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Special Union for the International Registration of Marks (Madrid Union)

Assembly

Forty-Third (25th Extraordinary) Session Geneva, September 20 to 29, 2010

INFORMATION TECHNOLOGY MODERNIZATION PROGRAM (MADRID AND HAGUE INTERNATIONAL REGISTRATION SYSTEMS):
PROGRESS REPORT

prepared by the International Bureau

INTRODUCTION

- A comprehensive document describing the approach to and the resourcing of, the IT
 Modernization Program was presented to the forty-second session of the Assembly of the
 Madrid Union in September 2009. The document MM/A/42/2 is reproduced for
 convenience in the Annex to this document, and shall serve as the baseline from which
 subsequent IT Modernization Program progress is subsequently reported to the
 Assembly of the Madrid Union.
- 2. The purpose of the present document is to outline such progress on the IT Modernization Program since the last Madrid Union Assembly. This document shall also update member States on any change to the overall approach to the completion of the Program, as well as notify changes to the Program schedule.

- 3. It is recalled that the IT Modernization Program was originally to be conducted in three phases, with the third Phase being optional and only to be initiated where there was a clear business requirement to do so. Phase I consisted of sub-projects that would produce immediate positive results, together with other sub-projects that would lay the technical foundations for subsequent program phases. The second Phase would build upon the achievements of Phase I without necessarily changing the database architecture of the legacy systems, whilst Phase III foresaw the introduction of a new database technical architecture which would necessitate the full redevelopment of the legacy systems.
- 4. It is further recalled that at its forty-second session, the Madrid Union Assembly approved a revised approach to and the resource envelope to achieve, the subsequent program phases. The revised approach combined Phases II and III into a single initiative (hereinafter known as Phase II) and the resource envelop amounted to 8.731 million Swiss francs from the Madrid Union, and 3 million Swiss francs from the Hague Union. It should also be noted that the scheduled completion of the new Phase II was originally planned for the third quarter of 2012 (see paragraph 30 of the Annex), rather than by the end of 2011, as indicated in the report of the forty-second session of the Madrid Union Assembly.

PHASE I – IMPLEMENTATION STATUS

- 5. A key milestone in Phase I was the migration of the legacy systems from a mainframe platform to a more cost effective UNIX platform. This achievement took place in February 2010 and was a key element towards the goal of operational cost reduction, and the establishment of an appropriate technical platform upon which subsequent technology sub-projects could be based.
- 6. The Service Oriented Architecture (SOA) Proof of Concept was successfully concluded in April 2010, after initially encountering a number of delays associated with internal administrative procedures. This exercise confirmed that the technologies that had been chosen for the creation of web services performed according to specification and therefore fully met business requirements. The Proof of Concept exercise involved the creation of a *bona fide* Madrid transaction using the SOA technology, and was successful to the extent that the resultant transaction would be migrated to the production environment as part of the SOA Pilot exercise.
- 7. The SOA Office Pilot was initiated in July 2010 with the establishment of a Terms of Reference document after consultation with three participating Offices (BX, CH and PT). The Office Pilot will ensure that the SOA environment is externally accessible by the technical infrastructure of the participating Offices. The Terms of Reference negotiated with the offices for the Office Pilot are more ambitious than originally intended due to the level of success of, and the confidence gained from, the preceding Proof of Concept exercise. The SOA Office Pilot exercise is scheduled for completion at the end of 2010, and if it is successful, we will have laid a very solid foundation for Phase II of the IT Modernization Program.
- 8. The use of Phase I tools for the purposes of re-engineering some internal processes has also been initiated. The Madrid System Goods and Services Database has been exploited by internal processes for the purposes of pre-translating expressions of goods and services included in international applications. The aim of this exercise is, to the extent possible, to only translate goods and services that have not been translated before. The revised translation procedure is currently used on a daily basis and is

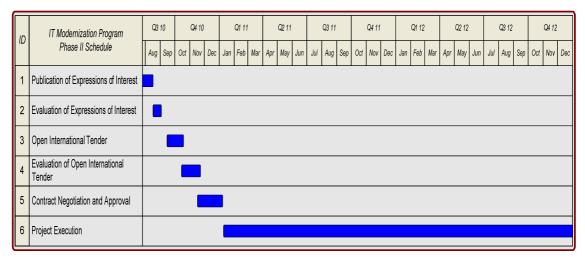
yielding a 50% efficiency gain in translation (i.e. we are translating 50% less), and will become even more efficient when the internal Goods and Services Database is supplemented with the most frequent goods and services terms inscribed in the International Register since 2008.

- 9. A similar approach is intended to be followed in the re-engineering of the goods and services classification processes where the eventual aim is to present to our classification examiners only goods and services terms that have hitherto not been classified by the International Bureau. It is expected that efficiency gains in this area will be equivalent to those being attained in the pre-translation exercise mentioned above, and that a re engineered procedure for classification will be in place prior to the 2010 Madrid Union Assembly.
- 10. Re-engineering of the refusal examination process has also taken place. This exercise has been restricted to the pre-selection of refusals communicated to the International Bureau in electronic form with the aim of conducting a fully automatic examination. It is expected that more than 50% of refusals received electronically can be examined electronically. It is further expected that the re-engineered procedure be in place prior to the Madrid Union Assembly.
- 11. The Madrid Portfolio Manager and the Madrid Electronic Alert services have been made available for testing by external users, and thus far have been proven to be fit for service. Since such services will provide online communication to Madrid system clients and third parties, it is essential that appropriate International Bureau back-office processes assuring persistent client assistance are in place prior to making the services generally available. It is expected that these processes will be assured and that the Madrid Portfolio Manager and the Madrid Electronic Alert will be available, before the end of 2010.
- 12. The sub-projects making up Phase I of the IT Modernization Program have yielded numerous positive results, many of which are available to internal and external users of the International Bureau's systems. The conclusion of the SOA Office Pilot at the end of 2010 will see the end of all activity under Phase I, which was originally planned to be completed by the end of 2008-2009, and all of which has been undertaken within the original Phase I resource envelope of 5.028 million Swiss francs.

