

ANNEX 1 MAJOR INFORMATION TECHNOLOGY ACTIVITIES (TIMELINES, MILESTONES AND LONG-TERM IMPLICATIONS)

382. Main Program 15 includes proposals for five major information technology (IT) activities in the biennium. (see subprograms 15.3 through 15.7). This Annex provides additional information on those activities, including timelines, major milestones and long-term budgetary implications.

WIPONET

383. In March 1998, the WIPO General Assembly approved the establishment of a Global Information Network for intellectual property Offices (IPOs), which gave the foundation for the creation of WIPONET. The objective of WIPONet is to provide the necessary network infrastructure and services for improved information exchange among the global intellectual property community. To enable the International Bureau to implement this sub-program, the Program and Budget Committee approved an amount of Sfr28,220,000 to be spent from the Special Reserve Fund.

384. The quotations submitted by bidders against the WIPONet Request for Proposal (RFP), issued in February 1999, revealed that the installation and recurring costs of the system were substantially higher than anticipated and exceeded the approved budget. Accordingly, the International Bureau revised the scope of this initiative and issued an amendment to the RFP. The revised scope comprised certain modifications to the technical specifications, a revised deployment strategy; and a phased implementation plan to reduce the implementation and operational costs. These changes were approved by the Standing Committee on Information Technologies (SCIT) at its fourth Plenary session in December 1999.

385. The rescoping of the technical specifications of WIPONet eliminated the Virtual Private Network (VPN) component and reduced bandwidth and time allocation of IPO connectivity. The WIPONET Project was conceptually split in to two components. The first, the establishment of a central facility, called the WIPONet Center, which will provide a wide range of electronic information services to all intellectual property Offices via the Internet. The second, to provide basic computer hardware, software, Internet connectivity and training, referred to as the WIPONET Kit, to those IPOs where the necessary infrastructure to access the WIPONet Center does not exist.

386. The WIPONET Center is being established at the headquarters of WIPO in Geneva. All intellectual property Offices (IPOs), already connected to the Internet or to be connected as part of the WIPONET Project will have access to the online information exchange services provided by the WIPONET Center.

387. In providing the WIPONET Kit to IPOs, the revised implementation plan takes into account whether or not an Intellectual Property Office has Internet connectivity. Out of a total of 320 IPOs 166 already have Internet connectivity. The remaining 154 IPOs will be provided Internet connectivity through WIPONET.

388. In accordance with the phased implementation plan the establishment of WIPONET will primarily be achieved in two phases. In Phase I the WIPONET Center will be established and equipment deployment, training, and Internet connectivity (the WIPONet Kit) will be provided to approximately 66 IPOs. The remaining 88 IPOs will be provided the WIPONET Kit during Phase II.

389. Concerning budgetary appropriations for the project, the 2002-2003 program and budget proposes Sfr29,300,000 (both staff and non-staff). The allocation initially approved for 2000-2001 for the WIPONET sub-program 12.1 under the Special Reserve Fund was Sfr28,220,000 for non-staff costs. This amount was increased by a reappropriated amount for non-staff costs also from the Special Reserve Fund of Sfr15,326,000. Staff costs in 2000-2001 were included in the regular budget allocation for Information Technology. WIPONET expenditures in 1998-1999 reached Sfr9,622,000 and were financed by the Special Reserve Fund. The estimated WIPONET operational expenditure for 2004-2005 is placed under the regular budget according to the new consolidated presentation, amounting to Sfr24,600,000.

390. In the 2004-2005 biennium, WIPONET is expected to be fully operational. A breakdown of the financial resources needed to complete the project, as well as the projected financial implications of running the network in the 2004-2005 biennium is given below:

WIPONET Costs
(in thousands of Swiss francs)

Project	2000-2001 Revised Budget			2002-2003 Proposed Budget			2004-2005 Estimate		
	Staff	Non-Staff	Total	Staff	Non-Staff	Total	Staff	Non-Staff	Total
WIPONET	--	43,546	43,546	402	4,766	5,168	--	--	--
WIPONET start-up	--	--	--	2,340	21,792	24,132	2,340	22,260	24,600
Total	--	43,546	43,546	2,742	26,558	29,300	2,340	22,260	24,600

391. Once WIPONET becomes operational as a system, it will provide online information exchange services such as secure electronic mail, secure exchange of intellectual property data, hosting of IPOs' web sites, secure conferencing services and directory services (e.g., directory of WIPONet Registered Users). In addition, intellectual property information will be accessible through it. This IP information will include the WIPO site, IPOs sites and distance learning programs from the World Wide Academy.

