

FUTURE ACCOMMODATION OF THE INTERNATIONAL COMPUTING CENTRE (ICC)

by

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Geneva  
July 1974

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Corrigendum

Page 2 of Annex C should be page 3 of Annex A

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### INTRODUCTION

1. In a letter to the Chairman of the Joint Inspection Unit dated 7 January 1974, the Under-Secretary-General for Administration and Management stated that at a meeting held in November 1973 the Management Committee of the International Computing Centre in Geneva (ICC) had agreed on the scope and terms of reference of a study to be carried out on the future accommodation of the ICC and had also agreed "to seek the assistance of an impartial person or body not immediately connected with the ICC to assist the Management Committee in obtaining and analysing the relevant information required, in order to enable the Management Committee to meet the request of the Administrative Committee on Co-ordination for a report on the question".
2. The Under-Secretary-General for Administration and Management, writing on behalf of the UN, WHO and UNDP as the "major participants in the ICC" invited the Joint Inspection Unit to undertake the study in question on "a high priority basis" and as early as possible in 1974. The letter added that "it would be understood that the information and analysis provided by the JIU, which could be submitted to the Secretary-General as a JIU Note, would be incorporated in, or appended to, the report of the Management Committee to the ACC".
3. Inspector C.E. King agreed to carry out the proposed study in response to the above request and in the light of the terms of reference proposed by the Management Committee of the ICC, which read as follows:

"The purpose of the study is the development of factual information for evaluation of alternatives, and would consist of the identification of alternative sites, including the present one, a consideration of costs for relocation and site preparation, including recovered or avoided costs and a definition of other limiting or constraining factors in its location, such as present or clearly foreseen needs for available space"

4. The Inspector's Note is attached. Reference to areas of offices, etc. are in square metres using the symbol m<sup>2</sup>. Swiss francs are converted into dollars at an exchange rate of 3 francs to the dollar, unless otherwise stated. The present (mid-1974) ILO building is referred to as the "old" ILO building.

5. The Inspector gratefully acknowledges the willing help he received from all concerned in the pursuit of his enquiries.

Chapter I  
GENERAL BACKGROUND

1. As a result of a recommendation by the Auditor-General of Canada in a report on Electronic Data Processing in the UN Family of Organizations, issued in 1970, the International Computing Centre (ICC) was set up jointly as from 1 January 1971 by the United Nations, the United Nations Development Programme and the World Health Organization as an inter-organization facility to provide electronic data processing services for themselves and others on a cost-sharing basis.

2. The 1970 report expressed the view that "in the long term, the Palais (des Nations) may be desirable as the site of the new computing facility due to its location at the centre of UN activity in Geneva", but that there were practical advantages in locating it in WHO, where space would be available which had been specifically designed to accommodate a computer facility.

3. WHO agreed to house the ICC on a provisional basis and, after the necessary structural alterations etc. had been completed, the Centre became operational in its existing premises in WHO on 1 March 1971. A Memorandum of Agreement signed jointly by the UN, the UNDP and WHO in December 1971 contains inter alia the following clauses:

"4. The agreement is for a minimum period of five years. A Participating Organization may terminate its participation on giving two years' notice to the other participants.

.....

9. The administrative, financial and other services such as personnel administration, purchasing, contractual maintenance, etc. will be provided by the organization on the premises of which the Centre is located. The pertinent Regulations and Rules of that organization will apply.

10. Initially, the Centre will be established on the premises of WHO".

4. In a Memorandum of Understanding signed in December 1971 by the Assistant Director-General of WHO and the Director of ICC, WHO undertook to provide accommodation for ICC without rental charge, on the understanding that clearly identifiable additional costs of utilities, repairs and maintenance provided to the Centre, including air conditioning, spares and consumables, would be reimbursed by the Centre. WHO also agreed to provide normal office furniture and equipment and standard small office supplies without charge; any specialized equipment would be paid for by the Centre which would also reimburse to WHO the cost of communications services (pouches, telephones, etc.) and document copying, reproduction and distribution facilities.

5. The Inspector was informed that the administrative arrangements referred to in paragraphs 3 and 4 above had been working smoothly, and that the premises provided by WHO were fully satisfactory from the operational point of view despite the need to accommodate some of the staff elsewhere. A change of WHO office hours which took place at the beginning of April 1974 might, however, give rise to difficulties owing to the fact that ICC's services to the UN family of organizations are based on a rather tight daily time-table of deliveries and collection of programme material. The matter is under study in ICC.

6. As explained in Chapter III below, enquiries into the possibility of housing the ICC on a long-term basis, i.e. elsewhere than in WHO, whose commitment was generally regarded as limited to five years under the terms of the 1971 Memorandum of Agreement, began in 1971 but led to no definite conclusions. The question was revived at the eighth meeting of the ICC Management Committee in February 1973 and was given added urgency by the request made subsequently by WHO, in a letter dated 8 June to the Director-General of the UN Office in Geneva, that in view of WHO's own office space problems, which were expected to become acute after 1974, plans should be made to accommodate ICC elsewhere after 1975. (For details of WHO's additional space requirements after 1974, see the Director-General's report of 30 November 1973 (EB53/23) to the 53rd session of the Executive Board.)

## Chapter II

### ICC SPACE REQUIREMENTS

7. The original requirements by UN Headquarters in New York, formulated in 1970 when the Centre was in the project stage, laid down that the area of the proposed Centre, exclusive of the offices needed for the Director, his secretary, the computer support staff and the programmers, should cover 910 m<sup>2</sup>, of which the computer room would take up 350 m<sup>2</sup>, the library (i.e. tape and data storage) 100 m<sup>2</sup> and "archival storage of cards and listings" 250 m<sup>2</sup>. WHO, however, could offer only 598 m<sup>2</sup>, or two-thirds of the area asked for by the UN, plus office space covering a further 163 m<sup>2</sup> - a total of 761 m<sup>2</sup>. This offer was accepted and, in addition to the computer etc., the present premises provide accommodation for 29 of the staff of 42 belonging to the Centre, the remaining staff being housed elsewhere.

8. The 1970 UN request for 910 m<sup>2</sup> contained no specific reference to space needed for the air-conditioning plant, nor was such space included in the 761 m<sup>2</sup> offered by WHO. When the Centre was established in the WHO building, the air-conditioning plant was installed in an underground chamber specially built close to the computer room, but outside the building. This chamber has a floor area of 218 m<sup>2</sup>, <sup>1/</sup> so that the total area occupied by the Centre is 979 m<sup>2</sup>.

