



INTERNATIONAL FEDERATION FOR INFORMATION PROCESSING

Date : 30 July 1987

Address reply to :
Dr. Ronald P. Uhlig
Northern Telecom Inc.
2100 Lakeside Blvd.
Richardson, TX 75081
USA

Dear IFIP TC-6 Member,

Minutes are enclosed for the last meeting, held in Lisbon, Portugal, 22-23 May 1987, as well as the provisional agenda for the next TC-6 meeting, to be held at Victoria Falls, Zimbabwe, 11-12 September 1987. Please review your action items from the Lisbon Minutes, and agenda items assigned to you on the provisional agenda. If you will be unable to attend the meeting in Zimbabwe, please provide me with a short note or telex regarding the items for which you are responsible. I will be leaving my office 30 August for the IFIP General Assembly in Budapest, and will go directly to Zimbabwe from there. If you cannot get the information to me before 28 August, please send it to Zimbabwe, in care of Geoff Fairall.

We will plan to spend the full day on Friday 11 Sep and a half day on Saturday 12 Sep in the TC-6 meeting. You should have received information directly from the Computer Society of Zimbabwe by now. It is important that you book your flight reservations through to Victoria Falls, with a stop in Harare for AFRICOM. There should be no extra charge to get from Harare to Victoria Falls, if you book this way. Flights from Harare to Victoria Falls are very limited in number, so please book now.

If the TC Chairman does not hear anything from a member for more than three TC meetings, we must follow the IFIP policy which requires removal from the TC. If you are unable to attend the meeting in Zimbabwe, please send a note to either Geoff Fairall or myself.

I look forward to seeing you in Harare and Victoria Falls.

Sincerely yours,

Ronald P. Uhlig
Chairman, TC-6

Enclosures: Lisbon Minutes
Provisional Agenda for Zimbabwe

TC-6 MEETING - ZIMBABWE - 11-12 SEP 1987

PROVISIONAL AGENDA

<u>ITEM</u>	<u>SUBJECT</u>	<u>RESPONSIBLE</u>
1	Attendance and Membership	TC-6 Chairman
2	Final Agenda	TC-6 Chairman
3	Approval of Minutes, Lisbon	TC-6 Chairman
4	ADB and General Assembly	TC-6 Chairman
5	Data Communication Taxonomy	A. Danthine
6	TC-6 Strategic Directions	TC-6 Chairman
7	Finance	TC-6 Chairman
8	IFIP Internal Awards	TC-6 Chairman
9		
10	AFRICOM-87	H. M. de Oliveira
11	WG 6.1 Activities	C. Sunshine
12	WG 6.4 Activities	P. Ravasio
13	WG 6.5 Activities	P. Schicker
14	WG 6.6 Activities	K.Kappel/J.Westcott
15	Developing Countries Task Group	D. Basu
16		
17	LAN Management - W. Berlin - Jul 87	B. Spratt
18	CCDC '87	D. Basu
19	Info. Network Data Com. - Mar 88	V. Iversen
20	High Speed LAN - II - Mar/Apr 88, Liege	A. Danthine
21	Network Info. Proc. Sys., Sofia, May 88	K. Boyanov
22	Eurinfo '88 - Athens, May 88	G. le Moli
23	Protocol Spec., Ver.& Test VIII, Jun 88	H. Rudin
24	SEACOMM '88 - Jakarta, Oct 88	J. Luhukay
25	Message Systems - Sep/Oct 88, Irvine	P. Schicker
26	ICCC-88 - Tel Aviv, Oct 88	R. Uhlig
27	ISDN-89	B. Boutmy
28	Network Management - 2nd Quarter 89	J. Westcott
29	Data Communication - Israel - Mar 89	D. Biran
30	Protocol Spec., Ver.& Test IX, May/Jun 89	H. Rudin
31	IFIP Congress '89	R. Uhlig
32	COMNET '90, Budapest - May 90	T. Szentivanyi
33	Message Systems - Spring or Fall 90 - Spain	P. Schicker
34	IBERICOM '90 - Spain - Sep 90	J. Riera
35	ICCC '90 - New Delhi, Oct 90	D. Basu
36	Protocol Spec., Ver.& Test X, May/Jun 91	H. Rudin
37	Other TC-6 Activities - '87-'91	Each delegate
38	Future TC-6 Meetings	TC-6 Chairman
39	Six Year Plan	TC-6 Chairman
40		
41	North Holland Publications	TC-6 Chairman
42	IFIP Bulletin/IFIP Newsletter	D. Khakhar
43	TC-6 News in Computer Networks	TC-6 Chairman
44	Questions on National Activities (*)	Each delegate
45	Miscellaneous	

(*) Each national or regional representative is requested to bring a typed summary of his/her national activities. These documents will be reproduced and distributed to all attendees.

IFIP

**IFIP
TC6 Meeting**

**Lisbon
23-23 May 1987
Minutes of the meeting**

The Meeting Documents (MD), distributed at the time of the meeting are to be considered as an integral part of the minutes of the meeting

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

1. ATTENDANCE (MD 1-11)

1.1 Attendees:

1. Ron Uhlig	Chairman, USA
2. Dipak Basu	India
3. Kiril Boyanov	Bulgaria
4. Alexandre Cerveira	Portugal
5. Peter Dallas	WG 6.4A (Rep: Brian Spratt)
6. Andre Danthine	Belgium
7. H.M. de Oliveira	Zimbabwe
8. Jan Ekberg	Finland
9. Villy Baek Iversen	Denmark
10. Kim Kappel	WG 6.6
11. Dipak Khakhar	Sweden
12. Koos Koen	South Africa
13. Peter Kovacs	TC-6 Cognisant Officer
14. Gesualdo le Moli	Italy
15. Hermann W. Meier	German Democratic Republic
16. Louis Pouzin	France
17. Peter Radford	Great Britain
18. Juan Riera	Spain
19. Harry Rudin	Switzerland
20. Peter Schicker	WG 6.5
21. Stephanie Smit	No. Holland Publishing Co.
22. Otto Spaniol	Federal Republic of Germany
23. Tibor Szentivanyi	Hungary
24. Liane Tarouco	Brazil
25. David Twyver	Canada
26. Jil Westcott	WG 6.6

1.2 Regrets were received from the following TC-6 members:

J. Carlos Angio	AR	W. Jensen	N
B. Boutmy	NL	J. Luhukay	INDO
F. Konigshofer	A	J. Puzman	CS
T. Housley	AUS	W. Sobczak	PL

1.3 Dipak Basu agreed to take draft minutes of the meeting.

1.4 The members were appreciative of the efforts of the Portuguese representative, Alexandre Cerveira, in ensuring that all delegates who applied received visas.

1.5 TC-6 welcomed Juan Riera, the new Spanish representative.

1.6 A letter and questionnaire were received from the Czech delegate on the subject of the 8th International Conference on Data Transmission, DPD 87. Members filled in and returned the questionnaire.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

2. FINAL AGENDA

2.1 Final agenda of this meeting is attached as Inclosure 1.

3. MINUTES OF THE TC-6 MEETING IN EINDHOVEN

3.1 Action on the Eindhoven Minutes:

3.1.1 Item 5.3 - See Item 6.1 below in these minutes. This action item continues.

3.1.2 Item 5.3.6: TC-9 Legal and Social Applications of Computing: Peter Radford reported that TC.9 was organising a working conference on the subject in May 1988. This conference would include a slot for data communications. TC-9 is also publishing a book on the subject.
ACTION: Peter Radford to advise TC-9 of TC-6's interest in the subject.

3.1.3 Item 5.3.7: Dissemination of Information: No papers publications or statements were received from the WG Chairman.
ACTION: This action item continues.

3.1.4 Item 9.2: No TC-6 member was able to participate in the International Conference on Computers and Communications in Abija, Nigeria.

3.1.5 Item 12.1: ADB has approved the Network Information Processing System Conference in Sofia in 1988.

3.2 Minutes of the Eindhoven meeting were approved.

4. ADB AND IFIP COUNCIL (MD 17-27)

4.1 Meeting Document 17 - Report of TC-6 to IFIP Council:
Names of WG Chairman will be added to the attendance report so that their dedication to their activity can be observed. The report is distributed to all GA members as well as Affiliate Members, including ICC.

4.2 MD 22 - Report of ADB to IFIP Council:

4.2.1 Ron Uhlig highlighted the item on sponsorship and co-sponsorship for planning TC-6 meetings. It is the responsibility of sponsoring/co-sponsoring organizations to grant visas to IFIP personnel and to bona fide information processing personnel who wish to participate in any event sponsored/co-sponsored by IFIP. ADB is preparing a form stating these conditions, which must be accepted by the organizers as a condition of IFIP's participation in an event.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

4.2.2 Regarding Grants: IFIP ADB wants to establish better follow-up on the use of grants. Grants are not to be used for travel assistance. Funding for travel assistance for Developing Country activities should be requested from IFIP Developing Country Support Committee (DCSC).

4.2.3 ADB is continuing consideration of strengthening the role of affiliates (IASC, FACE, IAPR, EUROMICRO, IJCAII, VLDB and ICC). On Page 3A is a concept chart offered by IFIP President, Mr. Goldsworthy, to stimulate discussion of alternatives.

5. TC-6 PRESTANDARDS ACTIVITIES (MD 29-33)

5.1 The 1986 General Assembly accepted the "The IFIP Role in Standards" (see Eindhoven Meeting Documents). MD 29 summarizes key points from the IFIP position. Ron Uhlig was asked to coordinate "prestandards" activities across IFIP. MD 29 asked TC Chairmen to comment on areas in which they have prestandards activities. Two TC Chairmen have responded (MD 31 and 33). TC-6 agreed that IFIP is a technical (Ref. IFIP Role in Standards) body and should not be drawn into political and other similar issues which surround standards bodies. Many IFIP working groups are involved in prestandards work and work which is complementary to standards development. The intent of this agenda item was to identify specific prestandards areas in which work is ongoing in TC-6. WG 6.5 and WG 6.6 are most directly involved in prestandards work at this time.

Peter Schicker: IFIP should work closely and in parallel to standards emphasized in organizations. IFIP should do early work which may lead to standards. IFIP generates ideas which can be channelised appropriately.

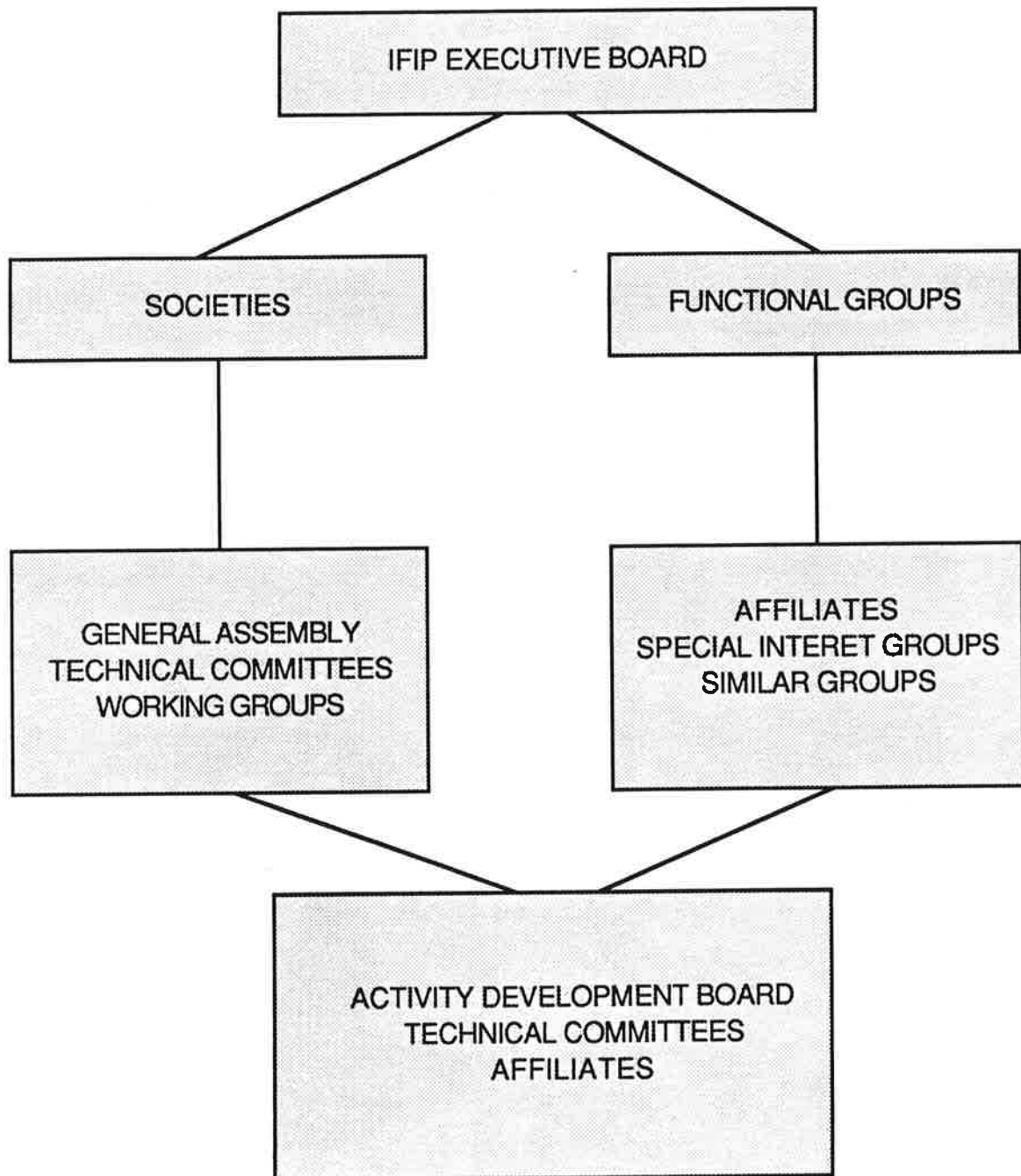
Jill Wescott: IFIP could address areas (such as in Network Management) which are not currently being worked by standards bodies.

