

ADVISORY COMMITTEE OF CERN USERSMinutes of the twenty-third meeting, held on 10 June 1985

Present : M. Albrow, W. Blair, M. Boratav, G.J. Bossen (Secretary), G. Damgaard, C. Fabjan, J. Feltesse, V. Gracco, A. Hallgren, E. Higon-Rodriguez, R. Klapisch (part-time), K. Kleinknecht (Chairman), A. Klovning, G. Leder, T. Mouthuy, H. Siebert, H. Taureg, M. Werlen.

Invited : J.L. Baldy (item 6b)), F. Bonaudi (item 7), R. Lévy-Mandel (item 6a)), R. Milligan (item 4b)).

Apologies for absence : K. Bos, F. Bradamante, C. Kourkoumelis, F. Niebergall, D. Websdale.

The Chairman welcomed Mouthuy, the new member from Belgium.

1. Adoption of agenda

With minor reordering, and deletion of one item (Matters arising - CERN computer policy - where the responsible director, Butterworth, had to participate in a meeting in Hamburg), the draft agenda was approved.

2. Apologies for absence

These were as given above.

3. Minutes of previous meeting (CERN/ACCU/22)

The minutes of the previous meeting, held on 25 February 1985, were approved.

The Chairman remarked that for the first time, a summary of the discussions had been published in the Weekly Bulletin. Members agreed to the style of it. The summary of the present meeting as published in the Weekly Bulletin is reproduced in Annex A.

4. Matters arising from the minutes

a) Housing

Klapisch informed the meeting that since the last ACCU meeting the CERN Finance Committee had approved the management's intention to have a total of 107 apartments built. This number was slightly in excess of present users' needs, but part of the apartments, in particular the larger ones which were more difficult to let, would be used for a period of a few years by companies participating in LEP construction which had made such a request to the management of the LEP Project. By summer 1986 some 50-60 studios and 2 or 3 bedroom flats would be at disposal of the users. As to service to be provided, Klapisch said that current

thinking concentrated on a formula somehow intermediate between services given in the CERN hostel and those provided for the existing housing pool. Also a maximum duration of stay in the hostel would be strictly implemented, persons wishing to stay longer being directed to the new apartments. Feltesse asked whether the apartments would have telephone. Klapisch confirmed.

ACCU took note.

b) Restaurants

Milligan reported that the management of Restaurant No 1 had contacted the Geneva Département de Police et Justice, to establish whether cantonal legislation would apply. Although the Département had not yet given a formal reply, this appeared to be the case which implied that the latest closing time would be 1 a.m. He also informed the meeting that Dalpiaz was regularly invited to the meetings of the Restaurants Supervisory Committee, representing the users.

The Chairman wondered whether a stricter checking at CERN's entrance as discussed at the previous meeting, would not change the question whether the CERN Restaurants were to be considered public. Milligan pointed out that at present access to the restaurants is not limited to persons belonging to CERN. Klapisch added that although most probably registered persons would in future have a card for valid access to the site, not everyone (e.g. visitors for a day, members of the family), would have such a card.

ACCU expressed its concern about the question whether legally the CERN restaurants had to be considered public and about its implications.

As to a closing time of 1 a.m., Albrow considered this to be a reasonable compromise. Feltesse agreed provided that hot food would be available until that time.

ACCU accepted a closing time of 1 a.m., as a reasonable compromise in the present situation.

Blair queried whether the call for tenders had been formulated. Milligan answered that it was still intended, but would wait until the recent call for the travel agency had been settled.

Albrow raised the point of the opening time in the morning which was 7 a.m. at present (6.30 a.m. at Restaurant No 2). He advocated an opening time of 6 a.m. The Chairman agreed that 7 a.m. was somewhat late. Taureg remarked that what users needed early in the morning was a coffee and a sandwich which could be provided for by a vending machine. Albrow agreed. Milligan reminded the meeting that the possibility of such machines had been investigated as an alternative for a late closing time, but that this had not been pursued as ACCU had asked for late opening hours of the restaurant itself.

ACCU expressed its support for the installation of vending machines near Restaurant No 1.

5. Office space for experimental physicists

Blair recalled that the recognized crisis in the availability of office space had led to the decision to construct two new buildings on the Meyrin site: construction of building 32, entirely intended for experimental physicists was by now well under way, as was the case with building 33 where the reception facilities of the Laboratory would be concentrated. The buildings should be ready in January 1986, and one could realistically expect people to be installed around Easter of that year. It was planned that users participating in the L3 and UA1 experiments would move in building 32, as well as part of the ALEPH collaboration, followed by a limited reorganization of the office space for the other EP groups. There would also be some additional space become available to EP Division in building 4 after parts of PE and FI Departments would have moved to the new reception building and building 5 respectively. Blair regretted that the existing space crisis for experimental physicists would not improve until Easter 1986 and he asked users for further cooperation and understanding of this difficult situation. Blair remarked that although most groups were already very cooperative, some space might sometimes be used better. It would be very helpful, if groups inform the local EP secretariat when they are going to be absent from CERN for an extensive length of time. This would diminish the risk that EP divisional management were faced with the argument "10 names on the door but nobody in" each time it raised the office space problem.

