

ADVISORY COMMITTEE OF CERN USERSMinutes of the twentieth meeting, held on 2 July 1984

Present : M. Albrow, W. Blair, M. Boratav, G.J. Bossen (Secretary),  
F. Bradamante, G. Damgaard, C. Fabjan, D. Favart, J. Feltesse,  
V. Gracco, A. Hallgren, E. Higon-Rodriguez, R. Klapisch,  
K. Kleinknecht (Chairman), C. Kourkoumelis (part-time), G. Leder,  
H. Siebert, P. Sonderegger (part-time), H. Taureg, D. Websdale,  
M. Werlen.

Invited : I. Butterworth (item 4b)), O. Barbalat (item 4d)), W. Kienzle  
(item 4d)), R.N. Milligan (items 4e) and f)), B. Sagnell (item 4a)).

Apologies for absence : K. Bos, A. Klovning.

The Chairman welcomed the new members to their first meeting of ACCU. The updated list of members of ACCU is attached to these minutes (see Annex A).

1. Adoption of agenda

With minor reordering, and insertion of an item on construction of housing under point 5, the draft agenda was approved.

2. Apologies for absence

These were as given above.

3. Minutes of previous meeting (CERN/ACCU/19)

The minutes of the previous meeting, held on 14 February 1984, were approved, with the addition of the following phrase at the end of point 3 on page 1: "The minutes of the previous meeting, held on 5 September 1983, were approved."

4. Matters arising from the minutes

a) Access to the site

Sagnell said that almost two years ago he had been asked by the Director-General to look into the possibilities for a streamlined access procedure to all CERN accelerator tunnels and to propose an access procedure to the LEP island sites. The idea was to save money by not guarding these sites with people, the cost of permanent guarding by people of all eight LEP sites being some 1.5 MSF per year. The present proposal of which a pilot system will be installed at pit 4 of the SPS towards the end of 1984 was based on the idea that the safety of people was primordial, but that it should not be a security system designed to avoid deliberate attack. Access should be controlled with a severity proportional to the safety risk involved, along the following lines (for

further details see Annex B):

- Access to the island sites (pits) needs to be supervised by guards during day time to deal with the unforeseen, and the guards would have a more concierge-type job. Presence of these guards around the clock was considered to be too costly. The entrance to the island sites should be automatic, badge operated. No nominal counting of people was foreseen, e.g. only one person in an arriving car needed to identify himself.
- Access to the pit would need to ensure that at any moment the number and preferably the identity of persons in the pit were known. However a system which would provide 100% nominal control was not envisaged, as experience elsewhere showed that users did not want to live with such systems. The proposal foresaw a low profile system consisting of low turnstiles and a lock for material. Such a system provided a visible barrier to strangers and the lowest possible nuisance to the user. It also solved the problem of an emergency exit. Correct use of the system would allow exact knowledge of who was down in the pit, and this information could be displayed on a TV screen at the pit entrance. This knowledge was important for the safety of the persons concerned and could avoid useless trips down in the pit of people who wanted to meet someone.
- Access to the accelerator tunnel itself would remain unchanged.

Taureg queried whether the turnstiles could not be replaced by infra-red barriers. Sagnell said that this should not be done as a visible barrier was needed to limit unauthorized access. In answer to a question by Bradamante, Sagnell confirmed that this kind of access control was only foreseen for the island sites, and that there would be no change to current practice for access to the Meyrin and Prévessin sites. Blair added that the only change intended for the Meyrin and Prévessin sites is a stricter control of cars leaving the site, as CERN management is worried about the number of thefts on the site. Users are asked to be comprehensive and to comply with requests from the guards to open cars for inspection. In order to try to reduce the number of thefts, users are invited not to leave wallets and other valuables in unlocked drawers or offices.

ACCU took note of Sagnell's presentation and agreed to the policy to try to implement for the island sites (pits) a low profile system as described.

#### b) CERN computing policy

Butterworth informed the meeting that he had presented the CERN computing policy to the meeting of the Scientific Policy Committee during the previous week and was happy to give another report to ACCU, as CERN management was worried about a serious short-fall in computing power in the future. He recalled the developments which had led to the publication of the so-called green book ("Computing at CERN in the LEP era") in May 1983 which contained 22 recommendations at a total cost of 45 MSF (in 1983 prices) (see CERN/ACCU/18). Some of the recommendations had been implemented but he stressed once more that it had never been CERN's intention to do so with all of them. Since the special meeting of the LEP Experiments Committee and the formation of the Computing Coordination Committee, on which he had reported at the previous meeting, CERN had proceeded to write a master plan which took into

account both the requests from the user community and the economic limitations. Implementation of the master plan which included some items which had been missed in the green book's recommendations, would lead to expenditure of 52 MSF (in 1984 prices) by CERN plus the necessity for users to spend some extra money. As it was beyond CERN's possibilities to spend 52 MSF, a final readjustment of the master plan had led to the so-called 6x6 plan, the name indicating that it foresaw expenditure of 36 MSF over 6 years (until 1989). This plan had been approved by the CERN Directorate, but will remain under constant review, in particular in view of various uncertainties like the expectation that both CDC and IBM would market new series of computers in the coming years. Butterworth estimated that the approved plan represented 3/4 of the green book recommendations, 3/5 of the master plan, and 3/10 of the users' requests.

As to CERN's central computing power, Butterworth reminded the meeting that this was at present equivalent to 13.2 IBM-168's; three of these units were used of the interactive systems (WYLBUR, INTERCOM) and the remaining ten for batch processing. There was a clear need for an improvement of the interactive systems, present use of these being at the level of 150 to 200 users per day logged on simultaneously. The improvement would include switching over to VM/CMS and allow to allocate more resources to each user and to increase the number of users to 300. He said that the 6x6 plan foresaw a capacity of 8 IBM-168 equivalent in 1988/89 to support interactive computing. Butterworth added that CERN management did not believe that buying personal computers was the right policy for a general service, and no money was allocated for it in the approved plan. Concerning batch processing, the master plan had assessed that a capacity of 12 IBM-168 equivalent per big experiment would be necessary in the steady state. The experiments had requested that all this capacity be available at CERN at least during the first one or two years of the experiment; experience with UA experiments had shown the desirability of such an approach. However, the economic constraints had forced CERN to allocate in the 6x6 plan a capacity of only 3 IBM-168 equivalent to each of the LEP and big UA experiments, i.e. 18 units in total. Overall the plan contained 33 IBM-168 equivalent for the total of CERN's central computing capacity, i.e. 18 units for batch processing of LEP and UA data, 8 units for interactive computing and 7 units for other activities. Butterworth said that CERN management was convinced that although there were some uncertainties (like LEP luminosity at starting up the experiments, the real fraction of computing done outside CERN, and the needs of the fixed target programme), this would lead to a serious shortfall in computing capacity. Butterworth remarked that one could become forced to use emulators to try to compensate this shortfall. Expenditure for central computing facilities was fixed in the 6x6 plan at 20 MSF for capital investment plus an additional 4 MSF for maintenance and software. Butterworth informed the meeting that the Computing Coordination Committee had considered CERN's plans far from ideal, but in the situation, plausible. Concerning the timescale of implementation, a first increase by 7 IBM-168 equivalent was foreseen by the end of the year; then one would coast through the quiet years, and the second increase was planned at the time that LEP and ACOL became available for physics experiments.

Concerning on-line computing, Butterworth said that manpower seemed to be a still more important problem than money. The 6x6 plan supposed that all experiments will use FASTBUS, and all cost was foreseen by the plan to be charged to the experiments. However, CERN would provide a VAX computer in the computer centre for software development, as well as

some support for microprocessor work.

