of Mineral resources	

8. 要請機材リスト/計画機材リスト

Code No.	機材名	要請機材数量	計画機材数量	設置場所										
				COM				CSC		ITS			ENG	
				1	9	11	14	6	8	7	10	14	4	5
COM-1	液晶プロジェクタ(大)	1	1	1										
COM-2	液晶プロジェクタ(小)/スクリーンセット	2	2		1	1								
COM-5-1	パーソナルコンピュータ(卓上型)	1	1				1							
COM-5-2	コンピュータ用机/椅子セット	1	1				1							
COM-5-3	パーソナルコンピュータ(ラックマウント型)	3	3	1	1	1								
COM-11	プレゼンター	3	3	1	1	1								
COM-13	DVDプレーヤー	1	1				1							
COM-14	HDD/DVD レコーダー	2	2				1					1		
COM-15	白板	3	3	1	1	1								
COM-16	TV	1	1				1							
COM-20	遠隔制御式テレビカメラ	1	1		1									
COM-26	スピーカー	2	2		1	1								
COM-100	多目的講堂用音響システム	1	1	1										
COM-101	多目的講堂用映像システム	1	1	1										
COM-102	ビデオ会議室用視聴覚システム	1	1		1									
COM-104	会議室用視聴覚システム	1	1			1								
CSC-1	サーバー/ラックセット	1	1					1						
CSC-4	スィッチングハブ	1	1					1						
CSC-6	パッチパネル	1	1					1						
CSC-10	イーサネットカード	40	40					40						
CSC-15-1	パーソナルコンピュータ(卓上型)	150	150					40	110					
CSC-15-2	コンピュータ用机/椅子セット	150	150					40	110					
CSC-16	組込型コンピュータ	4	4					4						
CSC-17	オシロスコープ	2	2					2						
CSC-24	プリンター	2	2					1	1					
ITS-1	サーバー(高機能型)	6	6								6			
ITS-3	サーバー(一般機能型)	14	14								14			
ITS-4	テープバックアップシステム	1	1								1			
ITS-6	スィッチングハブ	1	1								1			
ITS-7	無停電電源装置	1	1								1			
ITS-15-1	パーソナルコンピュータ(卓上型)	120	120							120				
ITS-15-2	コンピュータ用机/椅子セット	120	120							120				
ITS-20	プリンター	2	2							2				
ITS-22	液晶プロジェクタ(小)/スクリーンセット	2	2							2				
ITS-30	機材ラック	1	1								1			
ITS-32-1	パーソナルコンピュータ(卓上型/スケジュール管理	1	1									1		
ITS-32-2	コンピュータ用机/椅子セット	1	1									1		
ITS-33	作業台/椅子セット	1	1									1		
ITS-35	HDD/DVD レコーダー	2	2									2		
ITS-60	USPNet制御室用システム	1	1									1		
ENG-5	アナログ通信実験装置	1	1											1
ENG-6	アナログ通信実習システム	1	1											1
ENG-7	光ファイバー通信実験装置	1	1											1
ENG-8	アンテナ技術実習システム	1	1											1
ENG-9	マイクロ波技術実習システム	1	1											1
ENG-11	ディジタル通信実験装置1	1	1											1
ENG-12	ディジタル通信実験装置2	1	1											1
ENG-13	ディジタル通信実習システム	1	1											1
ENG-17	オシロスコープ	10	10											10
ENG-18	定電圧電源装置	10	10											10
ENG-19	信号発生器	10	10											10
ENG-20	マルチメータ	10	10											10
ENG-21	半田システム	10	10											10
ENG-22	工具セット	10	10											10
ENG-29	ブレッドボードセット	10	10											10
ENG-33-1	パーソナルコンピュータ(卓上型)	15	15										12	3
ENG-33-2	コンピュータ用机/椅子セット	15	15										12	3
ENG-34	サーバー/ラックセット	1	1											1
ENG-45	作業台/椅子セット	10	10											10
ENG-46	液晶プロジェクタ(小)/スクリーンセット	2	2										1	1
ADD-1	マイクロフィルムスキャナー	1	1				1							
ADD-2	フラットベッドスキャナー	1	1				1							

*設置諸室名

COM-1	:	多目的講堂
COM-9	:	ビデオ会議室(B棟3F)
COM-11	:	会議室(B棟3F)
COM-14	:	ICTリソース室(A棟2F)
CSC-6	:	コンピュータ科学科ネットワーク実習室(B棟4F)
CSC-8	:	コンピュータ科学科専用実習室(B棟4F)
ITS-7	:	一般PC実習室(A棟3F)
ITS-10	:	サーバー室(A棟2F)
ITS-14	:	USPNet制御室(B棟3F)
ENG-4	:	工学科PC実習室(B棟3F)
ENG-5	:	工学科情報通信実験室(B棟3F)

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