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கணக்காய்வாளர் தலைமை அதிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT

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எனது இல
My No. JF/B/PM/04(01)

මබේ අංකය
உமது இல
Your No.

දිනය
திகதி
Date 13 November 2007

Secretary General
Parliament of Sri Lanka

Audit on the Progress made on the implementation of
IT Projects at the Sri Lanka Parliament

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In consequent to the request made by you in your letter dated 30 November 2006 to have an audit conducted on the Progress made on the implementation of IT Projects in Parliament, M/S EIDIKOS Lanka (Pvt.) Limited, a consultancy firm had been engaged by me to have a detailed audit report on the same in conformity with the provision in the Article 154(4) of the Constitution.

02. The final report dated 12 November 2007 submitted by said M/S EIDIKOS Lanka (Pvt.) Limited is sent herewith.

P.A.Pematilaka
Auditor General

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# Audit on the progress made on the implementation of IT projects at the Sri Lanka Parliament

*12th November 2007*

# EXECUTIVE SUMMARY

The Auditor General commenced an audit of the overall project titled 'Modernization of Parliament' and requested the support of Eidikos Lanka (Pvt) Ltd to assist them in conducting the ICT aspect of the project 'Modernization of Parliament'. Thus an audit was carried out with the objective of assessing the possibilities of achieving the overall objectives established, justify the steps taken so far in implementing the projects, assessing the adequacy of the information security policies implemented and obtaining recommendations on the work to be carried out to implement the projects not already embarked on.

The audit was executed by examining the documentation made available, interviewing of the persons who were involved in the activities of the projects, through physical observation of activities and feedbacks obtained from parliament and its project steering committee.

During the knowledge gathering stage, the auditors observed that the Sri Lanka Parliament, under its modernization project funded by United Nations Development Program (UNDP) nominated Information & Communication Technology Agency (ICTA) as their consultant to support them in the ICT aspect of the modernization project.

As part of the modernization project, an ICT Strategic Plan was developed by ICTA with the assistance of Ernst & Young, a firm of consultants. The ICT Strategic Plan had identified 13 projects to be implemented to achieve the goals and objectives of Sri Lanka Parliament.

On completion of the formulation of the ICT Strategic Plan, the parliament embarked on the implementation of the strategic plan.

Of the 13 projects, the parliament initially considered implementation of four projects and of the four two have been completed so far.

We further observed that the budget for the overall ICT projects had been revised twice and there is a significant variance between the two budgets. We are of the opinion that the reasons for such variances are mainly due to the original budget being not accurate, or enhancement of scope with each revision, or increase of exchange rates or a combination of all these reasons.

We observed that parliament had not adhered to a documented procedure in the formation of steering committees.

Due to the concerns we had on decisions made in relation to the Communication Infrastructure project, we sought the assistance of an independent technical expert to analyse and justify those decisions taken. Based on the analysis carried out, we are of the opinion that;

- a fibre optic backbone with high redundancy had been implemented as part of the communication infrastructure even though the recommended configuration by the consultant did not provide for such a redundancy level
- there is no layout plan of the network since this document was not made available to us for inspection
- capacity estimation and switching plant dimensioning should have been carried out before drafting the final specifications of the network
- technical evaluation carried out on procurement of communication infrastructure should have been more elaborate
- the variance between the original estimate in the strategic plan and the subsequent estimates received from the vendors was approximately 400% which is not acceptable
- same consulting firm which carried out the preparation of the ICT Strategic Plan with cost estimates had subsequently prepared the revised estimate with a large variance. Such a variance between these estimates prepared by a reputed firm is not acceptable
- a standalone Voice over Internet Protocol (VoIP) telephone system has been acquired to cater to fourteen extensions, and the system is not integrated with the existing PABX.
- there is no clear migration plan in existence for the current PABX to be migrated to a suitable IP-PABX platform for the implementation of VoIP.
- in general, we feel the scope of the Communication Infrastructure project for the Parliament has been extended in terms of achieving the expected initial objectives.

We recommend that the Parliament revisits the budgets once more and amend them appropriately prior to embarking on the rest of the projects recommended in the ICT Strategic Plan.

We also recommend the appointment of a Steering Committee with rightful authority vested on them, be properly documented with defined escalation paths for better management of the implementation process. We observe that the Information Systems Security Policy (ISSP) drafted for Sri Lanka Parliament was at a very high level and therefore needs more depth and detail. The ISSP should also be well communicated to the staff of Parliament and be monitored for compliance.

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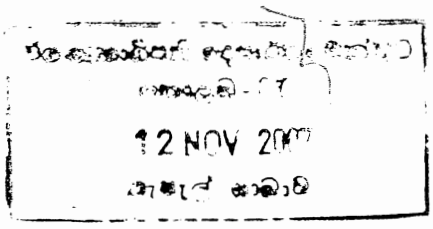


## 1. BACKGROUND:

The Sri Lanka Parliament, under its modernization project funded by United Nations Development Program (UNDP) nominated Information & Communication Technology Agency (ICTA) as their consultant to support them in their endeavour to use ICT as a tool to achieve the following strategic objectives of its modernisation project. The identified core objectives were;

a. Facilitate the Legislative function
b. Facilitate the citizen representative functions
c. Facilitate oversight over the executive
d. Facilitate public awareness on issues
e. Facilitate public participation in development process

Leading to the following items as mentioned in the Mission Statement of the Sri Lanka Parliament

a. Provide accurate and timely information to the MPP, to support their decision making process
b. Empower average citizen with knowledge and information on important issues and Parliamentary decisions
c. Enhance efficiency and effectiveness of the oversight of the executive

*(Source: ICT Strategic Plan of the Sri Lanka Parliament prepared by Ernst & Young - page 12)*

The ICTA henceforth procured the expertise of Ernst & Young (EY) through government tender procedure to formulate the ICT Strategic Plan.

The ICT Strategic Plan thus formulated by EY to address the strategic objectives of the Sri Lanka Parliament, recommended the implementation of 12 key IT projects. The ICT Strategic plan, which was at a conceptual level indicated the requirement for the implementation of these IT projects within a high-level time plan with indicative budgets for projects in most instances, for the purpose of achieving the strategic objectives of the Sri Lanka Parliament.

The parliament has now commenced the procurement & implementation of some of the projects recommended in the ICT Strategic Plan with the support and expertise of the ICTA and UNDP.

The Auditor General of Sri Lanka has commenced an audit of the project 'Modernisation of Parliament' and as part of this audit has identified the

need to carry out an audit of the procedures adopted to implement the above stated ICT projects at the parliament. As an audit of this nature requires specialised IT skills, the Auditor General sought the services of Eidikos Lanka (Pvt) Ltd., to conduct the said audit.

## 2. OBJECTIVE:

As per our understanding, the objectives of the audit by the Auditor General of Sri Lanka on the ICT Projects under the project title 'Modernisation of Parliament' are as follows.

a. The possibilities of achieving the overall objectives established
b. Justify the steps taken so far in implementing the projects.
c. Adequacy of the information security policies implemented.
d. Any recommendations on the work to be carried out to implement the projects not already embarked on.

## 3. SCOPE OF WORK:

The following list of projects was considered for the audit as stated in the ICT Strategy.

a. Information Security Policies
b. Training
c. Data warehouse
d. The Communication infrastructure
e. Messaging and Scheduling System
f. Remote Access for members
g. Document Management System
h. Archiving
i. Human Resource Management System
j. Financial Information Management System with Inventory Control
k. Hotel Management System
l. Physical access management system
m. Web site of the Sri Lanka Parliament - However, this project was not part of the IT Strategic Plan even though it was considered for the audit.

The scope of work for the project is as follows.

a) Obtain the current status of implementation on each of the projects stated above (indicating whether the implementation is complete, implementation is currently taking place or whether the implementation is yet to commence)
b) Identify if desired objectives for each of the projects already implemented are met with

c) Review the original budget suggested & accepted with the latest budget for the 11 projects listed above, and assess the causes for the variance if any.
d) Provide an overall recommendation for the way forward
e) The scope of this audit does not cover the process followed by the UNDP in carrying out procurement for parliament

## 4. Approach & Methodology

The approach and methodology adopted to accomplish the assignment within the defined and accepted scope is provided below.

I. We have considered the ICT Strategic Plan Document accepted by the Project Steering Committee as the baseline for this assignment.

II. Minutes of Steering Committee were perused to establish subsequent decisions taken to amend the Strategic Plan Document that was considered a conceptual document, with the consensus and approval of members of the Steering Committee to accommodate the evolution of the document.

III. Initial discussions were held with the representatives of the Auditor General stationed within the Secretariat of the Parliament to gather any information relevant to our exercise was already in their possession.

IV. Discussed with officials of the Secretariat of the Parliament and the UNDP coordinator for the 'Modernisation of Parliament' project to study the procurement process adopted to procure goods and services to implement the ICT projects specified in the ICT Strategy of the Parliament

V. Perused the IT Strategic Plan for the Parliament to establish the following
    i. Overall objectives of each of the projects
    ii. Suggested budget for each of the projects
    iii. Suggested time plans for each of the projects
    iv. Order of prioritisation for implementation for the list of projects

VI. Interviewed parliament staff to understand projects which have been already commenced/completed from the list of projects specified in the ICT Strategy document

VII. The specification documents for those projects commenced / completed were perused to understand the objectives of each project,

the desired functionalities and the specifications drawn up for each of the projects

VIII. Perused the RFP documents drafted by Ernst & Young to identify enhancements /deviations from initial specification for those projects commenced / completed

IX. Requested for the TOR for the procurement of services of EY to draft the RFP documents

X. Requested for any other supporting documents and correspondence as evidence to assess the procurement procedure adopted to procure the services from EY to draft the RFPs

XI. Perused the RFP documents floated by the Parliament of Sri Lanka to procure the products and services to implement the ICT projects specified within the ICT Strategy for Parliament and to establish any further deviations

XII. Perused submitted documentation as evidence such as minutes of Steering Committees and other communications from authorised personnel in support of the decisions taken to enhance the projects to justify identified enhancements / deviations

XIII. Conducted detail analysis on initial scope and objectives as per the ICT Strategy for Parliament, scope of the floated RFPs and the authorisation/justification established for the enhancements / deviations

XIV. Requested for any further documents available providing approvals for the enhancements / deviations observed from the initial 12 project specification of ICT Strategy;

i. Overall objectives.
ii. Specifications.
iii. Prioritisation of the implementation.
iv. Budget

XV. Perused evidence to establish the tender procedure for procurement

XVI. Reviewed the procedure adopted by the TEC to approve the specifications in the RFP floated

XVII. Sought the services of a technical expert with regard to communication networks to assess the project, Communication Infrastructure

XVIII. Established areas in the specifications floated in the RFP that needed an expert's judgement to justify its reasonableness of specifications taking into consideration the following
   i. The strategic objectives of the Parliament
   ii. The functional requirements of the users
   iii. Project objectives specified in the IT Strategy
   iv. Wish list of the stake holders

XIX. Perused the short-listing procedure to establish the shortlist of vendors

XX. Perused the procedure adopted to issue the TOR and tender documents to short-listed vendors

XXI. Perused the procedure adopted for any extensions to the initial proposal submission date and evidence in support of such extensions

XXII. Perused the proposals submitted by short-listed vendors and the marking scheme adopted by the TEC

XXIII. Perused available evidence on negotiations carried out

XXIV. Reviewed establish contractual agreements with the vendor to establish the scope specified in the contract

XXV. Reviewed the scope and specifications of the contract and with the specifications in the RFP for any amendments

XXVI. Justification of such amendments

XXVII. Conducted field visits with the Technical Expert to gather information to establish the methodology adopted by the vendor to implement the contract, the actual specifications of goods and services being delivered and the contractual agreement and any deviations / enhancements on specifications and the reasonableness of such decisions

XXVIII. Perused the available Project Acceptance Certificate for the embarked projects to ascertain the completeness of the project

XXIX. Two separate questionnaires were circulated to the under mentioned entities and written responses were obtained. The two entities are;
   i. The Project Steering Committee for the overall eParliament project

ii. Ernst & Young who developed the ICT Strategy for the parliament *(appointed by the consultant ICTA)* and who developed the tender documents for the projects identified in the ICT Strategy *(appointed by the donor agency UNDP)*

XXX. The responses received from the project steering committee and Ernst & Young were further perused.

XXXI. The following established contracts were perused to understand the deliverables of each of the contracts.

i. The two contracts that were signed with the consultants, Ernst & Young, one for the preparation of an ICT Strategy signed with ICTA and the other for the preparation of tender documents signed with UNDP
ii. Contract between ICTA and Affno (Pvt) Ltd., for the development of the website for parliament
iii. Contract between IDM and parliament to conduct a training program in order to create IT awareness among parliamentary staff
iv. Contract between Univell (Pvt) Ltd and parliament for the network project (which is part of the Communication Infrastructure project as per this report

XXXII. Interviewed the following officials of the parliament at different instances to obtain information related to the project.

i. The Secretary General of Parliament
ii. The Deputy Secretary General of Parliament
iii. Director (IS & M) of Parliament

XXXIII. Visited the UNDP office and perused the available documents in relation to the eParliament project and inquired about the eParliament project from the under mentioned officers.

i. Mr. Shane Sheils - Assistant Resident Representative (Programme)
ii. Mr. Rajiv Ranjan - ICT for Development Advisor

XXXIV. On completion of information gathering phase, all evidence gathered from the parliament was indexed and filed by the officials of Auditor General's Dept. within parliament

XXXV. Confirmation obtained from the Secretary General of Parliament stating that all documents available have been furnished to us for perusal in relation to the following projects.

i. "Supply, Installation, Commissioning and Maintenance of Communication Infrastructure for Sri Lanka Parliament" by Uniwell Microsystems (Pvt) Ltd
ii. Development of parliament website by Affno (Pvt) Ltd
iii. Provision of ICT Awareness Training for staff of parliament conducted by IDM Computer Studies (Pvt) Ltd
iv. Procurement of PC s, printers and UPS

Based on the confirmation provided to us, we subsequently verified to confirm the availability of any further document prior to the closure of this assignment and finalizing this report.

On completion of the audit a draft interim report was submitted to the Auditor General to obtain responses and comments of Parliament.

Three sets of comments were received for the draft interim report from Parliament, ICTA and UNDP. All comments from these parties were considered in context and subsequent amendments / responses have been incorporated where necessary based on the comments.

## 5. FINDINGS & OBSERVATIONS

Our findings and observations are broadly categorised as follows

I. General Observations
II. Specific Observations of the projects already commenced completed

### General observations:

Out of the 13 projects considered for the study only 3 projects had been commenced up until 8th June 2007 when we issued the Draft Interim Report. However subsequent communications from parliament indicated that an Information Systems Security Policy had been developed. Hence, based on the information we have received so far, the high level status of the projects commenced /completed is as follows.

| Name of Project | Status |
|---|---|
| The Communication Infrastructure | On going |
| ICT Awareness | Completed |
| Web site | On going |
| Information Systems Security Policies | Completed |

The above table indicates only the ICT Awareness project and preparation of Information Systems Security Policies have been completed so far. We also observed that there was a deviation of the prioritisation of the implementation of the list of projects in the ICT Strategy. Project Steering Committee, as a response to a questionnaire sent to them have confirmed that the committee approved such a deviation.

Our draft interim report indicated the non availability of an Information Systems Security Policy document for Parliament. However based on the responses received to the draft interim report it was revealed that there was an Information Systems Security Policy document which was verified by us subsequently. We verified the presence of such a document which had not been subjected to our verification prior to issuing the draft interim report, since the document had not been initialled and dated by our officers.

In our opinion the present Information Systems Security Policy document forwarded to us could be considered as a high level document which needs to be further elaborated.

The parliament provided us with a document containing lists of names of the following committees of the 'Modernization of Parliament' project.

a) Technical Evaluation Committee (appointed on May 9, 2005)
b) Sub committee for Parliament ICT Projects (up to implementation) (appointed on July 27, 2005)
c) e-Parliament Projects (E&Y Study and Web Project) Steering Committee
d) Network Infrastructure Project (implementation) Steering Committee
e) Network Infrastructure Project (implementation) Technical Committee

Parliament also provided us with a copy of a letter dated 10th May 2005 from the Secretary General of Parliament addressed to the Resident Representative of the UNDP informing the appointment of an Evaluation Committee for the purpose of implementation of the ICT Projects for Parliament and a copy of a letter from Director (IS&M) of Parliament addressed to Secretary General of Parliament, Deputy Secretary General and Assistant Secretary General recommending the addition of Director (Finance) to the same Evaluation Committee. Parliament also provided us with a copy of a letter by Director (IS&M) recommending to Secretary General of Parliament the composition of the members who were appointed for the Evaluation Committee.

Based on the response provided by the UNDP on the Draft Interim Report, the above mentioned letters and the comparison of the composition of the committees, it appears to be that the Evaluation Committee appointed by Secretary General of Parliament and the Technical Evaluation Committee stated in a) above, are one and the same.

However the composition of the membership of the steering committee that responded to our questionnaire and the original composition of the steering committee as per the list submitted to us were not compatible. The explanation received to the query raised by us from the parliament was that these steering committees are mostly consisting of nominees of outside agencies such as ICTA and UNDP and as and when these staff members leave these organisations new nominations are made to represent those organisations in these committees.

We however observed that one of the members of the original steering committee, who is still an employee of the parliament, had not endorsed the responses to our questionnaire.

In general, the response from the steering committee to our questionnaire indicates that the development of the ICT Strategy is an on going process which was initiated by the ICT Strategy evolved by Ernst & Young. Hence the steering committee has clearly indicated that the members of it were well aware of the changes that have been effected to the original strategy developed and accepted from Ernst & Young

We also attempted to obtain information in support of the procedure that was followed in forming the steering committee. This information was not available for us for verification. We also attempted to obtain information in support of the changes in composition of the steering committee that responded to our questionnaire. The responses from the Steering Committee, ICTA and UNDP for the Draft Interim Report indicated that changes to the composition of the members were carried out as and when members left those organisations they belonged to. ICTA, in their response to the Draft Interim Report had also indicated that formation of steering committees had been carried out according to a procedure, even though no documentation was available since the Parliament project had been their first pilot project. Based on all these responses, we feel that there is no sufficient documentation to form a proper opinion of the process followed in forming committees and changing the compositions of the committees which included the steering committee which provided responses to the audit.

We have evidence in support of the fact that the procurement of products and services towards implementation of the ICT strategy had been

entrusted to the donor agency UNDP. As such all payments towards entities providing the services had been directly made by the UNDP.

The procurement process carried out by the UNDP was not considered within the scope of this audit and hence that procedure is not covered in this report.

Budgets for the projects in the ICT Strategy

The table below indicates the original and the revised budgets for the projects in the ICT Strategy. This was based on the budgetary information parliament had obtained from ICTA, their ICT consultant

| No | Name of Project | Original Budget (LKR) | Revised Budget (LKR) |
|---|---|---|---|
| 1. | Communication & Infrastructure | 19,000,000 | 75,000,000 |
| 2. | Data Warehouse | 10,000,000 | Moved to Document Management System hardware cost |
| 3. | Document Management | 18,000,000 | 66,296,000 |
| 4. | Messaging & Scheduling | 6,000,000 | 16,957,880 |
| 5. | Information Security Policy | 600,000 | 1,000,000 |
| 6. | Human Resource Management | 6,000,000 | 9,926,000 |
| 7. | Physical Access Management | 12,000,000 | 25,000,000 |
| 8. | Financial Management | 12,000,000 | 28,266,000 |
| 9. | Hotel Management | 5,000,000 | 8,015,600 |
| 10. | Archiving System | 45,000,000 | 75,000,000 |
| Sub Total | | 133,600,000 | 305,461,480 |
| Contingency | | - | 19,538,520 |
| **Grand Total** | | **133,600,000** | **325,000,000** |

Further to our request for a revised budget following the responses received on our draft interim report, Parliament made available to us a revision of the budget drafted and approved during the period February / March 2005. This document indicated an ICT component in addition to other aspects of the Modernization of Parliament projects. However since the budget revision drafted and forwarded by ICTA had been made in December 2005, which is a subsequent date to the document, specified above, we have taken the latter into consideration as the correct revision for this report

Based on the budgetary information specified above, we observed that the budget for the overall ICT projects had been revised twice and there is a

significant variance between budgets. We are of the opinion that the reasons for such variances are mainly due to the original budget being not accurate, or enhancement of scope with each revision, or increase of exchange rates or a combination of all these reasons.

**Specific observations of the different projects which have commenced / completed:**

Communication Infrastructure:
We had concerns in the decisions made in relation to the Fibre Optic Infrastructure, Redundancy provided in the network and the Voice over Internet Protocol (VoIP) platform considered. Therefore we thought it was appropriate to seek the services of a technical expert to analyse and justify the decisions taken on the specifications which were ultimately contracted and implemented.

Please refer to Appendix A to this document for details of the findings which have been extracted from the Technical Expert's report

ICT Awareness:
This is the only project that has been brought to a completion. With the automation and computerization of the Sri Lanka Parliament, a vital factor that needs to be considered is the training on basic computer usage that has to be provided to the human resources of the parliament. Perusal of documents indicated that a great amount of efforts had been taken to carry out this task by identifying different groups of persons for the training. The process has taken into consideration to have a form of evaluation for the trainees which have been duly signed off at the end of the session to confirm that the training was effective. In our opinion this could be an indicator that the desired objectives would be achieved in the future with the other projects being implemented. However a final conclusion on the effectiveness of the training provided could be established once the core systems are implemented and the staff commences using those systems

Web site:
Based on the information available in the original Request for Proposal (RFP) document the requirement was to develop a trilingual web site for the Sri Lanka Parliament. Based on minutes of the Web Committee meeting held at parliament on 23rd November 2005, the Deputy Secretary General (DSG) of Parliament has stated that it is the accepted policy of the parliament to make available whatever material given out, particularly to members of parliament in all three languages and

therefore there was a key reason to have the web site in all three languages (i.e. Sinhala, Tamil and English)

The contract that was signed between Affno (Pvt) Ltd and the ICTA for the development of the web site for the parliament has not indicated the trilingual requirement. However apart from that, the final delivery of the web site was due on 24th May 2004 as per this contract

Only the English version of the web site was finally launched on 17th February 2006 and currently it is online.

Since the complete requirement cannot be seen to be implemented, this project cannot be considered as a completed project and therefore it is not possible to assess whether the project has delivered the desired objectives until all required deliveries are made.

## 6. RECOMMENDATIONS

Based on the information that was made available to us during this audit the following key recommendations are made taking into consideration our observations.

I. The budget we have considered in this document has been prepared in the year 2005 and the implementation of the identified projects has not commenced to date.

II. Hence it is recommended that the parliament revisits the budgets for its validity and make amendments if necessary prior to calling tenders.

III. We recommend that activities pertaining to the formation of steering committees are properly documented and rightful authority be granted

IV. We recommend that appropriate procedures are adopted in formation of steering committees and nomination of members to these committees. Relevant documentation in support of these procedures should be maintained along with minutes circulated and confirmed by the membership for future reference.

V. The Information Systems Security Policies (ISSP) document made available for inspection is too high level and requires more depth and details. It is also recommended once the ISSP is prepared the content of it should be properly communicated to all levels of the staff of Parliament along with close monitoring of the policies for compliance

## 7. ASSUMPTIONS TO THE PROJECT

I. We assume that the documented evidence in support of this audit is limited to the files with documentation confirmed and certified by Secretary General of Parliament.

II. The audit assumes ICTA as the primary consultant of parliament, and the role of Ernst & Young up to the point of preparing the ICT Strategy for the parliament is a sub contractor's role towards ICTA, based on the evidence made available to us.

III. The budgets (both original and revisions) presented in this report were based on the budgets prepared by ICTA, the primary consultant of the parliament.

## 8. LIMITATIONS

I. This report has been prepared based on the information provided to us by the parliament and UNDP.

II. The audit has not been able to establish the exact scope and the role of Ernst & Young in the phase where the tender documents for parliament were prepared, due to the absence of the terms of reference for Ernst & Young.

III. The audit carried out by us was unable to locate the documentary evidence to establish exact role and authority of the steering committee appointed for all the ICT projects under the project of 'Modernisation of Parliament'

# APPENDIX – A

## ICT Infrastructure Audit in the Parliament Complex

### 1. Optical Fiber Communication Infrastructure:

#### 1.1 Observations:

a) Before this project was implemented there had been a 4-core 62.5/125um optical fiber backbone which connected eight different areas of the Parliament. (See Annex 1). That network had been used as part of the backup optical fiber backbone in the new project implementation.

b) Under the new project the vertical backbone is cabled with Corning Cable Systems LANScape MIC riser-rated multimode optical fiber. Fiber cables originate from the master equipment cabinets in the Server Room. They reach eighteen cabinet locations for connecting the edge switches at those locations to the backbone.

c) The backbone has long horizontal stretches leading to the edge switches. Both vertical and horizontal sections had been provided with full path redundancy.

d) The optical cable used for the backbone is 6-core, 50/125um riser rated for the primary fiber backbone, and 6-core 62.5/125um riser rated cable for the backup backbone. The existing 4-core 62.5/125um fiber backbone (Corning) that was installed previously is also integrated to form the backup fiber backbone.

e) Additional 6-core 62.5/125um optical fibers had been installed to reach the locations that had not been covered with the existing fiber links.

f) Excluding the redundant fiber connections, each cabinet location is provided with at least one un-terminated fiber pair for future use.

g) Optical fiber connection to the Jayanthipura Entrance is a Steel armoured Hybrid Optical Cable, with 6 x 50/125um Multi mode fibers and 6 x Single mode fibers.

h) No layout diagrams were available for inspection on the site visit.

i) At the time of inspection the installation of the new ICT infrastructure was still in progress.

j) The contractor had decided on the paths to install the cables, then and there while the installation is progressing. No paths had been identified in advance by the user or the consultants.

k) Technical specifications for the ICT infrastructure were found in the RFP document. (See Annex 3)

1.2 Comments:

1.2.1 Very High Redundancy in Network Cabling Infrastructure

A fiber optic backbone with high redundancy had been implemented as part of the communication infrastructure as described under 1.1. The main and backup backbone cables provide two fiber connections to each edge switch for (1+1) operational redundancy. These two backbones go via separate cable paths adding path redundancy to the configuration as well.

The recommended configuration by consultant; ICTA, does not provide for such a dual redundancy configuration for the backbone (See Annex 2).

The reasoning for this dual-path backbone cabling infrastructure layout had been that if one path is physically damaged due to a serious incident the other path is available to provide the connectivity.

Since no part of the network has been laid through public land and the maintenance is done either by the internal staff or by other parties under direct/strict supervision in this type of a high security area, the risk of a cable being cut is at minimum. The other possibilities are earth quakes, bomb explosion or the failure of part of the building structure. In such an exceptional circumstance, it is very likely that people will be evacuated. (However if the need is there for the parliamentarians and administrative staff to continue using the network in the event of such a situation it could only be satisfied by this type of path redundancy design. It is not clear whether such a need assessment has been carried out). The configuration given in the strategic plan does not support the idea of dual path configuration either. This type of path redundancy can only be seen in highly commercialized data centre scenarios where even a very small downtime causes colossal losses in the form of compensation, damage to the goodwill and reputation. Therefore path redundancy is very difficult to be justified.

It is also very unprofessional that redundant paths had not been planned up to the time of awarding the tender. This should have been done by the consultants considering the building plan and layout diagrams to match with the requirements of the user. If it is left to be proposed by the bidder for any reason still the proposed layout plan should accompany the bid for the evaluation of the TEC. However the vendor has not submitted the path

redundancy plan. A layout plan was not even available at the date of the site visit by the audits because it is still being planned together with the end-user and the company who won the contract. Auditors are of the opinion that the opportunity for evaluating and selecting the vendor, who meets path-redundancy objectives with the most cost effective way, has been wasted and it is a serious flaw in the procedure.

The steering committee is of the opinion that it has approved this level of redundancy that is prevalent in the network. The steering committee is also of the opinion that Ernst & Young had indicated this in the RFP documents prepared by them. Based on the explanations provided above by us, we are still of the opinion, that such a high level of redundancy is not required for Sri Lanka Parliament's communication infrastructure. We also take a stand that we are unable to comment in what capacity Ernst & Young had indicated such a level of redundancy in the RFP documents since we have not been able to ascertain their scope of work for the project where Ernst & Young prepared the tender documents for Sri Lanka Parliament. However, since the steering committee is the apex decision making body of the project, they may take a final decision in this regard.

### 1.2.2 Power Utility

In the context of the given reasoning it is unusual why dual-path power supply has not been considered. Power utility path redundancy is the more common redundancy method used even in large mission-critical commercial data centre applications. The use of Uninterruptible Power Supply (UPS) in each location could be an alternate solution provided monitoring of all UPSs are continuously done and a damaged path can be restored within the holding time of the UPS.

The steering committee is of the opinion that the RFP under its scope did not cover dual path power supply which we accept. However, the steering committee, in its response to the questionnaire we had circulated had suggested that the parliament's network requires zero downtime. Based on this assumption we felt that dual path power supply is critical due to the fact that generator power would be available after a certain time delay that is required for the 'start-up' and 'change-over' process. We also state that at the time of the audit, the parliament had not considered having dual path power supply. Therefore we emphasise the fact that the consultants, should have carried out a detailed study of the requirement and provided the necessary recommendations, in this aspect

### 1.2.3 Network Dimensioning

With the implementation of the project the Parliament had received fiber connectivity with very high redundancy and availability. Applications such

as; Document Management System, Messaging/Scheduling System, Human Resources Management System, and Financial Management System etc, are envisaged to operate utilizing the capacity of the new communication network infrastructure. The Structured Cabling System being installed at the moment will therefore be capable of supporting data/voice/video applications due to its wide bandwidth. As such this inquiry actually focuses on investigating whether the communication infrastructure has been over-dimensioned.

From the available documentation it was not possible to establish as to how the backbone capacity has been calculated because no details were available for auditing. Therefore it is difficult to comment on whether the backbone recommended by the strategic plan is an over-design or not. In our opinion, network dimensioning engineering details is a matter that should come under the purview of the consultancy TOR. Capacity estimation and switching plant dimensioning should have been carried out before drafting the final specifications. Network traffic dimensioning assumptions, logic and estimates, that should be submitted to the TEC for approval prior to publishing the tender were not available for perusal.

The RFP provides some technical guidelines but invites the bidder to propose a technical solution. Therefore the technical design responsibility has been passed down to the bidder. An envisaged configuration is provided in the RFP for the reference. Therefore it appears that the solutions proposed are mostly vendor/product specific.

Since the approach for the procurement of the Communication Infrastructure had been to indicate a high level requirement in the RFP with the objective of obtaining a detailed design from the vendor proposals, we did not observe any evaluation of design superiority and solution feasibility being carried out on the vendor proposals that should have been properly documented. To further verify our position, a copy of the TEC report was obtained for inspection. This report contained tabulation of the evaluation criteria items against the different vendors being evaluated. The tabulation carried points being allocated based on a scale for each of those items of evaluation criteria against each vendor. However this report did not carry adequate explanation of the basis of allocating those points and a further interpretation of the points being allocated. Hence, in our opinion we feel the technical evaluation that has been carried out could have been more elaborate

### 1.2.4 Large variations of Estimates

The budgeted communication infrastructure cost estimated by Ernst & Young for ICTA was in the range of Rs. 18-20 Million. Subsequent modifications to the strategic plan have blown up the prices, out of proportion by almost four

times. Later ICTA has admitted that such a deviation is justified under the circumstances.

Auditors are of the view that this price increase is very unusual due to the following reasons.

i. It is highly unusual to have approximately 400% variation of estimated cost between a strategic plan and an implementation plan of any project.
ii. Same consulting company had been engaged in both stages and that makes it further impossible.
iii. Consulting company being a reputed firm should not have made a wrong estimate in either of the two stages
iv. It is an open tender that entertain competitive bids. Therefore it is almost impossible for all bidders to quote a price nearly 400% higher than the consultants estimate, knowing that they will loose the opportunity.
v. Some of the reasons provided by Ernst & Young for the deviation of the budget for the Communication Infrastructure are not acceptable. The following points indicate the reasons provided by Ernst & Young and why we feel those reasons are not acceptable.

    - *The initial budget taking into consideration the use of the existing Fibre Optic Back-bone.* - It should be noted that there had not been any deviation from this position, when procurement and implementation was carried out as parliament has utilised the existing Fibre Optic Back-bone.

    - *The initial budget not considering the need for voice over IP as a requirement for communication* - This position also cannot be considered since the IT Strategy document indicates that the network should support voice, video and data.

The gravity of this situation is high when considering the fact that the additional 300% of money from the donor agency could have been utilized to implement three other projects of the same proposed magnitude as the original strategic plan given by ICTA.