In the networking domain the approved plan had made only a small cut compared to the green book recommendations, and expenditure at the level of 3.8 MSF over the 6 years was foreseen. Butterworth explained that it was CERN's intention to do the necessary work required to link various computers of different makes and using different protocols in a wide area network. As to local area networks CERN accepted that CERNET needed to be replaced, but had decided to defer its implementation because of the fast moving market and shortage of money. Butterworth said that CERN realised that it needed ETHERNET hardware, although several users had asked for a cheaper system; also the IBM token ring system would need to be supported when it became available.

Expenditure on general computing services had been reduced from 4.8 MSF in the green book to 1.8 MSF in the 6x6 plan. This implied, apart from general cuts, no replacement of the mass store, no investment in video disks etc., availability of uninterruptable power supply to selected units only. Almost no money was made available for CAD/CAM for electronics engineering (0.8 MSF whereas the green book foresaw 3.5 MSF).

Butterworth concluded that the overall picture was depressing, and added that both the Computing Coordination Committee and the Scientific Policy Committee had subscribed to that statement. He feared that CERN was slipping away from providing good computer services, and regretted that the Computing Coordination Committee had not been in a position to offer substantial help.

Klapisch asked the meeting to realise that the total amount of money in the CERN budgets until 1989 which was not yet committed was about 100 MSF. Hence the approval of the 6x6 plan left only roughly half of that money to be spent on new detectors, new buildings, etc. Butterworth remarked that the only consolation was that FNAL was in a similar situation, as they had also tended to underestimate the expenditure necessary for computing.

Fabjan commented that in several areas more and more fundamental work was done in the home institutions of the CERN users, and hence he thought that this should mean that the inside/outside ratio for the off-line data handling should not change in the direction of a heavier load on the CERN facilities. He wondered whether the computing capacity in the Member States institutes was really known, and also whether CERN could not be more helpful to the institutes in providing assistance to optimize the use of existing installations. Butterworth answered that it was indeed difficult to assess the computer capacity available in the Member States and he illustrated this by mentioning a two hours' discussion at the last meeting of the Computer Coordination Committee, the main difficulty being the difference between power potentially available and power really used. He said that CERN is giving some assistance to outside centres but that such help was reasonably easy to give only to big computer centres. The Chairman remarked that for successful data analysis all participating institutes needed to use the same version of the programme or alternatively all computing had to be done at CERN as had been the case with the UA experiments. Hence, if a better use of outside facilities was desirable, networking had to have a high priority.

Websdale asked which efforts were made to use at maximum the expertise

accumulated in DD Division, e.g. concerning mass storage systems, as the 6x6 plan did not invest in any new system. Butterworth answered that the competent people in DD Division would need to monitor developments so that CERN kept in touch with the latest techniques.

The Chairman queried the absence of money for FASTBUS. Butterworth confirmed that the present plan charged costs to experiments; he pointed out that CERN had increased software support in this area. He added that it seemed necessary to force standardization.

Fabjan raised the point of CERN's plans for read-out systems of CAMAC crates. He reminded the meeting that Caviar was available to do this in stand-alone mode, but EP Division was not permitting experimental groups to buy Caviar units any longer, as a new read-out system which seemed to need a link to a central computer, would soon replace Caviar. He commented that a new system which would not work in a stand-alone mode would seriously affect users. Butterworth confirmed that Caviar was obsolete, but stressed that Super-Caviar could still be used, and that the question was what would come after Super-Caviar. He added that CERN management had already decided to make an assessment of this problem during this summer. Taureg noted that nothing comparable to Caviar was available for use with FASTBUS; Butterworth remarked that he was aware of some work on this topic within the UA1 experiment.

Blair commented that the reason for EP Division not to allow further purchase of Caviar units was primarily financial, coupled to the forthcoming closure of various experiments. The Chairman made a strong plea to CERN not to forget the users and to keep in mind that a new system which would replace Caviar but which could not operate in a stand-alone mode, would be unusable at many institutes.

ACCU took note of the information on CERN computing policy given by Butterworth and decided to continue the discussion at its next meeting, in particular concerning the future of Caviar-like systems. Butterworth was invited and accepted to present CERN's position on this specific topic at the next meeting.

c) Reorganization of workshops

The Secretary informed the meeting that both Brianti and Bonaudi (who had been asked by the Management Board to make a study) could not attend the meeting. Moreover a discussion at this moment had been considered untimely, as Bonaudi's report was not yet ready. The Secretary added that the only information available was the summary of the Management Board discussion on 24 November 1983 which was published in the Weekly Bulletin No. 50/83 of 12 December 1983: "The Board then considered a report by G. Drouet on the follow-up of the earlier Study Group on Mechanical Workshops. After some discussion it was agreed to ask F. Bonaudi, together with G. Drouet and the Divisions concerned, to make an overall plan for the equipping of the workshops which will be created at the head of each LEP pit so that as far as possible existing machines are used which are now dispersed over the site in many small workshops. A report on the situation should be given to the Management Board in summer 1984."

ACCU took note and decided to take the matter up again at a future meeting.

d) EDF contract

Barbalat summarized the history of the present EDF contract to which CERN had subscribed. In order to build LEP inside a constant overall CERN budget, various economies had been proposed, among which figured the proposition to reduce CERN's energy budget of about 60 MSF (of which about 50 MSF concerned electricity) by closing all accelerators one more month each year. Fortunately another possibility for savings arose as EDF came with an offer to its main customers to reduce the price of electricity provided EDF would be allowed to cut the supply on 22 days per year 18 hours per day (i.e 400 hours per year), these so-called critical days falling inside the 5 month period November-March of each year. CERN accepted these conditions on an experimental basis for winter 1981/82, which brought saving of about 3 MSF. The experiment was repeated in winter 1982/83, and in 1983 CERN signed a contract covering the 5 year period 1982-1987, this long-term contract increasing CERN's savings to about 4 MSF per year. Barbalat explained that EDF's offer was part of their general policy, and not specifically tailored to CERN. Hence a number of critical days (in fact about half of them) fell in the months January-February, the period of the normal shutdown of the accelerators. The decision to declare a day critical was taken centrally in Paris, taking into account the expected load on the French network and the electricity available. Evidently whenever an EDF plant suffered from a technical incident, this increased the probability of a critical day. As the general maintenance of EDF plants was executed during the summer, this tended to happen more often in March than in November-December.

Barbalat added that the contract foresaw that CERN was informed by 5 p.m. on Monday to Friday, if the next day the electricity were to be cut at 7 a.m., and at weekends the information would be given by 5 a.m. for a cut at 7 a.m. the same day. A contract clause permitting EDF to cut electricity without notice, had so far never been used. Barbalat said that each winter 8-10 days had been lost for physics experiments as a consequence of the EDF contract, which had to be compared with 4-5 weeks less running to achieve the same savings under a conventional contract. He stressed that only the SPS was affected, as the PS complex used Swiss electricity. Barbalat closed with the remark that electricity consumption at CERN this year was expected to cost 42 MSF (due to both EDF contract and ISR closing), compared with 50 MSF a few years ago.