PHASE II – IMPLEMENTATION STATUS

- 13. It is recalled that the approved approach to the execution of Phase II is to identify an external strategic partner, following an open international tender, with a view to selecting a suitably qualified and experienced company that would:
 - undertake a technical assessment of the legacy systems and databases, including the SOA technologies, for the purposes of converting them into a new technical architecture;
 - (b) propose an appropriate target technical architecture, also taking into account the results of the SOA Proof of Concept and Office Pilot exercises; and

- (c) prepare a fixed price offer for the conversion of the legacy software and data structures to the proposed new technical architecture, including preparation of the necessary web services using the SOA technologies, the execution of subsequent system testing and the establishment of systems performance benchmarks, together with an appropriate warranty period.
- 14. It should also be recalled that the longer term operational support of the resultant technical environment would be modeled upon the successful approach currently in place for WIPO's ERP systems i.e., contracts would be concluded with an external partner for the ongoing maintenance and development of the solution. Such contracts would be administered by a core internal team of technical experts with strong business knowledge. The internal team would be responsible for the day-to-day operation of the system and minor enhancements.
- 15. The initiation of Phase II was strictly dependent on the conclusions of the SOA Proof of Concept exercise. After a number of delays as mentioned above, the SOA Proof of Concept was concluded in April 2010 and it is now clear that the SOA technologies will necessarily become a fundamental element of the future technical architecture, subject to the successful conclusion of the SOA Office Pilot.
- 16. Given the delays in the SOA sub-project, it is now proposed to initiate Phase II of the Modernization Program in the third quarter of 2010, according to the draft schedule appearing below:



- 17. From the above timelines, it is clear that the focus of Phase II activity for the remainder of 2010 shall be upon the identification of the strategic partner, which is scheduled to commence work in early 2011 and complete the project by the end of 2012.
- 18. It should be noted that for the moment it is impossible to present a more granular project execution time line. Such a granular time line will be the first deliverable, once the project execution task is initiated in January 2011, with the selected company.

- 19. Due to the delayed initiation of Phase II, the resource envelope approved by the forty-second session of the Assembly of the Madrid Union (8.731 million Swiss francs) and the twenty-eighth session of the Hague Assembly (3 million Swiss francs) has not been utilized, therefore the resources remaining available for Phase II of the IT Modernization Program amounts to 11.731 million Swiss francs.
 - 20. The Assembly is invited to
 - (i) take note of the status of implementation of Phase I of the IT Modernization Program;
 - (ii) take note of the revised schedule for the implementation of Phase II of the IT Modernization Program, with an expected completion date of December 2012.

[Annex follows]







MM/A/42/2
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WORLD INTELLECTUAL PROPERTY ORGANIZATION

GENEVA

SPECIAL UNION FOR THE INTERNATIONAL REGISTRATION OF MARKS (MADRID UNION)

ASSEMBLY

Forty-Second (18th Ordinary) Session Geneva, September 22 to October 1, 2009

INFORMATION TECHNOLOGY MODERNIZATION PROGRAM (MADRID AND HAGUE INTERNATIONAL REGISTRATION SYSTEMS): STATUS REPORT AND PROPOSED NEXT STEPS

prepared by the International Bureau

I. INTRODUCTION

- 1. The purpose of the present document is two-fold. It contains a report prepared by the International Bureau on the implementation status of the Information Technology (IT) Modernization Program of the Madrid and Hague IT support systems, as described in documents MM/A/38/4 and H/A/24/2 and summarized in Annex I below. It also lays out how implementation of the Program could be pursued further.
- 2. Initiation of this IT Modernization Program was approved by the Assemblies of the Madrid Union and the Hague Union in September 2007. The Program was scheduled to be implemented in two phases over a period of four years (2008-2011), with the possible addition of a third phase, for a total estimated cost of some 15.3 million Swiss francs for the three phases. A first status report was presented to the Assemblies of the Madrid Union and the Hague Union in September 2008 and is contained in documents MM/A/40/3 and H/A/26/2.

- 3. Implementation of Phase I of the program was approved by the Assemblies against an estimated investment cost of 5.028 million Swiss francs, to be financed as follows¹:
- 2.9 million Swiss francs from programs 18 (1 million) and 27 (1.9 million) under the initial Program and Budget for 2008/09 i.e., programs 6 and 25 under the Revised Program and Budget for that biennium²;
- 2.128 million Swiss francs from the surplus generated by the Madrid Union budget by the end of 2007.
- 4. The Madrid Union Assembly further approved that any amount of the above-mentioned surplus exceeding the amount necessary to reach the target level of reserves (25 per cent of the estimated biennial expenditure in the 2008/09 biennium (PBE factor)) be kept within the Madrid Union Reserve and Working Capital Funds with a view to contributing to the financing of subsequent stages of the IT Modernization Program³.

II. PHASE I – IMPLEMENTATION STATUS

5. Within the first 18 months of implementation of Phase I (from January 2008 to June 2009), considerable progress has been made concerning several sub-projects, notably Sub-Projects A1, A2, A5, A6, A7, B1 and B5.

(a) Enhancing internal productivity

- 6. This goal will be achieved with the completion of Sub-Projects A1 to A7⁴. Sub-Projects A1, A2, A5, A6 and A7 will be completed in the course of 2009.
- 7. Under <u>Sub-Project A1</u> (Translation), an application aiming at automating the translation of limitations, subsequent designations and final decisions concerning trademark registrations by recycling those parts of the lists of goods and services already contained in the original registration, is being tested. It is planned to be in production as from September 2009.
- 8. Under <u>Sub-Project A2</u> (Classification), a web application aimed at assisting users of the Madrid system in composing lists of goods and services containing correctly classified indications is being developed. This e-classification tool will allow users to make searches in a database of acceptable indications of goods and services, validated by the International Bureau. As of May 2009, a prototype of this application is being tested.

