

ANNEX III

METHODOLOGY FOR THE UNIT COST OF PCT PROCESSING

Summary

1. This paper presents a methodology to calculate the unit cost per PCT publication. Recommendation 3 of the JIU report urges the Director General to “submit to the General Assembly a proposed methodology to determine the cost of processing PCT applications.”
2. Following consultations in-house and with other relevant organisations, such as the European Patent Office, this paper aims to propose a methodology for calculating the unit cost per PCT publication. The definition of the unit cost used in this methodology is the average total cost of producing one unit of output. Average total cost is determined by the total of the PCT budget plus a proportion of the budgets of supporting and management activities. The unit of output chosen for this methodology is a PCT publication, rather than an application, since publication corresponds more closely to the concept of output. Therefore the unit cost is an average total cost per publication and includes the cost of all PCT activities including translation, communication, management, etc.
3. This paper describes the methodology that has been used to determine the average total cost of production and the number of units of output produced. The methodology has been applied to the 2004/05 expenditures and to the 2006 budget. Further refinements are possible but are not expected to result in major changes to the results. Extending the methodology to 2003 and earlier years is feasible but not useful due to major differences in the WIPO budget structure.
4. According to the methodology, the unit cost per PCT publication is 886 Swiss francs in 2006 which represent a decrease of 15 per cent since 2004. The unit cost is broken down into direct and indirect costs where direct costs are those related to the processing of PCT applications and to the management of the PCT system and indirect costs include supporting activities such as buildings, human resources and information technology. The unit cost calculation methodology is presented below using 2006 budget. Detailed results for 2004, 2005 and 2006 are then presented.

Unit cost calculation methodology: Cost of production

5. The cost of production has been divided into two parts, the direct and the indirect cost. The direct cost corresponds to the budget of the units of the PCT system (the Administration of the PCT system and the PCT reform programs).
6. The indirect cost includes the budgets of the organizational units that support the PCT system. These budgets must be weighted in order to take into account only their share attributable to the PCT system. As the supporting units do not allocate equal resources to the PCT system, this weighting varies from one unit to another (See Appendix to this annex).
7. Two methods are used to determine the weightings of indirect costs. Where practical, managers were asked to estimate the share of their program related to the PCT. For the remaining programs, the weightings were estimated based on the relative numbers of staff.

8. Supporting units were divided into two categories: the administrative resources and the policy and legal resources.

9. For the administrative resources (such as Human Resources) the methodology chosen was to weight the number of PCT staff by the total WIPO staff excluding administrative resources. This gives an estimate of the proportion of administrative work allocated to the PCT according to the following formula:

$$\text{Method 1} = \frac{\text{PCT staff}}{\text{WIPO staff} - \text{Support staff}} = 54\%$$

10. The second weighting method evaluates the share of management, policy and legal activities, which may be associated with the PCT system:

$$\text{Method 2} = \frac{\text{PCT staff}}{\text{WIPO staff}} = 40.5\%$$

11. A third method was used to calculate the cost of the PCT system for the Office Space and Maintenance, since the PCT system must store applications for 30 years and so the future costs of storage must be included in the unit cost of a PCT application received and published today. The yearly cost of storage is taken from the cost of leasing the premises used for PCT storage, plus the security and maintenance contracts. The unit cost of storage is calculated by taking the yearly cost of storage of one PCT file and discounting that cost over 30 years using the present value method.

Table 1: Present Value of Storage Cost

Storage Cost – 2006	
Yearly PCT storage cost	723,960
PCT files	1,200,000
Years of storage	30
Discount rate	2.5%
Present value per unit	12.63

Total Cost of Output

12. According to the methodology, the total cost of production for the PCT system is 117,038,898 Swiss francs for 2006 (see Appendix to this annex) and the cost of storage per published application is 12.63 Swiss francs.

Number of units of output produced

13. This methodology uses a single and simple measure of output, the number of publications. This corresponds most closely to the concept of an output and is unaffected by factors that may vary over time such as the number of republications or other work associated with processing of PCT applications. This measure of output will correctly reflect efficiency gains such as increased electronic communication, or efficiency losses such as increased republications or rework.

14. The historical ratio of PCT applications filed to published allows us to estimate the number of publications in 2006 from the forecast PCT filings for the same period. The forecast number of PCT publications for 2006 is therefore 133,942.