IMPACT

392. IMPACT is required for two reasons. One, it will allow the OPCT to use modern document management methods in its efforts to cope with the ever-increasing volume of applications. Two, it will allow PCT to keep up with changes in its environment which are making it possible to exchange documents in electronic form and have thus created a demand from the OPCT's users and counterparts to be able to use this technology in the dealings with PCT. IMPACT is expected to streamline and automate significantly PCT operations, in particular current tasks related to data entry and publication of applications, leading to a reduction in staffing needs by 20 percent for the same volume of applications. Once work practices under the automated system will be better defined it will be possible to improve on the estimated impact of IMPACT.

393. Recognizing the need to tackle the growing complexity of manual procedures, the General Assemblies in 1998 authorized the expenditure of 40 million Swiss francs to establish a computerized document management and workflow system for the PCT to be financed from the Special Reserve Fund. This system will be designed to meet the business requirements of the Office of the PCT in the processing of PCT applications, whether in paper or electronic format. Under this budget authority, Sfr1,471,000 were spent during 1998-1999. An amount of Sfr21,882,000 is anticipated to be spent during 2000-2001 from the Special Reserve Fund, leaving Sfr16,647,000 to be spent in 2002-2003. Because of the consolidated presentation, this amount for 2002-2003 will be part of the regular budget proposal for the IMPACT subprogram 15.4. Additional Sfr22,200,000 are requested in 2002-2003 for the deployment of the new system, including the costs of training and reorganization, as well as its operations during the lifetime of the project. Planned expenditures for 2004-2005 in the amount of Sfr13,000,000 are also placed under the regular budget.

394. A breakdown of the financial resources needed to complete the development of IMPACT, as distinct from those funds needed to support the start-up components of the system during the 2002-2003 and subsequent biennia is given below. These costs include sufficient funds for the staff required to support and further develop the IMPACT system. This approach will assist WIPO in substantially reducing the long-term operational costs, whilst offering an opportunity to retain the knowledge and skills acquired during IMPACT development by WIPO.

IMPACT Costs (in thousands of Swiss francs)

<i>Project</i>	<i>2000-2001 Revised Budget</i>			<i>2002-2003 Proposed Budget</i>			<i>2004-2005 Estimate</i>		
	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>
IMPACT	1,042	20,840	21,882	3,496	15,605	19,101	--	--	--
IMPACT start-up	--	--	--	2,132	17,614	19,746	3,000	10,000	13,000
Total	1,042	20,840	21,882	5,628	33,219	38,847	3,000	10,000	13,000

395. After an international RFP in 1999, the International Bureau selected a consortium to develop such a system under the overall direction of a dedicated team established for this purpose at WIPO. Work on IMPACT began in January 2000 and the first deliverable being the communication on request subsystem the first component of which will be deployed August 2001 and which will be fully operational by the end of the first quarter of 2002. Phase II and III, i.e. the International Bureau system and the Receiving Office/ IB, are expected to start being deployed in December 2002, and become fully operational during 2003 with limited post-implementation activity planned for the second half of 2003. The operational system will be taken over and maintained by the IT Services Division.

396. The architecture of the system includes a main computer and workstations for each PCT employee. The main tasks to be conducted would include the examination, translation and publication of the application. At a later stage the system should be linked to the financial system to control payments and externally will be linked to IPOs through WIPONET for data exchange, including communications on request and other data on applications.

PCT Electronic-filing

397. The objectives of this activity are to adopt a standard for the electronic-filing and processing of international applications, and to develop a system for the electronic-filing of international applications based on the present software PCT-EASY (Electronic Application SYstem). PCT-EASY is a software designed to facilitate the preparation of international applications in electronic form. There has already been significant work towards making electronic-filing possible with the implementation of the PCT-EASY software. In its current capacity to assist in the preparation of international applications on paper with an accompanying floppy diskette, the software has proved highly successful, with over 27 per cent of PCT filings during 2000 being prepared using PCT-EASY (a total of 24,882 international applications). This suggests that further development into a fully electronic-filing solution will be an acceptable and attractive option for PCT users.