Paragraphs 35, 36 and 42 of document MM/A/38/4, and paragraph 14 of document H/A/24/2.

Financed from the Madrid Union budget for an amount of an estimated 2.441 million Swiss francs and from the Hague Union budget for an amount of an estimated 459 thousand Swiss francs.

Document MM/A/38/6, paragraph 41.

For the content of these sub-projects, reference is made to Annex I, Table 1.

- 9. Under <u>Sub-Project A5</u> (Monitoring and Statistics), a web application has been developed to consolidate and rationalize the process of production of statistics relating to the Madrid and Hague systems operations, both for monitoring and general information purposes. The new web application will offer online access to a broader range of statistical data, in addition to the monthly and annual statistics currently made available. This application will also provide for searching facilities by criteria such as year, Office of origin and designated Contracting Party. As of May 31, 2009, this application is being tested. It should be in production as from September 2009.
- 10. Under <u>Sub-Project A6</u> (Office automation), which aims at integrating some additional administrative tasks into the MAPS/DMAPS system, new applications have been completed to replace manual or paper based processes by automated applications, such as the implementation of a new printing procedure using OMR (Optical Mark Recognition) technology, the automation of the certified e-mail notification system and the automated creation of certified copies of Hague recordings.
- 11. Under <u>Sub-Project A7</u> (IMAPS enhancements), the work done has made it possible, since May 2009, to export documents in PDF format via a web service, allowing better efficiency through improved indexing functions and printing functions. Other developments are on-going, such as the creation of a means to store PDF documents in IMAPS and the planned importation of documents, including faxes and emails, directly into the IMAPS system.
 - (b) Expanding electronic business with offices, holders and representatives
- 12. This goal will be achieved with the completion of Sub-Projects B1 to B6 and C5⁵. Some of these sub-projects are dependent on the completion of the implementation of SOA tools (under Sub-Project C3). Nevertheless, wherever possible, their project development has started.
- 13. Some of the functions of Sub-Projects B1, B2, and B3 will be developed and regrouped under a unique web application. Based upon a WIPO User Center secured account access, holders and representatives will be able to manage and execute selected transactions on their Madrid portfolios electronically, via the Internet. The first version of this web application will be available in the last quarter of 2009 and will be updated upon completion of the development of new web services in 2010.
- 14. Under <u>Sub-Project B1</u> (e-Payment; e-Billing), an e-payment facility is now available on the web for regularizing the fees to be paid for any transaction under the Madrid or Hague procedures. Payment can be made via credit card or current account.

For the content of these sub-projects, reference is made to Annex I, Table 2.

15. Under <u>Sub-Project B5</u> (e-Communication: WIPO → Holders/Representatives), an electronic version of the *WIPO Gazette of International Marks* was introduced with effect from February 5, 2009 and replaces the paper version of the Gazette – allowing savings for an amount of 200,000 Swiss francs to be realized in 2009. This adds to earlier achievements under this sub-project, including the introduction of a certified e-mail notification system and several enhancements to the ROMARIN database (such as, the indication, since July 2008, where appropriate, that a refusal period has expired and the International Bureau has not recorded any notification of provisional refusal from the Office of a Contracting Party designated in a given registration; and the inclusion in ROMARIN of PDF copies of grants of protection, provisional refusals and final decisions, as from January 2009). Sub-Project B5 is now completed.

(c) Laying the foundations for modification of the system

- 16. As indicated in the previous status report (document MM/A/40/3), a series of technical sub-projects of Phase I of the IT Modernization Program is aimed at laying the foundations for modification of the system in particular, Sub-Projects C2 and C3 which set the architectural basis for the further development of the IT system and Sub-Project C4 which aims to run the current MAPS/DMAPS application on a new hardware platform and, thus, achieve substantial savings in operational costs of running the MAPS/DMAPS systems.
- 17. Progress with the implementation of Sub-Projects C2, C3 and C4 has been hampered by unforeseen difficulties. A fundamental assumption of Phase I of the IT Modernization Program was the rapid identification and engagement of external consultants with extensive ADABAS/Natural experience, who could liberate the WIPO staff experts from their current operational responsibilities. This was in recognition of the fact that considerable Madrid and Hague system business knowledge had been acquired by the WIPO staff members making up the IT team responsible for the ongoing maintenance and support of MAPS and DMAPS since 1996. For efficiency reasons, the same WIPO staff members had, therefore, better be assigned to lead the specific IT Modernization Program sub-projects and liberated from the maintenance and support responsibilities for the duration of the IT Modernization Program. However, the process of identifying and engaging suitably qualified consultants with ADABAS/Natural experience has proven to be much more difficult than presumed. Indeed, to date, only two such consultants could be identified and engaged.

- (i) Architectural basis implementing a SOA platform⁶
- 18. When the previous status report was issued (document MM/A/40/3), the base architectural level of SOA required for the project had been established and the requirements of the request for proposals ("RFPs") that would result in the selection of the SOA tools to be implemented were being written (under Sub-Project C2). Since then, the RFPs have been issued, and the responses have been evaluated. At the time of the preparation of this document, the successful bid was subject to validation by the Contracts Review Committee. Implementation of <u>Sub-Projects C2 and C3</u> is now scheduled to be completed by December 31, 2009.
 - (ii) Savings in operational costs of running the MAPS/DMAPS systems
- 19. This goal will be achieved with the completion of <u>Sub-Project C4</u> Downsizing to UNIX. Under this sub-project, the MAPS/DMAPS systems will be migrated from the IBM mainframe at the UN International Computer Center ("UNICC") to a UNIX environment. Furthermore, the technical capability will be built for underpinning the e-business strategic evolution as well as the future availability of MAPS/DMAPS 24 hours/day, seven days/week. Due to a longer than expected period of negotiation and validation of the financial figures with the UNICC to which the actual hosting of the UNIX environment will be outsourced –, the implementation of Sub-Project C4 has been delayed. The migration process as such could only start in June 2009. It is scheduled to be completed by October 2009.
- 20. The delay in the launch of Sub-Project C4 has resulted in the rescheduling of some other sub-projects due to unresolvable human resource conflicts (see Annex II). In addition, the delay will result in reduced savings in operational costs in 2009, which will partially affect the financing of Phase I activities (it is recalled that Phase I was to be partially financed from reduced expenditure in operation costs under Program 27 (i.e., Program 25 under the Revised Program and Budget for 2008/09) for an amount of 1.9 million Swiss francs). However, the relevance of going ahead with this sub-project still remains, considering the reduced operational costs for the future. The resulting operational savings will be realized in the 2010-2011 biennium.
- 21. Details on the state of play for all sub-projects are reflected in Annex II.

