INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASSEMBLY - 35TH SESSION

Subject No. 44 **Report on the Use of the Information and Communication Technology (ICT) Fund**

REPORT ON THE USE OF THE INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FUND

SUMMARY
Under Resolution A33-24, the Assembly resolved to create an ICT Fund and requested the Council to monitor progress achieved through the use of the Fund and to report at the next ordinary session of the Assembly on the use of the Fund. This report contains information on the three priority projects financed by the ICT Fund. The Assembly is invited to note this report, to encourage States to register and gain access to the ICAO-NET; and to consider ways to further finance the ICT Fund.
Action by the Council is in paragraph 8.

1.   **INTRODUCTION**

1.1   In Resolution A33-24, the Assembly recognized that the programme budget estimates did not include significant investments in information and communication technology and resolved to create an ICT Fund. The Assembly instructed the Secretary General to accord high priority to three Information and Communication Technology (ICT) projects, i.e. the modernization of financial systems, the enhancement of ICAO websites and the consolidation of file servers. The Assembly requested the Council to monitor progress achieved through the use of the ICT Fund and report at the next ordinary session of the Assembly on the use of the Fund.

(9 pages)

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2.   ESTABLISHMENT OF THE FUND

2.1   Pursuant to Resolution A33-24, an ICT Fund was established and an amount of $3.6 million was transferred to the Fund from the following sources[1]:

(i)	Interest of the General Fund in excess of the amounts included in the budget for the year 2001[2]:	$ 736 439
(ii)	Balance of unobligated appropriations as at 31 December 2001:	2 834 058
(iii)	Interest accrued on the ICT Fund during 2001(2 months):	1 427
	Total available as at 31 December 2001:	$3 571 924

2.2   The total amount of $3 571 924 available in the Fund as at 31 December 2001 was allotted for the following purposes:

(i)	Modernization of the financial systems:	$2 500 000
(ii)	Enhancement of ICAO websites:	510 000
(iii)	Consolidation of file servers:	485 000
(iv)	Contingencies:	76 924
	Total:	$3 571 924

2.3   The total expenditures incurred to 31 December 2003 are shown in paragraph 6.1.

3.   MODERNIZATION OF FINANCIAL SYSTEMS

3.1   **Scope of project**.   Under Resolution A33-24, the Assembly noted that the current accounting system is over 30 years old and that improvements are necessary to meet the information requirements of Contracting States relating to the Regular and Technical Cooperation Programmes. The Council and the External Auditor have noted that there are a number of weaknesses in the current systems which need to be addressed.   The modernization of the financial systems would eliminate many problematic areas and at the same time bring many benefits to the Organization, namely increased efficiency, improved quality and availability of information, enhanced internal control and reduced risks.

3.2   In A33-WP/126, it was proposed that the revision or replacement of key financial systems be undertaken gradually considering the limited resources of the Organization.   The funds allotted to-date are insufficient to implement a fully integrated financial management system or an Enterprise Resource Planning (ERP) system. Therefore, the focus of the initial development will be on the acquisition and implementation of a core, or basic off-the-shelf, financial system with flexibility and capability to incorporate other key systems or modules as resources become available.

3.3   As a minimum, the core financial system is expected to include the following functions: general accounting and general ledger; financial statement preparation; budget and project control, accounts payable, accounts receivable, and essential functions for cash management. The core financial system will cover more than 200 separate funds and special accounts, including the General Fund of the

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[1] The Assembly also requested States to make voluntary contributions in cash or in kind for ICT to ICAO. No voluntary contributions were received for this purpose as at 31 December 2003.

[2] Resolution A33-24 also requested that the excess of interest for the year 2002 be included in the Fund; however, interest realized in 2002 did not exceed the interest budgeted for 2002.

Regular Programme, the Administrative and Operational Services Cost (AOSC) Fund, Trust Funds and other funds and accounts. The core financial system will need to maintain separate sets of accounts for each Fund or account, provide the information on a real-time basis and support operations in a variety of currencies.

3.4   **First phase of the project**. In this phase of the project, which commenced in November 2002, the following key undertakings were initiated and completed:

> (i) a comprehensive needs assessment through consultations with all Bureaux and Offices of the Secretariat was conducted;
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> (ii) based on the results of the needs assessment at Headquarters and in the Regional Offices, the major functional requirements for the new financial system were identified and documented. This assessment included accounting, budget control, technical cooperation projects, payroll, procurement, travel and human resources management;
>
> (iii) a request for proposal to potential suppliers of financial systems, including the provision of integration services, was prepared; and
>
> (iv) a request for sealed tenders to selected suppliers was issued.