Unit cost per PCT publication

$$\text{Unit cost} = \frac{\text{Total cost of production}}{\text{Number of publications}} + \text{Cost of storage} = \mathbf{886 \text{ CHF}}$$

Detailed Results for the Period 2004 to 2006

15. The table below shows the main data used to calculate the unit cost of PCT processing from 2004. The unit cost of PCT processing decreased from 1,042 Swiss francs in 2004 to 886 Swiss francs in 2006. The PCT allocations of resources are presented in Appendix to this annex. The calculations for 2004 and 2005 are based on actual data; the 2006 calculation is based on estimates.

	2004	2005	2006
Method 1	53%	52%	54%
Method 2	39%	39%	40%
Storage cost per unit (CHF)	14.9	13.6	12.6
Publications	112,526	125,292	133,942
Unit cost of PCT processing (CHF)	1,042	934	886
Decrease of the unit cost		-10%	-5%

16. As WIPO has a biennial budget structure, precise yearly expenditures or budgets are not known. However, since the expenditures and budgets have been relatively constant from 2004 to 2006, we have used 50 per cent of the biennial expenditures and budgets to estimate annual figures.

Decomposition of the Unit Cost

17. The unit cost can be decomposed at the level of the Administration of the PCT units and at the level of the sections for the Operation of the PCT system. The unit cost has also been decomposed into direct and indirect costs (see below).

Unit Cost by Program Unit and Section

18. The decomposition by program unit is based on the relative share of the budget. The decomposition by section within the PCT System Operations is based on the number of staff in each section since budgets at this level are less meaningful.

Direct and Indirect Costs

19. The direct and indirect costs of the program units are calculated from the share of the PCT system budget (see Appendix to this annex). At the section level, the staff data have been used to calculate that share.

Decomposition of the Unit Cost for 2006

Programs, Units & Sections	Budget (in 1,000 CHF)	Staff	Share of PCT budget	Direct cost	Indirect cost	Unit cost of production
Operation of the PCT System	52,842	381	73%	400	250	650
<i>PCT Processing sections</i>		243		170	150	319
<i>PCT functional support section</i>		4		3	2	5
<i>PCT document section</i>		39		27	24	51
<i>PCT translation service</i>		95		66	59	125
<i>translation outsourcing</i>				123	14	137
<i>storage</i>				11	1	13
Legal Framework, Information and Training Activities	7,158		10%	54	34	88
Management of the PCT System	4,244		6%	32	20	52
PCT Systems	6,676		9%	51	32	82
PCT Reform program	1,151		2%	9	5	14
Total	72,070		100%	546	341	886

Decomposition of the Unit Cost for 2005

Programs, Units & Sections	Budget (in 1,000 CHF)	Staff	Share of PCT budget	Direct cost	Indirect cost	Unit cost of production
Operation of the PCT System	53,384	389	74%	432	260	692
<i>PCT Processing sections</i>		248	64%	252	163	415
<i>PCT functional support section</i>		4	1%	4	3	7
<i>PCT document section</i>		40	10%	41	26	67
<i>PCT translation service</i>		97	25%	98	64	162
<i>translation outsourcing</i>				25	3	28
<i>storage</i>				12	1	14
Legal Framework, Information and Training Activities	6,648		9%	54	32	86
Management of the PCT System	3,179		4%	26	15	41
PCT Systems	7,556		10%	61	37	98
PCT Reform	1,278		2%	10	6	17
Total	72,044		100%	583	351	934

Decomposition of the Unit Cost for 2004

Programs, Units & Sections	Budget (in 1,000 CHF)	Staff	Share of PCT budget	Direct cost	Indirect cost	Unit cost of production
Operation of the PCT System	53,384	406	74%	481	291	772
<i>PCT Processing sections</i>		263	65%	303	187	491
<i>PCT functional support section</i>		5	1%	6	4	9
<i>PCT document section</i>		37	9%	43	26	69
<i>PCT translation service</i>		101	25%	116	72	188
<i>storage</i>				13	1	15
Legal Framework, Information and Training Activities	6,648		9%	60	36	96
Management of the PCT System	3,179		4%	29	17	46
PCT Systems	7,556		10%	68	41	109
PCT Reform	1,278		2%	12	7	18
Total	72,044		100%	650	393	1,042

[Appendix to Annex III follows]