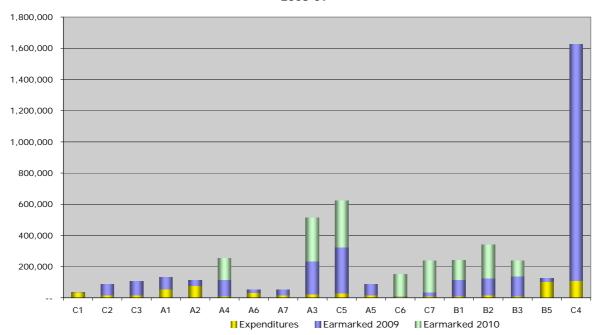
Service-Oriented Architecture: an architecture that uses loosely coupled services to support the requirements of business processes and users.

PHASE I – BUDGET STATUS

22. The following table and graphic reflect the status of commitments and expenditure concerning the implementation of the IT Modernization Program by the end of June 2009:

Sub-Project Description	Initial Budget	Total	Total	Total Futures	Balance Based on Expenditures	Balance Based	Balance Based
		Expenditure	Earmarked 2009	2010	on Expendiures	on Earmarked 2009	on 2009 + 2010
	40.000	36.686	37.889		11,314	10.111	10,111
C1 Project Organization and Change Management	48,000	,	- ,		,-	- ,	
C2 Requests for Proposal & POC	48,000	17,803	87,506		30,197	(39,506)	(39,506)
C3 SOA & Tools	72,000	16,705	105,509		55,295	(33,509)	(33,509)
A1 Translation	124,500	56,566	131,094		67,934	(6,594)	(6,594)
A2 Classification	124,500	78,113	114,294		46,387	10,206	10,206
A4 Trademark Last Status	240,000	11,517	117,530	135,000	228,483	122,470	(12,530)
A6 Office Automation	48,000	31,803	51,506		16,197	(3,506)	(3,506)
A7 IMAPS Enhancements	48,000	16,221	51,424		31,779	(3,424)	(3,424)
A3 Irregularity Letters and Notifications	480,000	23,035	235,060	280,000	456,965	244,940	(35,060)
C5 Pilot with an Office (includes B4 and B6)	599,200	28,755	323,766	300,000	570,445	275,434	(24,566)
A5 Monitoring and Statistics	340,000	16,316	87,984		323,684	252,016	252,016
C6 Complete Architecture + BPM + Middleware	150,000	7,198	10,956	140,000	142,802	139,044	(956)
C7 DBMS & Technical Enhancements	240,000	11,517	37,530	200,000	228,483	202,470	2,470
B1 e-Payment, e-Billing	240,000	11,517	117,530	125,000	228,483	122,470	(2,530)
B2 e-Modification	336,000	16,124	124,542	215,000	319,876	211,458	(3,542)
B3 e-Status	240,000	11,517	137,530	100,000	228,483	102,470	2,470
B5 Electronic Communication : WIPO -> Holders/Reps.	120,000	103,509	126,515		16,491	(6,515)	(6,515)
C4 Downsizing to Unix	1,529,875	109,133	1,625,843		1,420,742	(95,968)	(95,968)
Total	5,028,075	604,039	3,524,005	1,495,000	4,424,036	1,504,070	9,070
Total as a percentage	100.00%	12.01%	70.09%	29.73%	87.99%	29.91%	0.18%

MAPS Modernization Project Budget 2008-09



IV. CALENDAR FOR ACHIEVING THE GOALS ESTABLISHED

Phase I

23. Taking into account the status of implementation of the various sub-projects, it is now estimated that Phase I will be completed by the end of 2010, according to the calendar reflected in the graph below.

(n)	Tools Name	2008 2009 2010			0 10	2011										
ID	Task Name	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
1	C1- Project Organization and Change Management															
2	C2 - Requests for Proposal and POC)						
3	C4 - Downsizing to Unix															
4	C3 - SOA and Tools															
5	A1 - Translation															
6	A2 - Classification															
7	A4 - Trademark Last Status															
8	A6 – Office Automation															
9	A3 – Irregularity letters and Notifications															
10	A7 – IMAPS Enhancements															
11	C5 – Pilot w ith an Office(including B4 and B6)															
12	A5 – Monitoring and Statistics															
13	C6 – Complete arch. + BPM + middlew are															
14	C7 – DBMS and technical Enhancements															
15	B1 – e-Payment, e-Billing															
16	B2 – e-Modification															
17	B3 – e-Status															
18	B5 – Electronic Communication: WIPO with Holders / Representatives															

