

WIPO



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A/37/10

ORIGINAL: French

DATE: September 23, 2002

WORLD INTELLECTUAL PROPERTY ORGANIZATION

GENEVA

ASSEMBLIES OF THE MEMBER STATES OF WIPO

Thirty-Seventh Series of Meetings Geneva, September 23 to October 1, 2002

EVALUATION REPORT OF THE EXTERNAL AUDITOR ON THE NEW CONSTRUCTION

Document prepared by the Secretariat

1. The Program and Budget Committee, at its fifth session held from September 9 to 11, 2002, reviewed the Evaluation Report of the External Auditor on the New Construction prepared in accordance with the decision of the General Assembly in 2001 (paragraph 155 of document A/36/15). The recommendations of the External Auditor are contained in document WO/PBC/5/3, which is annexed to this document. The views of the Member States represented at the Committee on these recommendations are annexed to document A/37/9.

2. The Evaluation Report prepared by Mr. Grüter, Auditor General, Swiss Federal Audit Office, consists of three Parts, three annexes and references. The list of references is contained in the Evaluation Report as Part IV. This reference material has not been reproduced due to its large volume. It is available for information of Member States upon request.

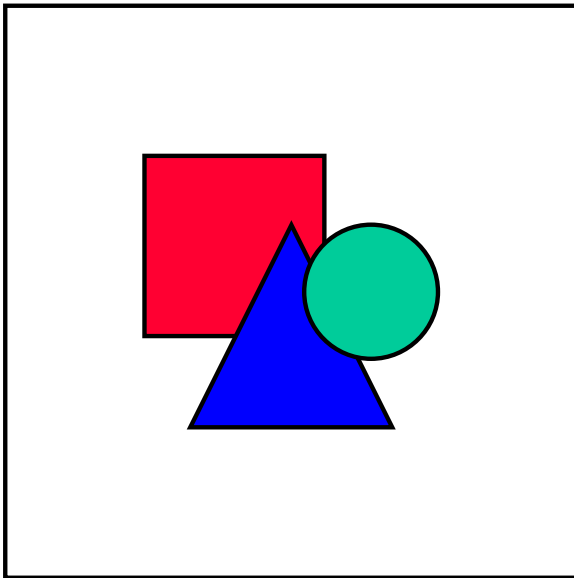
3. The Assemblies of the Member States of WIPO and the Unions administered by WIPO, are invited to take note of the contents of this document.

[Annex follows]

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ANNEX

EIDGENÖSSISCHE FINANZKONTROLLE
CONTRÔLE FÉDÉRAL DES FINANCES
CONTROLLO FEDERALE DELLE FINANZE
SWISS FEDERAL AUDIT OFFICE



WORLD INTELLECTUAL PROPERTY ORGANIZATION

GENEVA

AUDIT OF THE BUILDING PROJECT
for the creation of a new administrative building
with a car park,
additional storage areas
and a conference room

**Report by the External Auditor
to the General Assembly**

Reg. No. 2187/944.00.1.13 - 01
nede/reda

Berne, June 24, 2002

TABLE OF CONTENTS

PART I

Summary and conclusion

1	Summary	(paragraphs)	1-2
	Terms of reference		
1.1	Verification of needs		
	<i>How did the specification evolve over time?</i>		9-12
	<i>What are the present terms of reference?</i>		13-16
1.2	Evaluation of the November 2001 Final Project		
	<i>Does the future building meet WIPO's needs?</i>		17-21
	<i>November 2001 final project</i>		22-35
	<i>Are the planned costs reliable?</i>		36-44
1.3	Assessment of the profitability of a conference room		
	<i>Is a conference room profitable at all?</i>		45-47
	<i>What if any is the variation in the number of participants in WIPO meetings?</i>		48-49
	<i>What would be the ideal capacity for the conference room ?</i>		50-51
	<i>Should it be possible to divide the room ?</i>		52
	<i>What amount would have to be invested ?</i>		53
	<i>Market survey</i>		54
1.4	Verification of the various estimates		
	<i>How was it that a budget of 82.5 million became an estimate of 180 million ?</i>		55-62
1.5	Conclusion		63-76

PART II

Report and Supporting Arguments

SIA: Swiss Association of Engineers and Architects
GFA: Gross Floor Area
CFC: Code des frais de construction (construction costs broken down into 9 groups)

2	General		
2.1	Terms of reference		77-79
2.2	Object of the audit		
2.3	Information and Documentation		80-82
2.4	Development and structure of audit process		83
3	Appointment of groups of experts		
3.1	Documentation submitted for study		84
3.2	Structure of the experts' terms of reference		85-90
3.3	Call for tenders		91
3.4	Budget envelope		92
3.5	Program of analysis		

4	Analysis	
4.1	Definition of framework of analysis	94-101
4.2	Mission	102
4.3	Context and WIPO objectives	103-109
4.4	Changes in needs and buildings inventory	
4.4.1	Changes in needs between 1993 and 2001	110-113
4.4.2	Buildings inventory	114
4.5	Latest staffing forecasts	115-123
4.6	Present terms of reference	
4.6.1	Staff	124-126
4.6.2	Parking places	127-131
4.6.3	Storage areas	132-133
4.7	Evolution of the projects	
4.7.1	History	134-142
4.7.2	Net comparative area of the various projects	143
4.7.3	SIA volume of the various projects	144
4.7.4	Changes to the specification since 1997	145-150
4.7.5	Changes to the programs between the Competitions and the November 2001 final project	151-152
4.8	Analysis of the final project	
4.8.1	Project review	153-171
4.8.1.1	Fulfilment of the specification	172-180
4.8.2	Civil engineer	181-188
4.8.3	Heating, ventilation and air conditioning engineer (CVC)	189-194
4.8.4	Building doctor	195-201
4.8.5	Plumbing engineer	202-205
4.8.6	Electrical engineer	206-219
4.8.7	Sound engineer	220-228
4.9	Analysis of costs	229-233
4.9.1	Comparison of prices per m ³ SIA and m ² GFA, all CFC combined	234-239
4.9.2	Comparison of prices per m ³ SIA and m ² GFA, CFC 2	240-243
4.9.3	Comparison of prices per m ³ SIA and m ² GFA for the conference room	244-247
4.9.4	Risks	248-252
4.9.5	Ratios per working place	253-259
4.10	Conference room	
4.10.1	Profitability	260-269
4.10.2	Justification of future needs	270-281
5	Project organization	282-287
6	Inventory of savings and other technical solutions	
6.1	Technical solutions	288-292
6.2	Possible savings	293-298

PART III
Annexes

PART IV
References

PART I

Summary and conclusion

1. SUMMARY

Terms of reference

1. The World Intellectual Property Organization, which has its headquarters in Geneva, has plans to erect a new administrative building on its site with a car park, additional storage areas and a conference room. The scale of the increase in the construction costs bore so little relation to the allocated budget that the WIPO Program and Budget Committee recommended to the General Assembly of September 24, 2001:
2. “(i) to request the Federal Audit Office of the Swiss Confederation, as the External Auditor of WIPO, or other external experts [to be identified by the External Auditor], for those areas which the External Auditor judges not to be within his competence, [in consultation with the Chairperson of the Program and Budget Committee and regional coordinators], to conduct an evaluation of the project of the construction of a new building, in cooperation with the International Bureau, the architect of the winning design and other relevant organizations as appropriate.
“(ii) to propose to include in the mandate for the evaluation, the following terms of reference :
“(a) updating the current and foreseeable business needs of the Organization, with special attention to the process of planning and needs assessment, to include :
 - the impact of major investments, especially those in information technology, aimed at improving the efficiency of the Organization,
 - the financial implications and [business case for a conference center, and the phrase] business case for a conference center, and
 - an assessment of alternative solutions for technical facilities.“(b) assessing the building proposal in terms of its ability to achieve the Organization’s business objectives in a cost-effective way while providing the maximum possible value for money ; and
“(c) preparing a risk assessment, incorporating the financial implications for the Organization and the possibility of further increased costs to the project ;
“(iii) to invite the External Auditor and the other external experts to present their respective reports in time for consideration by Program and Budget Committee in April 2002.”
3. In order to conduct this evaluation in a manner consistent with the terms of reference given me, I arranged for two working groups to be set up composed of eight external experts (seven technical experts and one economist). I entrusted a colleague from the Federal Audit Office to direct the process, coordinate the two working groups and write the final report.
4. The process of analysis and the planning of the evaluation was submitted to the members of the WIPO management and to the representatives of regional groups on December 13, 2001. The analysis began on February 20, 2002, and the final report was delivered on June 24, 2002, as the program required. The evaluation was therefore conducted in a relatively short time, considering that the external experts were not operational until after the call for tenders, at the end of February 2002.
5. The terms of reference of the experts were organized under four headings:
 - (i) Verification of needs
 - (ii) Evaluation of the November 2001 final project
 - (iii) Evaluation of the profitability of a conference room
 - (iv) Verification of the various estimates

6. The observations and thoughts set down in this report reflect the general view of the advisers and the External Auditor, reached on the basis of the literature and information provided by WIPO.
7. The economy measures mentioned are indicative only, and of course will depend on the evolution of the project and the alternatives considered.
8. The report has been divided into four parts as follows for ease of reading and accessibility:
 - Part I Summary of the report and conclusion
 - Part II Report and supporting arguments
 - Part III Annexes
 - Part IV References

The numbering of the tables and diagrams corresponds to that of the advisers' reports.

1.1 VERIFICATION OF NEEDS

How did the specification evolve over time ?

9. The specification evolved according to staffing forecasts and the capacity of the buildings rented or owned by WIPO. Thus, between 1994 and 2000, the staffing forecasts for 2005 increased by 36% (from 1,152 to 1,565), for 2006 by 29% (from 1,275 to 1,643) and for 2007 by 31% (from 1,361 to 1,778). The latest staffing forecasts contained in the WIPO report (Report 1, Needs for Office Space and Parking, April 11, 2002) are structured according to an outlook that is both optimistic and more pessimistic. For 2007, for instance, the working places requirement, including a five per cent reserve, may be summarized as 1,867 places in the optimistic forecast and 1,622 places in the pessimistic forecast.
10. The forecasts made since 2000 show a considerable increase in staff strength for 2007 in spite of the introduction of new IT facilities (IMPACT program). According to a study carried out by De Loitte and Touche in 1998, a 23 per cent staff **saving should** be achieved on the introduction of the program. That corresponds to a reduction by 126 posts in 2007, assuming optimistic growth.
11. What is more, the buildings inventory speaks of 1,589 working places available to WIPO today, to which 450 places under construction in the former WMO building will be added in 2003, making a total of 2,039 places, including 1,010 (50%) owned by WIPO.
12. A figure of 1,028 parking places was also found, to which 180 places under construction would be added, making a total of 1,208 parking places available (including 419 (30%) owned by WIPO). The need for 280 additional parking places to be located in an extension to the present headquarters car park, mentioned in document WO/GA/23/5 of July 1998, is not evident. Moreover, the reassignment of that parking area for use as storage space, as mentioned in the plans of the final project, makes for some confusion.

What are the present terms of reference ?

13. In the light of the latest forecast made by WIPO (Report 1, Needs for Office Space and Parking, April 11, 2002), the terms of reference for 2007 may be summarized as follows:
 - According to the optimistic forecasts, 857 working places (1,867 minus 1,010) are necessary. It will not be possible to meet this need in the construction of the new building, but continued rental of the greater part of the Procter & Gamble (P&G) building, with its 430 places, brings the number of working places necessary in the new building down to 427 (857 minus 430).
 - The pessimistic forecast presupposes WIPO discontinuing the rental of the P&G building and accommodating all its staff on its own premises after the construction of

the new administrative building. The need for working places would then be 612 (1,622 minus 1,010).

The need for working places is therefore between 427 and 612, which corresponds to an average demand for 500

14. The need for parking places in the new building is estimated at between 514 and 603 (see paragraphs 127-131 for the details). However, the ratio of 80 parking places to 100 staff seems extremely high on an urban site. By way of comparison, the new WMO building has a 410-place car park for a building with 625 working places, corresponding to a 66:100 parking place-working place ratio. If one alters the ratio to 66:100, the result is a 265-place requirement for the optimistic forecast and 387 places for the pessimistic forecast (with the P&G building no longer being rented), which seems more realistic.
15. The storage space requirement is difficult to quantify. Document WO/GA/23/5 of July 29, 1998, speaks of an extension of the present WIPO car park that would allow 280 places to be added for delegates and visitors at conference times. This car park, although mentioned in the introduction to Competition No. 2, is not described in terms of area and capacity. What is more, it does not appear in the winning design. However, the areas are found in the final project, but their intended use is put as storage, whereas the need for this kind of area is not specified anywhere. I infer from this that the storage area could one day be converted into a car park, thereby acceding to the requests of Member States. Apart from that large area, storage needs (3,000 m²) are defined in the rules of Competition No. 2. When they are present in Geneva, delegates attending WIPO conferences use other forms of transport (city buses and shuttle buses, taxis) rather than private cars. The need to provide a dedicated car park for this category of temporary visitors has yet to be proved, and calls for study in greater depth.
16. Summary of the terms of reference for 2007 :

	Optimistic forecast	Pessimistic forecast	Comments
Number of working places to be provided in the new building (incl. 5% reserve)	427	612	The optimistic forecast presupposes rental of the P&G building
Number of parking places	265	387	(parking space 66% of staff numbers)
Storage areas	3,000 m ²		Competition No.°2
Conference room	600 places		

1.2 EVALUATION OF THE NOVEMBER 2001 FINAL PROJECT

Does the future building meet WIPO's needs?

17. Analysis of the plans of the final project leads one to believe that the actual capacity of the new office complex is in the range of 429 to 554 working places, depending on the potential for office space compression. The need for working places would thus be met by the **optimistic** figure as WIPO continues to rent the P&G building. On the other hand the terms of reference are not met by the **pessimistic** figure, which would result in a shortfall of 60 working places.
18. It seems to us on the whole that the present project makes use of the maximum capacity available under the PLQ (local district plan) to accommodate a small number of working

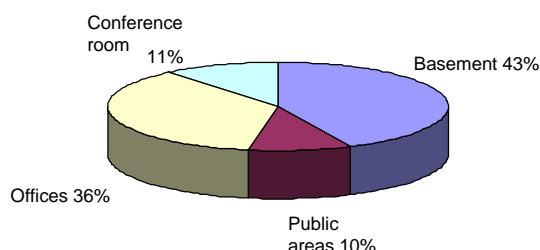
places. Given WIPO's potential for growth, it would seem more appropriate to provide for a higher degree of office space compression, in the knowledge that some of that potential might not be made use of until a later date. This comment should be placed in the context of the excessively large areas on the ground and mezzanine floors which cramp the project.

19. It should be pointed out that closer studies of the plans of the final project reveal a capacity of about 1,000 office modules of 7m², whereas the specification of the competition called for 1,285. The number of modules has thus been reduced by 285, which corresponds to a potential shortfall of about 140 offices at 14m². There is no document that affords any explanation of this step.
20. Storage areas. These areas come to a total of 6,185 m² more than the 3,000 m² already set down in the specification (see paragraph 16): archive areas of 1,700 m² have been noted and storage areas of 4,485 m²; in my opinion those additional areas can only be explained by a future reassignment of certain additional storage areas as parking space (subject to acceptance by the Geneva authorities), in response therefore to the original demands of Member States.
21. Parking places. As mentioned above, the number of parking places to be accommodated in the new complex should be between 265 (*optimistic* figure) and 387 (*pessimistic* figure). For the record, it should be remembered that the high figure presupposes WIPO to rent the P&G building, which contains 275 parking places. As the new complex provides for the addition of 280 places, the requirements corresponding to the *optimistic* figure would be covered, while in the case of the *pessimistic* figure there would be a shortfall of 107 places. It should also be borne in mind that the calculation of parking places is the result of a reduction in the parking places-to-employees ratio from 80:100 (high for an urban site) to 66:100 (based on the WMO Geneva reference). Without that reduction, the lack of parking places would be even more serious, regardless of the alternative adopted.

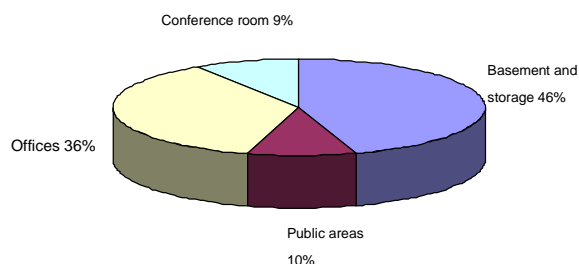
November 2001 final project

22. My study relates to the November 2001 final project and cost estimate. It is important to point out, however, that the status of the contributions by the technical contractors in November 2001 was out of phase with what is commonly known as the "final project": about half their contributions to the supposedly final project were still missing. The real "final project" stage had been reached only by the architect, and even that did not apply to the conference room, which was at the pre-project stage. The overall estimate that generally accompanies a final project was not available before March 2002, so I consider that the document submitted in November 2001 would constitute the basis for the advisers' study.
23. On analyzing the overall project, one notes that what are called the "secondary volumes" (car parks, storage areas, etc.) have become greater than the volumes set aside for "primary" needs (offices, conference room), although the latter were the original reason for which the building was to be constructed. The tables below show how this situation has evolved since 1997, up to the 2001 final project. The continuous, steady increase in "unproductive" areas (repositories, storage, etc.) in relation to useful areas, which we have noted in our analysis of the projects, puts a heavy strain on the final project. Moreover, there is still some confusion regarding the need for an independent car park and independent storage areas.

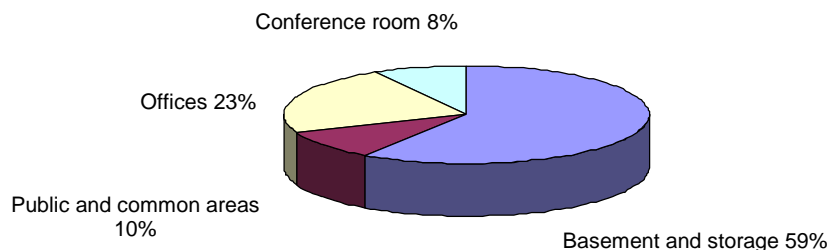
24. Table 6 bis''' Competition No.1, 1997
Allocation of gross floor area



25. Table 6 bis'' Competition No. 2, 1999
Allocation of gross floor area



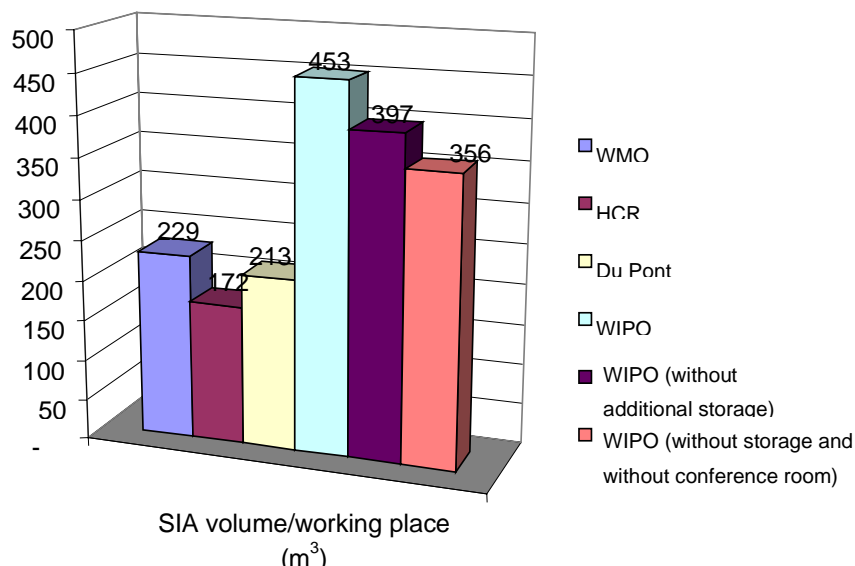
26. Table 6 bis. Final project, November 2001
Allocation of gross floor area



27. On an unspecified date in 2001, at WIPO's request, the conference room was removed from the main volume calculation to become an independent feature located close to the present headquarters. The volume of the new building remained the same after the removal. As a result, the ground and mezzanine floor areas are out of proportion to their actual use, even if one considers what are called representative areas. This substantially increases the area ratio (and the volume) per working place, and upsets the economics of the project. The table below illustrates this observation, and shows clearly that the future WIPO complex has

representative areas or areas without a clearly assigned purpose that are too large. Conversely, the number of working places is too small for the given volume and area.

28. Table 15. SIA volume per working place :
(SIA : Swiss Association of Engineers and Architects)



29. WIPO's decision to remove the conference room and bring it closer to the present headquarters building was therefore not accompanied by a rearrangement of the areas so released. The reduction in the "representative and public" areas or a reassignment of those areas as a reserve for working places would however make it possible to achieve ratios more readily comparable with those of the buildings of other international organizations. The configuration of the car park would also benefit from a redesign to improve its use.

30. The conference room gives the impression of conforming more to an architectural concept than to a specification. To illustrate this, the present division of the room into 280 and 320 places is not consistent with the initial (competition) requirement of 150 and 450 places. All the experts agree that the state of progress on this aspect of the job does not correspond to a "final project" but rather to a "pre-project." It is therefore important to effect the completion of the planning stage rapidly with the assistance of a specialist in conference room design.

31. WIPO's objectives specify among other things that the new building has to be "modern," in other words that it has to incorporate the most up-to-date construction and information technology, be compatible with the environment and be energy efficient. One is bound to observe that the technical concepts produced do not fulfil that requirement, apart from which the planners have not concerned themselves with the "Minergy" concept for the rational use of power in buildings.

32. There are still a great many important choices to be made and decisions to be taken regarding electrical networks and CVCS (heating, ventilation, air conditioning and plumbing). The documents relating to the overall estimate of March 28, 2002, which were consulted for information even though they do not form part of the terms of reference of this analysis, do not incline us to revise this opinion. With a view to the continuation of the project, it does seem necessary to do more work on power, plumbing and electricity concerns in the light of the present level of technical know-how and with a view to achieving synergy with the present installation (subject to adherence to the overall costs in the November 2001 estimate). There should moreover be greater coordination among the various contractors.

33. As far as energy consumption on heating and cooling is concerned, even though the heat insulation of the buildings conforms to legal requirements, it has to be said that the project cannot be described as exemplary: in fact the legal requirements are only just met as far as

the administrative building is concerned, while the conference room actually falls 10% below them. The large glazed areas on the façades and built into the ceilings of the common areas are certain to be a source of comfort problems in both winter and summer. It is possible to remedy these problems with appropriate heating and cooling installations, but that would nevertheless make for higher installation and power costs: given the large glazed areas, it has to be expected that the additional power consumption for heating and air conditioning will exceed 10%.

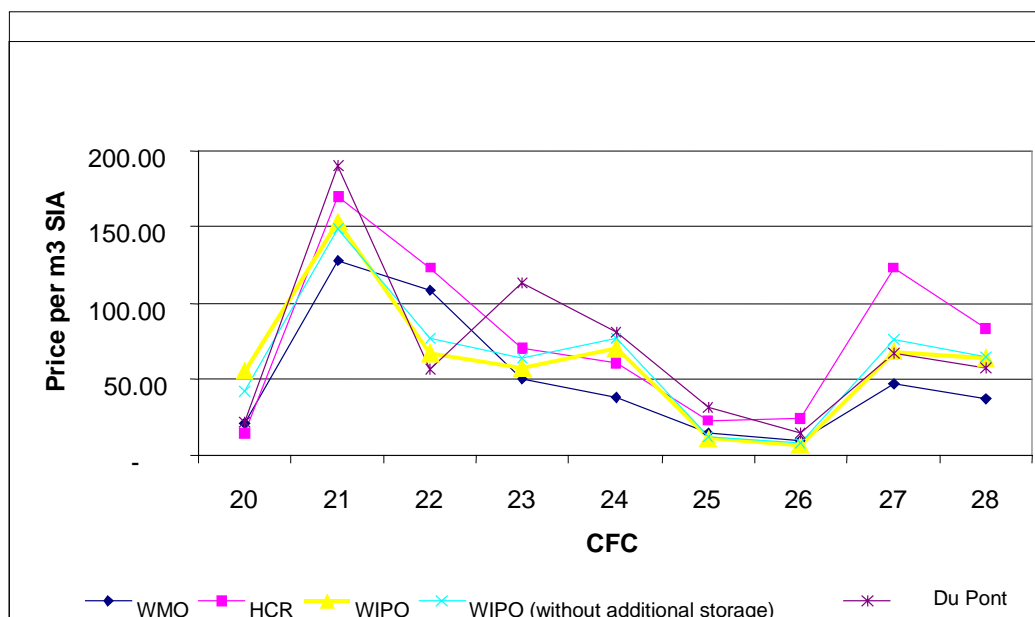
34. The sound engineer considers that the entire "acoustic project" of the conference room, common areas and offices has to be redesigned according to the actual acoustic requirements of users, and that the "architectural project" should be modified accordingly. According to him, the design of areas and volumes should first meet the acoustic requirements of users, with the architectural design being dealt with afterwards.
35. In particular he points to the need for a reduction in the volume of the conference room by about 40%, in order to meet acoustic requirements. Apart from that, the shape of the room is highly unsatisfactory with respect to visibility from the interpreters' booths and from certain seats in the room. It should be borne in mind that good visibility and good verbal comprehension go hand in hand. Also, the acoustics between the individual offices of the administrative building and on the mezzanine areas overlooking the reception area seem inadequate. Some work on the acoustics of the reception areas is necessary to remedy this problem.

Are the planned costs reliable?

36. For the purposes of comparison, we have seen fit to consider side by side the estimate for the November 2001 final project and both the estimates and final accounts of four comparable reference sites in the Geneva region. The WMO and HCR buildings were chosen for their geographical nearness to the future complex (similarity of site and context), and also for their programs which are comparable to those of WIPO. The Salle William Rappard in the WTO building is the only recent reference available for comparison, being of a size similar to that intended for WIPO. Finally, the Du Pont de Nemours building has features (volume, inner reception areas, etc.) in common with the future complex, while at the same time serving for comparison with a private business.

Table 10. Comparison of m³ SIA prices per CFC (without fees) :
CFC: Code des frais de construction (construction costs broken down into 9 groups)

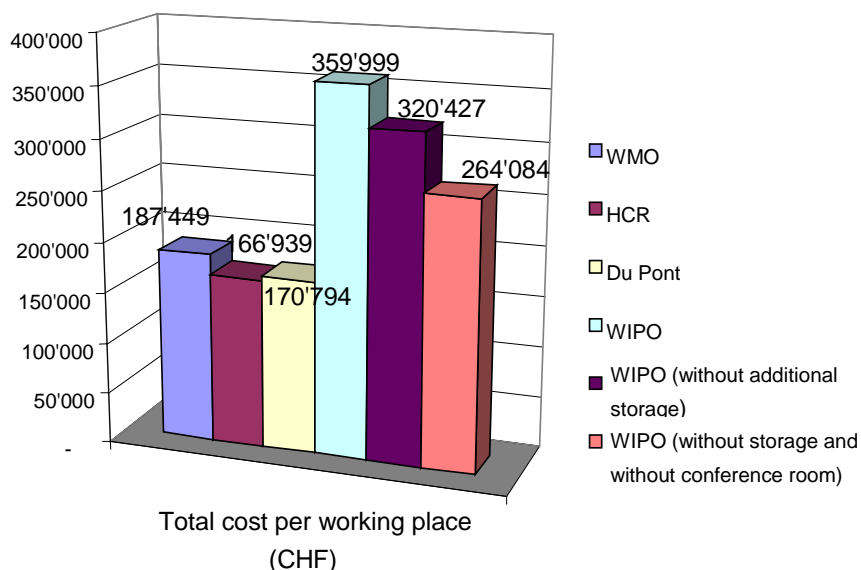
Administrative building, additional storage area and conference room



37. The planned costs at the final project stage correspond to the amounts paid for comparable work in Geneva. I can therefore confirm the budget of 180 million francs as being a realistic package, even though some rebalancing seems necessary between various types of work: The costs in the estimate for excavation (CFC 20) and for heating, ventilation and air conditioning installations (CFC 24) are above average. Conversely, the costs associated with plumbing installations (CFC 25) and transport facilities (CFC 26) are lower than average. CFC 22, which generally covers façades, is also very low.

38. What is more, I am of the opinion that the volume and area of this design are too great in relation to the number of working places available. That has the effect of increasing considerably the cost per working place and hence the overall cost of the project. It would benefit the project as a whole if it were reviewed it from the point of view of optimum use of usable areas.

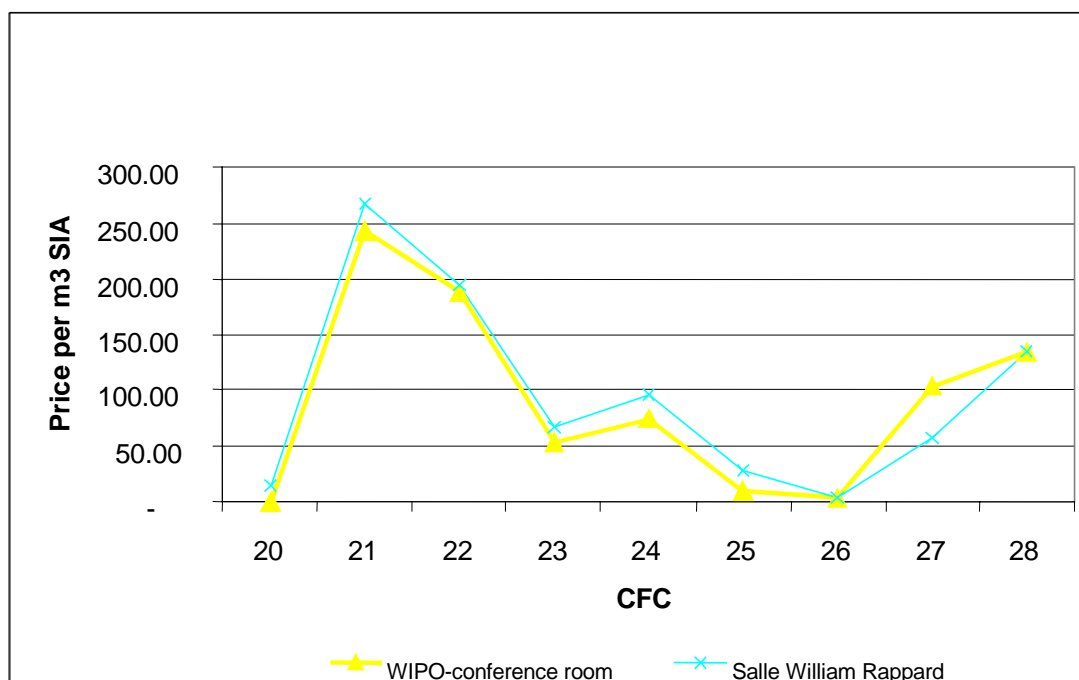
39. Table 16. Total cost per working place



40. The civil engineering adviser says that the costs relating to the surrounds of excavation, the excavations themselves (CFC 20) and concrete and reinforced concrete structures (CFC 21) relating to the additional storage area have been over-valued by about 30%. The project review adviser also confirms that an abnormally high cost of 707 francs per m³ has been noted; it is customary to work with a figure closer to 500 francs per m³.
41. The high cost (+ 43%) of the heating, ventilation and air conditioning plant (CFC 24) can be explained on the one hand by WIPO's requirements and on the other by the relatively costly air conditioning concept chosen.
42. The probable cost of the proposed electrical installations (CFC 23) is within the range of comparable values for other administrative buildings similar to the WIPO project. That cost is relatively low, however, compared with other buildings of a high technical standard. This is particularly true if one considers that the building in question should be a high-technology construction. The actual overall cost, after a number of details have been dealt with, could be higher.