5.2 A suggestion of the TC-5 Chairman that all TCs jointly sponsor an IFIP wide conference on prestandards work, did not evoke any interest by TC-6 members.

6. DATA COMMUNICATION TAXONOMY (MD 34-41)

6.1 See Item 5.3, Eindhoven Meeting Minutes. Andre Danthine led a discussion on this subject which led to the formation of a small group to finalise this issue and report at the next TC-6 meeting. The topics that this group should address are:

6.1.1 How much will the taxonomy represent the bias of the author?



IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

- 6.1.2 What is its length?
- 6.1.3 It should reflect all the work of TC-6.
- 6.1.4 It should include ALL data communications (e.g. digital communications).
- 6.1.5 Similar work done by the "COST" subgroup on telecommunications should be taken note of.
- 6.2 Members who volunteered to work on this group were: Twyver, Radford, Danthine, Pouzin, Spaniol. It was felt that Mr. Puzman and the Finnish representative could also contribute to the work.
ACTION: Andre Danthine to report on the work of the group at the next meeting.
7. TC.6 AIMS AND SCOPE
Harry Rudin contributed a proposed revision to Aims and Scope, based on an earlier proposal by Otto Spaniol. The proposal was discussed and approved with some modifications. The proposed revision will be submitted to the 1987 General Assembly. See Inclosure 2 for proposed revision.
8. FINANCE (MD 42-50)
A discussion on the subject is contained in Section 4 of IFIP TC-5 Brief Working Conference guide (MD 42). The TC-6 budget is rather unstructured.
ACTION: Andre Danthine to review MD 42 and provide comments relevant to TC-6.
9. BLANK AGENDA ITEM
10. IBERICOM
Alexandre Cerveira reported that IBERICOM attracted 140 delegates. 90 delegates attended the tutorial. He expected that the budget would be balanced. The next IBERICOM conference is planned for Spain in 2 or 3 years.
11. WORKING GROUP ANNUAL STATUS REPORTS (MD 51)
As a result of a request by New Zealand (MD 51), ADB asks that TC Annual Reports include a summary of major issues being addressed by Working Groups.

Pouzin: A WG Newsletter can serve as status report.

Danthine: There is no substitute for participation in a WG.
ACTION: WG Chairmen to submit a one-page summary of issues no later than the end of each June to TC Chairman.
"How to become a member of a WG" should also be included in the summary.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

12. WG 6.1 ACTIVITIES

12.1 WG 6.1 report is at Inclosure 3.

12.2 Chairman Carl Sunshine has indicated that his job responsibilities leave him too little time for WG 6.1 and that he would like to be relieved of the responsibility. A new Chairman for the working group will therefore need to be selected.

ACTION: Ron Uhlig asked members to advise him of suitable candidates if known to them and he would initiate a search.

12.3 Members felt that the scope of WG 6.1 is general and should be kept so. Its main activity is Protocol Verification. It can serve as a first-line working group in terms of identifying issues which can then go into other working groups.

13. WG 6.4 ACTIVITIES (MD 61-62)

13.1 No report was submitted for WG 6.4, however, see MD 61-62 for minutes of the WG 6.4 meeting held following the Toulouse Conference.

13.2 TC-6 Chairman and members expressed concern about the absence of WG 6.4 Chairman, Piercarlo Ravisio, from the last two TC-6 meetings, and the decline in activities of the working group. An attempt to contact Ravisio by telephone from Lisbon was unsuccessful.

13.3 Otto Spaniol stated that at the WG 6.4 Local Communication Systems Symposium (Toulouse, 26-28, November 86) there was significant interest in progressing the work of Toulouse; no progress has been made. This was attributed to lack of initiative from the Chairman.

ACTION: Ron Uhlig to try and contact Ravisio to determine whether he can become more active, else initiate the selection of a new Chairman.

14. WG 6.5 ACTIVITIES

14.1 Peter Schicker stated that two Vice-chairmen have been nominated to WG 6.5 to better streamline the work. Also, a rapporteur structure has been set up to disseminate information and keep activities going smoothly.

ACTION: Ron Uhlig to write to IFIP Secretariat advising them of the appointment of the Vice-Chairmen.

14.2 ACTION: Schicker to report on whether the Network Architecture Systems Standards work was based on an IFIP/WG activity.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

- 14.3 ACTION: Finnish representative Ekberg to investigate whether COST group on the handicapped is synchronised with WG 6.5 efforts on providing communications for the handicapped.
- 14.4 Louis Pouzin indicated that some of WG 6.5's work was impinging on that of other working groups, or is not covered by its charter. He also felt that some relevant work was not covered by its Work Items.
ACTION: Pouzin and Uhlig to work with Schicker and WG 6.5 Vice-chairmen to formulate a revised Scope and Aims. Schicker to propose changes to WG 6.5 at next TC-6 meeting.
- 14.5 ACTION: Newsletters and meeting reports should be sent to national societies by TC-6 representatives of those societies. Summary of status of standards documents should also be sent.
- 14.6 WG 6.5 conferences have been at approximately 12 month intervals in the past. This will be changed to 18 month intervals in the future.
- 14.7 TC-6 members appreciated the efforts put into Peter Schicker's report. A full copy of the WG 6.5 report is at Inclosure 4.
15. WG 6.6 ACTIVITIES (MD 63-77)
- 15.1 The members thanked Jil Westcott and Kim Kappel for starting the working group's activities and for coming to the meeting in Lisbon. A report of WG 6.6 activities is at Inclosure 5.
- 15.2 Ron Uhlig nominated Jil Westcott and Kim Kappel to become co-chairpersons of WG 6.6.
- 15.3 A charge of US \$25 for the WG 6.6 mailing list was authorized. Kim Kappel indicated the charge may not actually be instituted as yet.
ACTION: Kappel to report after 1 year on how much of the actual cost would be defrayed by a \$25 charge.
- 15.4 Members from Corporation for Open Systems (COS), IEEE, ISO, etc., have joined the working group. Also, members of WG 6.4A are attending.
- 15.5 The next meeting of the working group is July 22-24. Peter Kovacs indicated, per the by-laws, there should be no problem in having co-chairpersons instead of a single chairperson for a WG. TC-6 approved the appointment of Jil Westcott and Kim Kappel as WG 6.6 co-chairpersons.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

16. DEVELOPING COUNTRIES TASK GROUP (MD 78-91)
- 16.1 ICID has been renamed Developing Countries Support Committee (DCSC) with Luis Felipe Penedo of Portugal as Chairman.
- 16.2 Dipak Basu reported that response to his letter asking for comments on the Task Group proposed charter indicated that developmental projects would have to overcome funding and bureaucratic difficulties. Also, the wide geographic separation of developing countries renders meetings difficult. A copy of the Task Force Report is at Inclosure 6.
ACTION: Basu to hold meetings of representatives of developing countries and other interested people at AFRICOM (Sept '87) and/or CCDC (Oct '87) and report back to TC-6.
- ACTION: TC-6 members should convey to Basu any knowledge of activities in this area before AFRICOM.
17. INTERNATIONAL FUNDS TRANSFER
For TC-6 events which require advance payment, arrangements should be made for organizers to accept payment by major credit cards. This, however, should not be the only payment means. Traditional means of payment should continue to be accepted.
18. LOCAL COMMUNICATION SYSTEMS - TOULOUSE
Andre Danthine reported that 300 delegates attended this conference. North Holland Publishing Company is publishing the conference proceedings. One invited speaker did not appear.
ACTION: Danthine to report on finances of the conference.
19. HIGH SPEED LOCAL AREA NETWORKS - AACHEN (MD 92-93)
Otto Spaniol reported that 120 delegates attended this conference from more than 12 countries. 80 delegates were from FRG. North Holland Publishing Company is publishing the proceedings.
20. MESSAGE SYSTEMS - MUNICH (MD 94-98)
Peter Schicker reported that 250 delegates attended from 30 countries. There were 5 workshops and 8 parallel discussions. North Holland Publishing Company is publishing the proceedings.
21. PROTOCOL SPECIFICATION, VERIFICATION & TESTING VII - ZURICH
Harry Rudin reported a 1-day tutorial was held in addition to the regular program. There were 162 participants from 22 countries. Final papers are at North Holland Publishing Company for publication of the proceedings. 50% of contributed papers were selected.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

The proceedings are not suitable for a book since many of the papers would have to be revised. The symposium made a 10,000 SFr profit. The loan for the June 1988 symposium has been approved. This successful conference format will be repeated.

22. BLANK AGENDA ITEM
23. LAN MANAGEMENT - WEST BERLIN, JULY 1987 (MD 99-100)
 - 23.1 Ian Dallas, representing Brian Spratt, reported that 21 papers had been received so far. Acceptances were granted on abstract alone. A workshop for 60 participants would be held. The registration fee is DM 100.
 - 23.2 Kim Kappel requested WG 6.6 members be added to the conference mailing list. Andre Danthine suggested WG 6.6 be described at the opening session.
24. AFRICOM - HARARE, SEPT '87
H.M. (Chip) de Oliveira stated that response to the Call for Papers was not as good as expected. 15 papers have been selected. Expected attendance is 250 (50 from outside Zimbabwe). Registration fees of US \$700 include meals. This fee is not applicable to TC-6 members. A panel discussion with participation from TC-6 members and ARCC was suggested.
25. INFORMATION NETWORKS & DATA COMMUNICATIONS - MALMO, NOV '87
The venue and date were changed to Copenhagen, March 14-17, 1988. While the dates overlap with the 1988 Zurich Seminar on Data Communications, no loss of audience is expected as these are separate communities of interest.
26. NETWORK MANAGEMENT - USA, SECOND QUARTER 88
This conference was moved to the summer of 1988 with the Boston area as a tentative venue since a host exists there. The program committee plans to have members drawn from both voice and data communications. It was recommended that panels and tutorials be held.
ACTION: Call for Papers should be ready for distribution at the West Berlin conference (Item 23).
27. NETWORK MANAGEMENT PROCESSING SYSTEMS - SOFIA, MAY 88
Kiril Boyanov reported that 2000 Calls for Papers have been sent out and 1500 posters printed. 200-300 attendees are expected. This is the first joint program between TC-6 and TC-8. The conference has support from the Bulgarian Academy and State Committee for Sciences. A 2,500 SFr grant has been approved. Boyanov indicated that EURINFO dates have been changed to avoid a clash.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

- ACTION: Boyanov to ensure that the next Call for Papers must reflect that official language of the conference is English and that papers written in Russian must be accompanied by a translation.
28. INFORMATION TECHNOLOGY FOR ORGANISING SYSTEMS (EURINFO) -
ATHENS, MAY 1988 (MD - 111-118)
Gesualdo le Moli is the TC-6 liaison. Eurinfo has IFIP, but not TC-6 sponsorship.
ACTION: Uhlig to write to Prof. Roukens to ask him to contact le Moli.
29. MESSAGE SYSTEMS - NORTH AMERICA, SECOND QUARTER 88
Peter Schicker said that this conference will be held at the University of California at Irvine. A staff responsible for local arrangements has been established. While Nov 88 would be best, the staff is arranging for late Sept/early Oct. It was pointed out that the dates should not clash with ICC 88 in Tel Aviv, late Oct 88, and TC-6 meetings in Indonesia, early Oct 88 (see Items 31/32).
30. PROTOCOL SPECIFICATION, VERIFICATION & TESTING VIII - ATLANTIC CITY, USA, MAY 88 (MD 119)
Harry Rudin reported that the conference dates were changed to 7-10 June 1988 so as not to clash with the IEEE/ICC meeting in USA. The loan from ADB is approved and an organising committee is in place. A Call for Papers is out.
- 31/32. SEACOMM 88 - JAKARTA, OCT 88
SEARCC representative, Joseph Luhukay, was unable to attend this meeting because of a last minute conflict. However, he submitted a proposal for SEACOMM 88, a Seminar to be held in Jakarta plus a series of Seminars to be held in various SEARCC member countries. See Inclosure 7 for the complete proposal. TC-6 approved the proposal. 9 members of TC-6 volunteered to conduct tutorials either in Indonesia or in other SEARCC member countries.
- Dipak Basu stated that the Computer Society of India could sponsor local expenses for up to four TC-6 members who would conduct tutorials in India en route to Indonesia. Travel expenses for these four people would have to be met from IFIP development funds.
- ACTION: Ron Uhlig to notify Prof. Luhukay that TC-6 accepts proposal for SEACOMM 88 and to send names and forms completed by TC-6 members volunteering to conduct tutorials.
- ACTION: When writing to SEARCC for Data Communications, the tutorials in India should be mentioned for coordination purposes.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