Phases II and III

- 24. When approving the implementation of Phase I of the IT Modernization Program in September 2007, the Madrid and Hague Union Assemblies noted that the International Bureau would make concrete proposals concerning Phases II and III in due course⁷. Phase II was tentatively scheduled for implementation in the years 2010 and 2011. Implementation of Phase III would depend on further analysis on whether it would eventually prove to be necessary and, if so, when.
- 25. The approach initially followed under the IT Modernization Program was to continue to use the ADABAS/Natural database and programming language, taking into account the high level of satisfaction that the MAPS and DMAPS system functionality enjoyed among users, in general. Instead of focusing on a completely new system, the IT Modernization Program aimed to further maximize return on the original system development investment by: (i) migrating MAPS and DMAPS to a more cost effective operation platform; (ii) focusing on "web" enabling the MAPS and DMAPS application systems i.e., opening the systems transactions that were hitherto available only internally and, therefore, increasing the benefits to Madrid Union Members, and holders and representatives alike; and (iii) addressing the obvious inherent shortcomings that a mainframe system has in the manipulation of text in support of letter production, as well as in classification and translation related activities.
- 26. As indicated at the outset of the IT Modernization Program (document MM/A/38/4, paragraph 29), Phase II would involve partial migration of Natural interactive programs to Java Sub-Project C8 and further development of the electronic publication subsystem Sub-Project C10. Phase III which would result in the overall migration to a new technical environment resulting in the removal of ADABAS/Natural technologies (Sub-Projects C9 and C11) was considered to be optional at that time.
- 27. However, as already mentioned above, the International Bureau has had great difficulties in identifying consultants with extensive ADABAS/Natural skills, and ADABAS and Natural technologies would appear to be experiencing a rapid decline in the market place. It is a fact that it is nearly impossible to locate staff sufficiently skilled in these technologies.
- 28. Such recruitment difficulties have led the International Bureau to reflect upon the wisdom of continuing to have the Madrid and Hague operations dependant upon technologies for which it is clear that the level of skilled staff availability in the market place is dangerously low and the situation is unlikely to improve. The conclusion of the International Bureau is that the risks associated with these systems remaining dependant upon ADABAS and Natural are too high and that mitigation measures need to be introduced.
- 29. Consequently, implementation of Phase III as early as possible has become the most realistic option in the view of the International Bureau.

Document MM/A/38/4, paragraph 46(iii).

30. On the basis of the information available to date, the International Bureau estimates that Phases II and III could be implemented according to the calendar reflected in the graph below.

ID	Took Nama	2009		20)10			20	11			20	112	
טו	Task Name		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	1 C8- Remaining BPM, Portal and RIA													
2	C10 - Publication													
3	C9 - Remaining Interactive Web Services													
4	C11 - Remaining Java / Oracle Conversion													

V. IMPLEMENTATION MODALITIES FOR PHASES II AND III

- 31. One possible option for the implementation of Phases II and III would be to rely on in-house developments using consultants or third party contractors. However, the costs associated with this approach may require reconfirmation considering the estimates were included in the consultancy report prepared by Sogeti S.A. Switzerland in the summer of 2007 in the run-up to the initiation of the IT Modernization Program. In addition, there would also be an added element of risk due to the size and complexity of the redevelopment effort in a technology that internal staff are not familiar with.
- 32. When considering the modalities for executing Phases II and III, there are a number of options relating to the final technical architecture that also need to be considered. One option would be to establish an Oracle/Java environment identical (or similar) to the new PCT technical architecture⁸. Another option would be to establish a Microsoft .NET environment. The advantages of following the PCT lead in using Oracle/Java would mean that a single technical environment would from that time harbor all WIPO's major business application software, with all the economies of scale that a single architecture would imply. The disadvantage of following the PCT lead in using Oracle/Java would probably be cost, since Microsoft .NET system developments are generally less costly to initiate and to, subsequently, maintain.
- 33. An alternative implementation approach would be to engage an external company to convert the MAPS and DMAPS systems from ADABAS/Natural technology to an alternate technology to be determined by the company (Oracle/Java or Microsoft .NET, for example). It should be noted that a significant portion of the technical, business specific complexity of MAPS and DMAPS is the bespoke workflow system that is integrated into the technical

The International Bureau is currently in the process of decommissioning its legacy PCT application systems, which are also ADABAS/Natural dependant, and which have been replaced with a modern three tier Oracle/Java technical solution that has been the result of years of development effort.

solution. Since Phase I of the IT Modernization Program includes the introduction of standard workflow tools (Business Processing Modules or BPM), any MAPS and DMAPS conversion exercise would be exclusive of the conversion of its bespoke work flow functionality.

VI. RECOMMENDED APPROACH FOR PHASES II AND III

- 34. For the implementation of Phases II and III, the International Bureau recommends that an open international tender be conducted with a view to selecting a company that would:
- (i) undertake a technical assessment of the MAPS and DMAPS application systems and databases for the purposes of converting them into a new technical architecture;
 - (ii) propose an appropriate target technical architecture; and
- (iii) prepare a fixed price offer for the conversion of MAPS and DMAPS application software and data to the proposed new technical architecture, including the execution of subsequent system testing and the establishment of systems performance benchmarks, together with an appropriate warranty period.
- 35. The longer term operational support of the converted solution would be modeled upon the successful approach currently in place for WIPO's ERP systems i.e., contracts would be concluded with an external partner for the ongoing development of the solution. Such contracts would be administered by a core internal team of technical experts with strong business knowledge. The internal team would be responsible for the day to day operation of the system and minor enhancements.
- 36. The International Bureau is confident that the costs of following the approach recommended in paragraph 34, above would be well within the original cost estimates for Phases II and III (namely, 1.943 million Swiss francs and 8.292 million Swiss francs). The International Bureau is also confident that the proposal included in paragraph 35, above for ongoing support of the technical solution would be in line with industry practice as successfully demonstrated in the support model for WIPO's ERP systems.

VII. FINANCING OF PHASES I, II AND III

Remainder of Phase I

37. As recalled in paragraph 3, above, a budget of 5.028 million Swiss francs was approved for the implementation of Phase I of the IT Modernization Program in 2008-2009. However, as a result of the delays in the implementation of the program, as explained earlier in this document, only some 3.524 million Swiss francs will have been spent by the end of 2009. Most of the remainder 1.504 million Swiss francs (most precisely, an estimated amount of 1.495 million Swiss francs) would still be needed for the purpose of completing the implementation of Phase I in 2010.