After scrutinizing the pricing schedules submitted by the vendor and the specifications given in the RFP following observations can be recorded.

Quantities and the total price have almost doubled due to the concept of dual redundancy introduced after the completion of the strategic plan. At the core switch and server level (1+1) redundancy is acceptable in a mission critical system configuration. However we did not find a strong argument in the answers provided in response to our queries, to justify the level of path redundancy employed.

ii. Unit costs indicated can be considered as reasonable.
iii. Switch solution consisting of path redundancy to the edge switches, is the highest cost component in the project.
iv. The introduction of conditions such as 'no single point of failure' and 'high availability' had contributed significantly to the increase of the total price.
v. Software components have also contributed to the increase of the total price.

Conceptual changes as given in (iv) above that have been introduced subsequent to the strategic plan had contributed to this price change They may have been justified assuming a certain level of mission-criticality in the overall system.

In addition, ICTA as the primary consultant has specified that the initial budget prepared by Ernst & Young was for a conceptual design whereas the deviated budget is for comprehensive design. However, with the available information we have inspected, Ernst & Young has not confirmed the position that the initial budget was for a conceptual design. However, in our opinion it is still not acceptable to have a deviation of the costs to the magnitude reported.

### 1.2.5 Cable Run to Jayanthipura Entrance

The cable running up to the Jayanthipura entrance is having a huge capacity for which sufficient justification can not be established. The specification given for this fiber section in the RFP is given below.

| | |
|---|---|
| 1.1.1. | Features of outdoor Fiber Optic cable |
| 1.1.1.1. | 50/125 or 62.5/125 micron Multimode Fiber optic backbone cable |
| 1.1.1.2. | The fiber cable will be minimum of 8 fiber cores (4 pairs). |
| 1.1.1.3. | Armed fiber cable |
| 1.1.1.4. | The Fiber Cable shall be able to support Communication Infrastructure technologies such as FDDI, Fast Ethernet (100Mbps), Gigabit Ethernet (1000Mbps) and 10 Gigabit Ethernet (10Gbps). |
| 1.1.1.5. | The cable must be capable of withstanding without degradation in performance temperatures in the range of 0 C to 60 C. |

Capacity planning calculations to justify eight fiber cores to this location was not available in the given documentations for inspection. Item 1.1.1.4 list several technologies from which 10 Gbps bandwidth provides the upper limit and it becomes the deciding factor for communication channel bandwidth.

This list indicates that the consultants had not decided or recommended any particular technology based on their study before the RFP was published.

Therefore the study and subsequent recommendations seem to be incomplete leaving an opening to a vendor to propose the most expensive configuration/technologies available at present. For instance 10 Gbps capacity is commonly used by large telecom service providers who carry aggregated traffic of many subscribers between different regions of a large country or between different countries.

One application that is likely to run on this capacity is a security clearance system for vehicles and entrants. However it needs only two fibers or a wireless link to be implemented. Report prepared by E&Y recommends a RF link to this location (See Annex 2). No documentation was available to verify the procedure and the reasoning used to change this recommendation. It is necessary to inspect the technical design and rationale behind this unusual capacity design if any such design is available.

## 2. VoIP Platform:

### 2.1 Observations:

a) A standalone VoIP telephone system has been acquired to provide a VoIP extension facility to fourteen telephone extensions.

b) This system is not integrated with the existing PABX.

c) Existing PABX has spare capacity.

d) Audit investigation revealed that this VoIP facility has been acquired with the long term objective of using a single network infrastructure to carry audio, video and data. In addition it is envisaged to use this as a backup facility in the event of a failure of the main PABX.

### 2.2 Comments:

#### 2.2.1 VoIP Technology and Interoperability Issues

It is noted that the VoIP facility has been acquired to provide the service on a trial basis and achieve familiarity with the technology and the associated services. It is also noted .the strategic plan has the suggestion to integrate audio, video and data applications to run on a common network infrastructure.

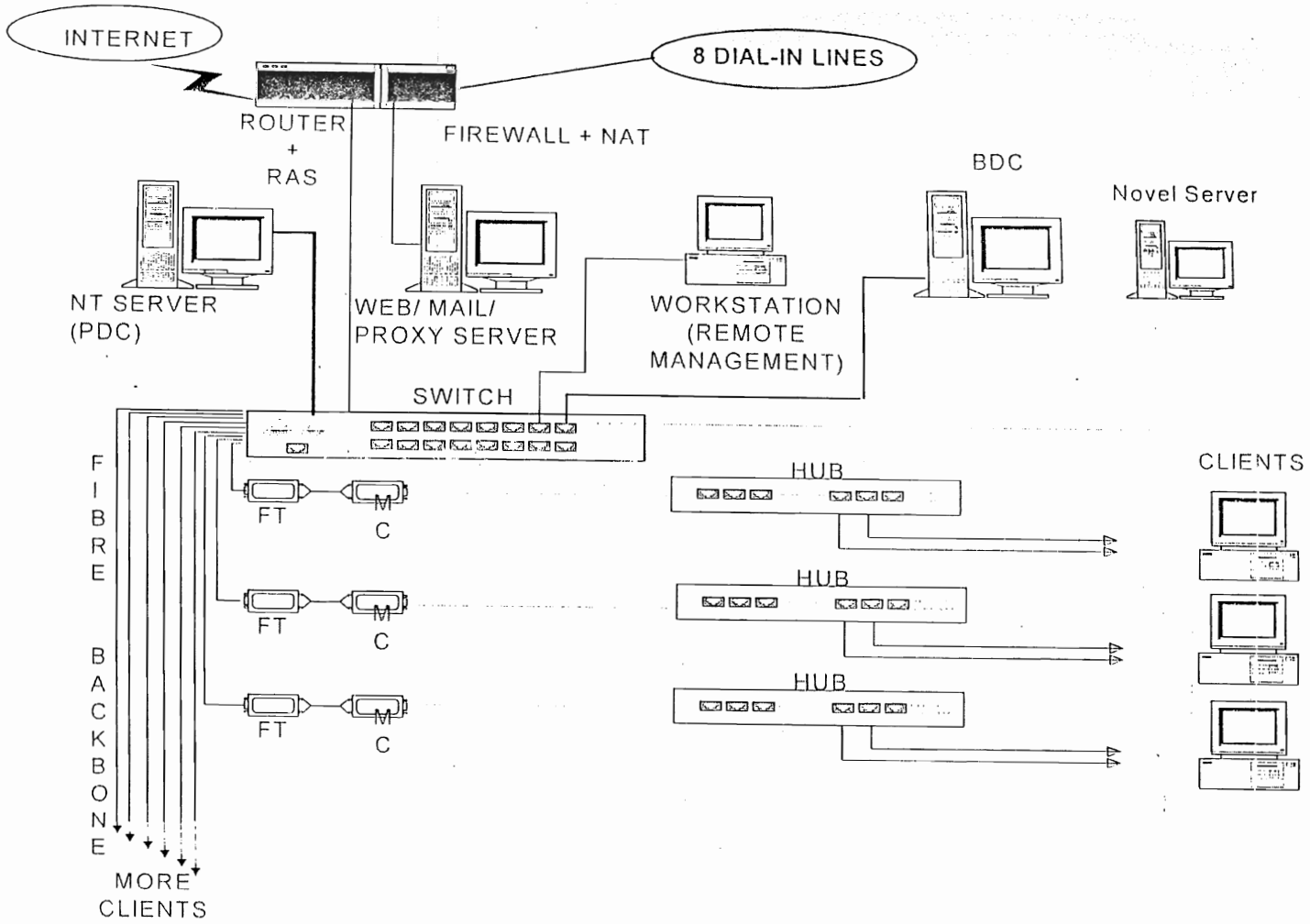
VoIP is a developing technology with more and more effective vocoders being added as the voice compression technologies progress. As such an older VoIP system may not support some new vocoders which were developed after that system and therefore old versions may not be forward-compatible. Some

VoIP systems use proprietary components as well. Therefore the present VoIP solution may not be compatible with a more modern VoIP solution that is likely to be acquired in the future because some systems are not fully mature to ensure that level of interoperability. Therefore present VoIP system is a redundant system at the moment which has been acquired for familiarization with the technology.

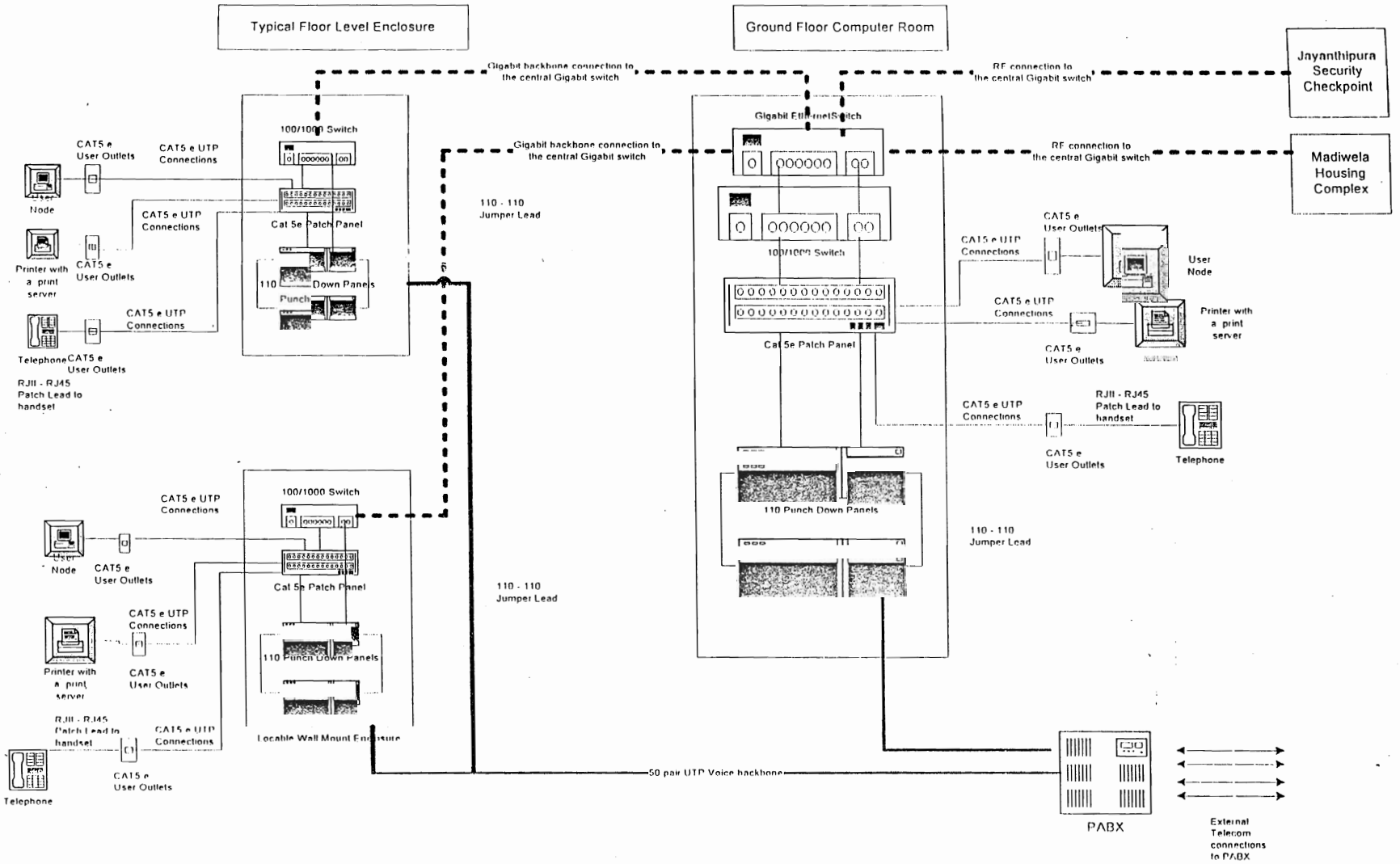
### 2.2.2 Lack of a Migration Plan for an IP-PABX

It is the common practice to have a phasing out plan for the existing PABX detailing the way for migrating to a suitable IP-PABX platform for the implementation of Voice over Internet Protocol (VoIP). It was noted that a migration plan with sufficient technological detail or a timeline was not available.

**Annex 1 : ICT Infrastructure in the parliament before the new project was implemented.**



## Annex 2 : Recommended ICT Infrastructure by consultants; ICTA



## Annex 3: Technical Specifications given in the Request for Proposal

Table 8.1.1 - 1

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 2. | General Requirements | |
| 2.1. | The communication infrastructure should cover all sections in the Parliament complex | M |
| 2.2. | Wired or wireless connectivity should be provided to ensure that all officers who require such facilities for their business functions | M |
| 2.3. | The wired network should be scalable to accommodate the growth of users of the communication infrastructure. | M |
| 2.4. | The Infrastructure should integrate seamlessly with the current IT infrastructure of the Parliament | M |
| 2.5. | The infrastructure should accommodate all future IT projects identified in the introduction to this RFP and the IT strategy | M |
| 2.6. | Client access should be at 100 Mbps or higher | M |
| 2.7. | There should not have a single point of failure | M |
| 2.8. | Single log-in for the communication infrastructure | M |
| 2.9. | Should facilitate data, voice and video | M |
| 2.10. | Should facilitate the Voice over IP | M |
| 2.11. | All software provided should be licensed versions | M |
| 2.12. | Vendor should provide industry standards in all relevant areas | M |
| | | |
| 3. | Structured Cabling System | |
| 3.1. | Backbone Connectivity | |
| 3.1.1. | Fibre Optic backbone between each floor of buildings in the main building and data centre (Ground floor) of the main building. | M |
| 3.1.2. | Each backbone cable run should have provision for cable slack (3m) at both ends. | M |
| 3.1.3. | Backbone cable run should be a single cable run without any splices. | M |
| | | |
| 3.2. | Features of Backbone Fiber Optic cable | |
| 3.2.1. | Features of Indoor Fiber Optic cable | |
| 3.2.1.1 | 50/125 or 62.5/125 micron Multimode Fiber optic backbone cable | M |
| 3.2.1.2 | The fiber cable will be minimum of 4 fiber cores (2 pairs). | M |
| 3.2.1.3 | Tight Buffer Cable | M |
| 3.2.1.4 | Riser rated cable | M |
| 3.2.1.5 | The Fiber Cable shall be able to support Communication Infrastructure technologies such as FDDI, Fast Ethernet (100Mbps), Gigabit Ethernet (1000Mbps) and 10 Gigabit Ethernet (10Gbps). | M |
| 3.2.1.6 | The cable must be capable of withstanding without degradation in performance temperatures in the range of 0 C to 60 C. | M |
| | | |
| 3.2.2. | Features of outdoor Fiber Optic cable | |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.2.2.1 | 50/125 or 62.5/125 micron Multimode Fiber optic backbone cable | M |
| 3.2.2.2 | The fiber cable will be minimum of 8 fiber cores (4 pairs). | M |
| 3.2.2.3 | Armed fiber cable | M |
| 3.2.2.4 | The Fiber Cable shall be able to support Communication Infrastructure technologies such as FDDI, Fast Ethernet (100Mbps), Gigabit Ethernet (1000Mbps) and 10 Gigabit Ethernet (10Gbps). | M |
| 3.2.2.5 | The cable must be capable of withstanding without degradation in performance temperatures in the range of 0 C to 60 C. | M |
| | | |
| 3.2.3. | *Fiber Termination* | |
| 3.2.3.1 | All fiber cables should be terminated using industry standard connectors. | M |
| 3.2.3.2 | All backbone fiber cables should be terminated at the time of installation. | D |
| 3.2.3.3 | In the data centre (at L3 switch), termination would be to the patch panel and in each floor it can be terminated directly to the uplink of the switch or to a patch panel. | D |
| | | |
| 3.2.4. | *Fiber Patch Panel* | |
| 3.2.4.1 | Rack mountable 19" Fiber patch panel at the data centre to terminate fiber run from each floor. | M |
| 3.2.4.2 | Patch panels should consist of Duct connectors, Fiber Management Kits and Connector Faceplates based on the Bidder's solution requirement. | M |
| 3.2.4.3 | Fiber patch leads to interconnect fiber Patch panel and the switch. | M |
| | | |
| 3.2.5. | Fiber Testing | |
| 3.2.5.1 | Fiber cables should be tested and certified by the Bidder at following periods:<br>▪ Prior to the installation, cable must be tested on the reel for continuity<br>▪ Test of each fiber segment at the time of installation<br>▪ Entire end to end fiber optic link should be tested after the installation | D |
| 3.2.5.2 | Following tests has to be carried out and certified by the Bidder: | M |
| | Attenuation test | |
| | OTDR test | |
| | Bandwidth test | |
| | Length test | |
| | Fault location test (if required) | |
| | | |
| 3.2.6. | Other requirements | |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.2.6.1 | Bidder has to specify the other requirements/ supporting structures for Backbone cabling of their solution. This shall include but not limited to the following components:<br>▪ Sleeves/ Slots/ Conduits<br>▪ Cable trays/ ladder racks/ J Hooks<br>▪ Raceways<br>▪ Equipment cabinets and trays<br>▪ Floor penetration<br>Other requirements have to be identified by the Bidder based on their solution. In addition, they should be based on approved Structured Cabling standards.<br>If the requirements are not specified, it is assumed that they are identified within the quoted price. | D |
| 3.2.6.2 | Based on the solution provided, the Bidder is responsible for firestopping, and bonding and grounding of fiber cables. | D |
| | | |
| 3.3. | Horizontal and Work Area Connectivity | |
| 2.3.0 | Wired connection should be provided for the locations specify by the Parliament - The bidder can obtain the list of locations, which need the wired connectivity at the time of the site visit. | M |
| 3.3.1. | Horizontal and work area cabling should be based on four pair Unshielded Twisted Pair (UTP) (Preferably Cat 6) cables. | M |
| 3.3.2. | Horizontal UTP cable length is limited to 90 metres and work area cable length is limited to 5 meters. Total UTP length including patch and fly leads to a maximum of 95 metres. | D |
| 3.3.3. | The horizontal and work area cable run should be a direct run from floor switch to UTP information outlet. | D |
| 3.3.4. | All work area equipments and cords must be the same category rating as the horizontal cabling and equipments. | D |
| 3.3.5. | Each horizontal cable run should have provision for cable slack at both ends. | D |
| 3.3.6. | Cabling inside rooms/cubicles should run on flat white PVC trunking and in GI pipes whenever they are outside buildings and corridors. | D |
| 3.3.7. | Also, cables must be appropriately shielded when they are wired (closely) parallel to power lines. | D |
| 3.3.8. | Equipment cabinets for cable termination and mounting wiring concentrators should be EIA 19 compliant, fully enclosed, wall mounting with integrated fan assembly. They should be equipped with transparent, lockable front doors. | M |
| | | |
| 3.3.9. | Features of Local Area Cabling | |
| 3.3.9.1 | The cabling should be compliant with the ANSI/TIA/EIA 568-B requirements. | M |

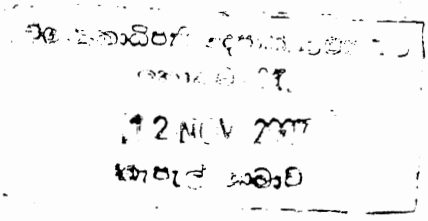
| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.3.9.1 | Should be capable of transmission speeds of 100 Mbps or higher | M |
| 3.3.9.3 | 4 pair UTP cables should support at least 100 Mbps Speed data communication and would comply with industrial accepted Standard. It should support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.9.4 | All the 4 pairs of the UTP cable should carry 24 AWG solid conductors; resistance of 100 Ohms and Bandwidth of 350 MHz or higher. | D |
| 3.3.9.5 | All pairs to be solid core and terminated and color coded in accordance with standards. | D |
| 3.3.9.6 | Branded cable from one manufacturer should be employed throughout the entire installation. | M |
| | | |
| 3.3.10 | UTP Patch panels | |
| 3.3.10 | The UTP patch panels should support Gigabit speed data communication | M |
| 3.3.10 | Patch Panels should comply with Industrial Acceptable standards. | M |
| 3.3.10 | The patch panels should be rack mountable in a standard 19" equipment rack. | D |
| 3.3.10 | All patch panels shall be ANSI TIA/EIA 568-B compliant. | D |
| 3.3.10 | The patch panels shall support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.10 | One cable management panel should be included with every patch panel. | D |
| | | |
| 3.3.11 | UTP Outlet | |
| 3.3.11 | All Information Outlets should comply with Industrial Acceptable Standards and backwards compatible. | M |
| 3.3.11 | The Information Outlet should support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.11 | All the outlets should be protected from dust and contamination with shutters. | D |
| 3.3.11 | The insertion of patch cords should be done without any difficulties. | D |
| 3.3.11 | All information outlets should be ANSI/TIA/EIA 568-B. | D |
| 3.3.11 | Information outlets should be able to be mounted in either at 90 degrees (Straight) or 45 degrees (Angled) in a standard faceplate | D |
| 3.3.11 | Information outlet can be placed on different locations based on the requirement of the work area such as on the wall, on the floor etc. | D |
| | | |
| 3.3.12 | UTP Patch and Fly Leads | |
| 3.3.12 | UTP patch leads of maximum 5m length should be provided for connection of patch panel to the Switch. | D |
| 3.3.12 | Fly leads with minimum or 2m and maximum 5m lengths must be provided for connecting the Workstations to the Information Outlet. | D |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.3.12 | UTP patch and fly leads should comply with Industrially accepted standards depending on which main structured cabling will be in place. | M |
| 3.3.12 | The patch & fly leads should support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.12 | The patch leads and fly shall be ANSI/TIA/EIA 568-B compliant. | D |
| 3.3.12 | The patch lead and fly leads would be factory made, tested and certified. | D |
| | | |
| 3.3.13 | UTP Testing Practices | |
| 3.3.13 | The testing of UTP shall provide following compliance. | M |
| | Link Test | |
| | Channel Test | |
| 3.3.13 | For both types of above stated tests the following shall be tested for compliance: | D |
| | Wire Map | |
| | Length and Delay | |
| | NEXT | |
| | Attenuation | |
| | Return Loss | |
| | Power Sum ELFEXT | |
| | ACR | |
| | Power sum ACR | |
| | Power Sum NEXT | |
| | ELFEXT | |
| | Propagation delay | |
| | Delay skew | |
| | | |
| 3.3.14 | Other Components | |
| 3.3.14 | Bidder has to propose the other components that are required for the horizontal and work area cabling such as but not limited to:<br>▪ Racks/ trays<br>▪ Conduits<br>▪ Equipment cabinets and trays<br>▪ Pathways etc.<br>If other components are not specified, it is assumed that they are identified within the quoted price. | D |
| | | |
| 4. | Switches | |
| 4.1. | Core Switches | |
| 4.1.1. | Core switch should support full layer 3 routing and 1000Base standard ports compatible with wiring | M |
| 4.1.2. | At least 24 1000BaseX gigabit ports to ensure Gigabit speeds for each and every floor. | M |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 4.1.3. | The central switch should be connected to each floor switches | M |
| 4.1.4. | Switches should consist of Enterprise edition software. | M |
| 4.1.5. | LAN carrier class core switches should be: | M |
| 4.1.5.1 | VLAN capable | |
| 4.1.5.2 | Minimum 50 GBPS backplane | |
| 4.1.5.3 | Full duplex multimode ports | |
| 4.1.5.4 | SNMP configured for centralised management | |
| 4.1.5.5 | Switch management software | |
| 4.1.5.6 | Port trunking | |
| 4.1.5.7 | Port priority | |
| 4.1.5.8 | Port mirroring | |
| 4.1.5.9 | Industry standard 19" rack mountable | |
| 4.1.5.10 | Make and model | |
| 4.1.6. | Bidder should clearly stated the Fail over mechanism for the Core Switch | M |
| 4.1.7. | Proposed solution should facilitate future upgrades (Stackable) | M |
| | | |
| 4.2. | Server Farm Switch | |
| 4.2.1. | Server farm switch should be a layer 3 manageable switch | M |
| 4.2.2. | 16 1000BaseX gigabit ports to ensure Gigabit speeds. | M |
| 4.2.3. | Server farm switch should connected to core switch - redundancy should be available (connectivity) | M |
| 4.2.4. | Switches should consist of Enterprise edition software. | M |
| 4.2.5. | Redundancy to be proposed with either an additional switch or by proposing a fault tolerant switch | M |
| 4.2.6. | LAN carrier class core switches should be | M |
| 4.2.6.1 | VLAN capable | |
| 4.2.6.2 | Full duplex multimode ports | |
| 4.2.6.3 | SNMP configured for centralised management | |
| 4.2.6.4 | Switch management software | |
| 4.2.6.5 | Port trunking | |
| 4.2.6.6 | Port priority | |
| 4.2.6.7 | Port mirroring | |
| 4.2.6.8 | Industry standard 19" rack mountable | |
| 4.2.6.9 | Make and model | |
| | | |
| 4.3. | Floor Switches | |
| 4.3.1. | 16/24 Full duplex multimode port switches | M |
| 4.3.2. | 2 fiber links from the core switches | M |
| 4.3.3. | GBIC to be used to uplink to floor switches from core switch. | M |
| 4.3.4. | LAN carrier class switches should be | M |
| 4.3.4.1 | VLAN capable | D |
| 4.3.4.2 | SNMP configured for centralised management | D |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 4.3.4.3 | Industry standard 19" rack mountable | D |
| 4.3.4.4 | Make and model | D |
| 4.3.5. | Bidder should clearly mention the redundancy mechanism | M |
| | | |
| 5. | Wireless Networking | |
| 5.1. | Wireless connection should be provided for the locations specify by the Parliament - The bidder can obtain the list of locations, which needs the wireless connection at the time of the site visit. | M |
| 5.2. | Wired and wireless connections should be integrated with each other. | M |
| 5.3. | Proposed solution should support encryption facility | M |
| 5.4. | The bidder's solution should cover user authentication | M |
| 5.5. | The proposed solution should facilitate seamless roaming | M |
| 5.6. | Bidder should propose a suitable mechanism for redundancy of wireless equipment | M |
| | | |
| 6. | Remote Access | |
| 6.1. | Secure remote access to the network should be available | M |
| 6.2. | Secure dial in support should be available | M |
| 6.3. | Proposed solution should support industrial standard authentication | M |
| 6.4. | Bidder should specify the fail over mechanism | M |
| | | |
| 7. | Firewalls | |
| 7.1. | Vendor has to propose a firewall solution | M |
| 7.2. | Propose solution should consider<br>• Total network security<br>• Remote access security<br>• Internal security issues and concerns | M |
| 7.3. | Data filtering should support state of art technology available | M |
| 7.4. | Bidder should specify the Firewall fail over solution and Quality of Service (traffic/ load balancing) | M |
| | | |
| 8. | Virus / Spy ware guards | |
| 8.1. | The bidder should propose a Virus/ spy ware solution | M |
| 8.2. | Industry standard enterprise solution | M |
| 8.3. | Upgrades for period of three years | M |
| 8.4. | The bidder can come up with multiple solution to support the entire solution (workstations and other servers) | D |
| | | |
| 9. | Server room setup | |
| 9.1. | The bidder is expected to setup the 'server room'/Data centre in the premises specify by the Parliament at the time of site visit. | M |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| | • Necessary power arrangement (online UPS power etc.)<br>• Network cabling requirements<br>• Physical Security requirements<br>• Proper AC requirements<br>• Fire protection systems<br>• Cabinets/ racks<br>• Etc. | |
| | | |



# Report of the IT Expert Panel

**Mandate**

Select Committee of Parliament to assess the present condition of the Parliamentary Complex, which met on the 15th of November 2007 at Parliament after having reviewed the Audit Report forwarded to this Select Committee, requested ICTA to appoint an IT Expert Panel to advice the Committee and make its recommendations.

Accordingly the ICTA appointed the following members to constitute the IT Expert Panel.

1. Dr. Ajith Madurapperuma, Senior Lecturer, University of Moratuwa
2. Prof. Gihan V. Dias, Senior Lecturer, University of Moratuwa
3. Dr. Prasad Wimalarathne, Senior Lecturer University of Colombo
4. Mr. Wasantha Deshapriya, Director, Re-Engineering Government, ICTA.
5. Ms. Thusha Mukunthan, e-Parliament Project Manager, ICTA
6. Mr. Rajiv Ranjan, ICT for Development Advisor, UNDP
7. Mr. Mahesh Perera, Director Information System Management, Parliament
8. Mr. Buddhika Nawagamuwa, Systems Engineer, Parliament
9. Mr. K.O.D.D. Fernando, Deputy General Manager – IT, Sri Lanka Foreign Employment Bureau.
10. Mr. Thushara Suraweera, Assistant Secretary, Presidential Secretariat

The Panel met at ICTA on several occasions to study and analyze the said Audit Report and referred to the earlier documentations furnished in this regard.

Firstly the panel wishes to bring it to the notice of the committee that the company 'Eidikos Lanka (Pvt) Ltd', who was chosen to do the audit by the Auditor General's Department, consists of a set of former employees of Ernst & Young (E&Y), who were the consultants who carried out the system study, prepared the ICT Strategic Plan and developed the Bid Documents for the Parliament. We wish to put on record our strong objection for this assignment been given to a set of individuals who had earlier carried out the work, to be finally audited. It is very unfortunate that Auditor General had appointed and delegated the

IT audit to a group of individuals who may not be neutral at all in this scenario. This is a 'Conflict of Interest'.

Having analyzed the Final 'Audit Report', the panel is of the overall opinion that it lacks clarity and contains inaccurate facts, and fails to meet its own stated objectives.

The 'Audit Report' constitutes the following sections and the panel gives its observations accordingly.

1. Executive Summary:
2. Background:
3. Objective:
4. Scope of work:
5. Approach & Methodology:
6. Finding & Observations:
7. Recommendations:
8. Assumptions to the Project:
9. Limitations:
10. Appendix – A

## 1. EXECUTIVE SUMMARY (*Refers to 'Executive Summary' of the Audit Report)*

The Audit Report has identified four objectives; however, in the report, there is no reference of the audit meeting these objectives.

The section refers to total number of IT projects as 13; however, in reality the revised ICT Strategy consists of only 10 projects.

Initial estimations for overall ICT project cost have been done by E&Y (*in ICT Strategic Plan*). Subsequent to an ICTA enquiry, E&Y re-estimated the overall ICT project cost. Further to that, even ICTA did an independent re-estimation of overall ICT project cost. Therefore, the

panel notes that in this section to say that 'budgets ...had been revised twice...' is incorrect and misleading.

The panel agrees with the justifications for the causes of variance in estimations; however, the statement such as 'original budget being inaccurate' is an understatement because the original estimation done by E&Y was not only inaccurate but also was grossly underestimated. This is reflected in 'Revised Estimations' done for all the Projects subsequently, which shows for example, about 475% increase in Document Management System, and about 369% increase in Messaging and Scheduling components.

The panel notes that all the Steering Committees were documented; however further strengthening on documentation of proceedings can further reinforce the processes.

With regard to the network infrastructure project, the comments made are highly speculative and undesirable, as it fails to take into account, the earlier clarifications provided to the 'Draft Interim Audit Report' by the Parliament, ICTA, and UNDP.

## 2. BACKGROUND *(Refers to 'Background' of the Audit Report, Page 1)*

The panel agrees with the auditor except for the number of projects. As stated earlier, the revised ICT strategy consists of 10 projects in contrast to 12 projects mentioned in this section. This fact was clarified to the auditor in the feedbacks given to 'Draft Interim Audit Report'.

## 3. OBJECTIVES *(Refers to 'Objectives' of the Audit Report, Page 2)*

The Panel agrees with identification of the objectives of the Audit.

## 4. SCOPE OF WORK *(Refers to 'Scope of Work' of the Audit Report, Page 2)*

The panel notes that the report includes 12 projects from ICT Strategic Plan and the Web Site for the audit. However, the list and sequence of projects are incorrect. Before

commencing the implementation, number of projects had been reduced to nine and the project sequence was also revised. The revised project order can be seen in every RFP document developed by E&Y. Having considered this backdrop, the panel is of the opinion that the final audit report could have considered the revised project sequence as the basis for auditing the progress made on the implementation of IT projects instead of previous conceptual model.

The proposed numbers and sequence of implementation of projects as given in the ICT Strategic Plan is as follows: (Available in ICT Strategic Plan for the Parliament of Sri Lanka, Page no. 120-121)

1. Information Security Policies
2. **Training**
3. **Data warehouse**
4. The Communication infrastructure
5. Messaging and Scheduling System
6. **Remote Access for members**
7. Document Management System
8. Archiving
9. Human Resource Management System
10. Financial Information Management System with Inventory Control
11. Hotel Management System
12. Physical access management system

The revised numbers and sequence of implementation of projects in implementation phase is as follows: (Available in all RFPs.)