9. In March 1973 the Director prepared an analysis by "modules"<sup>2/</sup> of the minimum space requirements of the Centre, of which the following is a summary:

<u>Module No.</u>	<u>Purpose</u>	<u>Staffing</u>	<u>Area(m<sup>2</sup>)</u>	<u>Principal special requirements</u> <sup>3/</sup>
1 (3 rooms) Office of the Director		1D,4GS = 5	60	Normal office
2 (5 rooms) Production Control		1P,4GS = 5	50	" "
3 (1 room) Input terminal		2GS = 2	50	Air conditioning (6,500 Kcal/hr) Sound proofing Floor load 1,000 K/m <sup>2</sup>
4 (10 rooms) User Services Branch		7P,5GS = 12	90	Normal office
5 (2 rooms) Educational Development		1P = 1	50	" "
6 (1 room) Ancillary equipment (decollators, bursters, output printers)		-	50	Air conditioning (6,500 Kcal/hr) Sound proofing Floor load 1,000 K/m <sup>2</sup>
7 (1 room) Data Entry Facility		10GS = 10	60	Air conditioning (2,500 Kcal/hr) Floor load 1,000 K/m <sup>2</sup>
8 (1 room) Programmer Work Area (4 visitors)			30	Normal office
9 (2 rooms) Software Development		2P = 2	15	" "
10 (1 room) Stationery etc. supplies		-	80	Floor load 2,000 K/m <sup>2</sup> <sup>4/</sup>
11 (1 room) Computer Main Frame		2GS = 2	120	Raised floor (1,000 K/m <sup>2</sup> ) Air conditioning (50,000 Kcal/hr) " circulation 450m <sup>3</sup> /minute Sound proofing
12 (1 room) Tape and Data Storage		-	80	Air conditioning (to maintain environment at 73 <sup>0</sup> +2 <sup>0</sup> F) Floor load 1,500 K/m <sup>2</sup>
			<u>39</u>	<u>735</u>

<sup>1/</sup> The discrepancy between this and the figure of 234 m<sup>2</sup> given in Annex A appears to be due to the fact that the latter measurement is external, i.e. includes the surrounding walls.

<sup>2/</sup> The term "module", as used by the Director in this context, means a room or group of rooms whose size is determined by functional requirements.

<sup>3/</sup> These omit security and fire prevention installations which are necessary in certain modules.

<sup>4/</sup> The Director has informed the Inspector that he hopes to reduce the stock of stationery kept in the Centre, and consequently the required floor load capacity.

10. It will be noted that the Director asks for only 120 m<sup>2</sup> for the computer room, or little over one-third of the UN requirement in 1970, and that his total requirement of 200 m<sup>2</sup> for the computer room and tape and data storage (modules 11 and 12) is not much more than half the area actually occupied for those purposes in the present Centre. The Director's estimate of space requirement for the entire Centre, including offices for all the staff, but excluding space required for the air-conditioning plant, adds up to 735 m<sup>2</sup>, or 26 m<sup>2</sup> less than the area of the present Centre which houses only 29 of the total authorized staff of 42.

11. According to information supplied to the Inspector by the Director of ICC, the minimum staff required to work close to the present computer assuming that three shifts are in operation, is 10, and the minimum space required to enable the present computer and its essential staff to function effectively would be 250 m<sup>2</sup>, i.e. modules 11 and 12 totalling 200 m<sup>2</sup>, plus 50 m<sup>2</sup> for stationery etc. and offices. The remaining staff (including the Director) and equipment could be accommodated elsewhere, although certain modules should be adjacent, e.g. Nos. 3, 6 and 7 to No. 2 and No. 4 to No. 3, and the printer should be in No. 3 or No. 6.

### Chapter III

#### AVAILABILITY OF ALTERNATIVE PREMISES FOR ICC

12. Enquiries into the possibility of housing ICC elsewhere than in WHO were begun in August 1971, when the Director corresponded with the Assistant Director-General of the UN Office in Geneva about possible premises which he had seen in the Palais des Nations. In a memorandum dated September 1971 to the Assistant Director-General, the Chief of the Buildings and Engineering Branch stated that the area referred to by the Director of ICC would be an unsuitable choice on account of:

- (a) the need to strengthen the flooring in order to increase its load capacity from 250 kilogrammes per square metre (the normal capacity in the Palais des Nations) to 1,000-1,500 kilogrammes per square metre;
- (b) the lack of room for expansion; "it is very easy to end up with having to double the required area";
- (c) the noise of the machinery, which would be audible in the nearby Secretariat offices;
- (d) the lack of room for storage of cards, tapes, discs, etc.;



- (e) the lack of available office space for the staff;
- (f) the difficulty and high cost of meeting the technical requirements, particularly as regards air conditioning.

13. In view of the difficulties summarized in the preceding paragraph, the idea of transferring the Centre to the Palais des Nations was not pursued at the time.

14. In March 1973, the Director of ICC wrote to the UN Office in Geneva, WHO, ILO, ITU and WMO stating that the Management Committee of ICC had decided at its eighth meeting on 5 February 1973 that a long-range plan was needed to meet the Centre's housing needs, and enclosing the analysis summarized in paragraph 9 above of the Centre's requirements in the form of twelve "accommodation modules", with a note for each module explaining its functions, the number of staff and of offices contained in it, its area in square metres, which of the other modules it must be close to, and what if any special installations it required. The addressees were asked to state whether they would consider housing any or all of the modules.

15. WMO replied on 2 April 1973 that it was unable to offer any accommodation to the ICC. No written reply was received from ITU, but the Inspector understands that this agency was likewise unable to offer any accommodation. There has since been no change in the position of either agency.

16. The UN Geneva Office replied on 9 April that it saw no possibility of providing accommodation for ICC in the Palais des Nations in the foreseeable future, but that suitable facilities "might be found" when additional space became available for the UN in Geneva, i.e. "hopefully in the course of 1975". A decision could hardly be made before the beginning of 1974. The Director of ICC was informed verbally on 12 April that it was unlikely that accommodation would be available in the Palais des Nations itself.

17. WHO's reply, dated 27 April 1973, stated that:

- (i) in the Memorandum of Agreement creating ICC, WHO had agreed to house the Centre's hardware plus 29 of its staff for five years, which period would expire in early 1976;
- (ii) WHO had since provided offices for additional members of the ICC staff;

(iii) Owing to its own staff needs, WHO did not expect to be able to continue the arrangement in (ii) above beyond 1974;<sup>5/</sup>

(iv) WHO would be facing serious problems of office space pending the construction of a permanent extension of its headquarters building, and was anxious to use all available space in its own building. As the WHO representative had indicated at the ninth meeting of the Management Committee of ICC on 4 April 1973, a possible long-term solution of the problem of finding accommodation for ICC might be to house it in the new ILO building.

18. In a reply dated 18 May, ILO informed the Director of ICC that:

- (i) the area in the new ILO building most suited to ICC's special requirements had already been assigned to existing ILO units;
- (ii) in any event "extremely costly" alterations would have to be made to the structure if it were adapted to meet ICC's special requirements;
- (iii) ICC's needs for ordinary office space could be accommodated in the new building, but without commitment as regards the long term;
- (iv) the old ILO building might offer a long-term solution of the problem.