398. In addition to PCT-EASY, several Offices have created pilot and production systems designed to exchange and process electronic patent application documents and data. The International Bureau is also developing such a system under IMPACT. As such, the standard for the electronic-filing and processing of international applications is an important step to assure future interoperability and data conformance among Offices, applicants and the International Bureau.

399. The PCT electronic-filing activities are divided into Step 1 (PCT E-filing Pilot) and Step 2 (PCT E-filing Implementation). Step 1 (PCT E-filing Pilot) will progress through three build cycles—prototype, beta and pilot—for each of the following four components:

- ◆ Extended PCT-EASY software capable of preparing and submitting international applications electronically. This and all subsequent components will conform with the

standard for the electronic-filing and processing of international applications, including the principles of electronic records management contained in that standard;

- ◆ The International Bureau as receiving Office (RO/IB) server software that can receive international applications filed electronically by applicants;
- ◆ A Public Key Infrastructure (PKI)¹ for the International Bureau that can administer the assignment and validation of low-level digital certificates for applicants who use the PCT electronic-filing system;
- ◆ A secure pilot database that allows for simple storage, retrieval and printing of the electronic version of international applications received by the RO/IB during the pilot.

400. In addition, Step 1 will include the finalization of a system requirements document and a scope definition document, and the preparation of a Document Type Definition (DTD) in eXtensible Mark-up Language (XML) for the international application, which will form the basis of an inventory of tags.

401. Step 2 (PCT E-filing Implementation) will similarly progress through three build cycles—prototype, beta and pilot—for the following two components, based on the components previously developed in Step 1:

- ◆ The RO/IB server software will be further developed to make it available, as RO server software, to other receiving Offices for deployment in their IT environments;
- ◆ PCT-EASY for enterprises (the PCT-EASY software will be developed into a product which can be deployed and integrated into an enterprise's IT environment).

402. Step 2 will also include the implementation of additional functionality into the pilot versions of the components produced in Step 1, such as PKI's extension to limited interoperability of digital certificates, depending on the results of further consultations with Contracting States and PCT users. DTDs in XML for other documents than those covered by Step 1 will be developed, depending on the requirements of IMPACT, of Contracting States and of PCT users.

403. In addition to the two steps summarized above, the PCT electronic-filing service will include the implementation of a Help desk infrastructure at the International Bureau, as well as the integration of customized services for the PCT electronic-filing system into the International Bureau's Help desk services. Since complex software for both applicants and Offices will be delivered, and there is a strong requirement for reliably and consistently upholding applicants' rights, Help desk services to PCT applicants and Offices will be critical to the success of the system. There is currently no Help desk infrastructure at the International Bureau, thus it is envisaged that this requirement will initiate the implementation of such an infrastructure with a view to it being expandable to other areas in the International Bureau, such as IMPACT.

¹ PKI provides a suite of services integral to information systems for processing sensitive information. Through digital signatures and encryption, PKI provides authentication, data integrity, non-repudiation, and confidentiality.

404. The enterprise version of PCT-EASY will be offered to applicants, providing them with the possibility of integrating PCT-EASY software into their own IT environment. Likewise, software for the reception of electronically-filed international applications will be made available to receiving Offices, thus enabling even small Offices to participate in electronic-filing. This initiative is in accordance with the agreement made during the Diplomatic Conference for the Adoption of the Patent Law Treaty, May 11 to June 2, 2000, for:

“...the General Assembly of the World Intellectual Property Organization (WIPO) and the Contracting Parties to provide the developing and least developed countries and countries in transition with additional technical assistance to meet their obligations under this Treaty, even before the entry into force of the Treaty” (see document PT/DC/47, Agreed statements, paragraph 4).

405. Since one of the major benefits of electronic-filing is a reduction in costs for the offices involved, applicants may also benefit from reductions in fees.