Kienzle reported on the impact of the contract on the users. At the end of the first experimental period, in March 1982, EDF had declared a large number of days critical, for reasons already given by Barbalat, but also arbitrarily in order to ensure that electricity was in fact cut for the allowed maximum of 400 hours. This had had serious consequences for the physics programme in that month, and CERN had decided to delay normal running until the end of March in 1983 and in the following years. Due to this precaution, there had been no bad surprises in winter 1982/83, but in the last winter EDF took unexpectedly 9 days before Christmas which had heavily affected some test runs. As it was realized that the worst effects of the present EDF contracts were hitting test runs and short experiments, future scheduling would try to avoid to place these in the months November and December. Kienzle warned that this might not be possible for all LEP test runs. He explained that the present scheduling foresaw for the end of this year pp running. Kienzle said that it was expected that the UA experiments would suffer less from eventual critical days, as the AA could continue to accumulate antiprotons which could compensate at least partly the

time lost at the SPS. He added that the provisional schedule for 1985 foresaw pp running in the pulsed mode during March which anyway would consist mainly of machine development runs, and normal pp running in the last two months of that year. Klapisch stressed that the 1985 schedule was not yet decided and the schedule given by Kienzle was only one of the possible options. The Chairman commented on a complaint by a Norwegian group which had lost a significant part of their travel budget as the test run in which they wanted to participate, had been cancelled due to a succession of critical days. Kienzle understood that EP Division had agreed to give some financial compensation in this particular case. Hallgren asked whether it would be in future CERN's policy to compensate financial losses of user groups. Blair replied that such compensation was unlikely to be given except in extreme cases.

ACCU took note and decided to rediscuss the matter before CERN needs to decide on an eventual extension of the EDF contract beyond 1987.

e) Health insurance arrangements for users

Milligan informed the meeting that Austria had agreed to raise the age limit for eligibility for the reduced insurance cover for single persons or those who did not want to cover their family to 60 years (40 years at present). He recalled that the present premium for this insurance was 183 SF per month and that the insurance had to be taken in multiples of one month duration.

As to the complementary insurance scheme, a detailed draft of the contract (which would be signed by CERN) was now being examined by the Italian authorities. Bradamante said that it seemed that the approved procedure in Italy was progressing and he thanked Milligan for the work which he had done to open this possibility. The Chairman said that, after discussion at the previous meeting, Europ Assistance had made a more detailed proposition (see Annex C). He invited members to ensure that these possibilities were discussed in the various user communities. Interested users should contact Milligan concerning Austria's proposal and Mazerand concerning that of Europ Assistance.

ACCU took note and considered its deliberations on this point closed.

f) Restaurants

Milligan said that CERN was at present reviewing its policies and the existing contracts, and account would be taken of the need to provide a good night and weekend service which were of particular interest to the users. As to the Restaurant Supervisory Committee, Milligan explained that some members were appointed because of their duties (e.g. representing SB Division concerned with the maintenance of the installations) and the clients were represented by the Staff Association nominees, who could include someone representing the CERN user community. Sonderegger agreed to the proposal.

ACCU decided to invite the Staff Association to nominate P. Dalpiaz to represent the users on the Restaurant Supervisory Committee.

N.B. As from the beginning of August 1984 it is planned to extend the opening hours of Restaurant No 1 to 06.30 - 24.00 on Saturdays and Sundays for a trial period.

g) Cars

Blair circulated the existing rules for renting blue R4 cars (see Annex 0), and confirmed that such cars could only be used by authorized drivers for journeys on-site and between the sites. For other trips an authorized driver needed an "ordre de mission". These restrictions were due to Customs regulations. He added that a reminder for those concerned was being prepared and asked all users to read the rules. Albrow remarked that pits 4 and 5 of the SPS were not included in the list of destinations. Blair answered that CERN considered these island sites to be part of the CERN domain, and they would be included in a future revised version of the rules. Hallgren complained that it was not clear which documents people needed to use the tunnel; in particular, he had been unable to determine to which category of tunnel users (as published in the Weekly Bulletin) he belonged. He was advised to take this up with Blair outside the meeting.

ACCU invited all users to inform themselves about the existing rules.

h) Telephones

As to the French P and T telephone booths on the Prévessin site, Blair confirmed that the booth in building 092 had been suppressed, as it was hardly used. Such a booth remained, however, available near Restaurant No. 3.

ACCU took note.

i) Hostel

Websdale queried whether the Housing Committee had come to a conclusion on the opening hours of the hostel reception. Klapisch answered that it was foreseen to change at least for a trial period the hours such that the reception was open after lunchtime from 1.30 p.m. onwards. The Secretary commented that according to his information the trial period had already passed, and that the opening hours were at present again 9 a.m. to noon and 2 p.m. to 4.30 p.m. (4.00 p.m. on Friday). Klapisch promised to follow this up.

ACCU asked Klapisch to ensure that the hostel reception should be opened from 1.30 p.m. onwards for another trial period of sufficient length and correctly announced.

5. Any other businessa) Housing

Klapisch said that it was an established fact that there existed a general shortage of housing in the Geneva area, both in Switzerland and in France. This was of concern to the CERN management, in particular because the number of users looking for accommodation for longer periods was expected to increase in the coming years with the preparation of the LEP experiments being increasingly concentrated at CERN. He considered it impossible for CERN to be responsible for the housing of all users, but as at the time there were 1000 users CERN had made available (on top of the possibilities of the local market) housing for 120 of them, it could be considered reasonable that the latter number would be increased, now the number of users had almost tripled. A preliminary



survey had shown that construction in Switzerland would be too expensive whereas in the Pays de Gex only St. Genis offered the required infrastructure (shopping, public transport, distance to CERN). The idea had then developed that CERN could try to convince appropriate French companies to build flats there to Swiss norms which should lead to rental prices of about 1000 SF per month, whereas equivalent housing in e.g. Meyrin would cost 1500-1800 SF. Klapisch said that land was available in St. Genis for 40 flats and that construction could be terminated by January 1986 if a decision was taken in the near future. He added that contacts with four major French companies had so far been encouraging; these companies were in principle willing to build according to the norms and prices foreseen by CERN, which would then take a lease of 9 to 12 years. There were then two options: either institutes would take a firm commitment to rent a given number of flats for several years from CERN at base cost, or the flats could be added to the existing pool rented through the CERN Housing Service at basic cost plus 15 to 20% (as complete filling of all flats in this case would not be possible). Klapisch stressed that the project was only in the information stage, and that it was not approved yet by CERN management.

Klapisch reminded members that they had received a letter from him asking for information on how many users were likely to want to benefit from such flats and on which commitments institutes would be prepared to take. Similar letters had been sent to the responsible people in the 4 LEP and 2 large UA experiments. Klapisch reported that the response so far had been encouraging but he invited those members who had given so far no or only a partial answer to provide him with the requested information as soon as possible. He said that institutes were willing to take firm commitments for at least half of the apartments. As to questions whether furnished flats and a cleaning service could be made available, the preliminary answer was yes, if requested.

Feltesse asked if the flats were intended for users with their families or for users coming alone. Klapisch answered that both categories could make use of these new apartments, and that the architecture would be such that sharing of an apartment among several users would be possible.

ACCU expressed its satisfaction on the initiative and encouraged CERN management to go ahead if a sound financial basis was available.

b) ACCU representatives to CERN committees

The Chairman reminded the members that the seat of the ACCU representative on the CERN Library Committee had become vacant now Thompson was no longer an ACCU member. Albrow accepted to represent ACCU from now on on this Committee.

The Secretary informed the meeting that he had received a request from the CERN Stores Committee to ACCU to nominate a representative. Such user representation had been foreseen by the Committee's mandate since a long time, but had never been implemented. After a short discussion, Hallgren was nominated.