33. ICCC-88 - TEL AVIV
The Call for Papers is late. No information was available in Lisbon. (TC Chairman Note: ICCC-88 Call for Papers has now been issued. A copy is enclosed.)
34. ISDN - NETHERLANDS, FIRST QUARTER 89
This event is to be jointly sponsored by ICCC and TC-6 and it is expected that the Dutch PTT will act as the organizer. All active European TC-6 members will be proposed as members of the Program Committee. Other PC members will be from ICCC. Each TC-6 representative should coordinate their activities with their local PTT. Bert Boutmy, Dutch member of TC-6, is responsible for working with ICCC in establishing the program committee, and representing TC-6 interests.
35. DATA COMMUNICATIONS - ISRAEL, FIRST QUARTER 89
No communication has been received from David Biran about this event.
36. INTERNATIONAL MESSAGE SYSTEMS SYMPOSIUM - EUROPE, MAY 89
Peter Schicker suggested that this meeting be moved into Spring of 1990 in keeping with his group's plan to hold meetings every 18 months. This meeting should not clash with COMNET '90 even though the two are complementary. IBERICOM '90 may also be around this time.
37. IFIP '89 CONGRESS - SAN FRANCISCO, AUG/SEPT 89 (MD 120-131)
For some major points from the extensive discussion, see MD 120-131 for an outline of program plans for IFIP '89, prepared by IFIP '89 Program Committee Chairman. The outline was discussed by TC-6.
- 37.1 Members who had attended IFIP '86 felt that the scope of the IFIP '89 program was too broad and would not attract specialists.
- 37.2 It was suggested that the IFIP Congress have a main policy program and optional technical programs for TCs and WGs.
- 37.3 TC-6 could hold a meeting in San Francisco around this time.
- 37.4 Jil Westcott suggested that WG 6.6 could hold a major Network Management conference around this time.
- 37.5 Some members felt that conference fees of TC and WG members should be reduced.
38. COMNET '90 - BUDAPEST, MAY '90
This event is planned for the first or second week of May, 1990.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

39. OTHER TC-6 ACTIVITIES - 1987 TO 1990
Members described the following events which were entered in the TC-6 Six Year Plan.
- 39.1 High Speed LANs - Liege, Belgium, March/April 88.
- 39.2 Protocol Verification & Testing - Belgium or Netherlands, May/June 89.
- 39.3 Computer Communications in Developing Countries (ICCC) - New Deli, Oct 27-30, 1987.
- 39.4 Protocol Specification, Verification and Testing - Stockholm, May/June 91.
- 39.5 IBERICOM '90 - Fall 90
- 39.6 ICCC '90 - New Delhi, Oct/Nov '90
- 39.7 Network Management - USA, Third Quarter 88
ACTION: ADB approval forms for the Messaging Systems meeting in Irvine and LAN Management meeting in Berlin must be submitted.
40. FUTURE TC-6 MEETINGS
- 40.1 Harare - September 11 & 12, 1987
The desired quorum of 10 persons should be surpassed. AFRICOM is hoping to find funding for Tarouco, Szentivanyi, Basu and Kamoun who are presenting papers. Uhlig, Pouzin, Boutmy, le Moli and Danthine require no funding. Khakhar and Schicker are conducting tutorials. Radford and Kappel may also attend.

Members should plan to fly from Harare to Victoria Falls on Sept 11 morning and return on Sept 12 evening or Sept 13.
- 40.2 Sofia - May 12 & 13, 1988
To coincide with Network Information Processing Systems (See Item 27).
- 40.3 Bali - October 9 & 10, 1988
TC-6 members who volunteered for tutorials are: Tarouco, (Protocols, LANs, Packet Switching), Khakhar (LAN, Network Connection), Riera (Messaging, Data Security), Danthine (LAN, Formal Methods).

Based on people volunteering to conduct tutorials, plus TC-6 members who could obtain other funding, it appears that enough people will be able to attend a TC-6 meeting in Indonesia.
ACTION: Ron Uhlig to write to SEARCC accepting their invitation to hold the TC-6 meeting in Bali.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

- 40.4 Israel - March '89
As no communication has been received from David Biran on either a Data Communications meeting (see Item 35) or a TC-6 meeting, The Netherlands could be an alternative venue, coinciding with the ISDN Meeting in First Quarter 89 (see Item 34).
- 40.5 San Francisco - September 89
To coincide with the IFIP Congress.
- 40.6 Budapest - May 90
To coincide with COMNET '90.
- 40.7 Spain - Fall 90
To coincide with IBERICOM '90.
41. SIX YEAR PLAN
This is included in Inclosure 8
42. 1988 ZURICH SEMINAR ON DATA COMMUNICATIONS (MD 132 - 137)
This is a very popular IEEE event being organised for the 10th time. Its official language is English. It is unavoidably close to the Copenhagen meeting (see discussion in Item 25). TC-6 has been requested to administer formal sponsorship. ACTION: Ron Uhlig to write advising the Organising Committee that TC-6 cooperation is approved. Three TC-6 members are on the Technical Program Committee.
43. IFIP INTERNAL AWARDS (MD 138-139)
- 43.1 It was the consensus of TC-6 that qualification standards for the Silver Core award should be slackened slightly in lieu of instituting the proposed IFIP Meritorious Service Award. ACTION: Ron Uhlig to write Mr. Fourot accordingly.
- 43.2 "Nobel Class" Award:
Following discussion of a letter from TC-2 Chairman, (Inclosure 9), a TC-6 committee consisting of Szentivanyi, Cerveira and le Moli was set up to investigate and propose criteria for an IFIP "Nobel Class" award. Suggested guidelines for this process are:
- Consider one or two people who could qualify and have not received such an award.
 - Criteria for the award should be clearly formulated.
 - Awards should be restricted to IFIP members.
44. NORTH HOLLAND PUBLICATIONS (MD 151-152)
Stephanie Smit presented an overview of North Holland's status, best sellers, forthcoming bibliography, etc. She stated that publication guidelines must be followed and books on conferences must be brought out fast.

IFIP/TC-6 MEETING - MAY 22 & 23, 1987
LISBON

Members felt that AFRICOM proceedings should not be published due to the regional nature of the papers. This fact, however, was not finally decided upon. IBERICOM proceedings will be published.

45. IFIP BULLETIN/NEWSLETTER
The IFIP Bulletin goes to TC/WG Chairmen and General Assembly members. Members should note that the IFIP Secretariat has moved to a new location.
ACTION: (i) Cerveira to send IBERICOM information to Khakhar.
(ii) Kappel to send Network Management information to Khakhar.
(iii) Papers from WG Chairmen on WG activities should go directly to IFIP Newsletter Editor, Mr. Rosenfeld.
(iv) Copies of Call for Papers for all activities should be sent to the IFIP Secretariat.
46. TC-6 NEWS IN "COMPUTER NETWORKS AND ISDN" JOURNAL
Selected papers from TC-6 conferences could be published in "Computer Networks and ISDN" Journal. Calls for Papers and entries for the Meeting Calendar should be sent to the Journal Editor. They will be published.
47. QUESTIONS ON NATIONAL ACTIVITIES
National Reports for Argentina, Czechoslovakia, Finland, France, Portugal, and United Kingdom are attached as Inclosures 10-15.
48. MISCELLANEOUS
- 48.1 The Korean Advanced Institute of Science & Technology is organising a Pacific Computer Communications Symposium and has requested sponsorship by IFIP/TC-6.
ACTION: Ron Uhlig to write and ask for the date of the next meeting and ask them to communicate with Trevor Housley (Australia) and/or Yukio Nakagome (Japan).
- 48.2 ACTION: WG Chairmen and conference organisers should send their address lists to Mr. Navez (see MD 142) who is building an IFIP address database.
49. COMPUTER COMMUNICATION EDUCATION FOR DEVELOPING COUNTRIES
ACTION: The Task Group for Developing Countries should investigate activities it can undertake in the education area. Dipak Basu to report at the next TC-6 meeting.

LIST OF INCLOSURES

1. Final Agenda
2. Proposed Revised TC-6 Aims and Scope
3. WG 6.1 Report
4. WG 6.5 Report
5. WG 6.6 Report
6. Developing Countries Task Force Report
7. SEACOMM '88 Proposal
8. July 1987 Six Year Plan
9. Letter from TC-2 Chairman regarding IFIP Awards
10. National Report - Argentina
11. National Report - Czechoslovakia
12. National Report - Finland
13. National Report - France
14. National Report - Portugal
15. National Report - United Kingdom

Summary of Action Items

- 3.1.1 P. Radford
- 3.1.2 WG Chairmen
- 6.2 A. Danthine
8. A. Danthine
11. WG Chairmen
- 12.2 All TC Members
- 13.2 R. Uhlig
- 14.1 R. Uhlig
- 14.2 P. Schicker
- 14.3 J. Ekberg
- 14.4 P. Schicker
- 14.5 TC Members
- 15.3 K. Kappel (May 88)
- 16.2 D. Basu, TC Members
18. A. Danthine
26. WG 6.6 Co-Chairmen
27. K. Boyanov
28. R. Uhlig
- 31/32. R. Uhlig
- 39.7 P. Schicker, B. Spratt
- 40.3 R. Uhlig
42. R. Uhlig
- 43.1 R. Uhlig
45. i) Cerveira
ii) Kappel
iii) WG Chairmen
iv) All organizers of TC-6 activities
- 48.1 R. Uhlig
- 48.2 WG Chairmen, Conference Organizers
49. Basu

IFIP

TC-6 MEETING - LISBON - 22-23 MAY 1987

FINAL AGENDA

<u>ITEM</u>	<u>SUBJECT</u>	<u>RESPONSIBLE</u>
1	Attendance and Membership	TC-6 Chairman
2	Final Agenda	TC-6 Chairman
3	Approval of Minutes, Eindhoven	TC-6 Chairman
4	ADB and IFIP Council	Uhlig/Kovacs
5	TC-6 Prestandards Activities List	R. Uhlig
6	Data Communication Taxonomy	A. Danthine
7	TC-6 Aims and Scope	TC-6 Chairman
8	Finance	TC-6 Chairman
9		
10	IBERICOM	A. Cerveira
11	Working Group Annual Status Reports	R. Uhlig
12	WG 6.1 Activities	C. Sunshine
13	WG 6.4 Activities	P. Ravasio
14	WG 6.5 Activities	P. Schicker
15	WG 6.6 Activities	K.Kappel/J.Westcott
16	Developing Countries Task Group	D. Basu
17	International Funds Transfer	A. Danthine
18	Local Communication Systems - Toulouse	J. Cabanel
19	High Speed Local Area Networks - Aachen	O. Spaniol
20	Message Systems - Munich	P. Schicker
21	Protocol Spec., Ver. & Test. - Zurich	H. Rudin
22		
23	LAN Management - July 87	B. Spratt
24	AFRICOM-87	H.M.de Oliveira
25	Information Network Data Com. - Nov 87	D. Khakhar
26	Network Management - May 87	J.Westcott/K.Kappel R. Uhlig
27	Network Information Proc. Sys. - May 88	K. Boyanov
28	Info Technology for Org. Sys. - May 88	A. LeMoli
29	Message Systems - 2nd Quarter 88	P. Schicker
30	Protocol Spec., Ver.& Test VII - Jun 88	H. Rudin
31	SEACOMM-88, Jakarta - Oct 88	J. Luhukay
32	Data Com. Tutorials - Oct. 88	D. Basu
33	ICCC-88	R. Uhlig
34	ISDN - 1st Quarter 89	B. Boutmy
35	Data Communication - Mar 89	D. Biran
36	Message Systems Symposium - May 89	P. Schicker
37	IFIP Congress 89	R. Uhlig
38	COMNET'90	T. Szentivanyi
39	Other TC-6 Activities - '87-'90	Each delegate
40	Future TC-6 Meetings	TC-6 Chairman
41	Six Year Plan	TC-6 Chairman
42	Int. Zurich Seminar on Data Com.-88	TC-6 Chairman
43	IFIP Internal Awards	TC-6 Chairman
44	North Holland Publications	TC-6 Chairman
45	IFIP Bulletin/IFIP Newsletter	D. Khakhar
46	TC-6 News in Computer Networks	TC-6 Chairman
47	Questions on National Activities (*)	Each delegate
48	Miscellaneous	
49	Education for Developing Countries	Dipak Basu

(*) Each national or regional representative is requested to bring a typed summary of his/her national activities. These documents will be reproduced and distributed to all attendees.

INCLOSURE 1.

PROPOSED REVISED SCOPE AND AIMS FOR TC-6 (DATA COMMUNICATION) - July 1987

AIMS

The Aims of the Committee are:

- 1) to promote the international exchange of information related to data communication;
- 2) to bridge gaps existing between users, telecommunication administrations, and computer and equipment manufacturers; and
- 3) to establish working contacts with international bodies concerned with data communication, such as CCITT, CEPT, ISO, ECMA, AND IEEE.

SCOPE

The Scope of its work includes all aspects of data communication such as research on and design, manufacture and operation of products, systems, concepts, and architectures related to information exchange.