Table 12. Conference room – Comparison of m³ SIA prices per CFC (without fees)

Conference room :



43. The cost analysis for the conference room shows that overall that the price per m³ is comparable to that of the Salle William Rappard. In view of the high quality of that room, the amount of the estimate for the WIPO room seems adequate. However, the uncertainty regarding the progress of that part of the project and the somewhat unclear intentions of the architects lead me to express reservations. I draw WIPO's attention to the fact that this part of the project is at a less advanced stage of development than the remainder, and as a result there is less precision in the costing.
44. The degree of precision allowed by the Swiss (SIA) standards at the final project stage is +/-10%. We find that only the administrative building and the additional storage area (excluding relevant technical installations) meet that standard. The other parts of the design (conference room, technical installations of the administrative building and additional storage areas) do not correspond to final project status but rather to pre-project status. Consequently I have worked out that the allowable share of risk is +24 million francs instead of +18 million francs, according to Swiss standards, or +9 million francs according to market standards.

1.3 ASSESSMENT OF THE PROFITABILITY OF A CONFERENCE ROOM

Is a conference room profitable at all ?

45. Calculations of the profitability of a conference room offering either 400 or 600 seats have shown that the annual operating cost would exceed the cost of renting external premises by 0.75 and 1.5 million francs respectively. Consequently, the construction of a 400-seat or 600-seat conference room is not profitable. From a strictly economic point of view, the option of not constructing a new conference room seems the most defensible among those proposed.

46. Analysis of the options, with costs :

Scenario	Room capacity (seats)	Investment in millions	Operating costs in millions ***	Rental costs in millions	Total in millions	Comments
1	0	0	0	0.75* (0.3 – 1)**	0.75	Present situation
2 bis	400	20	1.5	0.2 – 0.9	1.7 – 2.4	Investment corrected from 15 to 20 million francs
3	600	30	2.25	0 – 0.5	2.25 – 2.75	Final project

* Average annual cost of external rentals in 2000 and 2001.

** Costs +/- identical to option 2, as major conferences are spread over a large number of days and involve the use of more than 400 seats.

*** Amortization has been calculated at 3.25% over 40 years.

47. The following emerges from examination of the options summarized in the table above:

- 400-seat room : (15 million) When considered alongside a comparable building such as the Salle William Rappard, the budget of 15 million francs approved by the Member States is not realistic. It would be better to assume an investment of 20 million francs.

- 400-seat room : (20 million) WIPO would have to set aside between 1.7 and 2.4 million francs (average cost: 2 million francs) for operating costs and the cost of external rentals. The cost of renting outside conference premises continues to be very high, as most of the meetings are attended by more than 400 participants (between 400 and 650). This option would therefore compel the Organization to continue to organize its conferences to a large extent outside, and, in the economist's view would be an investment that made little or no sense.
- 600-seat room : Building a 600-seat conference room would call for an investment of 30 million francs, with the virtual certainty of having to organize future WIPO General Assemblies outside.
- Room offering more than 600 seats: The economist's proposal is to build a room with a capacity in excess of 600 seats for a budget equivalent to the 30-million-franc project submitted. This option would correspond to WIPO's aims and future needs, but it does entail a reduction in the average area per delegate. For an operating cost estimated at 2.25 million francs, in other words slightly above the average cost of a 400-seat room, it would thus be possible to accommodate future General Assemblies and the very large majority of other conferences that are organized.

Consequently, and independently of the economic aspect, if WIPO nevertheless wishes to build a new conference room, consideration of the above options shows that it is preferable to build a room with a capacity in excess of 600 seats. In spite of the Organization's non-profit status, WIPO should be able to recover in any case part of the annual operating costs by renting its rooms to other organizations. For the sake of reference, the WTO's Salle William Rappard is rented for 7,000 francs a day (see paragraphs 52 and 54 for additional information).

What if any is the variation in the number of participants in WIPO meetings ?

48. The number of conferences has remained stable since 1990. On the other hand the number of participants has tripled in ten years. Between 2000 and 2001 17 conferences (nine in 2000 and eight in 2001) were held outside, making a percentage of about 40% (eight of the conferences being for more than 250 people, including five for between 400 and 650).
49. Major conferences for which participation is dependant on the number of Member States will see their attendance stabilize when the maximum number of 185 States is reached. The maximum participation in the annual General Assembly should therefore flatten out in future at about 650 people. Delegate participation in other types of meeting depends on the subject matter dealt with, and therefore cannot be forecast, so only conferences equivalent to the General Assemblies will serve to determine room capacity.

What would be the ideal capacity for the conference room?

50. The ideal number of seats for the conference room should at least make it possible to accommodate in the future, on the one hand, the WIPO Annual General Assembly in one place, and, on the other, the very great majority of the other conferences that are organized.
51. Taking due account of the above factors, the construction of a 650-seat conference room offers the best balance between overall annual costs, and also a certain flexibility with respect to occupancy. For events of the Diplomatic Conference type, where attendance exceeds 650 and the frequency of which is unknown, WIPO will have to organize linked meetings by

connecting the new conference room to the present Room A, which would give a total capacity of 900 seats, or continue to rent premises outside. In the latter case the cost of rental would have to be added. That said, looking at the last ten years, one notes that a 650-seat capacity room would have accommodated the very great majority of WIPO conferences (only two would have had to take place outside).

Scenarios	Room capacity (seats)	Investment in millions	Operating cost in millions	Rental cost in millions	Total in millions	Comments
4	650	30	2.25	0*	2.25	Increase in capacity from 600 to 650 seats, and reduction in the average area per place.

**Calculated on the base of the last two years. Meetings (over 650 seats unforeseeable) will have to be organized with a link (250+ 650 = 900 seats) or outside. In the latter case rental costs would have to be added to the operating costs.*

Should it be possible to divide the room?

52. The additional cost represented by the installation of a partition is certainly considerable (1.5 to 2 million francs). However such a partition is, in my opinion, necessary if the size of the room is to be adapted to the number of participants, if the chance of renting the rooms is to be improved (according to CIGG figures, demand in Geneva is more for small rooms (100 to 200 seats)) and a growing need within WIPO for rooms of 100 to 250 seats is to be met.

It emerges from analysis of the conferences organized during the last ten years that they break down into three types: those with 100 to 200 participants, 200 to 450 participants and 450 to 650 participants. Division of the 650-seat room into two rooms of 450 and 200 seats would be the best way of meeting this need.

What amount would have to be invested ?

53. At the present stage of the project (preliminary project for the conference room) it should be possible to increase slightly the capacity of the room, without increasing its cost, by adopting one or a combination of the following measures:
- Reduction in the average area per seat. The ratio of net m² per delegate provided with a desk ranges from 1.7 m² for the Salle William Rappard to 2.0 m² for WIPO room A and CIGG Room No. 2.
 - If one assumes that a minority of participants (about 30%) are considered "observers" and do not have a desk, one could reduce the average area per delegate. For delegations of two persons or more (50% of delegations), it might be possible to arrange for some of them not to have a desk. So a five-person delegation would have only three seats with **desk, microphone and headset**, while the other two seats would be immediately alongside but **would have only headsets**. This arrangement, if ratified by WIPO, could make it possible to reduce the average area per participant (in this case from 2 m² to 1.6 m² per seat).
 - By reducing the volume of the room.

Market survey

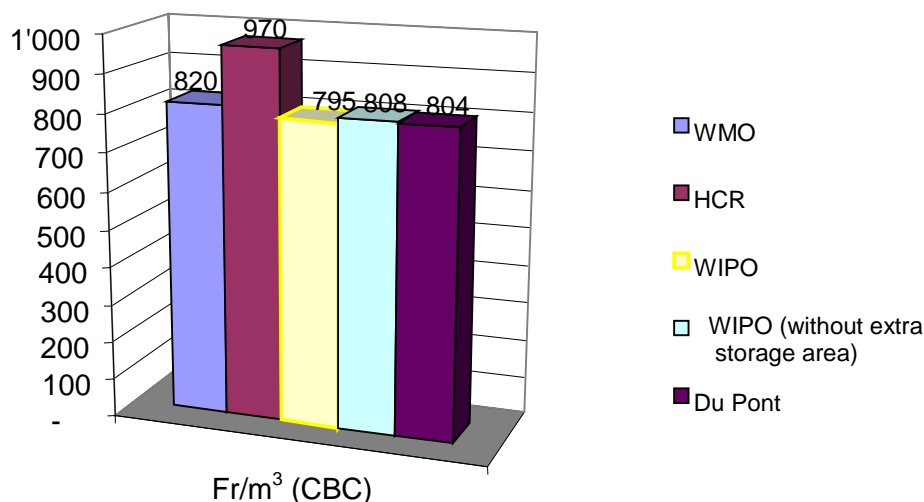
54. A market survey on the infrastructural facilities in conference rooms that meet the needs of WIPO (600-seat or larger rooms) produced the following conference centers or hotels: CICG, Palexpo, President Wilson Hotel, Salle William Rappard and UNOG. As a general rule, owing to the small number of rooms available, room reservations for the above capacity in Geneva have to be made between 12 and 18 months in advance. Events in Geneva take place generally during the same periods of the year, which adds to the problems of lack of infrastructure and complicates the reservation problem. As for the cost of renting outside conference rooms, **the hotels quote a rate almost double that quoted by the conference centers** (see the economist's reports for the details, reference 18).

1.4 VERIFICATION OF THE VARIOUS ESTIMATES

How was it that a budget of 82.5 million became an estimate of 180 million ?

55. The 82.5 million budget seems to have emerged from earlier studies conducted by the K. Steiner company (former owner of the land), STG-Coopers&Lybrand and WIPO's consultant architect. They led WIPO to value the cost of constructing the main building on the basis of prices per m³ of 320 francs for the basements and 632 francs for the offices (indexed costs). Analysis of similar buildings shows however that those figures were set too low (see table below), and WIPO's use of them led to a serious underestimation of the budget. Moreover, the volumes taken into consideration in the documents accompanying the budget are only theoretical, and do not allow for architectural solutions that might have cost implications.

56. Table 8, Comparison of m³ SIA prices, with all CFCs combined (incl. fees)
(SIA : Swiss Association of Engineers and Architects)
(CFC: Code des frais de construction (construction costs broken down into 9 groups.)



57. The net comparative area (net area allocated to the whole program, excluding the conference room and car park) is the only reliable element for comparison that can be used for all projects, and it has been noted that this net comparative area progressed from 13,889 m² in Competition No. 1 in 1997 to 20,579 m² in Competition No. 2 in 1999, representing an increase of 6,690 m² and that without any account being taken of the increased area associated with the capacity of the conference room and the additional parking:

- Increase in working places from 450 to 500 (+ 2,527m²),
- Addition of a basement storage area (+ 3,000 m²),
- Addition of a library, staff welfare installations and various other facilities, representing a total of 1,163 m².

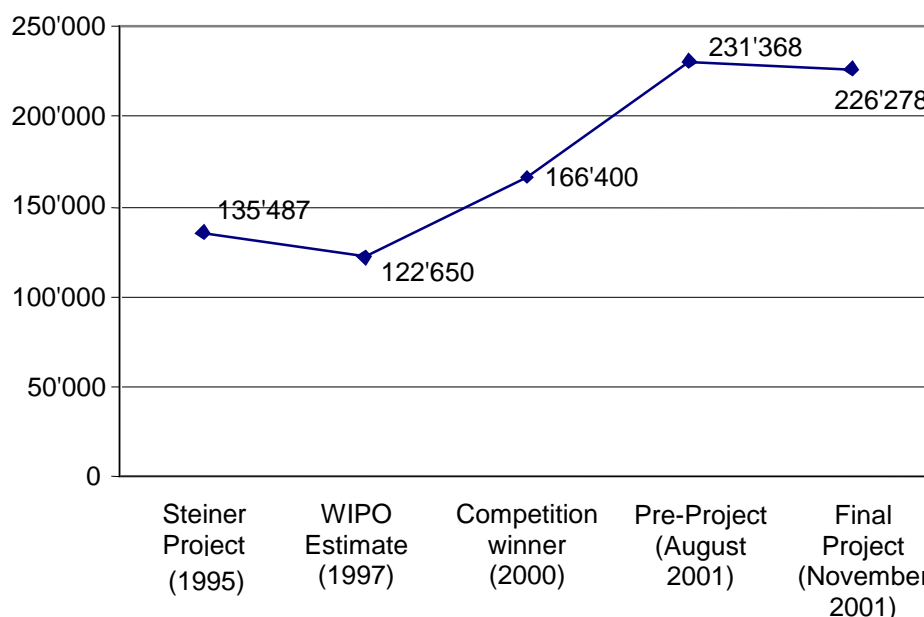
58. Thereafter that same area was increased further until the present figure of 26,897 m² was reached in the final project, namely 6,318 m² more than the figure for Competition No. 2 :

- Reduction in the number of offices (-2009 m²),
- Increased archive space (+ 1,700 m²),
- Increased storage area (+4,485 m²).
- Increase in the surface allocated to various deposit areas, new area for shows, increased display areas and various other spaces, representing a total of 2,142 m².

So, between 1997 (Competition No.1) and November 2001, we notice a 93% increase in the comparative area.

59. As the volume specifications of Competition No.1 are not known, the SIA volume for WIPO's 1997 estimate has been compared with the November 2001 final project. There is a difference of 103,628 m³ between the two designs, corresponding to an 85% increase in volume. By way of comparison, it is interesting to note that the 1997 estimate featured the three components of the complex (administrative building, conference room and additional parking). The November 2001 final project likewise had three components, but with the difference of additional storage instead of additional parking. On the other hand, the project of the competition winner does not incorporate the additional parking, and the conference room was integrated in the administrative building.

60. Changes in SIA volume from 1995 to 2001



61. As from Competition No. 2, which features a detailed specification with regard to the number and assigned purpose of premises, it is difficult to retrace the development of that

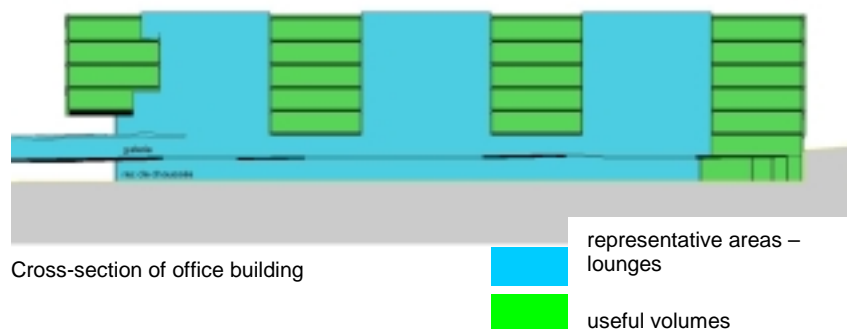
specification. There is no record of important decisions such as the shifting of the conference room or the reduction in the number of offices. WIPO's position regarding the development of the project and the proposal by the BB&P office is often non-existent and therefore hard to retrace in the literature made available to us.

62. On the basis of an analysis of the various projects shortlisted in the last round by the judges of Competition No. 2 in 1999, it emerges that the BB&P project is in the lower part of the average with regard to both the areas and the overall constructed volume. It should be noted that the constructed volume is not the same thing as the SIA volume, which adds to the latter a certain number of extras according to the account of the volumes. Apart from that, as the choice was made by an international panel, I abided by their decision and therefore considered the architectural design to be a settled matter.

1.5 CONCLUSION

Requirements

63. Evaluation of the November 2001 final project has shown that the needs with respect to working places would be fulfilled in so far as the scenario of an optimistic outcome establishes itself in the years to come. In that eventuality, WIPO does however have to continue to rent the greater part of the P&G building. Paradoxically, if the projections are more pessimistic, the P&G building is no longer rented and the specification is no longer met by the new administrative building with respect to either working places or parking places: there is a working place shortage of 60 and a parking place shortage of 107 if one puts the parking place-employee percentage at 66%. I think it is possible to remedy partly the 60 working place shortfall while respecting, on the whole, the intended architectural design.
64. I note therefore that the reserve premises for the various staff evolution scenarios is outside the WIPO infrastructure, even as a new administrative building project is being planned. Although the project under consideration makes use of the maximum capacities offered by the local district zoning plan, it does not allow all staff needs to be met (10% of those needs are not met in the pessimistic alternative). On the other hand, the project submitted for analysis provides for greater representative areas. A reassignment of those areas as working places in reserve would make it possible to achieve proportions that are more comparable with those of the buildings of other international organizations, and thereby to accommodate variations in staffing patterns better. In that case the architectural concept might be affected.
65. Table 6.6. Representative areas in cross-section



Conference room

66. As far as the conference room is concerned, surveys conducted have shown that the most economical alternative is not to build one. However, experience has shown that profitability is seldom achieved with a conference room, which is why I consider that the argument for the construction of such a room has to be found more in a discussion focused on objectives and future needs and also on the convenience and independence that it affords. So, if WIPO does after all want to build a new conference room, analysis of the alternatives shows that it is preferable to build a room with a capacity of 650 seats, which offers the best balance between overall annual costs and flexibility of use; it seems wise to me, after all, to specify a conference room capacity that meets the requirements of the great majority of the expected meetings, like the Organization's General Assembly. If one adds the small difference in operating and rental costs between a 400-seat and a 650-seat conference room, and the fact that a 400-seat room does not make for a noticeable reduction in the cost of outside rentals, I would recommend the planning of a 650-seat room that is divisible into two rooms of 450 and 200 seats. For events attended by more than 650 participants, WIPO could continue to rent outside premises or organize "linked" meetings. This increase in capacity should be achieved without altering the 30-million-franc estimate for the conference room, either by reducing the average area per delegate place or by recognizing that some of the participants (about 30%) are to be considered "observers." These two proposals could also be combined. Apart from that I have on a number of occasions pointed out that the planning of the conference room has not been completed, so a rationalization of the areas available would not strike me as being a problem at the present stage reached in the planning work.

67. *Costs and risks*

Subject to the rebalancing and checking to be done on the costs written into the estimate, I can confirm that the amount of 180 million francs is a realistic package for the construction of an administrative building offering 500 working places (on average), a 280-place car park, a 650-seat conference room and additional storage areas. However, the risks consecutive to the progress of certain parts of the project exceed the figures in the SIA standards by 6 million francs. It is therefore necessary to bring about the completion of the planning of the conference room and technical installations as rapidly as possible in order to achieve maximum risk limitation. I would also suggest to WIPO that it request the BB&P architect to submit an overall estimate that is accurate to +/- 5%, which corresponds to current standards on the Swiss market, in order to reduce the risk element still more (from + 24 million francs at present to + 9 million francs). The sum of about 16 million francs should be added to the estimate in order to cover WIPO fee costs (subject to the establishment of a project organization entity according to the proposal below), and also the project furniture and secondary expenses which would be higher than mentioned in the estimate. Consequently the budget envelope for the November 2001 final project, given the additional costs mentioned (16 million francs), should come to :

196 million francs, accurate to +/- 10% according to the SIA standard, or
214 million francs if one considers the maximum allowable risk (+10%) according to the SIA standard, namely +18 million francs.

This figure does not allow for inflation, interim interest, contractors' fees for possible updating of the final project according to WIPO decisions following the present evaluation, and removal expenses. The over-valuation of the cost of additional storage space could turn out to be a substantial saving of about 6 million francs. However, that reserve should be considered a buffer in the face of the considerable risks (+ 6 million francs) that are hampering the project. Should the completion of the planning make it possible to lessen those risks, the sum in question could then be considered a saving.

Possible savings

68. Considering the working facility that WIPO requires, I have mentioned the importance of rationalizing the project's useful areas. As my investigations failed to elicit any demonstrable need for additional storage space, other than the fact that it could be later converted into parking space, it seems to me that there is a potential saving of about 20 million francs in the

option of not building that area. There is no demonstrable justification for a delegate car park either. In any case, the need for a 650-seat conference room takes precedence over the need for additional storage space. This observation does not take account of possible synergies with the building of the new complex. At the same time it would be advisable to consider rentals and the cost of implementing this option in parallel, in order to ascertain the relative advantages and drawbacks.

69. As mentioned earlier, the budget envelope to be assumed for the construction of an administrative building, conference room and additional storage space would be 214 million francs. Should the Member States act on my recommendation that no additional storage space be constructed, the envelope would then come down to 190.5 million francs. Finally, if account is taken of the profitability of a conference room, the most suitable option would consist not only in abandoning the additional storage space but also in not building the conference room, whereupon the budget envelope would be about 158 million francs. These figures assume a maximum permissible risk according to SIA standards of +10%.
70. **Given the different rates of** progress on the phases of the project (pre-project and final project) depending on the buildings and contractors, it is difficult for me to submit accurate savings according to the type of work. On the other hand, as a number of options and concepts have to be redefined or completed, I would suggest that they incorporate on the one hand, at the technical level, a spirit of modernity and respect for the environment as well as synergy with the existing installations, and on the other hand better use of usable areas (administrative building) and adaptation of relative volumes according to need (conference room). The aim in implementing such measures would be not only to rationalize the project but also to achieve optimum use of the premises, in other words the working facility, which will ultimately, overall, result in savings.
71. The necessity mentioned earlier of reworking certain headings in the November 2001 estimate means that potential savings (in heating, ventilation, air conditioning and excavation) would offset the cost increases noted (façades, plumbing and electrical installations, transport installations and climate control in the conference room).
72. Other savings seem marginal in terms of the estimate (electricity supply, excessive acoustic demands made by the glazing of the outer fabric, overlaps between the sprinkler system and the fire hydrants). It should also be mentioned that this building is no model of electricity consumption, as the large glazed areas lead one to expect the additional energy consumption for heating and air conditioning to be in excess of 10 per cent when the building is operational.

Initial budget of 82.5 million francs

73. The initial budget of 82.5 million francs was a serious underestimate, on the one hand because of the m³ price used, which was about 170 francs below what is customary for this kind of project, and on the other hand because the volumes used in the 1997 evaluation were only theoretical, and took no account of architectural solutions that might have an effect on costs. Apart from that the areas and volumes have almost doubled between 1997 and the present project.

74. At WIPO's request I have made some recommendations regarding the action to be taken on the submission of this report, in response to its findings and to the decision of the Member States: I wish to alert Member States to the fact that, before any call for tenders is issued for the implementation of the project, it is essential that the planning be brought up to date in the light of the report's findings. The final project must cover the specifications of the client totally and incorporate all its demands to the utmost degree of precision, in order to minimize as far as possible the risks of defects at the time of implementation, which could cause considerable additional expense: experience has shown that every rider to a basic contract brings with it high costs that are often well in excess of market prices. Apart from that, it strikes me as important to have a project management body as well as a representative of the client to carry out the coordination, management and verification that are essential to any project as extensive and as complex in terms of its execution as this one. A body external to WIPO would be in a better position to respond effectively to the demands of the project and WIPO's representative.

Summary of the response to the External Auditor's terms of reference (see paragraph 2)

75. For 2007, **the Organization's requirements** amount to the following :

Working and parking places

optimistic forecast : 1,867 working places
1,020 parking places

pessimistic forecast : 1,622 working places
1,174 parking places

including the following for the new building :

optimistic forecast : 427 working places
(the P&G building is still rented) 265 parking places (66% of staff)

pessimistic forecast: 612 working places
(the P&G building is no longer rented) 387 parking places (66% of staff)

Storage areas : 3,000 m²

Additional parking for delegates and visitors : 280 places

Capacity of the new complex : 554 working places,
280 parking places,
9,185 m² of storage and archive space

Fulfilment of requirements in the new building :

optimistic forecast : The requirements are met if the P&G building is still rented

pessimistic forecast : - 60 working places
-107 parking places
+ 6,185 m² of storage and archive spaces

Information technology should make it possible for the PCT to reduce by 126 a planned 866 working places in 2007 according to the optimistic forecast, making a corrected total of 740 working places. At present the PCT has a staff of 490.

The profitability of a conference room of either 400 or 600 seats has not been established in our investigations.

The other possible solutions for technical installations are mentioned in Chapter 6 of Part II of this report.

The risk assessment points to additional costs of 6 million francs in relation to the state of the final project as of November 2001. Those risks can be offset by the overvaluing of the cost of the additional storage space (by 6 million francs). An amount of 16 million francs should be added to the 180 million francs of the confirmed November 2001 estimate for unforeseen expenses, which brings the overall budget envelope to 196 million francs at +/-10% (SIA standard).

76. I should like finally to mention that the comments in this report have been formulated on the basis of not only the individual observations made by experts, but also their overall impressions, which impressions I share, being conscious at the same time of the complexity of such a project and the difficulties inherent in it. The same complexity is to be found in the formulation of a specification reflecting the needs of the client, and its interpretation by the architect. Apart from that, the physical distance separating the architect and the delegates clearly does not make for such an exchange of information as would enable the latter to form a better idea of the project. Having said that, I invite all the delegates to become involved in this complex, ambitious and exciting project, so that they may fully understand its qualities and continue the work that started with the 1999 competition in order to create the working facility that WIPO needs.

K. Grüter

Director

FEDERAL AUDIT OFFICE
SWISS CONFEDERATION

(External Auditor)

PART II

Report and supporting arguments

2. GENERAL

2.1 Terms of reference

77. At their thirty-fourth series of meetings, held in Geneva from September 20 to 29, 2001, the General Assembly of the World Intellectual Property Organization (WIPO) and the Assemblies of the Paris, Berne, Madrid, The Hague, Nice, Lisbon, Locarno, IPC, PCT and Vienna Unions renewed the mandate of the Swiss Government as auditor of the accounts of WIPO and the Unions administered by WIPO, and also of the accounts of the technical assistance projects executed by the Organization up to and including 2003 (see paragraph 197 of document A/34/16).
78. The Government of the Swiss Confederation mandated me, as Director of the Federal Audit Office, to audit the accounts of WIPO and of the Unions mentioned. I entrusted a qualified colleague from the Federal Audit Office with the conduct of an audit, at the Organization's International Bureau (IB) in Geneva, of the project to build the new WIPO administrative building. This audit was carried out between November 2001 and June 2002. In accordance with the recommendation of the Program and Budget Committee to the General Assembly held on September 17 to 20, 2001, the Swiss Federal Audit Office has called upon "other external experts (.....) for those areas which the external auditor judges not to be within his competence."
79. My terms of reference are stipulated in article 6.2 of the WIPO **Financial Regulations**, and defined by the "Terms of Reference Governing Audit" annexed thereto.

2.2 Subject of the audit

See Summary, paragraph 2

2.3 Information and documentation

80. I must express my thanks to all WIPO staff whom we approached for the obliging way in which they provided information and documents.
81. In the course of their work, my colleagues frequently spoke with members of WIPO management and the representatives of regional groups and Member States attending the information meetings.
82. WIPO organized five information meetings on the dates shown below. These allowed the Swiss Federal Audit Office to give frequent updates on audit progress:
- November 27, 2001 Presentation, to members of WIPO management, of the audit process and the options for the call for tenders
 - December 13, 2001 Presentation, to members of WIPO management and representatives of regional groups, of the audit process and the planning of the procedure for the call for tenders
 - February 15, 2002 Meeting to appoint the external experts, with a reminder of their terms of reference. Documentation relating to the terms of reference of all the advisers was also sent by electronic mail to representatives of Group B. Tables comparing the offers received and the audit program were given to representatives of the regional groups and to members of WIPO management at the meeting
 - February 22, 2002 Presentation, to Group B Member States, of the structure of the audit process and the proposals for appointing external experts
 - April 26, 2002 Intermediate information meeting on the progress of the various advisers' analyses, attended by representatives of regional groups and members of WIPO management

2.4 Development and structure of audit process

83. At the first information meeting on November 27, 2001, my colleagues presented the audit process for evaluating the new building, as well as the options for the call for tenders for the external experts. As a result it became apparent that the various analyses would have to be carried out by a group of technical experts as well as by an economist responsible for verifying the profitability of the conference room, with the work of the two groups being coordinated by the project manager. With regard to time limits, the option of a restricted, invitation-only call for tenders was selected, as provided for in the WIPO Financial Regulations and Rules, allowing the report to be submitted on July 1, 2002 (see reference 1). The open procedure provided for in law and in the rules governing public contracts would have shifted the time-scale back to September 2, 2002, which was not acceptable to WIPO. The program presented to the representatives of the regional groups and to the members of WIPO at the meeting in Geneva on December 13, 2001, settled on the following time limits (see reference 2):

- | | |
|--|-------------------|
| • Submission to WIPO of the list of contractors | January 14, 2002 |
| • Timescales for submitting offers (outside experts) | February 8, 2002 |
| • Meeting with representatives of regional groups and members of WIPO for appointment of experts | February 15, 2002 |
| • Start of external experts' audit | February 20, 2002 |
| • Submission of advisers' reports to external auditor | May 13, 2002 |
| • Submission of final report by the Swiss Federal Audit Office | June 24, 2002 |
| • Informal discussion within Program & Budget Committee | July 3, 2002 |

It should be noted here that all the above deadlines were met.

3. APPOINTMENT OF GROUPS OF EXPERTS

3.1 Documentation submitted for study

84. The first step for the various advisers in preparing their terms of reference was to collect and list the documentation relating to the project for construction of the new building since 1989. This specific documentation was incorporated in all terms of reference during the tender process, then submitted to the advisers for them to begin their analysis (see reference 3). This call for tenders was amended in the course of the analysis in the light of the requests and requirements of the experts (see reference 4) as well as the availability of information from within WIPO and from its contractors. I also asked to be provided with an indication of projected staff requirements, taking account of the introduction of a computerized document management system called "IMPACT" (Information Management for the Patent Cooperation Treaty). *The IMPACT project should significantly rationalize and automate the workings of the PCT (Patent Cooperation Treaty), in particular ongoing tasks relating to data capture and the publication of applications, which will translate into a 20% reduction in staff needs for the same volume of applications.* Since a number of pilot modules have been in operation since the second half of 2001, it seemed important to me that the responsible members of WIPO should inform me of their initial observations in order to take them into account in my analysis. Two reports prepared specifically by WIPO for evaluation of the new building were thus kindly made available to me. The project review adviser and the economist studied these documents extensively.

- Report 1, Needs for Office Space and Parking, April 11, 2002 (see Annex 1)

- Report II, Needs for a Conference Room, March 4, 2002

A list of all the conferences organized by WIPO since 1990 was submitted to the economist at my request (see Annex 3). The project review adviser later requested the head of the conference service to sort this list by conference type (see reference 5). Finally, I shall mention the study of all the reports of the General Assembly and the Program & Budget Committee since 1989, which was carried out by the project review adviser and the economist.

3.2 Structure of the experts' terms of reference

85. The table below (diagram 1) summarizes the mandate given to me, and the resulting studies carried out in order to evaluate the project for the construction of a new administrative building with a car park, additional storage areas and a conference room for WIPO in Geneva.