ANNEX III

APPENDIX

PCT ALLOCATION PER UNIT

I. YEAR 2006

Programs	Units	Weight	Total Budget*	PCT share*
Administration of the PCT System	Operation of the PCT System	100%	53,262	52,842**
Administration of the PCT System	Legal Framework, Information and Training Activities	100%	7,158	7,158
Administration of the PCT System	Management of the PCT System	83%	5,127	4,244
Administration of the PCT System	PCT Systems	100%	6,676	6,676
PCT Reform	PCT Reform	100%	1,151	1,151
Law of Patents	Law of Patents	50%	1,498	749
Patent Information, Classification and IP Standards	International Patent Classification (IPC)	50%	1,597	799
Patent Information, Classification and IP Standards	Technology Documentation	50%	444	222
Patent Information, Classification and IP Standards	Standards and Documentation Services	50%	689	345
Direction and Executive Management	Office of the Director-General	40.5%	1,824	739
Direction and Executive Management	Protocol and Policy Advisory Commission	40.5%	2,489	1,008
Direction and Executive Management	Industry Advisory Commission	40.5%	17	7
Direction and Executive Management	Legal Counsel	40.5%	1,409	571
Direction and Executive Management	Strategic Planning and Policy Development	40.5%	933	378
Direction and Executive Management	Internal Policy Coordination	40.5%	317	128
Budget Control and Resource Mobilization	Program Budget and Financial Control	54.0%	2,247	1,213
Budget Control and Resource Mobilization	Extra-budgetary Resource Mobilization	40.5%	10	4
Internal Oversight	Internal Oversight	40.5%	891	361
Human Resources Management	Office of the Ombudsman	54.0%	374	202
Human Resources Management	Engagements	54.0%	2,129	1,149
Human Resources Management	Staff Benefits and Welfare	54.0%	3,396	1,833
Human Resources Management	Staff Training and Development	54.0%	1,240	669
Human Resources Management	Healthcare Services	54.0%	725	391
Financial Operations	Financial Operations	54.0%	5,633	3,040
Information Technology	Internal Systems Policy and Development	33.5%	2,584	866
Information Technology	Internal Systems Support	51.1%	2,074	1,060
Information Technology	IT Security	51.5%	192	99
Information Technology	Internet Services	51.5%	1,734	893
Information Technology	Technical Services	54.8%	12,906	7,072
Conference, Language, Printing and Archives	Administration Management	10.0%	965	96
Conference, Language, Printing and Archives	Language Service	10.0%	6,122	612
Conference, Language, Printing and Archives	Conference, Communications, Printing and Records Services	15.2%	10,802	1,642
Conference, Language, Printing and Archives	Publication Production Services	10.0%	2,512	251
Premises Management	Premises Management	54.0%	1,216	656
Premises Management	Office Space and Maintenance		24,110	13,155
Premises Management	Security Coordination	54.0%	4,050	2,186
Procurement and Travel	Procurement and Contracts	40.5%	3,333	1,350
Procurement and Travel	Travel Services	40.5%	708	287
New Construction	New Construction	40.5%	2,316	938
Total			176,852	117,039

* In thousand CHF

** Less the cost of Securarchiv (subcontractor for the maintenance of the stocks)

II. YEAR 2005

Programs	Units	Weight	Total Budget *	PCT share*
Patents and the Patent Cooperation Treaty (PCT) System	Operation of the PCT System	100%	53,804	53,384**
Patents and the Patent Cooperation Treaty (PCT) System	Legal Framework, Information and Training Activities	100%	6,648	6,648
Patents and the Patent Cooperation Treaty (PCT) System	Management of the PCT System	83%	3,841	3,179
Information Technology	PCT Systems	100%	7,556	7,556
Patents and the Patent Cooperation Treaty (PCT) System	PCT Reform	100%	1,278	1,278
Patents and the Patent Cooperation Treaty (PCT) System	Law of Patents	50%	1,103	552
Patents and the Patent Cooperation Treaty (PCT) System	International Patent Classification (IPC)	50%	1,488	744
Patents and the Patent Cooperation Treaty (PCT) System	Technology Documentation	50%	384	192
Information Technology	Standards and Documentation Services	50%	634	317
Direction and Executive Management	Office of the Director-General	38.8%	1,693	657
Direction and Executive Management	Protocol and Policy Advisory Commission	38.8%	2,103	816
Direction and Executive Management	Industry Advisory Commission	38.8%	154	60
Direction and Executive Management	Legal Counsel	38.8%	1,267	492
Direction and Executive Management	Strategic Planning and Policy Development	38.8%	1,031	400
Direction and Executive Management	Internal Policy Coordination	38.8%	340	132
Direction and Executive Management	Program Budget and Financial Control	52.2%	1,841	962
Direction and Executive Management	Internal Oversight	38.8%	878	341
Direction and Executive Management	Office of the Ombudsman	52.2%	55	29
Resources Management	Engagements	52.2%	2,593	1,354
Resources Management	Staff Benefits and Welfare	52.2%	3,494	1,825
Resources Management	Staff Training and Development	52.2%	1,170	611
Resources Management	Healthcare Services	52.2%	733	383
Resources Management	Administration: Management	52.2%	18	9
Resources Management	Financial Operations	52.2%	5,537	2,892
Information Technology	Internal Systems Policy and Development	33.5%	3,431	1,150
Information Technology	Internal Systems Support	51.1%	2,429	1,241
Information Technology	Internet Services	51.5%	1,727	889
Information Technology	PCT SAFE	100.0%	2	2
Information Technology	Technical Services	54.8%	11,681	6,401
Resources Management	Administration Management	10.0%	878	88
Resources Management	Language Service	10.0%	7,007	701
Resources Management	Conference, Communications and Records Services	15.2%	10,091	1,534
Resources Management	Publication Production Services	10.0%	2,740	274
Resources Management	Premises Management	52.2%	1,200	626
Resources Management	Office Space and Maintenance		25,265	13,396
Resources Management	Security Coordination	52.2%	1,850	966
Resources Management	Procurement and Contracts	38.8%	3,746	1,454
Resources Management	Travel Services	38.8%	705	273
Resources Management	Renovation of the former WMO building	38.8%	26	10
Resources Management	New Construction	38.8%	3,926	1,524
Total			176,338	115,339