The Chairman asked Albrow and Hallgren to report back regularly to the Committee.

c) Distribution of minutes

The Chairman raised the point of the distribution of the minutes which

at least in some Member States should be improved. After a short discussion ACCU decided that, on a trial basis, a shorter (two page) version of the minutes should be prepared which should be enclosed with the Research Board minutes, it being understood that the full version of the minutes remained available as an approved record of the Committee's discussions. Klapisch added that another complementary possibility would be to publish a summary of the highlights in the Weekly Bulletin, as was the case with the discussion of several other CERN Committees.

d) Staff Council

The Chairman informed the meeting that the elections to the CERN Staff Council had taken place and he reminded members that the users had three seats on this Council. Only one user, Niebergall, had been found, who was willing to stand for election and he had been elected.

e) Travel agency

Damgaard reported negative experience with the services of the Wagons-Lits Tourisme agency at CERN. Klapisch informed the meeting that also CERN management had observed a deterioration of the service, and CERN had given notice and asked for new bids from interested companies under new conditions. He added that CERN management would welcome information on users wishes.

f) CERN Kindergarten

Taureg raised a problem concerning the management of the CERN kindergarten, as the present treasurer, a CERN staff member in FI Department who had been spending some 15% of his working time on kindergarten affairs, was not willing or able to continue this work. The kindergarten management would now have to stop operations or find a replacement. Klapisch promised to enquire.

g) Parking

Blair said that he had been asked by the Director of Administration to give to ACCU advance information on a campaign against dangerous and bad parking which would start in the near future. The definition of tow-away zones would be reviewed, but then the rules for these zones would be strictly applied. As to dangerous parking outside these zones several propositions had been made, in particular the FNAL system which foresaw to glue a large sticker on the windscreen of a badly parked car, removing such a sticker taking about 15 minutes. As to abandoned cars, these would in future be removed from the site, but it remained that users can leave their cars unused on-site for longer periods, if they duly notified the security service in advance.

h) Scintillator workshop

Websdale expressed the opinion that the scintillator workshop did at present no longer fulfil the same functions as in the past when it provided a rapid service for small quantities of scintillation counters. It seemed that only two CERN staff were occupied now in this workshop, and that they were working on a large project which excluded the usual service. Blair said that although this workshop was not an EP responsibility he was willing to enquire.

i) Relations staff-users

Sonderegger mentioned that the Staff Association was concerned about a lack of communication between CERN staff and CERN users which had been apparent during the strike of the CERN staff last December. The Chairman proposed that Sonderegger would present the Staff Association's view and its proposition at the next meeting and it was so decided.

6. Items for the agenda of the next meeting

Due to lack of time this point of the agenda was not discussed. ACCU members are invited to contact the Secretary, if they have propositions.

7. Date of next meeting

The date and time of the next meeting were fixed on Friday, 19 October 1984 at 2 p.m. sharp.

G.J. Bossen

MEMBERSHIP OF ACCU 1984/85I. USERS

<u>AUSTRIA</u>	G. Leder	(no change)
<u>BELGIUM</u>	D. Favart	(no change)
<u>DENMARK</u>	G. Damgaard	(no change)
<u>GERMANY</u>	K. Kleinknecht H. Siebert	(no change, remains Chairman) (replaces A. Bamberger)
<u>FRANCE</u>	M. Boratav J. Feltesse	(replaces J.J. Blaising) (no change)
<u>GREECE</u>	C. Kourkoumelis	(replaces T.A. Filippas)
<u>ITALY</u>	F. Bradamante V. Gracco	(no change) (replaces P. Dalpiaz)
<u>NETHERLANDS</u>	K. Bos	(replaces J. Timmermans)
<u>NORWAY</u>	A. Klovning	(no change)
<u>SPAIN</u>	E. Higon-Rodriguez	
<u>SWEDEN</u>	A. Hallgren	(no change, appointed until 31.12.1984)
<u>SWITZERLAND</u>	M. Werlen	(replaces H. Suter)
<u>UNITED KINGDOM</u>	M. Albrow D. Websdale	(replaces J.C. Thompson) (no change)
<u>CERN</u>	C. Fabjan H. Taureg	(replaces J. Panman) (no change)

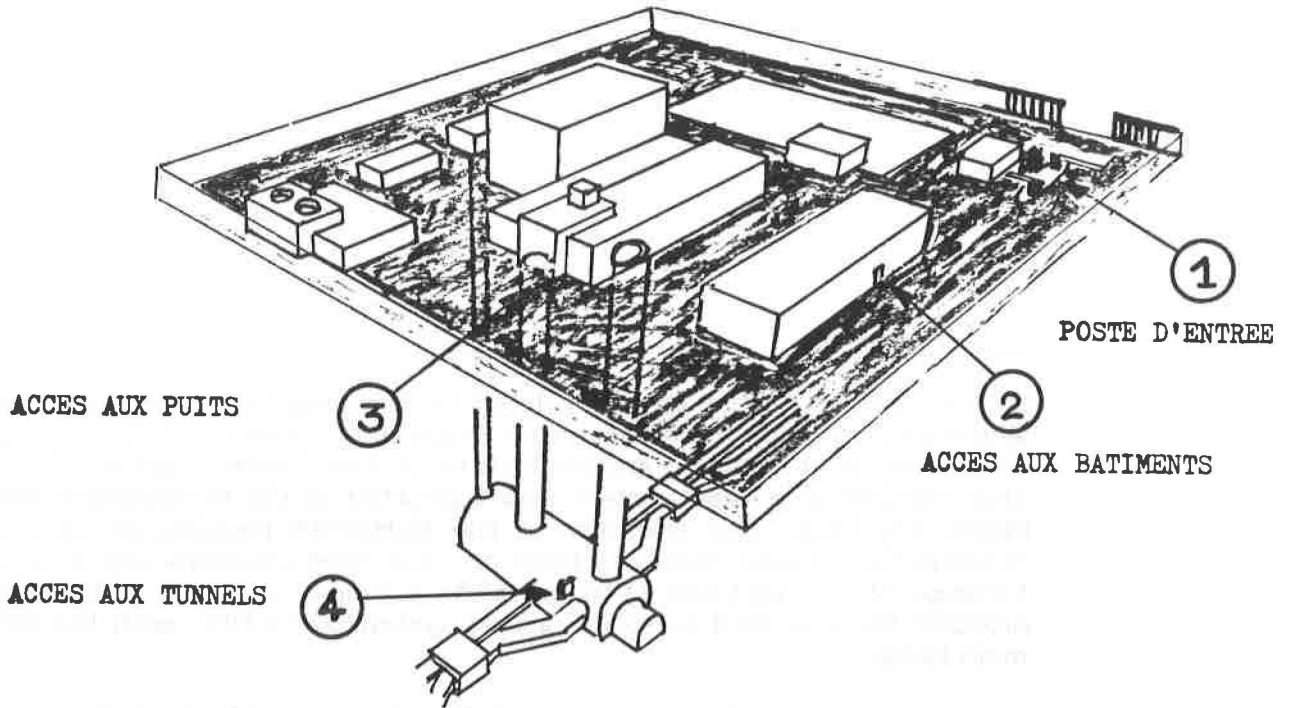
II. CERN

Directorate	R. Klapisch
EP Division	W. Blair
PE Department	G.J. Bossen (Secretary)

