X11/94-28

MUMPS Development Committee

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

Portable string length

June 1994
Produced by the MDC Subcommittee #13
Data Management and Manipulation

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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.

1. Identification of the proposed change

1.1 Title Portable string length

1.2 MDC Proposer and Sponsor

This proposal originates from the SQL taskgroup (Tom Ackerman) of Subcommittee 15 and is sponsored in Subcommittee 13 by Ed de Moel.
Motions regarding the status of this document will be made by Taskgroup 2 (String Handling) of Subcommittee 13 (Data Management and Manipulation).
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1.3 Motion

No motion. Final write-up after proposal was accepted as MDC Type A extension.

1.4 History of MDC actions

Date	Document	Action
July 1994	This document	Final write-up.
June 1994	X11/SC13/94-34	No modifications. Presented for promotion to MDC Type A. Accepted.
February 1994	X11/SC13/94-6	Additional modifications incorporated. Presented for promotion to SC#13 Type A. Accepted 6:2:2.
February 1994	X11/SC13/94-5	Counterproposal, presented for promotion to SC#13 Type B.
October 1993	X11/SC13/93-55	Presented for promotion to SC#13 Type A. Document did not reflect all modifications made during previous meeting; not voted on.
June 1993	X11/SC13/93-30	Presented for promotion to SC#13 Type A. Amended to make new portability limit 510 characters rather than 1020, and re-affirmed as SC#13 Type B.
February 1993	X11/SC13/93-11	Presented for promotion to SC#13 Type B. Accepted 20:1:2. Several motions to modify the proposal to increase the portable string length to a different number of characters (4092, 1000) failed.
October 1992	X11/SC15/TG7/91-1	Discussed in the string handling taskgroup of subcommittee 13. Presented for promotion to subcommitte 13 Type C. Straw poll held for preferred new string length (255, 510, 1020, 2040, 4080, more). 1020 was preferred at this

		meeting.
June 1992	X11/SC15/TG7/91-1	Discussed in subcommitte 15, remanded to subcommittee 13.
October 1991	X11/SC15/TG7/91-1	Proposed in subcommitte 15.

Sponsor's note: original proposal: 4095 characters, modified by subcommittee to 1020 (October 1992), modified by subcommittee to 510 (June 1993). In June 1993, also, a different limit for strings was defined for the case that a string is used as a subscript: 255 characters.

1.5 Dependencies

None.

2. Justification of Proposed Change

2.1 Needs

Current portable string length limitation is restrictive in communicating with other systems.

Currently, two proposals exist that intend to extend the portability limit for string lengths. The proposal in this document intends to set the limit for strings "in general" to 510 characters and "when used as subscripts" to 255 characters. The other proposal intends to use the same limit, regardless of the usage of a string.

2.2 Existing Practice in Area of the Proposed Change

Some **MUMPS** vendors offer increased string lengths, and software containing strings larger than the current portability limit is non-portable.

3. Description of the proposed change

3.1 General Description Of the Proposed Change

Current practice indicates a need to either enforce the current limitation, or to redefine the portability limit to a higher number. A straw poll taken in October 1992 between a number of multiples of 255 yielded the following result:

255	13 votes
510	16 votes
1020	11 votes (highest number with a majority)
2040	5 votes
4080	1 vote
more	1 vote (expressed preference: 16K)

The sponsor of this proposal interpreted these preferences as a guidance to pursue a new portability limit of 1020 characters.

3.2 Annotated Examples of Use

None required. Strings that exceed a length of 255 characters may become portable when

this proposal is accepted; strings that exceed a length of 510 characters will still be non-portable.

3.3 Formalization

In Section II, clause 2.3.3 (Values of subscripts) (RMDS Version 8), Replace the text

> There is no specific restriction on the length of a subscript, but a...

by

> The length of individual subscripts is limited to 255 characters, in addition, a...

In Section II, clause 2.8 (Character strings) (RMDS Version 8), change the value 255 to 510.

4. Implementation impacts

4.1 Impact on Existing User Practices and Investments

Application dependent. As implementations will need larger storage allocation units for intermediate results, performance may suffer when the combination of memory requirements per user and number of simultaneous users starts to exceed available resources.

4.2 Impact on Existing Vendor Practices and Investments

Small (according to a straw poll among the major implementors).

4.3 Techniques and Costs for Compliance Verification

Create a routine containing the following code:

```
STRLEN      ;This tests whether the longer string length is
            implemented
            SET X=""
            WRITE !-, "This should work with the current standard"
            FOR I=1:1:255 SET X=X_$CHAR(I#26+65)
            DO SHOW
            WRITE !,"The next code-line is not portable with"
            WRITE !,"the current standard, but would become"
            WRITE !,”importable when this proposal is accepted."
            FOR I=256:1:510 SET X=X_$CHAR(I#26+65)
            DO SHOW
            WRITE !,"The following remains non-portable:"
            SET X=X_"more"
            DO SHOW
            QUIT
            ;
SUBS        WRITE !,"Examples with subscripts:"
            WRITE !,"This was already portable:
            SET S="" FOR I=1:1:100 SET S=S_"X"
            SET S(S)="Long subscript"
            WRITE i,"This will also become portable:"
            SET S="" FOR I=1:1:255 SET S=S_"X"
            SET S(S)="Very long subscript"
```

```
           WRITE !,"This remains non-portable:"
           SET S=S_"This is still portable"
           SET S(S)="But this subscript may be too long."
           ;
SHOW       WRITE !,"X now has a length of ",$LENGTH(X),"
           characters."
           QUIT
```

An implementation that conforms to the standard should be able to execute this routine, but may report an error when the attempt is made to extend the length of local variable X beyond 510 characters, or while using the string in S that is longer than 255 characters as a subscript.

4.4 Legal considerations

None.

5. Closely related standards activities

5.1 Other X11 Proposals (Type A or Type B) Under Consideration

Counterproposal for extension of string-length that does not differentiate based on usage of strings.

5.2 Other Related Standards Efforts

None.

5.3 Recommendations for Co-ordinating Liaison

Subcommittee 15, SQL task group.

6. List of Associated Documents

None.

7. Issues, Pros and Cons, and Discussion

7.1 Date, meeting in City

So far, all meetings reported as cons:
- proposed extension is too much
- proposed extension is not enough