1. Communication Infrastructure (including remote access)
2. Document Management System
3. Messaging and Scheduling System
4. Information Security Policies
5. Human Resource Management System
6. Financial Information Management System

7. Catering and Reservation System
8. Physical Access Management System
9. Archiving

The panel notes that by the time of RFPs were prepared:

- 'Training' has already commenced
- 'Data warehouse' was merged with 'Document Management System'
- 'Remote Access for members' was included in 'Communication Infrastructure'

This is an evidence to support the argument that auditor does not have conceptual clarity on the key components of the ICT strategy, which is paramount to analyse the strategy and its progress with a view to critically commenting on the objectives identified at the beginning of the audit report.

## 5. APPROACH AND METHODOLOGY *(Refers to 'Approach and Methodology' of the Audit Report, Page 3)*

Agreeing with auditor on the approach adopted to accomplish the scope of work undertaken, the panel expresses serious concerns vis-à-vis the way various point of views have been synthesized in compiling the final report. For example, in point II *(Refers to Page 3 of the Audit Report),* while taking into account the fact that there have been changes in the original ICT Strategic Plan, which have been approved by the steering committee, the Audit report, however fails to take them into account and surprisingly, contradicting it self in point V *(Refers to Page 3 of the Audit Report)* chooses i, ii, iii and iv as basis of the audit.

## 6. Findings & Observations *(Refers to 'Findings & Observations' of the Audit Report, Page 7)*

### 6.1 General Observations

This section again refers to 13 projects, in contrast to actual 10 projects in the revised ICT strategic plan. Out of 10 projects only 'ICT awareness project' has been completed to date

and the 'Network Infrastructure Project' is still under implementation. The panel also agrees with the auditor on the progress made by the 'Network infrastructure project'. Though the web site project is not a part of the ICT strategy; the panel notes the inclusion of this project under this audit and agrees on the progress made. With regard to Information Security Policy, the panel does not agree with the auditor. The policy document which was introduced at present is merely an operational arrangement; proper security policy based on the IT Strategic Plan will be introduced on completion of the first four projects and this approach was clarified to the auditor through the observation to the interim report. Furthermore, the information security policy document is a practical guideline, meeting today's security needs of Parliament in contrast to comments made by the auditor.

With regard to the number of appointed committees and their composition, the panel does not agree with the auditor as to the reasons given below:

With regard to the Network Infrastructure Project, four committees had been appointed: two committees for project evaluation and two for project implementation. In terms of project evaluation, UNDP called for bids and requested Parliament to appoint a preliminary Evaluation Committee to assist UNDP's Procurement Committee. The Secretary General of Parliament incompliance with this request appointed a committee comprising of officials from Parliament, ICTA and UNDP. (The committee "a" cited in the audit report has to be changed as "Evaluation Committee") The Evaluation Committee itself appointed a Technical evaluation Committee comprising experts from all the three Institutions mentioned above (the committee "b" as per the audit report).

The second committee is a sub committee of the first committee; however, the two committees are not the same as cited by the auditor.

After the contract was awarded to the selected bidder, another steering committee - 'Network Infrastructure Project (implementation) (committee "d" as per the audit report) was appointed to ensure speedy and smooth implementation of the network infrastructure project.

The committee itself appointed another committee - 'Network Infrastructure Project (implementation) Technical Committee' to attend to 'day-to-day' operational activities at the ground level.

Therefore, all four committees appointed for the network infrastructure project are properly documented; right procedure had been adopted in appointing these committees.

'e-Parliament Project (E&Y Study and Web Project) Steering Committee', committee "c" as per the audit report, was constituted for the system study project. Change of members and non-availability of documentary evidence for the formation of the 'e-Parliament project steering committee was adequately justified by ICTA and Parliament in their feedback to the interim audit report.

Furthermore, the panel is of the view that the committee minutes have been properly maintained and distributed among committee members at the end of each committee proceeding.

With regards to the Budget/estimations, the panel is of the view that auditor's findings are misleading and inaccurate. Having referred to the feedbacks on the interim audit report provided by ICTA, UNDP and Parliament, the panel is of the opinion that the auditor has deliberately evaded presenting the truth in spite of adequate clarifications provided to the auditor vis-à-vis the entire process adopted in revising the budget. This is one of reasons as to why the panel takes a serious view of the conflict of interest situation, which arose as a result of the IT auditor being a formal employee of E&Y who drew up the initial budget which was grossly inaccurate.

The following extract taken from the feedbacks to the interim audit report clarifies the entire process adopted in revising the budget.

*The need for budget revision was arisen at the time the financial bids for the network infrastructure project were opened by the UNDP. It was observed that all the bidders have quoted a price far above the initial estimation of the E & Y. The UNDP requested the Secretary General for an explanation while informing*

*the External Resources Department about this development and the Secretary General in turn wrote to the Chief Executive Officer of the ICTA to provide an explanation for same. In view of the discrepancy the Secretary General also requested that the cost estimate evolved by E & Y for the other nine projects also be re-evaluated as the experts were of the view that E & Y could have erred in those as well. At this point of time ICTA undertook to prepare a realistic cost estimate which was forwarded to Parliament, External Resources Department and the UNDP, Table I: Revised Estimate .*

*Table I: Revised Estimate - ICTA*

| *No.* | *Project sequence* | *E&Y Estimate (Original) (Rs.), Source: ICT Strategy document (Page No. 134)* | *ICTA Revised Estimate (Rs.), Source: ICTA letter dated December 23, 2005), Warranty – 3 years N/A – Not Available* | *Percentage of Increase* |
|---|---|---|---|---|
| *1* | *Training* | *2,000,000* | *N/A* | *N/A* |
| *2* | *Communication Infrastructure* | *20,000,000* | *75,000,000* | *375%* |
| *3* | *Document Management System* | *20,000,000* | *66,296,000* | *331.4%* |
| *4* | *Messaging and Scheduling System* | *6,000,000* | *16,957,880* | *282.6%* |
| *5* | *Information Security Policies* | *800,000* | *1,000,000* | *125%* |
| *6* | *Human Resource Management System* | *6,000,000* | *9,926,000* | *165.4%* |
| *7* | *Financial Information Management System* | *10,000,000* | *28,266,000* | *282.6%* |
| *8* | *Catering and Reservation System* | *4,000,000* | *8,015,600* | *200.3%* |
| *9* | *Physical Access Management System* | *15,000,000* | *25,000,000* | *166.6%* |
| *10* | *Archiving* | *50,000,000* | *75,000,000* | *150%* |
| | *Contingency* | *N/A* | *19,538,520* | *N/A* |

*As a result of ICTA calling for an explanation from E & Y a report was forwarded to ICTA by E & Y which was made available to the IT Auditor.*

*The re-estimation effected by E & Y themselves in its report is as follows;*

*Table II: Revised Estimate – E&Y*

| No. | Project sequence | E&Y Estimate (Original) (Rs.), Source: ICT Strategy document (Page No. 134) | E&Y Revised Estimate (Rs.), Source: E&Y (Rs.100=$1), Warranty – 3 years, N/A – Not Available | Percentage of increase |
|---|---|---|---|---|
| 1 | Training | 2,000,000 | N/A | N/A |
| 2 | Communication Infrastructure | 20,000,000 | N/A | N/A |
| 3 | Document Management System | 20,000,000 | 95,147,800 | 475.7% |
| 4 | Messaging and Scheduling System | 6,000,000 | 22,177,000 | 369.6% |
| 5 | Information Security Policies | 800,000 | N/A | N/A |
| 6 | Human Resource Management System | 6,000,000 | 23,438,000 | 390.6% |
| 7 | Financial Information Management System | 10,000,000 | 12,825,300 | 128.2% |
| 8 | Catering and Reservation System | 4,000,000 | 5,451,400 | 136.2% |
| 9 | Physical Access Management System | 15,000,000 | 2,041,550 | -13.6% |
| 10 | Archiving | 50,000,000 | 42,719,700 | - 85.4% |

*The above depicts the variance of the cost estimates forwarded by E &Y at two points of time and that of the ICTA. Unfortunately the professional negligence on the part of E&Y was revealed very much at a later stage.*

The panel is of the view that Parliament has not done budget revision as stated in the audit report. Having compared the above revisions, the panel is of the opinion that the variance is mainly due to the original budget being inaccurate and not because of enhancement of the project scope or changes in exchange rates as claimed by the auditor.

## 6.2 Specific observations of the different projects which have commenced/ completed

With regards to the Communication Infrastructure, the panel is of the view that the concerns raised in this section have been properly clarified by ICTA, Parliament, and UNDP in their feedbacks to the interim report; however, more detail analysis is provided at a subsequent section *(Appendix A)*.

With regards to the ICT Awareness, the panel agrees with the auditor on the remarks.

Regarding the web site, the panel was informed by Parliament that the multilingual web site is now already completed and will be launched soon.

## 7. Recommendation *(Refers to 'Recommendations' of the Audit Report, Page 12)*

The panel agrees with the auditor on the recommendations I & II. The panel agrees with the auditor on the recommendations III & IV subject to clarifications given in the above sections.

With regard to the information systems security policy, the panel does not agree with the auditor as to the reasons outlined above (Pl refer to comments made in the section "General Observations").

The panel is of the view that the recommendation section should have included comprehensive list of recommendations for the deficiencies if identified during the audit; it is highly unsatisfactory that the auditor has failed to make substantial recommendations with

the view of meeting the envisaged audit objectives, which were set out by the auditor in the beginning of the report.

Furthermore, the panel wishes to make the following observations with regard to the four objectives listed out at the beginning of the report.

- *The possibilities of achieving the overall objectives established*

  The auditor has failed to comment or make substantial analysis or come up with recommendations towards meeting the overall objectives established by him/her. Therefore, the panel is of the view that auditor could have been elaborative on this matter.

- *Justify the steps taken so far in implementing the projects*

  *The a*uditor has done reasonable justice to this aspect.

- *Adequacy of the information security polices implemented*

  Having assessed the observations made, the panel is of the view that the auditor does not seem to have conceptual clarity on this aspect. Furthermore, the auditor has failed to comprehend the clarifications provided by Parliament, ICTA, and UNDP on their feedback report.

- *Any recommendations on the work to be carried out to implement the projects not already embarked on*

  The auditor has totally neglected this aspect and the report does not include any such recommendations Parliament could exploit towards achieving strategic objectives.

**8. Assumptions to the Project *(Refers to 'Assumptions to the Project' of the Audit Report, Page 13)***

While validating the assumptions by the auditor, the panel notes that this section of the report misrepresents the source of original and revised budget as ICTA (Pl refer section 6.1 for details).

**9. Limitations** ***(Refers to 'Limitations' of the Audit Report, Page 13)***

While noting the limitations as expressed in the audit report, the panel takes into cognizance that the report actually utilizes information provided by ICTA and E&Y also, other than only Parliament and UNDP as stated in this section.

Citing unavailability of Terms of Reference with respect to defining the E&Y's scope and role is not justifiable.

**10. Appendix A** ***(Refers to 'Appendix A' of the Audit Report, Page 14)***

The following section deals with the issues raised in the Appendix A of the Audit report. Having reviewed the background documents, the panel is of the view that the feedback to interim report prepared by Parliament, ICTA, and UNDP has clarified all these issues with adequate factual evidences. The following clarifications are extracted from the feedback to interim audit report.

**1. Optical Fiber Communication Infrastructure**

**Comments**

**Very high redundancy in Network Cabling Infrastructure**

The panel is of the view that this is a baseless argument made without knowing technological developments and institutional business needs. To support this argument, the clarifications that have been made available to the auditor are provided below:

*"The RFP document developed by E&Y categorically recommends redundancy at all critical points (Pl refer to 5.17 & 5.15 of the RFP). Accordingly, the selected vendor has proposed cable level redundancy in 'vertical backbone cabling'.*

*The capacity and quality of the redundant fiber cable is in compliance with industry standards and organizational needs. Furthermore, cable level redundancy brings much more value addition to Parliament in the long run particularly in tangible and intangible forms. Productivity improvements, improved stakeholder-satisfaction, and affirmative organizational image building are a few.*

*The reasoning for this dual-path backbone cabling infrastructure layout had been that if one path is physically damaged due to a serious incident the other path is available to provide the connectivity. This factual reasoning still stands true; ICTA cannot baselessly assume that there will not be any civil development works at Parliament, due to the fact that it is situated in a high security area. In such circumstances it is hard to assume that the cables will not be damaged or disconnected by mistake, and we are highly surprised that the auditors have assumed that there is not single civil work to be carried out at the Parliament which could damage the cabled laid out.*

*With regards to the redundant path being not specified upfront is a purposeful act, giving vendors an opportunity to propose innovative ideas with the lowest cost and that is the underlined concept behind the competitive bidding. RFP spelt out the requirements and also required redundancy at all critical points".*

**Unavailability of dual-path power supply (Power Utility)**

The panel is of view that redundant power arrangement for the entire network is out of the scope and the panel is satisfied with the existing power arrangement. The following are some of the comments made by ICTA, Parliament, and UNDP to the draft interim report.

*"There is a standby power generator in the Parliament. In case of main power supply failure, it takes care of the electricity needs of the parliament. Even more, redundant power arrangement is provided in the server room; however, dual-path power supply is out of the scope of the project, which may be contemplated in the future, contingent upon the necessity."*

**Over-capacity of the network infrastructure (Network Dimensioning)**

Having studied the proposed network infrastructure proposal and other supportive documents, the panel is of the view that the proposed infrastructure capacity is congruent for Parliament in strategic terms. In support of this argument, the following extract of the clarifications provided by ICTA, UNDP, and Parliament are quoted herewith.

*"The consultant E&Y who conducted the IT Survey was very well aware of the requirements of Parliament and drafted RFP without stating the solutions explicitly. The RFP provides basic guideline for the project rather than confining vendors to one particular design or framework. Accordingly, design responsibility was passed on to the vendors and the selection was based on design superiority and solution feasibility. Therefore the vendor is responsible to draw the proposals in relation with the requirements in the RFP in a cost effective manner. Vendors have also gone through the ICT strategy before submitting their proposals. And also vendors had few visits to parliament and see the building and the existing infrastructure several times. Vendors were aware of the requirements and the proposed applications planned to run on this network infrastructure. Accordingly, vendors have followed industry standards and proposed suitable solutions."*

**Large Variations of Estimates**

As stated, the panel is of the view that the variance is mainly due to the original budget being not accurate and not because of enhancement of project scope or increase in exchange rates as claimed by the auditor. Further more, the panel fully agrees with the following comments made by ICTA, UNDP and Parliament.

*"It is a fallacy to say that cost estimate has gone up merely because of subsequent modifications to RFP. This statement is misleading and inaccurate and by comparing figures it is obvious that estimated cost of all other projects has gone up after budget revision carried out by the same consultant, E&Y. This proves that initial cost estimates prepared by E&Y are inaccurate and far below the prices available in the market.*

*The consultants (E&Y) have developed an ICT Strategy which was a conceptual document and estimates made based on that were no exact. When the same consultants prepared the set of specification, the requirements were articulated in much detail. The said documents were further discussed at length by the*

*consultants and the Parliament and steps were taken to improve, refine and fine-tune the areas which were academic and conceptual to fit in to the practical needs of the Parliament. This process took place continuously and at times the participation of E&Y was also obtained.*

*Failure to estimate the true market value of the proposed solution has made the estimation deviate from the real value. With the specifications (not the 'modification') in place, the value of the solution came up to its real worth."*

**Unusual capacity design – connectivity to Jayanthipura (Cable run to Jayanthipura Entrance)**

The panel is of the opinion that the proposed solution is a practical and a modest approach in contrast to baseless and speculative comments made by the auditor. The panel furthermore, agrees with the clarification made by ICTA, Parliament, and UNDP; extract of the clarifications are given bellow:

*"The particular 'out door fiber cable' which is feasible in the long run in contrast to fragile wireless solutions.*

*Higher number of spare cables and higher capacity of bandwidth (10 Gb) has now become the industry-norm and therefore, the 'out door fiber cable' used between Parliament and Jayanthipura entrance is in compliance with industry norms, standards and organizational limits.*

*The requirements of the cabling to Jayanthipura Entrance are prescribed by the consultant E&Y. The diagram which is in the final RFP prescribed that the leased line is required to Jayanthipura Entrance and the relevant sections detailed the requirements specification in this regard as well. Further, it is the most appropriate system that need be installed.*

*Regarding the connection to the entrance, the industry standard procedures have been adopted; the fiber is a reliable and maintenance free option. The specifications adopted are industry norms. Also, the cost is not directly proportional to the bandwidth capacity that the fiber offers but is mainly a result of the casing. It is recommended to have armed fiber for outdoor cabling."*

## 2. VoIP Platform

### Comments

Having studied the background material, the panel is of the view that introduction of VoIP is fully in compliance with the ICT strategy. Furthermore, the decision to introduce VoIP is prudent in contrast to baseless allegations made by auditor. For easy reference, extracts of the clarifications are given bellow:

*"VoIP was one of the requirements spelt out in the RFP and to facilitate the implementation of this functionality, specifications were also included in the RFP at the time of lateral review stage by the Consultants and were approved by the Steering Committee. This position has been well clarified by E & Y in their clarifications provided through ICTA to the IT Auditor. Accordingly, a pilot project was initiated comprising of key stakeholders in Parliament. The implementation at the Parliament is not a 'trial' but a pilot project, which can be expanded further based on the adoption and usage. And also there is a cost saving associated with VoIP due to it's utilization of a single network to carry voice and data, especially where users have existing underutilized network capacity that can carry VoIP at no additional cost. Further ICTA, is currently engaged in implanting a project to provide VoIP facility to Island-wide public sector institutions intending to minimize telephone charges."*

### 9.7 Lack of a migration plan for an IP-PABX

VoIP implementation is a pilot implementation and the migration plan to fully IP based PABX was not under the scope of the Network Infrastructure Project. However, the panel notes that this is a valuable suggestion and should be taken into consideration.

## Conclusion and Recommendations

Having critically analyzed the interim and final audit reports and feedbacks to the draft interim report by ICTA, UNDP, and Parliament; and the ICT strategy documents, the panel is of the opinion that the audit report not only fails to capture the progress made on the implementation of IT projects at the Parliament but also misrepresents the situation with inaccurate and misleading comments. The panel strongly believes that the Parliament is carrying out the implementation of ICT strategy in the right direction; and recommends that the strategy evolved be perused without further delays. The Expert Panel is also of the opinion that the comments and substance of the audit report doesn't warrant or justify any substantial deviation from the strategy or specifications already evolved in this regard. In order to expedite the work, the panel also recommends constituting a rightful authority to carry forward the uninterrupted implementation of the strategy.

Dr. Ajith Madurapperuma, Senior Lecturer, University of Moratuwa

Prof. Gihan V. Dias, Senior Lecturer, University of Moratuwa

Dr. Prasad Wimalarathne, Senior Lecturer University of Colombo

Mr. Wasantha Deshapriya, Director, Re-Engineering Government, ICTA.

Ms. Thusha Mukunthan, e-Parliament Project Manager, ICTA

Mr. Rajiv Ranjan, ICT for Development Advisor, UNDP

Mr. Mahesh Perera, Director Information System Management, Parliament 8/1/2008

Mr. Buddhika Nawagamuwa, Systems Engineer, Parliament 8/1/2008

Mr. K.O.D.D. Fernando, Deputy General Manager – IT, Sri Lanka Foreign Employment Bureau.

Mr. Thushara Suraweera, Assistant Secretary, Presidential Secretariat

**Date: 27th of December 2007**

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GENERAL TREASURY

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My No. SA/ST

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Your No.

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கொழும்பு 01, இலங்கை.
P. O. Box 1559, 1st Floor, The Secretariat,
Colombo 01, Sri Lanka.

Friday, January 04, 2008

Secretary to the Select Committee
of Parliament to assess the present condition
of the Parliamentary complex and
Deputy Secretary General of Parliament

**IT Audit of Parliament**

This refers to your letters 26th November 2007 addressed to the Secretary to the Treasury and 7th December 2007 addressed to me. The letter addressed to me requested me to provide a report to the select committee of Parliament to assess the present condition of the Parliamentary complex, giving a **Financial Justification** with regard to an Audit Report made available to the select committee by the Auditor General after auditing the a project called e-parliament project. A report to Technically Justify the project has already been prepared by a panel of experts who are much more familiar with the project as some of them were involved in the project.

Copies of the following documents were made available to me for perusal for this report although I was not given a specific Terms of Reference and this report is based on the financial information collected by the survey of those documents.

**2. Document perused**

1. Report of the Auditor General Ref No JF/B/PM/04(01) of 13th November 2007
2. Comments of the parliament signed by the Steering Committee chaired by the Deputy Secretary General of the Parliament
3. Comments of the ICTA signed by the Director, Re-engineering Government Programme
4. Comments by the Resident Representative of f UNDP, Sri Lanka
5. Approved original budget signed by UNDP, External Resources Department and Parliament
6. Budget revision approved and signed by UNDP, External Resources Department and Parliament
7. Draft report of the IT expert Panel of ICTA to advice the committee

These documents were helpful to understand the problem and to extract financial information on the project. However the Parliament is keen to have an early report, and my work was limited by the availability of time.

**3. The Project**

As it stands now this appears to be a 325 million IT project to automate some of the work of the Parliament expecting the following benefits out of the respective components as shown in a document prepared by the Information and Communication Technology Agency (ICTA) of Sri Lanka.

1. Messaging and Scheduling
   Calendaring and scheduling which will permit 700 users to maintain and access individual, group or resource schedules at any time, indicate availability and free time on specific dates leave remarks, notices, reminder etc for specific dates.

2. HR Management
   Personal files database, Automatic recording of attendance, Calculation of attendance related allowances and deductions, facility management of 1000 employees

3. Hotel Management System (Catering)
   Maintain re-order level, Costing of food served, Generate bills, Charge the credit sales to a specific account, Staff roster and training management, Supplies history and maintenance, control room service requests.

4. Physical Access Management System
   Facilities to record requests for passes, and authorization is given, communicates the pass information to the gates and entrances to the building, control the entrances to the premises.

5. Document Management System
   Workflow management, Document management, Record Management, Secure Infrastructure, Web content management, Archiving.

6. Payroll System
   Payroll Calculation

7. Web Site
   Dissemination of Information

In addition, the two components Network Infrastructure and Training to facilitate above systems have already been completed.

ICTA and through it, Earnest and Young had functioned as the consultants of the Parliament for developing the ICT strategy and later preparation of the Request for Proposal (RFP) for purchasing. UNDP has granted funding and performed also the task of procurement with regard to the network infrastructure with the support of the officers from Parliament and ICTA.

**4. Audit Report**

Towards the completion of the communication infrastructure and training the Auditor General has conducted and IT audit of the project with the help of a technical consultant and presented a report to the Parliament.

The summary of the main arguments of the Auditor General are as follows.

- The parliament has incurred expenditure on the communication infrastructure component which are difficult to justify in audit
- The original budget of the component was Rs.19 million and it has been revised to Rs. 75 million.
- The explanations given for revising the budget and making enhanced expenditure are not acceptable.
- The gravity of this situation is high when considering the fact that the additional 300% of money from the donor agency could have been utilized to implement three other projects of the same proposed magnitude as the original strategic plan.

It is very unfortunate that Parliament is at the receiving end of such audit comments from the Auditor General after retaining, ICTA and Earnest and Young as consultants, securing funds from UNDP and the main responsibility of purchasing entrusted to UNDP.

However, the fact remains that the originally the budget for all components was Rs. 133 million, and it was revised to Rs. 325 million, and Parliament, ICTA and UNDP failed to satisfy the auditors by its explanations. It appears that the requirements have been enhanced later, but not the budgets until it was forced by the receipt of offers from vendors.

Earnest and Young, the consultants, are blamed for the discrepancy, but the fact remains that the consultants are only agents and the principals are responsible to utilize the agents properly and get a good job done by them.

The design responsibility of Communication Infrastructure had been entrusted to the vendors, as it is done with some complex purchases and I do not see any error there except the fact that it should have been possible to prepare specific guidelines for vendors and sufficiently close estimates before the tender call.

The following extract from the audit report demonstrates the variance.

| | Name of the Project | Original Budget (LKR) | Revised Budget (LKR) |
|---|---|---|---|
| 1. | Communication & Infrastructure | 19,000,000 | 75,000,000 |
| 2. | Data Warehouse | 10,000,000 | Moved to Document Management System Hardware Cost |
| 3. | Document Management | 18,000,000 | 66,296,000 |
| 4. | Messaging and Scheduling | 6,000,000 | 16,957,880 |
| 5. | Information Security Policy | 600,000 | 1,000,000 |
| 6. | Human Resource Management | 6,000,000 | 9,926,000 |
| 7. | Physical Access Management | 12,000,000 | 25,000,000 |
| 8. | Financial Management | 12,000,000 | 28,266,000 |
| 9. | Hotel Management | 5,000,000 | 8,015,600 |
| 10. | Archiving System | 45,000,000 | 75,000,000 |
| | Sub Total | 133,600,000 | 305,461,480 |
| | Contingency | - | 19,538,520 |
| | Grand Total | 133,600,000 | 325,000,000 |

The Auditor General recommends revisiting the budgets once more and amending them appropriately prior to embarking on the rest of the project. ICTA has already revisited the budgets in the year 2005, in response to a request from the Parliament. The revised budget by the ICTA which appears to be for the balance work is as follows.

| **Project** | **Budgeted Cost (USD)** |
|---|---|
| Messaging and Scheduling System | 310,000 |
| HR Management System | 300,000 |
| Hotel Management System (Catering) | 70,000 |
| Financial Information & Inventory Management System | 145,000 |
| Document Management System | 1,050,000 |
| Physical Access Management System | 25,000 |
| Archiving | 465,000 |
| Communication Infrastructure | N/A |
| **Total Budget for ALL Projets (USD)** | **2,365,000** |

If this budget is converted at the rate of US $ 1 = Rs 110/- the budget would be Rs. 260,150,000/-. This means that a further amount of Rs. 260 million is needed to the rest of the planned projects.

## 5. Project Costs Estimation

Although the Audit Report deals with the entire project, as requested in the discussion I had with the Secretary to the committee the Deputy Secretary General of Parliament (DSGP) the parliament is now keen to completely establish the Communication Infrastructure and implement the Document Management System only. Therefore he would like a financial justification of those components. Cost of these two projects would be Rs.190 million (75 + (1.05 x 110)).

DSGP also intends to utilize the available IT staff of 40 persons to maintain the system without contracting out the maintenance and updates. However if necessary according to the purchase, renewable software licenses have to be purchased.

Communication Infrastructure Component
Revised Budget Rs. 75 million
Depreciation per month if the life is assumed at 10 years = 75x0.1x 1/12 = 0.625 Million
Opportunity cost of capital per month at 10% rate = 75x0.1x 1/12 = 0.625 Million
Staff Salaries for maintenance and other over heads = 75x0.1x 1/12 = 0.625 Million

Cost estimate of the Communication Infrastructure per month Rs. Millions 1.875

Document Management System Component
Revised Budget Rs. 115 Millions

Depreciation per month if the life is assumed at 10 years= 110x0.1x 1/12 = 0.925 Million
Opportunity cost of capital per month at 10% rate = 110x0.1x 1/12 = 0.925 Million
Staff Salaries for maintenance and other over heads = 110x0.1x 1/12 = 0.925 Million

Cost estimate of the Document Mgt System per month Rs. Millions 2.775

This is a very arbitrary rough calculation based on many assumptions that may or may not be true. (e.g. hardware and software may not last for ten years and may have to be replaced just after five years. Staff salaries may not be 10%). However I feel above is a reasonable estimate.

It has also to be noted that again replacement funds will be required after ten years on this assumption as depreciated funds will not be invested to form a fund to meet the replacement cost according to the government accounting systems.

Against the above estimate one can argue that the staff salaries will anyway have to be paid as staff have been already recruited and cost of Communication Infrastructure will however have to be born as it is already almost in place and therefore the real incremental cost is only about Rs. 1.85 million, out of which depreciation is not a cash outflow and cost of capital would be born by the treasury and not by the Parliament.

## 6. Project Benefits

If the project is successfully implemented the benefits expected out of the project according to the ICTA document has been recorded earlier in this report.

It appears that Parliament expects many benefits such as to publishing the Hanzard within 24 hours after each sitting, and allowing members to attend to their Parliamentary obligations from their respective electorates or from abroad.

It is clear that in addition to those benefits the new technology would realize much more benefits which may not be easily quantified. There is also a possibility of savings in re-assignment of staff and less paperwork.

One should also consider that realization of these benefits would largely depend on many other factors than IT, such as re-engineering of procedures. For example the electronic voting system of the Parliament may not be used for want of change of standing orders of Parliament and the initial cost and any maintenance cost of it may be very difficult to justify.

## 7. Requirement for Justification

In theory, if the Parliament could expect to obtain benefits / savings exceeding the cost per month due to implementation of Communication Infrastructure and Document Management System, one could conclude that those parts of the project can be justified financially. Whether the benefits of the project is valuable exceeding the cost is a judgment to be made by the management of the Parliament, which knows the requirements, opportunities and risks exactly.

If more details for this judgment is required the IT department of the Parliament could do a detailed financial justification to identify each expected benefit, assign a reasonable financial value to the benefit, ignoring the time value of money and inflation for simplicity as I have done for the outflows and compare with the cost component to form an opinion whether the cost can be justified or not.

Alternatively a consultant could be retained for this purpose but for an outsider this is going to be a difficult, time consuming and expensive exercise which may easily take a very long time costing to negate the benefit of the exercise.

## 8. Conclusion

The following important issues can be highlighted.

- As an independent person the auditor's view is that it is difficult to justify the project component of communication infrastructure but it the auditor could justify the other component done, training.

- The incremental cost of the Document Management System can be estimated roughly as Rs. 1.85 million a month if the portion of already committed costs of installation of communication infrastructure and staff salaries is ignored.

- The management of the Parliament could carefully study the project with the light of the above framework (i.e. 2.5% of the revised budget per month) and decide whether to continue any part of the project or give it up.

- If the project is implemented in full the cost of Communication Infrastructure would share among the other components, but the licensing, maintenance and opportunity cost of capital would rise and the cost per month would go up.

I presume that above information is useful for the committee, to be considered with the technical justification report of the IT expert panel. Thank you.

P.M. Pius Fernando
Director, State Accounts
Ministry of Finance

GOVERNMENT OF SRI LANKA
Project Budget

BUDGET REVISION CODE: C

**Award Number:** '00038942

**Award Title:** Modernizing Parliament for Democracy & Development of Sri Lanka

**Project ID:** '00043440

| Actual/Planned Budget Totals by Year in US Dollars | | | | | |
|---|---|---|---|---|---|
| Project Years –> | | *2005* | *2006* | *2007* | *Total* |
| Total Net Budget | | 332,922 | 1,059,178 | 0 | 1,392,100 |
| Total GMS accrual | | na | na | na | 0 |
| Total Gross Budget | | 332,922 | 1,059,178 | 0 | 1,392,100 |

**Start Year:** 2005

**End Year:** 2007

| Fund | REV " B" | REV 'C' | VARIATION |
|---|---|---|---|
| | | | |
| UNDP - 04000 | 892,100 | 1,392,100 | 500,000 |
| | | | |
| | **892,100** | **1,392,100** | **500,000** |

**Executing Agent:** NEX

**Implementing Agents:** Parliament of Sri Lanka

**Revision Type:** Substantive

**Brief Description:**

The purpose of this budget revision is to increase the overall budget by US$ 500,000 and to rephase a balance of US$60,727 from 2005 and US$80,450 programmed for 2007 to 2006. The additional $500,000 in funding, with the concurrence of ERD (as per discussion of March 2nd, meeting minutes are attached), is required to fully implement Activity 4.1(Communication Infrastructure and Remote Access), which has been identified by Parliament as a high priority activity. The original cost of this activity was significantly underestimated in the original project design (supporting documents are attached). The underestimation in the cost of implementing this component was primarily the result of insufficient research and depth of analysis by the private firm contracted in 2005 to undertake the design of the project's ICT component.

This budget revision also sets in place a budget format more clearly aligned with the project structure in the project document and with 'activity-based' rather than 'input-based' budgeting. As such, in 2006 the budgetary allocations within the project are differentiated based on the original five outputs in the project document. The additional allocation of $500,000 to Output 4 is offset slightly by a reduction in the allocation for library modernization. As such, the overall increase in funding for Output 4 is $461,560.