Albrow wondered whether at CERN guidelines for office space rights existed. Blair said that the existing space did not allow for such guidelines. He pointed out that the facts were that EP Division could make of the order of 4 to 5 m² per full-time person available, assuming a 35 to 50% presence of registered users averaged over the year. This situation had arisen as during some 10 years there had been some 300 new users each year without adequate increase in space.

Fabjan said to feel embarrassed to see how badly users are sometimes housed, and he questioned whether this was a problem of EP Division only, as the average space available per full-time person in other divisions was almost double that in EP Division. Gracco remarked that external groups also need laboratory space for their technicians and equipment. Referring to a memorandum by the EP Division leader to all users asking them to inform him on their physical presence on the site during a certain week, he stressed that many people might not be regularly at CERN now, but that the situation in 1986/87 would be completely different.

Blair explained that the memorandum had been sent out to obtain an instant picture of the space occupancy, and that the exercise would be repeated on 2 or 3 occasions. The replies so far to the memorandum indicated that the assumption that one third of all users was present at CERN at a given time was correct. As to laboratory space, he entirely agreed that such space should also be available, but he asked several groups in the same collaboration to share laboratory space. Fabjan expressed the opinion that in principle each group should have its own laboratory space, and repeated that it would seem impossible to try to solve the space problem inside EP Division. He considered it the duty of CERN management to provide a solution implying all Divisions.

Blair reminded the meeting that the decision to construct buildings 32 and 33 had been the result of a report by a space committee which was not functioning any longer. Klapisch said to be sympathetic with the idea to provide more space to the users, ~~but he stressed that it remained that part~~

~~of the activities of a collaboration should remain in the home institutions of the users.~~

Boratav said to agree with Blair that groups should be invited not to keep office space occupied, if not needed. He also wondered why office space was sometimes used as storage space. Blair replied that there was unfortunately a problem with storage space as well.

The Chairman urged the CERN Directorate to look for solutions on a CERN-wide basis. Klapisch pointed out that as long as there were evident cases of abuse, it would be very difficult to improve the overall situation; he said that other divisions disputed the number of people which EP Division was claiming that it needed to provide space for.

ACCU recommended in view of the difficult space situation in EP Division that a CERN-wide study on available space and its optimal use would be made.

6. LEP island sites

a) Safety

Lévy-Mandel said that he wished to present the main items concerning safety at the LEP island sites. Whereas there were no special risks inherent to the surface level buildings, a large effort was being made for safety underground where the main difficulties were related to the size and the depth of the machine tunnel, and the large number of people and equipment downstairs. Starting with personnel evacuation in case of emergency, Lévy-Mandel explained that at the even pits (where the experiments are housed) the lay-out and equipment of the PM and PZ shafts was such that safe areas were created through pressurization (separated from the ventilation).

Then he turned to the main risks: smoke, gas release, fire. Each electrical fire provoked smoke, but cables had been chosen to be halogen free and not flame propagating to diminish the risks. Also transformers would be moulded in resin. As to the detection of the main risks, an extended network of smoke detectors was to be installed, as well as oxygen deficiency detectors in areas where helium, argon and CO₂ were used. Moreover additional gas detectors would be installed by the experimental collaborations around their experiments. Fire extinction was foreseen through halon to be released in electronics rooms and through sprinkled water, whereas the use of foam was still under discussion. Ventilation and a smoke extraction system would be used to evacuate smoke. Lévy-Mandel pointed out that each person who needed to go into the LEP tunnel or the experimental areas would have to wear lifeguard equipment provided by CERN, consisting of helmet, torch and oxygen mask. Bonaudi added that there was a reasonable model on the market now, and that one hoped that a lighter and cheaper version would be available in three or four years' time.

Lévy-Mandel then discussed the supply of electricity which for evident reasons needed to be continuous under all circumstances. Normally supply would come from the EDF 400 kV network providing 18 kV for general services. If this supply would fail, EOS could supply up to 15 MW. If this supply would also fail, diesel generators would be used feeding surveillance and alarm systems, emergency lighting, lifts, ventilation, smoke extraction, firemen's water pumps and water exhaust pumps. If everything would fail, connection to the 20 kV EDF aerial

network was foreseen. Also battery supply would be available for emergency lighting, access control system, gas and smoke detectors, status information of the electrical network and alarm synoptics.