406. The development of the system is expected to take three to four years. On the basis of the analysis made by the International Bureau in consultation with other Offices which already implemented similar systems, the resources required for the activity are presented below.

PCT E-filing Project Costs
(in thousands of Swiss francs)

<i>Project</i>	<i>2000-2001 Revised Budget</i>			<i>2002-2003 Proposed Budget</i>			<i>2004-2005 Estimate</i>		
	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>
PCT E-Filing	--	--	--	1,760	16,540	18,300	--	1,000	1,000

407. The budget estimate is in line with similar electronic-filing initiatives in other IPOs which are known to the International Bureau. When funding for IMPACT was initiated in March 1998, the estimates for the electronic-filing component of that initiative were based on a study carried out in 1997 by the consultants Deloitte & Touche Consulting/Praxis plc (see document A/32/5). In that study, the estimate for the cost of the electronic-filing component was 2,845,809 Swiss francs. That figure has already been allocated under the IMPACT Project into activities associated with the PCT electronic-filing, including the development of the Quality Procedures to be used the integration of the IMPACT receiving Office database with the electronic-filing server software, dependency management, resource sharing (secretarial staff, Documentum experts, XML experts), quality assurance of the conformance to the standard for electronic-filing and processing of international applications, shared security policy formulation and various business analysis and change management activities for RO/IB (Receiving Office/International Bureau) under electronic-filing.

408. Following consultations with PCT Contracting States and other interested parties over the course of the year 2000, it has become apparent that the solutions required for electronic-filing are far more complex than those proposed in the Deloitte & Touche Consulting/Praxis study. For example, there is now a requirement for substantial investment in the area of security including PKI developments and services. In addition, the reduction in services provided by WIPONET (see document SCIT/WG/2/2, paragraph 13) has led to an increase in the costs involved in developing the server software to be made available to PCT receiving Offices.

409. It is intended to build a core team made up of a mixture of International Bureau staff members and internal and external consultants. This team will be responsible for developing the standard for the electronic-filing and processing of international applications, and for activities including project management, specification of system requirements, contract management, verification and validation of third party deliverables (such as software) and the deployment of the various software products. The enhancement of PCT-EASY and other software developments such as the construction of server software will be outsourced to third party developers. Provision has also been made to support and further develop PCT E-filing in the longer term.

410. Towards the conclusion of the deployment, the deliverables coming out of the PCT electronic-filing system will be in operation and stable. Costs associated with operational electronic-filing activities (including items such as hardware leases and upgrades, software and support licenses and operations staff) are included in the table above, for the 2004-2005 biennium.

CLAIMS

411. CLAIMS (Classification Automated Information System) was first presented to Member States in chapter 12 of WIPO's IT Strategic Implementation Plan (document SCIT/4/2), which was adopted by the SCIT Plenary at its fourth session in December 1999. Since that date, some adjustments have been made to the scope to take account of the progress of international patent classification (IPC) reform and technical and software developments.

412. Carrying out the proposal is necessary for elaboration of automated tools supporting IPC reform. This work is scheduled for completion in the 2002-2003 biennium. The IPC reform program, approved by the Committee of Experts of the IPC Union, includes two tasks to be covered by CLAIMS:

- ◆ Task No. 12 Study automated classification and indexing tools and conduct pilot projects on their use, in particular for the reclassification of backlog files; and
- ◆ Task No. 16 Study ways and means for the establishment of the French version of the advanced level of the IPC.

413. The CLAIMS Project has a number of benefits, particularly for small IPOs and users of patent information made available on the Internet. Assisted by the most recent IT classification tools, those users will receive improved and cost-efficient access to the patent documentation. The reformed IPC will facilitate the use and search of the minimum documentation, which is defined under PCT as the essential patent documents to search for the patent examination of PCT applications.

414. The proposal will be undertaken by taking steps as follows:

(a) Automated Classification

- ◆ Setting-up the Master Classification Database in cooperation with the Trilateral Offices (EPO, JPO and USPTO).
- ◆ Providing links from the web-based version of IPC generated from the management system within the International Bureau to the new database.
- ◆ Linking the core and advanced levels of the reformed IPC to the database.
- ◆ Developing tools to use patent family information in the database.
- ◆ Testing of tools for automatic categorization, classification and re-classification of patent documents.

