Committee: ISO/IEC JTC1/SC22/WG11

Place: Teesside Polytechnic
                Computer Centre
                Middlesbrough
                United Kingdom.

Date: May 30 - June 1, 1990

Attendees: Mr. Edward Barkmeyer   NIST, US
                Mr. Paul Barnetson   IBM, UK
                Mr. Jean Bourgain   AFNOR, France
                Mr. Ken Edwards   IBM, US
                Mr. David Joslin   Teesside Polytechnic, UK
                Mr. Brian Meek   King's College, UK
                Mr. Willem Wakker   ACE, Netherlands
                Mr. Brian Wichmann   NPL, UK

1. Convenor

In absence of the convenor Mr. Don Nelson, the meeting was opened by Mr. Paul Barnetson as convenor of the BSI IST/5/11 panel.

After approval of the agenda, Mr. Willem Wakker was appointed to be acting convenor and chairman of the meeting.

2. Agenda (WG11 N164a)

The agenda was amended as follows:

— Corrected and changed date: "May 30 - June 1 - 1100 to 1730 Wednesday May 30, 0900 to 1730 Thursday May 31, 0900 to 1500 Friday June 1".

— Add point 6.b-bis: RPC document ECMA-127, January 1990 draft.

— Point 7.b (3): change "N1163" to "N163".

— Add point 7.5: Cross language issues.

— Add point 8.d: Any other business.

The agenda was accepted as amended.

3. Minutes of Previous Meeting (WG11 N154)

Item 3.b (2), last paragraph: strike last sentence.

Item 4.b, first paragraph: strike last sentence of this paragraph.

The minutes were approved as amended.

4. Convenor Report

As the convenor was not present at the meeting, no convenor report was presented.

The NNI is nominating Mr. Willem Wakker to become convenor of WG11.

5. National Activity Reports

5.1 BSI IST/5/11

Mr. Paul Barnetson was elected to be convenor of IST/5/11.
This panel has 13 members.

The panel has discussed the CLID WD#3, and 3 documents with comments are submitted to WG11 (WG11 numbers N170, N171 and N172).

A response is prepared on the Guidelines document (SC22/N754) stating "Yes with comments".

5.2 ANSI X3T2

The ANSI report is appended to these minutes.

5.3 AFNOR/CG 97/CN 22/GE 11

The first meeting of the French WG is on June 25, 1990. There are about 6 people expected to attend this meeting.

6. Work Item 22.14 - Language Bindings Guidelines

The ballot period on document SC22/N754 -- ISO/IEC JTC1 DTR 10182 is closed. The summary of voting and the comments are not yet available.
The responses will be discussed at the next WG11 meeting.

7. Work Item 22.16 - Common Procedure Calling Mechanism

The following documents were discussed.

1. WG11 N168 - Common Language-Independent Procedure Calling Mechanism, Working Draft, Version 1.1.

   This first draft was discussed at the last X3T2 meeting. The editor plans to incorporate extensive changes that were proposed during that meeting.
   Remarks, as made for the CLID draft (see WG11 N172), regarding the ISO style of the document will also be taken into account.

   A new WD is expected before the next X3T2 meeting (July 1990).

2. WG11 N175 - Standard ECMA-127 RPC using OSI, Final Draft Second Edition, January 1990.

   The document was discussed in rather general terms. It was felt that items (a) and (b), as defined in the Scope of this document (datamodel and interface definition notation) are work items for WG11, while (c) and (d) (RPC service and protocol) are the 'real' RPC specific parts.

Milestones for the CLIPCM project:

	90-09-01	WD ready for discussion with SC21/WG6
01.04	91-02-01	WD ballot initiated within SC22
01.05	91-06-01	WD ballot within SC22 closes

8. Work Item 22.17 - Common Data Types

8.1 Language Compatible Arithmetic Standard

1. Brian Wichmann reported that LCAS had been approved as a NWI by JTC1. He said that Belgium, Japan and USSR had offered participation and therefore he had written to these national standards bodies asking for the appropriate technical persons concerned.

2. Potential modifications to LCAS were discussed as follows:

2.1   Unbounded integers

This had been requested by two parties concerned with logic languages. The only technical problem would be the value of maxint and minint in the case of unbounded integers. WG11 supported this extension.

2.2   2's complement floating point

X3T2 supports this, but it does have a visible change since the operations of 'absF' and 'negF' can then produce 'overflow'. Machines which have such floating point includes Prime and the Multics machines (Bull). It was agreed that Ed Barkmeyer would contact Bull to see if they had any views on the current wording of LCAS. If no objections were raised the status quo would be retained.

2.3   Very unbalanced exponent ranges

Technically, such ranges are undesirable and hence no change is envisaged unless an objection was raised with a good rationale.

2.4   Optional operations

If software is to be portable it cannot make use of optional operations, yet these are very convenient in some circumstances. All these operations are simple to provide and an implementation, admittedly inefficient, is available from NPL. Hence it was concluded that making these operations mandatory is highly desirable. Either users would accept the inefficiency to get the convenience, or suppliers would provide implementation efficient on their system.

WG11 supported this conclusion.

2.5   Language annexes

It was noted that the examples of language 'bindings' need extensions to consider the major languages, to match the example of FORTRAN already given.

3.   Next stage with LCAS

A motion (Wichmann, Joslin) to forward N167 (changed as noted) to SC22 for registration as a DP was approved (Bourgain abstained).