19. Paragraph 44 of the Secretary-General's report of August 1973 to the Fifth Committee on electronic data processing and information systems in the UN family of organizations (A/C.5/1513) stated that the question of ICC's accommodation had been raised owing to a shortage of office space in the WHO building and that the Management Committee had requested ICC "to determine the needs for office and specially conditioned space for the staff and for equipment and supporting facilities. Working through the members of the Committee, ICC will informally explore the potential availability of space and estimated general costs for re-establishing the facility if this becomes necessary. With this information available, the matter can be referred to the appropriate levels of the Agencies for resolution".

20. Referring to the above-quoted paragraph, the Director of ICC wrote on 20 September 1973 to the Director of Conference and General Services in the UN office in Geneva, stating that he had been requested to prepare, for consideration by the ICC Management Committee on 1 November 1973, a report "outlining the estimated general costs of preparing possible alternative sites for the housing of the ICC when its agreement with

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<sup>5/</sup> Two of the four offices involved were surrendered in late 1973, and WHO have requested the return of the remaining two by mid-September 1974.

WHO ends on 1 March 1976". The letter went on to say that the writer understood from previous correspondence and from conversations with a senior UN official that neither the old nor the new Palais des Nations building could be seriously considered as a potential site, and that the only possibilities were the old ILO building, the ILO annex in Petit Saconnex and the present GATT buildings (Villa Le Bocage and Villa La Fenêtre). He asked to be put in touch with an appropriate official in order to work out the required estimates.

21. In a reply dated 24 September 1973, the Director of Conference and General Services informed the Director of ICC that it was not yet possible, in advance of a decision by the General Assembly on the question whether the UN should take over the ILO annex in Petit Saconnex, to indicate which premises could be made available to ICC, and that it would therefore be premature to attempt to work out cost estimates. The UN would get in touch with ICC again as soon as possible after the General Assembly's decision was known.

22. In a memorandum (CIC/XI/3) submitted to the eleventh meeting of the Management Committee of ICC on 1 November 1973, the Director reported on the results of his enquiries regarding possible alternative premises for the Centre. Ten possibilities had been considered, nine of which involved the use of existing buildings; the tenth was the construction of completely new premises. The report stated that it appeared from the replies to the Director's enquiries that the feasible alternatives were the old ILO building, the ILO annex in Petit Saconnex and the two villas in the UN compound at present occupied by GATT (Le Bocage and La Fenêtre). The report referred to the letter of 24 September 1973 from the Director of Conference and General Services in the Palais des Nations (see preceding paragraph), a copy of which was attached.

23. As a possible alternative to re-housing the Centre, the report suggested that ICC might return its office space to WHO, but retain the computer room against payment to WHO of a rent, which it was suggested should be \$4,000 a month. This proposal is discussed in Chapter VII below.

24. In the course of his investigations the Inspector was informed that:

- (a) While space for normal office use could probably be made available to ICC without great difficulty (e.g. in the old ILO building or the ILO annex at Petit Saconnex after ILO's move to its new building), serious problems would

arise in regard to accommodating ICC's "hardware", with its special requirements as regards air conditioning, floor load capacity etc.

- (b) Accommodation (other than office space) could not be made available in either the old or the new wing of the Palais des Nations without unacceptable disruption of existing occupancy plans and unacceptably heavy expenditure on the structural modifications that would be necessary; the most costly of these modifications would be the strengthening of the floors, which were designed for a maximum load of 250 kilogrammes per square metre, to carry the substantially higher loads required for certain sections of ICC. (It will be seen from the summary of the Centre's minimum space requirements given in paragraph 9 above that 280 square metres of flooring are required with a capacity of 1,000 kilogrammes per square metre, 80 square metres with a capacity of 1,500 kilogrammes per square metre and 80 with a capacity of 2,000 kilogrammes per square metre - a total of 440 square metres requiring strengthening).
- (c) The buildings in the UN compound at present occupied by GATT but due to be vacated by GATT for accommodation in the old ILO building becomes available in 1974 will require very extensive and expensive structural modification to convert them to suitable premises for ICC, having regard both to technical and floor load requirements. This also applies to the other buildings in the vicinity of Villa le Rocage, which are of very light construction and some of which are in a poor state of repair. It would be as expensive to convert the villas or their outbuildings as to build new premises. Moreover, plans have been made for their future use after the departure of GATT.
- (d) Similar objections apply to the pre-fabricated buildings of the ILO annex in the ILO compound, which are due to be vacated by ILO when the latter's new building is ready for occupation at the end of 1974, and the acquisition of which by the UN was approved by the General Assembly at its twenty-eighth session. Although in good condition, these buildings are of light construction with floor loads, and need adaptation to meet the requirements of ICC, as regards floor load capacity, air conditioning, etc. would be disproportionately onerous and expensive. The present situation makes them particularly vulnerable

from the security point of view. Moreover, security of tenure of these buildings is limited by the fact that the ground site belongs to the Canton of Geneva, which will be entitled to reclaim it in 12 years' time and may wish to do so.

- (e) In a letter to the Inspector dated 19 June, the Director-General of ILO confirmed the position of ILO as regards the suggestion made in 1973 that ICC might be located in whole or in part in the new ILO building (see paragraph 18 above). He added that, as a participant in ICC, ILO would be willing to pay its share of such reasonable rent as ICC might agree to pay to WHO for the use of its premises (see Chapter VI below).

25. As regards the old ILO building, the Inspector understands the situation to be as follows:

- (a) The building is due to be vacated by ILO at the end of 1974, but will not be ready for re-occupation before the latter half of 1976.
- (b) The building has become the property of Fonds des immeubles pour les organisations internationales (FIPOI), a Swiss organization.
- (c) GATT has negotiated with FIPOI a long-term lease for the northern wing of the building and plans to occupy all the space available in it, including the basement and the rooms at present housing the ILO computer facility, in which GATT may install its own EDP facility.
- (d) The UN has negotiated a long-term lease for the southern wing, where normal office space could doubtless be made available to ICC. The lease, however, excludes the basement, which is to be taken over by a Swiss organization for storing archives, etc.
- (e) Except for the basement, the floors in both wings of the building have a load capacity of only 200 kilogrammes per m<sup>2</sup>, which could not be substantially increased without costly constructional work, including the strengthening of the building's support pillars down to the foundations.
- (f) The six rooms at present housing the ILO computer facility have a total area of only 157 m<sup>2</sup> and are less than 5 metres wide. Although the removal of partitions could lengthen the largest room and so increase its area from 62.50 m<sup>2</sup> to 93.5 m<sup>2</sup>, the room could not be widened.

- (g) The basement has a rather low ceiling (2.25 metres) and is divided by numerous support pillars approximately three metres apart. People working in it would depend on artificial lighting and ventilation. The extent to which ICC could use it, if at all, would require further investigation.