Some examples of areas of specific interest are:

- Work fostering the development of standards,
- Signal processing,
- Formal protocol specification and verification techniques,
- National and international communication networks,
- Local communication networks,
- Integrated services digital networks,
- Network management
- Distributed computing and information interchange between data bases within a network of computers,
- Application of communication systems in the office, development and manufacturing areas,
- Communications tools and communication services, and the
- Promotion of existing and innovative data communication concepts both in developing countries and in developed countries.

INCLOSURE 2.

IFIP WORKING GROUP 6.1
ACTIVITY REPORT, MAY 1987
from
Carl Sunshine, Chairman

The major activities of WG 6.1 continue to be the annual workshop on protocol specification, verification, and testing, and the distribution of a newsletter with reprints of major standards organization documents. The first 1987 newsletter is late and has not been mailed yet, but we are planning one in June. This mailing will include a questionnaire as requested at the last TC6 meeting, soliciting ideas on new WG 6.1 activities.

The 1987 protocol workshop was held earlier this month in Zurich, Switzerland, hosted by Harry Rudin of IBM. He will be providing a separate report on this event.

Plans for the next protocol workshop are well underway, to be hosted in Atlantic city, New Jersey, by Krishan Sabnani of AT&T Bell Labs.

Subgroup B (satellites) has been officially disbanded at the last TC 6 meeting.

I have now been chairman of WG 6.1 for over four years, and I am finding that the responsibilities of a new job assignment leave me with less time for professional activities. Therefore, I think it appropriate to indicate my intention to resign at this time. I will work with Ron Uhlig to find and install a new chairman by the end of 1987.



Report
of
IFIP WG 6.5
"International Computer Message Systems"
to
IFIP Technical Committee 6
Lisbon, Portugal
May 1987

1. Subgroup Activities

1.1 European Systems and User Environment Subgroup

A joint meeting was held at the Hahn-Meitner Institut, Berlin, on September 22 through to 24, 1986, chaired by Hugh Smith. Items discussed included:

- * distributed office systems
- * advanced group communication
- * storage systems
- * personal message management

The report of the meeting is attached to this report.

The meeting scheduled to take place at the end of January, 1987, in Barcelona was cancelled.

A meeting is provisionally scheduled for early fall 1987. However, this meeting will no longer be held under the old subgroup structure but under the new rapporteur structure (see item 2 below).

1.2 North-American Systems and User Environment Subgroup

Work on the X.400-ARPA-Mail-Interworking being completed (and taken up by NBS for further development) the group remained essentially inactive. However, its chairman, Einar Stefferud, made preparatory investigations that lead to a new work item (see item 2 below).

1.3 other subgroups

no known activity

Incl 4

2. Full WG 6.5 Business Meeting

At the end of the Munich conference on Message Handling Systems (see item 3 below) a business meeting was held from 18:00 to 19:30. The agenda was as follows:

- * Organization of WG 6.5

- * Work Items / Work Plan

- * Extension of Mandate

- * Mailings

- * Next Conferences and full WG 6.5 Meetings

The group elected by acclamation two vice-chairmen, Horst Santo, GMD, and Einar Stefferud, NMA. The notion of sub-groups has been disbanded in favour of a rapporteur structure. For each work item a rapporteur has been nominated to steer discussion and instigate work on the topic. Each rapporteur's group is coordinated by one of the two vice-chairmen. The following work items have been defined:

Work Item	Rapporteur	Coordinator
Access Protocols and Message Store	Huitema	Santo
Group Communication	Pankoke-Babatz	Santo
Multi-Media / Multi-Mode Conferences	Santo	Santo
Directory Services	Benford	Santo
Generic User Agent	Stefferud	Stefferud
Linking People	Stefferud	Stefferud

The minutes of the meeting are attached to this report.

A coordinated European meeting is tentatively scheduled for early fall 1987; the North-American coordinator plans to work mainly through message handling facilities.

3. Working Conference 1987

The IFIP WG 6.5 Working Conference on Message Handling Systems (State of the Art and Future Directions) took place at the Technical University of Munich from April 27 to 29, 1987. It was attended by over 250 participants from over 30 countries or ~40% more than expected. The quality of the papers presented was very impressive and all authors and presenters merit the thankfulness of IFIP as their contribution led to the success of the conference.

Many thanks are also due to Dr. Rolf Speth, CEC, Brussels, and Prof. H. G. Hegering, TU, Munich. Not only did they provide us with a smooth organization before and during the conference but also the "Bayrische Brotzeit" and the traditional bavarian dinner at the Löwenbräu will be remembered by all conference participants.

During the three-day conference, the afternoon of the second day was dedicated to workshop style discussions. Topics discussed were:

- * Document Structures
- * Access Protocols
- * Directories
- * Interconnections
- * Human Factors
- * Group Communication
- * Message Store
- * Generic User Agent

Eight specialists in the respective fields agreed spontaneously to lead the discussion, report on the outcome of the discussion during the scheduled time the next morning and provide me with a handwritten short report that I will work up and include in the final proceedings. These should reach North-Holland by mid June 1987.

4. Mailings

see the minutes of the WG 6.5 business meeting

5. Six Year Plan

5.1 Working Conference 1988

The working conference will take place in southern California, most likely at the University of Irvine. E. Stefferud is currently completing the staff for the local arrangements committee. Contrary to earlier schedules, the conference is now scheduled for fall 1988 (for a discussion for the preference of the WG for an 18 months interval see the minutes of the business meeting). It was suggested that the conference be adjacent to the planned conference on "Computer Supported Cooperative Work" that many members of IFIP WG 6.5 wish to attend anyhow and that would allow the pooling of travel expenses for two important conferences.

5.2 Messaging Symposium 1989

In concordance with the 18 months interval, the symposium should be rescheduled for spring 1990. All further details are still under study.

Hombrechtikon, May 1987

Peter Schicker
Chairman WG 6.5

IFIP WG 6.5

Minutes of Meeting 22-24th September Hahn Meitner Institut, Berlin

1.0 Opening Session

The meeting began at 10.0 on Monday 22nd September. The opening session consisted of reports from delegates, presentation of papers for circulating during the meeting and agreement on the topics to be discussed. A list of delegates attending the meeting is given in Appendix A, and a list of circulated papers is given in Appendix B. The timetable adopted for the meeting was as follows:

Monday	am:	Member Reports
	pm:	Distributed Office Systems
		Advanced Group Communication
Tuesday	am:	Distributed Office Systems
		Advanced Group Communication
	pm:	Storage Systems
		Personal Message Management
Wednesday	am:	Storage Systems
		Personal Message Management
	pm:	Reports, IFIP 6.5 Administration

Before breaking into subgroups, the topic areas that IFIP WG 6.5 was currently interested in were identified along with people who would agree to act as rapporteurs between meetings. These were:

Distributed Office Systems Architecture (Manuel Medina)
Group Communication (Uta Pankoke)
Directory Services (Steve Benford)
Filing and Retrieval, Archival Services (Manuel Medina)
Document Architectures (Hugh Smith)
Personal Message Management (Michael Tschichholz)
Authentication/Security
Real Time Communication (Horst Santo)
User Interface
MHS+

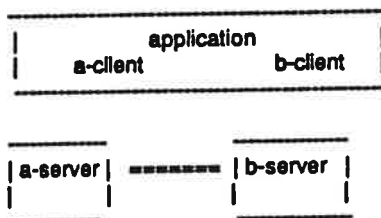
There are obviously considerable overlaps between these items but currently they are recognisably separate discussion topics.

Nb: The IFIP WG 6.5 electronic distribution list address is
IFIP WG 6.5 <ifip65@ean.cs.nott.ac.uk> OR
IFIP WG 6.5 <ifip65%cs.nott.ac.uk@cs.ucl.edu> for RFC822 mail

2.0 Distributed Office Systems: (Chairman: Horst Santo)

This group considered the status of the ISO Model of Distributed Office Services and tried to identify progress that was required. The basis of the discussion was the last version of the ECMA/ISO draft on 'Distributed Office Services'. Only the conclusions of the discussion are available here. These were:

1. Client-Server Architecture - as far as the present examples are concerned, the client-server model seems to be powerful enough to model the office applications.
2. Interworking of different applications (services) - the present framework allows one to 'put boxes together', but it offers no means to describe the semantics of
 - the applications
 - interworking of the different services
 This problem is highlighted by the very ill-defined 'third party traffic', which show only the lack of general description technique for office applications. In detail :



It is much more natural to see the relation between different services also in this client-server relationship, e.g. that that the b-server is a client of the a-server, if he needs the service to fulfill the request of his b-client.
 =====> this view is more general than third-party traffic, it forces one to have a description of the application, which is based on the different services, accessed through different clients belonging to the application.

3.0 Advanced Group Communication (Rapporteur: Uta Pankoke/Fred Sztajnkrycer)

Relations between Activities

The analysis of the examples taken from the AMIGO group introduced the idea that these examples show kinds of 'basic activities'. This means activities which might be used by quite different other activities like for instance a department or a team might use a date-planner activity.

So the question was asked whether there are different classes of activities. Examples of these classes will be:

Basic activities:

- date-planner
- bulletin board
- project documentation
- ;

Institutionalised activities:

- teams
- departments
- IFIP

The proposal is that there might be hierarchies between the activities.

At the next step we analysed relations which might occur between activities. As an example we tried to illustrate a department activity using the meeting organisation including the date-planning activity.

The Departmental activity consists of the following components:

Roles:

- Manager
- Secretary
- Member

Message objects:**Functions:****Roles:**

While the date-planning consists of the following:

Roles:

- Initiator
- Member

Message objects:

- Member request
- Date proposal
- Reminder
- ;

Functions:

- Send
- Evaluate
- ;

Rules:

- Phase initiate
- ;

(Nb: The details of the date-planner are described in the AMIGO paper.)
 At execution time these two activities will influence the reaction of its members.

If the date planning is initiated through the department activity this knowledge must be visible to the final members of the date planning activity since this decision whether they attend the meeting will depend on their relation to the initiator of the date-planning they have in the department. So this information (i.e. that it was the manager of the department who initiated the meeting) must be transparently carried through the date-planner and be visible to members of the dateplanner. Links between the two activities might be expressed for instance by:

- Membership assignment for DP (date-planner) is defined in the department (D)
- Member Request is initialised in D as required for DP
- all Parameters to initiate DP are expressed in a function of D
- Function Organise_Meeting(Chairman, Dates, Participants, Recipients)

If one tries to model Relations between activities in the AMIGO Model components these relations might be expressed in each of these components of the activity 'using' the other one.

Role Components:

- Role Relations { might be carried to
- Role assignment ~~~~the sub-activity}

Function Component:

- the initialisation or starting of the subactivity might be expressed by a function
- a function declared in the subactivity might be replaced by one defined in the calling activity.

Message Object Component:

- the initialisation or starting of the subactivity might be expressed in a special message.
- message objects to be used by the subactivity might be initiated here (in the calling activity)
- message objects to be exchanged between the two are declared here
- the sub-activity itself might occur as an object to be treated by the superior activity.

Rule Component:

- the initialisation or starting of the subactivity can be expressed by a set of rules
- the interaction with the subactivity can be expressed

- additional rules to be executed by the subactivities
- Rules how to modify/maintain the subactivity.

Some of the expressed relations might affect the behaviour and the consistency of the subactivity since they modify the declaration of the activity. It was not agreed in the meeting group that this should be allowed.

The following proposals were made:

- Modifications should only be allowed when the subactivity indicates the allowed modifications
- Modified activities will be 'new' selfstanding activities
- Basic activities are not to be modified at all
- Only authorised persons will be allowed to modify
- Only the replacing of functions is allowed, but not the modification of the rule component.

Pro arguments for modifications:

- Basic procedures should allow instantiation to be adjusted to special need.
- The need to specify alternative self standing activities will lead to a big number of variations.
- If the activities cannot be adjusted to special needs this will lead to burocratisation, forcing the user to adjust their need when the procedures allow.
- It will be difficult to find the 'right' set of basic activities.

Counter arguments:

- the consistency of activity can be violated
- the behaviour of those modified activities is not predictable.

The group did not yet decide or conclude how these relations between activities can be expressed. So it is still an open question whether this is done in any of those components as suggested above or whether there is a separate components whose relations between activities can be expressed.

Also the view from the subactivity to the calling activity has not been touched.

An Example for illustrating the first elements of a relations model between activities

An office application model has been introduced previously which describes it as a set of activities. Such activities are interrelated and their description, added to the descriptions of their relations, describe the global office environment.

At the moment, two levels of modelization are under consideration.

- a model for the activity concept
 - a model for the relations between activities
- The two models are not independent and are in fact two aspects of the same one.

As the second one is (may be) the more complex, and as the work is at the starting point for this second aspect it is worth developing some examples to find out whether there some obvious mechanisms for relating activities, and what they are.

The goal is not to exhaustively develop one example, but rather to put in a sufficient number of problems, just to be in the situation of discovering a sufficient number of solutions to describe relations.