- 38. Financing of the 3.524 million Swiss francs to be spent in 2008-2009 is expected to come from the following sources: 1.45 million Swiss francs from the Revised Program and Budget for 2008/09 (including 1 million Swiss francs from Program 6 and 0.45 million Swiss francs from Program 25); 2.074 million Swiss francs from the Madrid Union reserve set aside for this purpose.
- 39. Financing of the 1.495 million Swiss francs currently estimated to be needed for completing the implementation of Phase I in 2010 is proposed to be financed from the Madrid Union Reserve Fund, as indicated in paragraph 49, below.

Phase II

- 40. As indicated in document MM/A/38/4, the implementation of Phase II of the IT Modernization Program to be undertaken in 2010/11 would amount to an estimated cost of 1.943 million Swiss francs, to be shared between the Madrid Union (1,432,000 Swiss francs) and the Hague Union (511,000 Swiss francs).
- 41. The Madrid Union's share (1,432,000 Swiss francs) is proposed to be financed from the Madrid Union Reserve Fund, as indicated in paragraph 49, below. Subject to the approval of the Assemblies of the PCT Union and the Hague Union, the part to be paid by the Hague Union (511,000 Swiss francs) would be financed from the PCT Reserve Fund, based on the understanding that that amount shall be reimbursed by the Hague Union to the PCT Union as soon as the level of reserves of the Hague Union Reserve Fund so allows.

Phase III

- 42. As indicated in document MM/A/38/4, the estimated investment cost of Phase III, i.e. 8.292 million Swiss francs, would also be shared between the budgets of the Madrid Union (5,804,400 Swiss francs) and the Hague Union (2,487,600 Swiss francs).
- 43. The part to be paid by the Madrid Union (5,804,400 Swiss francs) is proposed to be financed from the Madrid Union Reserve Fund, as indicated in paragraph 49, below. Subject to the approval of the Assemblies of the PCT Union and the Hague Union, the part to be paid by the Hague Union (2,487,600 Swiss francs) would be financed from the PCT Reserve Fund, based on the understanding that that amount shall be reimbursed by the Hague Union to the PCT Union as soon as the level of reserves of the Hague Union Reserve Fund so allows.

Allocation of Funds from the Madrid Union Reserve and Working Capital Funds (RWCF)

44. As indicated in paragraph 4, above, it is recalled that, in 2007, along with approving the implementation of Phase I of the IT Modernization Program, the Madrid Union Assembly also approved that any amount of the surplus generated by the Madrid Union budget by the end of 2007 exceeding the amount necessary to reach the target level of reserves (25 per cent of the estimated biennial expenditure in the 2008/09 biennium (PBE factor)) be kept within the Madrid Union RWCF with a view to contributing to the financing of subsequent stages of the IT Modernization Program.

- 45. By December 31, 2007, the budget of the Madrid Union in 2006/07 had generated a surplus of 24.5 million Swiss francs, bringing the total level of reserves under the Madrid Union RWCF to an amount of 41.773 million Swiss francs. This amount was re-stated under the methodology approved by Member States, to an amount of 41.510 million Swiss francs as at January 1, 2008⁹.
- 46. In the Revised Program and Budget for the 2008/09 biennium, approved by the Assemblies of WIPO Member States in December 2008, the Madrid Union budget was foreseen to have a deficit of 124,000 Swiss francs for the 2008/09 biennium. The level of the Madrid Union RWCF was, consequently, established at 41.386 million Swiss francs (41.510 0.124 = 41.386) as at the end of 2009. Meanwhile, the Madrid Union RWCF target level for 2008/09 (25 per cent of the estimated biennial expenditure (PBE factor)) was established at 26.587 million Swiss francs (including the Working Capital Fund of 2 million Swiss francs).
- 47. Also in December 2008, the Assemblies of WIPO Member States approved the allocation of an amount of 2.644 million Swiss francs from the Madrid Union RWCF to cover the Madrid Union's share of a series of projects (security, IPSAS/FRR, etc.) approved by the Assemblies on that occasion.
- 48. As explained in paragraph 38, above, it is expected that by the end of 2009, an amount of 2.074 million Swiss francs, financed from the Madrid Union RWCF, will have been spent in the implementation of Phase I of the IT Modernization Program in the 2008/09 biennium, as approved by the Madrid Union Assembly in 2007 (see, also, paragraph 3, above).
- 49. Summarizing, it is expected that, at the end of 2009, some 10.081 million Swiss francs (41.386 (26.587 + 2.644 + 2.074) = 10.081) will remain available within the Madrid Union RWCF. As decided by the Madrid Union Assembly in 2007, those funds have been set aside to contribute to the financing of the subsequent stages of the IT Modernization Program. As indicated in paragraphs 39, 41 and 43, above, the Madrid Union's share in the financing necessary to implement the remainder of Phase I and Phases II and III of the IT Modernization Program in the 2010/11 biennium has been estimated at a total amount of 8.731 million Swiss francs (1.495 + 1.432 + 5.804 = 8.731). It is therefore proposed to allocate such an amount of 8.731 million Swiss francs from the Madrid Union RWCF to cover that share.
 - 50. The Assembly is invited to:
 - (i) take note of the status of implementation of Phase I of the IT modernization program, as described in paragraphs 5 to 22 and Annex II of the current document;

The re-statement is the result of the application of the adjusted income and expenditure allocation methodology (see Annex IV of the Revised Program and Budget for 2008/09), as approved by Member States as part of the 2008/09 Program and Budget.

- (ii) approve the implementation of the remainder of Phase I and of Phases II and III of the IT modernization program within the 2010/11 biennium, as proposed in paragraphs 23, 30 and 34 to 43 of the current document;
- (iii) approve the financing of the remainder of Phase I and Phases II and III of the IT modernization program as proposed in paragraph 49 of the current document.