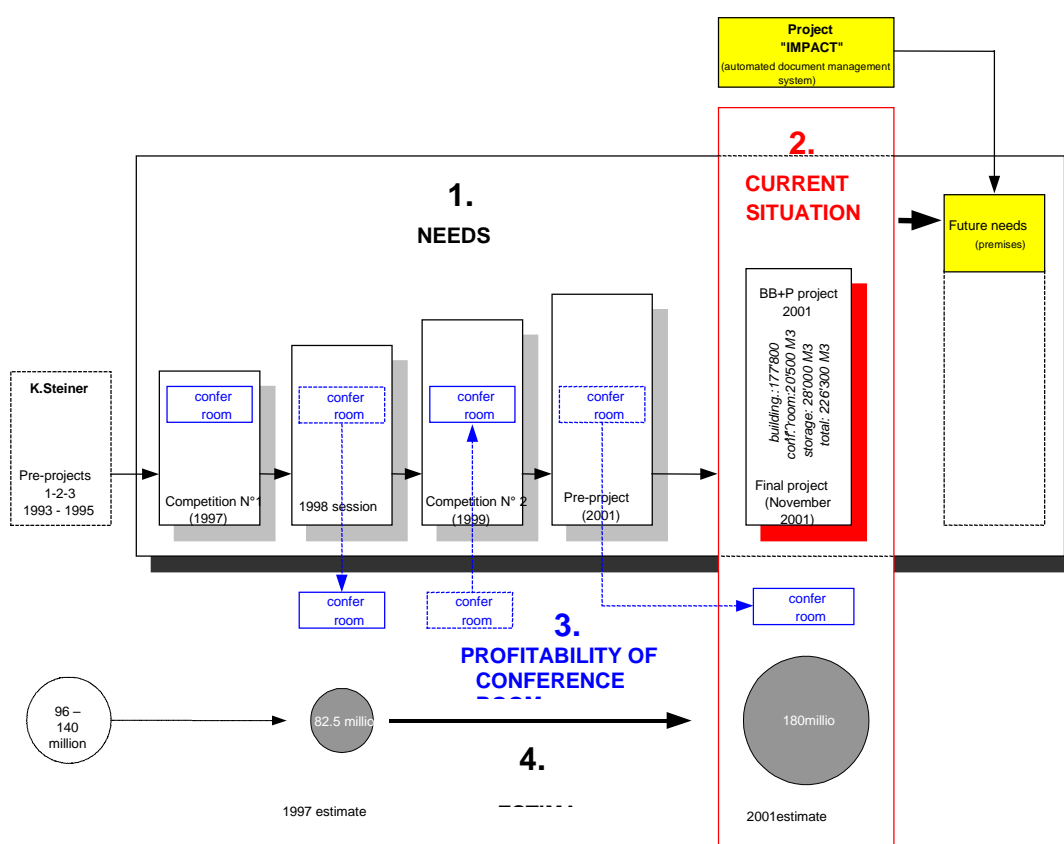


Diagram 1

86. There are four distinct areas of analysis:

- (i) Verification of needs (chapters 4.4 to 4.6)

An inventory of needs, taken from various reports of the General Assembly and of the Program & Budget Committee since 1989, but also from pre-projects, competitions and estimates from 1993 right up to the present position in 2001, was carried out and compared with the specification of the actual "final project," in order to determine whether the latter covers all WIPO's present needs. Account was also taken of the impact on the premises program of implementing a computerized document management system intended ultimately to rationalize staff needs. This analysis was part of the project review adviser's terms of reference, and allowed WIPO's future needs to be evaluated.

87. (ii) Current situation, evaluation of the “final project” (chapters 4.8 to 4.9)

An evaluation of the “final project” was carried out under the leadership of the project review adviser, with the cooperation of a multidisciplinary team including a civil engineering company, specialists in CVCS (heating, ventilation, air conditioning and plumbing), electrical engineers, a building physicist and a sound engineer. The project review adviser coordinated the management of the various technical specialists’ studies (diagram 2). I asked the various experts to structure their analysis in line with two principles: the first purely functional, the second architectural or formal. The project does indeed have two aspects: on the one hand a functional volume requirement linked directly to the client’s needs and, on the other, representative areas which are defined by the specification and the architectural language chosen by the competition winner. Particular attention was also paid to an appreciation of the structural and technical aspects of the project, the opportunities for flexible use and extension of different areas, maintenance and, of course, control of costs.

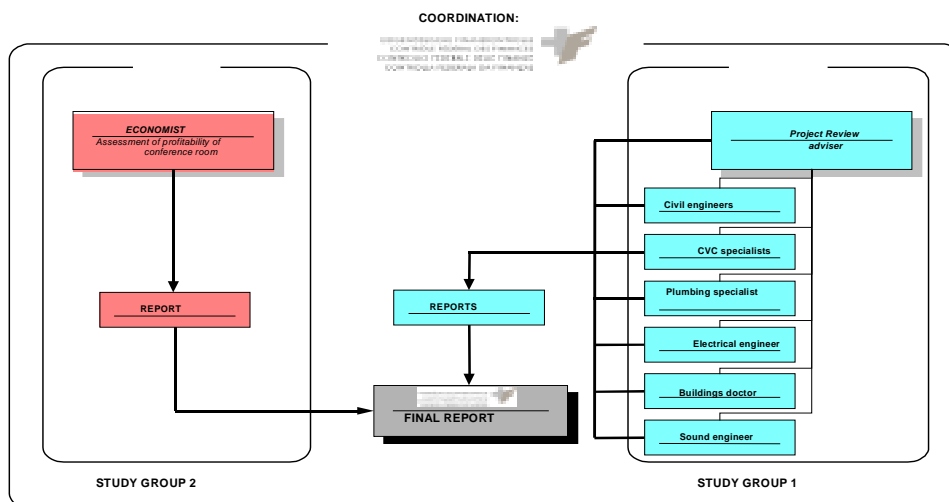
88. (iii) Evaluation of the profitability of a conference room (chapter 4.10)

Assessment of the profitability of a conference room (diagram 1) was carried out in parallel by an economist setting up the second study group (diagram 2). As a complement to this study, the project review adviser was also asked to look into future needs.

89. (iv) Verification of the various estimates (chapter 4.7)

Finally, the project review adviser reviewed the various estimates by comparing them with their respective projects (diagram 1).

90. The project manager directed this process and coordinated the two study groups. He collated the reports of both groups and drafted the final report (diagram 2).



(Diagram 2)

3.3 Call for tenders

91. The call for tenders for external experts took place between January 18, 2002 and February 8, 2002, as set out in the program. Twenty-two experts responded to the 26 invitations to tender sent. My colleague selected and interviewed 11 companies, and finally proposed the eight experts listed below to representatives of the regional groups

and members of WIPO management at the meeting to appoint the experts on February 15, 2002. This choice was accepted without modification (see references 6 and 7).

- Project Review
Tekhne Management SA
Mr Baeni, Mr Braune
Avenue de la Gare 33, 1000 Lausanne
- Civil Engineer
Fellrath & Bosso SA
Mr Bosso
Chemin de Maillefer 37, 1052 Le Mont-sur-Lausanne
- Heating, Ventilation and Air
Conditioning Engineer
Sigma Ing. Conseil SA
Mr Coutaz
Avenue de la Gare 10, 1003 Lausanne
- Plumbing Engineer
Sigma Ing. Conseil SA
Mr Coutaz
Avenue de la Gare 10, 1003 Lausanne
- Electrical Engineer
Bering AG
Mr Hofer
Papiermühlestrasse 4, 3025 Berne
- Building Physicist
Leuthe & Zimmermann
Mr Leuthe
Ruelle du Haut 4, 2500 Bienne 3
- Sound Engineer
AAB J.Stryjenski et H. Monti SA
Mr Monti
Rue des Noirettes 32, 1227 Genève
- Economist
Horwath Consulting
Mr Birr
Rue du Jeu-de-l'Arc 15, 1211 Genève 6

3.4 Budget Envelope

92. At the meeting on February 15, 2002, my colleague presented tables comparing the tenders received from the various advisers. The overall budget envelope for evaluating the new building with the advisers was estimated at 440,000 francs. Two complementary studies relating to the acoustics of the administrative buildings and to the verification of future requirements for the conference room were requested and posted to the reserve fund included in the above sum. At the time of writing, the detailed breakdown of the costs of this evaluation has not been finalized.

3.5 Analysis Program

93. An analysis program was defined and submitted to the various advisers at the first working meeting on February 20, 2002. This program sets out a framework for the studies in five phases with six coordination meetings (see reference 8):
- Phase 1 Verification of documents and study of documentation submitted February 20 to March 8, 2002
 - Phase 2 Functional and Architectural Analysis March 8 to 21, 2002
 - Phase 3 Analysis of Costs March 21 to April 11, 2002

- Phase 4 Synergies April 11 to 25, 2002
- Phase 5 Drafting of report April 25 to May 8, 2002
- Report submission May 13, 2002

4. ANALYSIS

4.1 Definition of framework of analysis (see reference 9)

Only the architect has reached the final project stage. As for the conference room, it is still at the pre-project stage.

Certain elements critical to the studies, such as the car park, are not yet complete.

94. The study refers to the November 2001 final project and estimate.
95. The documentation supplied to the various advisers at the start of their analysis caused them to question the exact status of the project phases. In fact, the documents from the civil engineer and building facilities engineer fell far short of what one might fairly expect from a final project. In order to define clearly the framework of our analysis, I had a table drawn up summarizing the contractors' contributions as at November 29, 2001, which was the date on which the estimate for the construction of the final project was submitted to WIPO.
96. The contributions of the architect as of November 29, 2001, fully cover the pre-project phase, with about 2% of the project phase remaining before the overall estimate can be finalized.
97. As the overall estimate was presented to WIPO on March 28, 2002, a month after the experts began their work, it was not included in their studies. They therefore focused on the estimate of November 29, 2001. This estimate, which according to the architects (BB&P) was accurate to +/-10%, was calculated on the basis of reference prices, not on a specification. It became clear that no proper comparison could be made between the estimate of November 2001 and the overall estimate of 2002, given that the project had evolved in the meantime.
98. Although the label of "final project" is broadly valid for the architect's contributions, the same cannot be said for the civil engineers and the special installations engineers: 40% of the work has still to be done by the civil engineer to reach the final project stage, and about 50% in the case of the electrical and CVCS engineers.
99. Moreover, even though the architect's final project document is almost complete, it is clear from perusal of the plans that the study of the conference room is at the pre-project stage at best. Also, some important elements of the project, such as the mezzanine, the study of the load-bearing structure and the car park, are not complete. More detailed study of this last part of the work could have a significant impact on the upper floors and on coordination. This will doubtless have financial repercussions (fees) and cause a planning delay.
100. Coordination between the various members of the planning team (in particular between those responsible for air conditioning, ventilation, plumbing and electrical installations) does not appear to be adequate, a fact made clear by the information brought to our notice.
101. It is a fact that the accuracy of estimates is closely linked to the state of progress of the study. Given that the architect and his technical contractors are at different stages, it is reasonable to suppose that the accuracy of the estimates is between -5% and +10% for

the architect, and between –10% and +20% for the others. The degree of accuracy of the estimates is illustrated in table 7 of paragraph 248 and in paragraph 249.

4.2 Mission

102. The areas of analysis, as described in chapter 3.2, were summarized by the project review adviser in the form of five questions (see his report, reference 10). His studies are set out in chapters 4.3 to 4.9. The observations of the project review adviser are complemented by the studies of the other advisers in chapter 4.8, relating to the analysis of the final project. Finally, chapter 4.10 analyses the findings of the economist and the project review adviser on the profitability of the conference room and adds six further questions concerning the room in addition to those shown below.

(i) Verification of needs

- *What are the current terms of reference?*
- *How did the specification evolve over time?*

(ii) Evaluation of the final project

- *Does the future building meet WIPO's needs?*
- *Are the planned costs reliable?*

(iii) Assessment of the profitability of a conference room:

- *Is a conference room profitable at all?*
- *What is the variability of the number of participants in WIPO meetings?*
- *What number of seats meets WIPO's current and future needs?*
- *What would be the ideal capacity for the conference room?*
- *Should it be possible to divide the room?*
- *What amount would have to be invested?*

(iv) Verification of the various estimates:

- *How was it that a budget of 82.5 million became an estimate of 180 million?*

4.3 Context and WIPO Objectives

The role and importance of WIPO continue to grow

103. WIPO observes that the current trend is towards an increased role for intellectual property in a number of areas, including the economic, the cultural and the social. WIPO believes that this trend will continue and even increase over the next ten years.

104. This trend, as one would expect, is accompanied by a considerable increase in applications for patent registration. Although not in proportion to this increase, WIPO staffing levels have grown markedly in recent years, rising from 650 in 1995 to almost 1300 at the end of 2001. Latest forecasts of staff numbers show an acceleration of this growth, despite the introduction of computerized methods.

The Organization wishes to open up more to the public

105. Moreover, WIPO has resolved to demystify intellectual property rights through a campaign of awareness and communication aimed at making the intellectual property

system and the Organization more accessible to the public (in line with the objectives set out in WIPO's "Future Vision" document). The planned new complex must also be part of this openness campaign.

The new building must symbolize WIPO and should be modern, functional and economic

106. Based on various official documents, the overall objectives set by WIPO for its new building can be summarized as follows:

The World Intellectual Property Organization (WIPO) wishes to create on a single site a coherent architectural complex that meets the operational needs of the Organization and responds to the constant development of its activities. The objective of the competition is not to construct a building alongside the current headquarters, but to create the urban image of a unique architectural space that symbolizes WIPO.

107. Extract from the rules of Competition No. 1: WIPO plans to create a complex of buildings of high architectural quality that will facilitate its activities and make use of 21st century technology. The projects must take account of the objectives of the organizer, namely the creation of a complex of buildings with the following characteristics:

- *Technical intelligence*
- *Respect for the environment*
- *Functionality, convenience, economic rationality, energy efficiency, technological efficiency*
- *A pleasant environment for workers and visitors*

108. Extract from the rules of Competition No. 2:

Moreover, in a reference document relating to the construction of the new building (WO/GA/23/5 of July 29, 1998), WIPO describes its objectives as follows: The new office building will therefore need to provide at least 500 working places, and must be a functional, utilitarian, modern and fully operational building designed to answer the precise needs and functional requirements of the Secretariat while, at the same time, offering maximum flexibility so that the modular working places could be re-arranged to enable future needs to be accommodated. This building will incorporate the latest information technology facilities, including high bandwidth cabling throughout the building and video-conference and other electronic conference facilities, so that staff can make maximum use of information technology in their work, thereby enabling them to work in the most efficient and productive manner; this is particularly important in the context of WIPO's computerization and information technology oriented projects. Through the effective use of information technology and new ways of using space, the building should allow for the possibility of accommodating larger numbers of staff in the future. The building can therefore be characterized as being an "intelligent" and operational building (the building should also be "intelligent" in incorporating the latest building technologies, to be environmentally adaptable and energy-efficient).

109. Summary of the judgement of the competition: *The successful project is the one that most clearly reflects WIPO's future vision. It is modern and respects the most important ecological aspects – it is a project for a new generation. The building is neatly integrated in the site, in that it takes advantage of the existing landscape and brings the outside world into the building. The open space devoted to offices is the most flexible of all the elements and it will be a pleasure to see it unfold. The ground floor gives an impression of movement and fluidity, thanks to the way the various areas are combined, and its general configuration emphasizes the importance of the location.*

4.4 Changes in needs and buildings inventory

4.4.1 Changes in needs between 1993 and 2001

Needs expressed in terms of working places depend on the available buildings

110. The need for working places on the “Steiner lot” has always been closely linked to the planning of this development and to the buildings at WIPO’s disposal (whether owned or rented). (See table 2 in reference 10 “Inventory of buildings used by WIPO as of April 11, 2002”). In fact, in order to know what the specification of the new building was at any given date, one would also need to know what buildings were available to WIPO at that time.

WIPO acquired or rented various additional buildings between 1993 and 2001. WIPO’s February 2002 forecast of a need for another 500 working places remains valid in view of the increase in staff numbers.

111. From 1993 to the present day, the following salient facts need to be considered:

- In 1993, WIPO decided to buy the WMO building and to convert it (450 additional working places from 2003),
- In 1995, WIPO decided to enlarge the BIRPI building (120 additional working places),
- In 1995, WIPO decided to rent the whole of the Procter & Gamble building apart from one floor (430 additional working places)

112. These factors demonstrate that it is not possible to compare the 1993 specification with that of 2002, since the available buildings had changed considerably. On the basis of various forecasts done by WIPO at regular intervals, we can see the following changes:

Summary of forecast staffing levels for the years 2005 to 2007:

Date of Forecast:	2005	2006	2007
August 1994	1152		
March 1996	1215	1275	
July 1996 (Sugden)		1300	
February 1997 (STG)	1215	1300	
February 1998	1238	1300	1361
September 2000	1565	1643	1725
April 2002			1778

Sources: WIPO documents

Note: the figures mentioned do not include a reserve of 5% normally required according to WIPO in order to assign working places correctly

113. Thus between 1994 and 2000, the staffing forecasts for 2005 increased by 36% (from 1,152 to 1,565), for 2006 by 29% (from 1,275 to 1,643) and for 2007 by 31% (from 1,361 to 1,778). Forecasts done since 2000 show a considerable increase in staffing levels for the year 2007, despite the introduction of new computer resources.

4.4.2 Buildings inventory (see reference 10, table 2)

114. The inventory of buildings used by WIPO was based on information contained in report 1 of April 11, 2002 (Report 1, Needs for Office Space and Parking, April 11, 2002), as well as on various information contained in minutes of the Premises Committee. Today WIPO has 1,589 working places available, to which 450 places under construction in the former WMO building will be added in 2003, making a total of 2,039 spaces, including 1,010 (50%) owned by WIPO. In addition, there are currently 1,028 parking places, plus 180 currently under construction, making a total of 1,208 available places, including 419 (30%) owned by WIPO.

4.5 Latest Staffing Forecasts

The latest available staffing forecasts are contained in report 1 of April 11, 2002 (Report 1, Needs for Office Space and Parking, April 11, 2002).

Despite the introduction of the IMPACT system, the rise in staff numbers seems inexorable: they have gone up again in the latest forecast.

In summary, the latest WIPO forecasts are based on the factors listed below:

115. WIPO observes that the current trend is towards an increased role for intellectual property in various areas, particularly economic, cultural and social. WIPO believes that this trend will continue and even increase over the next ten years. The number of parties to the various WIPO treaties has increased considerably.
116. The PCT system is growing rapidly: the number of applications increased by 16% per annum between January 1996 and December 2001. The "optimistic" growth in staff numbers, which is not in proportion to the growth in applications, takes into account an annual factor of 11.5% in 2002, declining to 7.9% in 2007. This "optimistic" forecast implies an increase in PCT staff from 490 today to 866 in 2007.
117. The IMPACT program should allow a saving of 23% in staff numbers following its introduction, according to a study by Deloitte and Touche in 1998. This corresponds to a reduction of 126 places in 2007 ("optimistic" growth), or a corrected total of 740 PCT places.
118. Madrid system: this system has a good chance of being extended to other geographical areas. Indeed the accession of the United States to this treaty could create "major unplanned growth" in the near future. This growth could double the number of international registrations filed.
119. Forecasts of the number of employees for the Madrid and The Hague systems are based on growth rates ranging from 3.2% (pessimistic) to between 4.3% and 12.8% (optimistic), equating to staff numbers of between 114 and 146, compared with the current figure of 90.
120. In addition to the office needs for WIPO employees, the WIPO buildings must also accommodate external services (e.g. travel agency, restaurant management, security guards and other WIPO sub-contractors), as well as employees of UPOV.
121. Another factor to be borne in mind is that WIPO believes that a sensible allocation of working places requires a reserve to be added of 5% of the total number of places.
122. Table 3 in reference 10 summarizes the staff forecasts for the year 2007. Although these forecasts are hard to verify in the light of the ever-changing IT situation, it seems to us that the bases of calculation can be considered reasonable, even in the optimistic forecasts.
123. The growth rates are in fact cautious, even in the "optimistic" forecast, and do not take account of the difficulties inherent in the introduction of new computer systems, or of the likelihood of paper-based and IT systems existing side by side for an unknown length of time.

4.6 Present terms of reference

In the light of the latest WIPO forecast, the terms of reference for the year 2007 may be summarized as follows:

4.6.1 Staff

124. A staff strength of 1,778 is planned for 2007, which corresponds to a requirement of 1,866 working places, taking account of the need for a 5% reserve. If only the buildings owned by WIPO are included, the needs of the Organization in 2007 can be summarized as follows:

	Optimistic Forecast	Pessimistic Forecast
• Forecast staff level (including reserve):	1867	1622
Spaces available in WIPO-owned buildings:	1010	1010
Working places required:	857	612

125. In the optimistic forecast, the new building will not meet this requirement. However, by continuing to rent the greater part of the P&G building, the number of working places needed in the new building will be:

	Optimistic Forecast	Pessimistic Forecast
• Working places required:	857	612
Spaces rented from Procter & Gamble:	430	0
Working places required:	427	612

126. The pessimistic forecast presupposes WIPO discontinuing rental of the Procter & Gamble building and accommodating all staff on its own premises after the construction of the new administrative building. The need for working places is therefore between 427 and 612, which corresponds to an average demand for 500 working places.

4.6.2 Parking places

127. WIPO estimates that 80% of its employees require a parking place. Once the renovation of the former WMO building is complete, WIPO will have in its own buildings 395 basement places and 24 outside places for visitors.

128. On the basis of the staffing forecasts for 2007, the requirement for parking places can be estimated as follows:

	Optimistic Forecast	Pessimistic Forecast
• Parking places required (staff numbers without reserve x 80%):	1,422	1,236
Spaces available in WIPO-owned buildings:	395	395
Parking places required:	1,027	841

129. Taking account of space rented in the Procter & Gamble building, immediately adjacent to WIPO, the number of parking places required in the new building can be justified as follows:

	Optimistic Forecast	Pessimistic Forecast
• Parking places required:	1,027	841
Spaces rented from Procter & Gamble:	275	0
Parking places required:	752	841

130. Taking account of spaces currently rented in the Parking des Nations, immediately adjacent to the site, the need would be:

	Optimistic Forecast	Pessimistic Forecast
• Parking places required:	752	841
Spaces rented in the Parking des Nations:	238	238
Parking places required:	514	603

Note: These figures do not take account of the periods when delegates are in Geneva.

131. The requirement for parking places in the new building can therefore be estimated at between 514 and 603 places. However, the ratio of 80 parking places per 100 employees seems extremely high for an urban site, in an area well served by public transport, 15 minutes' walk from the station. Also, the imminent opening (in 2003?) of tram route No. 13 will improve the situation still further. By way of comparison, the new WMO building has 410 parking places for 625 daily working places and 250 temporary working places during conferences, which corresponds to 66% of the working places. At a rate of 66%, the requirement would be for 265 places in the optimistic forecast, and 387 places in the pessimistic forecast (in which the Procter & Gamble building is not rented), which seems more realistic.

4.6.3 Storage space requirement

132. This element of the program is difficult to quantify. Document WO/GA/23/5 of July 29, 1998 speaks of an extension of the present WIPO car park that would allow 280 places to be added for delegates and visitors at conference times. This car park, although mentioned in the introduction to Competition No. 2, is not described in terms of area and capacity. What is more, it does not appear in the winning design. However, these areas are found in the final project, but their intended use is put as storage, whereas the need for this type of area is not specified anywhere. We infer from this that the storage area could one day be converted into a car park, thereby acceding to the requests of Member States. Apart from this large area, storage needs are defined in the rules of Competition No. 2.

133. Parking places for delegates

When they are present in Geneva, delegates attending WIPO conferences use other forms of transport (city buses, shuttle buses, taxis) rather than private cars. The need to provide a dedicated car park for this category of temporary visitors has yet to be proved, and would require examination in greater depth.

4.7 Evolution of the projects

4.7.1 History

After a detailed study of the various projects, it must be said that they are not all comparable, owing to the lack of information relating to some of them. However, the following chronology can be established:

134. 1989

One of the first preparatory meetings on the construction of new premises put forward a cost of 1,000 francs per m³ and a volume to be built of 130,000 m³, making an investment of 130 million francs.

The net comparative area changed from 16,184 m² in the Steiner project of 1995 to 26,897 m² in the November 2001 final project.

135. 1995

The Steiner project was costed at 96 million francs in its full version, i.e. with linking footbridge and a fourth basement level. Its net comparative area was 16,184 m². Advanced contacts took place between WIPO and the Steiner company with a view to carrying out this project as a **joint enterprise**.

136. 1997

STG/Coopers-Lybrand estimated however that the cost of this work was too high and reduced it in its calculations from 764 francs per m³ to 550 francs per m³. WIPO's consultant architect assessed at that time the possibility of creating a new conference room close to the existing one. The budget was estimated at 12.5 million francs. He also assessed the possibility of doubling the capacity of the existing basement car park for delegates. The budget for this 290-place garage was estimated at 7.9 million francs.

The budget of 82.5 million francs was underestimated, as a result of conflicting information from different studies.

137. 1997

It appears that WIPO worked out a budget of 82.5 million francs on the basis of different information calculated by Steiner, STG and its consulting architect, broken down as follows:

International architectural competition	1.5 million
Establishment of detailed specification	2 million
Construction and connecting up of new building	46 to 51 million
Furniture and equipment for the new building	5 million
Construction of the new main conference room	12 to 15 million
Construction of additional car park	8 million

74.5 to 82.5 million

138. 1997

The first exhaustive specification was worked out in 1997 with a view to launching an architectural competition. The net comparative area was then 13,889 m². This competition was subsequently abandoned.

139. 1998

WIPO purchases the Steiner lot.

140. 1998

A second specification was drawn up with a view to launching a second competition. The net comparative area was now 20,579m², or 6,690 m² more (see table in paragraph 151) than in Competition No. 1 (without taking account of the increase in area caused by the increase in the conference room to 600 seats and the additional car park). The contestants' plans had to comprise three parts: an office building, a 600-seat conference room and an extension of the basement levels of the current headquarters (delegates' car park).

141. 2000

In March, the independent panel awarded first prize to BB&P. The successful project had a net comparative area of 22,431m² and was below average for the projects presented, both in terms of gross floor area and built volume. It should be noted that at this stage the project planned to incorporate the conference room in the overall building. Also, the winner did not mention the third element of the program, which was the car park for delegates (which doubles the size of the existing building's car park).

142. 2001

In August, BB&P drew up a pre-project in which the conference room was removed. This project included a separate room as well as a delegates' car park that had become an "independent storage area." The net comparative area was now 29,004m². In November, BB&P submitted its final project, which forms the basis of the document submitted for our scrutiny. The net comparative area was now 26,897m², or 6,318 m² more than in Competition No. 2 (see table in paragraph 152).

4.7.2 Net comparative area of the various projects

Note: Net comparative area means the net area allocated to the whole of the program, excluding the conference room and the car park. This area is the only reliable comparator that can be identified in all the projects.

143. Table of net comparative area for each project:

	Net m ² (exc. conference room and car park)	%	Net m ² (inc. conference room and car park)
Steiner Project version C (1995)	16,184	100	23,034
WIPO estimate (1997)	Not available		Not available
Competition No. 1 (1997)	13,889	86	Not available
Competition No. 2 (1999)	20,579	127	Not available
BB&P winning project (2000)	22,431	139	34,841
BB&P pre-project (2001)	29,004	179	34,929
Current project (11/2001)	26,897	166	32,581

4.7.3 SIA volume of the various projects

144. Table of SIA volumes for each project:

	SIA m3 complete project	%	
Steiner Project version C (1995)	135,487	100	
WIPO estimate (1997)	122,650	91	
Competition No. 1 (1997)	Not available		
Competition No. 2 (1999)	Not available		
BB&P winning project (2000)	166,400	123	
BB&P pre-project (2001)	231,368	171	
Current project (11/2001)	226,278	167	

The table above allows a comparison between the various projects for the new plot, highlighting a difference between the volume in the WIPO estimate of 1997 and the final project in 2001 of +103,628m².

4.7.4 Changes to the specification since 1997

145. Comparison of projects selected in the 1999 Competition:

Analysis of the various projects shortlisted in the final round by the panel in Competition No. 2 shows that the BB&P project is below average in terms of built area (BA), gross floor area (GFA) and built volume (BV). It should be noted that the BV is not the same thing as the SIA volume, which adds to it a certain number of extras according to the account of the volumes.

146. 1997 specification (Competition No.1):

It was specified that the building should offer at least 450 working places, representing 924 modules of 135cm x 550 cm, a 400-seat conference room divisible into two rooms of approximately 250 and 150 seats respectively, and three meeting rooms of 40 seats each for consultation and meeting preparation.

147. Specification drawn up by STG Coopers & Lybrand (February 1997):

This report provided some interesting pointers on the ratio of net/gross area per employee. It also added to the 1996 Sugden report by allocating areas to Mr Sugden's staffing forecasts. This report also contained a sheet relating to the building project on the Steiner lot, which mentioned a sale price of 77 million francs, whereas STG estimated the project value at no more than 55 million francs. It seems that this corrected figure was one of the factors that influenced WIPO in its financial estimates for the future building.

148. 1999 specification (Competition No. 2)

The Competition stipulated that "the complex of buildings shall comprise":

- an office building
- a conference room with annexes (...)
- extension and remodelling of the lower floors of the main WIPO building (...)

149. It was desired that the new conference room be located in the immediate vicinity of the present ones, but in fact that was left to the discretion of the contestants. Even so, it is reasonable to assume that since the contestants had to respect the local district plan (PLQ), which did not provide space for a separate room, they integrated this room in the main building.
150. Moreover, the introductory paragraph of this document left room for an additional car park program that is not explicitly stated anywhere in the rules.

4.7.5 Changes to the program between the Competitions and the November 2001 final project

151. Differences between Competition No. 2 and Competition No. 1:

Program	Net area (m ²)	Comments
Increase in the number of working places from 450 to 500 and increase in the average area per working place (A)	2,527	1,285 modules instead of 924, i.e. 361 extra modules of 7m ² . The increase in area is greater than the increase in working places
Capacity of conference room increased from 400 to 600 seats (B01)	(350)	WO/GA/23/5 (para.23). Estimated additional area not added
Addition of one extra press room	30	
Increase in the size of the preparation area (B.10)	20	
Increase in the size of the cloakrooms (B.11)	20	
PC area for delegates (B.13)	150	
Secretariat for conference rooms (B.14)	77	
Reduction in size of reception area (C.02)	-30	
Addition of an exhibition area (C.07)	100	
Addition of a library and reading room (C12)	500	
Increase in kitchen staff cloakroom (E.17)	15	
Addition of basement storage areas (E.17)	3,000	
Addition of staff welfare facilities (E31)	400	
Motorcycle places		100 places
Bicycle places		100 places
Addition of extra car park for delegates (280 spaces)		WO/GA/23/5 (§35)
Various fluctuations	-119	
TOTAL NET ADDITIONAL M²	6,690	Not including additional car park and motorcycle and bicycle places

Numbers refer to the program of Competition No. 1

152. Differences between the “final project” program and Competition No. 2:

Program	Net area (m ²)	Comments
Reduction in number of offices (A)	-2,009	998 modules instead of 1,285 specified, i.e. 287 fewer modules of 7m ² .
Removal of one meeting room adjoining the main room	-60	
Addition of a separate kitchen for the main room	160	Due to the new positioning of the main room
New computer area	165	
New registration area	30	
New Chairman's cloakroom	65	
Reduction in size of entrance room	-150	
Removal of security staff area	-25	
Increase in exhibition areas (C.07)	250	
New show area	270	
Infirmary converted to medical center (C.10)	180	
Increase in area allocated to various storage facilities	613	
Increase in archive areas (E.27)	1,700	
Increase in storage areas (E.30)	4,485	
Various fluctuations due to normal evolution of the project	644	
TOTAL NET ADDITIONAL M²	6,318	

Numbers refer to the program of Competition No. 2

4.8 Analysis of the November 2001 final project

4.8.1 Project review

153. Principal characteristics of BB&P's final project, November 2001:

Net comparative area:	26,897 m ²
Total net area:	32,581 m ²
Gross floor area (GFA):	51,355 m ²
SIA volume:	226,278 m ²
Number of working places:	429 to 569
Number of parking places:	13 places for suppliers 280 places for staff
Restaurant:	300 seats
Cafeteria:	300 seats
Conference room:	600 seats
- Divisible into:	280 seats/320 seats

The net comparative area increased from 20,579 m² in the Competition specification to 26,897 m² in November 2001. At the same time, net office space fell from 9,560m² in the Competition specification to 7,749m² in November 2001.