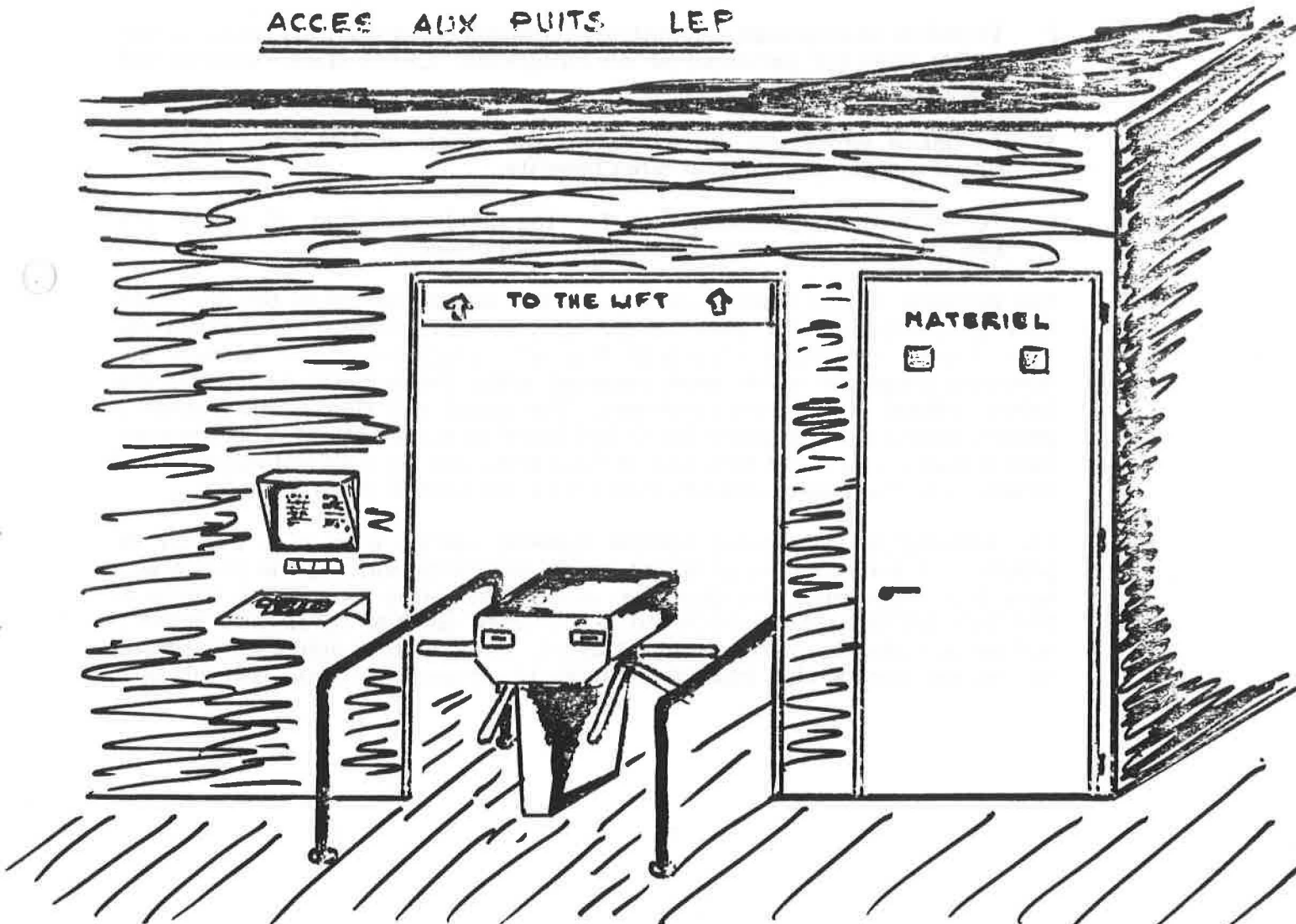
III. CERN Staff Association

P. Sonderegger (deputy M. Mazerand) (replaces E. Zavattini)

PROPOSITION



ACCES AUX PUITIS LEP



Control of Access - a Policy and Pilot Project Proposal

B Sagnell

1. Introduction

In the context of the studies related to the long-term manpower planning which was set up by the Management Board in November, 1982 I was requested to examine the Equipment and Methods for Access Control used at CERN.

This resulted in a report which was submitted to the Management Board on March 17, 1983, and discussed in the thirteenth meeting on April 21. A Working Group with members from all concerned Divisions and services was subsequently set up (June 1) to assist the author in the work of formulating a proposal for a unified personnel access system at CERN, with the following main tasks:

- 1 To define a unified Access Card for CERN suitable for both accelerator and site access control purposes.
- 2 To define an improved administrative procedure for granting access to the CERN sites for personnel of all categories: CERN staff, visitors and industrial support staff.
- 3 To define where the use of mechanised access control could result in future manpower savings or other benefits.
- 4 To have the necessary work for the implementation of points 1-3 executed following approval of appropriate projects.

The summary of the work done during 1983 was presented in the SPS Tech Note 83-6 November 28, 1983 and discussed in the Directorate on January 26, 1984. This is a revised version of this note which takes into account the numerous proposals which were received after the original report and the better defined LEP access conditions. The report will first of all propose a general access control policy for CERN based on the practical experience we have gained so far, and then submit final proposals for a CERN Access Card as well as a pilot access control project for experimental areas 4 and 5.

The introduction of access control systems carries with it a number of problems of a non-technical nature which constantly surprise the people who have been responsible for designing and implementing them. The reason is that only systems clearly perceived as necessary (such as accelerator access) will be accepted by most intelligent users. But for other applications people will muster considerable ingenuity in order to circumvent them. This sets up a

vicious circle of escalating safety requirements in order to stop all possibilities of fraud. As a result, the installations become complex, unreliable and costly as well as a great source of frustration to users and maintenance staff alike.

In order to avoid this running battle with the users these human reactions should be taken into account before deciding on access systems. This report should therefore be considered a declaration of the principles which I feel should be followed in order to make CERN's future access control installations successful.

Our experience shows that access control works well only if:

- The system is perceived as necessary.
- It allows people to take personal responsibility in order to deal with the unforeseen.
- It provides some personal incentive or advantage to the user. It should also provide an element of disadvantage if not used correctly.
- It treats people with personal respect (as names, not numbers).

## 2. A proposed set of principles.

Let us see how one can apply the above principles to the control of access to the underground experimental areas both in the SPS and in LEP where hundreds of people may have their daily work, and where there is a very large traffic of both people and equipment.

The following are the safety requirements which CERN should meet:

- Unauthorised personnel, stray visitors and strangers should be prevented access to these sites in general and to the pits in particular.
- A log of underground personnel should be available in case of fire and accidents to simplify the roll-call procedure.

On the other hand:

- We should not attempt to design a system which could protect us against deliberate attack. This is otherwise the reason for most commercial access control systems as installed in banks, sensitive industries etc, a fact which colours the entire security business.

There are two ways of satisfying the above requirements, the hard way and the human way: The "hard" system will oblige the users to obey the rules by preventing all forms of unauthorised access and fraud, turning the sites and buildings into virtual prisons. Commercial installations tend to do this. The "human" approach will apply the lessons of earlier systems and provide a lower key solution, combining carrots and sticks.

I am convinced that the first solution will fail at CERN regardless of how much money, ingenuity and effort is spent on it, and that the second approach has to be used. I therefore propose the following general guidelines for action:

- a) Access should be controlled with a severity proportional to the risk involved:
  - Light but not negligent at the entrance to the site, such as the driver of a car being responsible for his passengers.
  - On an individual basis into the experimental pits.
  - On a personal basis with individual safety keys into the machine tunnel itself (as at present).

The site and pit access identification is proposed done by an automatic system at all times, but under the eye of a guard person during working hours. The machine access will have to be under the direct supervision of the LEP Control Room. The last system will not be further discussed here.