The adoption of a budget based on the five project outputs has also resulted in funds from 2005's Output 7 (Training/Study Tours) being reallocated primarily to Output 1(Activity 1.2) and Output 5 (Activity 5.9) which therefore contribute to an increased budgetary allocation of $110,702 and $92,102 respectively. Funds have also been reallocated from Output 3 to Outputs 1 and 5 through a reduction in the budgetary allocation to Output 3 by $50,040. This reduction is based on a revised estimate of expenditure due to slower implementation progress than was anticipated at the time of the last budget revision in 2005. Lastly, it is also worth noting that there are two new activities in the workplan (1.3.1 and 2.8) which have been added after discussions between UNDP and Parliament. These activities are also in keeping with the related outputs.

| Approved by: | Name/Title: | Date | Signature |
|---|---|---|---|
| Government: | SUJATHA COORAY DIRECTOR GENERAL DEPARTMENT OF EXTERNAL RESOURCES, MINISTRY OF FINANCE & PLANNING, THE SECRETARIAT COLOMBO 1, SRI LANKA. | 26/04/06 | |
| Parliament of Sri Lanka | PRIYANEE WIJESEKARA Secretary General of Parliament | 7/4/06 | |
| UNDP: | Ayyadurai. COUNTRY DIRECTOR. | 03/05/06. | |

UNDP

# Management Work Plan

**Sri Lanka - Colombo**

Award Id: 00038942

Award Title: MODERNIZING PARLIAMENT FOR DEMOCRACY & DEVELOPMENT OF SL

Year: 2005

**Report Date:** 2/5/2006

| Project | Key Activities | Timeframe | | Responsible Party | Planned Budget | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Start | End | | Fund | Donor | Op Unit | Department | | Budget Descr | Amount US$ |
| 00043440 | MODERNIZING PARLIAMENT FOR DEM | | | | | | | | | | |
| | COMMITTEE SYS TEM STR | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 2,400.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 2,500.00 |
| | HUMAN RESOURCES PLA | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71200 | International Consultants | 0.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 10,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 5,000.00 |
| | ICT STRATEGY | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72100 | Contractual Services-Companie | 185,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72200 | Equipment and Furniture | 10,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | -58,727.00 |
| | PARLIAMENT LIBRARY SY | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 0.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72200 | Equipment and Furniture | 50,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 5,000.00 |
| | PUBLIC AWARENESS/ADV | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 1,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72100 | Contractual Services-Companie | 7,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 0.00 |
| | SUPPORT TO SECRETARI | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 17,750.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 4,000.00 |
| | TRAINING/AWARENESS/S | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71600 | Travel | 91,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 1,000.00 |
| | TOTAL | | | | | | | | | | 332,923.00 |
| | GRAND TOTAL | | | | | | | | | | 332,923.00 |

# Management Work Plan

**Sri Lanka - Colombo**

Award Id: 00038942

Award Title: MODERNIZING PARLIAMENT FOR DEMOCRACY & DEVELOPMENT OF SL

Year: 2006

Report Date: 2/5/2006

| Project | Key Activities | Timeframe | | Responsible Party | Planned Budget | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Start | End | | Fund | Donor | Op Unit | Department | | Budget Descr | Amount US$ |
| 00043440 | MODERNIZING PARLIAMENT FOR DEM | | | | | | | | | | |
| | COMMITTEE SYS TEM STR | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 21,300.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71600 | Travel | 66,177.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 30,400.00 |
| | HUMAN RESOURCES PLA | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71200 | International Consultants | 0.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 15,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 68,000.00 |
| | ICT STRATEGY | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72100 | Contractual Services-Companie | 710,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72200 | Equipment and Furniture | 8,300.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 10,000.00 |
| | PARLIAMENT LIBRARY SY | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 0.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72200 | Equipment and Furniture | 0.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 0.00 |
| | PUBLIC AWARENESS/ADV | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 23,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 72100 | Contractual Services-Companie | 20,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 60,000.00 |
| | SUPPORT TO SECRETARI | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71300 | Local Consultants | 18,000.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 9,000.00 |
| | TRAINING/AWARENESS/ST | 3/3/05 | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 71600 | Travel | 0.00 |
| | | | | SRL-National Execution | 04000 | UNDP | LKA | B0434 Sri Lanka - Colombo | 74500 | Miscellaneous Expenses | 0.00 |
| | TOTAL | | | | | | | | | | 1,059,177.00 |
| | GRAND TOTAL | | | | | | | | | | 1,059,177.00 |

United Nations Development Programme
Sri Lanka

Project ID: '00043440
Project Title: Modernizing Parliament for Democracy and Development
Update on: 4 April 2006

## Work Plan - Budget Revision "B " to "C "

| Expected Output | Key Activities | Timeframe | | | | Resp. Partner | Planned Budget | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Q1 | Q2 | Q3 | Q4 | | Fund | Donor | Account Code | Budget Description | Budget Rev 'B' 2005-2007 | Budget Rev 'C' 2005-2007 | Variance | Actual Expenditure 2005 | Budget Rev "C" 2006 |
| Output 1: Committee System Strengthened and Reorganized for improved performance of legislative and oversight functions | 1.2 Study trip by members from different political parties to review significant examples in parliaments of at least two countries | | | X | | Parliament | 04000 | UNDP | 71600 | (Air Fare $3,000 x11 = $33,000 + DSA 11 x 10days x $300 = $33,000) | 0 | 66,000 | 66,000 | 0 | 66,000 |
| | 1.3.1 Development of a set of proposals for the comprehensive revision and updating of the committee system (with assistance from a returning IPU mission) | | | X | | Parliament | 04000 | UNDP | 71600 | (Air Fare $3,000 x 2 = $6,000 + 2int'l consultants x 10 days x $500 = $10000) | 0 | 16,000 | 16,000 | 0 | 16,000 |
| | 1.3.2 Development of a set of proposals for the comprehensive revision and updating of the Committee System | | | | X | Parliament | 04000 | UNDP | 74500 | Consultants | 0 | 14,400 | 14,400 | 0 | 14,400 |
| | 1.7. Support Parliament in the implementation of the revised committee system and providing research | | | | x | Parliament | 04000 | UNDP | 71300 | Consultants | 0 | 21,300 | 21,300 | 0 | 21,300 |
| | Local Consultants | | | | | Parliament | 04000 | UNDP | 71300 | Consultants | 6,900 | 2,623 | -4,277 | 2,623 | 0 |
| | Miscelleneous | | | | | Parliament | 04000 | UNDP | 74500 | Miscellaneous | 7,500 | 4,779 | -2,721 | 4,779 | 0 |
| | Sub-Total | | | | | | | | | | 14,400 | 125,102 | 110,702 | 7,402 | 117,700 |
| OUTPUT 2 Structure and organization of secretariat revamped, providing clear differentiation of administrative, legislative, and technical support areas, and sufficient human, technical and material resources in place for improved continuing operation. | 2.1. Support Parliament in the separation of Legislative Support and Administration Divisions | X | X | X | X | Parliament | 04000 | UNDP | 71300 | Consultants | 0 | 18,000 | 18,000 | 0 | 18,000 |
| | 2.8 Support Parliament in developing plans for new building(s) | X | X | X | X | Parliament | 04000 | UNDP | 74500 | Consultants | 0 | 9,000 | 9,000 | 0 | 9,000 |
| | Local consultants | | | | | Parliament | 04000 | UNDP | 71300 | Consultants | 37,750 | 9,536 | -28,214 | 9,536 | 0 |
| | Miscelleneous | | | | | Parliament | 04000 | UNDP | 74500 | Miscellaneous | 5,550 | 3,790 | -1,760 | 3,790 | 0 |
| | Sub-Total | | | | | | | | | | 43,300 | 40,326 | -2,974 | 13,326 | 27,000 |
| OUTPUT 3 Human Resources Plan approved and implemented. Human resources upgraded in quantity and quality, fully-capable of providing required backstopping to members, Committees, legislative authorities and Secretariat, in all operative units of Parliament. | 3.6 Assist Parliament in the implementation of a permanent language-training facility utilizing both parliament and outside resources ( | | X | X | X | Parliament | 04000 | UNDP | 71300 | Tamil Language Classes | 0 | 15,000 | 15,000 | 0 | 15,000 |
| | 3.7 Support parliament in the implementation of full Human resources Development Plan and upgrade carder, including redistribution of existing staff in Parliament, as well as incorporating of new professional and specialized staff | X | X | X | X | Parliament | 04000 | UNDP | 74500 | Consultants | 0 | 68,000 | 68,000 | 0 | 68,000 |
| | International consultants | | | | | Parliament | 04000 | UNDP | 71300 | Consultants | 18,000 | 0 | -18,000 | 0 | 0 |
| | Local consultants | | | | | Parliament | 04000 | UNDP | 71300 | Consultants | 120,400 | 12,717 | -107,683 | 12,717 | 0 |
| | Miscelleneous | | | | | Parliament | 04000 | UNDP | 74500 | Miscellaneous | 25,000 | 7,643 | -17,357 | 7,643 | 0 |
| | Sub-Total | | | | | | | | | | 163,400 | 103,360 | -60,040 | 20,360 | 83,000 |
| OUTPUT 4 State-of-the-art parliamentary ICT services to assist members, staff, the media and civil society, based on long term ICT strategy and including | 4.1 Implement communication infrastructure and remote access | | X | X | X | Parliament | 04000 | UNDP | 72200 | equipment | 0 | 710,000 | 710,000 | 0 | 710,000 |
| | 4.15 Establish an internet digital library including news services, information database, encyclopedias and library catalogues, which will provide Parliament with valuable information and research resources. | | | X | | Parliament | 04000 | UNDP | 72000 | equipment | 0 | 8,300 | 8,300 | 0 | 8,300 |

| Expected Output | Key Activities | Timeframe | | | | Resp. Partner | Planned Budget | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Q1 | Q2 | Q3 | Q4 | | Fund | Donor | Account Code | Budget Description | Budget Rev 'B' 2005-2007 | Budget Rev 'C' 2005-2007 | Variance | Actual Expenditure 2005 | Budget Rev "C" 2006 |
| library, archives, research, Hansard, web and cyber café | 4.16 Establish a copy bureau | | X | | | Parliament | 04000 | UNDP | 72200 | (purchase of photocopying equipment) | 0 | 10,000 | 10,000 | 0 | 10,000 |
| | Contractual Services | | | | | Parliament | 04000 | UNDP | 72200 | equipment | 286,000 | 173,626 | -112,374 | 173,626 | 0 |
| | Local Consultants | | | | | Parliament | 04000 | UNDP | 71300 | Consultants | 6,000 | 1,588 | -4,412 | 1,588 | 0 |
| | Miscellaneous | | | | | Parliament | 04000 | UNDP | 74500 | Miscellaneous | 16,000 | 424 | -15,576 | 424 | 0 |
| | Equipment | | | | | Parliament | 04000 | UNDP | 72200 | equipment | 140,000 | 5,622 | -134,378 | 5,622 | 0 |
| | Sub-Total | | | | | | | | | | 448,000 | 909,560 | 461,560 | 181,260 | 728,300 |
| OUTPUT 5<br>Public knowledge of parliament's activity improved; increased awareness of the role of parliament in the consolidation of democratic governance; enhanced role of parliament as a representative institution through dynamic engagement in national reconciliation, involvement of and interaction with all sectors of society, including the media and civil society in the parliament's work and taking into account gender issues in parliamentary processes; more prominent role for parliament as a forum for debate on major issues of national and international concern. | 5.4 Support for the creation of a women's caucus within Parliament through technical advisory services and comparative documentation intended to develop women members' capacity for policy analysis and formulation. | | | X | | Parliament | 04000 | UNDP | 74500 | (Int'l consultant air fare $3,000) (Int'l consultant fee $400 x 5 = $2000) (Int'l consultant DSA 110x 7 = $770) (workshop with parliamentarians $2,230) | 0 | 8,000 | 8,000 | 0 | 8,000 |
| | 5.5. Organise workshops on gender issues with regard to formulation of policy, budgeting and law making | | | X | | Parliament | 04000 | UNDP | 74500 | Venue and Misc. | 0 | 5,000 | 5,000 | 0 | 5,000 |
| | 5.7 Development of information kits on Parliament | | X | | | Parliament | 04000 | UNDP | 72200 | publications/print | 0 | 20,000 | 20,000 | 0 | 20,000 |
| | 5.8 Organizing workshops to enable parliamentarians to debate issues of national and international concern (the MDGs, AIDS control, International trade negotiations, human rights, etc) | | X | | | Parliament | 04000 | UNDP | 74500 | Four workshops 4 X $2,500 | 0 | 10,000 | 10,000 | 0 | 10,000 |
| | 5.9 Organization of study trips by Parliamentary Leadership to visit one or more parliaments that have played an active role in the process of national reconciliation | | | | X | Parliament | 04000 | UNDP | 71600 | (Air Fare $3,000 x10 = $30,000 + DSA 10 x 10days x $300 = $30,000) | 0 | 60,178 | 60,178 | 0 | 60,178 |
| | Local Consultants | | | | | Parliament | 04000 | UNDP | 71300 | Consultants | 4,000 | 0 | -4,000 | 0 | 0 |
| | Contractual Services | | | | | Parliament | 04000 | UNDP | 71300 | Consultants | 14,000 | 1,941 | -12,059 | 1,941 | 0 |
| | Miscellaneous | | | | | Parliament | 04000 | UNDP | | Miscellaneous | 10,000 | 14,983 | 4,983 | 14,983 | 0 |
| | Sub-Total | | | | | | | | | | 28,000 | 120,102 | 92,102 | 16,924 | 103,178 |
| | Training/Study Tours - Travel | | | | | Parliament | 04000 | UNDP | 71600 | travel | 184,000 | 88,137 | -95,863 | 88,137 | 0 |
| | Miscellaneous | | | | | Parliament | 04000 | UNDP | 74500 | Miscellaneous | 11,000 | 5,512 | -5,488 | 5,512 | 0 |
| | Sub Total | | | | | | | | | | 195,000 | 93,650 | -101,350 | 93,650 | 0 |
| | GRAND TOTAL | | | | | | | | | | 892,100 | 1,392,100 | 500,000 | 332,922 | 1,059,178 |

Prepared by:

Programme Associate

Approved by:

Programme Officer

Note: In Budget revision 'C' activities Library System and Training/Study Tours has been merged into Committee System Strengthened and ICT Strategy respectively as per request by the Project authorities by their letter and workplan dated 17t
Therefore, in Revision 'C' there are only 5 activities and not 7 as in Budget revision 'B'

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கணக்காய்வாளர் தலைமை அதிபதி திணைக்களம்
AUDITOR GENERAL'S DEPARTMENT

මගේ අංකය
எனது இல
My No. JF/B/PM/04(01)

ඔබේ අංකය
உமது இல
Your No.

දිනය
திகதி
Date 11th June 2007.

Secretary General of Parliament.

Audit on the Progress made on the Implementation of IT Projects at Sri Lanka Parliament – Draft Interim Report

A copy of the Draft Interim Report prepared and submitted by the IT Auditor appointed by me to conduct the above audit is forwardered for your perusal and making your comments.

02. Further to that, prior to finalization of the Report, IT Auditor may need to verify and confirm the documentary evidence related to the audit, if any, based on the confirmation provided by you in your letter dated 6th June, 2007.

03. If you need to have any further clarification in this regard, Mr. Kamal Jayatillake, IT Auditor, may be contacted on Tel. 072-2452020.

04. An early response is very much appreciated.

P.A. Pemathilake
Auditor General

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# Audit on the progress made on the implementation of IT projects at the Sri Lanka Parliament

*Draft Interim Report*

*8th June 2007*

# Table of Contents

## 1. BACKGROUND:

The Sri Lanka Parliament, under it's modernization project funded by United Nations Development Fund (UNDP) nominated Information & Communication Technology Agency (ICTA) as their consultant to support them in their endeavour to use ICT as a tool to achieve the following strategic objectives of its modernisation project. The identified core objectives were;

a. Facilitate the Legislative function
b. Facilitate the citizen representative functions
c. Facilitate oversight over the executive
d. Facilitate public awareness on issues
e. Facilitate public participation in development process

Leading to the following items as mentioned in the Mission Statement of the Sri Lanka Parliament

a. Provide accurate and timely information to the MPP, to support their decision making process
b. Empower average citizen with knowledge and information on important issues and Parliamentary decisions
c. Enhance efficiency and effectiveness of the oversight of the executive

*(Source: ICT Strategic Plan of the Sri Lanka Parliament prepared by Ernst & Young – page 12)*

The ICTA henceforth procured the expertise of Ernst & Young (EY) through government tender procedure to formulate the ICT Strategic Plan,.

The ICT Strategic Plan thus formulated by EY to address the strategic objectives of the Sri Lanka Parliament, recommended the implementation of 12 key IT projects. The ICT Strategic plan, which was at a conceptual level indicated the requirement for the implementation of these IT projects within a high-level time plan with indicative budgets for projects in most instances, for the purpose of achieving the strategic objectives of the Sri Lanka Parliament.

The parliament has now commenced the procurement & implementation of some of the projects recommended in the ICT Strategic Plan with the support and expertise of the ICTA and UNDP.

The Auditor General of Sri Lanka has commenced an audit of the project 'Modernisation of Parliament' and as part of this audit has identified the

need to carry out an audit of the procedures adopted to implement the above stated ICT projects at the parliament. As an audit of this nature requires specialised IT skills, the Auditor General sought the services of Eidikos Lanka (Pvt) Ltd., to conduct the said audit.

## 2. OBJECTIVE:

As per our understanding, the objectives of the audit by the Auditor General of Sri Lanka on the ICT Projects under the project title 'Modernisation of Parliament' are as follows.

a. The possibilities of achieving the overall objectives established
b. Justify the steps taken so far in implementing the projects.
c. Adequacy of the information security policies implemented.
d. Any recommendations on the work to be carried out to implement the projects not already embarked on.

## 3. SCOPE OF WORK:

The following list of projects was considered for the audit as stated in the ICT Strategy.

a. Information Security Policies
b. Training
c. Data warehouse
d. The Communication infrastructure
e. Messaging and Scheduling System
f. Remote Access for members
g. Document Management System
h. Archiving
i. Human Resource Management System
j. Financial Information Management System with Inventory Control
k. Hotel Management System
l. Physical access management system
m. Web site of the Sri Lanka Parliament - However, this project was not part of the IT Strategic Plan even though it was considered for the audit.

The scope of work for the project is as follows.

a) Obtain the current status of implementation on each of the projects stated above (indicating whether the implementation is complete, implementation is currently taking place or whether the implementation is yet to commence)
b) Identify if desired objectives for each of the projects already implemented are met with

c) Review the original budget suggested and accepted and the latest budget for the 11 projects listed above and assess the causes for the variance if any.
d) Provide an overall recommendation for the way forward
e) The scope of this audit does not cover the process followed by the UNDP in carrying out procurement for parliament

## 4. Approach & Methodology

The approach and methodology adopted to accomplish the assignment within the defined and accepted scope is provided below.

I. Initial discussions were held with the representatives of the Auditor General stationed within the Secretariat of the Parliament to gather any information relevant to our exercise was already in their possession.

II. Discussed with officials of the Secretariat of the Parliament and the UNDP coordinator for the 'Modernisation of Parliament' project to study the procurement process adopted to procure goods and services to implement the ICT projects specified in the ICT Strategy of the Parliament

III. Perused the IT Strategic Plan for the Parliament to establish the following
    i. Overall objectives of each of the projects
    ii. Suggested budget for each of the projects
    iii. Suggested time plans for each of the projects
    iv. Order of prioritisation for implementation for the list of projects

IV. Interviewed parliament staff to understand projects which have been already commenced/completed from the list of projects specified in the ICT Strategy document

V. The specification documents for those projects commenced / completed were perused to understand the objectives of each project, the desired functionalities and the specifications drawn up for each of the projects

VI. Perused the RFP documents drafted by Ernst & Young to identify enhancements / deviations from initial specification for those projects commenced / completed

VII. Requested for the TOR for the procurement of services of EY to draft the RFP documents

VIII. Requested for any other supporting documents and correspondence as evidence to assess the procurement procedure adopted to procure the services from EY to draft the RFPs

IX. Perused the RFP documents floated by the Parliament of Sri Lanka to procure the products and services to implement the ICT projects specified within the ICT Strategy for Parliament and to establish any further deviations

X. Perused submitted documentation as evidence such as minutes of Steering Committees and other communications from authorised personnel in support of the decisions taken to enhance the projects to justify identified enhancements / deviations

XI. Conducted detail analysis on initial scope and objectives as per the ICT Strategy for Parliament, scope of the floated RFPs and the authorisation/justification established for the enhancements / deviations

XII. Requested for any further documents available providing approvals for the enhancements / deviations observed from the initial 12 project specification of ICT Strategy;
    i. Overall objectives.
    ii. Specifications.
    iii. Prioritisation of the implementation.
    iv. Budget

XIII. Perused evidence to establish the tender procedure for procurement

XIV. Reviewed the procedure adopted by the TEC to approve the specifications in the RFP floated

XV. Sought the services of a technical expert with regard to communication networks to assess the project, Communication Infrastructure

XVI. Established areas in the specifications floated in the RFP that needed an expert's judgement to justify its reasonableness of specifications taking into consideration the following
    i. The strategic objectives of the Parliament
    ii. The functional requirements of the users
    iii. Project objectives specified in the IT Strategy

iv. Wish list of the stake holders

XVII. Perused the short-listing procedure to establish the shortlist of vendors

XVIII. Perused the procedure adopted to issue the TOR and tender documents to short-listed vendors

XIX. Perused the procedure adopted for any extensions to the initial proposal submission date and evidence in support of such extensions

XX. Perused the proposals submitted by short-listed vendors and the marking scheme adopted by the TEC

XXI. Perused available evidence on negotiations carried out

XXII. Reviewed establish contractual agreements with the vendor to establish the scope specified in the contract

XXIII. Reviewed the scope and specifications of the contract and with the specifications in the RFP for any amendments

XXIV. Justification of such amendments

XXV. Conducted field visits with the Technical Expert to gather information to establish the methodology adopted by the vendor to implement the contract, the actual specifications of goods and services being delivered and the contractual agreement and any deviations / enhancements on specifications and the reasonableness of such decisions

XXVI. Perused the available Project Acceptance Certificate for the embarked projects to ascertain the completeness of the project

XXVII. Two separate questionnaires were circulated to the under mentioned entities and written responses were obtained. The two entities are;

i. The Project Steering Committee for the overall eParliament project
ii. Ernst & Young who developed the ICT Strategy for the parliament *(appointed by the consultant ICTA)* and who developed the tender documents for the projects identified in the ICT Strategy *(appointed by the donor agency UNDP)*

XXVIII. The responses received from the project steering committee and Ernst & Young were further perused.

XXIX. The following established contracts were perused to understand the deliverables of each of the contracts.

i. The two contracts that were signed with the consultants, Ernst & Young, one for the preparation of an ICT Strategy signed with ICTA and the other for the preparation of tender documents signed with UNDP
ii. Contract between ICTA and Affno (Pvt) Ltd., for the development of the website for parliament
iii. Contract between IDM and parliament to conduct a training program in order to create IT awareness among parliamentary staff
iv. Contract between Univell (Pvt) Ltd and parliament for the network project (which is part of the Communication Infrastructure project as per this report

XXX. Interviewed the following officials of the parliament at different instances to obtain information related to the project.

i. The Secretary General of Parliament
ii. The Deputy Secretary General of Parliament
iii. Director (IS & M) of Parliament

XXXI. Visited the UNDP office and perused the available documents in relation to the eParliament project and inquired about the eParliament project from the under mentioned officers.

i. Mr. Shane Sheils – Assistant Resident Representative (Programme)
ii. Mr. Rajiv Ranjan – ICT for Development Advisor

XXXII. On completion of information gathering phase, all evidence gathered from the parliament was indexed and filed by the officials of Auditor General's Dept. within parliament

XXXIII. Confirmation obtained from the Secretary General of Parliament stating that all documents available have been furnished to us for perusal in relation to the following projects.

i. "Supply, Installation, Commissioning and Maintenance of Communication Infrastructure for Sri Lanka Parliament" by Uniwell Microsystems (Pvt) Ltd
ii. Development of parliament website by Affno (Pvt) Ltd
iii. Provision of ICT Awareness Training for staff of parliament conducted by IDM Computer Studies (Pvt) Ltd
iv. Procurement of PC s, printers and UPS

Based on the confirmation provided to us, we may need to further verify the availability of any further evidence in this regard prior to closure of this assignment and finalising this report

## 5. Findings & Observations

Our findings and observations are broadly categorised as follows

I. General Observations
II. Specific Observations of the projects already commenced / completed

**General observations:**

Out of the 13 projects considered for the study only 3 projects have been commenced and the high level status of them is as follows.

| Name of Project | Status |
|---|---|
| The Communication Infrastructure | On going |
| ICT Awareness | Completed |
| Web site | On going |

The above table indicates only the ICT Awareness project has been completed so far. We also observed that there was a deviation of the prioritisation of the implementation of the list of projects in the ICT Strategy. Project Steering Committee, as a response to a questionnaire sent to them have confirmed that the committee approved such a deviation.

However, in our opinion, we believe that the development and implementation of an Information Systems Security Policies and Procedures prior to the implementation of other projects (as specified in the ICT Strategy) would have been more appropriate. As such, the parliament currently does not possess a comprehensive Information Security Policy.

The parliament provided us with a document containing lists of names of the following committees of the 'Modernization of Parliament' project.

- Technical Evaluation Committee (appointed on May 9, 2005)
- Sub committee for Parliament ICT Projects (upto implementation) (appointed on July 27, 2005)
- e-Parliament Projects (E&Y Study and Web Project) Steering Committee
- Network Infrastructure Project (implementation) Steering Committee

- Network Infrastructure Project (implementation) Technical Committee

However the composition of the membership of the steering committee that responded to our questionnaire and the original composition of the steering committee as per the list submitted to us were not compatible. The explanation received to the query raised by us from the parliament was that these steering committees are mostly consisting of nominees of outside agencies such as ICTA and UNDP and as and when these staff members leave these organisations new nominations are made to represent those organisations in these committees.

We however observed that one of the members of the original steering committee, who is still an employee of the parliament, had not endorsed the responses to our questionnaire.

In general, the response from the steering committee to our questionnaire indicates that the development of the ICT Strategy is an on going process which was initiated by the ICT Strategy evolved by Ernst & Young. Hence the steering committee has clearly indicated that the members of it were well aware of the changes that have been effected to the original strategy developed and accepted from Ernst & Young

We also attempted to obtain information in support of the procedure that was followed in forming the steering committee. This information was not available for us for verification. We also attempted to obtain information in support of the changes in composition of the steering committee that responded to our questionnaire. Since this information was not available to us we are unable to comment on the composition of the steering committee that responded to our questionnaire.

We have evidence in support of the fact that the procurement of products and services towards implementation of the ICT strategy had been entrusted to the donor agency UNDP. As such all payments towards entities providing the services had been directly made by the UNDP. However, the Secretary General of Parliament had made her recommendations to the UNDP for the formation of the Evaluation Committee for this purpose. The Secretary General has made her recommendations based on the recommendations made to her by the Director (IS&M) of the Parliament.

The procurement process carried out by the UNDP, was not considered within the scope of this audit and hence that procedure is not covered in this report.

Budgets for the projects in the ICT Strategy

The table below indicates the original and the revised budgets for the projects in the ICT Strategy. This was based on the budgetary information parliament had obtained from ICTA, their consultant

| No | Name of Project | Original Budget (LKR) | Revised Budget (LKR) |
|---|---|---|---|
| 1. | Communication & Infrastructure | 19,000,000 | 75,000,000 |
| 2. | Data Warehouse | 10,000,000 | Moved to Document Management System hardware cost |
| 3. | Document Management | 18,000,000 | 66,296,000 |
| 4. | Messaging & Scheduling | 6,000,000 | 16,957,880 |
| 5. | Information Security Policy | 600,000 | 1,000,000 |
| 6. | Human Resource Management | 6,000,000 | 9,926,000 |
| 7. | Physical Access Management | 12,000,000 | 25,000,000 |
| 8. | Financial Management | 12,000,000 | 28,266,000 |
| 9. | Hotel Management | 5,000,000 | 8,015,600 |
| 10. | Archiving System | 45,000,000 | 75,000,000 |
| Sub Total | | 133,600,000 | 305,461,480 |
| Contingency | | - | 19,538,520 |
| Grand Total | | 133,600,000 | 325,000,000 |

We also observed that parliament had prepared a revised budget which had been submitted to the UNDP. However the information contained in this document lacked clarity since printed figures had been manually altered.

Specific observations of the different projects which have commenced / completed:

Communication Infrastructure:

We had concerns in the decisions made in relation to the Fibre Optic Infrastructure, Redundancy provided in the network and the Voice over Internet Protocol (VoIP) platform considered. Therefore we thought it was appropriate to seek the services of a technical expert to analyse and justify the decisions taken on the specifications which were ultimately contracted and implemented.

Please refer to Appendix A to this document for details of the findings, which have been extracted from the Technical Expert's report

ICT Awareness:

This is the only project that has been brought to a completion. With the automation and computerization of the Sri Lanka Parliament, a vital factor that needs to be considered is the training on basic computer usage that has to be provided to the human resources of the parliament. Perusal of documents indicated that a great amount of efforts had been taken to carry out this task by identifying different groups of persons for the training. The process has taken into consideration to have a form of evaluation for the trainees which have been duly signed off at the end of the session to confirm that the training was effective. In our opinion this could be an indicator that the desired objectives would be achieved in the future with the other projects being implemented. However a final conclusion on the effectiveness of the training provided could be established once the core systems are implemented and the staff commence using those systems

Web site:

Based on the information available in the original Request for Proposal (RFP) document the requirement was to develop a trilingual web site for the Sri Lanka Parliament. Based on minutes of the Web Committee meeting held at parliament on 23rd November 2005, the Deputy Secretary General (DSG) of Parliament has stated that it is the accepted policy of the parliament to make available whatever material given out, particularly to members of parliament in all three languages and therefore there was a key reason to have the web site in all three languages (i.e. Sinhala, Tamil and English)

The contract that was signed between Affno (Pvt) Ltd and the ICTA for the development of the web site for the parliament has not indicated the trilingual requirement. However apart from that, the final delivery of the web site was due on 24th May 2004 as per this contract

Only the English version of the web site was finally launched on 17th February 2006 and currently it is online.

Since the complete requirement cannot be seen to be implemented, this project cannot be considered as a completed project and therefore it is not possible to assess whether the project has delivered the desired objectives until all required deliveries are made.

## 6. RECOMMENDATIONS

Based on the information that was made available to us during this audit the following key recommendations are made taking into consideration our observations.

I. The budget we have considered in this document has been prepared in the year 2005 and the implementation of the identified projects have not commenced todate.

II. Hence it is recommended that the parliament revisits the budgets for its validity and make amendments if necessary prior to calling tenders.

III. We recommend that activities pertaining to the formation of steering committees are properly documented and rightful authority be granted

IV. We recommend that appropriate procedures are adopted in formation of steering committees and nomination of members to these committees. Relevant documentation in support of these procedures be maintained along with minutes circulated and confirmed by the membership for future reference.

## 7. ASSUMPTIONS TO THE PROJECT

I. We assume that the documented evidence in support of this audit is limited to the files with documentation confirmed and certified by Secretary General of Parliament.

II. The audit assumes ICTA as the primary consultant of parliament, and the role of Ernst & Young up to the point of preparing the ICT Strategy for the parliament is a sub contractor's role towards ICTA, based on the evidence made available to us.

III. The budgets (both original and revisions) presented in this report were based on the budgets prepared by ICTA, the primary consultant of the parliament.

## 8. LIMITATIONS

I. This report has been prepared based on the information provided to us by the parliament and UNDP.

II. The audit has not been able to establish the exact scope and the role of Ernst & Young in the phase where the tender documents for parliament were prepared, due to the absence of the terms of reference for Ernst & Young.