3.5   In preparing the systems and functional requirements as comprehensively as possible, the Secretariat has made efforts to obtain as much useful and relevant information from other United Nations organizations who have undertaken similar projects. This has helped the Secretariat to reduce some of the effort and expenses that may otherwise have been required. In addition to in-house efforts, some limited consultancy services were also used to review technical requirements.

3.6   As additional work was required to prepare a more comprehensive specification of functional requirements and also because of other priorities, there was a delay to initiate the tender process. A request for tenders was issued in accordance with the Procurement Code in March 2004, from selected vendors, who were short-listed on the basis of expertise and experience in the implementation of integrated information systems. Tenders from the suppliers were received in May 2004 and are currently being evaluated.

3.7   **Second phase of the project**. The evaluation of the project is a critical phase as it will allow the Secretariat to gauge directly the systems and functionalities that can be acquired and implemented with the approved resources based on submissions received from suppliers. The evaluation phase will also enable the Secretariat to chart the detailed implementation plan for the next phase, taking into account both current and future requirements so that sufficient flexibility is built in from the beginning to facilitate the development of an overall integrated system in stages as resources become available. This phase will result in the selection and acquisition of software, hardware and integration services for those core modules that can be afforded within the approved resources.

3.8   Based on preliminary assessments and estimates, a fully integrated system including the core financial system, payroll, procurement, travel and human resources management would require at least $7 million, whereas the core financial system alone is estimated to cost about $4 million. These costs include licence fees, integration, hardware and maintenance for three years and internal resources. It should be noted that while the new systems are being developed and installed, the legacy systems have to be relied upon and maintained.

3.9   Every opportunity to minimizing costs will be explored carefully and used. However, it should be noted that the balance of resources available would not be sufficient to acquire and implement a fully-fledged core financial system, around which other systems could be built in the future. It may be possible to acquire the basic elements of a core financial system with existing resources, but with such an approach the long-term costs of having a viable core financial system will be even much higher.

3.10   **Estimated time frame**. It is estimated that the evaluation and selection of the solution and the supplier can be completed by November 2004. As part of the acquisition process, a detailed implementation plan could be developed with implementation commencing in January 2005. The objective is to complete the implementation of the selected modules in phases and have the basic financial system completely operational during 2005, which is the first year of the next triennium.

3.11   During the implementation phase, the Finance Branch will need to continue to perform its current activities, and current legacy systems will continue to support the Branch's operation. It is envisaged that a number of the experienced staff will have to focus full attention to the development and implementation of the new system. Since some critical systems may not be replaced, it may also be necessary to make essential improvements to ensure their continued security and integrity and their compatibility with new systems. This may be particularly the case for the Payroll System, which is rather archaic.

4.   **ENHANCEMENT OF ICAO WEBSITES**

4.1   **Scope**. The scope of this project included three main activities:

- the maintenance and expansion of ICAO websites
- introduction of additional languages to ICAO websites
- increase the number of Contracting States accessing ICAO-NET

The following paragraphs describe the action taken from January 2002 to May 2004 for each of the main activities.

4.2   **Maintenance and expansion of ICAO websites**. Priority was given to maintaining and keeping up-to-date the existing content on the public website (www.icao.int), as well as expanding the ICAO-NET (www.icao.int/icaonet), a special site restricted to ICAO Contracting States and some international organizations.

4.2.1   During this period, over 24 000 new pages were placed on ICAO websites and over 12 000 pages were updated. The number of visitors to ICAO's websites reached 100 000, opening around one million web pages a month. A large variety of pages was placed on the web covering various ICAO topics, Bureaux' activities, publications, meetings, and other relevant materials. Over 3 000 web pages were updated or added to websites of ICAO Regional Offices, mainly covering regional meetings.

4.2.2   Over 240 000 pages of various historical documents and materials were scanned, saving them from further deterioration, and making them available through the web. This includes a complete collection of all ICAO News Releases published since 1947 and the 10 first Sessions of ICAO Assemblies. The last 10 years of ICAO Journals are also made available online.

4.2.3   The State Letter Electronic Distribution (SLED) System continued to be maintained. Over 1 800 new files were added enabling direct access by ICAO Contracting States to all State letters

immediately after they are published. This application is also an electronic repository of all the State letters and enclosures eliminating the need by the Contracting States to save or file them locally.

4.2.4   The website for the Universal Safety Oversight Audit Programme was supplemented with a full-text database of Audit Summary Reports and other relevant documents and forms. In all, 400 reports in various languages were made available to all Contracting States.