- Regarding this in mind, the following example was given:
- An ORGANISATION, DEPARTMENT
 - A MEETING, PLANNER
 - A DATE, PLANNER

REMARK: These activities are defined according to the idea that the office environment is a very complex activity. To describe it, it is worth dividing it into subactivities, which in turn are divided ... This allows to define a hierarchy of activities. In this hierarchy, the lower you go, the more generic activities you define. The higher you go, the more office semantics you introduce to the activity description.

Here, a DATE_PLANNER finds a common date between different entities. It can be used for reserving time for a product presentation, for a meeting, for a fire alarm simulation, etc. A MEETING_PLANNER is organising a meeting. One of its tasks is to find a common date, using the DATE_PLANNER.

A meeting can be organised into different activities, that is:

- in a standardisation organisation
- in an organisation department
- in a company board
- etc.

In one example, the manager of the marketing department wants to organise a meeting with all the department members. We suppose that the organiser is the meeting chairman.

The basic model of an activity is proposed as:

- a set of actors which have roles
- a set of functions
- a set of types of messages
- a set of rules
- a co-ordinating entity, which knows the rules

The rules describe how functions may be used by the roles and the co-ordinating entity. Messages are exchanged between one actor and the co-ordinating entity. This

formalism does not preclude any implementation solution (message passing versus procedure calls, etc.)

The roles are meaningful only in the environment of the activity where they are defined.

For instance:

- Activity = ORGANISATION_DEPARTMENT
- Role = DEPARTMENT_MANAGER

- Activity = MEETING_PLANNER
- Role = MEETING_CHAIRMAN

The DEPARTMENT_MANAGER concept is meaningless in the MEETING_PLANNER activity. It is meaningful for a person in a meeting, because a person plays different roles in different activities at the same time.

REMARK: The person concept may be used to relate roles in specific instances.

Actions in the example and activities models =

activity = ORGANISATION_DEPARTMENT (OD)
 roles = OD_SECRETARY
 OD_MANAGER
 OD_MEMBER
 functions which may be called = ACTIVITY_PLANNER, ...

activity = MEETING_PLANNER (MP)
 roles = MP_MEETING_CHAIRMAN
 MP_MEETING_SECRETARY
 MP_MEETING_PARTICIPANTS
 functions which may be called = DATE_PLANNER, ...

activity = DATE_PLANNER (DP)
 roles = DP_INITIATOR
 DP_MEMBERS
 functions which may be called = ...

REMARK: The prefix is used to label the context in which the concept is meaningful (Prefixes used here = OD, MP, DP)

[See Diagram 1]

The generated messages could be =

From the MP_CHAIRMAN to the MP coordinator and then to the MP_PARTICIPANTS =

```

ORGANISE_MEETING_REQUEST
( MP_MEETING_CHAIRMAN = PERSON_ID,
  MP_PARTICIPANTS      = { PERSON_IDi },
  MP_POSSIBLE_DATES    = { DATEi },

  MP_INHERITED_CONTEXT =
  [ ENVIRONMENT_TYPE = OD,
    PERSON_ID1       = OD_MANAGER ]
)

```

From the DP_INITIATOR to the DP_COORDINATOR and then to the DP_MEMBERS =

```

DATE_PLANNER_REQUEST
( DP_INITIATOR      = PERSON_ID1,
  DP_MEMBERS        = { PERSON_IDi },
  DP_POSSIBLE_DATES = { DATEi },

  DP_INHERITED_CONTEXT =
  [ ENVIRONMENT_TYPE = MP,
    PERSON_ID1      = MP_CHAIRMAN,

    MP_INHERITED_CONTEXT =
    [ ENVIRONMENT_TYPE = OD,
      PERSON_ID1      = OD_MANAGER ] ]
)

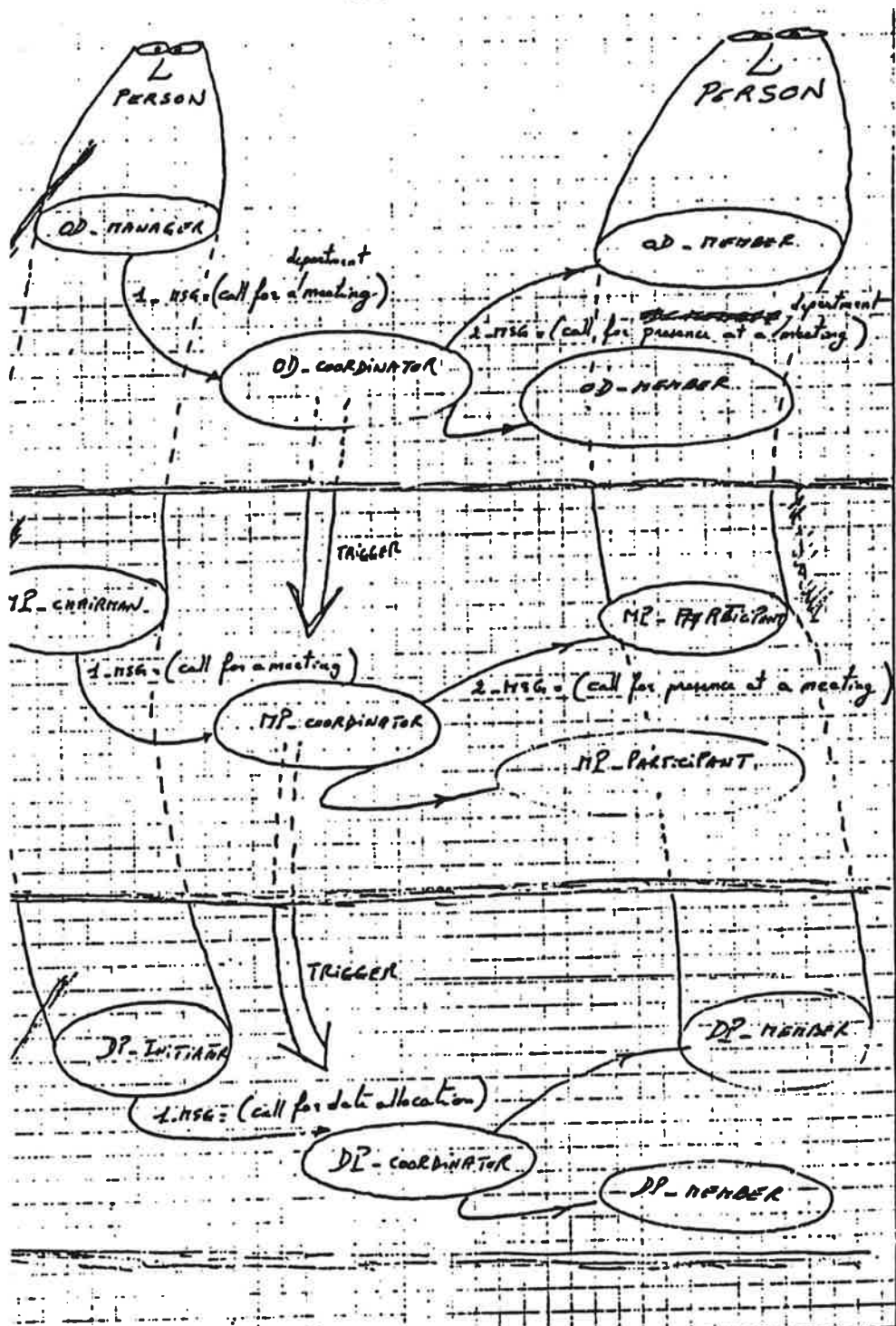
DP_MEMBER_ACTIONS =
• RECEIVE DP_REQUEST
• TAKE DECISION (comment = elaboration of answer)
• ANSWER

TAKE DECISION = (comment = generic definition)
• CASE NEEDED:
  • Yes: CALL_HIGHER_LEVEL_CONTEXT_ACTOR (
    CONTEXT      = ENVIRONMENT_TYPE,
    CONTEXT_PARAMS = {
      INHERITED_FIRST_HIGHER_LEVEL_PARAMS } )

  • No: TAKE_DECISION_USING_CURRENT_ACTIVITY_LEVEL_RULES
    ( comment = that is, these attached to the semantics of the
      roles of the current activity )
    is triggering, in this case, MP_MEMBER_ACTIONS.
    is decapsulating the first level of inheritance information.

MP_MEMBER_ACTIONS
• RECEIVE MP_REQUEST
• TAKE DECISION (comment = see generic definition)
• ANSWER

```



4.0 Personal Message Management (Rapporteur: Uta Pankoke)

Definition / Requirements

Definition: How MHS facilities interact with other systems and services within the user environment

Local User Agent Services For Communication Support

- Design of UA
- Referable Documents - Retrieval / Archiving
- Financial Systems
- Authentication / Notarisation
- Filter Services
- Message Classification
- Cooperative Facilities
- Relating communication / information from several sources
- Status / Coordination

IPM-UA

IPMessageId:

- S: generate globally unique ID
R/S: find body part with the same Id

In Reply To:

- S: reply/function to generate link referring on IPM-ID using a reference schema
R: retrieval must fetch referred message, messages must be stored at receivers and senders

Obsoletes:

- S: use same referencing schema as 'reply to'
R: might hide the obsolete messages (old versions should not be deleted except on explicit request by recipient)
retrieval must fetch referred message
when presenting the obsoleted message 'obsolete' must be displayed

Cross reference:

- S:
R: as in Reply To

Expiry Date:

- S:
R: on display if the date is expired this has to be indicated

Reply By:

- S:
 R: UA should set reminders before indicated date
 UA should not force the reply

Reply To:

- S:
 R: UA reply function should put indicated addresses
 into the primary recipients of the reply-messages

Importance:

- S:
 R: for incoming mail those with low importance will be
 scheduled last, high importance first

Sensitivity:

- S:
 R: When listing messages sensitivity should be indicated;
 'private' must be indicated.
 The autoforward function must be required to refer explicitly
 to the sensitivity class. e.g. procedure for personal, private and
 company confidential message must be specified explicitly.
 Company confidential: If a user wants to send that to
 a destination outside the PRMD of the company the
 test must warn him/her before sending.

Functional Requirements

- TIMER of Counting Function to generate locally unique IPM
- TIMER to be used to support 'expiry date' and 'reply by' through a
DATE CONTROLLER
- ARCHIVING function for message management supporting the
referencing scheme.
- Message MANAGEMENT function handling
References, expiry dates, reply by, importance class, sensitivity,
multibody part messages, message states (unread, new, old)
- Handling (e.g. conversion or indication 'unknown content type')
of content types required
- Handling of confirmation (receiving, generating)
- DISPLAY functions for IPmessages, IP/Heading, IP-Message id,
message status (read, unread, confirmed), envelopes
- SELECTION of messages on IPM-heading fields, status, bodyparts

Conceptual Requirements**References**

- Reply function applies referencing scheme
- References are created by creating new messages referring in its
heading to old messages.