*In thousand CHF

** Less the cost of Securarchiv (subcontractor for the maintenance of the stocks)

III. YEAR 2004

Programs	Units	Weight	Total Budget*	PCT share*
Patents and the Patent Cooperation Treaty (PCT) System	Operation of the PCT System	100%	53,804	53,384**
Patents and the Patent Cooperation Treaty (PCT) System	Legal Framework, Information and Training Activities	100%	6,648	6,648
Patents and the Patent Cooperation Treaty (PCT) System	Management of the PCT System	83%	3,841	3,179
Information Technology	PCT Systems	100%	7,556	7,556
Patents and the Patent Cooperation Treaty (PCT) System	PCT Reform	100%	1,278	1,278
Patents and the Patent Cooperation Treaty (PCT) System	Law of Patents	50%	1,103	552
Patents and the Patent Cooperation Treaty (PCT) System	International Patent Classification (IPC)	50%	1,488	744
Patents and the Patent Cooperation Treaty (PCT) System	Technology Documentation	50%	384	192
Information Technology	Standards and Documentation Services	50%	634	317
Direction and Executive Management	Office of the Director-General	39.2%	1,693	664
Direction and Executive Management	Protocol and Policy Advisory Commission	39.2%	2,103	825
Direction and Executive Management	Industry Advisory Commission	39.2%	154	60
Direction and Executive Management	Legal Counsel	39.2%	1,267	497
Direction and Executive Management	Strategic Planning and Policy Development	39.2%	1,031	404
Direction and Executive Management	Internal Policy Coordination	39.2%	340	133
Direction and Executive Management	Program Budget and Financial Control	52.6%	1,841	969
Direction and Executive Management	Internal Oversight	39.2%	878	344
Direction and Executive Management	Office of the Ombudsman	52.6%	55	29
Resources Management	Engagements	52.6%	2,593	1,365
Resources Management	Staff Benefits and Welfare	52.6%	3,494	1,839
Resources Management	Staff Training and Development	52.6%	1,170	616
Resources Management	Healthcare Services	52.6%	733	386
Resources Management	Administration: Management	52.6%	18	9
Resources Management	Financial Operations	52.6%	5,537	2,915
Information Technology	Internal Systems Policy and Development	33.5%	3,431	1,150
Information Technology	Internal Systems Support	51.1%	2,429	1,241
Information Technology	Internet Services	51.5%	1,727	889
Information Technology	PCT SAFE	100.0%	2	2
Information Technology	Technical Services	54.8%	11,681	6,401
Resources Management	Administration Management	10.0%	878	88
Resources Management	Language Service	10.0%	7,007	701
Resources Management	Conference, Communications and Records Services	15.2%	10,091	1,534
Resources Management	Publication Production Services	10.0%	2,740	274
Resources Management	Premises Management	52.6%	1,200	631
Resources Management	Office Space and Maintenance		25,265	13,499
Resources Management	Security Coordination	52.6%	1,850	974
Resources Management	Procurement and Contracts	39.2%	3,746	1,469
Resources Management	Travel Services	39.2%	705	276
Resources Management	Renovation of the former WMO building	39.2%	26	10
Resources Management	New Construction	39.2%	3,926	1,540
Total			176,338	115,581

* In thousand CHF

** Less the cost of Securarchiv (subcontractor for the maintenance of the stocks)

[Annex IV follows]