III. The audit carried out by us was unable to locate the documentary evidence to establish exact role and authority of the steering committee appointed for all the ICT projects under the project of 'Modernisation of Parliament'

# APPENDIX - A

## ICT Infrastructure Audit in the Parliament Complex

### 1. Optical Fiber Communication Infrastructure:

#### 1.1 Observations:

a) Before this project was implemented there had been a 4-core 62.5/125um optical fiber backbone which connected eight different areas of the Parliament. (See Annex 1). That network had been used as part of the backup optical fiber backbone in the new project implementation.

b) Under the new project the vertical backbone is cabled with Corning Cable Systems LANScape MIC riser-rated multimode optical fiber. Fiber cables originate from the master equipment cabinets in the Server Room. They reach eighteen cabinet locations for connecting the edge switches at those locations to the backbone.

c) The backbone has long horizontal stretches leading to the edge switches. Both vertical and horizontal sections had been provided with full path redundancy.

d) The optical cable used for the backbone is 6-core, 50/125um riser rated for the primary fiber backbone, and 6-core 62.5/125um riser rated cable for the backup backbone. The existing 4-core 62.5/125um fiber backbone (Corning) that was installed previously is also integrated to form the backup fiber backbone.

e) Additional 6-core 62.5/125um optical fibers had been installed to reach the locations that had not been covered with the existing fiber links.

f) Excluding the redundant fiber connections, each cabinet location is provided with at least one un-terminated fiber pair for future use.

g) Optical fiber connection to the Jayanthipura Entrance is a Steel armored Hybrid Optical Cable, with 6 x 50/125um Multi mode fibers and 6 x Singlemode fibers.

h) No layout diagrams were available for inspection.

i) At the time of inspection the installation of the new ICT infrastructure was still in progress.

j) The contractor had decided on the paths to install the cables, there and then while the installation is progressing. No paths had been identified in advance by the user or the consultants.

k) Technical specifications for the ICT infrastructure were found in the RFP document. (See Annex 3)

**1.2 Comments:**

**1.2.1 Very High Redundancy in Network Cabling Infrastructure**

A fiber optic backbone with high redundancy had been implemented as part of the communication infrastructure as described under 1.1. The main and backup backbone cables provide two fiber connections to each edge switch for (1+1) operational redundancy. These two backbones go via separate cable paths adding path redundancy to the configuration as well.

The recommended configuration by consultant; ICTA, does not provide for such a dual redundancy configuration for the backbone (See Annex 2).

The reasoning for this dual-path backbone cabling infrastructure layout had been that if one path is physically damaged due to a serious incident the other path is available to provide the connectivity.

Since no part of the network has been laid through public land and the maintenance is done either by the internal staff or by other parties under direct/strict supervision in this type of a high security area, the risk of a cable being cut is at minimum. The other possibilities are earth quakes, bomb explosion or the failure of part of the building structure. In such an exceptional circumstance, it is very likely that people will be evacuated. (However if the need is there for the parliamentarians and administrative staff to continue using the network in the event of such a situation it could only be satisfied by this type of path redundancy design. It is not clear whether such a need assessment has been carried out). The configuration given in the strategic plan does not support the idea of dual path configuration either. This type of path redundancy can only be seen in highly commercialized data center scenarios where even a very small downtime causes colossal losses in the form of compensation, damage to the goodwill and reputation. Therefore path redundancy is very difficult to be justified.

It is also very unprofessional that redundant paths had not been planned up to the time of awarding the tender. This should have been done by the consultants considering the building plan and layout diagrams to match with the requirements of the user. If it is left to be proposed by the bidder for any reason still the proposed layout plan should accompany the bid for the evaluation of the TEC. However the vendor has not submitted the path redundancy plan. A layout plan was not even available at the date of the site

visit by the audits because it is still being planned together with the end-user and the company who won the contract. Auditors are of the opinion that the opportunity for evaluating and selecting the vendor who meets path-redundancy objectives with the most cost effective way, has been wasted and it is a serious flaw in the procedure.

### 1.2.2 Power Utility

In the context of the given reasoning it is unusual why dual-path power supply has not been considered. Power utility path redundancy is the more common redundancy method used even in large mission-critical commercial data center applications. The use of Uninterruptible Power Supply (UPS) in each location could be an alternate solution provided monitoring of all UPSs are continuously done and a damaged path can be restored within the holding time of the UPS.

### 1.2.3 Network Dimensioning

With the implementation of the project the Parliament had received fiber connectivity with very high redundancy and availability. Applications such as; Document Management System, Messaging/Scheduling System, Human Resources Management System, and Financial Management System etc, are envisaged to operate utilizing the capacity of the new communication network infrastructure. The Structured Cabling System being installed at the moment will therefore be capable of supporting data/voice/video applications due to its wide bandwidth. As such this inquiry actually focuses on investigating whether the communication infrastructure has been over-dimensioned.

From the available documentation it was not possible to establish as to how the backbone capacity has been calculated because no details were available for auditing. Therefore it is difficult to comment on whether the backbone recommended by the strategic plan is an over-design or not. In our opinion, network dimensioning engineering details is a matter that should come under the purview of the consultancy TOR. Capacity estimation and switching plant dimensioning should have been carried out before drafting the final specifications. Network traffic dimensioning assumptions, logic and estimates, that should be submitted to the TEC for approval prior to publishing the tender were not available for perusal.

The RFP provides some technical guidelines but invites the bidder to propose a technical solution. Therefore the technical design responsibility has been passed down to the bidder. An envisaged configuration is provided in the RFP for the reference. Therefore it appears that the solutions proposed are mostly vendor/product specific.

### 1.2.4 Large variations of Estimates

The budgeted communication infrastructure cost estimated by Ernst & Young for ICTA was in the range of Rs. 18-20 Million. Subsequent modifications to the strategic plan have blown up the prices, out of proportion by almost four times. Later ICTA has admitted that such a deviation is justified under the circumstances.

Auditors are of the view that this price increase is very unusual due to the following reasons.

i. It is highly unusual to have approximately 400% variation of estimated cost between a strategic plan and an implementation plan of any project.
ii. Same consulting company had been engaged in both stages and that makes it further impossible.
iii. Consulting company being a reputed firm makes it very unlikely to make a wrong estimate in either of the two stages.
iv. It is an open tender that entertain competitive bids. Therefore it is almost impossible for all bidders to quote a price nearly 400% higher than the consultants estimate, knowing that they will loose the opportunity.

The gravity of this situation is high when considering the fact that the additional 300% of money from the donor agency could have been utilized to implement three other projects of the same proposed magnitude as the original strategic plan given by ICTA.

After scrutinizing the pricing schedules submitted by the vendor and the specifications given in the RFP following observations can be recorded.

i. Quantities and the total price have almost doubled due to the concept of dual redundancy introduced after the completion of the strategic plan. At the core switch and server level (1+1) redundancy is acceptable in a mission critical system configuration. However the decision to introduce path redundancy is highly dubious.
ii. Unit costs indicated can be considered as reasonable.
iii. Switch solution is the highest cost component in the project. One reason for the high cost is the concept of edge switch/path redundancy.
iv. The introduction of conditions such as 'no single point of failure' and 'high availability' had contributed significantly to the increase of the total price.
v. Software components have also contributed to the increase of the total price.

Conceptual changes as given in iv above that have been introduced subsequent to the strategic plan had contributed to this price change They may have been justified assuming a certain level of mission-criticality in the overall system.

### 1.2.5 Cable Run to Jayanthipura Entrance

The cable running up to the Jayanthipura entrance is having a huge capacity for which sufficient justification can not be established. The specification given for this fiber section in the RFP is given below.

| | |
|---|---|
| 1.1.1. | Features of outdoor Fiber Optic cable |
| 1.1.1.1. | 50/125 or 62.5/125 micron Multimode Fiber optic backbone cable |
| 1.1.1.2. | The fiber cable will be minimum of 8 fiber cores (4 pairs). |
| 1.1.1.3. | Armed fiber cable |
| 1.1.1.4. | The Fiber Cable shall be able to support Communication Infrastructure technologies such as FDDI, Fast Ethernet (100Mbps), Gigabit Ethernet (1000Mbps) and 10 Gigabit Ethernet (10Gbps). |
| 1.1.1.5. | The cable must be capable of withstanding without degradation in performance temperatures in the range of 0 C to 60 C. |

Capacity planning calculations to justify eight fiber cores to this location was not available in the given documentations for inspection. Item 1.1.1.4 list several technologies from which 10 Gbps bandwidth provides the upper limit and it becomes the deciding factor for communication channel bandwidth.

This list indicates that the consultants had not decided or recommended any particular technology based on their study before the RFP was published. Therefore the study and subsequent recommendations seem to be incomplete leaving an opening to a vendor to propose the most expensive configuration/technologies available at present. For instance 10 Gbps capacity is commonly used by large telecom service providers who carry aggregated traffic of many subscribers between different regions of a large country or between different countries.

One application that is likely to run on this capacity is a security clearance system for vehicles and entrants. However it needs only two fibers or a wireless link to be implemented. Report prepared by E&Y recommends a RF link to this location (See Annex 2). No documentation was available to verify the procedure and the reasoning used to change this recommendation. It is necessary to inspect the technical design and rationale behind this unusual capacity design if any such design is available.

## 2. VoIP Platform:

### 2.1 Observations:

a) A standalone VoIP telephone system has been acquired to provide a VoIP extension facility to fourteen telephone extensions.

b) This system is not integrated with the existing PABX.

c) Existing PABX has spare capacity.

d) Audit investigation revealed that this VoIP facility has been acquired with the long term objective of using a single network infrastructure to carry audio, video and data. In addition it is envisaged to use this as a backup facility in the event of a failure of the main PABX.

### 2.2 Comments:

#### 2.2.1 VoIP Technology and Interoperability Issues

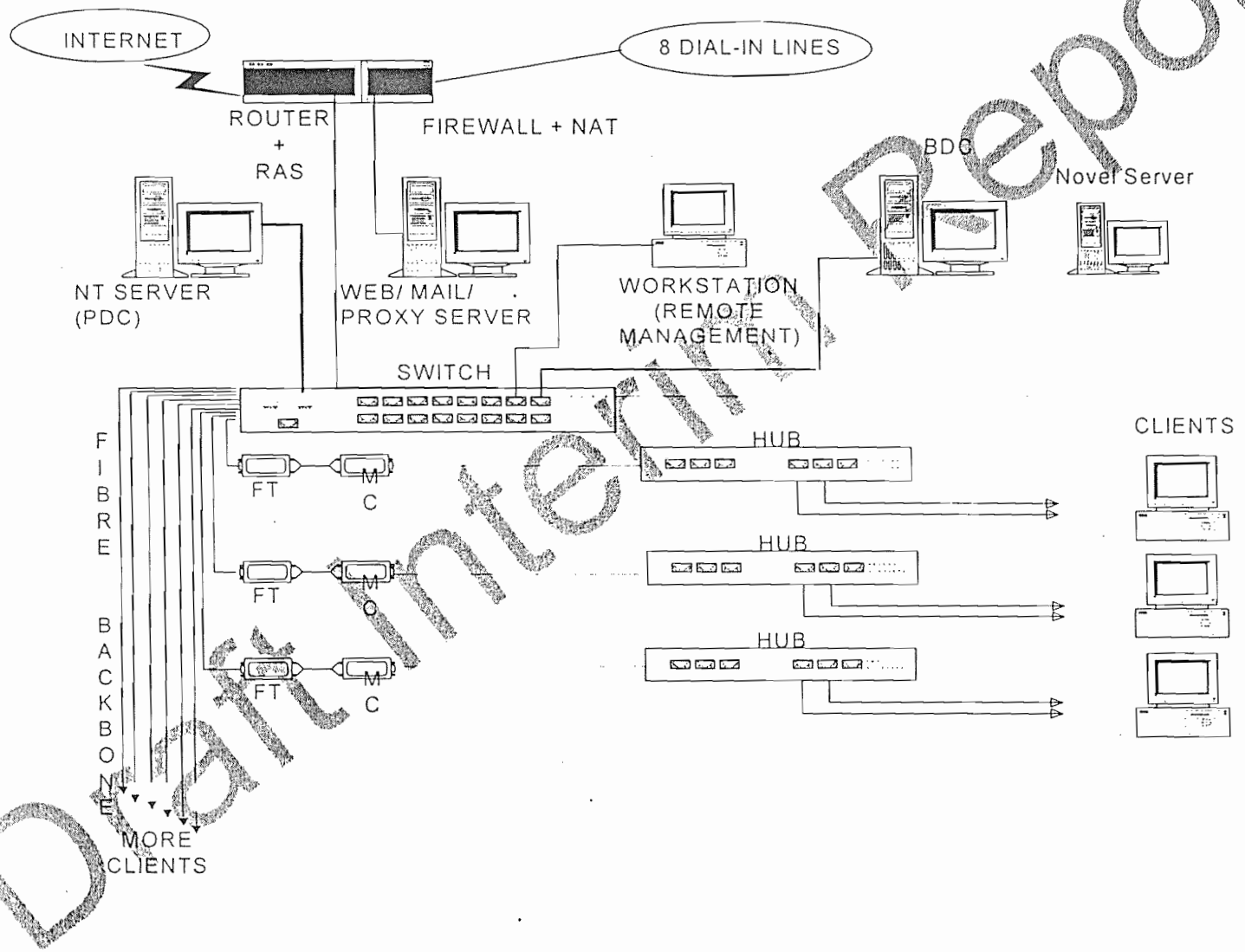
It is noted that the VoIP facility has been acquired to provide the service on a trial basis and achieve familiarity with the technology and the associated services. It is also noted the strategic plan has the suggestion to integrate audio, video and data applications to run on a common network infrastructure.

VoIP is a developing technology which is, at the moment, neither mature enough nor cost-effective. Therefore the present VoIP solution may not be compatible with a future VoIP solution likely to be acquired later because these systems are not fully mature to ensure interoperability. Therefore this VoIP system is a redundant system at the moment which has been acquired for familiarization with the technology.

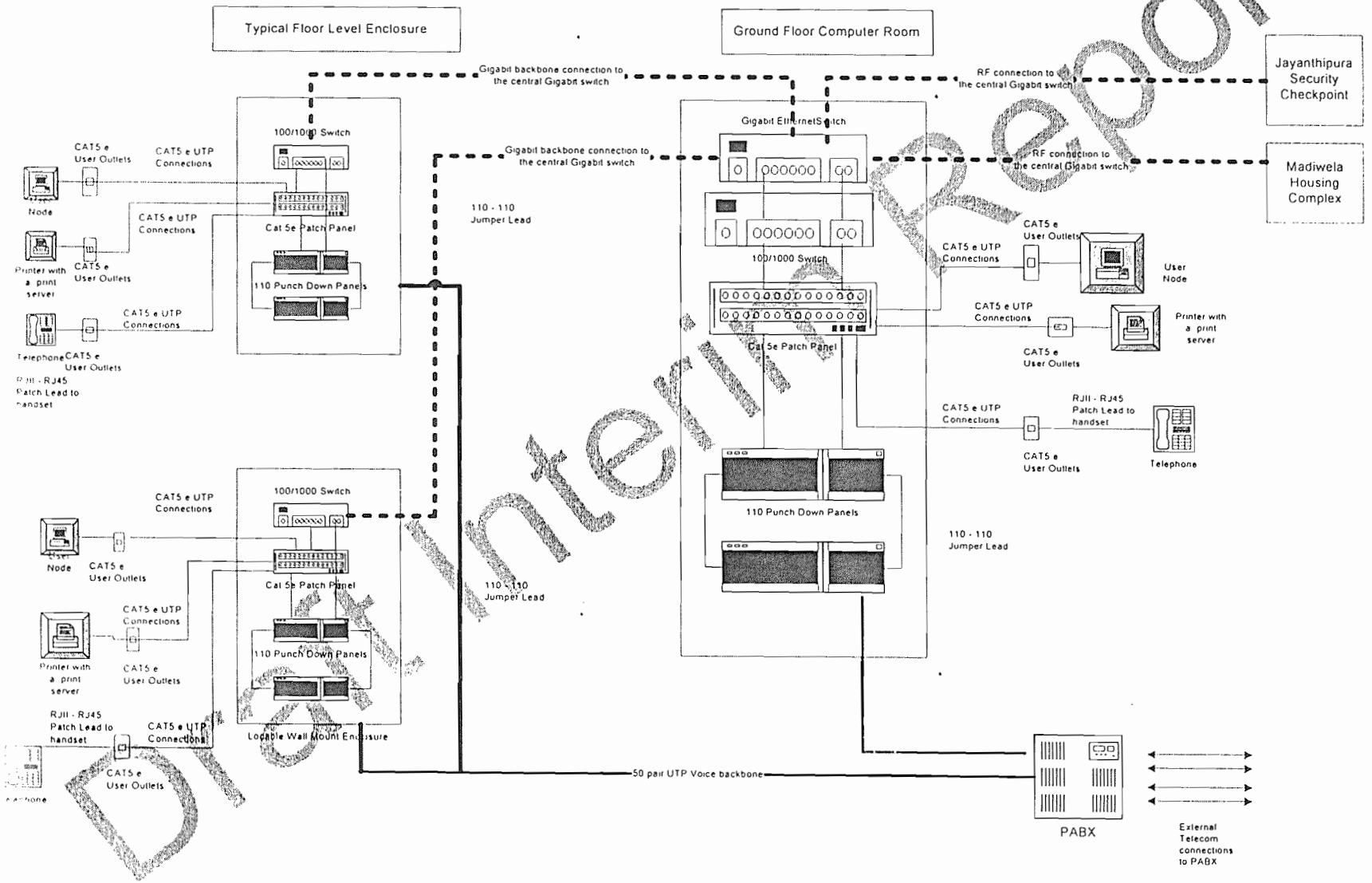
#### 2.2.2 Lack of a Migration Plan for an IP-PABX

It is the common practice to have a phasing out plan for the existing PABX detailing the way for migrating to a suitable IP-PABX platform for the implementation of Voice over Internet Protocol (VoIP). It was noted that a migration plan with sufficient technological detail or a timeline was not available.

Annex 1 : ICT Infrastructure in the parliament before the new project was implemented.



## Annex 2 : Recommended ICT Infrastructure by consultants; ICTA



## Annex 3 : Technical Specifications given in the Request for Proposal

Table 8.1.1 - 1

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 2. | General Requirements | |
| 2.1. | The communication infrastructure should cover all sections in the Parliament complex | M |
| 2.2. | Wired or wireless connectivity should be provided to ensure that all officers who require such facilities for their business functions | M |
| 2.3. | The wired network should be scalable to accommodate the growth of users of the communication infrastructure. | M |
| 2.4. | The Infrastructure should integrate seamlessly with the current IT infrastructure of the Parliament | M |
| 2.5. | The infrastructure should accommodate all future IT projects identified in the introduction to this RFP and the IT strategy | M |
| 2.6. | Client access should be at 100 Mbps or higher | M |
| 2.7. | There should not have a single point of failure | M |
| 2.8. | Single log-in for the communication infrastructure | M |
| 2.9. | Should facilitate data, voice and video | M |
| 2.10. | Should facilitate the Voice over IP | M |
| 2.11. | All software provided should be licensed versions | M |
| 2.12. | Vendor should provide industry standards in all relevant areas | M |
| | | |
| 3. | Structured Cabling System | |
| 3.1. | Backbone Connectivity | |
| 3.1.1. | Fibre Optic backbone between each floor of buildings in the main building and data centre (Ground floor) of the main building. | M |
| 3.1.2. | Each backbone cable run should have provision for cable slack (3m) at both ends. | M |
| 3.1.3. | Backbone cable run should be a single cable run without any splices. | M |
| | | |
| 3.2. | Features of Backbone Fiber Optic cable | |
| 3.2.1. | Features of Indoor Fiber Optic cable | |
| 3.2.1.1 | 50/125 or 62.5/125 micron Multimode Fiber optic backbone cable | M |
| 3.2.1.2 | The fiber cable will be minimum of 4 fiber cores (2 pairs). | M |
| 3.2.1.3 | Tight Buffer Cable | M |
| 3.2.1.4 | Riser rated cable | M |
| 3.2.1.5 | The Fiber Cable shall be able to support Communication Infrastructure technologies such as FDDI, Fast Ethernet (100Mbps), Gigabit Ethernet (1000Mbps) and 10 Gigabit Ethernet (10Gbps). | M |
| 3.2.1.6 | The cable must be capable of withstanding without degradation in performance temperatures in the range of 0 C to 60 C. | M |
| | | |
| 3.2.2. | Features of outdoor Fiber Optic cable | |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.2.2.1 | 50/125 or 62.5/125 micron Multimode Fiber optic backbone cable | M |
| 3.2.2.2 | The fiber cable will be minimum of 8 fiber cores (4 pairs). | M |
| 3.2.2.3 | Armed fiber cable | M |
| 3.2.2.4 | The Fiber Cable shall be able to support Communication Infrastructure technologies such as FDDI, Fast Ethernet (100Mbps), Gigabit Ethernet (1000Mbps) and 10 Gigabit Ethernet (10Gbps). | M |
| 3.2.2.5 | The cable must be capable of withstanding without degradation in performance temperatures in the range of 0 C to 60 C. | M |
| | | |
| 3.2.3. | *Fiber Termination* | |
| 3.2.3.1 | All fiber cables should be terminated using industry standard connectors. | M |
| 3.2.3.2 | All backbone fiber cables should be terminated at the time of installation. | D |
| 3.2.3.3 | In the data center (at L3 switch), termination would be to the patch panel and in each floor it can be terminated directly to the uplink of the switch or to a patch panel. | D |
| | | |
| 3.2.4. | *Fiber Patch Panel* | |
| 3.2.4.1 | Rack mountable 19" Fiber patch panel at the data center to terminate fiber run from each floor. | M |
| 3.2.4.2 | Patch panels should consist of Duct connectors, Fiber Management Kits and Connector Faceplates based on the Bidder's solution requirement. | M |
| 3.2.4.3 | Fiber patch leads to interconnect fiber Patch panel and the switch. | M |
| | | |
| 3.2.5. | Fiber Testing | |
| 3.2.5.1 | Fiber cables should be tested and certified by the Bidder at following periods:<br>▪ Prior to the installation, cable must be tested on the reel for continuity<br>▪ Test of each fiber segment at the time of installation<br>▪ Entire end to end fiber optic link should be tested after the installation | D |
| 3.2.5.2 | Following tests has to be carried out and certified by the Bidder: | M |
| | Attenuation test | |
| | OTDR test | |
| | Bandwidth test | |
| | Length test | |
| | Fault location test (if required) | |
| | | |
| 3.2.6. | Other requirements | |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.2.6.1 | Bidder has to specify the other requirements/ supporting structures for Backbone cabling of their solution. This shall include but not limited to the following components:<br>▪ Sleeves/ Slots/ Conduits<br>▪ Cable trays/ ladder racks/ J Hooks<br>▪ Raceways<br>▪ Equipment cabinets and trays<br>▪ Floor penetration<br>Other requirements have to be identified by the Bidder based on their solution. In addition, they should be based on approved Structured Cabling standards.<br>If the requirements are not specified, it is assumed that they are identified within the quoted price. | D |
| 3.2.6.1 | Based on the solution provided, the Bidder is responsible for firestopping, and bonding and grounding of fiber cables. | D |
| | | |
| 3.3. | Horizontal and Work Area Connectivity | |
| 2.3.0 | Wired connection should be provided for the locations specify by the Parliament – The bidder can obtain the list of locations, which need the wired connectivity at the time of the site visit. | M |
| 3.3.1. | Horizontal and work area cabling should be based on four pair Unshielded Twisted Pair (UTP) (Preferably Cat 6) cables. | M |
| 3.3.2. | Horizontal UTP cable length is limited to 90 metres and work area cable length is limited to 5 meters. Total UTP length including patch and fly leads to a maximum of 95 metres. | D |
| 3.3.3. | The horizontal and work area cable run should be a direct run from floor switch to UTP information outlet. | D |
| 3.3.4. | All work area equipments and cords must be the same category rating as the horizontal cabling and equipments. | D |
| 3.3.5. | Each horizontal cable run should have provision for cable slack at both ends. | D |
| 3.3.6. | Cabling inside rooms/cubicles should run on flat white PVC trunking and in GI pipes whenever they are outside buildings and corridors. | D |
| 3.3.7. | Also, cables must be appropriately shielded when they are wired (closely) parallel to power lines. | D |
| 3.3.8. | Equipment cabinets for cable termination and mounting wiring concentrators should be EIA 19 compliant, fully enclosed, wall mounting with integrated fan assembly. They should be equipped with transparent, lockable front doors. | M |
| | | |
| 3.3.9. | Features of Local Area Cabling | |
| 3.3.9.1 | The cabling should be compliant with the ANSI/TIA/EIA 568-B requirements. | M |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.3.9.1 | Should be capable of transmission speeds of 100 Mbps or higher | M |
| 3.3.9.1 | 4 pair UTP cables should support at least 100 Mbps Speed data communication and would comply with industrial accepted Standard. It should support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.9.4 | All the 4 pairs of the UTP cable should carry 24 AWG solid conductors; resistance of 100 Ohms and Bandwidth of 350 MHz or higher. | D |
| 3.3.9.5 | All pairs to be solid core and terminated and color coded in accordance with standards. | D |
| 3.3.9.6 | Branded cable from one manufacturer should be employed throughout the entire installation. | M |
| | | |
| 3.3.10 | UTP Patch panels | |
| 3.3.10 | The UTP patch panels should support Gigabit speed data communication | M |
| 3.3.10 | Patch Panels should comply with Industrial Acceptable standards. | M |
| 3.3.10 | The patch panels should be rack mountable in a standard 19" equipment rack. | D |
| 3.3.10 | All patch panels shall be ANSI/TIA/EIA 568-B compliant. | D |
| 3.3.10 | The patch panels shall support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.10 | One cable management panel should be included with every patch panel. | D |
| | | |
| 3.3.11 | UTP Outlet | |
| 3.3.11 | All Information Outlets should comply with Industrial Acceptable Standards and backwards compatible. | M |
| 3.3.11 | The Information Outlet should support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.11 | All the outlets should be protected from dust and contamination with shutters. | D |
| 3.3.11 | The insertion of patch cords should be done without any difficulties. | D |
| 3.3.11 | All information outlets should be ANSI/TIA/EIA 568-B. | D |
| 3.3.11 | Information outlets should be able to be mounted in either at 90 degrees (Straight) or 45 degrees (Angled) in a standard faceplate | D |
| 3.3.11 | Information outlet can be placed on different locations based on the requirement of the work area such as on the wall, on the floor etc. | D |
| | | |
| 3.3.12 | UTP Patch and Fly Leads | |
| 3.3.12 | UTP patch leads of maximum 5m length should be provided for connection of patch panel to the Switch. | D |
| 3.3.12 | Fly leads with minimum or 2m and maximum 5m lengths must be provided for connecting the Workstations to the Information Outlet. | D |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 3.3.12 | UTP patch and fly leads should comply with Industrially accepted standards depending on which main structured cabling will be in place. | M |
| 3.3.12 | The patch & fly leads should support LAN technologies such as FDDI, Fast Ethernet (100Mbps) and Gigabit Ethernet (1000Mbps). | M |
| 3.3.12 | The patch leads and fly shall be ANSI/TIA/EIA 568-B compliant. | D |
| 3.3.12 | The patch lead and fly leads would be factory made, tested and certified. | D |
| | | |
| 3.3.13 | UTP Testing Practices | |
| 3.3.13 | The testing of UTP shall provide following compliance: | M |
| | Link Test | |
| | Channel Test | |
| 3.3.13 | For both types of above stated tests the following shall be tested for compliance: | D |
| | Wire Map | |
| | Length and Delay | |
| | NEXT | |
| | Attenuation | |
| | Return Loss | |
| | Power Sum ELFEXT | |
| | ACR | |
| | Power sum ACR | |
| | Power Sum NEXT | |
| | ELFEXT | |
| | Propagation delay | |
| | Delay skew | |
| | | |
| 3.3.14 | Other Components | |
| 3.3.14 | Bidder has to propose the other components that are required for the horizontal and work area cabling such as but not limited to:<br>▪ Racks/ trays<br>▪ Conduits<br>▪ Equipment cabinets and trays<br>▪ Pathways etc.<br>If other components are not specified, it is assumed that they are identified within the quoted price. | D |
| | | |
| 4. | Switches | |
| 4.1. | Core Switches | |
| 4.1.1. | Core switch should support full layer 3 routing and 1000Base standard ports compatible with wiring | M |
| 4.1.2. | At least 24 1000BaseX gigabit ports to ensure Gigabit speeds for each and every floor. | M |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 4.1.3. | The central switch should be connected to each floor switches | M |
| 4.1.4. | Switches should consist of Enterprise edition software. | M |
| 4.1.5. | LAN carrier class core switches should be: | M |
| 4.1.5.1 | VLAN capable | |
| 4.1.5.2 | Minimum 50 GBPS backplane | |
| 4.1.5.3 | Full duplex multimode ports | |
| 4.1.5.4 | SNMP configured for centralised management | |
| 4.1.5.5 | Switch management software | |
| 4.1.5.6 | Port trunking | |
| 4.1.5.7 | Port priority | |
| 4.1.5.8 | Port mirroring | |
| 4.1.5.9 | Industry standard 19" rack mountable | |
| 4.1.5.10 | Make and model | |
| 4.1.6. | Bidder should clearly stated the Fail over mechanism for the Core Switch | M |
| 4.1.7. | Proposed solution should facilitate future upgrades (Stackable) | M |
| | | |
| 4.2. | Server Farm Switch | |
| 4.2.1. | Server farm switch should be a layer 3 manageable switch | M |
| 4.2.2. | 16 1000BaseX gigabit ports to ensure Gigabit speeds. | M |
| 4.2.3. | Server farm switch should connected to core switch – redundancy should be available (connectivity) | M |
| 4.2.4. | Switches should consist of Enterprise edition software. | M |
| 4.2.5. | Redundancy to be proposed with either an additional switch or by proposing a fault tolerant switch | M |
| 4.2.6. | LAN carrier class core switches should be | M |
| 4.2.6.1 | VLAN capable | |
| 4.2.6.2 | Full duplex multimode ports | |
| 4.2.6.3 | SNMP configured for centralised management | |
| 4.2.6.4 | Switch management software | |
| 4.2.6.5 | Port trunking | |
| 4.2.6.6 | Port priority | |
| 4.2.6.7 | Port mirroring | |
| 4.2.6.8 | Industry standard 19" rack mountable | |
| 4.2.6.9 | Make and model | |
| | | |
| 4.3. | Floor Switches | |
| 4.3.1. | 16/24 Full duplex multimode port switches | M |
| 4.3.2. | 2 fiber links from the core switches | M |
| 4.3.3. | GBIC to be used to uplink to floor switches from core switch. | M |
| 4.3.4. | LAN carrier class switches should be | M |
| 4.3.4.1 | VLAN capable | D |
| 4.3.4.2 | SNMP configured for centralised management | D |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| 4.3.4.3 | Industry standard 19" rack mountable | D |
| 4.3.4.4 | Make and model | D |
| 4.3.5. | Bidder should clearly mention the redundancy mechanism | M |
| | | |
| 5. | Wireless Networking | |
| 5.1. | Wireless connection should be provided for the locations specify by the Parliament – The bidder can obtain the list of locations, which needs the wireless connection at the time of the site visit. | M |
| 5.2. | Wired and wireless connections should be integrated with each other. | M |
| 5.3. | Proposed solution should support encryption facility | M |
| 5.4. | The bidder's solution should cover user authentication | M |
| 5.5. | The proposed solution should facilitate seamless roaming | M |
| 5.6. | Bidder should propose a suitable mechanism for redundancy of wireless equipment | M |
| | | |
| 6. | Remote Access | |
| 6.1. | Secure remote access to the network should be available | M |
| 6.2. | Secure dial in support should be available | M |
| 6.3. | Proposed solution should support industrial standard authentication | M |
| 6.4. | Bidder should specify the fail over mechanism | M |
| | | |
| 7. | Firewalls | |
| 7.1. | Vendor has to propose a firewall solution | M |
| 7.2. | Propose solution should consider<br>• Total network security<br>• Remote access security<br>• Internal security issues and concerns | M |
| 7.3. | Data filtering should support state of art technology available | M |
| 7.4. | Bidder should specify the Firewall fail over solution and Quality of Service (traffic/ load balancing) | M |
| | | |
| 8. | Virus/ Spy ware guards | |
| 8.1. | The bidder should propose a Virus/ spy ware solution | M |
| 8.2. | Industry standard enterprise solution | M |
| 8.3. | Upgrades for period of three years | M |
| 8.4. | The bidder can come up with multiple solution to support the entire solution (workstations and other servers) | D |
| | | |
| 9. | Server room setup | |
| 9.1. | The bidder is expected to setup the 'server room'/Data center in the premises specify by the Parliament at the time of site visit. | M |

| Sr. No. | Guidelines | M/D |
|---|---|---|
| | • Necessary power arrangement (online UPS power etc.)<br>• Network cabling requirements<br>• Physical Security requirements<br>• Proper AC requirements<br>• Fire protection systems<br>• Cabinets/ racks<br>• Etc. | |
| | | |

# Audit on the progress made on the Implementation of IT Projects at Sri Lanka Parliament – Draft Interim Report

## Comments of Parliament;

### Introduction and Background;

Having read the draft interim report, it is evident that the IT Auditor has not given attention to the clarifications provided by the Steering Committee in their report dated April 18, 2007 (copy enclosed). The Auditor has also not given sufficient attention to the clarifications provided by Earnst & Young ( E & Y ) through Information and Communication Technology Agency of Sri Lanka ( ICTA) and has embarked on an unjustified attempt to accuse Parliament of various hypothetical and speculative assumptions. The Parliament also has reason to believe that the IT Auditor himself was a former employee of E & Y at the time the IT Survey and Strategy was evolved by them which will give rise to a serious conflict of interest situation in the backdrop that certain aspects of the initial work done by E & Y ( the Agency which was procured by ICTA to conduct the IT Survey and evolve an IT Strategy) were found to be deficient which has been rectified by E & Y themselves after calling for their explanation by ICTA who contracted E & Y to carry out the IT Survey and come up with an IT Strategy, for example the Project Budget.