- change of sent message requires new IPM-ID
- UA archiving should establish references in both directions
 - e.g. backwards as in the message handling
 - ~~~forward by additional information useable to fetch a message
- globally unique IPM-ID including OR names
- forwarding of message should be done by encapsulation
- Referencing schema which allows referencing of encapsulated and multibody part messages

Profiles

- the specific UA reactions can be individually adjusted through profiles regarding the above requirements for treating P2-heading

Multibody part messages

- Each body part should be handled separately
- Handling of complete message

Receipt notification

- should be generated only after the recipient has had a chance not to look at the messages and be able to suppress its generation.

Requirements on IP-Message Retrieval

Function to *specify* which set of messages is to be retrieved

Function to *navigate* through a retrieved set of messages

Function to *list* specified fields of a set of messages

Function to *display* each message of a set of messages

Integration of *list* and *display* to browse through the set of messages

With Retrieval one can create and process temporal worksets of messages

Selection Criteria Comprise:

- each IPM-Heading field
- local filing attributes
- referencing schemes
- correspondence (specify partner occurring as: recipients or senders/originator)
- partner by name
- partners by organization
- partners or by not from organisation

- partners are distribution lists
- partners are storages
- body type
- full text retrieval

Partner: O/R name occurring in

- Primary Recipient
- Copy Recipient
- blind copy recipient
- sender
- originator

Selection criteria might contain:

- wild card
- alternate values

specification of limits (size of the set) operate on already selected set of messages

Combination of criteria:

- and
- or
- exclusive or
- not
- Priority Rules (brackets)
- Refinement of selected set

Retrieval should separate on *all* objects administered at the MUA such as

- on messages
- text
- documents
- etc.

Other local UA functions might operate on the selected set of messages

Mail User Agent

- local individual 'addressbook'
- globally unique identifiers of messages (local display of those)
- global and local referencing schemes
- selection of messages on IPMessage heading
- full text retrieval
- filtering of messages
 - to folder
 - to reject them
 - to other processes
 - to other recipient
 - to the trash

- Cancellation of sent but not delivered messages --> MHSservice requirement, Authentication Services required
- Mixed display of lists and contents for retrieved purposes
- Handling of notification
 - generation of notification suppress notification
 - handling of incoming notifications
- Differentiation of
 - new messages
 - unread messages
 - old messages
- Handling Reply request
- Ask for an action to be executed on receipt of a particular message
- Tickler, automatic resend on time out, number of timers to send out the message
- automatic send out of message at a particular date
- timetabling for actions to be executed on a message
- Integration of reset-, messages-, document handling
- time tabling
 - sending of messages
 - sending to oneself
 - filing or dropping of a message
 - printing

Office User Agent

Integration of other Services

Service	Group Use	Single Use
IPM-Service	N	N
Directory		N
Printing Service		N
Filing/Retrieval	N	N
Time Service		N
Authentication		
Group Communication	N	N
Storage Service	N	N
Text Processing System	S	N
(Operating System) Escape USA	-	N
Document Production system	S	N
Multimedia document handling	N	N
Local games, tutorials		N

- S should be usable
 N normal use - needs to be integrated in communication environment
 - not used

Name	Address/Phone	Mailbox-address
Uta Pankoke-Babatz	GMD P.O. 1240 D-5205 St. Augustin 1 +49 2241 14 2707	EAN: pankoke@si.gmd.dfn
Paul Andre Pays	EMSE 158, Cours Fauriel F-42023 Saint-Etienne Cedex 2 +	UUCP: mcvoxlinria@semsmcipays
Wolfgang Prinz	GMD P.O. 1240 D-5205 St. Augustin 1 +49 2241 14 2730	EAN: prinz@xps.gmd.dfn
Horst Santo	GMD P.O. 1240 D-5205 St. Augustin 1 +49 2241 14 2713	EAN: santo@xps.gmd.dfn
Pietro Schicker	Zellweger Telecommunications AG CH-8634 Hombrechtikon +41 55 416 377	EAN: schicker@ean.cs.nott.ac.uk
Hugh Smith	Nottingham University University Park GB-Nottingham NG7 2RD +44 602 506 101	EAN: hugh@ean.cs.nott.ac.uk
Fred Sztajnkrzyer	Lore Informatique 43 Boulevard Malesherbes F-75008 Paris +33 1 4742 6215	
Michael Tschichholz	Hahn-Meitner Institut Glienicke Str. 100 D-1000 Berlin 39 +49 30 8009 2570	EAN: tschichholz@vax.hmi.dfn
Karl-Heinz Weiß	Hahn-Meitner Institut Glienicke Str. 100 D-1000 Berlin 39 +49 30 8009 2598	EAN: weiss@vax.hmi.dfn
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Appendix A

IFIP 6.5 Meeting at HMI-Berlin,
22 - 24 September 1986

Attendance List

Name	Address/Phone	Mailbox-address
Astrid Beck	Hahn-Meitner Institut Glienicke Str. 100 D-1000 Berlin 39 +49 30 8009 2523	EAN: beck@vax.hmi.dfn
Steve Benford	GMD P.O. 1240 D-5205 St. Augustin 1 +49 2241 14 2715	EAN: benford@xps.gmd.dfn from 28th September 1986: adb@ean.cs.nott.ac.uk
Berthold Butscher	Hahn-Meitner Institut Glienicke Str. 100 D-1000 Berlin 39 +49 30 8009 2568	EAN: butscher@vax.hmi.dfn
Thore Danielsen	Univ. of Tromsø P.O. 953 N-9001 Tromsø +47 83 81688	EAN: dtd@hugin.uit.uninett until 7th November 1986: thore@xps.gmd.dfn
Jaime Delgado	E.T.S.I.T. Univ. Politecnica de Catalunya Jorge Girona Salgado, s/n E-08034 Barcelona +34 3 204 65 51	EAN: delgado@vax.hmi.dfn
Thomas Magedans	Hahn-Meitner Institut Glienicke Str. 100 D-1000 Berlin 39 +49 30 8009 2570	EAN: magedans@vax.hmi.dfn
Manuel Medina	E.T.S.I.T. Univ. Politecnica de Catalunya Jorge Girona Salgado, s/n E-08034 Barcelona +34 3 204 65 51 75 51	EAN: medina@vax.hmi.dfn
Julian Onions	Nottingham University University Park GB-Nottingham NG7 2RD +44 602 506 101	EAN: jpo@ean.cs.nott.ac.uk

Appendix B**List of Papers presented at meeting:**

J.P. Onions, S. Kille, D. Kingston, "PolyPost - An adaptable MTA. University of Nottingham, Communication Group Internal Report

DASE, ICL ECMA contribution

S.D. Benford, J.P. Onions, "Pilot Distribution Lists - Agents and Directories", University of Nottingham, Computer Science Communication Group Report. (September, 1986.)

Kille, Document Stores, INDRA Note
Kille Document Architecture INDRA Note

Pankoke, AMIGO, Advanced Group Communication Report

ISO MHS - Remarks on existing Drafts, Extensions

S. D. Benford, "A bibliography on directory services" University of Nottingham, Computer Science Communication Group Report.

SC18 "Distributed Office Systems

ECMA DOS August 1986 /90

ECMA SG32 P7 Version 5 August 86/87

MIT Thesis Interactive On-Line Conference

ECMA, Rank Xerox "Filing and Retrieval in DOS"

ECMA Security Draft



Minutes of the IFIP WG 6.5 Business Meeting

Munich, 1987-04-29, 18:00

0. Agenda

1. Organization of WG 6.5
2. Work Items / Work Plan
3. Extension of Mandate
4. Mailings
5. Next full WG 6.5 Meetings

1. Organization of WG 6.5

The chairman discussed the current structure of WG 6.5 with its nine subgroups. He proposed that the notion of subgroups be disbanded as:

- groups are no longer pure European or North-American; the existence of the worldwide academic MHS facilitates communication and face-to-face meetings become more and more seldom.
- several of the subgroups are inactive since a long time and there are no indications that activities will resume.
- the distinction between user and system environment subgroups has long disappeared; in reality, work has progressed in either group who happened to have a chairperson pulling people together and being responsible that the group achieved results.

The chairman proposed that the group should nominate two vice-chairpersons, one North-American and one European. In addition, he proposed a rapporteur structure where for each work item a rapporteur is assigned whose responsibility is to disseminate information to members active on his/her work item, prepare an agenda and discussion items prior to any WG 6.5 meeting, and assume responsibility that a report of the meeting is produced timely.

The group endorsed this new structure of WG 6.5 and the following two members were appointed vice-chairmen:

Einar Stefferud
Network Management
Associates, Inc.

17301 Drey Lane
Huntington Beach, CA 92647
USA

stef@gremlin.nrtc.northrop.com
santo@xps.gmd.dbp.de

Horst Santo
Gesellschaft für Mathematik
und Datenverarbeitung
Schloss Birlinghofen
Postfach 1240
D-5205 St. Augustin
Fed. Rep. of Germany

2. Work Items / Work Plan

Resulting from the workshop discussions, the following work items were agreed:

2.1 Access Protocols and Message Store

- * Storing and archiving of messages for use by distributed UAs, cooperating UAs, and as a tool for value added services
- * Synchronize work with respective AMIGO work
- * Study of access protocols and evolution of the protocols P3 and P7

Rapporteur: Christian Huitema
Coordinator: Horst Santo

2.2 Group Communication

- * establish expertise how existing (standardized) tools can be applied to group communication or how they should/can be extended to serve the required needs.
- * study human factors in electronic communication
- * follow the literature (state of the art)
- * follow respective AMIGO and COSMOS work

Rapporteur: Uta Pankoke-Babatz
Coordinator: Horst Santo

2.3 Multi-Media / Multi-Mode Conferences

- * develop new models for multi-media documents suited for real-time conferences (include temporal structure)
- * develop a model for real-time conference communication as perceived by the conference participant
- * develop a model for computer assisted conferences that especially includes the transition from non-real-time to real-time modes (Multi-mode)

Rapporteur: Horst Santo
Coordinator: Horst Santo

2.4 Directory Services

- * Liaise with European and North-American implementors of directory systems to determine current directions
- * track the standards development and comment where useful
- * Liaise with other IFIP WGs and WG 6.5 rapporteurs groups to determine the requirements which will be used to produce contributions to the 1992 X.ds standards.

Rapporteur: Steve Benford
Coordinator: Horst Santo

2.5 Generic User Agent

- * develop a model generic User Agent that unifies from a user perspective all user agents such as BBUA (bulletin board), GUA (group), DUA (directory); MUA (our old unqualified UA), and others to come
- * study the human factor's requirements for utilizing all User Agents and produce a set of guidelines for appropriate man-machine interfaces

Rapporteur: Einar Stefferud
Coordinator: Einar Stefferud

2.6 Linking People

Most members of IFIP WG 6.5 have access to and are regularly using a message handling system. However, not all networks are interconnected. This rapporteur's group will, therefore,

- * study the feasibility to establish an IFIP gateway linking all the different networks in one location
- * investigate for a possible location of such a gateway taking into consideration the various national telecommunication regulations

Rapporteur: Einar Stefferud
Coordinator: Einar Stefferud

3. Extension of the Mandate of WG 6.5

Due to the advanced time, no time remained for a detailed discussion of a new mandate for the group. However, there was unanimous agreement that the original mandate, i.e., the study of international message handling systems, is to a large part complete and that the remaining work is progressing in the standards organizations.

The group gave to the chairman and the two vice-chairmen the commission to draft a new mandate for WG 6.5. The new mandate should encompass:

- * communication among different sovereign management domains, i.e., personal systems
- * support for cooperative work or cooperating workstations
- * cooperating autonomous users
- * study services that complement the current MHS service

4. Mailings

The chairman reported that he did not send out a newsletter and an associated set of papers, he indicated that he is actually at loss and does not know how to proceed. He sent out during about one year at one month intervals to the active European members all newest versions of the recommendations that reached his office, however, he then found out that these papers were already available at the various institutions (no research papers or drafts thereof were available for mailing). The stack of new standards relevant to the work of IFIP WG 6.5 has now reached a height of .5 meters (~20 inches) and copying and mailing this pile to the people on the address list certainly surpasses what could be expected from a contribution of Sfr. 60.00.

The meeting agreed that while this service was possible some years ago it now has reached a volume no longer feasible for IFIP distribution. It was suggested that the mailing include only the cover sheet of the new documents and a reference about where they could be requested. It was also brought to the attention of the meeting that there exist commercial organizations where one can subscribe to an updating service for new standards documents. IFIP WG 6.5 will not compete with such a service.

The meeting agreed that the chairman will await the outcome of the CCITT SG VII meeting in June in Geneva and a meeting on directory services in Tokyo roughly at the same time before sending out his newsletter. The newsletter will thereafter be mailed at about 6 months intervals.

5. Next full IFIP WG 6.5 meeting

The chairman reported the intent of TC 6 to hold conferences on Message Handling in 12 months intervals. The ensuing discussion revealed that for the majority of the group this interval is too short. Papers just having been finalized and presented at the conference, the paper for the next conference should already be available in draft form to meet the proposed deadline for the call for papers.

The meeting agreed to aim at an 18 months interval for the WG 6.5 conferences and chartered the chairman to represent this view to TC 6. The next working conference is, therefore, scheduled to take place in fall 1988 in southern California. The third symposium on Message Handling would then take place in spring 1990; the location not being ascertained currently, the symposium should be held in central Europe.

The full WG meetings will be held within the framework of the WG 6.5 conferences.

The meeting closed at 19:30



How to become a member of IFIP WG 6.5

IFIP WG 6.5 is currently working on the following topics:

1. Access Protocols and Message Store
 - * Storing and archiving of messages for use by distributed UAs, cooperating UAs, and as a tool for value added services
 - * Synchronize work with respective AMIGO work
 - * Study of access protocols and evolution of the protocols P3 and P7

Rapporteur: Christian Huitema
Coordinator: Horst Santo
2. Group Communication
 - * establish expertise how existing (standardized) tools can be applied to group communication or how they should/can be extended to serve the required needs.
 - * study human factors in electronic communication
 - * follow the literature (state of the art)
 - * follow respective AMIGO and COSMOS work

Rapporteur: Uta Pankoke-Babatz
Coordinator: Horst Santo
3. Multi-Media / Multi-Mode Conferences
 - * develop new models for multi-media documents suited for real-time conferences (include temporal structure)
 - * develop a model for real-time conference communication as perceived by the conference participant