26. In the light of the facts set forth in the preceding paragraph, it seems unlikely that ICC could satisfactorily be housed in the old ILO building, except to the extent that its requirements can be met by normal office accommodation. A final decision would depend on the answers to the following questions:

- (i) whether or not the basement is a suitable place for the computer and other heavy equipment, or can be adapted without great expense;
- (ii) if the basement is suitable, whether the prospective occupants (i.e. GATT in the northern wing, or, in the southern wing, the organization referred to in paragraph 25 (d) above) are willing to surrender the necessary space, and if so on what terms. In the case of the southern wing, an amendment of the lease agreement between the UN and FIPOI would presumably be necessary.

27. If, as seems likely to be the case, the old ILO building is ruled out, the only practical alternative in the light of the situation summarized in paragraph 24 above appears to be the construction of a separate building on a UN site. The Inspector is informed that a suitable site could be made available within the perimeter of the Palais des Nations, subject to the approval of the authorities concerned.

#### Chapter IV

##### ICC START-UP COSTS IN 1971

28. In the third report of the ACABQ to the General Assembly at its twenty-fifth session (A/8008/Add.2 of 28 October 1970), the "global start-up costs" of ICC were estimated at \$458,000 for the necessary conversion of the premises offered by WHO, plus the travel expenses of staff transferred to Geneva from the UN Computing Centre in New York. The ACABQ report stated that WHO had agreed to pay 55 per cent of the conversion costs because the work would result in the improvement of part of its premises. The UN would pay 30 per cent plus the whole of the staff travel expenses, and UNDP would pay 15 per cent.

29. In a statement of account for the fiscal year ended 31 December 1972 issued by WHO in January 1973, the actual costs of installing ICC in its present location in WHO in 1971 are given as follows:

	\$
Release of registry and archives space	23,700.00
Rehousing of workshops	102,277.98
Expansion and preparation of site, including installation of new air conditioning	<u>329,164.32</u>
	<u>455,142.30</u>

30. The premises in which the Centre was installed had previously been occupied by WHO's own computer, but needed enlarging and adapting to suit a different and physically larger machine, and office space had to be found for as many of the Centre's staff as possible. Walls, etc. had to be demolished or built, and additional expenditure was incurred on accommodating elsewhere the archives, registry offices and workshops which had to be displaced to make way for the Centre. The underground chamber which, as explained in paragraph 8 above, had to be constructed to house the air-conditioning plant, accounted for \$178,100 of the above total.

31. In August 1971 the Director of ICC informed the Assistant Director-General of the UN Office in Geneva in writing that an area in the Palais des Nations, which he had seen, would be large enough for the Centre's "hardware" requirements, but that a "great deal of work" would be necessary to bring it up to the specifications essential for a computer, which were indicated in an annex to the Director's letter. According to this, the principal requirements were: power, 68.3 KVA; heat dissipation, 48,428 Kcal/hr; air circulation, 369 m<sup>3</sup>/min. The total weight of the computer and its associated equipment was 13,400 kgs. The letter added that additional space would be required for the 40-odd staff members of the Centre.

32. In a memorandum dated September 1971 to the Assistant Director-General, to which reference has already been made (see paragraph 12 above), the Chief of the Buildings and Engineering Branch in the Palais des Nations estimated the cost of adapting the area in question, which covered 500 m<sup>2</sup>, to house the ICC "hardware" at approximately Sw.Fr. 1.49 million (equivalent to about \$363,000 at the then prevailing rate of exchange), exclusive of the cost of desks, shelving etc. Owing to the high cost of adapting the area, and to other objections to its use by ICC (including the lack of nearby office accommodation), this suggestion was dropped (see paragraph 13 above).

33. The memorandum went on to discuss the cost of building entirely new premises for ICC, somewhere within the UN compound. This was estimated at approximately Sw.1. 3.15 million (about \$768,000 at the then prevailing rate of exchange), on the basis of a total surface of 1,000 m<sup>2</sup>, including offices for a staff of 40. (It will be recalled that the area at present occupied by the Centre in WHO is 979 m<sup>2</sup>, including the air conditioning plant but with office accommodation for only 29 staff.)

34. The memorandum further estimated that provision for an eventual total area of 2,000 m<sup>2</sup>, intended to provide for possible expansion, would bring the cost of constructing new premises up to about Sw.Fr. 4.81 million (\$1,173,000 at the then prevailing rate of exchange).

35. In his report of November 1973 to the eleventh meeting of the Management Committee of ICC, referred to in paragraphs 22 and 23 above, the Director discussed the cost of preparing alternative accommodation for the ICC, so far as this could be estimated without reference to any particular place. The report pointed out that normal office accommodation was suitable for eight of the twelve "accommodation modules" into which the Centre could be divided (see paragraph 9 above), covering 425 of the total of 735 m<sup>2</sup> required. Normal air conditioning would be required for three of the remaining modules; only the last module, the 120 m<sup>2</sup> required to house the computer, required special preparation. The report suggested that this preparatory work should not cost more than, and when properly planned could cost well under, \$200,000, even allowing for increased costs of construction. Repayment of a loan of \$200,000 over 5 years, at, say, 7 per cent, would require a total payment of \$242,000 or approximately \$4,000 per month, which, if apportioned according to the contribution percentages of the present participants to the running costs of the Centre, would increase their monthly expenditure by relatively modest amounts ranging from \$1,700 in the case of the UN to \$25 in the case of WHO.

36. The Director informed the Inspector that his estimate was based on the assumed availability of a building in good condition, in which a computer of the type required by ICC could be installed without major structural modifications; it represented the approximate cost of the necessary adaptations and installations (special air conditioning, raised floor, sound-proofing if required, etc.). The estimate was not based on any actual calculation of the cost of the work involved but was deduced from the fact that, on the \$329,000 spent on adapting the former WHO computer premises for the ICC, \$178,100, or more than half, had been spent on excavating and fitting out a special underground chamber for the air-conditioning plant (see paragraph 30 above). Moreover, the adaptation



of the computer room had had to be carried out with great caution, and therefore very slowly, in order not to disturb the ICC computer, which had been installed before the completion of the work, and some of the air-conditioning equipment supplied proved to be in excess of actual needs. These circumstances had led the Director to conclude that, on the assumption that a structurally adequate building was available, including space for the air-conditioning plant, the cost of installing the ICC computer in other premises, including the necessary technical preparations, should not exceed \$200,000.

37. Whether or not the above estimate is unduly optimistic is an academic question, since it rests on an assumption which is unfortunately invalid - namely, that a structurally suitable building is available which could be adapted to the ICC's requirements without undue expense. As explained in Chapter III above, no such building is available among those occupied by, or available to, the UN or the specialized agencies in Geneva.