Table 1: Internal Operation

Seq.	Project	Description	Category
A1	Translation	Update translation tools to replace in-house translation tools with commercial ones.	Operational
A2	Classification	Update Nice classification tools by integrating database of accepted goods and services into classification procedure. Develop a web application to assist users in composing lists.	Operational
A3	Irregularity Letters and Notifications	Update the letter generation process to produce more understandable documents.	Operational
A4	Trademark Latest Status	Create tools to show the goods and services protected within a given designated Contracting Party, and show how these change over time.	Operational
A5	Monitoring and Statistics	Create tools to monitor and analyze operational processes. Create statistics for internal and external use.	Analytical
A6	Office Automation	Integrate internal administrative tasks into the MAPS/IMAPS system, e.g., importing Word documents, e-mails, etc. directly into MAPS/IMAPS.	Operational
A7	IMAPS Enhancements	IMAPS enhancements (e.g., search capabilities, new document formats, tighter integration with MAPS,).	Operational

Table 2: External Communication

Seq.	Project	Description	Category
B1	e-Payment, e-Billing	Create e-Billing (for extracts from the International Register) and e-Payment (for other transactions) for holders.	e-Business
B2	e-Modification	Allow holders to submit transactions electronically and to further automate their processing within MAPS.	e-Business
В3	e-Status	Allow holders to monitor the status of their communications to WIPO.	e-Business
B4	Electronic Communication: Offices → WIPO	Enhance the transmission of information from national or regional offices to WIPO.	e-Business
B5	Electronic Communication: WIPO → Holders/Representatives	Enhance the transmission of information from WIPO to holders and representatives.	e-Business
В6	Electronic Communication: WIPO → Offices	Create tools that enhance collaboration between WIPO and national or regional offices with respect to the international procedure.	e-Business

Table 3: Governance and Technical

Seq.	Project	Description	Category
C1	Project Organization and Change Management	Put procedures into place which will facilitate the implementation of these projects.	Governance
C2	Requests for Proposal and POC ¹⁰	Requests for Proposal (tenders) and Proof of Concept of technical solution.	Governance
C3	SOA ¹¹ and Tools	Create the IT architecture (SOA) and provide the necessary tools for its use.	Architecture
C4	Downsizing to Unix	Migrate MAPS and DMAPS from the UNICC mainframe to a UNIX environment.	Downsizing
C5	Pilot with an Office	Pilot project with a single national office based on direct access to MAPS. (SOA+BPM ¹² +e-Business +Portal ¹³ +RIA ¹⁴).	Conversion
С6	Complete Architecture + BPM + Middleware	Adapt the IT architecture and BPM processes based on experience with Pilot (C5) to allow expansion to other interested offices.	Conversion
C7	DBMS ¹⁵ and Technical Enhancements	Improve the database design of MAPS and resolve any technical issues.	Conversion

Proof of Concept: verifying that the proposed technical architecture performs according to specifications.

Service-Oriented Architecture: an architecture that uses loosely coupled services to support the requirements of business processes and users.

Business Process Management.

Portal: a Web interface which provides individualized access to users based on their security profile.

Rich Internet Application: a Web application that has the features and functionality of traditional desktop applications.

Database Management System.

Seq.	Project	Description	Category
C8	Remaining BPM, Portal and RIA	Migrate business logic from Natural to Java, but retain Adabas.	Conversion
С9	Remaining Interactive Web Services	If needed, define processes and develop a new user interface with common technology for WIPO and national or regional offices.	Conversion
C10	Publication	Modernize the publication process including the replacement of the legacy Visual Basic programs.	Architecture
C11	Remaining Java / Oracle Conversion	Migrate the remaining Natural /Adabas programs to Java/Oracle if and when needed, but not before 2010.	Conversion

	A1	Translation						
	А	Initial	Total	Total	Total	Balance	Balance	Balance
		Budget	Expenditure	Earmarked 2009	Futures 2010	Based on Expenditures	Based on Earmarked	Based on 2009 +
				2009	2010	2perium es	2009	2010
Budget Description Benefits Current status		More autom Application	ation, reduced	costs, improve the translation	ed quality on of override	67,934 in tools with cons s using the tran		
	A2	Classification				1		
		Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010
Budget Description						46,387 se of accepted so assist users in		
Benefits			validated term neir list of good		,	t helps users of	f the Madrid s	system pre-
Current status						for pre-validate ble on the Intra		r test as of
	A3	Irregularity	Letters and No	otifications				
		Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010
Budget Description Benefits Current status		Producing n	23,035 etter generatio nore comprehe group is working	n process to p	roduce more	456,965 understandable	244,940 documents	(35,060)
Current status		11 Working E	Group is working	is on the requ				
	A4	Trademark I	Last Status					
		Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010
Budget Description			11,517 to show the go			228,483 within a given	122,470 designated C	(12,530) Contracting
Benefits		Better and c	learer status of	trademark wi	thin a given o	lesignated Con	tracting Party	7

Current status

A working group is working on the modifications, from the examination policy to the IT tools, required to determine the Goods and Services that have effect in given designated Contracting Party

A	5 Monitoring	and Statistics					
	Initial	Total	Total	Total	Balance	Balance	Balance
	Budget	Expenditure	Earmarked	Futures	Based on	Based on	Based on
			2009	2010	Expenditures	Earmarked 2009	2009 + 2010
Budget	340,000	16,316	87,984		323,684	252,016	252,016
Description	Create tools external use		d analyze oper	ational proce	sses. Create st	atistics for in	ternal and
Benefits	Access to s	tatistics from In	ntranet and Int	ernet			
Current status	Prototype o May 10, 20		ication is avail	lable on the I	ntranet and unc	ler test as of	

A6	Office Auto	mation					
	Initial	Total	Total	Total	Balance	Balance	Balance
	Budget	Expenditure	Earmarked 2009	Futures 2010	Based on Expenditures	Based on Earmarked	Based on 2009 +
			2007	2010	Ехрепанитез	2009	2010
Budget	48,000	31,803	51,506		16,197	(3,506)	(3,506)
Description	_				IMAPS systen	1	
Benefits		l procedure, le					
Current status	New printin	g procedure us	ing OMR tech	nnology: com	pleted		
	Automation	of the certified	d email systen	n: completed			
	Automation	of the creation	of certified c	opies of Hagi	ae applications	completed	