4.3   A new application bringing hyper-linked versions of working papers for the Council, the ANC and the Standing Committees (in English, French, Spanish, Russian, Arabic and Chinese) was developed. Currently, 13 500 files of the following documentation going back 6-7 years is available through the ICAO-NET Council Documentation link:

> - Council: Working Papers, Decisions, Minutes
> - ANC: Working Papers, Minutes
> - ATC, JSC, UIC, TCC: Working Papers, Summary of Decisions
> - FIC: Working Papers

4.4   **Introduction of additional languages to ICAO websites**. The introduction of additional languages to ICAO websites was done at two different levels: inclusion of additional web pages in various languages to the existing ICAO English site, and the creation of an independent French website. The ICT Fund was used to translate about 1000 new web pages into the French language which were placed on the ICAO websites. Documentation in various languages from 110 ICAO meetings was offered. ICAO News Releases in French cover the period since 2000. Assembly documentation, Vacancy Announcements, Catalogue of ICAO Publications and ICAO Journals were maintained in all languages available. Files covering a complete history of all ICAO Annexes in the French language were also prepared and placed on the ICAO-NET, under Electronic publications.

4.5   Creation of an independent French website is in its final phase. A great number of documents have been translated, coded and prepared for the web. It can be launched as soon as additional funds for its continuation and maintenance are available.

4.6   **Access of additional Contracting States to the ICAO-NET**. Significant progress was made in registering additional Contracting States to access the ICAO-NET. Out of 188 Contracting States, 168 States have already registered and gained access to the ICAO-NET (ref. Appendix). Extra efforts were made through direct contacts to encourage the remaining States to register, however, some States were not able to do so because of lack of access to the Internet facilities. In addition, 64 international organizations gained access to the ICAO-NET.

4.7   **Further course of action**. The development and maintenance of all aspects of the ICAO websites is a continuous process. The resources provided through the ICT Fund has helped to make significant progress in the development and maintenance of the websites. The limited resources provided in the Regular Budget for the next triennium, due to budget constraints, would be inadequate to maintain the same pace of development and maintenance. Therefore, further progress in this area depends greatly on the availability of additional resources.

5.   **CONSOLIDATION OF FILE SERVERS**

5.1   **Scope**.   The purpose of the project is to replace the existing file servers with a contemporary storage device along with back-up facilities.   In undertaking the replacement of the servers/storage devices, consideration was also given to ensure that the conversion of the Vines network to a full Microsoft network would offer homogeneity and operational functionality in a new technological environment.   These changes also required the replacement of the firewall and an upgrade of the messaging system.   The new firewall also offers networking facilities to the Regional Offices (as an alternate to the SITA Internet Connect Services) and staff working at home.

5.2   **Project implementation**.   The project included the phasing-out of the Banyan Vines operating system and the acquisition of a new storage device to replace the six departmental servers running on Vines (for the following Bureaus/Offices: ANB, ATB, LPB, OSG, TCB, and ADB).   Final installation and testing was completed in October 2002. The actual migration of files (from the Banyan file servers to the new file server) was completed in January 2003 and the Vines operating system was phased out.

5.3   The new servers with built in fault tolerance offer high-availability of files and documents to staff members.   Moreover, they offer additional storage capacity for the end-users who previously could not store their documents on the file servers; spare disk space on the new file servers should be able to meet the demand for additional request of capacity in the next years without any new acquisition.   Finally, users benefited from a reduction in the response time for retrieving or storing files.

5.4   In anticipation to the migration to a full Microsoft network, the firewall protecting the information assets from the Internet was replaced in June 2002.   The new firewall provides faster, more secure and reliable access to and from the Internet.

5.5   A remote access appliance (UROAM) was tested and installed to provide easy access to Headquarters' systems through a Virtual Private Network.   This device targets the Regional Offices and Headquarters staff on mission or at home, allowing staff outside Headquarters to gain access to file services and all intranet applications running on the computers at Headquarters, i.e. Staff Web, Terminology, ATB statistical database, etc.

5.6   The upgraded mail system will provide a more reliable and functional e-mail environment to all users at Headquarters and the Regional Offices.   The new servers will be fault-tolerant, faster and will provide larger storage capacity.   New functionality will also be available, such as instant messaging and improved spam filtering.

5.7   **Estimated time frame**.   The project will be completed in the third quarter of 2004 with the upgrade of the current electronic mail server.