- b) The access systems should be kept low-key and convenient to use in order to be acceptable, but still be visibly evident barriers to strangers and intruders. The use of automatic sliding doors with badge readers, or only low barriers and low turnstiles of the type used in shops, swim baths etc are proposed for pit access in order to simplify transport of small material. In the latter case indirect ways of preventing further progress of an intruder may be envisaged.
- c) All systems should allow exceptions gracefully, for instance by allowing an authorised person to pass visitors legally, or by allowing alternative means of identification besides the Access Card. (Commercial systems do not provide this possibility).
- d) There could be a log screen at the pit entrance and there should be one in the central reception area of the site showing the names of the people working underground. It should be visible to all users.

As a general rule, no access control system can be convenient to the users, but we should at least attempt to make ours as convenient as possible. This means that they must be very simple, reliable and fast in order to avoid user resistance due to technical short-comings. The simple card reader may well have to be backed up by a more attractive system for identifying the absent-minded, such as a log-on keyboard, a hand reader or proximity card.



To conclude:

- Access should be controlled with a severity proportional to the danger involved.
- The systems should be made as friendly and helpful as possible in order to be accepted by the heavy users, yet be viable barriers to strangers and intruders.
- The systems should allow exceptions gracefully and encourage personal responsibility.
- The information gathered by the systems should be openly available to the users.

3. The Access Card

No automatic access control system can work without some means of identifying the person requesting entry. The most popular, and indeed the only standard one, consists of the familiar plastic card of credit-card size. The CERN requirements are modest by industrial standards, and can be summarised as:

- The card should conform to an international standard to allow multi-source purchasing.
- It should survive the CERN magnetic environment.
- It should be cheap and easy to produce in-house, preferably while the client waits.

Only one type of card is covered by an international standard, the common credit card with magnetic strip coding. Our experience with this type of coding at CERN is, however, not a happy one. It is therefore fortunate that a second-generation magnetic card has just been introduced using a high-energy magnetic material. This material can withstand fields up to 4000 Oersted instead of the 300 Oe which erase a normal credit card. The new cards can be read in the same readers as normal cards, but require more powerful coding equipment. This is an advantage since it reduces the risk of fraud. The Working Group on Access therefore proposes this type of card for CERN.

The Working Group also requests that the card remains coupled to the Film Badge in the same way as at present, a method which gives the users additional ease of use. This leads to a vertical format.

The information on the card should be kept to a strict minimum, as the card must not be confused with credit cards or national ID cards. It must be clearly marked as being a CERN Access Card, and apart from the photograph should only contain the NAME, CERN personnel number and FIRM (for external contractors). We propose to make a slight but visible distinction between CERN staff and contract staff. The result is a card which is visually very similar to the one used in the SPS (see enclosed illustration).

### Proposal

The Working Group proposes the following card to be used for all access control and identification purposes within the Organisation:

- Plastic card of credit-card dimensions (85.5 x 54 mm) according to ISO 3554 and 4909.
- High-energy magnetic-strip coding of ID number and NAME.
- Vertical format to allow coupling to Film Badge.

### 4. A Pilot Project

In order to test the above proposals in more detail, and to benefit as soon as possible from unattended access control, the original proposal was to extend the embryonic access systems installed in the experimental zones 4 and 5. This still holds as far as the site access is concerned, but in view of a limited budget and the very difficult and cramped conditions surrounding the lift into UAI, no project will be proposed for controlling the access into Pit 5.

The pit into 4 is easier to control since it is much smaller. The proposal is therefore to equip this pit with the two forms of access control envisaged for LEP: low turnstiles for personnel access, and an infrared-supervised material access lock. The enclosed sketch shows the proposed layout.

The cost for this transformation is estimated at 30'000.- for site 5 and 60'000.- for site and pit 4. The work could be done during 1984 by the SPS Access Section. It is proposed to supervise the present gates from the existing SPS entrance, but the final system will be controlled from the new Centre d'Accueil and LEP control room.

Another test area might be the Route Maxwell Entrance adjacent to the Car Club. This would also be a suitable place for testing a proximity card type of entry control, a proximity card being a small, semi-active device which can remain inside a car and be detected from a distance. Such a card gives the ultimate in convenience since it requires no action from the driver: the tagged car will just open the gate automatically (regardless of who the driver is, of course). Since a method should be found for keeping track of the CERN vehicles around the LEP sites it would be useful to test this device somewhere. Because of the higher price of a proximity card (about 50.-), it would otherwise remain reserved for a privileged class of users, such as official cars. A simple badge operated sliding gate at this entrance has been estimated to cost 20'000.-

Proposal: Equip areas 4 and 5 with a prototype site access control system during 1984, and equip pit 4 with a personnel access system incorporating the above design principles and access card. Try a proximity badge system on either one, or at the Rt Maxwell Entrance.

### Other Projects

The Working Group has also taken note of requests from other groups for some form of access control. The most specific are from the DD Division and from the Library where control is required for the classical reasons of preventing theft, fraud and vandalism. It is proposed that these projects be decided and funded by each Division concerned, but that they be made to conform to the guidelines contained in this study. The cost and difficulties of making viable systems for these applications should not be underestimated.

### 5. A Unified Access Procedure

CERN has, of course, a system for recording new staff, scientific visitors, Summer students etc. and for issuing them with necessary papers (see the CERN User's Guide, Chapter 2).

But no unified procedure exists for recording the staff of external firms working on contract to the Divisions, occasional visitors, representatives from firms, members of the family etc. The Working Group therefore recommends that the future 'Centre d'Accueil' should be able to receive, guide and advise people of all categories arriving at CERN, and issue them with all papers, badges and other means of control required by CERN and the host authorities.