At the very inception it has to be reiterated that the introduction of information and communication technology to Parliament was initiated by the Information and Communication Technology Agency of Sri Lanka, being the Government Authority responsible for introducing ICT to Government Institutions, under its direction, guidance and supervision. The ICT Survey, the development of the ICT Strategy and also the development of the Parliament Website was implemented by the ICTA under its e-Parliament Pilot Project which was a component of the e-Sri Lanka Project which envisage an IT backbone for entire Sri Lanka with connectivity to all Government Institutions. **At all times, ICTA being the Advisor, Consultant and the implementing agency of the above components has certified and assured Parliament of the appropriateness, quality and standard of the ICT strategy that is being implemented in Parliament. It has to be further emphasized that ICTA has taken part in every step up to the implementation of the projects in**

**Parliament at present. All documentation pertaining to the e-Parliament Project are available with the ICTA being the implementation agency.**

ICTA under its e-Parliament Pilot Project procured the services of Earnest & Young to perform an IT Survey of Parliament. The selection process was carried out by the ICTA and the activities of the e-Parliament Project was implemented by the ICTA utilizing its own funding.

In this backdrop it is important to reiterate the role of Parliament, which was meticulously explained to the Auditor, but from his observations it seems that he has totally lost track of same. As a prelude to the initiation of the e-Sri Lanka Project by ICTA with the sponsorship of the World Bank, a World Bank team of experts visited Sri Lanka and also few selected Government Institutions of which Parliament was one. Sequel to this visit at the invitation of Parliament, Parliament was selected as a suitable Institution to implement a pilot project which was subsequently classified as the **e-Parliament Project**. ICTA invited Parliament to take part in a Steering Committee to facilitate the implementation of the e-Parliament Project and those officers who were involved in the particular subject and those who had various expertise were asked to attend these meetings depending on the requirement. The Steering Committee meetings were convened at the ICTA. Even though the Auditor seems to suggest that those officers should have demanded letters of appointment from ICTA at the relevant time such an issue was never thought to be so important. The officials who attended these meetings were substituted and increased depending on the matters being discussed and availability. The ICTA also made available the services of experts who were invited to discuss specific areas of the IT strategy.

At the request of Parliament, UNDP initiated the Parliament Modernisation Project the key strategies being drafted based on the observations of two international expert missions mobilized by the UNDP. The two groups of International Consultants identified ICT as one of the key areas which need comprehensive and urgent attention. In keeping with the recommendation of the Mission Report which was transformed as the Parliamentary Modernisation Project, the UNDP undertook to implement the 1st Project which was the

Network Infrastructure and Communication Project evolved sequel to the IT Strategy that was developed by ICTA based on the initial survey and strategy done by E & Y being its contractor. The prioritization was done in keeping with the requirements of Parliament on the advise of the experts after having been discussed at the Steering Committee for the expeditious and effective implementation of the ICT strategy which was a recommendation of the Expert Missions. The Parliament is indebted to the UNDP for making available its International IT Consultant attached to the UNDP Office in Colombo to join the group of ICTA experts to develop and refine the IT Strategy for Parliament. As the contract signed by the ICTA and E & Y did not include the provision to develop RFPs for the Projects, UNDP procured the services of E & Y to perform this task which was done under the supervision of ICTA and Parliament.

The UNDP which undertook to implement the 1st Project being the Network Infrastructure and Communication Project was also entrusted with the task of procurement. Accordingly, following the UNDP procurement procedure, the UNDP called for bids and requested Parliament to appoint a preliminary Evaluation Committee to assist UNDP's Procurement Committees. The Secretary General incompliance with this request appointed a Committee comprise of Officials from Parliament, ICTA and UNDP. The Evaluation Committee itself appointed a Technical Committee comprising experts again from all the three Institutions mentioned above. The process was carried out by the UNDP in keeping with their procedures. The Parliament was informed that the procurement process involved the scrutiny and evaluation not only by the local Procurement Committee of the UNDP Office in Colombo but was considered and approved by the UNDP Procurement Committee at the Headquarters in New York. The UNDP has assured Parliament that all documentation pertaining to the procurement process is available with the UNDP.

At the time the financial bids were opened by the UNDP it was observed that all the bidders have quoted a price far above the initial estimation of the E & Y and it was realized that in preparation of the cost estimates E & Y has failed to perform in keeping with their reputation. The UNDP requested the Secretary General for an explanation while informing the External Resources Department about this development and the Secretary General in turn

wrote to the Chief Executive Officer of the ICTA to provide an explanation for same. In view of the discrepancy the Secretary General also requested that the cost estimate evolved by E & Y for the other 9 projects also be re-evaluated as the experts were of the view that E & Y could have erred in those as well. At this point of time ICTA undertook to prepare a realistic cost estimate which was forwarded to Parliament, External Resources Department and the UNDP. The initial estimate of the E & Y and the Revision effected by ICTA is as follows;

**Table I: Revised Estimate - ICTA**

| No. | Project sequence | E&Y Estimate (Original) **(Rs.)** Source: ICT Strategy document (Page No. 134) | ICTA Revised Estimate **(Rs.)** Source: ICTA letter dated December 23, 2005) Warranty – 3 years N/A – Not Available | Percentage of Increase |
|---|---|---|---|---|
| 1 | Training | 2,000,000 | N/A | N/A |
| 2 | Communication Infrastructure | 20,000,000 | 75,000,000 | **375%** |
| 3 | Document Management System | 20,000,000 | 66,296,000 | **331.4%** |
| 4 | Messaging and Scheduling System | 6,000,000 | 16,957,880 | **282.6%** |
| 5 | Information Security Policies | 800,000 | 1,000,000 | **125%** |
| 6 | Human Resource Management System | 6,000,000 | 9,926,000 | **165.4%** |
| 7 | Financial Information Management System | 10,000,000 | 28,266,000 | **282.6%** |
| 8 | Catering and Reservation System | 4,000,000 | 8,015,600 | **200.3%** |
| 9 | Physical Access | 15,000,000 | 25,000,000 | **166.6%** |

| | | | | |
|---|---|---|---|---|
| | Management System | | | |
| 10 | Archiving | 50,000,000 | 75,000,000 | **150%** |
| | Contingency | N/A | 19,538,520 | N/A |

As a result of ICTA calling for an explanation from E & Y a report was forwarded to ICTA by E & Y which was made available to the IT Auditor.

The re-estimation effected by E & Y **themselves** in its report is as follows;

**Table II: Revised Estimate – E&Y**

| No | Project sequence | E&Y Estimate (Original) **(Rs.)** Source: ICT Strategy document (Page No. 134) | E&Y Revised Estimate **(Rs.)** Source: E&Y (Rs.100=$1) Warranty – 3 years N/A – Not Available | Percentage of increase |
|---|---|---|---|---|
| 1 | Training | 2,000,000 | N/A | N/A |
| 2 | Communication Infrastructure | 20,000,000 | N/A | N/A |
| 3 | Document Management System | 20,000,000 | 95,147,800 | **475.7%** |
| 4 | Messaging and Scheduling System | 6,000,000 | 22,177,000 | **369.6%** |
| 5 | Information Security Policies | 800,000 | N/A | N/A |
| 6 | Human Resource Management System | 6,000,000 | 23,438,000 | **390.6%** |
| 7 | Financial Information Management System | 10,000,000 | 12,825,300 | **128.2%** |
| 8 | Catering and Reservation System | 4,000,000 | 5,451,400 | **136.2%** |

| | | | | |
|---|---|---|---|---|
| 9 | Physical Access Management System | 15,000,000 | 2,041,550 | **-13.6%** |
| 10 | Archiving | 50,000,000 | 42,719,700 | **- 85.4%** |

The above depicts the variance of the cost estimates forwarded by E &Y at two points of time and that of the ICTA . Unfortunately the professional negligence on the part of E & Y was revealed very much at a later stage and if there was any indication of this at the time the survey and strategy documentation was handed over to ICTA, the ICTA and Parliament would not have accepted same. The RFP for the Network and Infrastructure Project is available for any competent person to cost estimate each of the component there in contained to analytically assess whether the price escalation was the result of any deviation from the initial strategy and the RFP. Further more the escalation of the cost estimate has been effected by E & Y in respect of the other projects which have not been considered by the Steering Committee when their explanation was called by ICTA.

It is also to be noted that ICTA themselves have undertaken to implement the 2nd major project based on the revised cost estimate.

The comments of the IT Department on more specific issues are as follows;

**Prioritization of Projects;**

The original project sequence as envisaged by E & Y and the revised sequence as agreed by all the stakeholders including the Parliament, ICTA , UNDP and E & Y are as follows (vide Steering Committee Meeting Minutes dated December 20, 2004 );

**Table III: Comparison of Projects – Original vs. Revised**

| No. | Original project sequence | Revised project sequence |
|---|---|---|
| 1 | Training | Training |
| 2 | Information Security Policies | Communication Infrastructure |

| | | |
|---|---|---|
| 3 | Data warehouse | Document Management System |
| 4 | Communication Infrastructure | Messaging and Scheduling System |
| 5 | Messaging and Scheduling System | Information Security Policies |
| 6 | Remote Access | Human Resource Management System |
| 7 | Document Management System | Financial Information Management System |
| 8 | Archiving | Catering and Reservation System |
| 9 | Human Resource Management System | Physical Access Management System |
| 10 | Financial Information Management System | Archiving |
| 11 | Hotel management system | |
| 12 | Physical Access Management System | |

The revised project sequence is also reflected in the RFPs developed by the same consultant E & Y. It has to be emphasized that these refinements were effected on the advise of eminent experts after being discussed at the Steering Committee forum with the objective of effectively and expeditiously implementing the ICT strategy for Parliament.

**'Findings & Observations'**

*'As such, Parliament currently does not possess a comprehensive Information Security Policy'*

It is incorrect for the IT Auditor to state that the Parliament does not possess a comprehensive Information Security Policy at the moment. The Parliament has already developed an adequate Information Security Policy which is based on that of the New Zealand Parliament and we are convinced that the IT standard prevailing currently in the New Zealand Parliament is quite adequate to our Parliament at this juncture.

*'We also observed that Parliament had prepared a revised budget which had been submitted to the UNDP. However the information contained in this document lacked clarity since Printed figures had been manually altered.'*

This is a serious allegation which needs to be investigated thoroughly. Inquiries were done by Parliament and the views of the UNDP was sought. It was revealed that the IT Auditor who visited the UNDP Office had obtained a photocopy of a working document of the UNDP Programme Officer who himself had made few notes on it at a discussion. The UNDP has further clarified that the original printed figures are still perfectly legible on the document. **Considering the gravity of the statement of the IT Auditor who should have very well known the sensational and prejudicial effect it may have in the minds of a person reading the text should have at least verified this position from the UNDP, ICTA or the Parliament. This is further aggravated by the fact that a copy of this document was also handed over to him by the IT Department which did not have any alteration.** ***This unprofessional and unfair statement itself is indicative of the lack of professionalism and bias on the part of the IT Auditor.***

**Table II: Budget Revision**

This aspect has been sufficiently explained in the earlier paragraphs.

***'1.2.1 Very High Redundancy in Network Cabling Infrastructure'***

*'The recommended configuration by consultant, ICTA, does not provide for such a dual redundancy configuration for the backbone'*

The above assertion of the IT auditor is inaccurate. The ICT Project of Parliament is implemented under the supervision, guidance and full knowledge of the ICTA.. Furthermore the RFP document developed by E&Y categorically recommends redundancy at all critical points (Pl refer to 5.17 & 5.15 of the RFP). Accordingly, the selected vendor has proposed cable level redundancy in 'vertical backbone cabling'.

The capacity and quality of the redundant fiber cable is in compliance with industry standards and organizational needs. Furthermore, cable level redundancy brings much more value addition to Parliament in the long run particularly in tangible and intangible forms. Productivity improvements, improved stakeholder-satisfaction, and affirmative organizational image building are a few.

In the clarifications provided by the Steering Committee the IT Auditor was clearly explained the mission criticality of the Parliament. The relevant paragraphs are quoted for easy reference.

*" Do you consider the operations of the parliament mission critical?*

*The activities of a Parliament in a democratic country which includes the legislative, representative and oversight functions cannot be under estimated at any cost. With the implementation of the ICT strategy for Parliament it is expected to bring it up to a level which is comparable to that of any other modern parliaments. Many of the paper based procedures will be converted to electronic transactions which will save money and time for the Parliament and for the Members. Information dissemination will be quicker and effective. Members would be able to communicate and attend to their parliamentary obligations from their respective electorates or even if they are abroad. The parliamentary committees will be able to obtain necessary information and keep the Members informed of the proceedings very early. Most of the processes of the Parliamentary Secretariat will be re-engineered and captured through the IT processes. All necessary information required for the higher management will be available online. The Hansard (the official record of Parliamentary proceedings) will be published within 24 hours after each sitting, meeting a long felt requirement of Parliament. Duplication of information will be avoided and all necessary information will be available in data bases. Parliament security will be enhanced with all critical information including the particulars of visitors and staff being available on the system. These are few of the challenges that the IT strategy will address. In this context considering the dependency that this environment is going to create it is superfluous to emphasise the degree of mission criticality that it will create.*

*Do you consider that the zero tolerable down time is absolutely necessary for the communication infrastructure of parliament?*

*The Steering Committee is of the opinion that the zero tolerable down time is absolutely necessary for the smooth functioning and prestige of the apex democratic institution of this country. Furthermore, network redundancy is required as the success of the rest of the ICT projects is contingent upon availability of the infrastructure.*

*Aren't adjournments and alternate means such as manual mechanisms to record Parliamentary proceedings that currently exist inadequate to continue with the operation.*

*The Steering Committee recognises the importance of our Parliament keeping pace in its modernisation, particularly with the other Parliaments in the South Asian Region and those of the rest of the regions. The Government of Sri Lanka through its Information, Communication and Technology Agency has initiated a drive to implement ICT strategies in Government establishments. The Parliament was the first pioneering pilot project that was undertaken by the ICT Agency as part of the eSri Lanka Project which it undertook to implement. The manual processes that are in operation now are cumbersome, time consuming and repetitive and also do not address the current needs and challenges which are essentially linked to the technological advances that are currently available in the market.*

*Aren't such mechanisms acceptable in keeping with procedures of Parliamentary proceedings?*

*Parliamentary procedures and practices do change according to the current needs. For example an electronic voting system was installed sometime back in the well of the House as part of the modernisation process. However such procedure was not provided in the Standing Orders of Parliament. The Party Leaders have agreed to use the system at appropriate times. Hence it is quite clear that the political leadership appreciates modernisation and is receptive to change. Furthermore the Modernisation Project of Parliament initiated by UNDP has as one of its key components the introduction of ICT to Parliament and this Project has been approved by the Party Leaders."*

*'It is also very unprofessional that redundant paths had not been planned up to the time of awarding the tender'*

As noted in the following sections, the responsibility of network design was given to vendors and therefore, there was no need to provide cable layout plan at the time of awarding the tender. This is also the position taken by E &Y in drafting the RFP document. ( Refer 6.13 Submission A13 documentation. ) However vendors were briefed on the building layout and also the RFP has provided adequate controlling measures to manage the situation. Accordingly, the selected vendor was given a list of network points required in location wise

and furthermore, the vendor is expected to submit a comprehensive cable layout diagrams before the project is signed off.

**'1.2.2 Power Utility'**

*'In the context of the given reasoning it is unusual why dual path power supply has not been considered.'*

Redundant power arrangement is provided in the server room; however, dual-path power supply is out of the scope of the project, which may be contemplated in the future, contingent upon the necessity.

**'1.2.3 Network Dimensioning'**

*'Capacity estimation and switching plant dimensioning should have been carried out before drafting the final specifications.'*

The consultant E&Y who conducted the IT Survey was very well aware of the requirements of Parliament. However according to the RFP designing responsibility was cast on the vendor to allow them to come up with the best solution to meet the requirements of the Parliament to pave the way for novel and new technology to immerge in this connection without hampering the initiative of the vendors. Having evaluated offers, the selected solution provides adequate capacity for business operations even after implementing all other down-streams projects scheduled. This aspect has been further explained in paragraphs to follow.

*'Therefore the technical responsibility has been passed down to the bidder.'*

RFP documents should provide basic guidelines for the project rather than confine vendors to one particular design or framework was one of the prudent decisions taken at the time of formulating ICT strategy. However, RFPs contain adequate controlling measures to manage projects to make it appropriate to Parliament. Accordingly, vendors were selected

considering holistic nature of the design superiority and solution feasibility. The RFP document drafted by E & Y refers to this position under *Technical Specifications 8.1.1 b. II* where it states *" But the Bidders response should not only limit to the guidelines provided in the RFP and should describe the additional features/capabilities of the proposed solution which were not mentioned under the guidelines."*

**'1.2.4. Large variation of Estimates'**

*"Subsequent modifications to the strategic plan have blown up the prices, out of proportion by almost four times"*

It is a fallacy to say that cost estimate has gone up merely because of subsequent modifications to RFP. This statement is misleading and inaccurate and by comparing figures given in the table II it is obvious that estimated cost of all other projects has gone up after budget revision carried out by the same consultant, E&Y. This proves that initial cost estimates prepared by E&Y are inaccurate and far below the prices available in the market.

In this context, it is dubious as to why the Auditor is pushing hard to defend E&Y which made such a fundamental mistake in preparing the original erroneous budget estimates which they themselves rectified later.

**'1.2.5 Cable Run to Janyanthipura Entrance'**

RFP developed by E & Y recommends 'Armed fiber cable' for outdoor cabling. (Pl refer to 'Technical Specifications' 8.1.1 b II and 8.1.1 – 2.2)

The particular '*out door fiber cable*' which is feasible in the long-run in contrast to fragile wireless solutions (which is highly vulnerable for environmental factors such as lightning and which may incur high maintenance cost in the long run) has been recommended by our Consultants.

Higher number of spare cables and higher capacity of bandwidth (10 Gb) has now become the industry-norm and therefore, the 'out door fiber cable' used between Parliament and Jayanthipura entrance is in compliance with industry norms, standards and organizational limits.

**'2.2.1 VoIP Technology and Interoperability Issues'**

*'It is noted that the VoIP facility has been acquired to provide the service on a trial basis and achieve familiarity with the technology and the associated services'*

The IT strategy evolved by E & Y has recommended VoIP. This position has been well clarified by E & Y in their clarifications provided through ICTA to the IT Auditor.
The project RFP has also recommended VoIP (Pl refer to project scope c–x). Accordingly, a pilot project was initiated comprising key stakeholders in Parliament. VoIP facility will be enhanced to other sections in Parliament at a subsequent phase on successful completion of the pilot project. The following benefits will be available to the group of people selected:

- Secure internal communication
- Improved level of service
- Reliability
- Integrated services

Furthermore, there is no need to obtain VoIP for familiarization purposes as this technology has been available in the market for longtime.

18th April, 2007

Secretary General of Parliament,
Sri Lanka Parliament,
Sri Jayewardenepura, Kotte.

We, the Members of the Steering Committees would like to forward our clarifications as requested by the IT Auditor in his email dated 2nd April 2007, addressed to the Project Coordinator UNDP.

| | **Clarifications** |
|---|---|
| 1. | Are you aware of the contents of the ICT strategy and the separate supporting set of specifications for each of the projects recommended in the ICT Strategy drafted by Ernst & Young and accepted by the ICTA, UNDP and Parliament?<br><br>ICTA who functioned as the IT Consultants for Parliament mobilised the services of Ernst &Young to carry out an IT Survey of Parliament and E & Y came up with an IT Strategy and a set of specifications. The said documents were further discussed at length by the Consultants from ICTA, UNDP and IT officials of Parliament and steps were taken to improve, refine and fine tune the areas which were academic and conceptual to fit in to the needs of the Parliament from a practical standpoint. This process took place continuously and at times the participation of E & Y was also obtained. An example would be the stage at which the RFP's were developed. The Steering Committees were fully aware and has endorsed this process and were satisfied with the modifications that have been effected by the Consultants which has paved the way to improve the strategy and to have the important aspects of the strategy to be implemented at the earliest to ensure the effective and efficient utilisation of donor funding and to continue with the momentum that was initialised with the early steps taken to provide IT training and orientation in change management provided to the staff who are also a major stakeholder of the project. The Steering Committee was privileged to have an eminent group of Consultants to advise them and the Consultants themselves were supported by institutions which had the necessary capacity and capability to handle this kind of tasks. |
| 2. | Are you aware of the recommended sequence of the implementation of the projects as specified in the ICT Strategy?<br><br>As indicated before and for the reasons given above, from the initial strategy prepared by E&Y, sequence, scope, contents were modified by the Consultants in keeping with the requirements of Parliament. At the stage of drafting of the RFP's E & Y was also involved with this process. The Steering Committee was briefed of the modifications that were recommended and effected by the Consultants and were satisfied with same. |

| | Clarifications |
|---|---|
| 3. | Are you aware of any changes to this sequence and if so have you authorised such a change to the sequence?<br><br>As the Steering Committee the members unequivocally supported the continuous process of improvement, refinement and adaptation to the needs of Parliament the strategy and the specifications that were originally drafted by E & Y. As these modifications were effected by a panel of eminent Consultants after through scrutiny and study the Steering Committee had no hesitation whatsoever in accepting their recommendations. |
| 4. | Please provide any comments or reasons to support these changes.<br><br>In general terms the position of the Steering Committee vis-à-vis the modifications has already been indicated above. On specific terms the Steering Committee was satisfied that the network infrastructure and the document management projects are the centrepiece of the strategy in the viewpoint of project's contribution to organizational bottom line. Furthermore, the committee was of the view that the success of the strategy is contingent upon the outcome of these two projects and therefore, the two projects should be implemented on priority basis (on completion of the ICT awareness project). |
| 5. | Please provide any reasons for not implementing the Information Security Policy so far which was the primary project to be implemented as per the ICT Strategy.<br><br>According to the revised schedule, the Security Policy Project is to be implemented at the fifth stage, i.e. after the conclusion of the Messaging and Scheduling Project. It may be appropriate to note that a Security Policy which is appropriate for the present context has already been evolved by the IT Department of Parliament and has been effectively brought in to operation by promulgation by the Secretary General of Parliament. It is also worthwhile to mention that the Consultants have informed the Steering Committee that 'security policies are more effective in real business context rather than in isolation'. |
| 6. | Please provide any reason for not implementing the Data Warehouse so far, which was to be implemented prior to the Communication Infrastructure project as per the ICT Strategy.<br><br>According to the modifications that were recommended by the Consultants and accepted by the Steering Committee, there is no separate project called the Data Warehouse Project. The initial strategy did have such Project which was subsequently amalgamated with the Document Management Project at the time of drafting of RFP's. The recommendations of the Consultants were discussed at length at the Steering Committee Meeting held on December 20, 2004. At this Meeting the pros and cons of restructuring the existing applications to suit the current environment, economy and compatibility issues were discussed. . |

| | Clarifications |
|---|---|
| 7. | Are you aware of the member database that existed prior to the formulation of the ICT Strategy?<br><br>The Steering Committee acknowledges the existence of a Members Database which is designed to cater to the information needs of the Library, Table office and the Office of Member's Services. The Database is also being used to obtain information on Member Profiles for the website. |
| 8. | Are you aware of the recommendation in the ICT Strategy to migrate such a database to the data warehouse once it was implemented?<br><br>As indicated above the initial proposal to implement a Data Warehouse Project has now been amalgamated with the Document Management Project. It is envisaged to enhance and improve the Members Database with enriched functionality as far as practicable making use of the existing Database. The ICTA has informed that in implementing the Document Management Project they will endeavour to make use of all existing Databases and software as far as possible avoiding duplication and unnecessary expense. |
| 9. | Are you aware that the data warehouse project involves the procurement of both hardware and software, as per the ICT Strategy?<br><br>According to the original draft strategy by E & Y this was correct. |
| 10. | Are you aware of the anticipated benefits to the Members of Parliament and the Parliament Secretariat on implementing such a database on the data warehouse initially?<br><br>It is a sine qua non to have a comprehensive and exhaustive Members Database with all functionalities as part of the ICT strategy which is not in dispute. However such Database needs to be compatible with the infrastructure and the document management system platforms to enable the smooth flow of information. Hence the Steering committee was advised that this aspect had not been underestimated or delayed unduly as it is going to be implemented at the second stage when the Document Management System is installed. |
| 11. | Are you aware of the existing network infrastructure available within the Parliament?<br><br>The Consultants have briefed the Steering Committee of the existence and nature of the existing network infrastructure and its shortcomings in terms of capacity, expansion, maintenance and security in providing the intended services to the stakeholders. However the Consultants have also recommended that the existing infrastructure be used as far as possible in installing a new infrastructure, which position is reflected in the RFP. The Steering Committee was informed that the Contractor mobilised by the UNDP to install the infrastructure will be making use of the exiting infrastructure as well. |

| | Clarifications |
|---|---|
| 12. | Are you aware of the content of the Communication Infrastructure specifications provided with the ICT Strategy?<br><br>The Steering Committee is aware that a communication infrastructure comprising of state of the art facilities has been recommended to support the applications outlined in the ICT strategy. Furthermore, the Steering Committee has further been appraised that the new infrastructure has improved facilities in terms of security, availability, and reliability to fit into Parliament's strategic needs. |
| 13. | The Communication Infrastructure Project was to be carried out in a phased manner of 3 phases. Are you aware of such a phased approach?<br><br>During the procurement process carried out by the UNDP in respect of the Infrastructure Project, the Steering Committee that was set up in addition to the previous Committee to provide guidance for this process was informed that the funding that had already been pledged for this Project was inadequate in view of the bids received by the UNDP. In this context the Steering Committee recommended a phased out project to accommodate the funding constraints. However once the UNDP indicated its wiliness to provide funding for the full scope of the project the phased out approach was no longer required and was abandoned. |
| 14. | In our opinion the phased approach mentioned in 13 above has not been considered. Please explain why this phased approach was not taken and the whole project executed in one single phase, and if not provide information to support such a phased approach.<br><br>Please refer the answer above. |
| 15. | Explain why IP Telephony facility was included in the procurement and implementation of the Communication Infrastructure since this facility was not envisaged in the ICT Strategy<br><br>As was indicated before, the development of the ICT strategy for Parliament was an ongoing process which was initiated by the ICT strategy evolved by E & Y. On the direction of the Steering Committee, Consultants have taken steps to improve and fine tune the strategy and scope of the projects in keeping with the requirements of the Parliament. The Steering Committee was advised that VoIP was one of the requirements spelt out in the RFP (pl refer to the project scope) and to facilitate the implementation of this functionality, specifications were included in the RFP at the time of lateral review stage by the Consultants and was approved by the Steering Committee. |
| 16. | Therefore, explain whether the committee approved the IP Telephony facility.<br><br>Yes, please refer to answer 15 above. |

| | Clarifications |
|---|---|
| 17. | Are you aware of the capacity of the existing fibre optic backbone?<br><br>The Steering Committee was advised that 62.5/125um fibre (Corning) is available and will be used for redundancy in the new infrastructure. 50/125 um fibre (Corning) will be used in the proposed infrastructure as the vertical backbone. |
| 18. | Explain why the existing fibre optic backbone was not considered to be continued and a new procurement was carried out in spite of the fact that the ICT Strategy does not indicate the requirement for new fibre backbone.<br><br>The Steering Committee was advised that the RFP includes provision for reusing of existing infrastructure facilities such as fibre (Clause 5.15 of the RFP says "Usage *of Available Infrastructure - Where possible, the proposed solution should use the components available in the existing infrastructure of the parliament. If the bidder agreed to re-use components from existing infrastructure, the bidder should be responsible to maintain above components for a period of three Years (please refer 5.14), in order to ensure that the entire infrastructure is in operation as expected.*)<br><br>The selected vendor has made use of the existing fibre backbone in the new infrastructure with warranty.<br><br>Accordingly the Steering Committee was advised that new procurement will be carried out only for additional fibre requirements. |
| 19. | Please provide any particular reasons why two separate RFPs were floated for the network and the PCs, Printers & UPSs where both these were covered under one RFP submitted by the consultants Ernst & Young.<br><br>The Steering Committee took in to consideration the following reasons in recommending the purchase of computers and other peripherals before the implementation of the Network Infrastructure Project ;<br><br>1. On completion of the IT training for 400 staff members and after the conducting of Change Management Orientation Seminar there was a heavy demand for computers from various sections of Parliament.<br><br>2. There was a shortage of computers and even more some of available computers were out-dated. It was paramount that the computers with the required peripherals were purchased early to meet operational requirements of Parliament.<br><br>3. The IT Survey carried out by E &Y involved the capturing of processes at the ground level which created a synergy among the Staff that a new office environment which is IT enabled will be created soon. In this backdrop the Steering Committee thought it appropriate to maintain the momentum by providing computers to the staff members. |

| | Clarifications |
|---|---|
| | Therefore, the decision of segregating the project has a strategic as well as operational significance in the context of Parliament modernization. |
| 20. | Do you consider the operations of the parliament mission critical?<br><br>The activities of a Parliament in a democratic country which includes the legislative, representative and oversight functions cannot be under estimated at any cost. With the implementation of the ICT strategy for Parliament it is expected to bring it up to a level which is comparable to that of any other modern parliaments. Many of the paper based procedures will be converted to electronic transactions which will save money and time for the Parliament and for the Members. Information dissemination will be quicker and effective. Members would be able to communicate and attend to their parliamentary obligations from their respective electorates or even if they are abroad. The parliamentary committees will be able to obtain necessary information and keep the Members informed of the proceedings very early. Most of the processes of the Parliamentary Secretariat will be re-engineered and captured through the IT processes. All necessary information required for the higher management will be available online. The Hansard (the official record of Parliamentary proceedings) will be published within 24 hours after each sitting, meeting a long felt requirement of Parliament. Duplication of information will be avoided and all necessary information will be available in data bases. Parliament security will be enhanced with all critical information including the particulars of visitors and staff being available on the system. These are few of the challenges that the IT strategy will address. In this context considering the dependency that this environment is going to create it is superfluous to emphasise the degree of mission criticality that it will create. |
| 21. | Do you consider that the zero tolerable down time is absolutely necessary for the communication infrastructure of parliament?<br><br>The Steering Committee is of the opinion that the zero tolerable down time is absolutely necessary for the smooth functioning and prestige of the apex democratic institution of this country. Furthermore, network redundancy is required as the success of the rest of the ICT projects is contingent upon availability of the infrastructure. |
| 22. | Aren't adjournments and alternate means such as manual mechanisms to record Parliamentary proceedings that currently exist inadequate to continue with the operation.<br><br>The Steering Committee recognises the importance of our Parliament keeping pace in its modernisation, particularly with the other Parliaments in the South Asian Region and those of the rest of the regions. The Government of Sri Lanka through its Information, Communication and Technology Agency has initiated a drive to implement ICT strategies in Government establishments. The Parliament was the first pioneering pilot project that was undertaken by the ICT Agency as part of the eSri Lanka Project which it undertook to implement. The manual processes that are in operation now are cumbersome, time |

| | Clarifications |
|---|---|
| | consuming and repetitive and also do not address the current needs and challenges which are essentially linked to the technological advances that are currently available in the market. |
| 23. | Aren't such mechanisms acceptable in keeping with procedures of Parliamentary proceedings?<br><br>Parliamentary procedures and practices do change according to the current needs. For example an electronic voting system was installed sometime back in the well of the House as part of the modernisation process. However such procedure was not provided in the Standing Orders of Parliament. The Party Leaders have agreed to use the system at appropriate times. Hence it is quite clear that the political leadership appreciates modernisation and is receptive to change. Furthermore the Modernisation Project of Parliament initiated by UNDP has as one of its key components the introduction of ICT to Parliament and this Project has been approved by the Party Leaders. |

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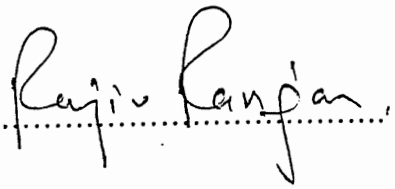
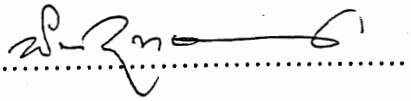
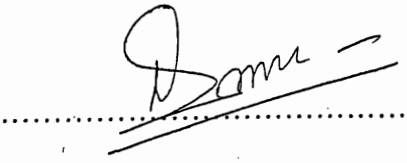
Steering Committee ..... 