#### Chapter V

##### THE COST TODAY OF MOVING ICC

38. In the light of the conclusion reached in paragraph 27 above, that the only practical alternative to leaving the ICC in its present location is to build separate premises within the perimeter of the Palais des Nations, the Inspector invited the General Services Division to provide estimates of the probable cost of constructing a building based on the "minimum requirements" itemized by the Director of ICC in his memorandum of March 1973, summarized in paragraph 9 above.

39. In reply, the General Services Division submitted two memoranda, translations of which are attached as annexes A and B to this note. The first of them, which may be regarded as constituting a substantive reply to the request by the Director of ICC of 20 September 1973 referred to in paragraph 20 above, estimates the cost of constructing a building suitable for housing the ICC as a whole, including its staff, at Sw.Fr. 5,765,000, or approximately \$1,920,000 at the present (April 1974) rate of exchange. The second memorandum estimates at Sw.Fr. 3,505,000 (approximately \$1,170,000) the cost of constructing only the five modules (i.e. Nos. 3, 6, 7, 11 and 12 as listed in paragraph 9 above) which required special treatment as regards air conditioning etc.

40. Attention is drawn to the fact that the estimate at annex A, unlike the 1971 estimate referred to in paragraphs 33 and 34 above, makes no provision for possible expansion. The Director of the Centre informed the Inspector that he could foresee no need for expansion on the technical or "hardware" side (modules 3, 6, 7, 10, 11 and 12),

but that the Centre might at any time be requested to take on a programming job which would require additional staff in the User Services Branch. This would, however, affect only module 4, and no special requirements would be involved, only normal office facilities. Nevertheless, the Inspector thinks that some provision for the expansion of module 4 should be made, particularly in view of the fact that it must be in close proximity to module 3 (see paragraph 9 above).

41. The estimate at annex B is of a somewhat hypothetical nature, since it does not take into account the requirement, mentioned in paragraph 11 above, that modules 3, 6 and 7 must be adjacent to modules 2 and 4. A more logical exercise, and one which would presumably produce a lower figure, might be to calculate the cost of constructing only the installation indicated by the Director of the Centre (see paragraph 11 above) as the basic minimum required to enable the computer and its essential staff to function effectively, i.e. modules 11 and 12 plus 55 m<sup>2</sup> for stationery etc., occupying a total area of 255 m<sup>2</sup>, the remaining staff and equipment being accommodated in existing premises elsewhere which could be converted at lesser expense.

42. It should be emphasized that the estimates discussed above are in the nature of theoretical exercises, based as they are on an analysis of ICC's requirements which is itself somewhat abstract. This does not, of course, mean that they are necessarily inaccurate, but any final estimate would need to take into account many factors peculiar to the site chosen and to the needs and working conditions of a large computer installation, and to be worked out in close consultation with the persons responsible for operating it. (The use of the word "large" is perhaps misleading in this context, since technical developments in computer design appear to be in the direction of physically smaller machines; this is only one example of the kind of special consideration affecting the question of accommodation for computer facilities).

43. The Inspector has considered the extent to which expenditure on providing new premises for ICC would be offset by the financial and other benefits which could be expected to accrue to WHO as a result of a move. A note transmitted to the Inspector in February 1974 by the Assistant Director-General of WHO gives details of the use which WHO would propose to make of the premises occupied by ICC in the event of the latter's withdrawal. These may be summarized as follows:

- (a) Relocation of ICC would release about 220 m<sup>2</sup> of immediately usable office space and 106 m<sup>2</sup> of storage space, the use of which would permit deferment of rental of additional office space outside WHO to the tune of

Sw.Fr. 132,400 per annum, plus savings on a messenger (Sw.Fr. 41,000), totalling Sw.Fr. 173,400 (\$57,800) per annum. In addition to these identifiable savings, there would be other benefits resulting from better internal communications, lower transportation and servicing costs, etc.

- (b) Although the space at present occupied by the ICC computer and the tape and data store could not be converted into normal offices, with natural lighting except at a disproportionate cost, it could be used in such a way as to enable some 350 m<sup>2</sup> of space elsewhere in the building to be released for use as offices, with a possible saving of Sw.Fr. 154,400 (\$51,460) per annum on outside offices which would otherwise have eventually to be rented.

44. The WHO note explains that the savings, totalling some \$109,000 per annum, which would or could result from re-occupation of the ICC premises are calculated on the basis of Sw.Fr. 4,000 (\$1,330) per 10 square metres per annum, this being the expected cost, including cleaning, of net usable office space which WHO is planning to hire on a temporary basis in the new ILO building.

45. The transfer of ICC to other premises would of course affect the administrative arrangements for the staff. Apart from the Director, who is an established UN official on secondment to the Centre, the staff have ICC contracts signed by the Director, but are treated administratively as though they were WHO staff (see clause 9 of the 1971 agreement, quoted in paragraph 3 above). If ICC were located in premises owned or controlled by the United Nations, the staff would presumably be administered in the same way as other inter-organizational staff working in Geneva. This does not seem likely to give rise to serious problems. The status of the Centre vis-à-vis the Swiss authorities might also need to be revised, but here again there should be no difficulty.

## Chapter VI

### POSSIBLE ALTERNATIVES TO COMPLETE WITHDRAWAL

46. This study has so far been concerned with the possibility, and the cost, of moving the whole of ICC to new premises. Attention is drawn, however, to the possibility of partial withdrawal, already referred to in paragraph 23 above. This would involve leaving the computer and the tape and data archives in the room which they occupy at present, and moving in a proportion (to be determined) of the stationery stocks, plus the staff needed to run the unit. In terms of the organizational analysis given in

paragraph 9 above, the modules involved would be No. 9, part of No. 10 and Nos. 11 and 12, with a combined minimum area (allowing, say, 40 m<sup>2</sup> for module 10) of 255 m<sup>2</sup>, compared with the 380 m<sup>2</sup> of the existing computer room. The total staff involved, assuming three shifts in operation, would be about ten, of whom about four would be present at any one time.

47. The remainder of the space at present occupied by the Centre would revert to WHO. It would consist of about 22 office modules of 10 m<sup>2</sup> each, with movable partitions, plus about 100 m<sup>2</sup> of storage space, some of which might be convertible into offices - a total (including 50 m<sup>2</sup> of corridor space) of about 357 m<sup>2</sup>, or nearly half the total area (excluding the air conditioning plant) occupied by ICC.

48. The Director has assured the Inspector that the separation, both of equipment and staff, involved in this proposal is administratively practicable, even on a long-term basis, and would not entail heavy additional expenditure.

49. The proposal has obvious advantages. It would leave the computer undisturbed in premises which have proved satisfactory and which, as WHO have acknowledged (see paragraph 43 (b) above), could not be converted to normal office use without disproportionate expense. It would thus preserve a substantial capital investment, in addition to saving the cost of providing new accommodation. It would restore to WHO that part of the space now occupied by ICC which is the more immediately useful from WHO's point of view, requiring as it does little or no structural alteration to adapt it to normal office use.