 - * develop a model for computer assisted conferences that especially includes the transition from non-real-time to real-time modes (Multi-mode)

Rapporteur: Horst Santo
Coordinator: Horst Santo
4. Directory Services
 - * liaise with European and North-American implementors of directory systems to determine current directions
 - * track the standards development and comment where useful
 - * liaise with other IFIP WGs and WG 6.5 rapporteurs groups to determine the requirements which will be used to produce contributions to the 1992 X.ds standards.

Rapporteur: Steve Benford
Coordinator: Horst Santo
5. Generic User Agent
 - * develop a model generic User Agent that unifies from a user perspective all user agents such as BBUA (bulletin board), GUA (group), DUA (directory); MUA (our old unqualified UA), and others to come
 - * study the human factor's requirements for utilizing all User Agents and produce a set of guidelines for appropriate man-machine interfaces

Rapporteur: Einar Stefferud
Coordinator: Einar Stefferud
6. Linking People

Most members of IFIP WG 6.5 have access to and are regularly using a message handling system. However, not all networks are interconnected. This rapporteur's group will, therefore,

 - * study the feasibility to establish an IFIP gateway linking all the different networks in one location
 - * investigate for a possible location of such a gateway taking into consideration the various national tele-communication regulations

Rapporteur: Einar Stefferud
Coordinator: Einar Stefferud

(turn page)

If you plan to become an active member of IFIP WG 6.5 on any or several of the work items, contact the respective rapporteur, the respective coordinator, or the WG 6.5 chairman either by traditional mail or through electronic mail.

Chairman WG 6.5

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Vice-chairmen and coordinators

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May 1987

Peter Schicker
Chairman WG 6.5

ACTIVITY REPORT FOR WG 6.6
SUBMITTED BY KIM KAPPEL AND JIL WESTCOTT

MAY 20, 1987

WG 6.6 held its founding meeting in December 1986 at BBN Labs in Cambridge, MA, USA. Prior to that meeting, a workshop was held in July 1986 in Plano, TX, USA to provide a forum for discussion of the issues and to assess interest in forming the working group.

The July and December meetings were attended by approximately 30 people each. There has been a very good mix of international, voice, data, industry, government and university representatives. There are only 4 who were able to attend both meetings, but the strong interest and enthusiasm for this working group is very evident. A mailing list of approximately 120 names has been maintained; however, this includes all TC-6 members, and is in the process of being pared down to a manageable size. As of May, there have been 45 responses requesting to remain on the mailing list.

This WG has formed informal, at this time, liasons with representatives from COS, MAP/TOP, IEEE and ISO groups working in the same area of network management. There are members of WG 6.6 who are also very active with the other mentioned groups. This has given WG 6.6 a clearer sense of direction and goals in that we have some very definite plans in place in order to complement the work being done elsewhere, particularly the ISO work on OSI Management. The work plan for the group is detailed in the minutes of the December 1986 meeting which should have been distributed to all TC-6 members. It includes the following:

- Dissemination of information about network management efforts
- Analysis of user requirements and data required for OSI Management (This was specifically requested by our ISO liasons.)
- Investigation of human interface issues
- 1988 symposium on Network Management

The next meeting of the WG was to be May 27-29 in Atlanta, GA. Due to conflicts with meetings of some national organizations, in particular ANSI, the meeting has been rescheduled for July 22-24, 1987. The meeting announcement was mailed on May 15, 1987 to all interested parties. It is planned to have two major reports presented at this meeting. One is an analysis of user requirements compiled from materials supplied by the group. The other is a report from our liason representatives on work being done by the other groups. The plans for the symposium will also be discussed and the program and organizing chairs for this event should be present.

Incl 5

REPORT OF THE TASK FORCE ON REQUIREMENTS OF DEVELOPING COUNTRIES

The task force was formed at the Eindhoven meeting in September 1986, with the objective of identifying ways in which TC-6 could contribute to data communications in developing countries.

The task force Chairman addressed a letter on 13/11/86 to 18 people who had indicated interest in the subject from developing and developed countries. Views were sought in the letter on the following Charters for a full-fledged Working Group (WG.7) on developing countries:

- (a) Pursue specific development project(s), including feasibility-study, design and implementation and/or
- (b) Identify problems and provide solutions to datacomm needs of developing countries.

Responses from this letter were received from: R. Narasimhan (Chairman, IFIP Committee on Informatics for Development), F. Kamoun (Tunisia), R. Uhlig (Chairman TC-6), A. Danthine (Belgium). In addition, a query on the subject was received from L.F. Penedo (Portugal).

The responses can be summarised as follows:

- both Charters are suitable for WG.7
- proposal (a) would require overcoming funding and bureaucratic difficulties
- the low-orbit satellite network can be tied to a project like AFRIMAIL and to data base retrieval services for researchers in developing countries
- publicise a Newsletter of activities of the Working Group

After review of the responses, it appears that there are certainly enough concrete and worthwhile activities that can justify the formation of a full-fledged Working Group. However significant difficulties exist and have to be overcome before it can do meaningful work. Some of these are:

- Working Group members will be spread out across the globe, have poor communication facilities and limited travel resources
- Computer communications is controlled by PTTs, while IFIP members are usually from Computer Societies. Thus recommendations of the Working Group may not be accepted and implemented
- A Secretariat and full time Technical Staff from member countries will have to be set up for proposal (a), thus requiring a budget with significant funds.

It is therefore proposed that a meeting of task force members be held either at Harare (TC-6 meeting in September) or New Delhi (CCDC 87 in October) at which commitments regarding participation be solicited and a budget prepared. If both items are positive, a proposal can be made to TC-6 for the funding if proposal (a) is adopted. Thereafter a decision can be taken to officially form TC-6/WG.7.

Dipak Basu
Task Force Chairman
May 19, 1987
Lisbon

SEACOMM 88

Scope

SEACOMM 88 is a series of activities proposed to be conducted in the geographic area covered by the South-East Asia Regional Computer Confederation (SEARCC), namely Hong Kong, India, Indonesia, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka and Thailand. In-country activities will be co-sponsored by SEARCC, IFIP TC-6 and the individual country's computer society.

Activities

Activities will consist of IFIP TC-6 sponsored, SEARCC organized, series of lectures and seminars on data communications and computer networking. Central will be two main activities proposed to be held in Indonesia, namely:

1. The SEACOMM 88 SEMINAR, Jakarta, October 5-6, 1988
2. An IFIP TC-6 MEETING, Bali, October 7-8, 1988

Also proposed will be Data Communication Seminars and Lectures presented by TC-6 experts in SEARCC member countries. These can be given by the TC-6 members *en route* to or returning from Bali. SEARCC member societies have shown interest in co-sponsoring such activities.

Topics of Interest

Desired major subjects to be covered in SEACOMM 88 include:

- ISDN
- Message Handling Systems
- Protocols
- Network Management Issues
- Value Added Networks
- Multi-Media Networks

Issues Awaiting Follow-Up Action

IPKIN, the Indonesian Computer Society has earmarked US\$ 5000 to support the Jakarta and Bali activities. This will be in the form of air-tickets and local hospitality for TC-6 members speaking in the Jakarta seminar. IPKIN/SEARCC is still waiting for the necessary steps to be initiated (i.e. ADB approval forms, etc) to generate the ADB approval for a grant of SFr 8000 to support the activities.

Moreover, responses from TC-6 members are solicited to serve as:

- a. SEACOMM 88 Program Committee member
- b. Speaker at the SEACOMM 88 Seminar in Jakarta
- c. Speaker in SEACOMM 88 activities in other SEARCC countries (Hong Kong, India, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka and/or Thailand)^{*)}

*) Pending approval from the SEARCC member society in the individual country

Contact Person & Address

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PO Box 3442 Jakarta 10002
INDONESIA

Phones: (+62-21) 330303, 335766, 3106014

Telex : 45680 UI JKT

E-Mail: mcvax!seismo!indovax!luhukay (uucp)

SEACOMM 88 RESPONSE FORM
(Submission Deadline: August 1, 1987)

YES, I would like to participate in SEACOMM 88 as:
(check as many as you'd like):

☐ SEAComm 88 Program Committee member

☐ Speaker at the SEAComm 88 Seminar in Jakarta (Oct 5-6, '88)

Tentative topic: _____

☐ Speaker in SEAComm 88 activities in

Name of preferred country: _____

Tentative topic: _____

Name: _____

Mail Address: _____

Phone: _____ Telex: _____

Network Address: _____

TC 6 SIX YEARS PLAN

DATE: July 1987 1/2

	ACTIVITY	TITLE AND DESCRIPTION	ORGANIZED BY	TIME	PLACE	STATUS	APPROVAL
1	Conference	Data Communication Systems and their Performance	TC6/TC7/ITC/INRIA	22-25 Jun 87	Rio de Janeiro, Brazil	O.K.	ADB 1/10/87
2	Workshop	LAN Management	WG 6.4A	2-3 July 87	W. Berlin	O.K.	ADB 7/87
3	Conference	AFRICOM 87	TC-6/ARCC	8-10 Sep 87	Harare, Zimbabwe	O.K.	ADB 19/11/86 Sfr8000-G
4	Meeting	TC-6 Meeting	TC-6	11-12 Sep 87	Victoria Falls, Zimbabwe	Under Study	
5	Conference	Computer Communications for Developing Countries - CCDC '87	ICCC	27-30 Oct 87	New Delhi, India	O.K.	
6	Conference	Information Network Data Communication INDC-88	TC-6/SDF/SSI	14-17 Mar 88	Copenhagen, Denmark	O.K.	ADB 4/3/87
7	Workshop	High Speed Local Area Networks II	WG 6.4	Mar/Apr 88	Liege, Belgium	Under Study	ADB 19/11/86 Sfr 2500-G
8	Symposium	Network Information Processing System	BAS/TC-6/TC-8	9-11 May 88	Sofia, Bulgaria	O.K.	
9	Meeting	TC-6 Meeting	TC-6	12-13 May 88	Sofia, Bulgaria	O.K.	
10	Conference	Eurinfo '88	EEC/IFIP	16-20 May 88	Athens, Greece	O.K.	ADB 1/10/87 SFr 8000-L
11	Working Conference	Protocol Specification, Testing and Verification - VIII	WG 6.1	7-10 Jun 88	Atlantic City, N.J.	O.K.	
12	Conference/Tutorials	SEACOMM '88	SEARCC/TC-6	5-6 Oct 88	Jakarta, Indonesia	Under Study	
13	Meeting	TC-6 Meeting	TC-6	7-8 Oct 88	Bali, Indonesia	Under Study	Under Study
14	Tutorials	Data Communications Tutorials	TC-6/CSI	Sep/Oct 88	India	Under Study	
15	Working Conference	Message Systems	WG 6.5	Sep/Oct 88	Irvine, California USA	Under Study	

TC 6 SIX YEARS PLAN

DATE: July 1987 2/2

	ACTIVITY	TITLE AND DESCRIPTION	ORGANIZED BY	TIME	PLACE	STATUS	APPROVAL
16	Conference	ICCC-88	ICCC	31 Oct-3 Nov 88	Tel Aviv, Israel	O.K.	
17	Conference	ISDN	TC-6/ICCC	25-27 Apr 89	Netherlands	Approval Pending	
18	Symposium	Network Management	WG 6.6	2nd Quarter 89	USA	Under Study	
19	Conference	Data Communication	TC-6	Mar 89	Israel	Under Study	
20	Meeting	TC-6 Meeting	TC-6	Mar 89	Israel, Belgium or Germany	Under Study	
21	Working Conference	Protocol Specification, Testing and Verification IX	WG 6.1	May/Jun 89	Belgium or Netherlands	Under Study	
22	Congress	IFIP '89	IFIP	Sep 89	San Francisco	O.K.	
23	Meeting	TC-6 Meeting	TC-6	Sep 89	USA	Under Study	
24	Conference	COMNET '90	J. v. Neumann Soc./TC-6	May 90	Budapest	Under Study	
25	Meeting	TC-6 Meeting	TC-6	May 90	Budapest	Under Study	
26	Symposium	International Computer Message Systems	WG 6.5	Spring or Fall 90	Spain	Under Study	
27	Conference	IBERICOM-90	TC-6/FESI	Sep 90	Spain	Under Study	
28	Meeting	TC-6 Meeting	TC-6	Sep 90	Spain	Under Study	
29	Conference	ICCC-90	ICCC	late Oct 90	New Delhi, India	O.K.	
30	Working Conference	Protocol Specification, Testing and Verification X	WG 6.1/SICS	May/Jun 91	Stockholm, Sweden	Under Study	



INTERNATIONAL FEDERATION FOR INFORMATION PROCESSING

Date : 15 April 1987

Address reply to :

To: Technical Committee Chairmen

R.E.A. Mason
c/o Online People
7100 Woodbine Ave.
Suite 300
Markham, Ontario, L3R 5J2
CANADA

Re: MERITORIOUS SERVICE AWARD

M. Fourot has written to you, on 3 April, requesting comments and suggestions on this award, by 15th May. TC-2 met one week ago, and the proposal was discussed at some length. Since TC-2 does not favour the award, I felt it worthwhile to attempt to influence you, and to at least stimulate thoughtful responses to M. Fourot's request.

The basic concern of TC-2 was embodied in a formal motion expressing concern that an award of the type envisioned would not be recognized (by recipients, especially) as being indeed meritorious. We also fear that the award may inject into TC and WG affairs issues that we feel may detract from the work of the TC. Our concerns center around the number of awards to be made, the distinction of this award from the Silver Core, and the processes of nomination and selection that are only implied by the award, but are necessary to its working. Other TC's may have different feelings, but TC-2 expressed strongly to me its desire to concentrate TC effort on encouraging technical work of high calibre, in all activities. The kind of score-keeping, comparison and even negotiation that are inevitable in the scheme detract from this, and are not necessary to motivate good work in TC's and WG's.

TC-2 would much rather that IFIP try to initiate a high-prestige award ("Nobel Class") that would recognize contributions to the field of Information Processing. Such awards would be few, and would have value for IFIP. TC-2's formal motion suggested that the proposed Meritorious Service award should simply be an extension of the existing Silver Core, which could be opened to an additional scope of activities. This expresses our feeling that a "new" award introduces a distinction in services that may detract from the value of both awards.

The proposed award is well meant. I am certain that there are many services to IFIP within WG's and TC's that should be recognised. But we need an award that will be seen by its recipients as appropriate, and that will not detract from our real work. Please think about these issues.

R.E.A. Mason
Chairman TC2

Copies: TC2 Secretary
J.C. Fourot
IFIP Secretariat
G. Sacerdoti

287

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Incl. 9

NATIONAL ACTIVITY REPORT - ARGENTINE -

May 1987
J.C. Angio

ARPAC Network

ARPAC is the public packet switching network operated in Argentina by ENTEL (Empresa Nacional de Telecomunicaciones).

It was installed by SINTEL, a subsidiary of the National Telephone Company of Spain (CTNE), and it is based on the TESYS switch equipment.

Configuration and principal characteristics are:

- 6 nodes (4 in operation since 1984, 2 will be in 2nd. semester 1987).
- 18 remote concentrators.
- protocols supported:
 - . X25 2400/4800/9600 bps direct access
 - . X28/X29 300 bps telephone access
 - . X28/X29 1200 bps direct access
 - . HDLC-MNR (SDLC) 1200/2400 bps direct access.