D.P.Dahanayake
Rtd. Director Finance and Supplies Parliament and
Member Steering Committee ..... 

Buddhika Nawagamuwa,
Systems Engineer Parliament and
Co-opted Member Steering Committee ..... 

Gamini Samaraweera
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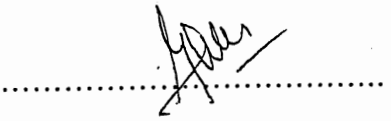
Steering Committee ..... 

C.Kuruppu
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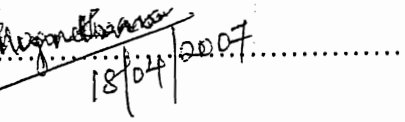
Steering Committee ..... 

Thusha Mukunthan,
e-Parliament Project Manager ICTA and
Member Steering Committee ..... 

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Information & Communication Technology Agency of Sri Lanka
*An Agency under the Presidential Secretariat*

ICTA
ideas actioned

**My Ref: Re-Gov/eParliament**

2007-07-05

**Secretary General**
The Parliament
Sri Jayawardenapura Kotte
Battaramulla

Dear Madam,

**ICTA's comments on the draft interim audit report on Parliament Modernization Project**

As per the request made by you seeking our views on the interim draft report prepared by the Auditor General on the modernization of the Parliament project, we herewith forward our comments for your attention.

Should you need any further clarifications, please feel free to contact me.

Thank you.

Yours faithfully,
**ICT Agency of Sri Lanka**

**Wasantha Deshapriya**
Director, Re-engineering Government Programme



160/24, කිරිමණ්ඩල මාවත, කොළඹ 05, ශ්‍රී ලංකාව 160/24, கிரிமண்டல மாவத்தை, கொழும்பு 5, இலங்கை 160/24, Kirimandala Mawatha, Colombo 05, Sri Lanka

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# ICTA's comments on the draft interim audit report

# on

# Parliament Modernization Project

## Introduction

The Auditor General of Sri Lanka is carrying out an audit on the progress made on the IT projects in Parliament and also whether the projects have met their objectives. Subsequently to the clarifications requested from the Project Steering committee (PSC) and from the system study consultants, Ernst and Young (E&Y), the draft interim report is forwarded to the Parliament for any comments. As per the request made by the Parliament on the technical issues highlighted in the interim audit report, ICTA is forwarding the below arguments for the verdicts given in the report.

However, before going into any details of the technical issues raised, ICTA would like stress upon the point and would give an assurance and certification that this project is been implemented with the best industry standards to meet the requirements specified after carrying out a comprehensive system study.

## Concerns on the IT Auditors

Firstly ICTA wants to bring into notice that the company 'Eidikos Lanka (Pvt) Ltd' , who is sought to do the audit by the Auditor General of Parliament, consists of set of former employees of E&Y, who were the consultants carried out the system study at Parliament. We wish to show our strong disagreement and disappointment on this assignment been given to set of individuals who had actually carried out the system study to finally audit the same. It is very unfortunate that Auditor General had appointed and delegated the IT audit to a group of individuals who cannot be neutral at all in this scenario. This is a conflict of interest and the said company is not honest enough to express the facts taking the advantage of Auditor General is not at all aware of the background of the employees of the 'Eidikos'.

**ICTA's comments**

As mentioned in the earlier responses also, sequence of the projects were changed subsequently and approved by the project PSC members. The details could be referred from the responses from the PSC members, what ICTA forwarded to the auditors. However, ICTA will comment on the issues raised related to system study assignment and the procurement process where a contradiction is evident.

**General Observations**

As previously mentioned in our report with evidences that there were revisions in the project sequence proposed by E&Y and some of the projects, which were in the original IT strategy document were amalgamated with another in the final stage of the IT strategy formulation with the approval of the PSC.

With regards to the statement on the new nominees from ICTA, we would like to point out that it's very natural that employees of an organization leaves and new appointments take place. However the new nominations that are replaced for the original members are also aware of the situation and the issues of this project. It is also worthwhile to note that they are also of the same capacity to manage the project successfully.

With regards to the formation of the Project Steering Committee of this project, ICTA would like to mention that a proper procedure is followed to appoint the members of this committee. However, since this is the first pilot project undertaken by ICTA, the appointment of the PSC members and procedure followed is not documented since ICTA was also practicing these procedures for the first time.

**Budgets for the projects in the ICT strategy**

With regards to this comment, it is necessary to brief down the background factors which caused the revision of the project cost estimates.

- E&Y formulated the IT strategy which contained the budgetary information as well. When the bids are called for the Network Infrastructure Project a major variance was observed between the budgeted estimate and the actual cost. Due to this issue, Secretary General of Parliament requested ICTA to re analyze the initial budgets for all the projects anticipated the same issue with the rest of the projects as well. A committee was formed comprising experts from Parliament, ICTA and UNDP to revise the budgets considering the actual scope of the project and propose the new budget indications. However, ICTA requested the consultants E&Y also to produce a report explaining the reasons for the variance.

- The Draft Interim Report provides the comparison between the initial budgets proposed by E&Y and the comprehensive budget produced subsequently. The comparison was done between the budget for the conceptual design and the comprehensive budget, therefore the comparison does not materialize since there are no common factors to compare.

*(References:*
*Annexure 1 - Attached correspondences between ICTA and Parliament,*
*Annexure 2 - Revised Budgets for Parliament Projects by E&Y)*

**Comments on Appendix – A**

ICTA agrees fully with the comments made from a) to g) which were given in the Draft Interim Report.

1. Optical Fiber Communication Infrastructure

1.1. Observations.

(h) First of all ICTA wishes to state that the layout diagrams are one of the deliverable of the network infrastructure project. These documents are currently been reviewed by the project stakeholder, i.e. UNDP. E&Y, the consultants developed RFP giving sufficient provision to manage this situation. ICTA is of the view that the vendors are given an opportunity to propose an innovative solution in this case.

j) The design responsibilities are passed on to the vendors to propose creative ideas in this regard. This is purposely done so that Parliament will get the best bid/vendor. However, the evaluation criteria were developed very comprehensively to evaluate these factors.

1.2. Comments

1.2.1. Very high redundancy in network cabling infrastructure.

- The fiber optic backbone with high redundancy has been implemented already as part of the communication infrastructure as per the RFP circulated to all the vendors. The RFP developed by E&Y, which was signed-off by Parliament and ICTA has explicitly mentioned about the redundancy at all critical points. The vendor had adhered to that mandatory requirement which was clearly spelt out in the RFP. *(Reference: 5.15, 5.17 of the Final RFP)*

- The reasoning for this dual-path backbone cabling infrastructure layout had been that if one path is physically damaged due to a serious incident the other path is available to provide the connectivity. This factual reasoning still stands true; ICTA cannot baselessly assume that there will not be any civil development works at Parliament, due to the fact that it is situated in a high security area. In such circumstances it is hard to assume that the cables will not be damaged or disconnected by mistake, and we are highly surprised that the auditors have assumed that there is not single civil work to be carried out at the Parliament which could damage the cabled laid out.

- With regards to the redundant path being not specified upfront is a purposeful act, giving vendors an opportunity to propose innovative ideas with the lowest cost and that is the underlined concept behind the competitive bidding. RFP spelt out the requirements and also required redundancy at all critical points. However, in the pre-bid meeting, the standards expected in this regard were explained to the vendors and

now it's evident that these are fulfilled at Parliament. The vendors were given five chances for site visits in addition to the meetings.

### 1.2.2. Power Utility

We would like to mention that the power utility is not in the scope of this project so that the area is not covered. However, the server room is designed and equipped having this also in mind as Generator Power and UPS Power was available.

### 1.2.3. Network Dimensioning

It is true that the RFP had given guidelines in this regard and also it is appropriate to note that the standards which were expected are explained at the pre-bid meeting in this regard were the factors which were taken into consideration at the evaluation stage. The consultancy assignment which was carried out by E&Y was to specify the requirements and not to state the solutions explicitly. Therefore the vendor is responsible to draw the proposals in relation with the requirements in the RFP in a cost effective manner.

### 1.2.4. Large variations of estimates

*(Refer the section under Revised Budgets for Parliament Project to gather sequence of activities happened behind this revision*

*References:*
*Annexure 1 - Attached correspondences between ICTA and Parliament,*
*Annexure 2 - Revised Budgets for Parliament Projects by E&Y)*

Apart from the facts stated in the mentioned references and documentary evidences, the following have to be noted in this regard.

- E&Y, the competent consultants have failed to perform an actual market analysis for the actual scope, and thus there is a committee formed to revise it. It is worthwhile to note that E&Y was also requested by ICTA to carry out a budget revision exercise with justifications.

- It is true that the same company was engaged in both the stages and they could not come with the actual market value until it became evident when the bids were opened for Network Infrastructure Project. This clearly indicates the negligence on E&Y.
- However UNDP finally awarded the lowest bidder after the evaluations.

### 1.2.5. Cable run to Jayanthipura Entrance

The requirements of the cabling to Jayanthipura Entrance are prescribed by the consultant E&Y. The diagram which is in the final RFP prescribed that the leased line *(Refer Annexure 3 – RFP extract)* is required to Jayanthipura Entrance and the relevant sections detailed the requirements specification in this regard as well. Further it is the most appropriate system that needs to be installed.

## 2. VoIP Platform

### 2.1. Observations

a) A secure internal communication within key office holders is currently possible with the VoIP telephone facilities.

b) The RFP never covered the integration with the existing PABX in its scope.

### 2.2 Comments

The RFP is floated to carry out a pilot implementation with regards to the VoIP, however there was no reference as 'trial' in any of the documents. ICTA expects that all the parties are aware that there is a vast difference between a 'trail' project and 'pilot' project.

Further, the argument 'VoIP is a developing technology' is a highly inaccurate argument. Any technical person, who is inline with the current technology growth, SHOULD be aware that the VoIP is not an emerging technology currently, but it's a proven and matured technology. The International Telecommunication Union (ITU) and the

**Internet Society** defines the VoIP standards. This is actually a hypothetical statement from the auditors.

The conclusion about the interoperability features about the VoIP is also an immature statement, since even though there could be developments in this technology in the future; the standards are made to ensure the interoperability issues and compatibility issues.

Finally we would like to stress upon the point that the VoIP technology is not a new technology to familiarize with it and further more it's worthwhile to note that there is not a single evidence to make this courageous statement.

2.2.2. Lack of Migration Plan for an IP-PABX

In this section also, ICTA wishes to stress upon the point that the VoIP implementation was a pilot implementation and we are yet to see the results. Obviously it will not have a phase out plan with the migration. This has to be decided once the results are analyzed and that is the main objective of implementing pilot projects.

**Conclusion**

As per the auditors ICTA is the prime consultant for the parliament and in that capacity the clarifications raised on technical factors and the processes adopted were clarified to the maximum level of clarity. However if there are further clarifications in this regard, ICTA is willing to summon a discussion with its technical experts to clarify the auditor's concern.

# Annexure - 1

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ICTA
ideas actioned

23rd December 2005

**Ms. Priyanee Wijesekera**
Secretary General of Parliament
Project Director, Parliament Modernization Project

Dear Madam,

**Budget Revision – Parliament ICT Projects**

With reference to your letter dated 5th December 2005, Information and Communication Technology Agency appointed a committee to prepare a revised budget for the Parliament ICT projects. The report of the committee is attached herewith.

The main reasons for the variance of the initial budget and the actual proposals are:

1. The initial cost estimate was prepared based on the conceptual designs of the projects. This was the budget submitted to UNDP for fund approval by Parliament.

   The RFP documents were prepared at a latter stage which had details of the required solution that were not outlined in the initial System Study.
   But the budget was not revised.

2. Maintenance cost of the respective projects were considered for a lower period than what is listed in the RFPs. This results in higher maintenance cost.

3. The number of users have been increased from what the System Study consultants has proposed. This leads to higher license cost.

The committee studied the revised scope and inquired from local ICT companies for prices of the products. Based on the verbal price quotations (as the vendors were reluctant to send proforma quotations) the committee has recommended that the budget for the nine ICT projects of Parliament be revised to Rs. 305,461,480.00

ICTA has also requested the consultants, Earnest & Young, who conducted the System Study and consequently also developed the Request For Proposals (RFPs) for Parliament ICT projects, for a report explaining the reasons for the lower budget they had submitted initially.

Information and Communication Technology Agency of Sri Lanka
(Wholly owned by the Government of Sri Lanka)
*An Agency under the Prime Minister's Office*
160/24, Kirimandala Mawatha, Colombo 5, Sri Lanka. Tel: +94 11 2369099 Fax: +94 11 2369091 E-mail : info@icta.lk web : www.icta.lk

ICTA also envisage a minimum period of three years to implement all ten projects if they are implemented without major delays. It is imperative the technology and products could change during this period and the budget revision has been made based on today's technology and products. Therefore ICTA recommends to allocate Rs. 19,538,520.00 as contingency cost.

We recommend that the revised budget for the ten ICT projects of Parliament to be Rs. 325,000,000.00.

Thanking you.

Yours sincerely,
**ICT Agency of Sri Lanka**

**Manju Haththotuwa**
Managing Director/CEO

1] Ms. Sujatha Cooray, Director General
External Resources Department

2] Mr. Abu Y.M. Selim, Country Director
UNDP

| | | |
|---|---|---|
| To | : | Mr. Manju Haththotuwa,<br>MD/CEO, ICTA |
| From | : | Parliament Project Management Team |
| Subject | : | **BUDGET REVISION – PARLIAMENT ICT PROJECTS** |
| Date | : | 23rd December 2005 |

---

A team comprising Director – IT Parliament, Senior Project Manager - ICTA & ICT for Development Advisor – UNDP assembled at ICTA on December 06, 2005 to revise Parliament ICT budget. The team reviewed the respective RFP documents and revised the budget considering the following categories:

- Base product & Implementation Cost
- License cost
- Maintenance cost (for a period of three years)
- Hardware cost
- Training and other charges

We conducted a market study, particularly with a few reputed vendors, and estimated a revised budget for the envisaged projects. The detailed break down is enclosed. The total amount of the revised budget is Rs. 325,000,000.00
The implementation period for the all 9 projects is envisaged to last about 3 years.
The budget was estimated based on available technology and products.

The team also identified possible causes for the budget variance:

1. The team is of the view that the initial cost estimate was prepared based on the conceptual designs of the projects. The RFP documents had been prepared at a latter stage and no proper budget revision was done at that stage.
2. During the RFP stage, there were details included for the requirements and the consultants failed to revise the budget.
3. Initial cost estimate was prepared almost a year ago and cost of those equipment have increased due to new technologies.
4. Maintenance cost of the respective projects was not taken into account at the initial budget preparation.

.....

Mr. Mahesh Perera
Director IT - Parliament

.....

Mr. Anandakumar Varatharajah
Senior Project Manager ICTA

.....

# Detail Budget Breakdown - Parliament Projects (Dec 2005)

| Num | Project name | Initial Budget | Revised Budget | Breakdown of Revised Budget | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Base Product | Implm Cost | User License | No. of Users | User License Total | Maintenance for 2nd & 3rd yrs | Hardware Cost | Training & Others |
| 1 | Communication and Infrastructure | 19,000,000.00 | 75,000,000.00 | Bids available | | | | | | | |
| 2 | Data Warehouse | 10,000,000.00 | | Moved to Document Management System hardware cost | | | | | | | |
| 3 | Document Management | 18,000,000.00 | 66,296,000.00 | 20,400,000.00 | 4,080,000.00 | 25,500.00 | 700.00 | 17,850,000.00 | 10,466,000.00 | 10,000,000.00 | 3,500,000.00 |
| 4 | Messaging and Scheduling | 6,000,000.00 | 16,957,880.00 | 459,000.00 | 45,900.00 | 15,300.00 | 700.00 | 10,710,000.00 | 2,742,980.00 | 2,500,000.00 | 500,000.00 |
| 5 | Information Security Policy | 600,000.00 | 1,000,000.00 | Not applicable | | | | | | | |
| 6 | Human Resource management | 6,000,000.00 | 9,926,000.00 | 2,550,000.00 | 255,000.00 | 51,000.00 | 50.00 | 2,550,000.00 | 1,571,000.00 | 2,500,000.00 | 500,000.00 |
| 7 | Physical Access Management | 12,000,000.00 | 25,000,000.00 | Detail breakdown not possible | | | | | | | |
| 8 | Financial Management | 12,000,000.00 | 28,266,000.00 | 15,300,000.00 | 1,530,000.00 | 102,000.00 | 50.00 | 5,100,000.00 | 4,586,000.00 | 1,000,000.00 | 750,000.00 |
| 9 | Hotel Management | 5,000,000.00 | 8,015,600.00 | 4,080,000.00 | 408,000.00 | 25,500.00 | 50.00 | 1,275,000.00 | 1,252,600.00 | 500,000.00 | 500,000.00 |
| 10 | Archiving System | 45,000,000.00 | 75,000,000.00 | | | | | | | | |
| | Total | 133,600,000.00 | 305,461,480.00 | | | | | | | | |
| | Contingency | | 19,538,520.00 | | | | | | | | |
| | **Grand Total** | | **325,000,000.00** | | | | | | | | |

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எனது இல.
My No.

මගේ අංකය
உமது இல.
Your No.

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பாராளுமன்றம்
PARLIAMENT

ශ්‍රී ජයවර්ධනපුර කෝට්ටේ ஸ்ரீ ஜயவர்தனபுர, கோட்டே Sri Jayewardenepura, Kotte

5th December 2005

**Mr. Manju Haththotuwa**
Managing Director / CEO
Information & Communication Technology Agency of Sri Lanka
160 /24, Kirimandala Mawatha
Colombo 5.

Dear Mr. Haththotuwa

**BUDGET REVISION – PARLIAMENT ICT PROJECTS**

This refers to the telephone conversation Mr. W B D Dasanayake, Deputy Secretary General of Parliament had with you few days ago. You may recall that sequel to an ICT survey conducted by Consultants E&Y with your sponsorship, came up with a project proposal consisting of 09 sub projects. The contractual agreement with E&Y was extended to cover the development of RFP's.

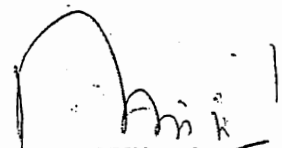
At present we have embarked on the implementation of the first project being the network infrastructure project. When bids were called a major variance was observed between the budgeted estimate and the actual cost of implementation. This has seriously hampered the progress of this project and the External Resources Department and UNDP have requested Parliament to obtain a justification from you as to this disparity. I would also suggest that this problem may arise in respect of the implementation of the rest of the sub projects as well and the need has arisen for us to reconsider the initial estimates to ascertain that they too need revision.

I have been informed by Mr. Mahesh Perera Director/IT that at the time the system study was carried out by E&Y the budgetary requirement was assessed at a very conceptual level. But subsequently at the time the RFP's were developed by the same consultant certain enhancements / modifications were made to those projects by which time the initial estimate has already been forwarded to UNDP.

Therefore I would be grateful if you could examine the full scope of the project (all 9 sub projects) and forward to us a revised budget in keeping with the final version of the project scope to enable us to forward same to UNDP and External Resources Department for approval at the earliest.

Thanking you,

Yours sincerely,



**Priyanee Wijesekera**
Secretary General of Parliament
& Project Director, Parliament Modernisation Project

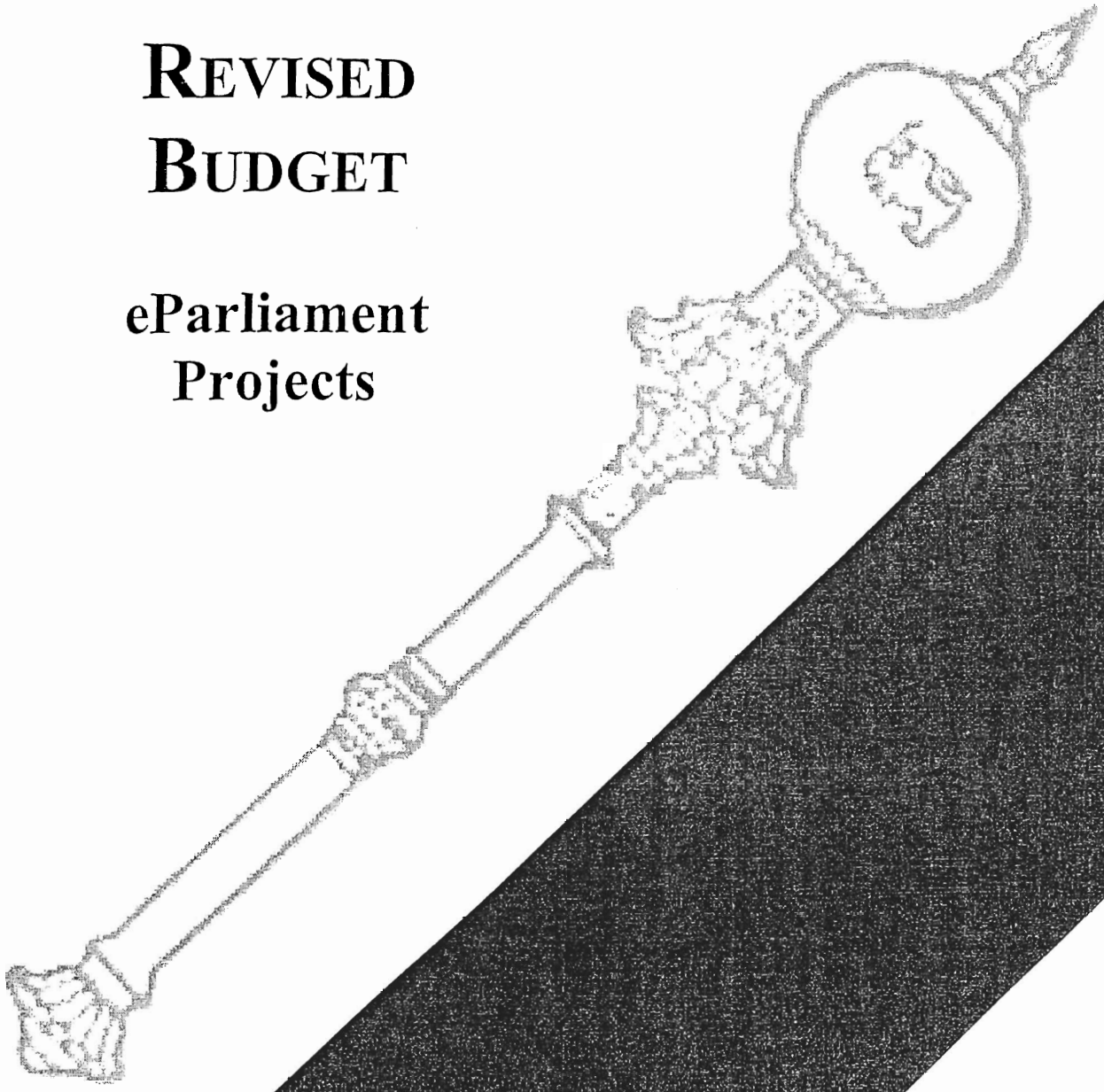
Cc: 1) Mrs. Sujatha Cooray, Director General,
External Resources Department

2) Mr. Abu Y.M. Selim, Country Director,
UNDP

# Annexure - 2

# REVISED BUDGET

## eParliament Projects



ICTA

eSri Lanka

# Table of Contents

## INTRODUCTION

The exercise to revise the proposed budget to implement the ICT Strategy for the Parliament of Sri Lanka was carried out by Ernst & Young at the request of the ICTA.

The budget to implement the ICT Strategy was proposed by Ernst & Young on completion of the System Study and preparation of ICT Strategy and ICT Implementation Plan for the eParliament Project that was concluded in 2004.

Ernst & Young obtained the pricing information for the revision of budgets for the identified projects in the IT Strategy from selected vendors and business partners in Sri Lanka, by requesting for a 'Proforma Invoice'.

## NEED FOR REVISION

The ICT Strategy for the Parliament was formulated in the year 2004, and the infrastructure and technology considered was based on the availability of the same.

The suggested costs were estimated on the assumption that a limited number of users would use each application based on their job profile and the user licenses were to be purchased on the number of 'Concurrent User' licenses as opposed to the consideration of number of 'Named User' licenses that are considered today.

The period of warranty for a software solution is usually not more than 1 year, as opposed to the present requirement of the parliament of a 3 year comprehensive warranty.

## PROJECTS

A 'Proforma Invoice' was requested from vendors for each of the identified projects as listed hereunder. The Proposals for the 'Communication Infrastructure' project has already been received by the parliament and the costs proposed by vendors are considerably higher than the anticipated budgeted cost. However, this document does not intend to revise the budget allocated for the Communication Infrastructure project, but will provide an explanation as to what may have caused the deviation in costs.

1. Messaging and Scheduling System
2. HR Management System
3. Hotel Management System (Catering)
4. Financial Information & Inventory Management System
5. Document Management System
6. Physical Access Management System
7. Archiving
8. Communication Infrastructure

## APPROACH

In an attempt to acquire pricing information from vendors for the purpose of budget revision, the following approach was adopted, in concurrence with the Director IT, Sri Lanka Parliament. During the initial discussions held with Director IT, Sri Lanka Parliament the following was decided

- The maximum number of user licenses for each software solutions to be implemented.
- The comprehensive warranty period for each solution to be 3 years
- The Document Management System would function as the information highway as opposed to the Messaging and the Scheduling System.

A list of well reputed business partners and vendors were chosen for this exercise, offering tried and tested systems for the identified high-level requirements (Project Scope) of the Parliament.

Ernst & Young prepared a document requesting for a 'Proforma Invoice' that included the scope of each project and the formats to be used by vendors and/or business partners to respond to our request. Further, an interface matrix that defined the interface requirements to interface with the existing systems and future systems was also prepared and sent to vendors and business partners. However, the functional requirements of the parliament for each project were not sent to the parties, hence the vendors and business partners were required to assess the pricing based only on the scope of each project.

The document sent to vendors and business partners requesting for estimated pricing is attached as **Annexure I** to this document.

When calculating the budget using the pricing information sent by the respective vendor parties and business partners certain assumptions were made and such assumptions are indicated under the breakdown of costs and budget calculations for each project. General notes and assumptions that were made are listed as a separate section in this document.

## VENDORS AND BUSINESS PARTNERS

The following list of vendor parties and business partners were selected to request for 'Proforma Invoices'. Please note that **NOT** all vendors responded to our request and is marked accordingly.

Further, certain vendors and business partners that responded with pricing information have failed to provide pricing for a comprehensive solution that includes hardware costs, hardware maintenance costs, etc.

| Vendors and Business Partners that responded with pricing information | Pricing information Provided (✓) / Not-Provided (×) |
|---|---|
| hSenid | ✓ |
| Kingslake | ✓ |
| Zillione | × |
| Millenium IT | × |
| Ewis | ✓ |
| Microimage | ✓ |
| Kbsl | ✓ |
| Securo Dynamics | ✓ |
| Informatics | ✓ |
| Greenwich Lanka | ✓ |
| Affno | × |
| JIT | ✓ |
| Mnet | × |
| Sanje Lanka | ✓ |

## NOTES AND ASSUMPTIONS

- All costs are considered in United States Dollars (USD).
- Costs provided in LKR were converted to USD at Rs.100 = $1.00
- When considering hardware costs only the server and related license costs together with the maintenance for same was considered.
- None of the future payments were discounted to arrive at the percent value.
- Certain pricing information sent by the vendors were re-calculated and adjusted, as some vendors had amalgamated two or more vital cost factors to form one total cost. (e.g. The cost for License and the cost for the implementation included as one single cost)
- It was assumed that a maintenance contract would be signed subsequent to the warranty period for the purpose of product related support, in the event of a procurement of the solution from a selected vendor, as certain vendors offer training Free Of Charge (FOC) if the client is covered under a Annual Maintenance Contract (AMC).
- When calculating the budget cost for each project the figures were rounded to the nearest 100, 1,000 or 10,000.
- The budgeted costs include the Total Cost of ownership (TCO) for 5 years including a 3 year comprehensive warranty. The warranty period offered by most

vendors is for one (1) year. Hence the costs that may need to be incurred by the vendor parties for the two immediate years (2 & 3) were calculated and is added separately to the TCO as the Parliament is requesting for a 3 year warranty period. The maintenance cost for year 4 & 5 was requested from the vendors. The maintenance cost mentioned includes the hardware maintenance and the software solution maintenance fees.

- It was observed that certain 3rd party software that is required by most vendor parties to facilitate the functioning of the proposed solution may be used when implementing one or more of the other software solutions. This opportunity of using a single licensing arrangement as per the 3rd party software lies, in the event the same vendor party is chosen for more than one implementation. However, when formulating the budget we have not considered this opportunity.

- It was also observed that if the parliament decides on a standard for the platform (Operating System), Database, Hardware (Servers, clients) and storage medium and strategy (Centralized), that there remains an opportunity to lower the costs for each project. Further, it is envisaged that subsequent to the procurement of the document management system these standards could be decided. However, these opportunities were not taken into consideration as such is beyond the scope of this document.

## VENDOR RESPONSE AND COLLATED PRICING

Detailed costs for each project by each vendor are stated in **Annexure II**. Further, the pricing information sent by the respective vendors and business partners are provided in softcopy format in the CD that accompanies this document.