50. There are of course disadvantages. WHO would recover only half of its space, and although, as already noted above, the space retained by ICC would not be suitable for normal office use, it could still be used in such a way as to relieve pressure on space elsewhere in the building, thus reducing the need to hire outside space. This objection could, however, be met by adopting the Director's suggestion (see paragraph 23 above) that ICC should pay rent to WHO for the space retained. Assuming a rental charge of Sw.Fr. 10 a day for a single office (which is what ICC has hitherto been paying for office space rented by it in other UN buildings), and a rate of exchange of Sw.Fr. 3 to the dollar, the rent of \$4,000 per month suggested by the Director would pay for about 40 offices - or more if office space could be made available at a cheaper rate, as the Inspector understands may be possible in the Petit Saconnex annex when it has been taken over from ILO. The amount paid to WHO could, moreover, be adjusted so as to include, in

addition to the actual rent paid by WHO for outside space hired as a result of the continued occupation of the computer room by ICC, an element to cover identifiable indirect costs, such as the provision of a messenger service if this proved necessary. Whatever sum was agreed would, of course, be an additional charge on the ICC budget.

51. A further disadvantage of the proposal that ICC should retain its present computer room, while returning the rest of its premises to WHO, would be that accommodation would have to be provided for the ICC staff and equipment which would leave the WHO building. This would involve modules 1 to 8 inclusive and part of module 10. The Inspector is informed by the General Services Division of the Palais des Nations that no existing accommodation is available, either in the Palais des Nations or in the additional premises in the present ILO building and the Petit Saconnex annex which are due to be taken over by the UN, which would meet the technical requirements involved, particularly as regards floor load capacity, and that it would be necessary to construct a new building. At annex C is an estimate of the cost of such construction, totalling Sw.Fr. 3,895,250 (\$1,298,417). As in the case of the estimates in annexes A and B (see paragraph 42 above), this estimate must be regarded as a theoretical exercise, subject to revision in the light of the practical requirements of the operation.

52. A variant of the compromise proposal discussed above would be for ICC to retain the whole of the space which it now occupies in WHO against payment of a rent which could be calculated to cover:

- (i) the direct cost to WHO of outside space hired as a consequence of ICC's occupation of space in the WHO building;
- (ii) indirect costs attributable to (i), so far as they can be identified (e.g. the provision of messenger services);
- (iii) the cost of the services provided by WHO to the ICC staff, so far as these can be satisfactorily identified and assessed.

53. The proposal outlined in the preceding paragraph would have the advantage of allowing ICC to continue to function in its present premises and of avoiding the disruption and expense of a complete or partial transfer, while compensating WHO financially for the space and other facilities which it has hitherto provided free of charge.



ANNEX A

MEMORANDUM

To: Mr. C.E. King,  
Inspector,  
Joint Inspection Unit

Through: Mr. R. Pointe, Chief,  
General Services Division

Ref: G.AD/511/221(2)

From: A. del Bubba, Chief,  
Buildings and Engineering Branch

Geneva, 11 April 1974

Subject: International Computing Centre

Pursuant to our various conversations, I attach herewith the comments I am able to make on the accommodation of the International Computing Centre if it were to be transferred from its present premises in WHO.

1. Layout of the Centre

(a) Villas and ancillary buildings, Petit Saconnex building

Having obtained the opinion of consulting engineers and architects, I can confirm that it would not be possible to install the ICC in the Villa Le Bocage and its annexes (prefabricated buildings), or its outhouses, the Villa La Fenêtre or the Petit Saconnex buildings. Apart from anything else, all the structures and foundations would have to be rebuilt, for they are not strong enough to house the Centre's special equipment.

(b) United Nations - ILO

Moreover, the ICC cannot be installed in:

- the Palais des Nations (original and new buildings), since there are no premises there with an adequate structure;
- the present ILO building, without incurring very heavy expenditure on the alteration of structures that are calculated to support loads of 200 kg/m<sup>2</sup>.

(c) New building

One might consider putting up a new building to house the ICC. The space for such a building could no doubt be found on one or other of the United Nations properties, but the first step would be to obtain the agreement in principle of the Director-General of the Office to the erection of such a building, should that be regarded as the only way of solving the problem of housing the Centre.

2. Cost of a new building

(a) Basis for calculating the estimate

The estimate was based on:

- the letter from Mr. W.A. Mackay to Mr. E. Renlund of 21 March 1973,
- your memoranda of 15, 18 and 22 February 1974.

(b) Analysis of modules

We first analysed the various modules required, as indicated in Mr. Mackay's letter of 21 March 1973, from the standpoint both of surface areas and of the interdependence of the various modules.

On this point you will find attached the following documents:

- modules: analysis of surface areas
- modules: interdependence
- calculation of volume.

(c) Calculation of surface areas and volumes

(i) Surface areas

Total surface area to be provided 1,300 m<sup>2</sup>

of which:

- premises for computers and similar equipment,  
offices and storage areas: 772 m<sup>2</sup>
- air conditioning equipment premises like those  
now existing in WHO: 234 m<sup>2</sup>
- corridors, closets, toilets, stairs, etc.: 300 m<sup>2</sup>

(ii) Volumes

In accordance with the rules of the Swiss Society of Engineers and Architects, the following must be allowed for in determining the height needed (measurements in metres):

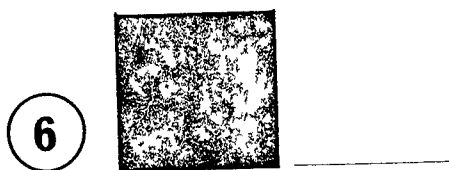
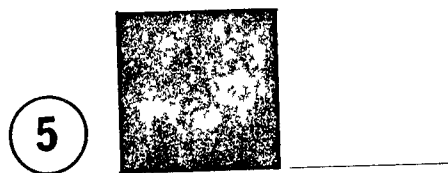
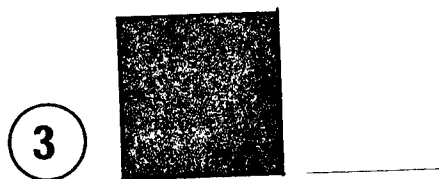
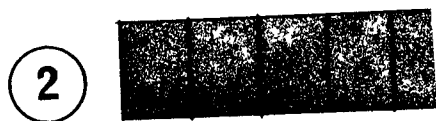
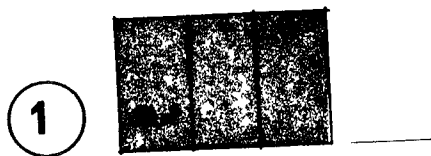
- accessible roof terrace 1 m
- height of rooms, including thickness of floor slab 4 m
- sink hole 1 m
- foundations 1 m

