X11/94-46

MUMPS Development Committee

Extension to the MDC Standard
Type A Release of the MUMPS Development Committee

^$GLOBAL Correction

June 1994
Produced by the MDC Subcommittee #15
Programming Structures

Jamie Crumley, Chairman
MUMPS Development Committee

Kate Schell, Chairman
Subcommittee #15

The reader is hereby notified that the following MDC specification has been approved by the MUMPS Development Committee but that it may be a partial specification that relies on information appearing in many parts of the MDC Standard. This specification is dynamic in nature, and the changes reflected by this approved change may not correspond to the latest specification available.

Because of the evolutionary nature of MDC specifications, the reader is further reminded that changes are likely to occur in the specification released, herein, prior to a complete republication of the MDC Standard.

Anyone reproducing this release is requested to reproduce this introduction.

1. Identification

1.1 Title: ^$GLOBAL Correction

1.2 MDC Proposer and Sponsor:

Proposer:	**Sponsor:**
Ben Bishop	SC15/TG13 ssvn Syntax
64 Maolis Road	Alan Frank, Chair
Nahant, MA 01908	Matchups
aci@shore.net	alf@world.std.com

1.3 Motion:

Subcommittee 15 moves to elevate this proposal to MDC Type A status.

1.4 History:

Date	Document	Action
01 Dec 94	X11/94-46	MDC/A
20 Apr 94	X11/SC15/94-14	Proposed as MDC/A (Passed: 25-7-12)
01Feb94	Xll/SC15/94-8	Proposed as SCI5/A (Passed: 26-0-5)
25Oct93	X11/SC15/TG13/93-2	Reformed as SC15/TG13 proposed as SC15/B (Passed: 11-7-4)
09 Sep 93	X11/SC12/TG4/93-3	Initial proposal

1.5 Dependencies:

No proposals have been identified which depend on this proposal. No proposals have been identified upon which this proposal depends.

2. Justification

2.1 Needs

^$GLOBAL's first subscript is defined as a gvnexpr which in turn is defined as an expr V gyn. Unfortunately', this leads to first level subscripts of ^$GLOBAL which are full global references including subscripts and environments. This needs to be changed to make the first level subscript be just the name of the global.

2.2 Existing Practice

To the author's knowledge one vendor has released the ^$GLOBAL ssvn with the gvnexpr V gvn form of the ssvn. Another vendor has implemented ^$GLOBAL but has indicated that the final form will depend on the action on this proposal. Note that prior to the June 93 MDC meeting, the ^$GLOBAL formalization was significantly different.

3. Description

3.1 General description

Define the first subscript of ^$GLOBAL to be a gvnexpr defined as being an expr V name.

3.2 Annotated Examples of Use

^$GLOBAL("TEMP") should represent the global ^TEMP in the default environment. ^$ | "linus"| GLOBAL("TEMP") should represent the global ^TEMP in the environment "linus" (provided the ssvn formalism is approved, and ^$GLOBAL is designated as an ssvn which can be used with environment syntax).

3.3 Formalization (References are to the X11.1-1994 Canvass Document)

Subclause 7.1.3.3 (^$GLOBAL definition), replace gvnexpr definition with:

gvnexpr ::= expr V name

4. Implementation Effects

4.1 Effect on Existing User Practices and Investments

Possible backward incompatibility since vendors may have already implemented the ^$GLOBAL ssvn in the existing formalism.

4.2 Effect on Existing Vendor Practices and Investments

The vendors may need to rewrite existing ^$GLOBAL definition code.

4.3 Techniques and Costs for Compliance Verification

Create some globals and then check ^$GLOBAL to make sure they are presented in the correct format. Specifically:

```
Set NoGlo=l,Glo="" For  Set Glo=$O(^$GLOBAL(Glo)) Q:Glo=""
      DO
If $D(^$Global(Glo))#2 W !,"Global ""_Glo_" exists" Set
      NoGlo=0
If 'NoGlo Q  ;there are globals -- can't continue
W !,"No Globals are defined, beginning test..."
W !,"^TEMP is
      "_$S($D(^$GLOBAL("TEMP"))#2:"listed??",1:"unlisted")
Set ^TEMP($J)=1 W !,"^TEMP has been set."
W !,"^TEMP is
      "_$S($D(^$GLOBAL("TEMP"))#2:"listed",1:"unlisted??")
```

4.4 Legal Considerations

None identified.

5. Closely Related Standards Activities

5.1 Other X11 Proposals Under Consideration

None.

5.2 Other Related Standards Efforts

X11/SC15/94-21	ssvn formalization

5.3 Recommendations for Coordinating Liaison

X11/TG13	(Backwards incompatibility) may need to work on the backward incompatibility issues of this proposal.
X11/TG18	ssvn coordination

6. Associated Documents

X11/92-48	MDC/A	Structured System Variables
X11/SC12/93-20	MDC/A	Character Set Profiles
X11/SC15/94-32	SC15/A	ssvn Formalization.

7. Issues, Pros and Cons, and Discussion

The ^$GLOBAL ssvn was clearly intended not to allow subscripted forms of globals as the first subscript. The inclusion of "^" would also imply the use of environment within the subscript, as opposed to the actual ssvn reference; that would be more consistently handled through the inclusion of environment in the ssvn name syntax (i.e. ^S [| environment |] GLOBAL (...)) [which is a different proposal].

7.1 October 1993. Dublin Passed, SCI5/B 11-7-4

Micronetics indicated that it had just released a version of their software using the June 1993 version of ^$GLOBAL. Digital indicated that it was about to release a version, but specifically indicated that knowing that this proposal was being taken up by the MDC would permit them to indicate that the ^$GLOBAL definition used in their system might be changed later (to somewhat lessen the likelyhood of backward incompatible code being produced). The author believes that vendor utilities are probably the only place, at this point, where ^$GLOBAL is likely to have been used under any implementation, which is why fixing this NOW. while there is still time, is so important.

7.2 February 1994 Houston Passed, SC15/A 26-0-5

7.3 June 1994 Reno Passed, MDC/A 25-7-12

Pros:	Cons:
a) Corrects error in current standard	a) backward incompatible
b) standardizes existing functionality	b) current standard is fine

c) could be enhanced	c) precludes implementor from allowing subscripted globals

8. Glossary

None.

9. Appendix

None.