(b) Automated Translation

- ◆ Off-line local tests with selected machine translation software.
- ◆ Overview of translation-related problems of IPC.
- ◆ Computer-aided checking and analysis of the evolution of the IPC vocabulary.
- ◆ Build-up of a special IPC vocabulary.
- ◆ Implementation of a server-based translation support system.
- ◆ Automatic translation of entries in cases of re-use of terminology from the IPC vocabulary.
- ◆ Automatic translation of entries and submission for human checking.

415. On the basis of the analysis made by the International Bureau, in consultation with other Offices which already implemented similar systems, the resources required for this activity are presented below. These include the necessary staffing to support and further develop CLAIMS in the longer term.

CLAIMS Costs
(in thousands of Swiss francs)

Project	2000-2001 Revised Budget			2002-2003 Proposed Budget			2004-2005 Estimate		
	Staff	Non-Staff	Total	Staff	Non-Staff	Total	Staff	Non-Staff	Total
CLAIMS	--	--	--	734	2,466	3,200	--	--	--

AIMS

416. At its fifth Plenary session in July 2000, the SCIT approved in principle a proposal contained in document SCIT/5/6 for the need for an up-to-date IT infrastructure to support the changes underway in WIPO to increase transparency and accountability. The document highlighted the need for a rapid replacement of the existing finance system, FINAUT, with a new central financial accounting and budgetary control system able to support the way the Organization wished to manage and present its financial and management data, and to accommodate the tremendous growth in financial transactions which has taken place during the sixteen years that FINAUT has existed.

417. With regard to the area of Finance, the new system will support the accounting structures of the different legal entities for which the Finance Division has responsibility: WIPO, UPOV, Funds-in-Trust (FIT), UNDP, and the Closed Pension Fund. For each of these areas the system functionality will cover: expenditure (staff and non-staff, including automatic comparison of payables with commitments and subsequent liquidation of commitments), income, profit and loss, trial balances (being roughly the combination of expenditure, income, and profit and loss), balance sheet (assets and liabilities accounting), bank and supplier and other automatic reconciliations, Treasury, audit requirements and the production of financial reports and statistics.

418. In addition to the Finance Division, other users require access to financial management reporting. Two main functions performed by the Office of the Controller need IT support. These are formulation of the staff/manpower and non-staff expenditure budget, and the monitoring of the staff/manpower and non-staff expenditure budget. At this stage, only the monitoring function is included in the scope of the AIMS Project. Individual Program Managers require an on-line facility for the monitoring of committed and actual expenditure (staff and non-staff) against the budget and the ability to drill down to individual transactions, as appropriate; the availability of drill down facility to individual transactions for staff costs will depend on the software solution selected.

419. Finally, the existing interfaces with the current FINAUT system will need to be maintained. Automated interfaces which currently exist to the FINAUT system will be upgraded for the new system, for example, the PCT System, the Madrid and The Hague systems (MAPS/DMAPS), and payroll. Existing manual interfaces will continue for Procurement and Contracts Services (PCS), the Cooperation for Development Project

Planning and Monitoring system, the WIPO Arbitration and Mediation Center, Travel and Human Resources.

420. A number of benefits would be realized with the delivery of AIMS. In terms of improvements to current business functions, the processes within the Finance and Budget areas will be streamlined to improve work productivity. Data input will be easier, faster and non-duplicative and data retrieval will benefit from modern data querying tools and the integration of the system with existing WIPO Office software. Requirements from internal and external auditors for transparency in, and security of, financial operations will be addressed, and there will be a huge improvement in the quality and quantity of financial management information available to Program Managers throughout the Organization, thus making it easier for them to monitor their budgets for the projects and activities under their responsibility.

421. Once a reliable finance and budget core system is established, with robust interfaces to existing systems, future system modules may be developed on the same software platform for other administrative services, and for the Cooperation for Development Sector. The high degree of system integration which will result will further improve the Organization's management information and control. The new system will also provide the necessary flexibility to accommodate the changes in Organizational budgetary and accountancy procedures which are impeded by the existing system. Finally, annual maintenance costs for the new system may be expected to diminish, when compared to those for FINAUT.