Total height 7 m

which gives a cube of:

$$1,300 \text{ m}^2 \times 7 \text{ m} = 9,100 \text{ m}^3$$



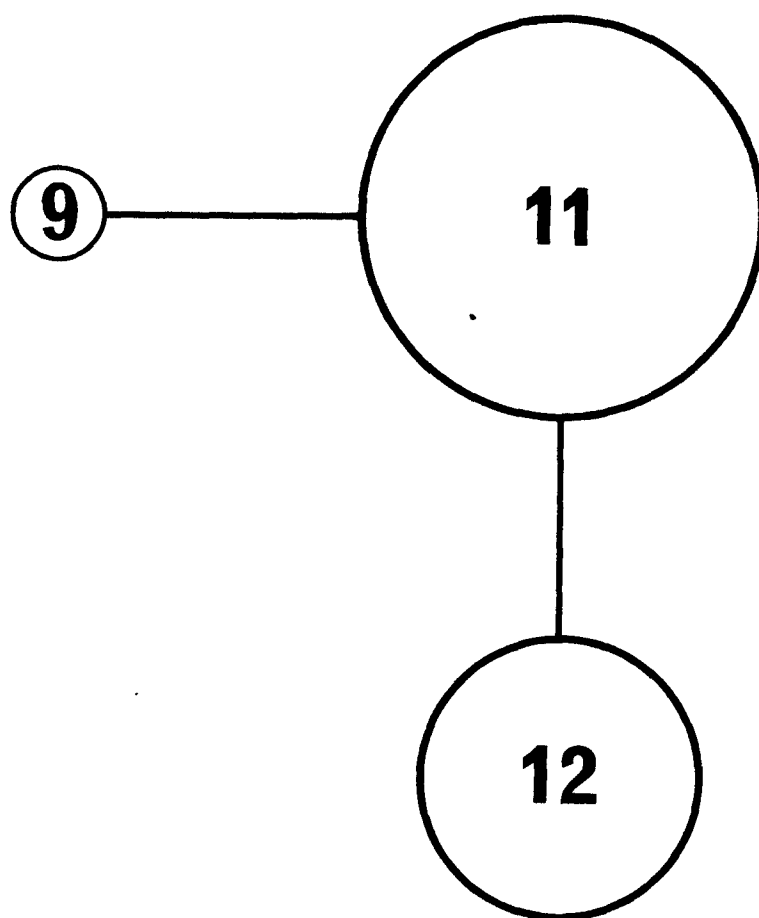


MODULE	1	=	60	M <sup>2</sup>
"	2	=	60	"
"	3	=	50	"
"	4	=	110	"
"	5	=	50	"
"	6	=	50	"
"	7	=	60	"
"	8	=	30	"
"	9	=	22	"
"	10	=	80	"
"	11	=	120	"
"	12	=	80	"

TOTAL = 772 M<sup>2</sup>

CONDITIONNEMENT 234  
CIRCULATION 300

1306 M<sup>2</sup>

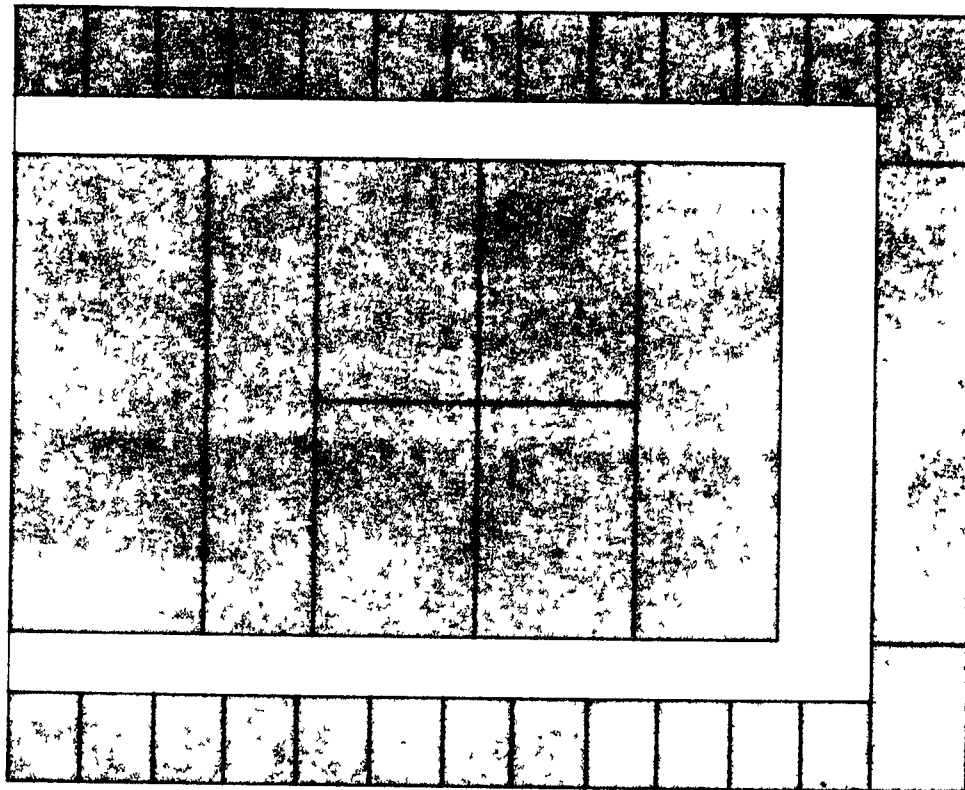


ORDRE DEPENDANCE DES MODULES

ONIS UNIES  
GENÈVE

ÉCHELLE :  
DATE :

Nº

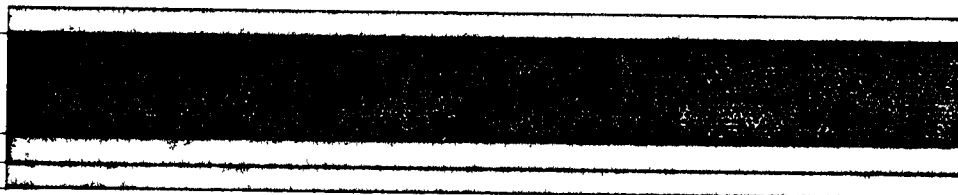


40

32.50

Terrasse Als

Vide Sanitaire  
Fondation



4  
7

$$1300 \text{ m}^2 \times 7 = 9100 \text{ m}^3$$

CALCUL DU VOLUME



ANNEX B

MEMORANDUM

To: Mr. R. Pointe, Chief,  
General Services Division

From: C. Monteiro Neves, Deputy Chief,  
Buildings and Engineering Branch

Subject: International Computing Centre

Ref: G/AD/511-221(2)CMN/am.

Geneva, 11 April 1974

Please find below the total cost of accommodating the International Computing Centre - Solution B.