## BUDGET AT A GLANCE

Budgeted Cost including a 3 year warranty and 2 years of maintenance.

| Projects | Budgeted Cost (USD) |
|---|---|
| Messaging and Scheduling System | 310,000 |
| HR Management System | 300,000 |
| Hotel Management System (Catering) | 70,000 |
| Financial Information & Inventory Management System | 145,000 |
| Document Management System | 1,050,000 |
| Physical Access Management System | 25,000 |
| Archiving | 465,000 |
| Communication Infrastructure | N/A |
| **TOTAL Budget for ALL Projects (USD)** | **2,365,000** |

## BUDGETED COSTS FOR THE SOLUTIONS

*Messaging & Scheduling*

| Areas to be considered (All Costs are in USD) | TCO | Year 4 | Year 5 |
|---|---|---|---|
| Base product pricing:<br>o For 700 users | 6,000.00<br>91,000.00 | | |
| Implementation cost<br>o Data Conversion (including data cleansing)<br>o Customization / Interfacing | N/A | | |
| Training cost | FOC | | |
| OPE | 1,000.00 | | |
| Hardware costs with Backup | 55,700.00 | | |
| Comprehensive warranty for 3 years for the software solution, including charges for version upgrades | 52,900.00 | | |
| Comprehensive Warranty for Hardware for 3 years, including Database and O/S | 15,170.00 | | |
| **TOTAL 01 (OTI)** | **221,770.00** | | |
| TOTAL Maintenance cost of the application for Years 4 & 5 | **56,400.00** | 28,200.00 | 28,200.00 |
| TOTAL Maintenance cost of the Hardware solution for Years 4 & 5 | **27,910.00** | 13,955.00 | 13,955.00 |
| **TOTAL 02** | **306,080.00** | | |

**Training costs and the implementation costs are included in the base price.*
**The number of Client ends (PCs & Laptops) was considered as 700 for 700 users.*
**Although vendors had not charged for Out of Pocket Expenses (OPE), USD 1000 was taken as possible OPE Cost.*

Approximate One Time Investment (OTI) ≈ 221,800

*Software Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 56,400

*Hardware Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 28,000

Approximate TOTAL =306,200
**Budgeted COST (USD)** **≈ 310,000**

*HR Management System*

| Areas to be considered (All Costs are in USD) | TCO | Year 4 | Year 5 |
|---|---|---|---|
| Base Product pricing:<br>o For 1000 employees<br>o 40 HR Admin users (Named) | 125,000.00 | | |
| Implementation cost<br>o Data Conversion (including data cleansing)<br>o Customization / Interfacing | 10,000.00 | | |
| Training cost | FOC | | |
| OPE | 1,000.00 | | |
| Hardware costs with Backup | 41,000.00 | | |
| Comprehensive warranty for 3 years for the software solution, including charges for version upgrades | 45,000.00 | | |
| Comprehensive Warranty for Hardware for 3 years, including Database and O/S | 12,380.00 | | |
| **TOTAL 01 (OTI)** | **234,380.00** | | |
| TOTAL Maintenance cost of the application for Years 4 & 5 | **45,000.00** | 22,500.00 | 22,500.00 |
| TOTAL Maintenance cost of the Hardware solution for Years 4 & 5 | **15,110.00** | 7,230.00 | 7,880.00 |
| **TOTAL 02** | **294,490.00** | | |

**Training cost is included in the base price.*
**Although vendors had not charged for Out of Pocket Expenses (OPE), USD 1000 is added as a mitigating factor.*
**With the consent of the vendor The Hardware costs including Database server license cost and the related maintenance costs were doubled to accommodate redundancy as per backup requirements*

Approximate One Time Investment (OTI) ≈ 234,400

*Software Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 45,000

*Hardware Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 15,200

Approximate TOTAL =294,600
**Budgeted COST** ≈ 300,000

*Hotel Management System*

| Areas to be considered (All Costs are in USD) | TCO | Year 4 | Year 5 |
|---|---|---|---|
| Base product pricing:<br>o For 65 users | 20,000.00 | | |
| Implementation cost<br>o Data Conversion (including data cleansing)<br>o Customization / Interfacing | 2,000.00 | | |
| Training cost | FOC | | |
| OPE | 1,000.00 | | |
| Hardware costs with Backup | 17,940.00 | | |
| Comprehensive warranty for 3 years for the software solution, including charges for version upgrades | 12,500.00 | | |
| Comprehensive Warranty for Hardware for 3 years, including Database and O/S | 1,074.00 | | |
| **TOTAL 01 (OTI)** | **54,514.00** | | |
| TOTAL Maintenance cost of the application for Years 4 & 5 | **9,175.00** | 4,470.00 | 4,705.00 |
| TOTAL Maintenance cost of the Hardware solution for Years 4 & 5 | **1,646.00** | 776.00 | 870.00 |
| **TOTAL 02** | **65,335.00** | | |

**All vendors have offered to Train the users of the application Free of Charge (FOC).*
**None of the vendors have provided costs for Hardware Maintenance. Hence it was calculated at 10% of the hardware cost.*

Approximate One Time Investment (OTI) ≈ 54,600

*Software Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 9,200

*Hardware Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 1,700

Approximate TOTAL =65,500
**Budgeted COST** ≈ 70,000

*Financial Information & Management System*

| Areas to be considered (All Costs are in USD) | TCO | Year 4 | Year 5 |
|---|---|---|---|
| Base Product pricing:<br>o For 50 users<br>o Users (Concurrent) | 11,210.00<br>70,500.00 | | |
| Implementation cost<br>o Data Conversion (including data cleansing)<br>o Customization / Interfacing | 7,000.00 | | |
| Training cost | FOC | | |
| OPE | 1,000.00 | | |
| Hardware costs with Backup | 25,450.00 | | |
| Comprehensive warranty for 3 years for the software solution, including charges for version upgrades | 13,093.00 | | |
| Comprehensive Warranty for Hardware for 3 years, including Database and O/S | FOC | | |
| **TOTAL 01 (OTI)** | **128,253.00** | | |
| TOTAL Maintenance cost of the application for Years 4 & 5 | **13,290.00** | 17,000.00 | 17,000.00 |
| TOTAL Maintenance cost of the Hardware solution for Years 4 & 5 | **2,068.00** | 940.00 | 1128.00 |
| **TOTAL 02** | **143,611.00** | | |

**All vendors have offered to Train the users of the application Free of Charge (FOC).*
**Although vendors had not charged for Out of Pocket Expenses (OPE), USD 1000 is added as a mitigating factor.*
**With the consent of the vendor The Hardware costs including Database server license cost and the related maintenance costs were doubled to accommodate redundancy as per backup requirements*

Approximate One Time Investment (OTI) ≈ 128,300

*Software Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 13,300

*Hardware Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 2,100

Approximate TOTAL =143,700
**Budgeted COST** ≈ 145,000

*Document Management System*

| Areas to be considered (All Costs are in USD) | TCO | Year 4 | Year 5 |
|---|---|---|---|
| Base Product pricing:<br>o For 450 users (Full Access)<br>o For 250 users (Read Only) | 30,330.00<br>225,000.00<br>12,000.00 | | |
| Implementation cost<br>o Data Conversion (including data cleansing)<br>o Customization / Interfacing | 192,000.00 | | |
| Training cost | 10,000.00 | | |
| OPE | 21,200.00 | | |
| Hardware costs with Backup | 400,000.00 | | |
| Comprehensive warranty for 3 years for the software solution, including charges for version upgrades | 12,352.00 | | |
| Comprehensive Warranty for Hardware for 3 years, including Database and O/S | 48,596.00 | | |
| **TOTAL 01 (OTI)** | **951,478.00** | | |
| TOTAL Maintenance cost of the application for Years 4 & 5 | **12,352.00** | 6,176.00 | 6,176.00 |
| TOTAL Maintenance cost of the Hardware solution for Years 4 & 5 | **78,016.00** | 37,133.00 | 40,883.00 |
| **TOTAL 02** | **1,041.846.00** | | |

**The Document Management Solution includes Document Management & Work flows, Records Management, Email Archiving. The relevant license fees and the implementation charges are added accordingly in the above cost breakdown.*

Approximate One Time Investment (OTI) ≈ 951,500

*Software Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 12,400

*Hardware Solution*
Approximate Annual Maintenance Cost for Year 4 & 5 ≈ 78,100

Approximate TOTAL =1,042,000
**Budgeted COST** ≈ 1,050,000

*Physical Access Control System*

| Areas to be considered (All Costs are in USD) | TCO | Year 4 | Year 5 |
|---|---|---|---|
| Base Product pricing: | 180.00 | | |
| Implementation Cost | 800.00 | | |
| Training Cost (if applicable) | FOC | | |
| OPE (Out of Pocket Expenses, including per-diem) | 1,000.00 | | |
| Hardware Costs (Data Center)<br>o Readers (16)<br>o Controllers (One)<br>o Proximity Cards (1000)<br>o Batteries, etc for 16 locations | 12,542.00 | | |
| Cabling Costs for all locations | 28.00 | | |
| Servicing of existing equipment | 1,800.00 | | |
| Comprehensive Warranty for Hardware for 3 years | 4,065.50 | | |
| **TOTAL 01 (OTI)** | **20,415.50** | | |
| TOTAL Maintenance cost of the solution for Years 4 & 5 | **4,065.00** | 2,032.50 | 2,032.50 |
| **TOTAL 02** | **24,480.50** | | |

**All vendors have offered to Train the users of the application Free of Charge (FOC).*
**Although vendors had not charged for Out of Pocket Expenses (OPE), USD 1000 is added as a mitigating factor.*

| | |
|---|---|
| Approximate One Time Investment (OTI) | ≈ 20,500 |
| Approximate Annual Maintenance Cost for Year 4 & 5 | ≈ 4,100 |
| TOTAL | =24,600 |
| **Budgeted COST** | **≈ 25,000** |

*Archiving*

| Areas to be considered (All Costs are in USD) | TCO | Year 4 | Year 5 |
|---|---|---|---|
| Cost of Service at USD 0.07 per image | 2,27,500.00 | | |
| OPE (Out of Pocket Expenses, including per-diem) | 1,000.00 | | |
| Cost for re-binding at USD 7.00 per book with 150 pages (Number of Books including all types of documents – 1671) | 11,697.00 | | |
| Hardware cost including backup | 170,000.00 | | |
| Comprehensive Warranty for Hardware for 3 years | 17,000.00 | | |
| **TOTAL 01 (OTI)** | **427,197.00** | | |
| TOTAL Maintenance cost of the solution for Years 4 & 5 | 36,600.00 | 8,500.00 | 28,100.00 |
| **TOTAL 02** | **463,797.00** | | |

**Although vendors had not charged for Out of Pocket Expenses (OPE), USD 1000 is added as a mitigating factor.*
**Only the cost for 10% of 16708 (books) were taken as unique that will needed to be rebound (16708 * 0.10 ≈ 1671).*
**Where multiple copies of volumes are in existence, it was assumed that one copy can be unbound for scanning purposes. Hence a rebinding charge will not apply.*

| | |
|---|---|
| Approximate One Time Investment (OTI) | ≈ 427,200.00 |
| Approximate Annual Maintenance Cost for Year 4 & 5 | ≈ 36,600.00 |
| TOTAL | =463,800.00 |
| **Budgeted COST** | **≈ 465,000.00** |

## *Communication Infrastructure*

When the proposals were submitted in response to RFP of Sri Lanka Parliament to implement a communication infrastructure the Sri Lanka Parliament a considerable deviation from cost suggested by Ernst & Young was observed. Such deviation could be due to the following reasons.

The projects Data Warehouse and the Communication Infrastructure were considered as independent projects and the suggested costs for each project should be added together. Further, the initial budget has been formulated on the basis of a 1 year comprehensive warranty as opposed to the 3 year comprehensive warranty required in the Request for Proposal (RFP).

The following reasons would also have influenced the cost deviation

1. Changes in Technology as oppose to the technology that was available 2 years before.

2. The initial budget took in to consideration the use of the existing 'Fibre Optic Back-bone'.

3. The initial budget did not have switch level redundancy and the cost implications of such redundancies.

4. The initial budget did not consider the need for voice over IP as a requirement for communication.

5. The initial budget did not consider network points in the 'well of parliament'

## RECOMMENDATIONS

Taking into consideration the escalating costs we wish to make the following recommendations to the Sri Lanka Parliament.

Procuring of Named User Licenses should be done based on profile of the user, the exact functional needs of the Secretariat and the workload handled by each user. For example, all members of the Secretariat may not need to have access to the 'Document Management System, where preparation of documents could be done off line forwarded to a person who holds a user license to be uploaded to the system.

Based on the role of the Sri Lanka Parliament, its stake holders, and its communication and publication needs, we have identified three broad categories of users who would access and interact with their work/information flows and information resources.

They are;

1. The Members of Parliament (also as Members of Parliamentary Committees)
2. The Members of the Secretariat
3. The Members of the General Public

The staff of the secretariat who is actively involved in the business process would need full user licenses.

Members of Parliament who may not need to edit the documents within the work-flow but need to track its progress could request for a hybrid user license (full user – read only user) so that the types of documents they may have access to could be defined. Since the members of committees are Members of Parliament, but would have confidential documents that would be shared within the membership, each committee could have a user license with a defined user profile to ensure desired confidentiality.

The needs of the members of the General Public could be addressed with a read-only enterprise-wide license if they are allowed to access publications created within the workflow management system.

## CONCLUSION

Please note that this exercise was carried out as an independent exercise and at no time was Ernst & Young biased towards a vendor party or it's price quotations. The costs were derived only from the information provided by vendors and business partners and the highest quoted figure or the most comprehensive quotation (that includes hardware costs and all maintenance costs) was considered for budgetary purposes.

By submitting this document, Ernst & Young is in no way claiming that the solutions envisaged as per the requirements of the Sri Lanka Parliament will cost exactly as stated in the price quotations submitted by the respective vendors and business partners.

It should also be noted that these prices were not obtained in an competitive environment and is also hypothetical to the extent that the vendor was not provided with the detailed functional requirements or the nature of the business of the client. Hence, the estimated costs provided by the vendor parties and the business partners may not be complete and accurate. However, we have made attempts to complete the information in order to obtain a more comprehensive budget.

Therefore the budgets provided in this document should be considered as estimated figures. Please, also note that the budgets estimated are valid only for a brief period as the technologies changes rapidly and the costs may fluctuate.

## Departments/Types of users affected under each system implementation and Scope

*Messaging & Scheduling*

Multiple message delivery technologies, highest possible security, server side filtering, and spam and virus control.

The system shall provide calendaring and scheduling which will permit a user to:

- Maintain and access individual, group, or resource schedules at any time.
- Indicate availability and free time on specific dates
- Leave remarks, notices, reminders, etc. for specific dates

The bidder shall identify and state exactly, the baseline condition the hardware and software must be in for installation of the software (e.g., operating system version installed, which libraries loaded, firmware level, etc).

Proposed number of users – 700
(Includes Secretariat & Members)

*HR Management System*

At a minimum the HR solution must address the following functions:

- Personal files data base
- Automatic recording of attendance
- Calculation of attendance related allowances and deductions
- Facility management

The HRMS will be required to encompass the following departments:

1. Administration Department – 50 users
2. Finance Department – 50 users

Number of employees of the organization - 1000

| *Hotel Management System (Catering)* |
|---|

At a minimum the solution must address the following functions:

- Maintain the re-order levels
- Costing of food served
- Generate bills
- Charge the credit sales to a specific account
- Staff roster and training management
- Suppliers history maintenance
- Control room service requests

Further, the system should provide facilities for Members to request for committee room reservation through electronic means, such as a web interface. In addition, system should provide facilities for Members to check availability of the committee rooms.
The Hotel Management System will encompass the activities of the following departments:

1. Catering and Housekeeping Department – 50 users
2. Department overseeing the Physical Access Control System – 15 users

Maximum number of accounts may reach 1000 (employees of the organization – 1000)

v. Services (i.e. Repairs and Replacements)

1. Finance and Supplies Department (Processing of Financial transactions)
2. Member Services Department (Processing of Financial transactions)
3. Coordinating Engineers department (Stock / Inventory Management)
4. Catering and Housekeeping Department (Stock / Inventory Management)
5. Information Technology Department (Stock / Inventory Management)
6. Administration Department (Stock / Inventory Management)

Minimum number of users – 50

***Physical Access Management System***

Affects all staff members/Visitors/Members

The physical access control system shall cater mainly to the requirements of the Department responsible for management of the physical access control system. The following features are required in the Physical Access Management System:

- Facilities to record request for passes, and authorisation given.
- Communicate the pass information to the gates and entrances to the building (using the networking facilities available at the organization)
- Provide suitable system (such as proximity card system) together with suitable hardware devices (such as card readers) to control the entrances to the organization's premises.
- Provide the necessary servers, power supply units and other hardware for the access management application
- Provide the necessary Physical access control devices which required for proposed solution
- The bidder could use available physical access control equipments of the organization such as security gates, and other devices in the proposed solution, but the bidder should provide 5 years warranty for any such equipments used for the new proposed solution.

- Record pass information (information regarding person, equipments, vehicles, areas allowed etc.) and entry information (date & time) in a centralised database, which should be compatible with the Organization's centralized data architecture.
- The bidder is expected to deliver sufficient level of training to the users of the system
- The Bidder should provide sufficient Documentation including User Manuals, Technical Manuals, Relevant Diagrams, Conceptual Model of the Proposal, etc.

In addition, any interaction with the outside parties and other departments of the Organization as required for the Physical Access Management must be addressed by the system. These interactions include: Facilities for Members, staff and visitors to request for passes and view status of request over the internet / LAN.

*Document Management System*

The proposed system should encompass all the departments of the organization and should address the requirements listed below on an enhance-able application server that would host the down stream projects identified in the IT Strategy for the Organization when such projects are implemented.

- Workflow Management
- Document Management
- Record Management
- Secure infrastructure
- Web Content Management
- Archiving

The proposed system is expected to host a centralized data store for all data within the Organization on the successful implementation of the projects identified in the IT Strategy. Therefore the hardware architecture proposed should have adequate scalability for future expansions.

This Data Store will provide for:

- Centralized management of Data
- Centralized Storage of Data
- Centralized Control for Security for Data

*Two types of users*

Type 01 – Users that will have full access and will be actively involved with the business process flow of the organization
(Maximum number of users – 450)

Type 02 – Users that will benefit from the system, who will require to read documents and track the progress of the documents within the process flow.
(Maximum number of users – 250)

## The Interface Matrix for systems to be implemented

| | Messaging & Scheduling System | HR Mgmt System | Hotel Mgmt System | Financial Information & Mgmt. System | Physical Access Mgmt System | Document Mgmt System | Web Site and Intranet | Payroll System |
|---|---|---|---|---|---|---|---|---|
| Messaging & Scheduling System | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| HR Management System | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Hotel Management System | ✓ | ✓ | | ✓ | ✓ | | ✓ | |
| Financial Information & Mgmnt System | ✓ | ✓ | ✓ | | | | | ✓ |
| Physical Access Management System | ✓ | ✓ | ✓ | ✓ | | ✓ | | |
| Document Management System | ✓ | ✓ | | | ✓ | | | |

## Common Specification for all software systems excluding Physical Access Control System

| Areas to be considered | One time Investment | Year 1 | Year 2 | Year 3 | Year 4 |
|---|---|---|---|---|---|
| Base Product pricing:<br>License Type & Cost per user<br>o User License (Named or Concurrent)<br>o Full User / Read Only Access<br>o Server License | | | | | |
| Implementation Cost<br>o Data Conversion (including data cleansing)<br>o Customization<br>o Interfacing Cost (with existing applications) | | | | | |
| Training Cost | | | | | |
| OPE (Out of Pocket Expenses, including per-diem) | | | | | |
| Maintenance Cost (Support) | | | | | |
| Charges for version upgrades | | | | | |
| Third party software Costs (if applicable) | | | | | |
| Hardware Costs<br>o Database Costs<br>o O/S Costs | | | | | |
| Other Costs | | | | | |

## Common Specification for Physical Access Control System

| Areas to be considered | One time Investment | Year 1 | Year 2 | Year 3 | Year 4 |
|---|---|---|---|---|---|
| Base Product pricing: | | | | | |
| Implementation Cost<br>o Customization/Parameterization<br>o Interfacing Cost (with existing applications) | | | | | |
| Training Cost (if applicable) | | | | | |
| OPE (Out of Pocket Expenses, including per-diem) | | | | | |
| Maintenance Cost (Support) | | | | | |
| Charges for version upgrades | | | | | |
| Third party software Costs (if applicable) | | | | | |
| Hardware Costs (Data Center)<br>o Readers<br>o Controllers, etc. | | | | | |
| Other Costs | | | | | |

United Nations De· ·ment Programme

Sri Lanka

4 July 2007

Dear Mr. Dasanayaka,

**Draft Interim Audit Report**

Thank you for your letter of June 28th with which you have enclosed a copy of the draft interim report of the "Audit on the progress made on the implementation of IT projects at the Sri Lankan Parliament" and where you have asked UNDP for its comments on the issues raised in the report.

As is made clear in the audit report itself (Section 3 Scope of the work, part e) on page 3), the *"scope of this audit does not cover the process followed by the UNDP in carrying out procurement for parliament"*. As such, UNDP did not feel that it was expected to respond to the Auditor-General's office on this matter at this point. However, based on your request and our commitment to transparency in our Programme activities, we are content to share with you some comments and additional details relating to UNDP's support to Parliament and specifically the Network Infrastructure Project.

Most of the specific questions contained in your letter are dealt with in the attached set of comments. As noted above, the audit has not been tasked with looking into the UNDP procurement process, however in response to your explicit raising of the issue; I can assure you that all UNDP procurement processes adhere to the highest international standards. I can also confirm that UNDP remains prepared to extend all assistance possible to both Parliament and the Auditor-General's office in relation to this audit and that although there have been two meetings with the audit team, UNDP has not received any official written communication from the Auditor-General's office requesting any documents.

Please don't hesitate to contact me if you need any further information.

With best regards

Bengt Messing
Resident Representative a.i.

Dhammika Dassanayaka
Deputy Secretary General
The Parliament
Sri Jayawardenapure
Kotte

cc. Mrs. Priyani Wijesekara, Secretary General, The Parliament, Sri Jayawardenapure, Kotte.

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**Part 1:**
**General observations on the report:**

## 1. BACKGROUND

Under section 1, 'Background', on page 1 & 2, the report mentions that there were 12 IT projects recommended by E&Y.

Comments: Concur, however those 12 projects were proposed in the conceptual level - ICT Strategic Plan for the Parliament of Sri Lanka - prepared by the consultant E&Y. It is to be noted that the number of projects and their sequence was revised by the same consultants (E&Y) prior to commencing the project implementation phase and endorsed by the steering committee [This is mentioned against clarification no. 2 in the response to the questionnaire from the IT Auditors by the Steering Committee dated, April 18, 2007,]. Before commencing the implementation, the number of projects had been reduced to nine and the project sequence was also revised. The revised project order can be seen in every RFP document developed by the same consultant. Having considered this backdrop, the audit report could have considered the revised project sequence as the basis for auditing the progress made on the implementation of IT projects instead of previous conceptual model.

The revised numbers and sequence of implementation of projects in implementation phase is as follows: (Available in all RFPs.)

1. Communication Infrastructure (including remote access)
2. Document Management System
3. Messaging and Scheduling System
4. Information Security Policies
5. Human Resource Management System
6. Financial Information Management System
7. Catering and Reservation System
8. Physical Access Management System
9. Archiving

Note: By the time of RFPs were prepared:

- 'Training' has already commenced
- 'Data warehouse' was merged with 'Document Management System'
- 'Remote Access for members' was included in 'Communication Infrastructure'

## 2. OBJECTIVE: No comment

## 3. SCOPE OF WORK: No comment

## 4. APPROACH & METHODOLOGY: No comment

## 5. FINDINGS & OBSERVATIONS:

### General Observations:

Under section 5, 'Findings & Observation', on page 7, the report raises the concern on the priority of implementation of information system security policy.

Comments: It may be noted that a security policy which is appropriate for the present context has already been in effect in the Parliament. It is also worthwhile to mention that the security policies for information system are more effective in real contexts rather than in isolation.

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Under the same section 5, 'Findings & Observation', on page 7, the report lists the names of the steering committees.

Comments: There are some discrepancies observed regarding the steering committee names and the dates on which they were formed. Following is the correct description.

Vide letter dated May 10, 2005, Secretary General of Parliament constituted an 'Evaluation committee' for the purpose of implementation of the ICT project for Parliament. (Dr. Fredrick Abeyratne – Senior Programme Analyst and Mrs. Chamindry Saparamadu – Deputy Project Coordinator were members from UNDP)

Vide letter dated July 11, 2005, Chairman-Evaluation Committee and Deputy Secretary General of Parliament appointed a 'Technical Evaluation Committee' to scrutinize relevant project documents and to make suitable recommendations to the evaluation committee on technical issues pertaining to the Parliament ICT projects. (Mr. Rajiv Ranjan – ICT for Development Advisor from UNDP was the member)

After the contract was awarded to the selected bidder, there was another steering committee formed vide letter dated August 8, 2006 by the Deputy Secretary General, to ensure speedy and smooth implementation of the network infrastructure project. (Mr. Rajiv Ranjan – ICT for Development Advisor from UNDP is the member)

The report mentions two other committees.

'Network Infrastructure Project (implementation) Technical Committee', - is a 'day-to-day' committee constituted for speedy implementation of the project at ground level. (This is consisting of the representative from the selected vendor and the parliament staff. UNDP is not represented in this committee)

'e-Parliament Projects (E&Y Study and Web Project) Steering Committee', - was constituted when the E&Y was doing the system study at the Parliament.

*The audit report may wish to number the committees while referring to the related decisions taken.*

---

On page 8, regarding changing representations in the Steering Committees, Dr. Fredrick Abeyratne was replaced by Mr. Rajiv Ranjan from UNDP and similar changes happened in cases of representations from ICTA and the Parliament also. Therefore the original names were not matching with the people who responded to the IT auditor's questionnaire. It is most likely that in cases where a representative of one organization was replaced by a colleague from the same institution, it was not felt necessary to reconstitute the committee.

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On page 8, regarding steering committee's concurrence to the changes made by the consultant (E&Y) in the original strategy developed and accepted from E&Y, is correct. [This is mentioned against clarification no. 2 in the response to the questionnaire from the IT Auditors by the Steering Committee dated, April 18, 2007]

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**Budgets for the projects in the ICT Strategy**

On page 9, the report deals with the 'Budget for the projects in the ICT Strategy'.

Comments: Concur with details in the table.

On page 9, the report mentions about 'manually altered figures'.
Comments: This is a reference to the proposed work-plan/budget sent by the Secretary-General of Parliament to UNDP on February 6th 2006. The total amount requested by Parliament from UNDP in this document was US$4,811,750, including over US$3.5 million for ICT. This amount was far in excess of the funds that UNDP was able to contribute to the project. When it became clear that the project would actually only have a total of US$1,059,000 in 2006, the UNDP programme officer and the project coordinator met and discussed which activities, based on the needs and priorities of Parliament, would be supported with those funds. In order to do this and keep note of their deliberations and calculations, they lightly marked the February 6th document in red pen. All the original figures are still perfectly legible. This was a working draft budget and work-plan and as such it is not unusual for notes or marks to be inserted manually. This document was shown to the auditors by UNDP following

questions put to UNDP by the auditors regarding the level of support for ICT sought by Parliament in 2006

**Specific observations of the different projects which have commenced / completed:**

**Communication Infrastructure:**

There have been some concerns raised in this section

Comments: The responses to the concerns expressed are detailed in the following section (Part B) point by point.

**ICT awareness:**
No comment

**Web site:**
No comment

**6. RECOMMENDATIONS:**
No comment

**7. ASSUMPTIONS TO THE PROJECT**
No comment

**8. LIMITATIONS**
No comment

## Appendix A
## Detailed comments (point-by-point) on appendix – A

On page 9, the report raises concerns on the fibre optic infrastructure, redundancy provide in the network and the Voice over Internet Protocol (VoIP) and refers to appendix – A. Responses to the points mentioned in appendix – A is organized according to the original document and as given below

### 1. Optical Fibre Communication Infrastructure

#### 1.1 Observations:

a. Concur
b. Concur
c. Concur
d. Concur
e. Concur
f. Concur
g. Concur
h. Concur; however, as per the RFP, the vendors were required to submit cable layout diagrams on the completion of the project. Cable layout diagrams are the project deliverables and as the next item (i.) says 'at the time of inspection, the installation of the new ICT infrastructure was still in progresses'. To seek these prior to the completion of the project is not proper. However, the layout diagrams are now available with the Parliament as the cables have been laid.
i. Concur
j. Though it is correct that no paths had been identified in advance by the users or the consultants to lay cable through the possible duct roots, it is difficult to accomplish laying cable without prior planning. Prior planning was done by the vendor with the help of parliament staff. It was not done, 'there and then' while the installation is progressing. As of date, the cabling has been completed and the vendor has submitted the cable layout diagrams.
k. Concur

#### 1.2 Comments:

##### 1.2.1 Very High Redundancy in Network Cabling Infrastructure

It is to be noted that the RFP document developed by the consultant E&Y, has explicitly mentioned redundancy at all critical points [Please refer to section 5.15 and 5.17 of the RFP]. The project has fully endorsed cable level redundancy.

The claim made for the network being safer in the Parliament because of high security area and other such factors, is questionable as civil, electrical and other such development work inside the Parliament may accidentally damage the cable – as happened once in the current installation process also.

In responding to the questions on the high level of redundancy in network cabling infrastructure, a look at the response to the question of 'do you consider the operations of the parliament mission critical' is useful. This question was asked in the questionnaire from the IT auditors [Clarification no. 20][Attached]. The steering committee has provided its response in the following terms.

"The activities of a Parliament in a democratic country which includes the legislative, representative and oversight functions cannot be under estimated at any cost. With the implementation of the ICT strategy for Parliament it is expected to bring it up to a level which is comparable to that of any other modern parliaments. Many of the paper based procedures will be converted to electronic transactions which will save money and time for the Parliament and for the Members. Information dissemination will be quicker and effective. Members would be able to communicate and attend to their parliamentary obligations from their respective electorates or even if they are abroad. The parliamentary committees will be able to obtain necessary information and keep the Members informed of the proceedings very early. Most of the processes of the Parliamentary Secretariat will be re-engineered and captured through the IT processes. All necessary information required for the higher management will be available online. The Hansard (the official record of Parliamentary proceedings) will be published within 24 hours after each sitting, meeting a long felt requirement of Parliament. Duplication of information will be avoided and all necessary information will be available in data bases. Parliament security will be enhanced with all critical information including the particulars of visitors and staff being available on the system. These are few of the challenges that the IT strategy will address. In this context considering the dependency that this environment is going to create it is superfluous to emphasise the degree of mission criticality that it will create."

Further, in responding to the question, "do you consider that the zero tolerable down time is absolutely necessary for the communication infrastructure of parliament?" [Clarification no. 21][Attached], The Steering Committee submits,

"The zero tolerable down time is absolutely necessary for the smooth functioning and prestige of the apex democratic institution of this country. Furthermore, network redundancy is required as the success of the rest of the ICT projects is contingent upon availability of the infrastructure."

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Last paragraph on page 15, says, "It is also very unprofessional that redundant paths had not been planned up to the time of awarding the tender"

Comments: It may be noted that, the practice adopted for inviting proposals provided the room for vendors to come up with creative solutions that encouraged innovation and competition among participating bidders. All five short listed bidders made actual site visits before submitting their respective proposals. In all these interactions, the 'requirements' were specified to the vendors and not the 'solutions'. Standards of required redundancy were explained to the vendors. Therefore the RFP provides basic guideline of the project rather confining vendors to one particular design or framework. Accordingly, design responsibility was passed on to the vendors and the selection was based on design superiority and solution feasibility.

### 1.2.2 Power Utility

Comments: There is a standby power generator in the Parliament. In case of main power supply failure, it takes care of the electricity needs of the parliament. However, it is appropriate to emphasize that the UPSs have been provided not only to the server room but to all switches spread across the parliament.

Also, it may be noted that this is not in the scope of the RFP.

### 1.2.3 Network Dimensioning

Comments to the 2nd paragraph: The backbone capacity was not calculated. It was not required. Vendors have gone through the ICT strategy before submitting their proposals. Vendors were aware of the requirements and the proposed applications planned to run on this network infrastructure. Accordingly, vendors have followed industry standards and proposed suitable solutions.

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The RFP provides basic guideline for the project rather confining vendors to one particular design or framework. Accordingly, design responsibility was passed on to the vendors and the selection was based on design superiority and solution feasibility.

### 1.2.4 Large Variation of Estimates

Comments on the 1st paragraph: The consultants (E&Y) have developed an ICT Strategy which was a conceptual document and estimates made based on that were not exact. When the same consultants prepared the set of specifications, the requirements were articulated in much detail. The said documents were further discussed at length by the consultants and the Parliament and steps were taken to improve, refine and fine tune the areas which were academic and conceptual to fit in to the practical needs of the Parliament. This process took place continuously and at times the participation of E&Y was also obtained.

Failure to estimate the true market value of the proposed solution has made the estimation deviate from the real value. With the specifications (not the 'modification') in place, the value of the solution came up to its real worth.

UNDP Comments on the 4 reasons for the price increase on page 17.

i. No comment.
ii. No comment.
iii. This comment assumes that the 'reputation' of a company can prevent it erring in its estimations.
iv. Bidders have quoted against the requirements and specification (RFP).

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In the third paragraph (centre of page) on page 17, it is asserted that the additional donor funds could have been used to implement three other projects. It could be made clear that this is a hypothetical scenario and that estimated can demonstrably deviate from real market value. It may also be noted that the cost estimations have been revised for all other projects also.

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i. It is to be noted that the RFP document developed by the consultant E&Y, has explicitly mentioned redundancy at all critical points [Please refer to section 5.15 and 5.17 of the RFP]. The project has fully endorsed cable level redundancy.
ii. Concur
iii. It is to be noted that the RFP document developed by the consultant E&Y, has explicitly mentioned redundancy at all critical points [Please refer to section 5.15 and 5.17 of the RFP]. The project has fully endorsed edge switch/path redundancy.
iv. Concur; however this has been the requirement and the consultant (E&Y) have recommended the solution based on this.
v. Concur

Not just 'certain' level of mission criticality, but high level of criticality has been envisaged in the project; accordingly consultants have recommended the solutions.

### 1.2.5 Cable Run to Jayanthipura Entrance

Regarding the connection to the entrance, the industry standard procedures have been adopted. The fibre is a reliable and maintenance free option. The specifications adopted are industry norms. Also, the cost is not directly proportional to the bandwidth capacity that the fibre offers but is mainly a result of the casing. It is recommended to have armed fiber for outdoor cabling.

## 2. VoIP Platform:

### 2.1 Observations:

a. Concur
b. Concur
c. Concur
d. Concur

### 2.2 Comments:

#### 2.2.1 VoIP Technology and Interoperability Issues

Voice over IP facility is not an emerging but a mature technology. There is a cost saving associated with it due to it's utilization of a single network to carry voice and data, especially where users have existing underutilized network capacity that can carry VoIP at no additional cost.

The implementation at the Parliament is not a 'trial' but a pilot project, which can be expanded further based on the adoption and usage.

VoIP was one of the requirements spelt out in the RFP and to facilitate the implementation of this functionality, specifications were also included in the RFP at the time of lateral review stage by the Consultants and were approved by the Steering Committee.

It is hypothetical to say that the present VoIP solution may not be compatible with the future solutions.

#### 2.2.2 Lack of Migration Plan for an IP-PABX

It is a good suggestion; however it is a pilot implementation and migration to IP-PABX was not included in the RFP.