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Date: Tue, 21 May 91 18:20 GMT
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Subject: CLIPCM WD3.0 comments

CLIPCM is definitely moving in the right direction. I have only just got around to reviewing WD 3.0 and I have a number of comments on it

Outstanding issues identified in Editors Notes:

2. I'm not sure that the procedure needs to be identified in the marshalling procedure. This feels like an implementation issue and should be addressed in lower level standards such as RPC.

3. I think that Pointers are essentially the same as Call by reference parameters and therefore if a separate section is needed to clarify their effect it should essentially be a cross-reference.

4. As I implied in the answer to 2) above I don't think that we need to include many (any?) details about marshalling. It is certainly appropriate for RPC, but I'm not sure whether this issue has anything to do with CLIDT.

5. CLIPCM should specify that synchronous behaviour is perceived by the client procedure.

9. Appendix A is useful, but I'm not sure that it should be headed Implementors Guidelines since that is rather misleading since the people who will be using this standard will be other standards bodies. In that vein it would probably be helpful to call it a Users guidelines and put in it more information about how other standards can (should?) use the CLIPCM standard.

Other points

1. I haven't looked at the IDN and therefore have no comments on it.

2. There are a number of typographical errors:

a) Section 5.1 para 2 sentence 4 should start "The concepts" b) Para headed "Argument mode" sentence 3 should start "Also, there may" c) Para after "Argument allocation" ":hp2functions" is wrong d) At end of this para should end ", nor does it prohibit this." e) Section 6.3.4 sentence 3 "abilility" should be "ability" f) Sentence 4 "choosen" should be "chosen" g) Section 6.6.2 "called" should be "server" and "calling" should be
"client" for consistency with rest of document (possibly also elsewhere)

3. I'm unhappy about Argument Allocation is section 5.1. The wording implies that we are dealing with physical issues, and I thought that CLIPCM was intending to handle the conceptual issues, leaving such physical (implementation) issues to other standards such as RPC which use the CLIPCM model.

4. There is an implication in section 6.3.1 and a number of other sections that an error should occur if an actual parameter has no value at the moment of the call. In some languages, such as MUMPS, although the parameter passing mechanism is present, because of the dynamic (late) binding of the language an error will not occur until such time as this parameter is used so that a value is needed. It is therefore possible that, depending on the path through the called procedure, the parameter is not actually referenced and no error occurs.

This type of behaviour is not modelled within CLIPCM, which in section 6.3.1 makes it mandatory to raise an exception.

In section 6.3.2 para 3 makes another similar assumption, but this is also problematic for other languages since the call by reference parameter could be an output only one. In this event there may be no value given to the variable, but it may have a storage allocation in which to receive results.

Paras 2 and 3 of section 6.3.3 also have a similar problem I believe.

I'm also not sure that the note at the end of section 6.3.2 is accurate. It is not the "concept" that is much more complicated it is the "practicality".

5. In section 6.3.4 I think that the definition of global data needs to be made a little more precise. I would suggest the addition of the words "without being passed as part of the parameter passing mechanism" at the end of the first sentence.

It is unclear whether we are requiring the client and the server procedures to have the same mechanism for accessing global data. Also when making a CLIPCM call do we have one or two implementations involved?

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