1. Calculation of surface areas

module	surface area in m <sup>2</sup>
3 .....	50
6 .....	50
7 .....	60
(11 .....	120
(12 .....	80
<hr/>	
4 modules	= 360 m <sup>2</sup>
Corridors, closets, etc. 30%*/	109 m <sup>2</sup>
Air conditioning	234 m <sup>2</sup>
<hr/>	
TOTAL	703 m <sup>2</sup>
	700 m <sup>2</sup> x 7 m <sup>1</sup> = 4,900 m <sup>3</sup>

2. Calculation of volumes

3. Cost estimate

- construction of a special building with floating slab  
and all the finishings essential for housing costly  
equipment      4,900 m<sup>3</sup> x 450 Sw. Fr. =      2,205,000,-- Sw.Fr.
- air conditioning equipment      800,000,-- Sw.Fr.
- outside work such as:
  - access roads, parking area, lighting,
  - electricity and telephone cables      400,000,-- Sw.Fr.
- fees of consulting engineers (civil engineering)      60,000,-- Sw.Fr.
- fees of consulting engineers (technicians)      40,000,-- Sw.Fr.
- TOTAL      3,505,000,-- Sw.Fr.

\*/ This is the standard figure used for building estimates.

cc. Messrs. del Bubba	Prahov
Monteiro-Neves	Pallas
Le Corguillé	Registry
Garcia	x

3. <u>Estimated costs</u>	<u>Swiss francs</u>
(a) Construction of a special-purpose building with all essential finishings: 6,545 m <sup>3</sup> x 450 Sw.Fr.	2,945,250.--
(b) Air conditioning plant	400,000.--
(c) Site improvements such as: access roads, parking space, lighting, laying on electricity and telephones, drains, etc. (Cost depends on site selected for new building)	400,000.--
(d) Fees for consultant civil engineers and technicians	<u>150,000.--</u>
Total:	3,895,250.--

cc. Messrs. del Bubba      cc. M. Prahov  
Monteiro Neves  
Le Gorguillé  
Garcia  
Pallas  
registry  
x

ANNEX C

MEMORANDUM

To: Mr. R. Pointe, Chief,  
General Services Division

G/AD/511/221(2)

From: C. Monteiro Neves, Deputy Chief,  
Buildings and Engineering Branch

22 May 1974

Subject: International Computing Centre - Study No. 3

1. Please find herewith information on the cost of installing the International Computing Centre, as requested by Mr. C.E. King, Inspector, on 16 and 20 May 1974.

We first analysed the requirements as regards floor spaces and then classified them in groups with due regard to the interrelationship of the modules. Two copies of the following documents are annexed hereto:

Modules: analysis of floor spaces;

Layout: interrelationship and plan.

2. Estimated floor space and volume

(a) Floor space

- (i) Premises for offices and equipment connected with the computer (modules 1, 2, 3, 4, 5, 6, 7, 8 and 10), including two additional offices for extension of module 4

... 520 m<sup>2</sup>

- (ii) Premises for air conditioning plant

... 130 m<sup>2</sup>

- (iii) Corridors, free space, lavatories, etc.

... 285 m<sup>2</sup>

Total:

935 m<sup>2</sup>

(b) Volume

935 m<sup>2</sup> and 7 m (height including: foundations, air space, height of premises and flat roof)

..6,545 m<sup>3</sup>

(Cancels and replaces memo of the same date on same subject)

3. Estimate

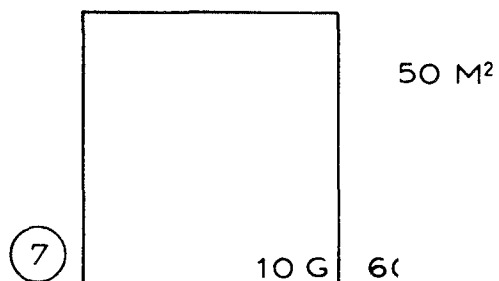
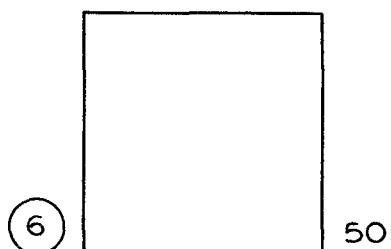
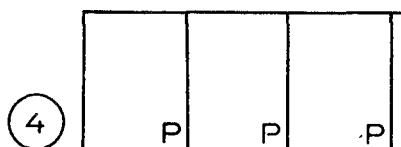
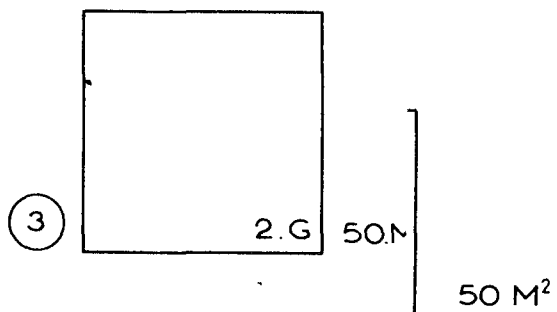
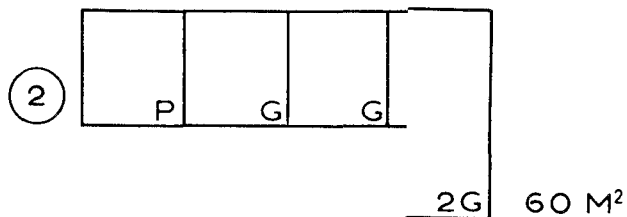
On the basis of the foregoing data an estimate can be made:

- construction of a special building with floating slab and all the finishings essential for housing costly equipment requiring premises that provide every guarantee of security  
9,100 m<sup>3</sup> x Sw.Fr. 450 = 4,095,000 Sw. Fr.
- air conditioning equipment 1,000,000 Sw. Fr.
- outside work such as access roads, parking area, lighting, electricity and telephone cables 500,000 Sw. Fr.  
The exact cost of this work, particularly roads and parking area, would depend on the site chosen for the new building.
- consulting engineers' fees (civil engineering) 120,000 Sw. Fr.
- consulting engineers' fees (technicians) 50,000 Sw. Fr.
- Total: 5,765,000 Sw. Fr.



MODULE

2	3	4	6	7
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ANALYSE DES SURFACES

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unand.

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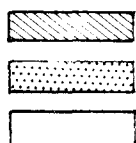
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2

# SCHEMA

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35



MODULES 1-5-8-10-

MODULES 2-3-4-6-7-

CIRCULATIONS  
DEGAGEMENTS

W.C

ESCALIERS

HALL

INSTALLATIONS TECHNIQUES

EXTENSION MODULE 4

INTER DEPENDANCE ET PLAN

O.N.U GENEVE

le 20-5-74

n.dunand

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2  
3

4  
5  
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