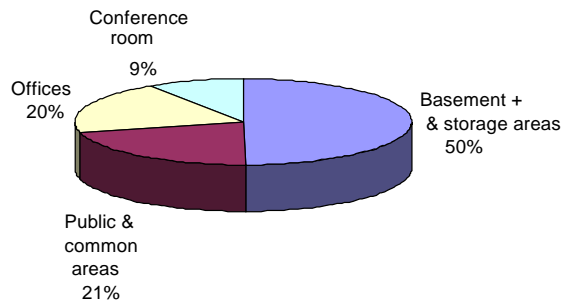
The number of office modules has thus been reduced from 1,285 at the time of the Competition to 998 in November 2001. This elimination of 285 modules corresponds to a potential shortfall of about 140 offices at 14m².

Examination of the plans gives rise to the following observations:

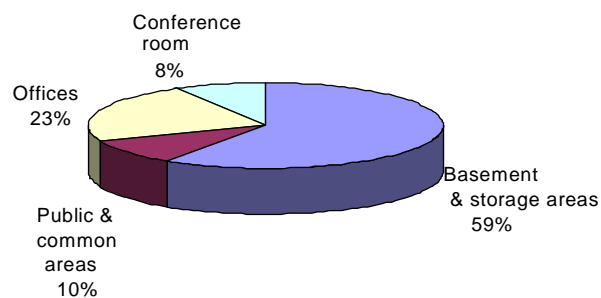
154. From the time of the Competition, the BB&P project stood out because of the decision to integrate the exterior and interior of the building. This is achieved particularly by the "free" ground floor, which simulates hills and a forest (of pillars). This volume occupies two floors containing the "representative" areas of the building.
155. On an unspecified date in 2001, at WIPO's request, the conference room was removed from the main volume calculation to become an independent feature located close to the present headquarters. Petitions made by WIPO (represented by their consultant architect) to the authorities made this situation possible, although at the time of the Competition it was still uncertain. It should be noted that the volume of the new building without the conference room remained the same.
156. The present architectural project achieves WIPO's expressed objective of opening up the organization, as summarized in the introduction to this document.
157. Architecturally, the new building is divided vertically into three distinct units:
 - the car park with its own building structure
 - the "free" ground floor
 - the "conventional" office floors
158. Despite this apparent simplicity, the superposition of these different albeit traditional activities creates structural constraints that make little sense. Owing to the stairwells and lifts on the upper floors, the car park does not have an optimum layout and has a very large area for each parking place (38m² per place, rather than the normal 25m²).

159. The spiral configuration within the car park and the design of the access ramp make circulation of vehicles at peak times difficult.
160. The entirely open areas on the ground floor raise various questions regarding the ambient climate (large open areas allow odours, noises and draughts to circulate on the office floors). Resolving these issues could have significant financial implications (see the report of the sound engineer on this topic, reference 17).
161. Currently, data relating to the mezzanine are partially incomplete and do not allow costs to be verified.
162. The design of the ground and mezzanine floor areas derives from the architectural concept of "outside spaces." Following the removal of the conference room, these areas seem out of proportion to their actual use, even for what are called representative areas. This substantially increases the ratio of area (and volume) per working place, and upsets the economics of the project.
163. The number of modules at 7m² allotted to offices went from 1,285 units in the specification of Competition No. 2 to approximately 998 now, i.e. a potential reduction of 140 working places. The office floors are laid out in individual offices, but with a few adjustments, it would be possible to add some group offices. Apart from the possible reassignment of some relaxation areas as offices (approximately 30 working places), the project does not have any other areas in reserve.
164. The stairwells and the service areas are arranged at the front of the building, which gives a more vibrant appearance but also takes away areas that are ideal for working places.
165. The security zones requested by WIPO are not completely identifiable and seem to conflict with the "dispersed" layout of the lifts and stairwells.
166. The load-bearing structure of the offices reveals several offset elements in the framework, which seem to owe more to architectural concepts than functional necessity.
167. The conference room also gives the impression of having more to do with architectural concepts than the specification. By way of proof, the division of the room does not correspond to the original request and visibility is not ideal for some participants and for the translators.
168. The third element of the program has been converted from a car park to an independent storage area, although to date no document has indicated to us why this should be necessary.
169. On analyzing the overall project, one notes that what are called the "secondary volumes" (car parks, storage areas, etc.) have become greater than the volumes set aside for "primary" needs (offices, conference room), although the latter were the original reason for which the building was to be constructed. The volumes devoted to the representative areas (restaurant, mezzanine, reception areas) should be stressed. The tables below illustrate this observation.

170. Table 6. Allocation of SIA volume



171. Table 6 bis. Allocation of gross floor area



4.8.1.1 Fulfilment of the specification

The present status of the final project suggests that WIPO's needs will be met in the optimistic version, with the P&G building continuing to be rented. In the case of the pessimistic version, which should allow needs to be met without having to rent the P&G building, needs will not be covered by the new building.

172. Working places

As mentioned above, the number of working places in the new complex by 2007 will be between 427 (optimistic version) and 612 (pessimistic version). In the optimistic scenario, WIPO would have to continue to rent the P&G building, while in the pessimistic scenario, it is feasible to accommodate the entire staff of WIPO in its own buildings.

173. Analysis of the plans of BB&P's final project shows a number of working places between 429 and 569. Type A.4 offices (five modules of 7 m²) do not figure in the plans and are probably replaced by offices of type A.3 (four modules of 7m²).

174. It should be noted that the figure of 569 working places is only achieved by compressing occupancy, that is, by accommodating four people in a type A.4 office instead of one and three people in a type A.3 office instead of one. Given the disappearance of the A.4 offices mentioned above, the figure of 569 would have to be reduced to 554 working places at most.

175. The real office capacity of the new complex can therefore be put at between 429 and 554 working places (an average of 500 places), which would be sufficient to meet needs in the optimistic scenario, but not in the pessimistic, which would have a shortfall of 60 places.

176. It should be pointed out that closer studies of the plans of the final project reveal a capacity of about 1,000 office modules of 7m², whereas the specification of the competition called for 1,285. There is no document that affords any explanation of this step.
177. Conference room
The room does indeed have a capacity of 600 seats. However, its subdivision has been changed from 150/450 (in the Competition) to 280/320, on an unspecified date and for an unspecified reason.
178. Storage areas
These are considerably larger than stipulated in the specification. Thus the archives comprise an additional 1,700m² and the storage areas a further 4,485m². In our view, this major difference can only be explained by a future reassignment of certain areas as parking space, in response therefore to the original demands of Member States.
179. Parking places
As mentioned above, the number of parking places in the new complex should be between 265 (optimistic version) and 387 (pessimistic version). For the record, it should be noted that in the optimistic version WIPO continues to rent the P&G building, which contains 275 parking places.
180. Since the new complex allows for the addition of 280 extra places, the needs of the optimistic version are covered, whereas in the pessimistic version there is a shortfall of 107 places. These could be found by reducing the excess storage areas.

4.8.2 Civil engineer

181. The documents made available for this audit were those showing the status of the project as of the end of November 2001, which corresponded to 100% of the pre-project contributions and 60% of the final project. The remaining 40% will allow the initial estimates to be finalized.
182. Analysis of the load-bearing structure of the new building and the additional storage has enabled us to confirm the choices made by the civil engineering contractor.
183. The methods accepted for the surrounds of excavation and the excavations themselves appear suitable, given the types of terrain and the environment. The load-bearing reinforced concrete structure consists of floor slabs supported on pillars or cross walls. This choice is economical and gives great flexibility for the internal arrangements. However, the positioning of some of the pillars which are not centered could cause complications and incur extra cost.
184. The positioning of parking places on levels -3 and -2 is dictated by the structure of the upper floors. Although some loads have been spread by means of crossbeams in the floor on the first basement level, we note that traffic movements in the car park are awkward and would require additional analysis.
185. As for the conference room, the documents in our possession indicate that the project is not as far advanced as the other two parts of the work. The plans seem to indicate that the load-bearing structure of the roof consists of a framework of non-rectilinear metal beams. This seems to be a good choice, given the expressed architectural wishes. The level of detail does not allow an accurate estimate of construction costs, so a broader approach, based on a price per m³ in other similar projects, needs to be considered in order to verify the overall budget for this feature, estimated at approximately 28.2 million francs.
186. As for costs, the adviser provided an estimate in summary form of all the civil engineering costs for the new building, the additional storage areas and the conference room. The figure of approximately 40 million francs, estimated by the BB&P architects, was confirmed to within approximately 10-15%.
187. The additional storage areas were also taken into account when estimating the three main headings (surrounds of excavation, the excavations themselves, concrete and reinforced concrete structures). The total cost of the work estimated by the contractors

in November 2001 was approximately 11.5 million francs. Compared to the expert's estimates, this figure is over-valued by about 30%. The work to protect the surrounds of excavation and the excavations themselves is over-valued by about 40%, and that for the concrete and reinforced concrete by about 25%.

188. The mezzanine at ground-floor level, the removal of floor slabs on the first floor, the excessive thickness of the slabs in places on the second floor and the crossbeams on the first basement level are the effect of the chosen architectural concept. The additional cost of these specific elements can be put at approximately 1 million francs.

4.8.3 Heating, ventilation and air conditioning (CVC) Engineer

189. The documents made available to the expert did not allow him to identify the chosen energy design, which must reflect the latest standards in technical know-how. The studies demonstrated that the standards proposed for heating and cooling do not meet WIPO's wish that the latest in building technology be used. There is thus no correspondence between the image of modernity created by the architectural design of the planned project and that provided by the heating and cooling systems. For example, the air curtain technique, used at the entrances of shopping centers some 20 years ago to keep out the cold is no longer in common use. Similarly, the decision to use a four-pipe ventilator-convector design with cooling by ventilation does not conform to current standards for an office.
190. The CVC (Heating, Ventilation and Air Conditioning) expert also deplores the lack of synergy with the heating and cooling systems of the existing building.
191. Comparison of CVC equipment costs was made by reference to two buildings in Geneva, namely the HCR and WMO buildings. This comparison was expressed in terms of the cost of an office module. The costs of the WIPO installations were thus seen to be 43% higher than in the reference buildings. This significant difference may be explained by the demands of WIPO (flexibility, individual CVC control of each office, glass façade), as well as by the chosen climatic design (ground-level convector, cold ceiling, forced air, extraction by superpressure in the reception areas), which is the most costly option. An active floor design (where the floor ensures basic heating in winter and basic cooling in summer) would be less costly and ought to be considered.
192. A new study of the climatic design of the conference room should be undertaken. It is important to analyze whether it is wise to use ventilation for all heating and cooling demands, since conveying energy (for heating or cooling) using air is costly. As for the conference room, the costs of the air-conditioning installation are 10% lower than those of the reference building (Salle William Rappard).
193. Regarding the extra storage areas and the small amount of heating to be installed, the cost of this installation should not exceed 0.5 million, although it is put at 0.7 million in the November 2001 estimate. The airflow calculation should also be revisited.
194. The information supplied in relation to the November 2001 project was not what one would expect to receive for a pre-project. Also, the documents we consulted in relation to the overall estimate were also more in keeping with a pre-project than a final project. Moreover, a lack of coordination was noted between the various contractors.

4.8.4 Building physicist

195. With its outer fabric of huge glass bays, the building corresponds to the architectonic idea of how a modern administrative complex should look. The same goes for the large covered reception areas. These qualities have already been recognized by the Competition panel.
196. From the physical point of view, the structural design of the project conforms to the ideals of compact form and having the load-bearing structure located on the warm side of the building's insulated shell. The solar protection on the outside is also worthy of positive comment.
197. The heat insulation of the project meets legal requirements. However, as regards power consumption for heating and cooling, it is not exemplary. In fact, legal requirements are only just met as far as the administrative building is concerned, while the conference room actually falls 10% below them. For the project to be exemplary, standards such as

the Swiss "MINERGIE" standards would have to be applied in order to guarantee an optimum level of comfort while being economically competitive and using energy resources rationally.

198. The large glazed areas on the façades and built into the ceilings of the common areas will be a source of discomfort in both winter and summer. These can however be remedied with appropriate heating and cooling installations, although this does involve higher installation and power costs. In fact, given the large expanses of glass, it has to be expected that the additional power consumption for heating and air conditioning will exceed 10%.

- In winter A feeling of cold caused by the radiation of body heat against the large, relatively cold window areas

 Internal air circulation (draughts) caused by falling air chilled by contact with the glass roofs

These problems can be avoided by placing heating equipment under the glass surfaces.

- In summer Overheating due to solar radiation

199. The heating, ventilation and air conditioning engineers recognized the problems and analyzed them using complex programs simulating the building's power consumption. The external solar protection greatly contributes to reducing this problem.
200. Buildings with huge expanses of glass (more than 30% of the façade) represent a large proportion of new buildings in Switzerland. Owners, authorities and planners are currently very sceptical, since a number of buildings have been built that have not been high on comfort or energy efficiency. This is why the Federal Energy Office (OFEN) has ordered a research program with the object of establishing regulations for structures with huge expanses of glass. The initial results are known, but have not yet been published. It is strongly recommended that planners make contact with this study group in order to benefit from the results of their research (see reference 16).
201. From the physical point of view, the structural design of the conference room conforms to the ideals of compact form and having the load-bearing structure located on the warm side of the building's insulated shell. The solar protection on the outside is also worthy of positive comment. Compared with a traditional shape, the dual-curve free form incurs additional costs.

4.8.5 Plumbing engineer

202. The adviser notes here too a mismatch between WIPO's desire for a design based on the concept of the latest in technology and the standard proposed for the plumbing installations. It would therefore be advisable to carry out more detailed investigation, jointly with the CVC engineer, into hot water production for the plumbing installations. In fact, heat recovery on kitchen refrigerators and air conditioning refrigerators, use of solar power and decentralized hot water production are all options that reflect the latest standards in plumbing technology.
203. The number of plumbing installations on the office floors is higher than the norm. Also, fire hydrants have been provided in conjunction with a sprinkler system (spray nozzles which trigger automatically when the ambient temperature reaches a certain point). This overlap serves no purpose, since if fire hydrants are installed there is no need for sprinklers, and vice versa. With this in mind, a cost reduction of 15% could be achieved.
204. As regards the next phases of the project, it is important to establish a design for hot water production for the plumbing installations which reflects the latest know-how. The number of plumbing installations should also be reviewed in conjunction with the architect's office, the fire protection system should be defined precisely, the usefulness of the water recovery system in the conference room should be reviewed, the standard

of the professional kitchen should be defined and finally the costs arising from these proposals should be revisited.

205. As regards the progress of the planning for plumbing installations and coordination between contractors, the same observation can be made as for the CVC installations (paragraph 194).

4.8.6. Electrical engineer

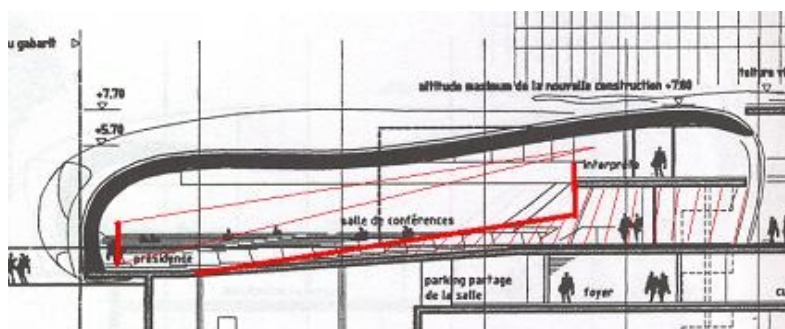
206. Defining the design and finalizing the client's requirements form the basis of the work that drives the implementation of a project. This is a very important phase, which must be carried out from the outset of the study and planning activity. Apart from the document "Non-Exhaustive Questionnaire on Electrical Installations at the Pre-Project Stage" of June 2001, the expert does not know whether other such documents were produced.
207. At this stage of the project, various choices and important decisions remain to be made in consultation with the client and the user (criteria for choosing a back-up electricity production method, principle for back-up power distribution, design of lighting and lighting management, principle for emergency lighting, universal cabling distribution design, IT network security design, general security design, design of technical management of the building).
208. According to the documents of the overall estimate of March 2002, consulted for information, the expert considers that the state of progress of the studies does not completely match the level of an overall estimate. Moreover, there is a lack of documentation to indicate how the studies for the electrical installations evolved.
209. The expert did not find evidence in the documents made available to him to confirm that the techniques proposed conform to Swiss standards (SIA 380/4) and to the "Minergie" concept (energy efficiency in buildings). This point relates to a request made by WIPO (see 4.1).
210. In general terms, the proposed project does conform to the requirements of this type of building, but certain technical choices could be improved.
211. As mentioned in chapter 4.3, *Context and WIPO objectives*, the project must provide for "a complex of modern buildings, able to meet the needs of WIPO". Some of the proposed installations do not come up to the future-oriented technical level desired by WIPO. They must therefore be improved. For example, the infrastructure of a modern building requires high-performance computer cabling. In view of rapidly evolving office automation needs, it would be highly advisable to plan for higher-performance cabling (broader bandwidth, at least category 6).
212. IT network security must also be revisited, even completely overhauled. The technical management of the buildings, as well as the organization and setting of technical alarms must be finalized. Lastly, the organization of maintenance must be quickly addressed.
213. The likely cost of the proposed electrical installations is within a range comparable to that of other administrative buildings similar to the WIPO project. However it is low by comparison with other buildings of a high technical standard. This is particularly so considering that the building in question would have to be of a high technological quality. The real overall cost, after finalizing the various details, could be higher.
214. Regarding the conference room, analysis of the costs confirms that the sum indicated reflects a reasonable average value. However, in the absence of a definition of various pieces of equipment and systems, the range of possibilities when the installations are actually implemented remains wide open. The costs could therefore vary considerably.
215. Comparison of costs with three reference buildings (head office of a large telecoms company in Berne with 1,000 working places, administrative building and accounting center of the Federal Government in Berne with 500 working places, and the UNHCR administrative block in Geneva with 720 working places) confirms our impression that there was not enough leeway in the cost calculations in the November 2001 pre-project document. Moreover, the average price per working place for the WIPO building is very high, as a result of the poor ratio of working places to gross floor area.

216. The lack of specific detail in the definition of equipment provided for in the descriptive part of the November 2001 pre-project document creates a risk of additional cost, and consequently of a budget overrun. It is therefore important to ascertain the impact on the budget of every design modification.
217. When the project is being finalized, before preparing the documents for the call for tenders, it is vital that the client and the users ratify the various principles and designs.
218. In the view of the expert, no precise specification exists for the “electrics” project. It seems that the electrical contractor completed his project on the basis of a series of discussions with the client and the users, but those discussions were not documented. It would be advisable for the engineering contractor to specify what electrical installations and equipment are provided for in the November 2001 overall estimate.
219. Finally, the expert points to a lack of basic technical coordination between the various contractors.

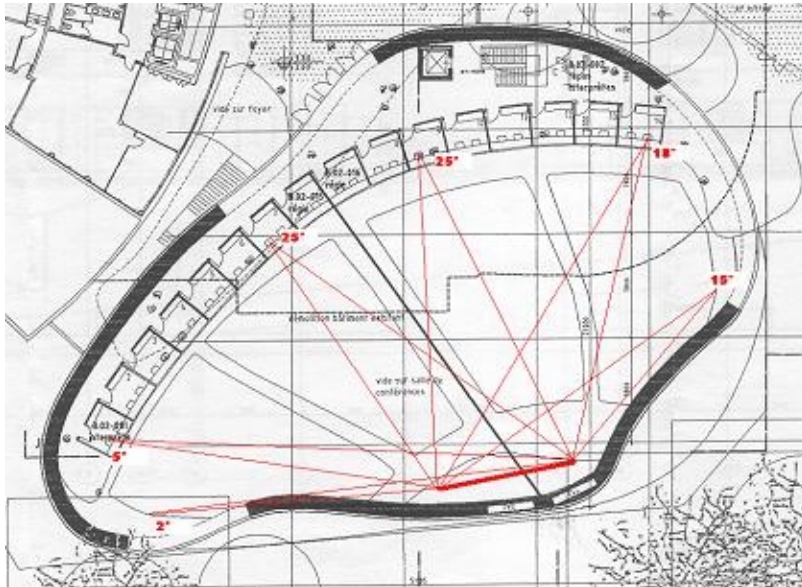
4.8.7 Sound engineer

Conference room:

220. He recommends using the present WIPO premises as a reference and carrying out an audit of their present acoustic status (sound insulation between different areas, sound insulation of façades, reverberation time in each location, noise level, etc.). A survey of user satisfaction or dissatisfaction would also be advisable, as would an assessment of any specific acoustic requirements.
221. The sound engineer noted that the specification for the outer fabric of the façades is overstated by about 10dB (according to the Federal Noise Protection Order and the Cantonal Ecotoxicology Service). Consequently, for “standard glazing” an improvement in insulation on this scale means an increase in construction costs of some 10 to 15%. The same applies equally to the administrative building.
222. The relationship between the volume of the room and the number of people is approximately 9 to 11 m³ per person (or approximately 6,200 m³). For a conference room with potential for other activities, this figure should be kept to 5-8m³ per person, so that the surfaces (ceiling and walls) can meet the requirements for reverberation time. The volume of the room should therefore be reduced to approximately 6 m³ per person in order to improve the volume-to-surface ratio.
223. The literature indicates that a ventilation system renewing 50,000 m³ of air per hour is envisaged. Renewal of this quantity of air requires very high-performance noise limiters. It seems that the reduction in volume of the room, as well as improving the acoustics, also reduces the air renewal requirement and lessens the obtrusive noise from the ventilators.
224. The rake of the floor under the seats is rather too shallow for delegates to be able to see and hear well. It is therefore advisable to increase considerably the slope where the seats are located (in relation to the podium). This would allow volume to be reduced and visibility improved.



225. It should be pointed out that the shape of the room in plan view is highly unsatisfactory as regards visibility: It is not easy to see the Chairman's podium, and the angle of visibility for the seats at the extremities is less than five degrees. This is particularly unacceptable for the interpreters, who must have perfect visibility of the conference participants. It should be borne in mind that good visibility and good verbal comprehension go hand in hand.



226. According to the sound engineer, sound-damping materials need to be used in the conference room, especially a textile floor covering and padded seats.
227. Based on experience, particularly in the case of the Salle William Rappard and the Arena-Palexpo room, mobile partitions do not achieve the level of $DnTw > 40\text{dB}$. When two conferences with translation and headsets are taking place simultaneously, provision needs to be made for a single mobile partition of at least $DnTw > 35\text{dB}$, while in the case of simultaneous use for film (video or cinema) and conference (with headsets for translation), a double mobile partition of at least $DnTw > 50\text{dB}$ would be needed.

Reception area

228. The sound engineer mentions the matter of the false ceilings on the mezzanine levels, which pose the particular problem of being acoustically reflective. This means that sound reverberation will be a problem in the reception areas of the administrative building. The acoustics between the offices and the mezzanine level will therefore be inadequate, and the confidentiality of the offices will not be guaranteed. To remedy these problems, some work is necessary on the floors of all the reception areas. This will entail an estimated additional cost of 1.5 million francs. Improving the acoustics of the surfaces in the mezzanine areas only has a very small impact on the acoustics of the reception areas.

4.9 Analysis of costs

Comparisons made with similar buildings in Geneva show that the surface-to-volume ratio per working place in the future WIPO complex is too high. The effect of this is to increase considerably the cost per working place and therefore the overall cost of the project.

229. Analysis of the November 2001 estimate highlights a number of errors. Since these represent about 1% of the investment, we did not consider it worth looking for detailed

explanations. The document also fails to mention certain items normally taken into account (cost of reproduction work, mock-ups, insurance, etc.), and WIPO expenditure (auditor's fees), all of which add to the cost.

230. The figures calculated in this document refer to inclusive prices or ratios and do not seem to have been discussed with any commercial businesses, which increases the risk of inaccuracy.
231. Lastly, at this stage of the studies, the estimate should clearly identify the elements that are not included, so that WIPO is aware of them.
232. For purposes of comparison, we saw fit to consider the future administrative building alongside four comparable reference sites in the Geneva region. These are as follows:
- WMO building, Geneva (overall estimate)
 - HCR building, Geneva (final accounts)
 - Salle William Rappard, Geneva (final accounts)
 - Du Pont de Nemours building, Geneva (final accounts)
233. The WMO and HCR buildings were chosen for their geographical proximity to the future complex (similarity of site and context), and also because they have programs that are similar to those of WIPO. The Salle William Rappard is the only recent reference available for comparison, being of a similar size to that intended for WIPO. Finally the Du Pont de Nemours building has features (volume, inner reception areas, etc.) in common with the future complex, while at the same time serving for comparison with a private business.

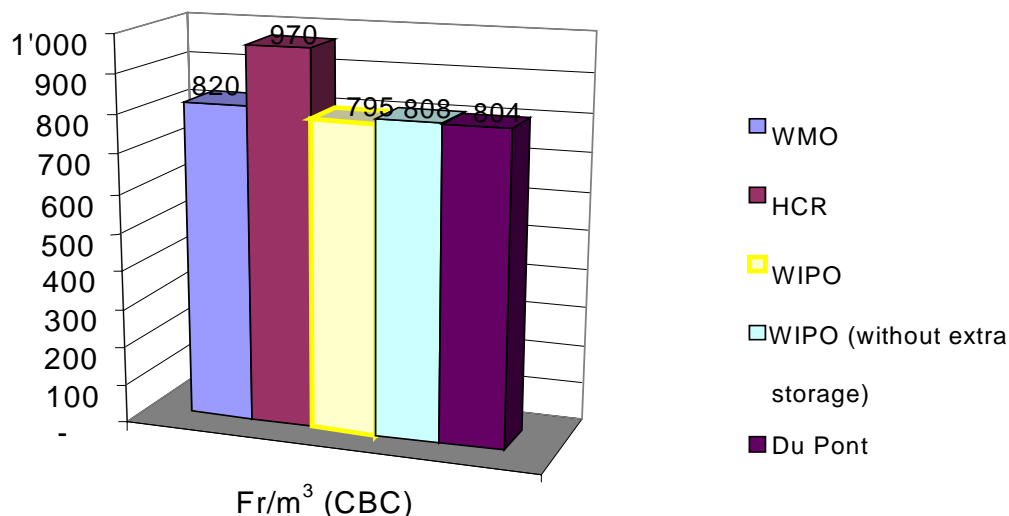
4.9.1 Comparison of prices per m³ SIA and m² GFA, all CFC combined

GFA: Gross Floor Area

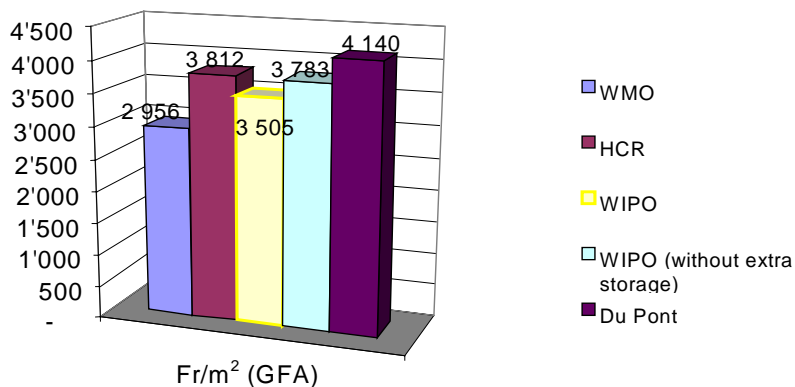
CFC: Code des frais de construction (construction costs broken down into nine groups)

234. It is clear from table 8 below that the overall price per m³ of the WIPO complex is comparable to that of the other projects analysed. Analysis of prices by m² GFA confirms this fact (table 9).

235. Table 8. Comparison of m³ SIA prices, all CFC combined (including fees)



236. Table 9. Comparison of prices per m² GFA, all CFC combined (including fees)



237. On analysing each part of the project in greater detail, the cost of independent storage areas was found to be abnormally high (707 francs per m³ SIA, 2,197 francs per m² GFA).

238. The cost of the conference room is comparable to that of the Salle William Rappard, which is a room deemed to be of high quality. However, the uncertainty regarding the progress of that part of the project and the rather unclear intentions of the architects lead us to express reservations. These should however be covered by the overvaluation of the storage areas mentioned above.

239. I consider that the budget anticipated at this stage is adequate for the completion of an administrative building, conference room and separate storage areas of the quality desired by WIPO. I would however draw WIPO's attention to the degree of accuracy of the estimates for the final project stage (see table 7, paragraphs 248 and 249).