In case of flood, exhaust pumps with a capacity of 40 m³ per hour would be installed at each point, whereas in each experimental zone 400 m³ of water could be stored.

Lévy-Mandel explained that the alarm system would have three levels. The lowest level would give information on a failure which did not call for any intervention. Level 2 alarms would imply that something needed to be done, but without urgency, whereas level 3 would ask for immediate intervention by the firemen. Level 3 alarm would be given in case of smoke detection, gas detection, oxygen deficiency, flood, emergency stop, evacuation signal or red telephone request.

As to access control, Lévy-Mandel said that he was aware that this had already been discussed by ACCU at a previous meeting (see CERN/ACCU/20). Technical details were being discussed now, e.g. whether turnstiles or the simpler rapid access tube units (RATU) should be used. Bonaudi added that these systems were tested now in LSS4 of the SPS where the UA2/4/5 experiments were housed.

Albrow wondered whether there would be any CERN help for the collaboration to install their gas detectors. Bonaudi answered that this would be done jointly between the collaboration involved and EP/EF Divisions. The Chairman asked which kind of gas detectors were foreseen. Bonaudi said that two full scale prototypes of sniffing stations were being developed which could (hopefully selectively) detect carbonmonoxide, hydrocarbons, etc.. Fabjan raised the question of the fire extinction system for electronics. Lévy-Mandel repeated that halon extinction had been chosen at least for machine equipment whereas discussions concerning the electronics rooms of the experiments were continuing. Blair asked what the maximum response time would be in case of an emergency. Lévy-Mandel answered that this would depend on the outcome of the discussions whether each intervention would be made from the Meyrin site or not.

ACCU took note.

b) Lavout, buildings, offices

Baldy presented the status of the project for surface buildings on the LEP island sites (see also p. 10-15 of Annex B). He stated that most of the plans were now definitive but that there remained some possibilities of changes and modifications. Some 70 buildings with a total surface of 55000 m² were to be built at a pace which was higher than usual at CERN. On the odd sites (without experiments) only a few service buildings would be constructed, whereas at each of the even sites (with experiments) a dozen buildings were planned. Each building was characterized by a code as follows:

Building SX (above PX pit)	: assembly experimental equipment
SXC (adjunct to SX)	: 3 level building for offices, etc. with 350 m ² per floor
SG	: gas storage
SD	: as SX but for machine equipment
SF	: cooling towers
SZ (above PZ pit)	: access for personnel

SU	: ventilation and air conditioning
SA	: storage and tests of accelerating cavities
SEM-SES	: electricity sub-station
SR	: rectifier building
SUH	: helium compressors
SY	: access control

An extra light structure building was foreseen on the site which would host the L3 experiment to allow the "assemblage de bobine" for that experiment; on the Echenevex site (no. 4) a building for the firemen would be constructed.

It had been possible to find acceptable lay-outs of the buildings on each site although the access to some of the buildings on site no. 2 (L3 experiment) was not easy. Included in the lay-out were at each site parking space for 30 cars outside the fence and for another 70 cars inside. To allow a better integration in the landscape of the buildings on site no. 4, this site had been excavated and was protected by a concrete wall of up to 9 metres high. Also the cooling towers were outside the fence of this site. Before construction authorization was requested from the competent French authorities, an architect had been charged to look after items like colours and green space.

Baldy explained that from the civil engineering point of view the buildings could be divided into three types: one being constructed with reinforced concrete under earth and with a steel structure and cladding above, the second being constructed with prefabricated sandwiches of thermal insulation and concrete on a steel structure, and the third one being constructed with reinforced concrete only. Standard sizes for the buildings would be used as much as possible.

The total civil engineering work had been split in six parts and contracts placed for two of them. CERN Finance Committee would adjudge the third one on 26 June. All work should be finished by the end of 1988.

Albrow wished to know which surface would be available in the SX assembly building. Baldy answered that the standard size was 1000 m². Taureg said that according to his information each collaboration would be free to decide on the use of space in the SXC building, but that in principle the ground floor was foreseen for laboratory and workshop space, the first floor for computer facilities and the second floor for offices and a conference room. Boratav wondered whether during the assembly phase of the experiments extra barracks could be made available. Baldy said that in his view this was not excluded. Taureg pointed out that the space situation would be dramatic during this phase, as many buildings would not yet be ready. Bonaudi confirmed and explained that the problem was that Baldy and collaborators could only start construction after the pits had been cleared.