This step was thought desirable to encourage the language groups to comment on LCAS. This request is to be accompanied by a letter from the acting convenor mentioning:

3.1   ISO language groups need to study LCAS.

3.2   National language groups need to study LCAS.

3.3   Two further items are being proposed for follow LCAS. The LCAS itself should have a note from the Editor noting potential changes as listed in 2.1-2.5 above.

4.   LCMPS and LCCAPS

The following motion (Meek, Barkmeyer) was passed unanimously:

"WG11 believes that the two proposals, for Language Compatible Complex Arithmetic and Procedure Standard, and for a Language Compatible Mathematical Procedures Standard, recently forwarded by X3T2 for registration as domestic workitems, should be considered for international participation at the earliest opportunity; and therefore, without prejudice to eventual national member body votes from participating members of WG11, directs its acting convenor to take the necessary steps to submit equivalent ISO New Work Item proposals to SC22 secretariat as soon as possible."

Milestones for the LCAS project:

01.04   90-08-01   WD ballot initiated within SC22
01.05   90-11-01   WD ballot within SC22 closes

8.2 Language-Independent Data Types

Working draft 3 was reviewed by discussing the comments from the documents listed below.

Mr. Bourgain expressed his concern regarding the level of abstraction of the WD: he thinks that the document is too abstract.

The following documents were discussed.

1. WG11 N163 - CLI Datatypes WD.3, Editor's notes.
   The issues 4 and 5 of section B (grosser classes of datatypes and constructors and the criterion for retention or elimination of less common datatypes) are considered the most critical ones. WG11 should decide how to solve these problems.

   Regarding section C, issue 2 (is InOrder necessary) it was felt that characterising operations should only be added if they are really needed to distinguish between datatypes. The list does not need to be minimal, but it does need to be sufficient.

2. WG11 N170 - Comments on N162/N163 (Brian Meek).
   This document was discussed, the necessary changes to the WD were left to the editor.

3. WG11 N172 - Comments on CLID, WD#3 (P. R. Brown).
   This documents contains numerous suggestions to get the document in line with the ISO directives. The necessary changes to the WD were left to the editor.

4. WG11 N176, N177 and N178 - Various papers by Ed Greengrass.
   The documents were discussed in general terms. Specially the treatment of pointer types in the documents was appreciated. No direct changes to the WD resulted from this discussion.

5. WG11 N179 - Comments from France on the CLID, WD#3
   This document was discussed, the necessary changes to the WD were left to the editor.

It is the intention of the editor to have WD#4 available before the next X3T2 meeting (July 1990).
A motion (Barkmeyer, Meek) to forward WD#4 to SC22 for registration as a DP was passed unanimously.

Milestones for the CLID project:

01.04	90-09-01	WD ballot initiated within SC22
01.05	90-12-01	WD ballot within SC22 closes

9. Cross language issues

Cross language issues were discussed, specially in relation to conformance testing and RPC. It was felt that further consideration on this issue was needed.

The following documents were discussed.

1. WG11 N169 - Issues list version 4 (March 1990), ISO/IEC JTC1/TSG-1 N287.
   It was agreed that the Guidelines for Language Bindings (DTR 10182) should informally be brought to the attention of TSG-1. Furthermore, TSG-1 should be asked about their opinion on bindings.

2. JTC1 N711 (Modelling of Application Program Interfaces and Procedure Calls) with the US X3T5.5 comments.
   The following observations were made:

   — WG11 hopes to be involved in a workshop as suggested in the recommendations 4.1.b.

   — Recommendation 2: WG11 strongly favours such a joint meeting since otherwise the work of WG11 could be seriously affected.

— Recommendations 7 and 8: WG11 has a more generic procedure call mechanism (than currently proposed in the RPC document), and wants to make sure that this model is not overlooked.

10. Action list

1. Edwards.
   To contact Don Nelson about the current situation on the convenorship of WG11.

2. Barkmeyer/Edwards.
   To update ANSI meeting report (EJB) and to supply CLIPCM info (KE), and to email this to Wakker, for inclusion in the minutes.

3. Wakker.
   To find out about SC21/WG6 in the Netherlands, and to see if contacts can be useful.

4. Meek.
   To contact Don Folland about possible arrangements on information exchange between WG15 and WG11.

5. Wakker.
   To inform SC22 on the coming combined SC21/WG6 and SC22/WG11 meeting.

6. Meek/Bourgain.
   To communicate with validation experts on the possibility of testing implementations for conformance with N168.

7. Wakker.
   To send letter to the people in Canada, Germany, Austria and Denmark that are on the mailing list, to ask them to pass CLID WD#3 to their parent organisations for distribution to language committees and other interested committees for comment.

8. Meek.
   To inform the BSI TSG-1 representatives informally about WG11 observations as noted in this minutes under point 9 (cross language issues).

11. Future meetings

— Second meeting 1990.
This will be (partially) a combined meeting with the RPC rapporteur group of SC21/WG6.
Suggested dates: September 24th (Amsterdam), or in October (France, Geneva).
To be arranged by convenor WG11 and SC22/WG6 rapporteur (David Robinson).

— First meeting 1991, combined meeting with X3T2.

Date: January 21st - January 25th, 1991.
Place: California
Host: IBM

— Second meeting 1991.
Suggested date: week before SC22 meeting in September 1991.
Suggested place: Vienna. Note that the SC22 meeting is also in Vienna.