4.9.2 Comparison of prices per m³ SIA and m² GFA, CFC 2

(Administrative building, extra storage area and conference room)

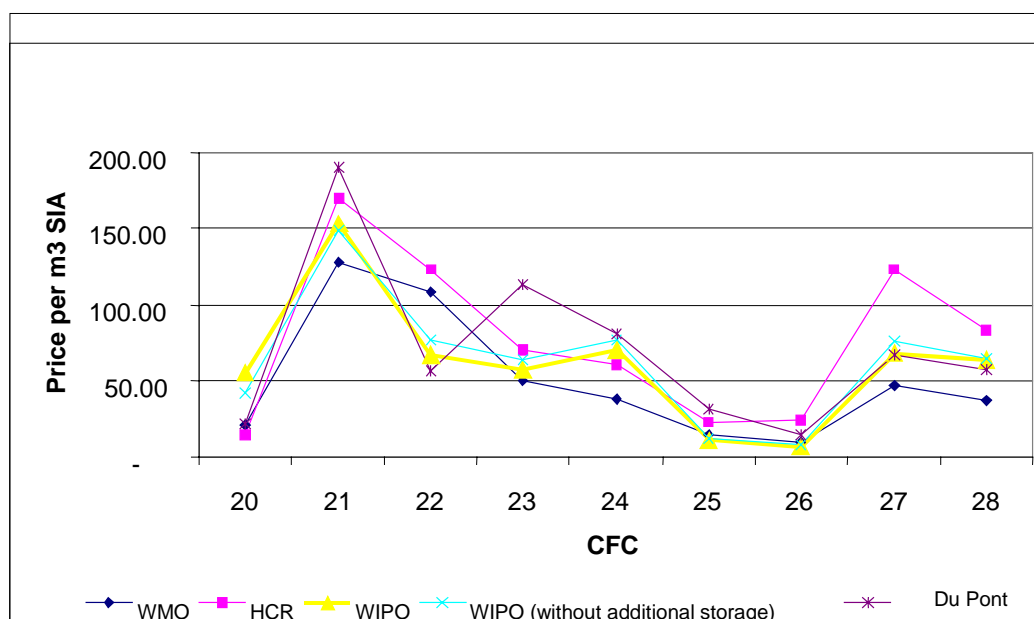
SIA: Swiss Association of Engineers and Architects

GFA: Gross Floor Area

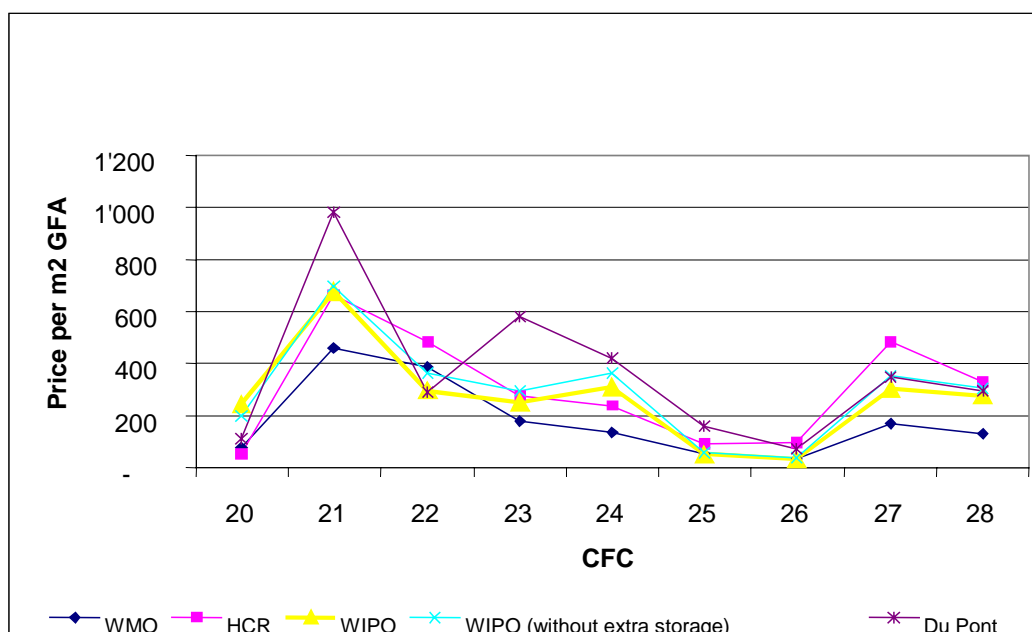
CFC: Code des frais de construction (construction costs broken down into nine groups)

CFC 2: Costs relating to the building

240. Table 10. Comparison of SIA m³ prices per CFC (without fees)



241. Detailed analysis of the SIA m³ price of CFC 2 (building) shows that costs for CFC 20 (excavation) and CFC 24 (heating, ventilation, air conditioning) are above average compared with the reference projects, while costs for CFC 25 (plumbing installations) and CFC 26 (transport facilities) are below average. Detailed explanations for these differences can be found in the analysis by the advisers responsible for the relevant areas.
242. CFC 22, which generally covers façades, is also very low (approx. 60 francs per m³ instead of 120 francs per m³ for the other reference buildings). This fact is not explained, bearing in mind the high architectural demands (façades made entirely of glass, double skin in places) and technical demands (large glazed areas, large areas of blinds). Analysis of costs per m² confirms these differences.
243. Table 11. Comparison of prices per m² GFA per CFC (without fees)



4.9.3 Comparison of prices per m³ SIA and m² GFA (conference room)

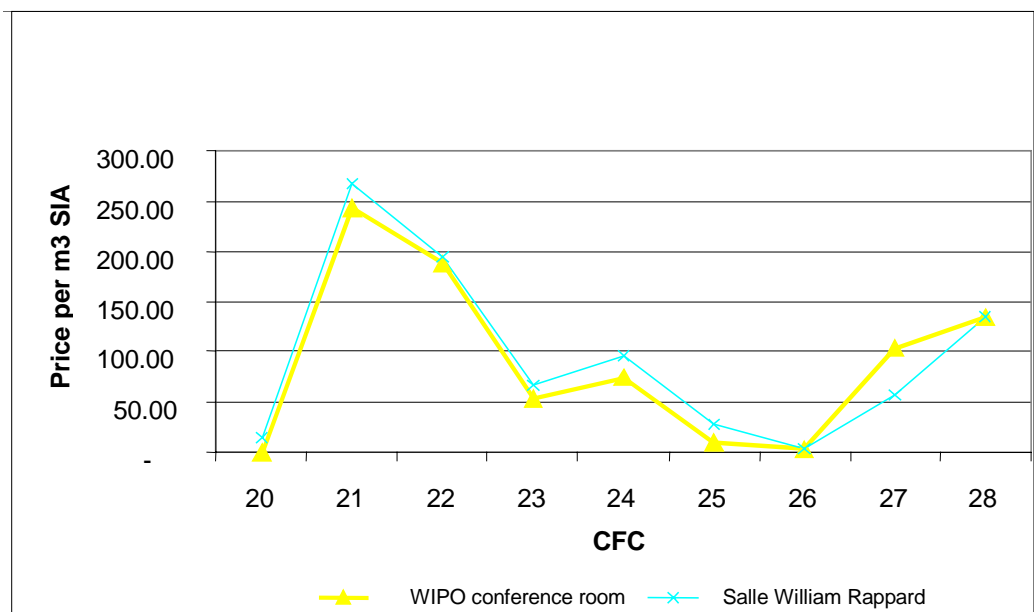
SIA: Swiss Association of Engineers and Architects

GFA: Gross Floor Area

CFC: Code des frais de construction (construction costs broken down into nine groups)

244. This analysis shows that overall the price per m³ is comparable to that of the Salle William Rappard, both in terms of the total figure of Fr 812 per m³ for CFC 2, and in terms of the breakdown.

245. Table 12. Conference room – Comparison of prices per m³ SIA per CFC (without fees)

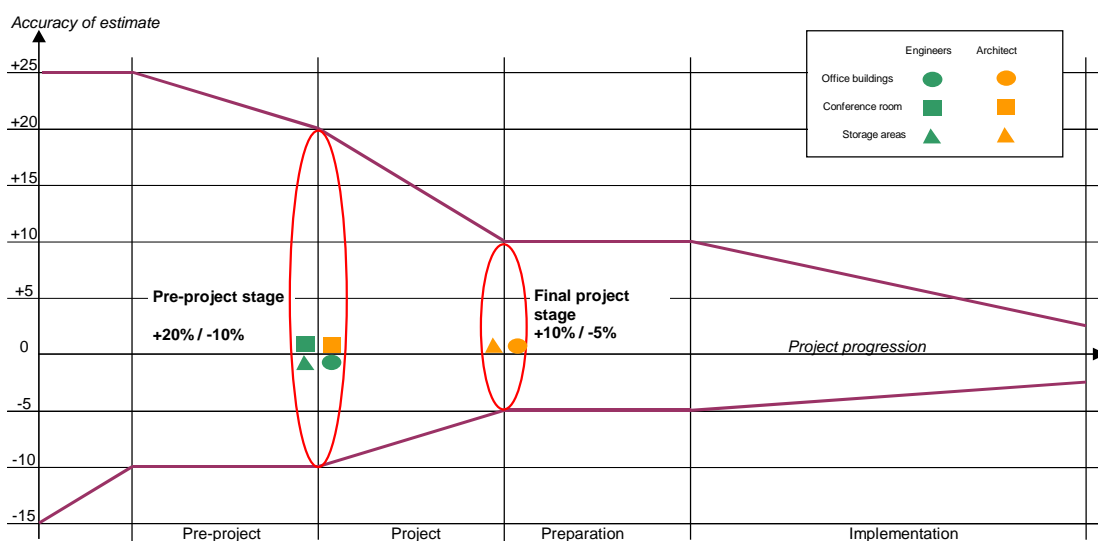


246. In view of the high quality of the Salle William Rappard, the amount of the estimate for the WIPO room seems adequate. Analysis of the price per m² confirms this view (see reference 10, table 13).

247. It should however be borne in mind that this part of the work is at a less advanced stage than the rest of the project. The degree of accuracy of costs is therefore lower, as table 7 below demonstrates.

4.9.4 Risks

248. Table 7. Accuracy of cost estimates in relation to project progress (diagram based on experience of the project review expert)



249. The table below summarizes the risks associated with the different rates of progress of the various parts of the project:

	Parts of the project	Total in millions	Accuracy in %	Risk in millions
Administrative building	Technical installations (heating, ventilation, plumbing and electricity)	29.4	Pre-project stage -10% / +20%	-3 / +6
Conference room	Room + technical installations	28.1		-2.8 / +5.5
Extra storage areas	Technical installations (heating, ventilation, plumbing and electricity)	1.3		-0.1 / +0.3
Administrative building	Building (without technical installations)	102.6	Final project stage -5% / +10%	-5 / +10
Extra storage areas	Storage areas (without technical installations)	18.5		-1 / +1.8
Total		180		-11.9 / +23.6
Total admissible according to SIA standards			-10% / + 10%	-18.0 / +18.0
Total according to market standards			-5% / + 5%	-9.0 / +9.0

*Percentages indicated are based on the experience of the project review adviser
SIA : standard of the Swiss Association of Engineers and Architects*

The degree of precision allowed by the Swiss (SIA) standards at the final project stage is +/- 10%. The table above shows that only the administrative building and the additional storage area (excluding relevant technical installations) meet that standard. The other parts of the design (conference room, technical installations of the administrative building and additional storage areas) do not correspond to final project status but rather to pre-project status. Consequently I have worked out that the allowable share of risk is +24 million francs instead of +18 million francs, according to Swiss standards, or +9 million francs according to market standards.

250. In relation to the above-mentioned risks, it would be appropriate also to consider the following factors that could have an impact on the costs:

- Car park study incomplete
- Façades underestimated
- Coordination between technical contractors incomplete
- Estimate based on reference prices, not on a specification

251. Moreover, the total cost of heading No. 5 in the November 2001 estimate, relating to "other secondary costs," is 5.7 million. The detail of this figure has not been specified, so I am not in a position to be able to verify whether this sum includes the elements below. However, from experience this item normally represents 5% of total costs, which in this instance makes 9 million francs instead of the 5.7 million allowed for, i.e. 3.3 million francs more.

- Costs of obtaining authorizations and levies which could represent additional costs in the order of: +1.5 million francs
- Costs of reproduction work, mock-ups, documentation: +1.5 million francs
- Costs of travel, study visits, site surveillance and indemnification of neighbours +1.0 million francs
- Insurance +0.5 million

- Building site power
- Bringing building on line

252. Finally the list below sets out the costs that are not included in the November 2001 final project estimate:

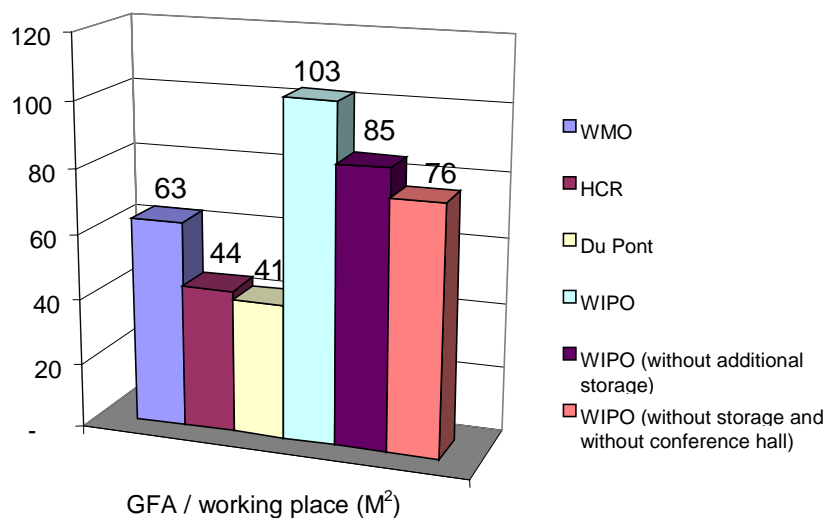
- Inflation
- Interim interest payments, bank charges
- WIPO Project Manager's fees +1.2 million
- Project management fees (1% of the total cost) +1.8 million
- Audit costs +0.4 million
- Contractors' fees for updating final project in the light of the audit
- Removal expenses
- Office furniture per gross working place (including infrastructure),
furniture for conference room +8.5 million
- Total +11.9 million

4.9.5 Ratios per working place

253. For comparison purposes, an overall analysis was done of the volume and area per working place of the WMO, HCR, Du Pont de Nemours and future WIPO buildings.

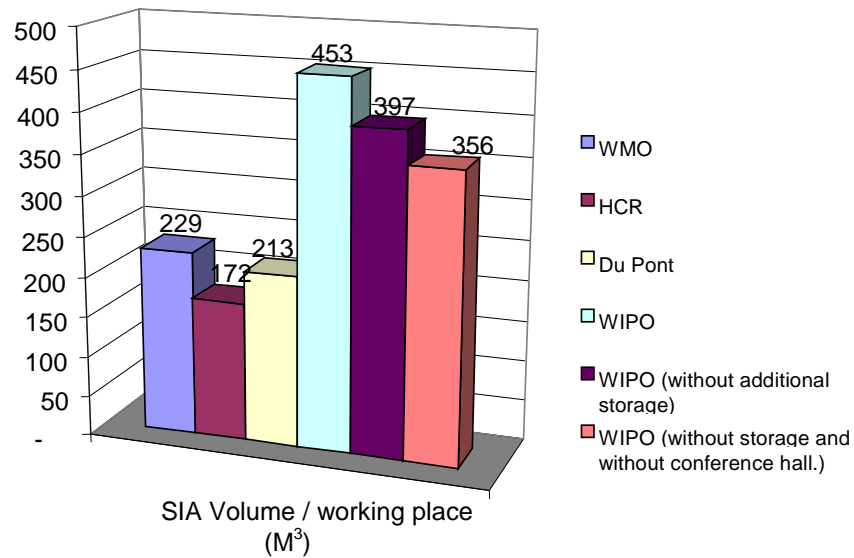
254. The graphs below show clearly that the SIA volume per working place is much higher in the WIPO building than in the other three. This could be explained by the large volume set aside for the covered reception areas, and yet the graphic of gross floor area per working place (table 14) produces the same result, even though the reception areas are not included. From this it may be inferred that the area per workspace is much too high in the WIPO building because of the size of the basement levels and public areas. It therefore naturally follows that the comparison of cost per working place also shows a significant difference between WIPO and the other buildings.

255. Table 14. Gross Floor Area (GFA) by working place

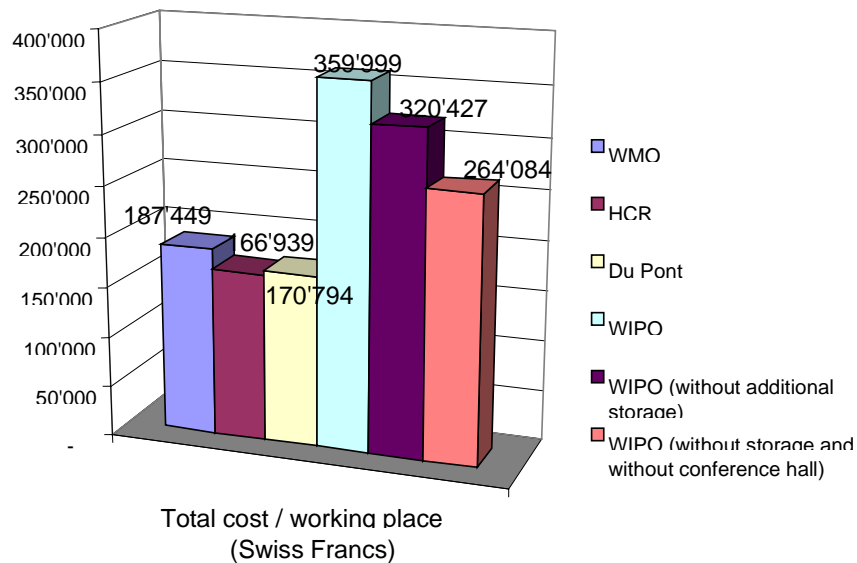


256. Table 15. SIA volume by working place:

SIA: standard of the Swiss Association of Engineers and Architects



257. Table 16. Total cost by working place



258. These ratios clearly demonstrate that the future WIPO complex has too much space set aside for representative areas. Conversely, the number of working places is too low for the given volume and area.

259. I am in a position to confirm that the budget envelope allocated to this project will allow it to be completed. However, the area and volume per working place are too high and should be reviewed.

4.10 Conference room

4.10.1 Profitability

260. The analysis is based on the following options:

- Scenario 1, representing the present situation
- Scenario 2, representing the approved investment of 15 million for a 400-seat room (see Sugden report and STG Coopers & Lybrand report);
- Scenario 3, representing the project under consideration, with an estimate of 30 million francs for a 600-seat room

261. Construction cost per seat

Analysis of industry standards (benchmarks) shows that the construction costs envisaged by WIPO for a conference room are very high compared with projects that aim to be profit-making. The proposed investment is 30 million francs for a 600-seat room (at 2 m² per seat), or 50,000 francs per seat, whereas industry standards give a cost per seat of 24,000 francs (at 1.5 m² per seat). However, if one compares the cost per seat of this project with that of the Salle William Rappard, the costs are identical.

Ratios	Scenario 2 (approved investment)	Scenario 3 (project under consideration)	Industry Standards
Average m ² per seat	-	2.0	1.5
Cost per seat (SFr)	37,500	50,000	24,000

262. Annual operating cost:

Based on the currently approved investment, the total operating cost is 1.1 million francs. Under scenario 2, that cost rises to 2.25 million francs.

Ratios	Scenario 2 (approved investment)	Scenario 3 (project under consideration)
Annual financing costs (SFr)*	675,419	1,350,838
Annual maintenance costs (SFr)**	450,000	900,000
Total Operating Cost	1,125,419	2,250,838

* based on depreciation over 40 years and 3.25% interest; interest + loan repayment

**up to 3% per annum – starting from the third or fifth year

263. Rental cost of outside conference rooms:

The average annual cost of renting outside rooms during 2000 and 2001 was estimated by the economist at 0.75 million francs (40 francs per person per day).

Ratios	2000	2001
Minimum average cost per person per day*	20	25
Maximum average cost per person per day*	35	40
Total minimum annual cost*	576,740	323,100
Total maximum annual cost*	1,009,295	516,960

* room rental + technical costs (board and lodging not included)

264. Rental cost of outside conference rooms under three different scenarios:

Scenario 2 (approved investment) (400-person room)	2000	2001
Number of outside conferences	3	2
Number of days of outside conferences	46	15
Number of participants per conference	1,629	990
Total participants	25,890	7,870
Total minimum annual cost (in francs)	517,800	196,750
Total maximum annual cost (in francs)	906,150	314,800

Scenario 3 (project under consideration) 600-person room	2000	2001
Number of outside conferences	1	0
Number of days of outside conferences	23	0
Number of participants per conference	626	0
Total participants	14,398	0
Total minimum annual cost (in francs)	287,960	0
Total maximum annual cost (in francs)	503,930	0

Scenario 4 room for over 600 persons	2000	2001
Number of outside conferences	0	0
Number of days of outside conferences	0	0
Number of participants per conference	0	0
Total participants	0	0
Total minimum annual cost (in francs)	0	0
Total maximum annual cost (in francs)	0	0

265. The annual operating cost of the new room according to the economist's estimates would be 1.12 million francs per annum for a 400-seat room and an approved investment of 15 million francs, and 2.25 million francs per annum for a 600-seat room and an investment of 30 million francs. Amortization of the investment has been calculated over 40 years. The average annual cost of outside rental during 2000 and 2001 has been estimated by the economist at 0.75 million francs.
266. The figure of 15 million francs for a 400-seat conference room does not seem realistic to me. An investment of 20 million francs (50,000 francs per seat) should be considered in order to achieve the required quality. This would increase the operating cost of the room from 1.1 million to 1.5 million (see scenario 2bis).
267. According to the above estimates, the annual operating cost of the new room under the proposed project (option 3) would exceed by 1.5 million francs the rental cost of outside rooms at present (0.75 million francs in the case of a 400-seat room, scenario 2bis).

From a strictly economic standpoint, therefore, the construction of a conference room of either 400 or 600 seats is not profitable.

268. Summary of the various scenarios/options:

Scenarios	Room capacity (seats)	Investment in millions	Operating costs in millions	Rental cost in millions	Total in millions	Comments
1	0	0	0	0.75* (0.3 – 1)**	0.75	Present situation
2	400	15	1.1	0.2 – 0.9	1.3 – 2.0	Investment of 15 million not realistic
2 bis	400	20	1.5	0.2 – 0.9	1.7 – 2.4	Corrected investment
3	600	30	2.25	0 – 0.5	2.25 – 2.75	Final project
4	650	30	2.25	0***	2.25	At the present stage (pre-project), the room must be planned to allow its capacity to be increased without increasing its area, while reducing the average area per seat

* Annual cost of outside rental during 2000 and 2001, increased by a percentage for miscellaneous costs (transport, etc.)

** Costs more or less identical to option 2, since large conferences are spread over several days and have over 400 participants

*** Calculated on the basis of the last two years. Meetings (unforeseeable above 650 places will have to be organized by linking the two rooms (250 + 650 = 900 spaces) or held externally. In the latter case, the rental costs would have to be added to the operating costs.

269. As shown in the table above, there are thus four distinct options:

- Option 1: This option reflects the present situation. WIPO has to rent a room elsewhere whenever the attendance at a conference exceeds the current capacity of room A. Not building a new room at all seems to the economist to be the most defensible of the proposed options from a strictly economic standpoint.
- Option 2: Principle approved by the Member States to build a 400-seat room at a budget of 15 million francs. On the basis of the Salle William Rappard, we note that this budget is not realistic.
- Option 2 bis: Value of the investment for option 2, corrected on the basis of the final accounts of the Salle William Rappard in today's money. A 400-seat room is too small to meet the real needs of WIPO. This option would therefore oblige the Organization to continue to hold many conferences elsewhere, and would in the view of the economist be an investment that made little sense.
- Option 3: Project for construction of a new room as set out in the BB&P documents. Building a 600-seat conference room means investing 30 million francs with the virtual certainty of having to organize future WIPO General Assemblies elsewhere.
- Option 4: The economist's proposal is to build a room with a capacity of greater than 600 places for a budget equivalent to that of the project presented. This option

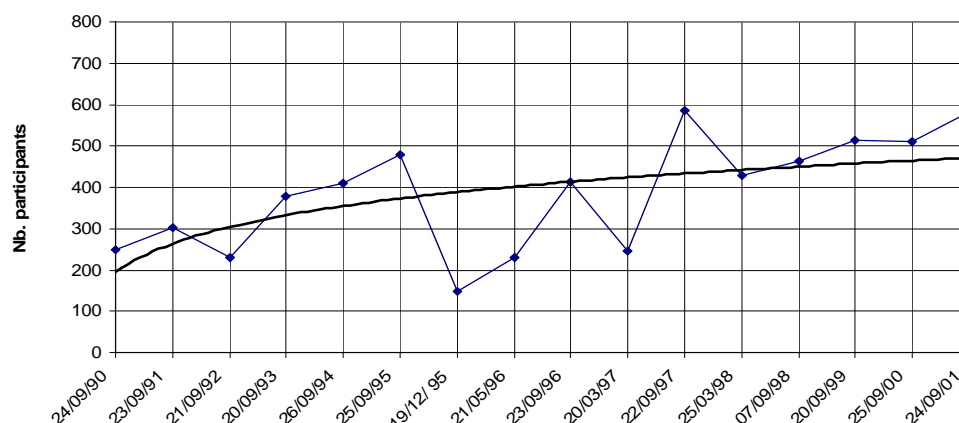
would correspond to WIPO's aims and future needs. It does however entail a reduction in the average area per delegate.

4.10.2 Justification of future needs

Changes in the number of participants in WIPO meetings:

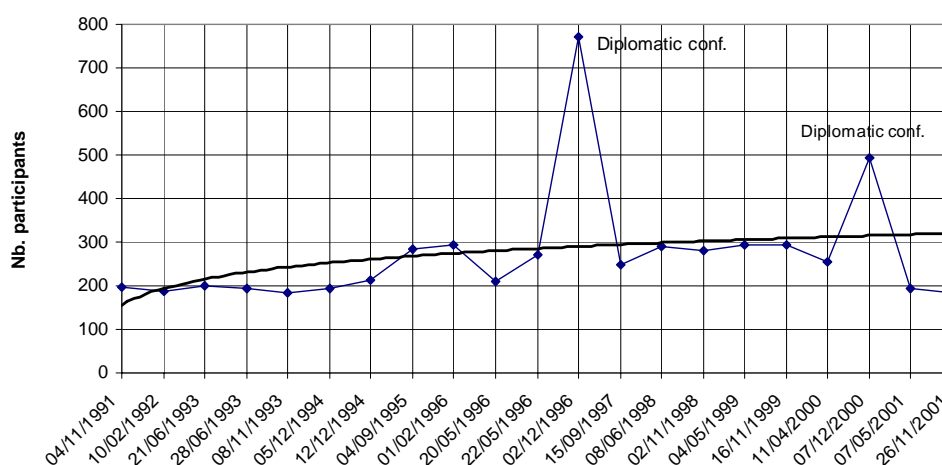
270. Analysis of conferences organized by WIPO up to the end of 2001 shows that the number of conferences has remained stable (between 45 and 57 per annum): the WIPO report (Report II, Needs for a Conference Room, March 4, 2002) mentions an estimate for the year 2010 of more than 60 conferences during the year (as against 45 in 2000), lasting a total of 260 days (against 240 in 2000). Conversely, the number of participants has trebled in ten years (from 2,209 in 1991 to 6,587 in 2001). Approximately 40% of the conferences took place elsewhere (45% in 2000 and 38% in 2001), which corresponds to nine in 2000 and eight in 2001.
271. The economist's analysis shows that if WIPO were to decide to build a conference room that would be used by the Organization on average 50 days per year for approximately eight or nine conferences, it should in any event be able to be used for the WIPO General Assemblies. Its capacity should therefore be planned to exceed 600 seats. It will indeed be a conference room for the future, intended first and foremost for the Organization's General Assemblies, which already have an attendance of 584 today.
272. Moreover, for a 400-seat room, WIPO would have to set aside between 1.7 and 2.4 million francs (option 2bis, average of 2 million francs) for the operating costs of the new room and the cost of outside rental. This represents an additional cost in relation to the current situation of 0.95 to 1.65 million francs (average 1.25 million). However, for an operating cost estimated at 2.25 million francs, equating to 1.5 million francs more than at present, it would be possible to obtain a 650-seat room that could house not only the annual General Assembly in a single room, but also the vast majority of other conferences organized. This figure does not include rentals for events of the Diplomatic Conference type requiring more than 650 seats, the frequency of which is not known.
273. The project review adviser, with the help of WIPO, has identified more than ten different types of meeting that have an attendance of more than 100. This has allowed three representative groups to be formed:
1. *General Assembly of Member States.* This group is characterized by a regular, consistent increase in attendance: the number of Member States has gone from 158 in 1995 to 178 in 2001. The maximum participation by 2010 can be put at 185 Member States. Taking an average of 3.2 people (the average number of participants per delegation), the number of delegates should be 590, plus about another 30 intergovernmental organizations (IGOs) and non-governmental organizations (NGOs), each represented by two people, making a total of approximately 650.

Type 1 - Assemblies of the Member States



2. *Standing Committee.* The standing committees are characterized by working meetings at regular intervals with between 150 and 300 participants. The Diplomatic Conference that approves the results of these working meetings has a higher attendance. In fact, since the Member States are often all represented, the IGOs and NGOs attend these meetings in greater numbers. For Diplomatic Conferences organized at undefined intervals, participation will very much depend on the subject. If the subject is weighty or if it has to do with a number of treaties, it can attract a very large audience, as in December 1996 (772 participants). In the future, it is likely that WIPO will still have to rent a room elsewhere when the subject attracts an unusually large audience. However, the meetings are called at least six months in advance, which gives time for a location to be found before the date is announced.

Type 2 - Standing Committees on Copyright



3. *One-off events.* Attendance at these events cannot be forecast and depends greatly on the subject. For this type of meeting where taking the floor does not have political significance, it seems possible to organize two linked rooms, which allows the audience to be placed in rooms close to one another and thereby considerably increases capacity (in this instance, room A and the new room).

Only group 1 allows the room capacity to be determined. Ideally it should be 650 people. Looking at the last ten years, one notes that this would have been sufficient for the very great majority of WIPO conferences (two conferences would have had to take place outside). It would also allow the Organization to hold its annual Assembly there.

Ideal capacity of the conference room:

274. The ideal number of seats should at least allow the annual General Assembly of WIPO to be held, as well as the large majority of other conferences organized. Attendance at other types of meeting depends on the subject matter and cannot be predicted.
275. It emerges from analysis of the conferences organized during the last ten years that they break down into three types: those with 100 to 200, 200 to 450 and 450 to 650 participants. Conferences with more than 650 participants generally come under the heading of "Diplomatic Conference" or "one-off event," attendance at which is impossible to predict.
276. Overall, the construction of a room with a capacity of more than 250 seats (capacity of the present room) will relieve the pressure on room A. The planning carried out for the years 1999 to 2001 (see reference 11), with a new 400-seat room, shows that one to three meetings a year would have to be organized outside the confines of WIPO. Those meetings would include the annual General Assembly of the Member States. By building a room with a maximum capacity of 650 seats, the analysis shows that WIPO

would have had to organize two meetings outside (a Diplomatic Conference in 1996 and a one-off event in 1999). The possibility of subdividing the 650-seat room into two rooms of 200 and 450 seats affords added convenience: this allows the room to be adapted to the size of the conference, which improves the working environment (a full room is more motivating than a large room half-empty). Moreover, this subdivision increases the opportunities for rental. A 650-seat room will be occupied more often than a 400-seat room (conferences with more than 400 persons would have to be organized elsewhere). However, if this 650-seat room is not divisible, it will often be too big for the event being held.

277. Taking account of the investment that would have to be agreed, the construction of a 650-seat room, divisible into two rooms of 450 and 200 seats, offers the best balance between overall annual cost and flexibility of use. For events with over 650 participants, WIPO would have to continue to rent a room elsewhere or organize linked meetings by connecting the new room to room A, which will give a total capacity of 900.

Division of the room:

278. The additional cost represented by the installation of a partition is certainly considerable (1.5 to 2 million francs). However, such a partition is in my view necessary for the following reasons:

- The ability to divide the room will allow WIPO to adapt the size of the room to the number of participants, particularly for meetings with 300-450 participants. Since the room is a working facility, this seems to us an important motivating factor for the delegates.
- Allowing subdivision greatly increases the availability of rooms and therefore the opportunity for rental.
- According to WIPO forecasts, conferences for between 100 and 250 participants are increasing more rapidly than the others. The subdivision of the room will allow this trend to be catered for.
- The statistics available to WIPO do not allow an assessment of the phenomenon of plenary sessions with sessions in working groups during breaks. In the view of WIPO, this way of working is on the increase and requires the availability of a larger number of small rooms.

Expected Investment

279. At the present stage of the project (pre-project for the conference room) it should be possible to increase slightly the capacity of the room, but without increasing its cost, by adopting one or a combination of the following measures:
- Reduction in the average area per delegate seat. The ratio of net m² per delegate provided with a desk ranges from 1.7 m² for the Salle William Rappard to 2.0 m² for WIPO room A and CIG Room No. 2.
 - If one assumes that a minority of participants (about 30%) are considered "observers" and do not have a desk, one could reduce the average area per delegate. For delegations of more than two persons (50% of delegations), it might be possible to arrange for some of them not to have a desk. So a five-person delegation would have only three seats with desks, microphones and headsets, while the other two seats would be immediately alongside but would have only headsets. This arrangement, if ratified by WIPO, could make it possible to reduce the average area per participant (in this case from 2 m² to 1.6 m² per seat).
280. The operating costs of the new room could be partly covered by renting the room to outside organizations when it is not in use by WIPO, which is frequently the case. In fact, analysis of the conferences organized by WIPO in the last ten years shows an increase in the number of participants, rather than in the number of conferences, which has remained very stable. That is why, if WIPO were to decide to build its room, it seems to me essential to set up a commercial department to manage the three WIPO conference rooms. By way of reference, we once again mention WTO, which rents the Salle Rappard (710 seats) at 7,000 francs a day, as well as WMO, which rents its

260-seat room for 2,900 francs a day and its 70-seat room for 600 francs a day. These rooms have the same capacity as the three rooms that WIPO could rent out in the future.