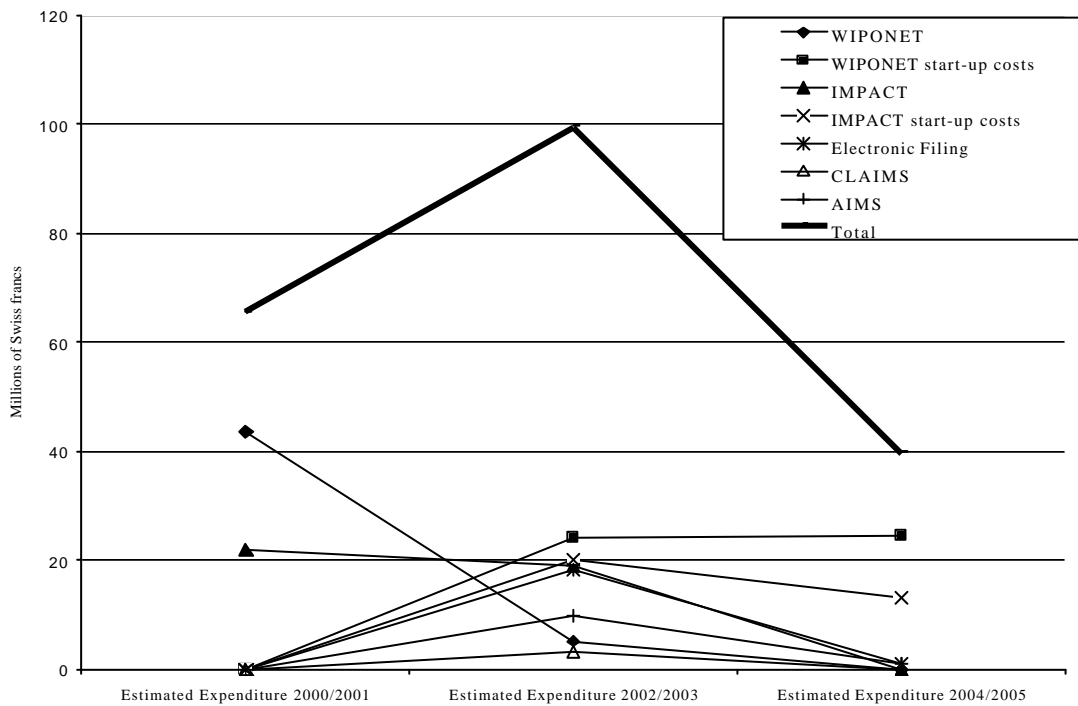
AIMS Costs
(in thousands of Swiss francs)

<i>Project</i>	<i>2000-2001 Revised Budget</i>			<i>2002-2003 Proposed Budget</i>			<i>2004-2005 Estimate</i>		
	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>	<i>Staff</i>	<i>Non-Staff</i>	<i>Total</i>
AIMS	--	--	--	362	9,538	9,900	--	1,000	1,000

Summary of Information Technology Activities 2000-2005
(in thousands of Swiss francs)

Project	2000-2001 Revised Budget			2002-2003 Proposed Budget			2004-2005 Estimate		
	Staff	Non-Staff	Total	Staff	Non-Staff	Total	Staff	Non-Staff	Total
1. WIPOnet	--	43,546	43,546	402	4,766	5,168	--	--	--
WIPOnet start-up	--	--	--	2,340	21,792	24,132	2,340	22,260	24,600
2. IMPACT	1,042	20,840	21,882	3,496	15,605	19,101	--	--	--
IMPACT start-up	--	--	--	2,132	17,614	19,746	3,000	10,000	13,000
3. PCT E-Filing	--	--	--	1,760	16,540	18,300	--	1,000	1,000
4. CLAIMS	--	--	--	734	2,466	3,200	--	--	--
5. AIMS	--	--	--	362	9,538	9,900	--	1,000	1,000
Total	1,042	64,386	65,428	11,226	88,321	99,547	5,340	34,260	39,600

IT projects six-year expenditure



[Annex 2 follows]