JULY 1992

TITLE: Report from the Convenor of WG11 - Binding Techniques
to the fifth plenary of SC22

SOURCE: Secretariat ISO/IEC JTC1/SC22

WORK ITEM: JTC1.22.14, .16, .17, .28, .33, .34

STATUS: New

CROSS REFERENCE: N/A

DOCUMENT TYPE: WG Report

ACTION: For information to SC22 Member Bodies.
This document will be discussed at the
SC22 Plenary meeting.

1. Meetings

The following meetings have been held since the last report:

16-20 September 1991   Vienna
21-25 April 1992   Linthicum (Baltimore. U.S.A.)

The first meeting had participants from 5 countries (U.S.A.. U.K. Germany. France and The Netherlands); during this meeting a combined meeting with SC22/WG2 Pascal was held to discuss common issues.

The second meeting had participants from only 3 countries (U.S.A.. U.K. and The Netherlands). and was a combined meeting with X3T2.
The chair of SC22 attended this meeting for a few hours to discuss general WG11 matters. One of the discussion items was the ongoing concern of WG11 participation. whereby it was noted that participation from members of language WGs in the work of WG11 is at least as important as NB participation. The NB participation of a number of countries (Germany. France and The Netherlands) is (or seems to be) based on a number of interested individuals without a good NB support with as result that fact that when the one expert of a country cannot attend a meeting. the NB is not represented.
After the meeting it appeared to be even worse: the French expert is not able to attend WG11 meetings anymore. and hence the active participation of the NB is suddenly unclear!

The following meetings are planned:

21-23 August 1992   Tampere (Finland)
12-16 October 1992   Paris (France)

The intention of the interim meeting in Tampere is to make sure that the drafts for CLID and CLIPCM are in such a state at the Paris meeting that they can go out shortly after the Paris meeting as CDs.

It is planned that during the October 1992 meeting in Paris a co-located meeting with the SC21 RPC group will be held.

2. Work Item JTC1.22.14 - Language Bindings Guidelines

The document is finalized; the JTC1 ballot closed in June 1992. No ballot results are know to date.

3. Work Item JTC1.22.16 - Common Procedure Calling Mechanism

Working draft 4 of this document was sent to SC22 for review and comment (SC22/N1082). During the April 1992 meeting much work was done on the alignment of the draft with the emerging RPC drafts.

It is the intention of WG11 to establish the text for the first CD during the October 1992 meeting. Alignment with the RPC standard is again one on the issues that will be handled during this meeting.

4. Work Item JTC1.22.17 - Common Language-Independent Datatypes

The CD ballot on the first CD had closed in November 1991. the member bodies comments are in SC22/N1069.

The comment accompanying the Canadian No vote to include a datatype "Processable Structured Alphabetic" was discussed extensively during the April meeting. Since this type does not appear in any international standard. it was felt that its appearance in CLID

would be premature without the support of SC2. It was decided that WG11 does not have the expertise to judge the validity of the proposal and that guidance should be sought from WG20 and the SC22 - SC2 liaison officer in this matter.

5. Work Item JTC1.22.28 - Language Compatible Arithmetic Standard

The SC22 plenary meeting in Vienna approved the proposal to publish the LCAS, LCMPS and LCCAPS standards as parts of a multi-part standard on Language Independent Arithmetic (LIA).

Extensive changes to the conformance and notification sections of LCAS were proposed in Vienna, based on comments received from the U.S.A. and from the IFIP WG2.5. The changes have caused delay in the whole schedule: not only for part 1, but also for the other parts.

Comments from France (amongst others) suggested that the informative example language bindings (to Ada, Basic, C, Pascal, Fortran, PL/I, Prolog, Modula-2 and Lisp), as specified in Annex B become normative in absence of a binding standard. At this moment this change is not implemented as WG11 has no work items to produce such bindings. WG2 is proposing a workitem to produce LIA bindings to Extended Pascal.
This is clearly an issue that needs to be discussed during the next SC22 plenary. Note that this is not a purely WG11 issue: any language independent standard may encounter this problem.

CD10967-1.2 will be circulated during summer 1992.

6. Work Item JTC1.22.33 - Language Compatible Mathematical Procedure Standard

This standard will be published as CD10967-2. The first draft is expected by March 1993. The delay is due to the delay of part 1.

7. Work Item JTC1.22.34 - Language Compatible Complex Arithmetic and Procedure Standard

This standard will be published as CD10967-3. The first draft is expected by end 1993. The delay is due to the delay of part 1.

8. Liaisons

The liaison problem with SC21/WG6 RPC (as mentioned in the previous report) seems to be solved: a co-located meeting is planned for October 1992.

During the April 1992 meeting WG11 has reviewed documents from SC22/WG15 POSIX on the language independent POSIX specification. It occurred to WG11 that the LIS POSIX documents are developed in accordance with the IEEE/TCOS document on Programming Language Independent Specification Methods, but that this IEEE document has no international status. WG11 has reviewed this document, and endorses the document in general.
Since it can be expected that more US domestic language independent standards (which in a later stage can become international standards) will be developed based on this document, and since there is a perceived need to have a Guidelines document on the production of language independent specifications, WG11 has advised WG15 (in a liaison statement) to seek means to promote this document to a ISO technical report.
As the foreword of the TCOS-LIS document already states, sections of the document that (re)define notions that are also defined by standards currently under preparation by WG11 (Common Language Independent Datatypes and Common Language Independent Procedure Calling Mechanism) should be updated to refer to the WG11 standards. When then the

POSIX LIS 9945 standards are updated according to this new technical report, full alignment with the WG11 standards is ensured.

The scope of the TR should however be broader than only POSIX: it should serve as a generic guide for all language bindings projects within JTC1. It this way the document may be seen as an companion document to TR 10182 (and as the current TCOS document makes use of TR 10182. the relationship between the 2 documents should be clearly documented).

9. SC22/WG11 Milestones

Work Item 22.14 - Language Bindings Guidelines
Milestones:	5.3	92-09	TR published

Work Item 22.16 - Common Procedure Calling Mechanism
Milestones:	2.8	92-10	WD approved for registration as CD

Work Item 22.17 - Language-Independent Data Types
Milestones:	2.8	91-01	WD approved for registration as CD
	3.0	91-05	CD registered
	3.1	91-05	CD study initiated
	3.8	93-04	CD approved for registration as DIS

Work Item 22.28 - Language Compatible Arithmetic Standard
Milestones:	3.8	92-10	CD approved for registration as DIS

Work Item 22.33 — Language Compatible Mathematical Procedure Standard
Milestones:	2.1	91-09	WD study initiated
		93-01	First draft circulated
	2.8	93-11	WD draft for CD registration

Work Item 22.34 — Language Compatible Complex Arithmetic and Procedure Standard
Milestones:	2.1	91-09	WD study initiated
		93-09	First draft circulated
	2.8	94-07	WD draft for CD registration