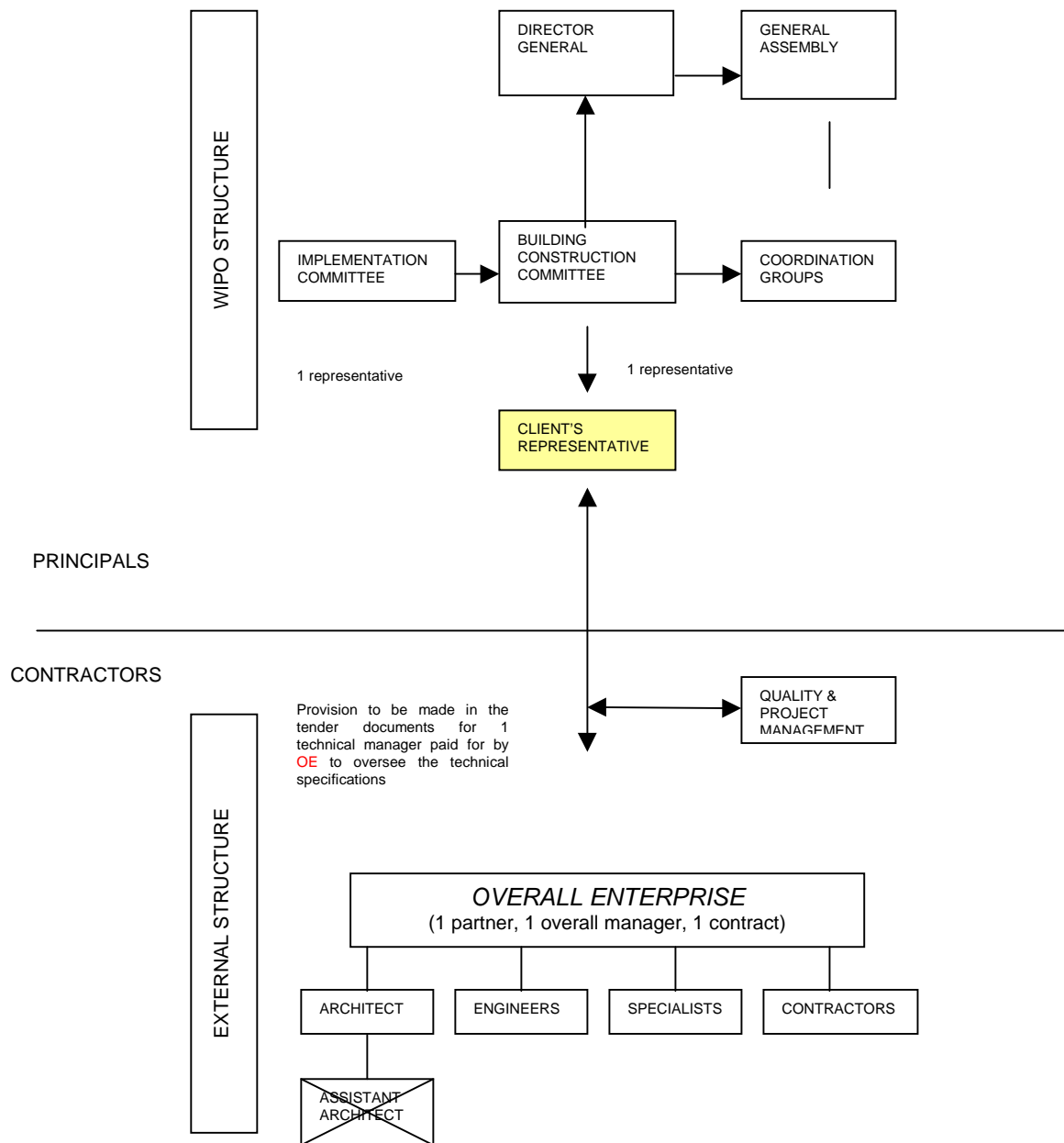
Market survey – conference infrastructure in Geneva (see reference 18)

281. In response to the request made to me by the Member States of Group B at the presentation meeting on February 22, 2002, I have have arranged for the economist to carry out a market survey of the available conference infrastructure in Geneva. It emerges from this study that the facilities that meet the needs of WIPO (600-seat or larger rooms) are the following conference centers or hotels: CICG, Palexpo, President Wilson Hotel, Salle William Rappard and UNOG. As a general rule, owing to the small number of rooms available, room reservations for the above capacity in Geneva have to be made between 12 and 18 months in advance. Events in this city generally take place during the same periods of the year, which adds to the problem of the lack of infrastructure and complicates the reservation problem. As for the cost of renting outside conference rooms, the hotels quote a rate almost double that quoted by the conference centers. Annex 2 of the economist's report gives details of the infrastructure and rental costs of the available rooms in Geneva.

5. PROJECT ORGANIZATION

282. At the request of WIPO, various proposals for organizing and implementing the project were studied by the Federal Audit Office and considered alongside other projects in Geneva (WTO/Salle William Rappard, ITU/new Montbrillant building, WMO/new building) (see reference 19). Although other solutions do exist, it does not seem advisable to me, given the lack of a guarantee from the client, to use standard working procedures (individual contracts with companies and suppliers). On the contrary, implementation under a total services contract (see diagram below) seems to have greater appeal.

283. Organization diagram of a project under total services contract
(standard organization for large projects)



284. I am of the opinion that a total services contract arrangement would be better suited to the implementation phase of the works. Working in this way would allow conflicts to be avoided between subcontractors, given that they would be under the responsibility of the general contractor. The client would ultimately have only a single partner in the implementation phase, a single person in overall charge, and a single contract. The only reservation would be over the final project, which has to be planned in a very detailed manner in order to avoid overspends during project execution. It would therefore be better to view the project in the context of economy and profitability, subject to respect for the architectural design. The diagram proposed above represents a normal organization for management and implementation of a large project.

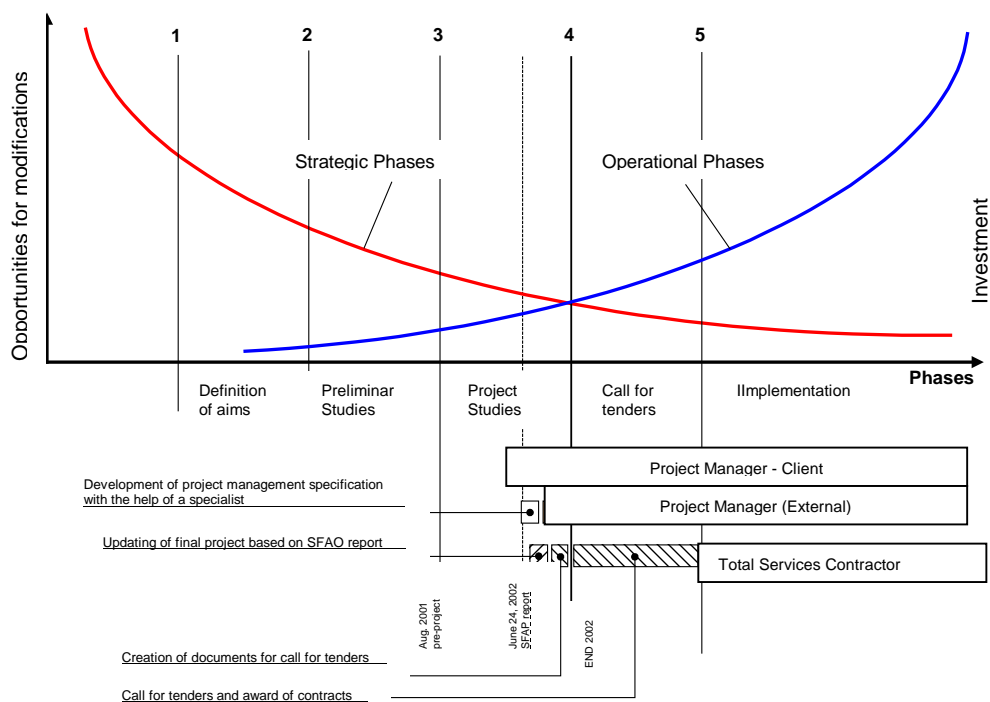
285. The position of client's representative should be a full-time role. The client's representative should also have decision-making authority, so that decisions can be taken rapidly as project requirements dictate. His first task would be to verify that the various project and technical specifications are in keeping with WIPO's needs. This task will not allow a call for tenders to be made before the end of 2002. In order to conduct a

call for tenders with maximum cost certainty, one needs to be sure that the final project is actually finalized.

286. Project management should be the responsibility of a company outside WIPO. It seems to me sensible to divide the responsibilities between WIPO and the project manager, so that the client's representative is better placed to specify requirements (costs, time limits, specification). This company would act as an assistant to the client and would provide the following services:

- Management of project quality
- Verification of project conformity to specification
- Risk assessment in each phase
- Coordination of planning and implementation processes
- Monitoring of negotiations and award of contracts
- Management of contracts, modifications, riders, time limits and costs
- Etc.

287. The diagram below shows the opportunities for modification of the project (in red) and the increases in costs (in blue) in relation to the various phases. It is clear that modifications occurring later than phase 4 generate significant costs. This is why the final project (phase 3) must meet the client's specification in full and must include all the requirements with the utmost precision, in order to minimize as far as possible the risks of defects at the time of implementation, which could cause considerable additional expense. This is particularly true when working under a total services contract. Indeed, experience has shown that every rider to a basic contract brings with it high costs that are often well in excess of market prices. These observations lead me to recommend that implementation of the call for tenders for a total services contract should not occur before the end of 2002, in order to be able to incorporate the comments of the evaluation report on the new building and thereby to update the final project. The call for tenders for the management of the project would have to be done after submission of my report to WIPO, so as to incorporate the updates made to the final project in the specification.



6. INVENTORY OF POSSIBLE SAVINGS AND OTHER TECHNICAL SOLUTIONS PROPOSED BY THE VARIOUS ADVISERS

The paragraphs below summarize succinctly the other technical solutions raised by the various advisers. For further detail, refer to the experts' reports (see references 13, 14, 15, 16, 17).

6.1 Inventory of technical solutions

288. Heating, Ventilation and Air Conditioning (CVC) Engineer

- **Heating and cooling**

(a) Administrative building:

Study possible synergies with the existing building (central power generator). A cheaper option than the proposed solution (floor-level convectors, cold ceiling, forced air, extraction by superpressure in the reception areas), which moreover no longer reflects current standards, providing the same advantages (flexibility, individual control), could be considered using the following principles:

- Active floor providing (basic) heating in winter and (basic) cooling in summer.
- Warm ceiling in winter and cold in summer

(b) Conference room:

- A water system satisfying heating and cold ventilation needs.

- **Ventilation**

(a) Administrative building:

- Reduction of 30% in the forced air output by superpressure extraction in the reception areas.

The "four-pipe ventilator-convector, cooling by ventilation" concept is no longer standard CVC equipment for an office.

(b) Conference room:

The principle of a ventilation system that provides for all heating and cooling demands is no longer in common use. The expert's proposal is as follows:

- Ventilation providing an airflow of 15 to 20 m³ per hour per person, which for 600 persons amounts to 9,000 to 12,000 m³ per hour.

- **Environment**

Consider the "Minergie" concept, which aims to guarantee a superior comfort level while being economically competitive and energy-efficient.

- **Heat recovery**

Consider the option of "de-superheaters" on refrigeration plant.

289. Plumbing Engineer

- **Hot water production**

Decentralized hot water production for plumbing installations (hot water produced locally in an electric water heater).

- **Solar power**
Use of solar power for hot water production for plumbing installations.
- **Heat recovery**
Heat recovery on kitchens refrigerators and air conditioning plant.
- **Rainwater recovery**
Investigate the possibility of recovering rainwater from the roof of the conference room.

290. Electrical Engineer

- **Distribution design**
In order to avoid disruption of the IT network, the vertical distribution and the distribution areas need to be arranged in such a way as to avoid telecom equipment and cabling being placed immediately alongside high-voltage equipment and cables.
- **Environment**
Take account of the “Minergie” concept.
- **Production and distribution of emergency electrical power**
No concept, requires study.
- **Emergency lighting**
No concept, requires study.
- **Universal cabling distribution**
No concept, requires study.
- **IT network security**
No concept, requires study
- **Office lighting**
Use of free-standing lamps fitted with sensors and daylight bulbs and linked to the building’s technical management installation. This proposal would allow great flexibility of usage and would fit with the concept of energy efficiency.
- **Low-voltage equipment**
Study the functionality of the various proposed systems, especially their compatibility and interdependence.
- **Telephone switchboard**
Determine the need for the centralization of incoming calls and use of the computer network for telephony.
- **Universal cabling**
It would be advisable to provide for more powerful cabling with broader bandwidth, at least equivalent to category 6. Moreover, the overall cost increase due to the use of fiber optics for all components would be offset by a 5% increase in capacity compared with the “copper cable” system chosen.
- **Management of timekeeping, time clocks**
With regard to time signals, we have to report the absence of any documentation or diagram relating to this installation. It is important to define needs with the client and the user.

- **Interphones**

There is no mention of intercom and videophone requirements.

- **Paging**

A DECT telephone system is recommended in place of the conventional paging system proposed. Use of portable DECT gives the user great mobility.

- **Audiovisual equipment**

For the reception area on the ground floor, there is a case for providing an electronic display system for visitor information. A possible alternative for the building's emergency evacuation system would be the installation of an alarm system via the telephone network, which would allow the broadcasting of pre-recorded or live messages instead of a siren and thereby prevent panic reactions.

- **Conference room equipment**

By interconnecting the conference systems control deck with the cabling of the building automation system, it would in principle be possible to manage several types of audiovisual presentation (lighting management, blinds, projection screens, video projectors and computer-controlled presentations). Interconnection via the Internet must also be available (intercontinental link-ups, videoconferences).

- **Building technology management**

The diagrams of the principles of the proposed installations provide for command modules for the blinds and lighting control boxes in the false floors, organized by module and by office. This technology does not offer the same options as the modern management systems available on the market. New technology enables each consumer (lighting, blinds, etc.) to be linked on decentralized programmable automated modules.

- **Alarm management**

For a complex project such as WIPO, the alarm management functions must be handled by a well-designed system. They could perhaps be integrated in the building's technology management system.

- **Access control**

It would be preferable to choose a system integrated with the universal cabling.

- **Fire detection**

At this stage of the project, it would be wise to define in an outline diagram all the functions triggered by the fire detection system (fire doors, shut-off valves, emergency exits).

- **Burglar alarm equipment**

It would be advisable to know the specifications for the surveillance of the outside of the buildings and the link to the video surveillance system. It should also be ascertained whether the safes are fitted with burglar alarms.

- **Facilities maintenance**

Early analysis of the question of maintenance will allow provision to be made for the installation of certain infrastructural elements. Given the structure of the buildings and the height of certain areas, the option of buying a hydraulic cradle needs to be considered. The cradle could also be useful for maintenance of the ventilation and fire detection systems, the video surveillance equipment and so on.

291. Building Physicist

- **Environment**

Take account of the "Minergie" concept.

- **Interior comfort in winter and summer**

Owing to the large glazed areas, one could highly recommend analysing the building using a simulation program (for example, the program of the Federal Testing and Materials Laboratory).

292. Sound engineer

- **Volume**

For the surfaces (ceilings and walls) to conform to reverberation time standards it would be necessary to reduce the volume of the conference room to 6 m³ per person, instead of the current 9 to 11 m³.

- **Visibility**

In order to improve visibility and therefore audibility for delegates, it would be necessary to increase considerably the rake of the floor where the seats are located (in relation to the podium).

- **Noise**

Reduce the obtrusive noise of the conference room ventilators.

- **Acoustic treatment**

Allow for highly sound-absorbent ceilings and walls in the reception area, covering a total area of about 4,500 to 6,000 m². Insulation from airborne noises between the offices and the reception area corresponding to at least 40dB is required, so the concept of trunk ventilation would be worth investigating.

6.2 Inventory of Savings

293. Civil Engineer

- **Excavations (for additional storage areas)**

Since the work to protect the excavation areas has been overvalued by about 40%, and those for concrete and reinforced concrete by 25%, savings are possible in this area.

294. Heating, Ventilation and Air Conditioning (CVC) Engineer

- **Ventilation**

Administrative building:

Reduction in airflow of 30% per element. Looking at 1,000 modules, one notes a saving of 10,000 m³ per hour, or 250,000 francs.

- **Heating**

Replacement of floor-level convectors by heating units with the flexibility of two heating elements instead of one.

Reconsider the of the active floor, which would serve as a basis for heating and cooling. The ceilings (warm and cold) would provide back-up and regulation, using the principle of three pipes instead of four.

Extra storage area: in view of the airflow of 16,000 m³ an hour and the small amount of heating to be installed, the cost of this installation should be reduced by 0.2 million francs.

295. Plumbing Engineer

- **Fire protection installations**

The overlap between the sprinkler installation and the fire hydrants means that a saving of 15% could be achieved.

- **Kitchen**

A saving of about 15% would be possible in relation to the demands of a professional kitchen.

296. Electrical Engineer

- **Lighting**

Use of free-standing lamps in office spaces.

297. Building Physicist

- **Surfaces**

A reduction in the percentage of glazed areas would have the effect of reducing building and operating costs (cost savings in the CVC installations and in the power consumption for heating and cooling). This saving does however entail a departure from the architectural purpose of the project.

298. Sound engineer

- **Acoustic requirements**

The reduction in acoustic requirements concerning the façades would mean a cost reduction of 10 to 15%.

PART III

Annexes

(WIPO – World Intellectual Property Organization)

- | | | | |
|----|------|--|------------|
| 1. | WIPO | Report I (Needs for Office Space and Parking) | 11.04.2002 |
| 2. | WIPO | Report II (Needs for a Conference Room) | 04.03.2002 |
| 3. | WIPO | List of conferences organized in Geneva since 1990 | 21.03.2002 |

[Appendix 1 follows]

APPENDIX 1 (OF ANNEX)

WIPO INPUTS FOR THE EVALUATION OF THE BUILDING PROJECT
BY THE SWISS FEDERAL AUDIT OFFICE

REPORT I: Needs for Office Space and Parking

Introduction

1. This document is offered in response to a request of the Federal Audit Office of the Swiss Confederation, which sought a document regarding specifically the perceived business needs of WIPO in consideration of expansion options to augment its office space and parking.

2. Where statistical evidence is presented in this document, those figures either represent factual information, projections that were previously published or projections developed expressly for this document. Factual information would be representative of the number of employees in a Division, States members to a treaty or, as an example, the number of international applications to the Patent Cooperation Treaty (PCT) that were deposited in any one year. Projections of previously published data would include anticipated growth, as of a certain date, such as for forecasting the future number of employees in the Divisions of WIPO. Frequently those two items can then be compared, in allowing new projections to reflect the actual historical growth as compared to that period's forecasted growth, for the purposes of making a best and rational forecast of future activity levels. It is in the nature of WIPO to present solid, conservative estimates; where applicable, a range of "best-case" or "worst-case" scenarios has been developed.

3. The timeline of this document ranges from the actual growth achieved between 1996 and 2001, and the forecasted growth as from 2002 to 2007: a 12-year span. Doing so presents a logical development of WIPO's recent history as well as showing the interrelationship between WIPO's growth and that of those industrial sectors, and international political achievements, that converged upon WIPO and created an accelerated momentum for growth. The Secretariat has studiously reviewed the historic projections previously presented on these matters, and believes it is less useful to project further than 2007. Projecting beyond that time period adds a speculative aspect that could easily be discounted, due to the nature of the various mandates WIPO has administered.

4. WIPO must balance its internal forecasts with those representing the various global sectors in which WIPO's foreseeable growth originates: the world's political and economic sectors which, by their nature and that of WIPO, bear great influence on WIPO's activities. Within the political arena, the ebb and tide of events for each Member State may prompt change in their responses to various factors. Within the economic sphere, macro- and microeconomic forces are in constant flux. As well, one important sector has proven nearly impossible to predict: *Information Technology* ("IT"). This market sector has a clear history of unpredictability beyond the range of 2-3 years, and has repeatedly been demonstrated to be outside normal forecasting capabilities: those markets simply evolve too rapidly. However, IT is, for this forecasting exercise, both an internal and external component for WIPO. WIPO has IT projects with forecasted ramp-up periods culminating between 2002 and 2005 or 2006. Those internal IT projects are reviewed in this document. The external IT component has

influence, as one example, as to whether global or regional market segment growth patterns would have effect on WIPO's PCT or other International Registration activities.

5. This document is structured to provide a logical sequence to the presentation of the future needs of WIPO for premises. It first lays out within *Part I* an overview of business needs, relative to WIPO's mandates, including the increased perception of States and industrial sectors to the use of IP, with resulting growth in WIPO as to Member States and related WIPO activities. *Part II* presents the status within WIPO for the premises it holds under title or lease, as of year-end 2001. In *Part III*, a newly updated forecast of actual WIPO needs is presented, as to the elements of office working places, technical facilities and parking spaces. An updated forecast of WIPO needs for a large conference room is presented in a separate document (Report II).

PART I: WIPO'S ACTIVITIES AND INCREASING DEMANDS FOR INTELLECTUAL PROPERTY (OVERVIEW OF WIPO'S BUSINESS NEEDS)

6. WIPO is the only authoritative, worldwide, intergovernmental organization of intellectual property, and as such is increasingly requested by Member States, and users of the international intellectual property system, to expand the range of its activities and services. As the number of Member States grows, and as those Member States adhere to a greater percentage of the IP treaties administered by WIPO, the importance of intellectual property is increasingly recognized at the highest level of policy makers. WIPO foresees that the current trends of the expansion of intellectual property's role in various areas including economic, social, cultural and environmental areas will continue or augment for the next ten years. Many economists, futurologists and experts concur, and predict that the engines driving the world economies will present more knowledge-intensive activities, more investments in knowledge industries, a growth in electronic commerce, and the intertwined global activities.

7. In this new century, intellectual property is increasingly empowering individuals and nations, and creating this force for both knowledge and wealth creation. The expanding worldwide interest in the potential of intellectual property and its role in business, international trade, cultural advancement and knowledge creation will ensure long-lasting growth in this field, well into the new century.

8. The challenges facing WIPO during the next decade will include developing intellectual property systems to adapt to rapid socio-economic, cultural and technological (especially Internet-driven) change. WIPO will also need to provide a solid, reliable structure of global intellectual property services, which depends on economic activities in the world rather than the intention of the International Bureau of WIPO. A particular challenge of special political concern to the leaders in the world is to assist developing countries and countries in economic transition to utilize intellectual property-oriented market development as a platform for economic take-off in the new millennium.

9. WIPO is confronted with ever-growing and dynamic market-driven demands for global protection systems and services, notably under the PCT, Madrid, and The Hague systems (hereinafter these three systems are referred to as the "Global Protection System"), and the on-

line domain name dispute resolution service. It is vital that all these market-driven services are delivered smoothly, without any interruption, that the prescribed deadlines are met and that the highest possible quality is ensured to satisfy the customers. In addition, they need to be supported by customer-oriented assistance and solid delivery mechanisms and facilities, as well as being customized for different cultures and languages.

Growing membership of WIPO

10. In the following Table, a comparison has been laid out to the Member States that have joined selected WIPO Conventions or Treaties, to offer a comparison between the representative numbers associated with these international agreements, as well as offering a snap-shot of two comparable and influential intergovernmental organizations: the United Nations itself (hereinafter “UN”), as well as the World Trade Organization (hereinafter “WTO”).

Table 1: Evolution in Memberships to WIPO Major Conventions; and Those Totals in Relation to United Nations and WTO Memberships

Year	Major WIPO Conventions							Membership	
	WIPO	Paris	Berne	PCT	Madrid	Hague	Avg.	UN	WTO
								(Year end total 2001)	
1970	13	78	59	0	21	14	30.5		
1980	88	88	71	27	24	17	36.9		
1990	126	100	84	43	29	20	47.8		
2000	175	160	147	109	65	29	89.4		
2001	178	162	148	115	70	29	92.1	189	143
Prediction of Future Treaty Membership for 2010									
2010	185	180	170	150	120	50	(122)	NA	NA

11. Two items should be mentioned in relation to the above statistics. WIPO has no authority to give estimates concerning the future membership levels of other international organizations. However, as regards the World Trade Organization, any new State that ascribes to membership in that body must also subscribe to the substantive obligations of the Paris and Berne Conventions in their most recent versions, as well as several other treaties administered by WIPO. This is called for in the Agreement on Trade-Related Aspects of Intellectual Property Rights (the TRIPS Agreement), being an element of membership under the WTO. As Member States of WIPO (currently 178) have various merits in becoming also members of several treaties for the Global Protection System, the membership of the Global Protection System is expected to increase steadily as projected in Table 1.

12. In considering the anticipated growth of the Madrid System (discussed in paragraph 71 below), one salient point must be stressed. This system, for the international registration and protection of marks, has a good chance of geographical expansion (currently most of the members are European countries, partly due to its history and origin). WIPO is aware that the United States of America is in the process of formulating the necessary enabling legislation, and cannot predict when that event will transpire. However, as the United States of America holds a pre-eminent position in terms of its volume of United States Patent and Trademark Office filings for the protection of marks, its adhesion to this treaty could provoke an

unanticipated and major increase. As well, its joining could promote the subsequent adhesions by States in the Pacific region, and South America.

13. In its role facilitating activities that establish and advance international public law, or treaty law, WIPO has witnessed the following normative actions, which promoted and agreed on terms for the following new treaties or Acts. Adopted in 1996, the WIPO Copyright Treaty (“WCT”) and WIPO Phonograms and Performances Treaty (“WPPT”) update and improve the international protection of the rights of authors and performing artists (singers and musicians) within the digital environment such as the Internet (hence they are called “the Internet Treaties”). Both Treaties will shortly enter into force (in March and May 2002, respectively). The Geneva Act of the Hague Agreement was signed in 1999, and its entry into force requires only three or four more States, yet with some extra conditions, to take place. These treaties are good examples that demonstrate WIPO’s dynamic activities in the area of international law, which will continue to generate new activities to be undertaken by WIPO.

PART II: WIPO PREMISES AS OF DECEMBER 2001

14. To address the premises issue as it stands in 2001, one must first briefly review the status of the various properties owned by WIPO, and those facilities it now leases. To accomplish this ‘site inventory,’ this document will address the properties in the chronological order that they were occupied, providing information deemed important to signify their occupant capacity, costs and significant advantages or disadvantages. While all pertinent statistics have been scrupulously reviewed for this report, WIPO defers to the official documents on file, in case of discrepancies or omissions.

15. In the following section on buildings owned or leased, each property is discussed separately, and to introduce each building, reference is made to that name under which it appeared in the original WIPO documentation, and named as they opened. The owned buildings have since been renamed, which appears in parenthesis, and the official names are used throughout the rest of the document.

Buildings Owned

16. BIRPI (“BIRPI I,” hereinafter “G. Bodenhausen I”): completed in 1960, and originally holding four floors of offices, this building was constructed by the predecessor of WIPO: the United International Bureaux for the Protection of Intellectual Property (whose acronym derives from the French name). The building is owned by WIPO, and is sited on land owned by the Republic and Canton of Geneva (hereinafter “Geneva” or the “Geneva authorities” as applicable): WIPO benefits from a long-term, renewable leasehold on that land. The building construction was completely paid off in 1976. A project was mandated to augment the G. Bodenhausen I building by the addition of a fifth floor, and the replacement of its façade.

17. The G. Bodenhausen I building now has seven levels (basement, entrance, five floors), total volume of 17,210 m³ and a gross floor space of 4,986 m².

18. It has no conference facilities.

19. WIPO 'Headquarters Building' (hereinafter the 'A. Bogsch' building): completed in 1978, and described variously as "one of the best known buildings in Geneva" (AB/XX/11), and as "a landmark of Geneva" (AB/XX/20), it is owned by WIPO, on land leased from the canton of Geneva. The cost of the A. Bogsch building construction (as well as the costs for the addition made to the G. Bodenhausen I building) was financed by the *Fondation des immeubles pour les organisations internationales* (hereinafter "FIPOI"). The money was acquired on a 40-year loan, bearing three per cent interest, subsequently this interest was eliminated with 40 equal annual installments.

20. The A. Bogsch building has 19 levels (five basements (of which four are for parking and storage), entry level and 13 floors above ground), a total volume of 82,315 m³ and a gross floor space of 23,290 m². It has some 270 work places.

21. The A. Bogsch building opened with two functioning conference rooms: Room A (250 seats for delegates; with six booths for simultaneous interpretation and Room B (70 seats; three booths).

22. In 1998, a proposal was presented, and later accepted, to provide for some modification and refurbishing of the WIPO Mezzanine, with as a goal the opening of three new small meeting rooms. With one further modified room, the work for which was accomplished in 2000, those four rooms now include the Baeumer and Bilger Rooms, each with two interpretation booths, as well as the Rooms 1.27 (with three interpretation booths) and 1.1 (simple meeting room - used mostly for internal matters). Those transformations allowed the Secretariat a greater ability to host smaller meetings with needed flexibility, such as for the meetings of Group Coordinators. Several of those meeting rooms have simultaneous interpretation capabilities; the net benefit for WIPO was enormous in comparison to the costs that transformation necessitated.

23. These two headquarters buildings (not including the ex-WMO location, discussed below at paragraphs 30-32) combined, had a total volume of 99,525 m³ and a total gross floor space of 28,276 m². As to their office occupancy capacities, upon completion in the late 1970s, and throughout the 1980s, the capacity was determined to be, for G. Bodenhausen I, some 110 people (and then 145 (see paragraph 19) upon completion of the fifth floor) and 270 in the A. Bogsch building. With certain internal modifications to reduce storage priorities and rearrangement of offices, that total of 415 (110 + 35 + 270) was boosted by an additional 25, to encompass a round number of 440 working places. The A. Bogsch building is not only the main building of WIPO but also the premises providing space for the International Union for the Protection of New Varieties of Plants (UPOV) which is an intergovernmental organization for the protection of plant varieties (the Director General of WIPO is also the Secretary-General of UPOV). As UPOV uses the administrative facilities of WIPO, it needs to be located in the same premises.

24. There were as well some 240 parking spaces available to employees (who numbered nearly 400 in the late 1980s, with the inclusion of UPOV staff): 215 in the underground garage and 24 in front of the two buildings. There were no assigned parking facilities for delegates or visitors.

25. BIRPI II (hereinafter "G. Bodenhausen II"): Approved for construction in 1995 (see document AB/XXVI/19: Item 12), this building was constructed and opened in 1996, to

provide 120 working places. These were deemed vitally necessary, to allow the ever-expanding PCT staff a means of staying unified in one location (to provide the highest level of security possible to the international applications for patents). Built as an extension to the G. Bodenhause I building, this addition needed no new installed elevators or heating and electrical systems, as all could be extended from the existent G. Bodenhause I systems.

26. With the addition of G. Bodenhause II, WIPO held title to working places for 570 employees.

27. Ex-WMO: In the early years of discussions on construction of a new building, the option to acquire the World Meteorological Organization (hereinafter “ex-WMO”) headquarters building, located south of WIPO, was proposed by the Geneva authorities. The WMO and WIPO together negotiated, in the years 1990-1993, for the transfer of this property. Agreement of the price (34.3 million Swiss francs) and terms was concluded in 1993. Possession of this site by WIPO was delayed, however, and followed WMO’s occupation of its new building (located at *7bis, avenue de la Paix*, Geneva) in June 1999. Due to the delay in the construction of a new building at WMO’s headquarters, WIPO was forced to delay by two years the start date of its scheduled renovation and extension of the ex-WMO building. Preliminary work thus began on this renovation in late 1999, and was fully underway in mid-2000. The plans, as approved by the Member States, were modified to allow further upgrading and modernization, with a net increase that reached a total of some 450 working places, some 180 new parking places, and a new cafeteria with capacity of 300 people.

28. Upon completion of this project in 2003, WIPO will hold title to some 1,020 working places. In addition, the total number of parking spaces owned by WIPO would rise to accommodate some 380 employee vehicles. There remained no adequate designated delegation or visitor parking facilities among the owned buildings.

Buildings Leased

29. While intellectual property protection issues were becoming more and more mainstreamed into the consciousness of both industry and governments alike in the 1990s, producing a continuous growth in WIPO’s workload and staff, a series of leases had to be entered into by the Secretariat. These actions were taken as a means of providing some form of medium-term solution to the increasingly more urgent situation of the lack of sufficient working places owned by WIPO. The following section traces the leasing history of WIPO, including office working places, their locations and cost factors (annual). It does not include various locations rented to serve as warehouses for equipment and supplies, document storage and other matters which can be found in paragraph 88.