The Chairman asked what infrastructure would be available in the SXC buildings. Baldy listed the following items: staircase, lift, toilets, faux-plancher, faux plafond, air-conditioning, heating. As to internal walls, he added that their type had not yet been finally decided upon, but that it was the intention to choose such a type that would be relatively easy to displace. As to further equipment, he could only say that this was not included in the civil engineering budget.

The Chairman wondered where the borderline was between the

infrastructure furnished by CERN and the part to be financed by the collaboration. Bonaudi said that this borderline was not well defined for the moment, as the definition tended to change with time.

ACCU took note.

7. Local workshops for LEP experimental areas

Bonaudi said that G. Drouet of SB Division and himself had been asked in November 1983 by the CERN Management Board to make a plan for mechanical workshops for the LEP experimental areas, assuming that a) each experimental area would need some facilities of this type (e.g. to assist assembly work, to make small modifications locally, to fabricate last-minute components) and b) there should exist enough machine tools at CERN in the divisional and free workshops to equip the four LEP island sites concerned without buying new items.

Bonaudi explained that a typical local workshop for the LEP experimental areas would occupy 10 x 25 m² on the ground floor of building SXC, but he stressed that each collaboration would decide on its own lay-out. Each workshop should typically being equipped with three lathes, one large (250 x 1500), one medium (150 x 800) and one small (100 x 600), a medium and a small universal milling machine and a medium column drilling machine. To these main machines should be added a small bench drilling machine, a medium size band saw, two grinders and welding/brazing equipment.

As to the present situation, twelve out of the twenty-four main machines had been found and a provisional allocation had been made to allow the use of these machines already now for work on the LEP experiments. Bonaudi stressed however, that a re-allocation would be made before the equipment would be moved to the island sites at the end of 1987/beginning of 1988. Presently five of the main machines were used by the DELPHI collaboration, two by L3 and one by OPAL (both experiments using also some machines from the ex-BEBC workshop) whereas the immediate needs of the ALEPH collaboration were covered by nearby workshops on the site. Furthermore two main machines were on loan to the ACOL project until summer 1987, whereas the remaining two machines would be available at the end of 1985 or beginning of 1986.

Bonaudi said that it remained to find the other machines, to distribute all machines according to needs and also to find the required tools and accessoires. He closed his presentation with the reminder that tooling could be very expensive, that a qualified mechanic must be put in charge and that regular maintenance (or sometimes reconditioning) was needed.

In answer to a question from Siebert, Bonaudi explained that his group consisted of some 20 CERN staff. Out of this group one mechanical expert per experiment would be available who could be in charge of the machines if the collaboration agreed. Bonaudi said also that he was optimistic to find the remaining equipment in time.

The Chairman expressed the opinion that this kind of workshops suited very well the needs of the collaborations.

ACCU took note.

8. Any other businessa) Library Committee

The ACCU representative, Albrow, said that there had been no meeting recently. He assumed that users were aware of the additional service offered by the Library since some months which made it possible to make photocopies in the Central Library outside normal working hours by means of a pre-paid card.

b) Stores Committee

The ACCU representative, Hallgren, reported that the Committee had discussed the mandate of the standarization committee and heard a report on overpressurized gas bottles. He mentioned that in case items were missing from the stores, users should write to the head of the stores, Reitz.

c) ~~Fabjan said to be aware that some special fast electronics items were not available any longer, and wondered whether this was related to a list of sensitive items which US industry was not allowed to export to Switzerland. ACCU decided to take this point up at its next meeting.~~

9. Items for agenda of next meeting

Boratav said that he wished ACCU to be informed on services as transportation, cafeteria, etc. foreseen for the LEP island sites.

Albrow remarked that it seemed to him that more and more items which had been provided by CERN in the past were being charged to experimental groups now. He asked ACCU to be provided with a list of all such items which had been free of charge 10 years ago.

10. Date and time of the next meeting

The date and time of the next meeting were fixed on Tuesday, 24 September 1985 at 2 p.m. sharp. (The date has subsequently been modified to Friday, 8 November 1985.)

G.J. Bossen

**SUMMARY OF THE 23rd MEETING OF
THE ADVISORY COMMITTEE OF CERN USERS
HELD ON 10 JUNE 1985**

Restaurant opening hours

ACCU noted that negotiations were under way to delay the closing time to 1 a.m.

Office space for users

ACCU heard a report on the progress of the Z building; in view of the difficult space situation in EP Division ACCU recommended that a CERN-wide study on available space and its optimal use would be made.

LEP Island sites

ACCU took note of three presentations concerning

- a) present plans for lay-out of surface buildings,
- b) underground safety and
- c) local workshops.

ACCU representatives

The ACCU representatives on the Library Committee and on the Stores Committee reported on their activities.

Next meeting will be held on 24 September 1985.