A7	IMAPS Enl	nancements					
	Initial	Total	Total	Total	Balance	Balance	Balance
	Budget	Expenditure	Earmarked 2009	Futures 2010	Based on Expenditures	Based on Earmarked	Based on 2009 +
			2009	2010	Expenditures	2009	2010
Budget	48.000	16,221	51,424		31,779	(2.424)	(3,424)
Description	- ,	,	,	 hilities new (document form	(3,424) ats_tighter in	())
Description	with MAPS	` `	,., scaren capa	omnes, new v	document form	ats, tighter in	icgration
Benefits	Additional	functions for us	sers				
Current status	Export in Pl	DF format for 7	Γiff document	: completed			
	New indexi	ng and printing	functions: co	mpleted			

Management of native PDF format inside IMAPS: on-going

B1	e-Payment,	e-Billing								
	Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010			
Budget Description		240,000 11,517 117,530 125,000 228,483 122,470 (2,530) Create e-Billing (for extracts from the International Register) and e-Payment (for other transactions) for Holders								
Benefits	1 2	facility for user cessing time fo		id system						
Current status		by credit card ion of an irregu		ount, is availa	able on the Wel	b site for payi	ng fees			
	Additional I where holde		ctions from B ntatives will b	1 will be imple able to man	lemented throu age and execut	_	1 3			

B2	e-Modificat	ion						
	Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010	
Budget Description	336,000 Allow holde within MAF		124,542 ansactions ele	215,000 ctronically an	319,876 ad to further au	211,458 tomate their p	(3,542) processing	
Benefits	U I	Reducing processing time for users						
Current status	Reducing workload (Mail processing team) E-Business functions from B2 will be implemented through a common project where holders and representatives will be able to manage and execute selected transactions on their Madrid portfolios electronically, via the Internet							

В	3	e-Status							
		Initial	Total	Total	Total	Balance	Balance	Balance	
		Budget	Expenditure	Earmarked	Futures	Based on	Based on	Based on	
				2009	2010	Expenditures	Earmarked	2009 +	
							2009	2010	
	L								
Budget		240,000	11,517	137,530	100,000	228,483	102,470	2,470	
Description		Allow holde	rs to monitor t	he status of th	eir communic	cations to WIP	C		
Benefits		Better communication to holders							
		Decreasing 1	equests receiv	e from holder	S				
Current status		E-Business functions from B3 will be implemented through a common project where holders and representatives will be able to manage and execute selected transactions on their Madrid portfolios electronically, via the Internet							

B4 Electronic Communication: Offices -> WIPO

Budget, description and current status included under C5

B5	Electronic Communication : WIPO -> Holders/Representatives								
	Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010		
Budget Description	120,000 Enhance the	103,509 transmission	126,515 of information		16,491 to holders and	(6,515) representative	(6,515)		
Benefits		Better communication to holders Costs savings from paper less transmission							
Current status	Gazette is now exclusively available via the Internet and has been enhanced with search functions Notification of certain communications are now available via the internet (ROMARIN) Notification of certain communications by certified email is now available								

B6 Electronic Communication: WIPO -> Offices

Budget, description and current status included under C5

	C1		nization and (
		Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010
Budget Description Benefits		Enabling the	36,686 res into place ve project to pro		0 ilitate the imp	11,314 elementation of	10,111 these project	10,11
Current Status		Completed Project office	e and Project	Team in place				
	C2	Requests for	Proposal & P	OC				
		Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010
Budget Description Benefits Current status		Providing has SOA platfor Offers from	ardware/softwa m	are platform fo	or the project	30,197 of technical so and the hosting essful bid is cu	services for	
	C3	SOA & Too	ls					
		Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based or 2009 + 2010
Budget Description Benefits Current status		Provides oth Offers from	16,705 Γ architecture her projects with bidders for SO aplementation	th the tools rec OA tools are un	quired to be d	-	(33,509) its use	(33,509)
	C4	Downsizing	to Unix					
		Initial Budget	Total Expenditure	Total Earmarked	Total Futures	Balance Based on	Balance Based on	Balance
			2pe	2009	2010	Expenditures	Earmarked 2009	Based or 2009 + 2010

Thorough analysis: competed

Detailed analysis: completed

Current status

Selection of consulting services fro the migration through an RFP: completed

New contract with ICC: completed

Technical implementation: started as of June 2009

C5 Pilot with an Office (includes B4 and B6)									
		Initial	Total	Total	Total	Balance	Balance	Balance	
		Budget	Expenditure	Earmarked	Futures	Based on	Based on	Based on	
				2009	2010	Expenditures	Earmarked	2009 +	
							2009	2010	
Budget		599,200	28,755	323,766	300,000	570,445	275,434	(24,566)	
Description		Pilot project with a single national office based on direct access to MAPS. (SOA+BPM +e-Business+Portal +RIA)							
Benefits		Implementing, using, validating and learning new technology (SOA+BPM +e-Business+Portal +RIA)							
Current status		Depending on the completion of C2 and C3. It will start as of September 1, 2009							

C6	6 Complete Architecture + BPM + Middleware									
	Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010			
Budget Description		7,198 Γ architecture as other interest		140,000 esses based o	142,802 n experience w	139,044 rith Pilot (C5)	(956) to allow			
Benefits Current status		allow various stakeholders to benefit from the new SOA tools Will start upon completion of C2, C3 and C5								

C7	DBMS & T	echnical Enhai	ncements						
	Initial Budget	Total Expenditure	Total Earmarked 2009	Total Futures 2010	Balance Based on Expenditures	Balance Based on Earmarked 2009	Balance Based on 2009 + 2010		
Budget Description	240,000 Improve the	11,517 e database desig	37,530 gn of MAPS a	200,000 and resolve an	228,483 sy technical issu	202,470 ies	2,470		
Benefits Current status	-	Improve the database design of MAPS and resolve any technical issues Adapt the database to new tools Will start upon completion of C2, C3 and C5							

[End of Annex and of document]