- Telex access and 1200 bps FD telephone access will be available during this year.
- International connections with other public networks via Telenet and ITT gateways.

ITT gateway concentrator

A concentrator connected to ITT international gateway is operating in Buenos Aires since 1981.

VAN Services

A node of DELPHI service was installed in Buenos Aires last year. At present it has more than 1000 subscribers using different facilities (electronic mail, database enquires, telex conversion)

This year began offering of electronic mail services, principally to replace high cost international telex. The nodes installed in USA or Germany are accessed via ARPAC network (Telepak, Graphnet, Geonet).

Videotex

A Videotex system was installed in the country by a private national company, Radio Victoria Telematica, using NAPLPS technology. It began in 1986 and has now more than 200 subscribers.

Local Databases

This year began the opening as public service of the National Juridical Informatics Service, which offer a database of laws and jurisprudence. Based on a UNIVAC 1100/61 and Italian FIND II software, service is accessed via ARPAC network.

Banking networks

At present, 3 multi-bank networks are operating, connecting hundreds of automatic cashiers in the principals cities of the country.

Some banks offer to his customers possibilities of automatic services using its PC at home and telephone network.

J.F. Pužman

April 1987

Experimental packet switching and computer network in Czechoslovakia

The experimental datagram packet switching network comprising three nodes was put into operation in 1980. Minicomputers SMEP SM 3-10 (a member of CMEA series of minicomputers) and DEC PDP 11/34 were used in the function of node computers connected by data links with speeds up to 9,6 kbit/s.

The network software was developed in the Institute of Applied Cybernetics in Bratislava. The institute was, and still is, responsible for the operation of the network, which is now substantially extended and gradually being transformed into the X.25 (with LAPB), X.75 packet switching network supporting the heterogeneous computer network with host computers EC 1045, EC 1040, EC 1033, Siemens 4004/151, Siemens 7755, PDP 11/34, SM 4-20, M 4030.1, and with terminal concentrators.

Now (in March, 1987) the network consists of five node computers (packet switches), seven front-end computers (providing the necessary conversion functions), eleven host computers (owned by particular users), and of three terminal concentrators. Since 1986 the network became a sort of partially commercial value-added network with users paying for the provided services, based on improved data transmission services. Several groups of users have network supported access to various data bases (implemented on various host computers), comprising science information and various planning information used by governmental agencies.

The network is pioneering the penetration of data communication and networking in Czechoslovakia.

Experiences gained by the design, operation, and exploitation of the network will be presented at the 7th International Conference Computer Networks '88 which will be held in Bratislava in October 18-20, 1988.

TELECOMMUNICATIONS IN FINLAND
SITUATION 1.1 1987

1. General

Telecommunications services are in Finland provided by the:

- Administration for Post and Telecommunications (PPT)
- Privat Telephone Companies

The PTT is administrating the trunk network and about one quarter of the local networks, while the privat telephone companies have about three quarters of the local networks, especially in the densily populated areas.

2. Telecommunications services 1.1.1987

The following statistical informations could be mentioned

Population	5 milj.
Telephones	3 milj.
Mobile telephones	32 000
Videotex terminals	5 000
Telex terminals	8 500
Data modems in teleph.netw.	60 000
Datel service subscribers	3 300
Circuit switched terminals	
- data transmission (also 64 kbit/s)	4 000
- teletex	600

Packet switched terminals	700
Message Handling Services subscribers	4 000
Optical fibres in the network	2 500 km

The Finnish university network Funet with its 79 hosts is via Decnet in connection with EARN, X400, CSNET public nets and so on.

3 RESEARCH, INDUSTRY ETC.

The telecommunications equipment export from Finland is a little greater than this import to Finland. Big export articles are for instance transmission equipments, mobile telephones, personal computers and terminals just to mention some examples.

Research efforts and programs in the following fields could also be listed.

- Software engineering, artificial intelligence
- Development tools for telecommunications protocols (eg. Teletex protocols for mainframes have been implemented and installed in some ten places in Finland and Scandinavia).
- Satellite communication earth stations have been developed as well as measuring system for satellite management.

DATA COMMUNICATIONS in FRANCE

Louis Pouzin, IFIP-TC.6

The following notes do not represent official statements, but a personal selection of recent notable facts and figures related to data communications in France.

1. Adding one digit overnight to the telephone numbering plan cost 5850 MF.

2 The PTT packet network, Transpac, is still growing steadily. In 1987 the number of switches will reach 65. In 1986, 44000 subscribers (+20%) shelled out 1500 MF.

Videotex PAD number a hundred, with a total capacity of 45000 calls. The electronic phone directory, using 50 more dedicated PADs, can handle 12000 calls. 2,500,000 minitel were in service in April 87. Their population is growing by 100,000 a month.

X.32 access is available (X.25 on dial up circuit at 4800 bit/s). Either the calling or the called subscriber can use X.32, but not both.

PAD telephone numbers are now only 4 digits, one number per modem speed or service type. Ex: 3600 for FDX 1200 bit/s, 3615 for videotex at kiosk rate.

3. Videotex traffic keeps breaking all optimistic forecasts, with 39 millions calls and more than 4 millions hours in February 87. At 60 F per hour, revenues amount to 240 MF, 2/3 being repaid by the PTT to information providers. There are 5000 distinct service codes (mnemonic address). The most popular applications are leisure oriented, including so called pink messaging, that is, minitel to minitel anonymous conversations without mailbox. The privatisation of formerly nationalized companies has induced a surge in stock quotation data base access. More tariff steps will be introduced anytime soon so that information providers can diversify their services. So far only users are in favour of tariff decrease.

Some examples of more exotic applications:

- query a politician's views on issues,
- get help on homework from on line teachers,
- order supermarket items for home delivery,
- real time rating of TV performers.

4. Smart cards are still struggling for big markets. A first large size market has been opened by the PTT for public payphones, which are replacing coin operated phones. One expected bonus is that they now work, instead of being vandalized.

Home banking with card reader plugged on minitel is being introduced cautiously. An experiment has been launched in Blois with a smart card usable as ticket for public transport, credit card and money. It doesn't play music yet.

Lot of brainstorming in search of applications. A curious syndrome is that every smart card missionary is adamant on having a specific card for his own field. Just as if we should have a different PC for each application.

Prospects for international standards are not too bright. Chances are that the videotex story will be played back.

5. A public X.400 message service half opened in February 87. Terminals may be ASCII, PC, minitel, teletex, fax, telex or X.400 private domain. Tariffs are:

2000 char. message	2 F	to individual subscriber
	1 F	to private domain
per addit 2000 char.	0.4 F	
delivery confirm.	1 F	
connect time	0.32 F/min	(Individual subscriber)
storage	0.10 F/day/1000 char.	(Individual subscriber)

A regular postal letter stamp costs 2.20 F.

Incl '3

6. The French are discovering facsimile. There were 60,000 terminals at end 86 (+50 % in a year). Traffic has doubled in 18 months.
7. Telex growth is not spectacular, but telex is still much in demand with 135,000 subscribers (+8% yearly).
8. A baby ISDN will open at end 87 in Brittany.
9. IBM La Gaudie and CNET have opened QSI protocols test centers. The IBM service is free.
10. Deregulation, demonopolisation, etc. draw a lot of rhetoric. So far, more roar than teeth.
11. Major restructurations occurred in the telecom industry. The French CGE took over ITT telecom activities worldwide, thereby becoming Nr. 2 CGCT, a former ITT subsidiary nationalized in 1982, was put on the block for privatisation. The winner was a MATRA-ERICSSON consortium. Losers were SIEMENS and ATT-PHILIPS.
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ACTIVITY REPORT

REPORT NUMBER: 9
COUNTRY: Portugal
Date: May 1987
AUTHOR: Alexandre Cerveira

1. The Portuguese PTT

The subsidiary company TRANSDATA expects to have VIDEOTEXT Public Service available during the first half of 1988 and X.400 Public Service in 1989.

2 Pseudstar

This LAN is a Picture Archive and Communication System intended to support image, data and voice which has been developed at University of Aveiro.

They work on a second version with better performance and higher hardware integration and have considered the voice service implementation to have the highest priority.

3 C-NET

This LAN belongs to the microcomputer UNIC developed at the

University of Coimbra. They started a second phase of development which will transform C-NET in networks fully conforming to MAP or TOP specifications.

4 Protocol Specification

Some work on protocol specification has been done at University of Minho. This work is based in heterogeneous Temporal Logic and executable prototypes running in Concorrent Prolog.

5 Distributed Operating System

Some activity has been developed at INESC in revising the Distributed Operating System they used in Project ELENA in order to implement the Comandos Operating System where the most relevant problems are heterogeneity, standard communication protocols, Unix interface and performance.



(Alexandre Cerveira)

IFIP TC6

National Activity Report: United Kingdom

Peter Radford

The Big Bang and the BT strike

For many people in the United Kingdom, data communications events over the last few months have been dominated by two things: the "Big Bang" at the Stock Exchange and the British Telecom strike.

Formally, the Stock Exchange "Big Bang" was the changeover (on 27th October 1986) from requiring that there be two distinct categories of people ("jobbers" and "brokers") to allowing people to act in both capacities. The implications of the changeover were explosive increases in the use of both computers and communications in stock market trading. The installation of the new equipment, particularly the communications facilities, placed a severe load on all concerned. While there were numerous problems initially, particularly with the Stock Exchange's own computer systems, the success of the changeover and the extent to which computer-based trading has been adopted can be judged from the fact that the Stock Exchange floor is to be closed because it is hardly used any more. In general, the data communications aspects seemed to be fairly conventional, but there are now proposals to use more advanced facilities such as the BBC's Datacast service (see below).

For many communications managers there was a little time to recover from the Big Bang before Christmas and a little time to recover from Christmas before British Telecom engineers went on strike. This was obviously a worrying time for the managers but the consequences of the strike were quite limited. If something failed, there was not much chance of repairs being done (although this did happen in some cases and in other cases remedial action could be taken) and no new work could be done. The strike demonstrated that modern communication equipment is pretty reliable, however. Once the strike was over, repairs were done fairly quickly. It was reported, however, that many organisations were talking to Mercury Communications about arranging for a second source for communication facilities.

UKReport_87-05

Incl 15

X.400

X.400 is continuing to be a topic of interest to almost everybody in the communications business. British Telecom have not yet made their service operational although trials are said to be in progress and they were involved in the Hannover Messe demonstration in March of this year. The service dates have been slipping steadily. Once this is operational, one suspects that interest will increase further.

GOSIP

Along with (far too) many other people, CCTA, the Central Computer and Telecommunications Agency (which is actually part of the British Treasury Ministry) have started to define Functional Standards for the use of OSI etc in government-procured systems. This is under the banner of GOSIP (Government OSI Profile). They are trying to avoid inventing too many new wheels and are collaborating with the US GOSIP (note that this stands for Government OSI Procurement). The activities under GOSIP do go somewhat further than the basic OSI set and include Office Document Architecture and Electronic Data Interchange.

Datacast

One interesting service that has been introduced recently is the BBC's Datacast. This works in a similar way to broadcast teletext, sending information in the periods when a television signal cannot carry picture information (the line and frame flyback periods). Unlike the broadcast teletext situation, where the information is generally characters or simple graphics, Datacast is more oriented to the transmission of data, which may be of any sort. The data may be encrypted to restrict its reception to particular groups. The potential applications of the technique are many, ranging from distribution of stock market and horse racing information to sending out new copies of programs to distributed computer systems.

Approvals

As a result of having two telecommunications system providers in the United Kingdom, British Telecom and Mercury Communications, the system of approving equipment for connection to public telecommunications networks was changed. Whereas approval used to be in the hands of BT (and to some extent at the whim of whoever was responsible for carrying out the approval process) the goal now is to have public standards, which must be satisfied by equipment before its connection is legal. Producing these standards has been a slow process and there has recently been considerable debate over the extent to which the standards should cover the proper working of the equipment in addition to considerations of safety. A committee (known as the Birtwistle Committee from its chairman) was sent up to look at this but its report was inconclusive: from a membership of 15 there were 4 minority reports. The debate continues.

The work done by the British Standards Institute committee has, however, been drawn upon by the European Commission as part of its production of "NETS" which are intended to fulfil a similar role but in a Europe-wide context. Although it is a EC initiative other non-EC European countries have become involved. The objective of this is that manufacturers would need to submit their equipment to only one body and, if successful, gain approval for the whole of the EEC.