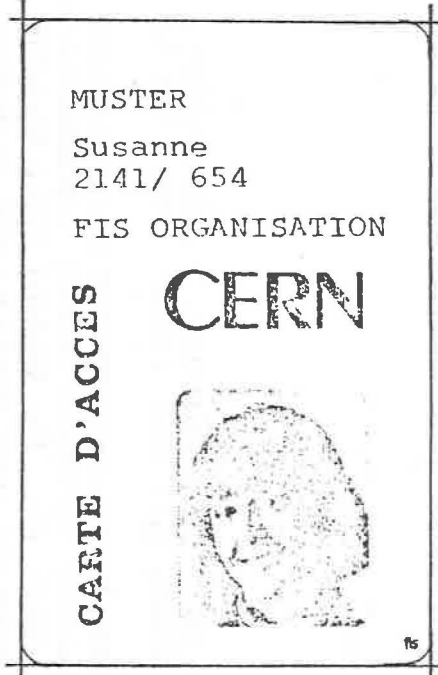
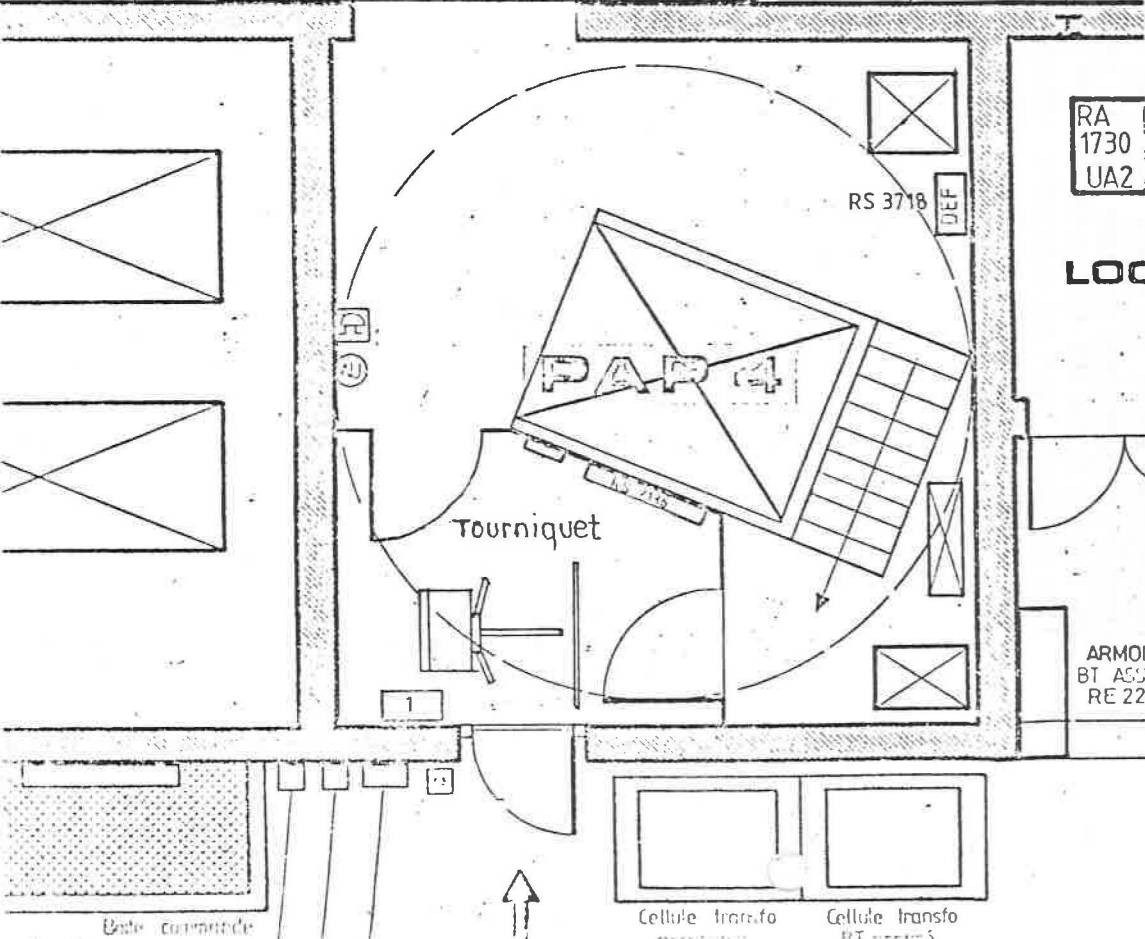
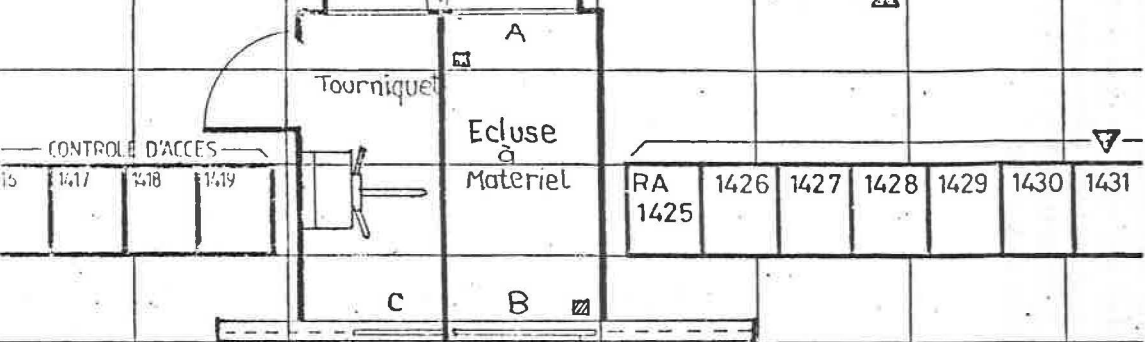
In this context it would also be desirable if a certain, minimal amount of this information could be made available to the Personnel Officers and the Divisional secretaries through CERN's computer network in order for them to be able to trace the thousands of staff and contractors who work at CERN. This possibility does not now exist. No other enterprise of our size seems to be as ignorant about who actually works for them as we are.

UA 2  
4,5 MVA  
TORE

1116 Divers BT  
1117 Divers ventilation  
1118 explosimetres  
1119

CONTROLE D'ACCES  
15 1417 1418 1419

RA 1425 1426 1427 1428 1429 1430 1431



CERN ACCESS CARD  
CARTE D'ACCES will be printed in  
BLUE for CERN staff, RED for contract staff.

PROPOSED ACCESS CONTROL  
into Pit 4  
The material passage will be controlled by  
infrared sensors to prevent passage of  
personnel.

Ref.: EP/MM/0294M-ACCU  
Date: 7 mai 1984

M E M O R A N D U M

To/A: Monsieur G. Bossen  
From/De: Michelle Mazerand - Suppléante Association du PE à l'ACCU  
Subject/: Assurance des "visiteurs" au CERN (non couverts par l'Austria)  
Concerne

---

Copy to/Copie à:  
P. Sonderegger - EP

Je vous transmets la proposition de contrat que m'a fait parvenir la Compagnie Europ Assistance à la suite d'une entrevue que j'ai eue avec un de ses directeurs au début du mois dernier.

Il me semble que leur proposition répond bien aux besoins du personnel concerné (les techniciens, ingénieurs ou physiciens etc.) et qu'il serait judicieux de soumettre copie de ce document aux membres de l'ACCU.

Si les représentants trouvent cette proposition intéressante nous pourrions envisager ensemble la manière d'établir les contrats (en assurant une permanence au bâtiment principal 1 heure par semaine par exemple?).



**europ assistance**

23-25, rue Chaptal 75441 Paris Cedex 09 Tél. 285.85.85

Monsieur le Directeur

BANQUE REGIONALE DE L'AIN  
14 rue de Genève

01630 ST GENIS POUILLY

CIAL/84/2249  
PhM/NE

PARIS, le 18 avril 1984

Monsieur,

Nous vous confirmons, ci-après, les termes de notre dernier entretien avec Madame MAZERAND, au sujet d'un éventuel contrat entre le C.E.R.N. et EUROP ASSISTANCE.

Compte tenu du type de séjours effectués par les physiciens et des prestations souhaitées, nous conseillons vivement à cet organisme, de souscrire un contrat "Carte déplacements professionnels".

Cet abonnement offre les prestations suivantes :

- . Organisation et prise en charge du transport/rapatriement médicalisé du bénéficiaire en cas de maladie ou d'accident.
- . Prise en charge des frais d'hospitalisation et des frais de transport locaux nécessités par cette hospitalisation à concurrence de 25 000 FF par bénéficiaire.
- . Organisation et prise en charge du voyage d'un collaborateur de remplacement à la suite d'un rapatriement médicalisé.
- . Organisation et prise en charge du transport/rapatriement de corps du bénéficiaire en cas de décès.
- . Organisation et prise en charge du retour anticipé du bénéficiaire dans son pays de résidence en cas de décès d'un de ses proches parents (conjoint, père, mère, enfants, frère, soeur).
- . Aide au voyage.  
Informations sur les précautions médicales, les formalités administratives, les conditions de voyage et de vie locale.  
Avance au bénéficiaire des frais de caution pénale (40 000 FF) et des honoraires d'avocat (5 000 FF) en cas de poursuites judiciaires à la suite d'un accident de la circulation.  
Transmission de messages urgents.

Son prix annuel s'élève à 500,00 FF, TTC, par personne.

Il n'est ni cessible, ni remboursable.

./...