30. It should be recalled that where the term “total annual costs” (or a variation) is applied in the following paragraphs, it is specific to the leasing costs and utility charges, and exclusive of all staff, renovation, or other substantial, indirect expenditures.

31. Procter and Gamble (hereinafter “P&G”): In 1991, while searching for the proper resolution of its long-term needs, WIPO took the first steps to solve its shortage of working

places with the signing of a lease for 20 offices located in the P&G building Annex, located some 250 meters south (at 1, *rue du Pré de la Bichette*) of the A. Bogsch building.

32. Subsequently to that first lease, WIPO engaged to lease further working places in P&G. The leases increased as follows:

- January 1, 1995: Renewal of the lease for the above-described annex (377 m²);
- 1998: Lease of the fourth floor (August 1; 910 m²), fifth floor (August 15 (1/2) and October 15 (2/2); 910 m²), ground level (December 1; 218.25 m²);
- 1999: Lease of the sixth floor (March 1; 910 m²), first and second floors (September 1; each 910 m²);
- 2000: Lease of the Data Center and street-level offices (April 1: respectively 56 and 752 m²), the ninth and tenth floors (August 1: respectively 910 and 714 m²), and then the seventh and eighth floors, Auditorium, Cafeteria and most other functioning portions of the building.

33. WIPO held under lease, at the publishing of the present document, all but the third floor of the P&G building (the Mission of Finland retains its lease to the third floor). The P&G building provides WIPO with some 430 working places. The sum total of annual costs of these separate leases is about 6,970,000 Swiss francs, including parking fees. Included are 275 rented parking places (from 10 in 1995, then progressively increased to a total of 104 in 2000, with another 171 places added in 2001).

34. With the inclusion of heating, water, air conditioning and electricity annual charges (hereinafter “utilities” or “charges”), those together being estimated at 890,000 Swiss francs, the amount of total annual expenditure rises to some 7,860,000 Swiss francs.

35. *Centre Administratif de Morillons* (hereinafter “CAM”): concurrently to the negotiation covering the P&G Annex, another medium-term arrangement was found, with a proposal offered by the *Fondation du Centre international de Genève* (FCIG). Their location at CAM had already two buildings on-site, and the Geneva authorities proposed that WIPO assist in financing the development and construction of a third building – CAM III – which would then be leased exclusively to WIPO. The Member States gave their accord in 1991 (see document WO/PC/III/3) to that proposal, which allowed the construction of CAM III to commence. Its construction was finished in late 1993, and since then it continues to provide WIPO with some 140 working places, at a distance of over 1.6 kilometers (approximately one mile) from the A. Bogsch building.

36. Under the terms of the FCIG – WIPO agreement, money was advanced from WIPO to FCIG (10 million Swiss francs) to aid in the rapid completion of that project on a timely basis.

37. WIPO holds leases for the occupation of this building, and its parking spaces. The amounts come to 385,000 Swiss francs (for the 4,241 m²), 165,000 Swiss francs for parking places (89 interior and 20 exterior) and estimated utilities (“charges”) of 120,000; the total annual expenditure thus stood at 670,000 Swiss francs.

38. UC/UNHCR: This property, sited some 300 meters from the A. Bogsch building, was first leased in 1994 to offer WIPO 50 extra working places. That was almost immediately enlarged, beginning in 1995, to offer WIPO a total of 100 working places. Spaces within the UC building are leased from two sources: the United Nations High Commissioner for Refugees (UNHCR or “HCR”) and a private Geneva property management firm.

39. Leases were signed with HCR in 1997, to take occupancy for the seventh, fifth and second floors, beginning August 1, and to begin October 1 for the fourth floor (totaling 4,290 m² for what eventually was the seventh, fifth, fourth, second and first floors). The cost of those HCR leases, including 80 parking places and sundry other storerooms, is two million Swiss francs. Annual charges total 425,000 Swiss francs. Total funds transferred annually from WIPO to HCR for these leases amount to 2.4 million Swiss francs.

40. From a separate private management firm, WIPO also leased space on the second floor of the UC/HCR building in 1998 (July 1; 492 m²) and increased that in 2000 with an additional 256 m² (August 1). Those two leases combined, require annual payments of 350,000 Swiss francs; adding in the annual utility charges (11,500 SFr) shows an annual total of 360,000 Swiss francs.

41. The total annual rental costs WIPO expends to supply working places and parking places at the UC/HCR site were, at the end of 2001, some 2.8 million Swiss francs for a total of some 170 work places.

42. Sogival: Located approximately one kilometer from WIPO, an opportunity to lease the fifth floor of that building was negotiated, to take occupancy in mid-May 1998. The lease covers 30 working places (1,125 m²) and parking spaces (35) for a total of 260,000 Swiss francs; charges per annum are 22,500 Swiss francs.

43. The total annual costs for WIPO to provide working places for staff at the Sogival site amount to 282,500 Swiss francs.

44. OIM: Located next to the CAM building, which WIPO occupies with the International Registrations Divisions, the International Organization for Migration (“OIM”) offers an auxiliary location, from which WIPO has leased 85 m² of offices, or four work places since 15 January 1999. The amount of the lease is 24,000 Swiss francs (annually), together with the charges of 480 Swiss francs.

45. These amounts give WIPO a total annual expenditure at the OIM site of 25,000 Swiss francs.

46. Chambésy: WIPO took occupancy of this site in mid-August 1999. The facilities currently provide 55 work places to house WIPO’s Academy and Library, and the Development of Industrial Property Law Division. Located at a distance of four kilometers, the lease WIPO holds on this site commenced on 15 August, 1999, and covers the entire facility. Comprising 3,955 m² (its underground parking facility is an additional 1,700 m²), the annual lease for this facility (parking included) runs to 2.2 million Swiss francs. Annual charges are estimated at 138,000 Swiss francs.

47. The total annual WIPO expenditure at the Chambésy site amounts to 2.3 million Swiss francs.
48. Budé: Taken in lease in August 2001, this site is located near the Intercontinental Hotel, some 500 meters from WIPO, and provides 1,075 m² of space on its mezzanine floor, offering approximately 50 working places for the Finance Division. The annual leasing expenditure is 430,000 Swiss francs; charges are estimated annually to run 16,000 Swiss francs.
49. Thus the total anticipated annual expenditure for this site is 446,000 Swiss francs.
50. Giuseppe Motta: A new lease has been agreed, between WIPO and the developers of a new office building in Giuseppe Motta to rent some 1,440 m² at a location some 425 meters from the A. Bogsch building. The annual expenditure for this site would be 734,400 Swiss francs. This new building is still under construction and WIPO plans to start renting it from August 2002, which will provide some 70 working places.
51. When added to the annual charges, which are estimated to be in the neighborhood of some 50,400 Swiss francs, the annual total becomes 784,800 Swiss francs.
52. Casai: WIPO has started renting a building located at avenue de Casai close to Geneva Airport since the beginning of April 2002.
53. This facility provides some 80 working places at some 600,000 Swiss francs annually including charges (utilities).

Overview of Rented Premises

54. As of December 2001, the sum total of leases, as well as the annual utility charges, for working places, parking spaces, miscellaneous and necessary space for the leased properties inventoried above (not including the G. Motta property, which have not yet been occupied; nor the miscellaneous storage facilities) amount to just under 14.5 million Swiss francs. Inclusion of those three leased properties brings the total estimated annual expenditures by WIPO for its leased offices, with utilities charges included, to approximately 15.8 million Swiss francs.
55. It is clear in reviewing this survey, of property owned or leased by WIPO in the last ten years to secure sufficient office working places, that the increase in demand for the latter was engendered by exceptional growth, created by the growing demand for the multitude of WIPO services. Registrations of intellectual property as well as technical or educational assistance within those fields of its expertise, provoked this rapid expansion of the Secretariat: even greater than WIPO had forecasted, when it regularly submitted its findings on these issues to the Member States, between 1989 and 2001.
56. What is not as easily quantifiable, are the reduced efficiencies that derive from the dispersal of staff to the multitude of buildings leased outside the WIPO complex. The issue deepens when considering the relocating of staff of a Division that has seen rapid growth, which outstrips the capacity of their designated space. To move them requires that someone else moves also. To do so, perhaps two smaller Divisions must necessarily be relocated to other accommodations in advance, to allow the one growing Division to face its challenges together as a team. These relocations yield implied time and financial costs, which have the

unfortunate effect of increasing administrative costs, and thus reducing the funds available to WIPO's substantive programs. In 1997, WIPO engaged the firm of Coopers & Lybrand, to perform a second independent evaluation of the rental and construction options open to WIPO. One of their annexed data pages described the costs associated with sites located away from the main headquarters building complex, the cost being directly correlated to the time-distance involved (see document WO/BC/XVI/2-WO/PC/VII/2, ANNEX 10).

PART III: UPDATES OF WIPO'S REQUIREMENTS

57. Office space needs (*Section A*, following) refers to the need to provide working places to the increasing staff and associated non-staff personnel, as well as associated requirements (elevator shafts, WCs, copy/printer areas, hallways, etc.). Technical facilities (*Section B*, below) respond to those portions of the Director General's vision that emphasizes the role WIPO holds, for example, in helping to level out among the Member States the ability to inform citizens of potentially vital information disseminated from WIPO's Cooperation for Development programs. To meet these technical goals, WIPO has planned certain facilities to be included in the new building, such as a public exhibit hall (replacing the current temporary site near the reception desk), IT training room for Staff Development courses, augmented IT networking capacity and more. One of the long sought-after needs to be addressed through building a new addition is a vastly-increased capacity to hold conferences (see document entitled "WIPO Premises Audit: Need for Expanded Conference Facilities"); WIPO now hosts conferences with attendance numbers reaching upwards from 600 participants. With these topics of working places for staff, and conference facilities for diplomats and other participants, comes the associated need to create additional parking for both staff and conference participants (*Section C*, below).

Section A: Office Space Needs

58. It is recalled that, in 1996, at the request of WIPO Member States, Mr. Alec Sugden (former Assistant Comptroller of The Patent Office of the United Kingdom) prepared a study called "Opinion and Report" (see document WO/BC/XV/2-WO/PC/VI/2). This report has adapted the format used for an analysis of staff deployment at WIPO that was used in Mr. Sugden's study. His logical groupings of WIPO Divisions to include the following: Office of the PCT; Madrid and Hague (or the "International Registrations Division"), Development for Cooperation Sector; Industrial Property and Copyright; Office of the Director General and Senior Management, and the Support units. This report also includes two additional sectors that have demonstrated reliable growth trends due to the mandates they have received from WIPO Member States: the WIPO Worldwide Academy (hereinafter "WWA" or "Academy"), and the WIPO Arbitration and Mediation Center (hereinafter the "Center").

59. Table 2 shows, as a baseline, the statistics used in Mr. Sugden's study (see paragraph 16 of the Annex to the said document and the most recent statistics regarding the number of WIPO employees. For the purposes of this report, the term "WIPO employees" includes staff in the following categories: permanent, fixed term, short-term and consultants. Mr. Sugden provided a range of pessimistic (low), moderate (medium) or optimistic (high) numbers related to staff growth projections. It is to be noted, that various Divisions are under a "flexibility clause," that allows the concerned Division (e.g.: Divisions responsible for the operation of the Global

Protection System and the Arbitration Center) some greater flexibility when outside demands for registration or related activity require greater growth than was forecasted and approved by the Member States during the normal biennium budget planning cycle. It is further noted that Table 2 below shows two different types of data, one relating to the total number of WIPO employees while the other refers to the number of posts which have been allocated in the budget. The number of budget posts is smaller than that of employees which also include non-staff members such as short-termers and consultants.

Table 2 : WIPO Employees and Budget Posts

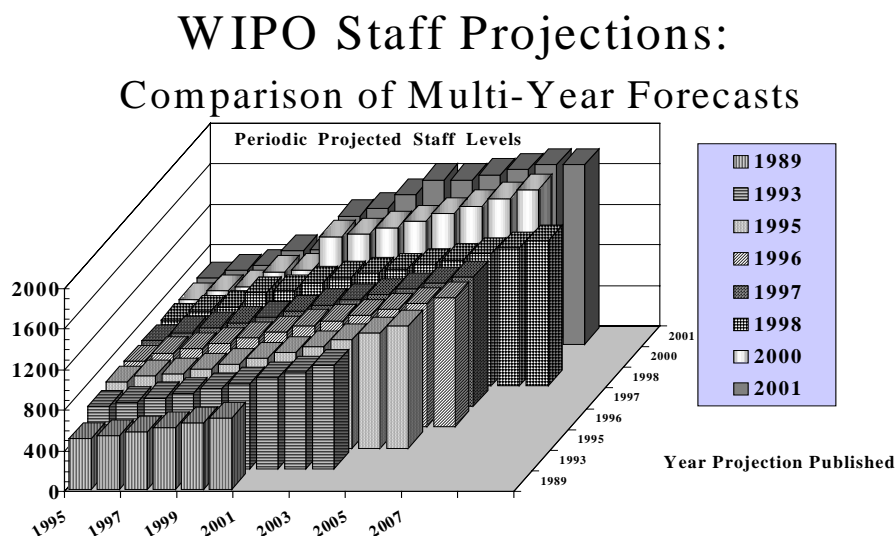
WIPO Divisions	Sugden Report 2006 Projection (WIPO employees)			Actual number of WIPO employees as of end 2001	2000-2001 Revised Budget posts	2002 –2003 Budget posts
	Low	Medium	High		Number of staff posts	
PCT Division	340	425	490	490	323	372
Madrid / Hague	94	120	139	90	88	89
Development for Coop.	139	139	139	124	85	93
Industrial Property and Copyright*	72	72	72	26	25	24
DG, Sr. Mgmt. and Aides	30	31	32	42	42	44
Support units	314	347	374	256	294	315
WW Academy	NA	NA	NA	28	14	19
Arb. Center	NA	NA	NA	21	21	30
Other**				220	40	46
Totals	989	1,134	1,246	1297	932	1032

* The variation between the Sugden Report numbers and this survey's data comes from a reassignment of certain of these staff to the Cooperation for Development Regional Bureaus.

** This includes Information Technologies Division, Global Issues Division, the Global Communications Division, the SME Division and other units that have been created since 1996.

60. The following chart (Chart 1) shows clearly how several recent projections of WIPO staff levels, published between 1989 and 2001, have been continuously augmented as a result of the ongoing impressive growth in the Global Protection system. From the chart each "slope," from front to back, represents a different projection, from the base-year forward, usually for ten years. They offer redefined growth patterns, progressively, mainly in reaction to that private sector thrust for increased services, a call that WIPO must respond to precisely.

Chart 1



PCT Growth

61. As was the case in the last decade, it is hard to establish reliable methods to project PCT growth. In this section, two scenarios are presented for PCT projections. The method of estimating the number of work places based on these projections needs certain steps of evaluation. First, the number of international applications is used, as this figure is obviously the most important factor to assess the workload of the Office of PCT. Secondly, the relation between the number of international applications and the number of WIPO employees who work in the area of PCT. Then, any efficiency and productivity gain deriving from IT projects, notably IMPACT project, will be evaluated. These three steps of evaluation will lead us to the projected number of work places needed in the area of PCT.

Conservative Scenario

62. The number of international applications that the Program and Budget of the 2002-03 biennium used to project the resource plan have been updated below by reflecting the actual number of international applications received in 2001. This scenario is conservative, since despite the fact that from January 1996 to December 2001, the average yearly growth in the number of international applications has been approximately 16%, the annual growth is estimated at 7% throughout the period in question (see table 3 below).

Optimistic Scenario

63. A more optimistic estimate, as reflected by the second set of numbers, is projected to show more optimistic growth. It was based on a premise that the historic growth from the mid-90s through the year 2001 could continue for several more years, then perhaps to lessen

and eventually move towards the seven per cent growth rate already used. Chart 2 perhaps gives a better and vivid indication of these two potential growth lines.

64. The projections of international applications are given in Table 3 below, following two different scenarios discussed above.

Table 3: Projections of International Applications

Scenario	Conservative		Optimistic	
	International Applications	% increase	International Applications	% increase
2001	103,947	-	103,947	-
2002	111,223	7%	120,579	16%
2003	119,009	7%	138,665	15%
2004	127,340	7%	159,465	15%
2005	136,253	7%	180,196	13%
2006	145,791	7%	203,620	13%
2007	155,996	7%	226,019	11%

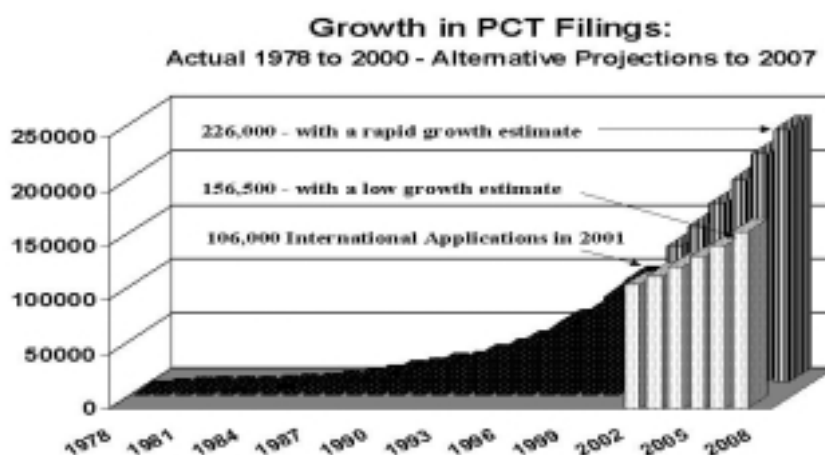
65. With regard to the relation between the growth in the number of international applications and that of staff and non-staff members associated with the Office of PCT (hereinafter referred to as the "PCT employees"), it is noted that over the last two biennia, the number of PCT employees is not growing at the same rate as the number of international applications, partly because not all of PCT employees directly deal with the handling of international applications and also because some economy of scale is achieved. According to WIPO's internal record for the last several years, the growth in the number of employees is 72% of the growth in the number of international applications. If this rate (72%) continues to be valid, for example, an increase of 16% in the number of international applications leads to an increase of 11.5% in the number of PCT employees, on the assumption that the organizational structure and method of working remain unchanged. Thus, the number of PCT employees needed for the next six years is estimated as shown below.

Table 4: PCT Employees Projections

Scenario	Conservative		Optimistic	
	% increase in the number of applications	% increase in PCT employees needed for the PCT operation	% increase in the number of applications	% increase in PCT employees needed for the PCT operation
2001	-	-	-	-
2002	7%	5%	16%	11.5%
2003	7%	5%	15%	10.8%
2004	7%	5%	15%	10.8%
2005	7%	5%	13%	9.4%
2006	7%	5%	13%	9.4%
2007	7%	5%	11%	7.9%

66. The above two scenarios are presented in Chart 2 below.

Chart 2: International Applications to PCT:
1978 to 2001; Projections to 2007



67. If the above growth rates are to be translated into the number of PCT employees, the number of PCT employees are estimated to be in a range between 657 to 866 in 2007 as shown in Table 5 below.

Table 5: The Projection of the number of PCT Employees
without considering IMPACT's efficiency gain

Scenario	Conservative		Optimistic	
	% increase in PCT employees needed for the PCT operation	The number of PCT employees	% increase in PCT employees needed for the PCT operation	The number of PCT employees
2001	-	490	-	490
2002	5%	515	11.5%	546
2003	5%	540	10.8%	605
2004	5%	567	10.8%	671
2005	5%	596	9.4%	734
2006	5%	625	9.4%	803
2007	5%	657	7.9%	866

Efficiency Gain from the IMPACT Project

68. In a study prepared by De Loitte and Touche (see document S.P0565.40.13: "WIPO Analysis – Qualitative and Quantitative Benefits; 1998), the development of IMPACT was submitted to an independent review of its effect on PCT employees and business model. As far

as the magnitude of the gains from the automation of the IMPACT is concerned, some indications were given in its document that, at the end of the project, a total saving of 88 posts over 380 posts (then projected number of PCT employees at the time of deployment of the IMPACT system), or 23%, was expected. Though the statistics used for the study have become obsolete and it is practically impossible to redeploy redundant PCT employees immediately after the beginning of the IMPACT operation (expected at the end of 2002), it is still reasonable to use this figure (23%) as an indicative rate to evaluate a one-time impact of the deployment of the IMPACT system. It means that the number of PCT employees to be saved would be either 118 (conservative scenario) or 126 (optimistic scenario), which correspond to 23% of the estimated number of PCT employees at the end of 2002. The result of taking into account the efficiency gain are shown in Table 6 below. It seems noteworthy to underline that, though the fact the figure of 23% is significantly higher than that of other similar projects, it is likely to be achieved after all according to the progress made so far in the IMPACT project.

Table 6: The Projection of the number of PCT Employees
in which the IMPACT's efficiency gain has been reflected

Scenario	Conservative		Optimistic	
	% change in PCT employees needed for the PCT operation	Number of PCT employees	% change in PCT employees needed for the PCT operation	Number of PCT employees
2001	-	490	-	490
2002	5%	515	11.5%	546
Start of the IMPACT System				
2003	5%	422 ¹	10.8%	479 ²
2004	5%	449 ³	10.8%	545 ⁴
2005	5%	478	9.4%	608
2006	5%	507	9.4%	677
2007	5%	539	7.9%	740

Projections on the Growth of the International Registration (Madrid and The Hague Systems)

69. The International Registration Division is responsible for the activities that share registration procedures for the international registration of marks and international deposit of industrial designs. Those two Systems are the Madrid System (for Marks) and the Hague System (for Industrial Designs).

70. Like the PCT operation, these two systems are part of the Global Protection system, whose growth depends on the demands from the market economy, culminating needs for dynamic adjustments of staffing levels to the number of applications for international

¹ 540 (see Table 5) – 118 = 422

² 605 (see Table 5) – 126 = 479

³ 567 (see Table 5) – 118 = 449

⁴ 671 (see Table 5) – 126 = 545

registration. In the same manner as ensuring an appropriate level of staffing at the Office of PCT, the Divisions in charge of the international registration have been allocated additional human resources in accordance with the increasing demands from the market by applying a “flexibility clause” which allowed the International Bureau to automatically increase the number of posts in the Divisions concerned.

71. As to the future growth of the Madrid System, this report has already highlighted a scenario that could provoke rapid expansion (see paragraph 12 above). The regional nature of this treaty (a majority of Member States located in Europe, Eurasia, Africa and countries in economic transition; little penetration of North and South America) could soon change towards greater global penetration. For example, the United States of America anticipates finalizing its enabling legislation, perhaps in 2002 or 2003, to allow accession to the Madrid Protocol (and/or the Madrid Agreement). Such entry, in consideration of the amplitude of the US market for domestic and international trademark protection, as well as the effect on other States’ future actions influenced by that country’s acceptance, would perhaps provoke a strong increase. Such an increase could display a magnitude nearly doubling the present inflow of international registrations for marks. As the Madrid System introduced in 1996 a new interval for renewal of the registration of 10 years, the first timing of renewal will come in 2006 when a sharp increase in the number of requests for renewal is expected.

72. It is proposed to use figures included in the Program and Budget (paragraphs 353 and 359 of document WO/PBC/4/2) and simply extrapolate them for the year 2002. It is further proposed that, taking into account certain factors referred to in paragraph 70 above, the projection for 2003 onwards be presented by a range of figures (conservative and optimistic). Table 7 shows conservative figures which have been extrapolated from the figures for the year 2002, and optimistic figures which anticipate additional increase stemming from the accession by the United States of America. As regards the Hague System, 4% annual growth is projected.

Table 7: Madrid and Hague System Filings

Year	The projected number of the International Registration			
	Madrid (including renewals)	The Hague	Total	% Change
2000	29,837	7,300	37,137	-
2001	30,488	7,600	38,088	2.6%
2002	33,500	7,900	41,400	8.7%
2003	34,500-38,500	8,200	42,700-46,700	3.2-12.8%
2004	35,535-41,535	8,530	44,065-50,065	3.2-7.2%
2005	36,600-46,600	8,875	45,475-55,475	3.2-10.8%
2006	37,700-49,700	9,230	46,930-58,930	3.2-6.2%
2007	38,850-51,850	9,600	48,450-61,450	3.2-4.3%

73. Given that the growth in the international registration can be considered as the most relevant indication of the future workload, the number of employees working for international registration activities is expected to grow as shown in Table 8 below.

Table 8: The projected number of employees in the area of International Registration

Year	Growth in the number of International Registration (% Change)	The number of employees
2001	-	90
2002	8.7%	98
2003	3.2-12.8%	101-111
2004	3.2-7.2%	104-119
2005	3.2-10.8%	107-132
2006	3.2-6.2%	110-140
2007	3.2-4.3%	114-146

74. The WIPO Arbitration and Mediation Center was established in 1994 to offer arbitration and mediation services for the resolution of international commercial disputes between private parties. Implementation of arbitration rules and procedures for the resolution of Internet domain name and related trademark infringement issues created an avenue through which this WIPO activity has grown swiftly. While not alone in this field, WIPO established itself as one of the leading authorities for the resolution of these Internet Domain name disputes, and currently holds, for these disputes, a greater than 50% market share. The Uniform Domain Name Dispute Resolution Policy (hereinafter “UDRP”) had initially been designed to be available to disputes within the generic Top-Level Domains (“gTLD”s: .com; .net; .org;) that existed prior to 2001. That system was expanded as “new” gTLDs became or are becoming available (e.g.: .biz; .info), for which usage of the UDRP was mandatory. This system has also been adapted to cover country code TLDs (or “ccTLDs,” examples of which are: .uk; .fr; .tv), at the choice of those ccTLD administrators. Other recent expansion to the domain naming system extends this form of dispute resolution to the “internationalized domain names”: domains that are registered in a non-Roman (or “non-ASCII”) language. These scripts, such as Arabic, Chinese, Cyrillic or Korean, have presented a huge growth-curve in their usage for domain names since they first came into use. Since those new gTLD domains are still in the ramping-up phase and with the huge growth in non-ASCII domains, to offer statistical data with a high degree of certainty, as to its reliability in this area, may still be premature.

75. It is presumed within the Secretariat that the increased use of the Center by parties addressing both domain name and other IP law disputes will continue to increase, and impact strongly on WIPO’s long-range activity levels and future growth, based on the premise that the Internet will continue to expand the availability of usable and desirable domains, within the known parameters of this important system. As well, in the legal community, usage and familiarity create an increased demand for the non-Internet related arbitration and mediation venues. In sum, WIPO envisages growth to this Division to center on 3% growth annually.

76. The WIPO Worldwide Academy (hereinafter the “WWA” or “Academy”) was formalized into a coherent structure in 1998, bringing together previous activities that were spread across several Divisions. With a focus on the training, through several different delivery methods, of policy makers, professionals of many different categories, including national intellectual property Office officials, patent or trademark attorneys, and many more, the Academy has grown in these last four years. This Division is expected to provide space for trainees, if training courses continue to be intensively organized at the Academy.

77. Major investment in several large-scale information technology projects that are oriented towards bringing efficiencies to both the internal and external operations of the Organization have been initiated, with several reaching full deployment. The first of these major projects will automate the Finance and Budget activities within the Organization, as these are central to the overall Organizations activities. Providing accurate and up-to-date managerial information is critical for Program Managers in the delivery of their respective programs. A modern IT system in this area will also meet new security and functional requirements that are not currently offered by the existing 15 year-old system.

78. The investment in certain IT projects supporting WIPO's Global Protection system will also bring significant benefits to WIPO's Member States and other stakeholders, by improving and supporting more efficient business processes, providing access to and the dissemination of intellectual property data and by establishing the WIPO global network infrastructure (the WIPONET Project) to support intellectual property services. As discussed in paragraph 67 above, regarding the operation systems for the PCT, the IMPACT project will allow WIPO to deal with electronic distribution of priority documents to PCT Contracting Parties and to increase its efficiency, once the system is deployed towards the end of 2002.

79. With the exception of those of the Global Protection System and the Arbitration Center which enjoy the application of the "flexibility clause" to increase human resources in response to the market demands, all other Divisions, in particular, administrative support units, are expected to benefit from various IT projects to modernize administrative work within the International Bureau. Moreover, all Divisions, are expected to grow in a modest way as seen in the last five years. It is therefore proposed to estimate an annual growth rate of about 2%.

80. In summary, table 9 shows the compilation of projections made for various Divisions and units.

Table 9: Projections for the increase in Staff up to the Year 2007

WIPO Divisions	Sugden Report 2006 Projection (High)	Actual number of WIPO employees as of end 2001	New Projection of WIPO employees for 2007
PCT Division	490	490	539-740
Madrid / Hague	139	90	114-146
Development for Coop.	139	124	157
Industrial Property and Copyright	72	26	29
DG, Sr. Mgmt. and Aides	32	42	47
Support units	374	256	247
WW Academy	NA	28	35
Arb. Center	NA	21	25
Other *		220	247
Totals	1,246	1,297	1,440-1,673

81. In addition to office space for WIPO employees, WIPO premises also need to provide space for external services (e.g., travel agent, restaurant management, security guard and other WIPO contractors) and UPOV staff. As of 2001, some 50 workplaces were provided to external services. It is to be noted that UPOV will continue to use the same premise as WIPO's headquarters building. It is proposed to estimate that in 2007 UPOV will need 25 work places (currently 15 work places are occupied by UPOV staff members and short-termers.). It is also to be noted that for effective management of office space and collocating employees of the

same Division, 5% of the total number of work places should be reserved. In Sugden's study, he concluded that "on the basis that the WIPO, BIRPI and WMO buildings will provide approximately 760 work places in the long term, the forecast above of WIPO staff needs, taken with the likely needs of UPOV and external services - up to another 50 people - suggests that another 280-540 places will be required in ten years' time." As it was in 1996 that his conclusion was made, his projection implied that WIPO's office space needs for 2006 would be 1,040-1,300 work places. The result of these adjustments leads us to Table 10, which shows the updated needs of WIPO for office space for the year 2007. It is recalled that in the Program and Budget for the present biennium, the requirements for office space for April 2007 is estimated to be 1,772 (Table 22 of document WO/PBC/4/2).

Table 10: New Projection for work places required

WIPO Divisions	Sugden Report 2006 Projection (High)	Actual number of WIPO employees and office space needs as of end 2001	New Projection of WIPO employees and office space needs for 2007
PCT Division	490	490	539-740
Madrid / Hague	139	90	114-146
Development for Coop.	139	124	157
Industrial Property and Copyright	72	26	29
DG, Sr. Mgmt. and Aides	32	42	47
Support units	374	256	247
WW Academy	NA	28	35
Arb. Center	NA	21	25
Other		220	247
Total Number of WIPO Employees	1,246	1,297	1,440-1,673
UPOV	20	15	25
External Service	35	50	80
Workplace Needs (without 5% reserve)	1,301	1,362	1,545-1,778
Workplace Needs (with 5% reserve)	--	--	1,622-1,866

82. It should be noted that, as described in paragraph 426 of document WO/PBC/4/2, with the completion of the ex-WMO building in 2003, WIPO plans to discontinue rentals of certain buildings with a view to co-locate WIPO employees and reduce rental costs.

Section B: Technical Facilities

83. When the initial budget estimate for the new construction project was made in 1998, requirements for technical facilities were generally described as follows:

"The building will incorporate the latest information technology facilities, including high bandwidth cabling throughout the building and video-conference and other electronic conference facilities, so that staff can make maximum use of information technology in their work, thereby enabling them to work in the most efficient and productive manner; this is particularly important in the context of WIPO's computerization and information technology oriented projects. Through the effective use of information technology and new ways of using space, the building should allow for the possibility of accommodating larger numbers of staff in the future. The building can therefore be characterized as being

an “intelligent” and operational building. (The building should also be “intelligent” in incorporating the latest building technologies, to be environmentally adaptable and energy-efficient.)” (see paragraph 8 of document “Premises” WO/GA/23/5)

84. The above description of requirements was too general, and no specific requirements had yet been determined (in 1998). When the Rules and Program for the international architectural competition (referred to as the “Program”) were prepared in 1999, the Director General’s new vision, which was also under preparation at that time, was reflected in the Program in order to elaborate the above-mentioned requirement defining this as an “intelligent” building.