6.   **RESOURCES DEVOTED TO THE PROJECTS**

6.1   The following Table summarizes funds obligated for each project since the establishment of the Fund.

	Modernization of Financial Systems	Enhancement of Websites	Consolidation of File Servers
Obligations (in US dollars):			
Salaries and Common Staff Costs:			
Temporary Staff	154 755	278 736	–
Contractual Services	20 411	99 190	–
Training	–	188	500
	175 166	378 114	500
General Operating Expenses:			
Software Acquisition	–	–	91 281
Maintenance - Software	–	–	55 387
Maintenance/Rental - Hardware	–	–	59 574
Computing Supplies	–	–	2 770
Travel	2 264	1 219	–
Other - Miscellaneous Supplies/Services	–	–	18 726
	2 264	1 219	227 738
Equipment:			
Hardware Acquisition	–	–	206 604
Total Obligations from 1 January 2002 to 31 December 2003 (2 years)	177 430	379 333	434 842
Interest earned	69 793	7 784	1 725
Unobligated balance	2 392 363	138 451	51 883

          At 31 December 2003, the unobligated balance in the ICT Fund amounted to $2 661 861 including an amount of $79 164 set aside for contingencies.

7.   **FINANCIAL IMPACT OF THE PROPOSED ACTION**

7.1   The main purpose of this paper is to report on action taken with respect to the use of the funds appropriate for the ICT Fund.

7.2   Nevertheless, in terms of the future, as mentioned in paragraph 3.8, the balance in the ICT Fund for the implementation of a modern financial system would only be sufficient to implement some key elements of a core financial system, whereas it is estimated that an additional amount of $2 million would be required for a fully fledged core financial system and at least another $3 million for other key systems.

7.3   In order to maintain the same pace of development and maintenance of all aspects of the ICAO websites, an additional funding of $500 000 would be required to the ICT Fund. No funding has been provided in the draft Programme Budget of the Organization for the 2005-2007 triennium.

8.   **ACTION BY THE ASSEMBLY**

8.1   The Assembly is invited to:

a) note this report;

b) encourage those Contracting States which have not yet registered and gained access to the ICAO-NET to do so; and

c) consider ways to further finance the ICT Fund, namely for the modernization of financial systems and the enhancement and maintenance of ICAO websites.

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APPENDIX

LIST OF ICAO CONTRACTING STATES REGISTERED FOR ACCESS TO ICAO-NET

Afghanistan*	Dominican Republic	Madagascar	Senegal
Albania	Ecuador	Malawi	Serbia and Montenegro
Algeria	Egypt	Malaysia	Seychelles
Andorra	El Salvador	Maldives	Singapore
Angola	Eritrea	Mali	Slovakia
Antigua and Barbuda	Estonia	Malta	Slovenia
Argentina	Ethiopia	Marshall Islands	Somalia
Armenia	Fiji	Mauritius	South Africa
Australia	Finland	Mexico	Spain
Austria	France	Micronesia (Federated	Sri Lanka
Azerbaijan	Gambia	States of)	Sudan
Bahamas	Georgia	Monaco	Suriname
Bahrain	Germany	Mongolia	Swaziland
Bangladesh	Ghana	Morocco	Sweden
Barbados	Greece	Mozambique	Switzerland
Belarus	Guatemala	Myanmar	Syrian Arab Republic
Belgium	Guinea	Namibia	Tajikistan
Belize	Guyana	Nepal	Thailand
Benin	Haiti	Netherlands	The Former Yugoslav
Bhutan	Hungary	New Zealand	Republic of Macedonia
Bolivia	Iceland	Nicaragua	Togo
Bosnia and Herzegovina	India	Nigeria	Tonga
Botswana	Indonesia	Niger	Trinidad and Tobago
Brazil	Iran (Islamic Republic of)	Norway	Tunisia
Brunei Darussalam	Iraq**	Oman	Turkey
Bulgaria	Ireland	Pakistan	Turkmenistan
Burundi	Israel	Palau	Uganda
Cambodia	Italy	Panama	Ukraine
Cameroon	Jamaica	Paraguay	United Arab Emirates
Canada	Japan	Peru	United Kingdom
Cape Verde	Jordan	Philippines	United Republic of
Chile	Kazakhstan	Poland	Tanzania
China	Kenya	Portugal	United States
Colombia	Kuwait	Qatar	Uruguay
Congo	Kyrgyzstan	Republic of Korea	Uzbekistan
Cook Islands	Lao People's Democratic	Republic of Moldova	Vanuatu
Costa Rica	Republic	Romania	Venezuela
Croatia	Latvia	Russian Federation	Viet Nam
Cuba	Lebanon	Saint Vincent and the	Yemen
Cyprus	Lesotho	Grenadines	Zambia
Czech Republic	Liberia	Samoa	Zimbabwe
Côte d'Ivoire	Libyan Arab Jamahiriya	San Marino	
Denmark	Lithuania	Sao Tome and Principe	
Djibouti	Luxembourg	Saudi Arabia	

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* Delegation registered
** Inactive

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