La souscription sera optionnelle et les abonnés devront obligatoirement avoir leur domicile légal dans l'un des pays d'Europe occidentale (Allemagne Fédérale, Andorre, Autriche, Belgique, Danemark, Espagne, Finlande, France, Gibraltar, Grèce, Irlande, Italie et Iles, Liechtenstein, Luxembourg, Principauté de Monaco, Norvège, Pays-Bas, Portugal, Royaume-Uni, San-Marin, Suède, Suisse).

Notre garantie s'étend au monde entier, à l'exception de quelques pays (Afghanistan, Corée du Nord, Guyana, Kampuchéa, Laos, Mongolie, Nicaragua, Ouganda, Salvador, Vietnam).

→ [ De ce fait, les physiciens participant à des conférences, aux U.S.A. et au Canada, bénéficieront de plein droit de notre couverture.

En ce qui concerne la procédure administrative, nous pensons qu'il est préférable d'attribuer un seul numéro d'abonnement au C.E.R.N.

Chaque semaine, cet organisme nous adressera par votre intermédiaire, les listes des bénéficiaires, accompagnées du règlement correspondant en Francs français.

Espérant vous avoir donné tous les éléments nécessaires pour l'élaboration de ce contrat et restant à votre entière disposition pour tout complément d'information,

Nous vous prions de croire, Monsieur, à l'assurance de nos sentiments les meilleurs.



Philippe MERRIENNE  
Inspecteur Commercial

HIRE OF CARS FOR VISITORS GROUPS AT

C.E.R.N.

CERN's territory has become vast since the opening of the SPS North Area, and a distance of 7 km. separates the Meyrin and Prévessin sites. Representatives of institutes working at CERN have repeatedly complained to us of the difficulties of transport around the sites. CERN has therefore concluded a contract with a car-hire firm in order to facilitate their research work.

CERN will hire these vehicles for a period of three years and will be prepared to subhire them to the institutes on the following conditions :

Cost of hire

The cost of hiring a vehicle will be Sfr. 13.-- per day, covering 1000 km per month. The use of vehicles over a greater distance will be charged at a rate of 4 centimes per km. The price includes the hire of the vehicle itself, full maintenance, unlimited third party liability insurance and the all risks insurance of the vehicle less a hirer's own risk of Sfr. 500.--, which shall be at the institutes' charge.

During the period of hire, the institutes will receive invoices to be paid through their CERN accounts.

Fuel will have to be bought outside CERN but, if the institute agrees, it may be purchased from the filling stations near CERN and invoiced to the group.

Period of hire

The minimum period of hire will be one month, but longer periods are preferred.

Use of vehicles

These vehicles are intended for official purposes only and will be subject to the same rules and restrictions as CERN vehicles, i.e. they may be used only for journeys on and between the Meyrin and Prévessin sites.

Journeys outside CERN e.g. between CERN and user's home, the airport, and the Geneva railway station, may be permitted occasionally or on a permanent basis in accordance with the institutes' instructions.

Responsibilities of the institute's representative

The institute shall appoint a representative to be responsible for and in charge of the vehicle(s) during the period of hire. He shall be informed of his rights and duties and shall undertake to ensure compliance with the rules for the use of the vehicle(s).



He shall also :

- draw up the lists of persons authorised to drive these vehicles and add the names of any new users;
- liaise with the appropriate CERN service with regard to the acceptance, maintenance and use of the vehicle and the obtaining of any information needed. To this end, he shall be in a position to state at any time where the vehicle is and who is driving it. In the event of any infringement of road traffic law, the driver or the person responsible for the car shall pay the fines and, where appropriate, endure any other consequences, such as the withdrawal of the driving licence, etc.;
- inform CERN immediately of any accident, however slight the damage.

The use of the vehicles shall be subject to the applicable rules in force. The driver and/or the institute may be held liable for any improper use of the vehicle.

If you are interested in making use of this facility, please signify your agreement by returning to us the attached form No. 1 together with the copy of this letter duly signed.

N. Koulberg  
EP Divivion / CERN

Encl.: - General conditions of use;  
- Form No 1 to be completed by the institute and returned to CERN;  
(N. Grenier - EP Div.)

Signature : \_\_\_\_\_

Date : \_\_\_\_\_

General Conditions for the Use of Vehicles Placed at the Disposal  
of Visitors Groups

CERN may provide visiting groups with hired vehicles after obtaining the agreement of their institutes on the cost of hire, compliance with the general conditions of use, the authorised journeys, and the name of a representative responsible for liaison with CERN.

The users shall keep the hired vehicle and be responsible for it throughout the period of hire.

Any vehicle hired to a group by CERN shall be subject to the following rules :

- Every person required to drive a hired vehicle shall be in possession of a national driving licence and a CERN driver's card. He shall comply with the road traffic regulations both on and off the CERN site.
- The authorised number of passengers and the maximum loading of the vehicle shall not exceed those shown on the car licence.
- The driver shall be responsible for making regular checks on the vehicle. He shall ensure that the vehicle which he drives is in good condition, check the oil level and tyre pressure regularly and inform Mr Brochu (tel. 4070, 8-565 - bldg 124) immediately of any mechanical or other defects. The vehicle shall be thoroughly inspected once a month.
- The groups shall undertake to submit the vehicles to the Renault garage in good time for the periodical services. They may claim no compensation for periods during which their vehicle is off the road.
- The vehicle must not be used, even free of charge, by any third person who is not a member of the institute and whose name is not shown on the lists of users supplied to CERN.
- The vehicles may be used freely everywhere on the Meyrin and Prévessin sites and for journeys between the two sites and to and from the St Genis hostel. For any other journey outside CERN, the drivers shall obtain a personal "Ordre de Mission" (journey authorisation) issued by the EP Division administration (Messrs W. Blair and N. Koulberg) in agreement with the instruction of the institute which has hired the vehicle.
- The driver of the vehicle shall report any damage to the vehicle, even minor scratches on the paint.

In the event of an accident, the driver shall :

- a) if it occurs on the site : inform the Site Security Service (tel. 4444) to have a damage report made, even if he is not responsible for the accident;
- b) if it occurs off the site : complete an accident form, and inform the Renault garage (tel. 712535) which will, if necessary, call in its insurance inspector.

The vehicle shall be returned in good condition at the end of the period of hire. The representatives of CERN and the institute together shall inspect the car and sign an inspection form which shall include all appropriate remarks.

## HIRE OF VEHICLES TO VISITORS GROUPS

*To be completed by the institute*

The institute hereby agrees to the general conditions of use set out in the attached information sheet, and to the following points :

- 1) Name and address of the Institute : \_\_\_\_\_  
 \_\_\_\_\_  
 CERN a/c no. : \_\_\_\_\_  
 \_\_\_\_\_
- 2) Name of the representative in charge at CERN : \_\_\_\_\_
- 3) Is he authorised to undertake a commitment on behalf of the institute for a period of less than 6 months ? : YES / NO
- 4) Number of vehicles : \_\_\_\_\_ Period of hire : \_\_\_\_\_
- 5) Does the Institute agree to pay for any additional km? : YES / NO
- 6) Are fuel bills to be paid via the Institute's account? : YES / NO
- 7) Use of vehicle (normally on and between the two sites)  
*If you agree, permission may be granted for the following journeys outside CERN :*
- a) CERN - home - CERN : YES / NO  
 b) CERN - Airport - CERN : YES / NO  
 c) CERN - Geneva railway station - CERN : YES / NO
- 8) List of authorised drivers :  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 9) Any other remarks :  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 10) The Institute hereby agrees to the general conditions of use set out in the attached documents and expressly declares itself bound to CERN by the above instructions.

This agreement shall be subject to Swiss law.

Date and place : \_\_\_\_\_

Signature : \_\_\_\_\_