85. The Director General’s vision was approved by Member States at the Assemblies in September 1999. His vision includes new initiatives to make the intellectual property system more generally accessible to the general public (the process of ‘demystification’), strategic and active use of information technologies for modernization of WIPO, and staff development to acquire new skills and knowledge. These initiatives were described in the “Vision and Strategic Direction of WIPO” (see document A/34/3; paragraphs 18 and 32).

86. The reflection of that vision resulted in the inclusion of certain technical requirements which were specifically described in “Part II” of the Program (September 8, 1999). In accordance with those requirements, the winning design contains a technical area which has a relatively large proportion of gross floor space compared with office working places.

87. For example, the Program includes certain large facilities as was featured in “Table 2” of document WO/PBC/4/3 (See cited document, page 3).

Table 11: Re-published “Table 2”:
Selected large facilities of the new office building

Facilities	Space (m2)
An underground parking space for trucks*	2,300
An underground floor for storage	2,000
An underground space for unloading*	1,920
Multipurpose hall*	700
IT training room*	600
Library and a reading room*	500
Staff welfare facilities*	400
Information center and storage space*	320
Medical Unit*	300

88. The facilities marked with an asterisk (“*”) were not mentioned in the initial general description of technical requirements (i.e., in document WO/GA/23/5) but were subsequently included in the Program and received approval from the Jury of the International Architectural Competition. Most of them were intended to augment the vision of the Director General by supporting such new initiatives as relating to demystification, information technologies and staff development.

89. Another example of the benefits provided by the inclusion of these additional items is seen in the space to be utilized for the transfer of goods delivered by trucks (first three lines of the Table 11 immediately above). This addition will allow the vital separation of administrative and restaurant deliveries, bringing to an end the unavoidable situation where certain waste products, such as recycled toner cartridges, are collected for pickup in close proximity to the unloading dock. That dock currently is used to bring in restaurant food items, as well as paper and other supplies. The parking space for trucks to unload is currently made available at the A. Bogsch Building. However, it is not only too small but also located at the entrance of the building, which often blocks cars entering the parking.

90. It is noted that in addition to normal requirements for storage space, WIPO has particular needs for storage space to keep the records relating to international applications under the PCT for at least 30 years from the date of receipt of the record copy of an international application (PCT Rule 93.2). They are about several million sheets of papers. WIPO currently rents the following storage space as shown below in Table 12.

Table 12: Storage Space

Location	Storage space in m3	Charges/year in Swiss francs
Meyrin	1272	173,000
Collex	916	81,000
Sogival	308	43,000

Section C Parking Spaces

91. WIPO has consistently forecasted a need for parking spaces based on a statistic that 80% of WIPO employees would have need of an assigned parking space. The inventory of parking facilities that are maintained throughout WIPO's owned and outlying leased properties, to accommodate WIPO employees, is seriously distorted, with a strong majority of spaces (nearly 80%) available at office sites WIPO has leased. WIPO in 2001 owned some 240 parking spaces (see Table 13), while some 800 parking spaces were sited at the leased properties.

92. To restore some balance, WIPO has leased, from the *Parking des Nations*, some 238 parking spaces. That parking facility is located under the ITU property directly across the street from WIPO, with one set of access/exit ramps located on WIPO's corner. That supplemental parking arrangement costs the Secretariat some 345,576 Swiss francs per annum. This facility is managed by FIPOI, and has offered WIPO a sort of "safety valve" by its independent status. However, in the winter of 2001-2002, the *Transports publics de Genève* (hereinafter "TPG") broke ground on the extension of an existing tramway line that will create a new terminus at the intersection between WIPO and the *Palais des Nations* (European seat of the United Nations organization). By offering tramway service from the *Palais* to the central Geneva rail station, and through connections to its existing tramway (and bus) network, impacts resulting from that tramway extension will need to be assessed. Both a small reduction in the use of WIPO parking facilities by its staff could be anticipated, or the availability to access increased levels of parking within the *Parking des Nations* by WIPO remains to be judged. If the tram becomes a convenient alternative, a major increase by other IGOs for day, or monthly parking pass sales,

or from the public at large, for the *Parking des Nations* facility, could reduce WIPO's access to the facility.

93. The sum of parking thus available to WIPO that is *independent* of WIPO's leased office properties is 478 spaces in February 2002. The plans for the ex-WMO building and garage called for some 180 additional parking spaces to be provided. As well, the design for a new building on the new lot (the subject of this audit) has envisaged some 580 new spaces (300 within the new building; 280 additional spaces would be built between the A. Bogsch building and the new building, while subterranean foundation work was underway). Adding the total of new spaces (580) to the 478 cited above, yields a total of approximately 1,060 spaces. However, once renovation of the ex-WMO site has been completed parking spaces will become available during the second half of 2003; the target date for the new construction project is of course tied to the outcome of the construction process currently under review. Initial plans had called for its completion in early 2005.

94. However, while the two construction projects are currently underway or to be undertaken, the number of WIPO's owned parking spaces may see further small, temporary reductions from time to time. The constructions underway may necessitate either the temporary closure or abandonment of certain actual spaces, to make progress and provide access, as an example, or to provide storage.

95. In order to correlate the parking that WIPO has available with the needs and locations of staff working places, is a monumental ongoing task requiring several site-oriented waiting lists that must be constantly updated and maintained in hopes of avoiding confusion, or staff discord. The deletions of available spaces, or reassignments of an individual staff member, often creates a "ripple effect" multiplied by the numbers of staff in a Division, who may all be relocated together. Such was the case in 2000, when over 400 members of the PCT staff (and short-term personnel) were relocated from building G. Bodenhausen I and II, to the P&G building.

96. Table 13 below shows a simplified inventory of the owned and leased WIPO parking spaces, and was updated (and derived) from Table 23, of document WO/PBC/4/2 (see Table 23, following paragraph 427). While holding an inventory of spaces that seems adequate at the moment, it must be recalled that the vast majority of spaces are tied to properties that are leased. This creates an additional burden on WIPO's budget, as was outlined in Part II of this document. This table also does not account for any unanticipated growth in WIPO staff, as it follows the anticipated rise in *owned parking spaces*, as well as the reduction in *leased parking spaces*. Thus the column marked "Surplus or Shortage" retains the uncertainties associated to construction delays, further unanticipated increases in work activities (thus staff increases) and, if construction completion dates are pushed back, the date by which leased properties may be vacated.

Table 13: Parking Space Availability

Year	Required Spaces (Projected)	Owned	Leased	Total	Surplus or Shortage
2001	1,070	237	803	1,040	(30)
2007	1,152-1,338 1,401-1,673	681	894	1,375	130

97. On the issue of parking, one final note should bring to light a practice within WIPO, during the annual General Assembly sessions in September-October, and within its on-site parking facilities, of offering some 20 parking places to Delegations in attendance. To accommodate this extraordinary step, WIPO has requested volunteers from its staff, who hold a right to park within the A. Bogsch building garage, and relocated those staff to assigned parking elsewhere. This temporary measure has alleviated, to a small and not entirely satisfactory degree (to other Delegations or to the temporarily displaced WIPO staff), the overwhelming problems associated with the historic lack of centralized WIPO parking for visitors and Delegates. As described in this extraordinary arrangement, currently no parking facilities are made available to visitors, delegates and participants in WIPO's meetings. The Secretariat of WIPO has been repeatedly reminded by the Member States of the needs for visitors' parking in front of or under the A. Bogsch building.

[End of Appendix 1 (of Annex), Appendix 2 follows]

WIPO INPUTS FOR THE EVALUATION OF THE BUILDING PROJECT
BY THE SWISS FEDERAL AUDIT OFFICE

REPORT II: Needs for a Conference Room

Introduction

1. This document is offered in response to a request of the Federal Audit Office of the Swiss Confederation, which sought a document regarding specifically the perceived business needs of WIPO in consideration of expansion options to augment its conference facility space. The Secretariat of WIPO has made every effort to provide accurate information herein yet, in case of any inaccuracies, defers to the officially published WIPO documentation.

Analysis

Existing Conference Room

2. Throughout every facet of WIPO's substantive mandates are the necessity to host and organize meetings, ranging across broad or narrow topics; these may be to promote discussions leading to new international agreements, to disseminate concepts of intellectual property (IP) law to government IP Office policy makers or staff, or to present to WIPO's Member States the internal management issues currently on the table. In order to perform these mandated activities, the Organization had built in its Headquarters building a conference room with capacity for 250 seats. That facility was opened in 1978, and for the last 23 years has hosted numerous meetings. However, it has been proven no longer adequate, in the 21st century, to accommodate the size and range of meetings that WIPO has increasingly hosted in the last decade. The following section of this document reviews the nature and trends in the hosting of meetings at WIPO.

3. The A. Bogsch building opened with two functioning conference rooms: Room A (250 seats for delegates; interpretation booths accommodating six-language translation simultaneously) and Room B (70 seats; three languages).

4. In 1998, a proposal was presented, and later accepted, to provide for some modification and refurbishing of the WIPO Mezzanine, with as a goal the opening of three new small meeting rooms. With one further modified room, the work for which was accomplished in 2000, those four rooms now include the Baeumer and Bilger Rooms, each with two interpretation booths, as well as the Rooms 1.27 (with three language interpretation capability) and 1.1 (simple meeting room - used mostly for internal matters). Those transformations allowed the Secretariat a greater ability to host smaller meetings with needed flexibility, such as for the meetings of Group Coordinators. Several of those chambers have multilingual interpretation capabilities; the net benefit for WIPO was enormous in comparison to the costs that transformation necessitated.

Conferences and Meetings Organized by Wipo in Geneva

5. The evolution in the number of meetings and related variables is shown in Table 1 below, which includes actual data for the period 1990 to 2000.

Table 1: Evolution in the number of meetings, days and participants (1990-2000)

Year	Meetings	Days	Participants
1990	45	220	2784
1991	37	158	2209
1992	45	191	2394
1993	52	256	3347
1994	44	194	3382
1995	57	208	3905
1996	52	229	5127
1997	56	241	4740
1998	54	200	4882
1999	57	234	6499
2000	45	240	5444

6. There has been an upward trend in all categories displayed: the annual number of meetings (five-year average from 1971 to 1976 was 28; from 1996 to 2000 was 53), number of meeting-days (five-year average from 1971 to 1976 was 121; from 1996 to 2000 was 229) and in the participant counts of meetings attended (three-year average from 1990 to 1992 was 2,462 per year; from 1998 to 2000 was 5,608 per year). Furthermore, the average duration of individual meetings (the 30-year totals - sum of meeting days divided by sum of annual meetings) equaled some 4.5 days per meeting. This long-range statistic showed a very slight decrease of 3.8 per between 1991 and 2000, whereas the average attendance to those meetings approximately doubled in the same period. These statistics reveal that WIPO welcomed a higher number of State delegations, IGOs and NGOs who attended those meetings, as well as suggest the larger size of the individual delegations.

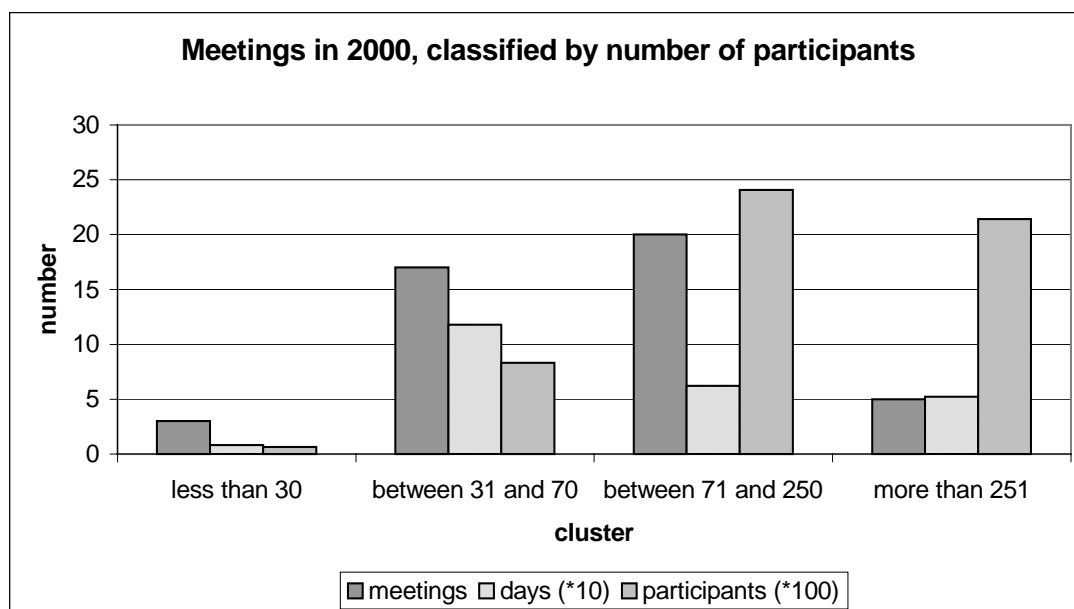
7. In the year 2000, WIPO organized 45 meetings in Geneva. These meetings spanned 240 days and involved 5,444 participants. Five of these meetings, lasting 52 days and involving 2,140 participants, had average attendance in excess of 250 participants (thus exceeding the capacity of WIPO's Room A). Another 20 meetings, lasting 62 days and involving 2,408 participants, had an attendance in excess of 70 participants (thus exceeding capacity of WIPO's Room B) but less than 250. Moreover, 17 meetings, lasting 118 days and involving 832 participants, had an attendance in excess of 30 participants (thus exceeding capacity of WIPO's conference rooms in the Mezzanine of the Arpad Bogsch building). Finally, 3 more meetings lasting 8 days and involving 64 participants had an attendance below 30 participants. This presents the aspect that anytime a meeting exceeds any WIPO conference facility capacity, that meeting session must be 'upgraded' to the next higher-capacity (and available) room: the weak link being 'availability.' Or, participation must be restricted.

8. These conference facility statistics reflect neither the internal usage of conference rooms by the Secretariat for informational and/or educational/training staff activities, nor do they reflect the preparatory or coordination meetings with regional groups of Member States, Group Coordinators, etc. It is recalled that the common practice for the six regional groups of Member States in WIPO, is to meet, in parallel to larger conferences, for the purpose of

coordinating their Regional Group positions. These statistics also do not include more than 200 national or regional meetings, seminars or symposia, which are organized annually outside Geneva by the International Bureau.

9. The Chart 1 below reflects the distribution of meetings in Geneva in 2000, classified according to the number of attendees:

Chart 1



10. In addition, Table 2, below, provides detailed information for each cluster of participants to a meeting for the period between 1990 and 2000. This breakdown is not available prior to 1990.

Table 2: Evolution in the number of meetings, days and participants clustered by size (1990-2000):

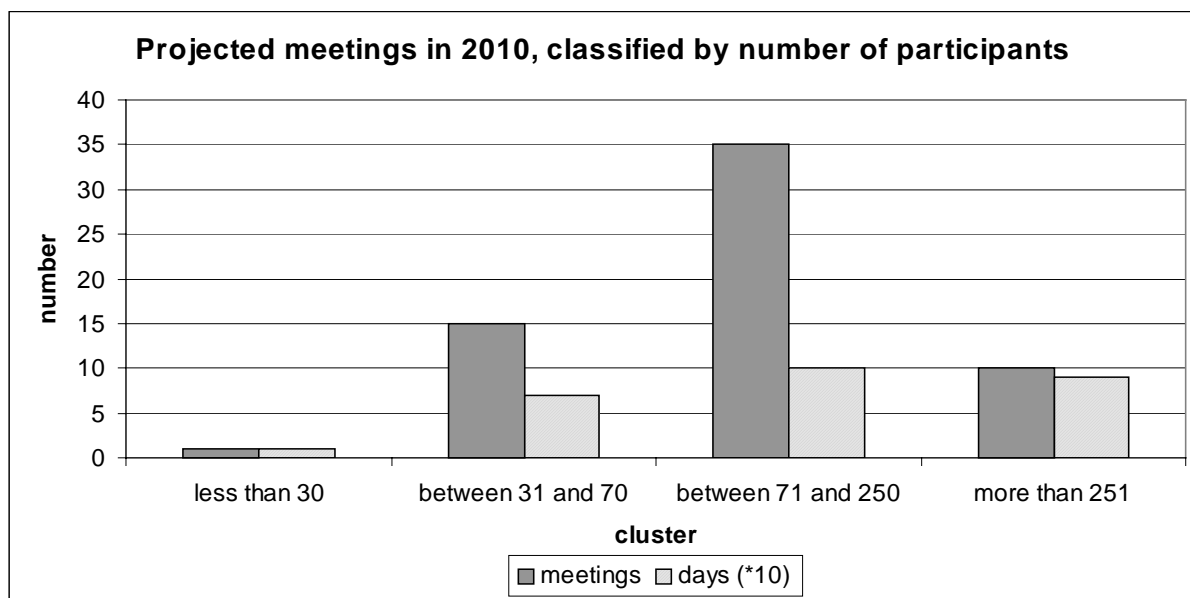
Year	More than 251 participants			Between 71 and 250 participants			Between 31 and 70 participants			Less than 30 participants		
	Meetings	Days	Participants	Meetings	Days	Participants	Meetings	Days	Participants	Meetings	Days	Participants
1990	0	0	0	15	93	1880	12	65	512	18	62	392
1991	1	10	302	9	49	1135	11	58	478	16	41	294
1992	0	0	0	12	69	1454	14	53	589	19	69	351
1993	1	10	378	11	65	1547	18	57	901	22	124	521
1994	3	30	998	11	41	1345	18	87	825	12	36	214
1995	2	18	762	14	39	1861	22	95	985	19	56	297
1996	3	38	1480	19	60	2457	21	96	1052	9	35	138
1997	3	15	1187	21	78	2597	17	77	752	15	71	204
1998	4	26	1463	17	49	2247	19	84	962	14	41	210
1999	5	47	2243	25	87	3306	15	59	729	12	41	221
2000	5	52	2140	20	62	2408	17	118	832	3	8	64

11. Analysis of the information contained in Table 2 supports the finding that the overall growth of meeting sizes tends to increase the percentage of available days that are spent on higher capacity meetings, to the detriment of smaller groups' meetings. In particular, the number of meetings with an excess of 250 participants has increased five-fold in one decade,

whereas meetings with less than 30 participants decreased by a similar factor during the same period.

12. Concerning the projection in the number of future meetings, the overall WIPO trend shown in Chart 2 suggests that by the year 2010, WIPO could be conducting meetings annually in excess of 60 meetings (45 in 2000) for some 260 days (240 in 2000). Furthermore, the average participation to these meetings would have increased to some 170 participants per meeting (120 in 2000). Reviewing projections for each individual cluster of meetings, it appears that meetings in excess of 250 participants would have growth higher than the average, driven not only by the general upward trend in the number of meetings, but also because of increased size of meetings that otherwise would have been classified in smaller clusters. The chart below shows projections in the number of meetings by 2010, classified by the number of participants.

Chart 2



13. These projections also appear consistent with the advancing role of the International Bureau in formulating activities based on the emergence of new Intellectual Property issues; these may require the continuous input and involvement by Member States, particularly when approaching a stage involving international legal normative activities. They also appear consistent with the increasing number of Members, not only to the WIPO Convention, but more importantly (as far as size of meetings are concerned) to each individual treaty. Table 3, below, shows the actual evolution in membership to the active WIPO treaties that are in force. The periods are broken to reflect prior to 1991, from 1991 to 1995, then annually from 1996 to 2002, with a projection towards new potential memberships in 2010.

Table 3: Time-Segmented Breakdown of WIPO Administered Treaties:
Pre-1991; 1991-1995; yearly from 1996 to 2002; projections for 2005 and 2010

Treaty Adherences per Time Period	WIPO Conv	Paris	Bern	Madrid System		Hague	Nice	Lisbon	Rome	Locarno
				Agrm't	Prot.					
Prior to 1991	124	98	86	27	NA	19	32	16	35	15
1991 to 1995	33	38	31	19	5	6	12	1	16	9
1996	1	4	3	0	7	1	4	0	3	4
1997	7	3	7	1	10	3	4	1	3	2
1998	6	8	6	3	12	0	4	0	2	5
1999	0	5	7	1	6	0	3	1	5	1
2000	4	4	7	1	9	0	3	0	4	1
2001	2	2	1	0	5	0	4	1	0	3
2002 *	1	0	0	0	1	0	2	0	0	0
Subtotal 1996 to 2002	21	26	31	6	50	4	24	3	17	16
Actual Totals	178	162	148	Sys. = 70		29	68	23	68	40
Projected 2010 / TOTAL	185	180	170	Sys. = 120		50	95	32	100	55

For the charts above and below:

* 2002 appears here as 'Actual' since States' previous actions to adhere to a treaty may span two calendar years. This figure is preliminary and/or incomplete;

** NA for 'not applicable.'

Treaty Adherences per Time Period	PCT	Strasbourg	Phono	Vienna	Satellite	Budapest	Nairobi	Film Reg.	TLT	UPOV	WCT
Prior to 1991	45	26	42	5	13	24	33	NA**	NA**	19	NA**
1991 to 1995	37	3	11	0	7	12	3	12	NA	10	NA
1996	5	5	1	3	2	4	1	0	6	2	NA
1997	7	5	1	3	0	3	0	0	5	3	NA
1998	4	1	2	2	0	3	2	1	10	4	NA
1999	6	4	1	1	1	3	0	0	4	6	NA
2000	4	2	6	1	1	1	1	0	1	2	NA
2001	7	2	3	4	0	3	0	0	0	3	NA
2002 *	0	3	0	0	0	0	0	0	***	1	30
Subtotal 1996 to 2002	33	22	14	14	4	17	4	1	26	21	30
Actual Totals	115	51	67	19	24	53	40	13	26 [+3***]	50	30
Projection 2010 / TOTAL	150	75	80	27	32	90	50	15	45	85	60

*** The entries of three States to this Agreement are "Not Yet in Force," as conditions precedent must be satisfied for their adherences to take effect.

14. As can be seen from the table above, WIPO's international conventions have seen substantial growth in the designated periods. Some notable achievements include the growth in the Patent Cooperation Treaty (PCT: for the international registration of national patent applications), Madrid system (to register national trademarks internationally) and the Budapest Treaty (which protects deposited microorganisms as part of the patent procedure).

15. Constitutional reform has been on the agenda of WIPO for the last several years, for Member States to agree to reduce the number of active Unions and governance bodies ("Assemblies"). WIPO treaties often established a Union (e.g.: Paris Union, PCT Union) and this historic legal process created both a highly articulated, but unwieldy governance structure

for which WIPO recently began a period of steadily progressive revisions. However, this aspect is not perceived to have a major impact on the number or duration of future meetings. In WIPO, the subject matter drives the subjects and frequency of topical meetings, not the formalities of such Unions and their Assemblies.

16. The above schema, showing the frequency and participation of meetings, is projected forward to the year 2010. Combining that data with the Table showing progressive trends in treaty adherences amplifies the fact that more Member States, more normative topics and more participants have created a demand for augmented conference facilities, in which WIPO may accommodate these additional and more frequent participants. However, WIPO remains subject to the caveat of the uncertainties that inherently attach to the mandates brought by Member States to the International Bureau.

17. Concerning the possibility to accommodate WIPO's meetings in outside facilities, a survey conducted in November 2001 yielded the occupancy rates reflected in the tables below. Table 4a refers to the overall occupancy rate computed on time customarily available for meetings, i.e. all year with the exception of weekends, and the winter, spring and summer breaks (195 days). Table 4b provides the occupancy rate in peak meeting period (i.e. from March to June and September to November, or 133 days).

Table 4a: Overall Occupancy in Certain Geneva-based IGO Conference Facilities

(On basis of 195 days per year)									
	CICG		UNOG		ILO		WIPO		
Year	1st room	2nd room	1st room	2nd room	1st room	2nd room	Room A	Room B	
2000									
Days	113	142	56	89	65.5	NA	105	119	
Rate	58%	73%	29%	46%	34%	NA	54%	61%	
2001									
Days	93	126	57	120	58	NA	134	119	
Rate	48%	65%	29%	62%	30%	NA	69%	61%	
Avg. rate	53%	69%	29%	54%	32%	NA	61%	61%	

Table 4b: Peak-time Occupancy Rate for those
Geneva-based IGO Conference Facilities

(On basis of 133 'Prime' days per year: March-June and September-November)									
	CICG		UNOG		ILO		WIPO		
Year	1st room	2nd room	1st room	2nd room	1st room	2nd room	Room A	Room B	
2000									
Days	75	106	46	64	50	NA	90	105	
Rate	56%	80%	35%	48%	38%	NA	68%	79%	
2001									
Days	82	102	52	84	47.5	NA	118	96	
Rate	62%	77%	39%	63%	36%	NA	89%	72%	

Avg. rate	59%	78%	37%	56%	37%	NA	78%	76%
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18. These two tables, taken together, reveal that WIPO conference facilities already have higher occupancy rates than other major conference facilities in Geneva. It also shows that the average occupancy rates for those facilities, particularly at peak times, may effectively prevent WIPO from organizing or convening meetings outside WIPO premises during certain periods in the year, especially during those more appropriate periods. The fact that the CICG also shows higher occupancy rates than UNOG and ILO appears to undermine the possibility of hosting meetings outside WIPO premises, as CICG is more conducive to hosting WIPO meetings because of its proximity: only some 375 meters from WIPO.

Arranging for Wipo's conference needs

19. A review of the projected evolution in frequency, duration and size of meetings hosted at WIPO suggests that by the year 2010, some 60 meetings lasting 260 days could be conducted. From these totals, it could be anticipated that some 10 meetings (90 days) would probably be in excess of 250 participants, and 35 meetings (100 days) may have attendance between 71 and 250 participants. The balance corresponds to meetings below 70 participants.

20. WIPO's current conference room capacity could accommodate the 35 meetings (100 days) between 71 and 250 participants in Room A, representing 51% occupancy rate of the room (83% occupancy of peak periods). Conference Room B could hold the 15 meetings (70 days) below 70 participants, representing 36% occupancy rate (58% occupancy of peak periods). The following options could be envisaged for the 10 meetings (90 days) in excess of 250 participants:

21. Option 1: Accommodate the demand of meetings in existing WIPO facilities: It could be noted that the sum of meetings in excess of 70 participants would reach 45 meetings lasting 190 days. This translates into a 100% occupancy rate of Room A for the entirety of the periods available for meetings (195 days per year). Implementation of Option 1 would require curtailing the size of delegations attending WIPO meetings and losing the necessary flexibility by the Secretariat and Member States in the timing of organizing follow-up meetings for issues discussed at prior meetings. Reductions in the size of delegations could have the adverse effect of reducing the cross-fertilization of views among participants, IP offices, diplomatic missions and the Secretariat triggered by meetings. Loss in the flexibility of arranging for upcoming meetings would translate into work delays which would be seen to influence the response of the Secretariat to instructions provided by Member States.

22. Option 2: Accommodate meetings in excess of 250 participants in conference facilities outside WIPO. Option 2 requires the servicing of conferences away from WIPO's headquarters building. Under this scenario, some administrative arrangements would be required to minimize disruptions to the regular development of the meeting. In particular, it appears that minimum requirements would include the establishment of shuttle services to transport conference documents and participants, including additional messenger-driver services, and the provision of telephone and computer connectivity to WIPO headquarters. Other additional and substantial costs would include the rental of the facilities and equipment as well as extended duration of certain meeting days due to operational difficulties to arrange informal consultations within regional groups, group coordinators and the Secretariat. These consultations are

currently held in smaller meeting rooms available at WIPO headquarters' building and could effectively consume as much time as time spent on regular sessions. This is amplified by the spot demand for such sessions, which would necessitate instant responses to requests for rooms, transport and the like. Certain regional groups also routinely request interpretation services for these informal meetings. Although additional costs involved in convening meetings outside WIPO premises are difficult to quantify due to the variable nature of WIPO meetings, the daily rental fees of the available large conference facilities near WIPO range between Sfr3,000 and Sfr5,000. Other included costs would be for the additional staff support required by organizing meetings outside WIPO premises. It has been estimated that these costs represent at least an amount equivalent to the costs of renting the conference room.

23. Option 3: Accommodate meetings in excess of 250 participants in a new conference room at WIPO, as foreseen in the new construction project. The holding of these meetings in a new conference room of sufficient capacity would give an occupancy rate of 46% (75% of peak periods). This occupancy rate compares favorably with occupancy rates observed for other major UN conference halls. Additional occupancy could be envisaged by making the conference facility available for rent. It appears that by the year 2010, the addition of one bigger room would be sufficient to eliminate timing conflicts in the programming for meetings. The decision as to whether the adequate number of seats for a new conference facility should remain within the 450 to 600-seat range, or greater, and whether it should be possible to split the larger room into two breakout rooms of different sizes could be founded on the basis of WIPO's continued growth – beyond 2010.

Evaluation of the options

24. It appears Option 1 imposes permanent and severely detrimental constraints in the proper functioning of the Secretariat. WIPO has an overall annual budget in excess of Sfr300 million per year, with an important share of its activities relating to the proposal and discussion of innovative legal frameworks in the different Intellectual Property domains. Moreover, and due to the emergence of new agendas on IP protection, this international legal framework is far from reaching its mature state. Hence, imposing constraints on these developments by adopting Option 1 might translate in undermining the effectiveness of the Secretariat in delivering its mandates.

25. Consideration could be given to the fact that savings accrued through the facilitating of an efficient spending of the organization's annual budget would be of a higher order of magnitude than savings accrued by not building the new conference hall.

26. Concerning Option 2, and assuming the need for renting conference rooms during 90 days per year, it should first be noted that during peak periods WIPO might not be able to secure adequate conference facilities. Intellectual property is evolving so dynamically that few major conferences could be organized well in advance to secure the availability of a large conference room outside of WIPO. In addition, it appears that this option would have direct incremental costs in a range between Sfr500,000 and Sfr1,000,000 per year. It appears therefore that during peak periods, this option may lead, de facto, to Option 1. Finally, some of the additional costs under Option 2 are difficult to quantify at this stage, and they could be seen as a lower bound for these expenditures. For example, should a reorganization of conference support services be

required for servicing these conferences outside WIPO premises, each additional general service staff member engaged would add an annual cost of some Sfr140,000.

27. Finally, Option 3 would involve the outlays related to the initial investment of the conference rooms, currently estimated at some Sfr30 million for the BB&P project. Operating costs of the new conference room would not be incremental with respect to the other two options, as availability of interpreters, printed documents, etc, are not a distinctive feature of Option 3. By way of comparison, the estimated cost of the conference room would be equivalent to annual outlays of some Sfr1,300,000 per year, during 40 years, deflated at the current interest rate of WIPO account on the Swiss National Bank (3.25 % per year).

28. In summary, it appears that Option 1 is the least advantageous one, as it puts at risk the Secretariat's mandate and the efficient spending of its annual budget, several orders of magnitude higher than the annual costs of providing conference rooms. The comparison between Options 2 and 3 is far from straightforward: whereas the equivalent annual cost of Option 3 is of simple assessment, the quantification of the annual cost of Option 2 is more difficult, as some of the elements can only be expressed qualitatively at this stage. Option 2 has to be seen in light of the possibility of additional higher costs in some of these elements, as well as with the permanent risk that choosing Option 2 may lead de facto into Option 1 for an important period during the year.

[End of Appendix 2 (of Annex), Appendix 3 follows]