MUMPS Development Committee

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

Multiple patatoms Within alternation

February 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

Multiple patatoms Within alternation

1.2 MDC Proposer and Sponsor

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1.3 Motion

None.

1.4 History

Feb 1994	X11/SC13/94-1	Approved as MDC Type A 28:0:1.
Oct 1993	X11/SC13/TG2/93-12	Modified to be consistent with new proposal format. Approved as SC13 type A 16:0:1
Jun 1993	X11/SC13/TG2/93-4	Task group amendments included. Approved as SC13 type B.
Feb 1993	X11/SC13/TG2/93-1	Proposal discussed in SC13 TG2.
Aug 1992	X11/SC13/92-32	Issue brought forth by an unidentified author.

1.5 Dependencies

None.

2. Justification of the Proposed Change

2.1 Needs

The formalism for alternation does not allow for more than one patatom within any alternative in alternation. For example, ?1(4P,4A) is allowed, but ?1(2P2U,4A) is not allowed. The intent of the original alternation proposal, as exhibited by its examples, was to allow this.

2.2 Existing Practice in Area of the Proposed Change

Users who wish to check for a juxtaposition of patatoms within alternation are currently required by the existing MDC Type A Logical OR to use more than one pattern match operation (see example 1 in section 3.2).

3. Description of the Proposed Change

3.1 General Description of the Proposed Change

Change the definition of alternation to allow multiple patatoms within an alternative in alternation.

3.2 Annotated Examples of Use

3.2.1 Example 1

```
IF X?2N1(3P2A,2U3N).E
```

will now be possible, and is equivalent to

```
IF (X?2N3P2A.E)!(X?2N2U3N.E)
```

3.2.2 Example 2

```
IF X?2N1"-"1(3N1"-"1N,1N1":"4N)
```

can be used to validate data which must be in one of two forms:
nn-nnn-n or nn-n:nnnn.

3.3 Formalization

In Section **7.2.3** of the RMDS version 8, change the definition of alternation to:

alternation ::= (L patgrp)

and add

patgrp ::= patatom ...

Also, change the sentence which begins "An alternation is satisfied if" to read:

An alternation is satisfied if any one of its patgrp components individually matches the corresponding S_i.

4. Implementation Effects

4.1 Effect on Existing User Practices and Investments

Existing MUMPS code will be unaffected by this proposal. However, this proposal introduces the potential for improving existing code as well as new code in terms of efficiency, clarity, debugging and maintenance.

4.2 Effect on Existing Vendor Practices and Investments

At least one vendor is known to have already implemented this proposal.

4.3 Techniques and Costs for Compliance Verification

The sample MUMPS code below must result in output of "11".

```
TEST    SET X="24,,,AB"
        SET Y="24,,ABC"
        WRITE X?2N1(3P2A,2P3A)
        WRITE Y?2N1(3P2A,2P3A)
        QUIT
```

4.4 Legal Considerations

None.

5. Closely Related Standards Activities

5.1 Other X11 Proposals Under Consideration

None.

5.2 Other Related Standards Efforts

None.

5.3 Recommendations for Coordinating Liaison

None.

6. Associated Documents

X11/90-51 Logical OR Capability in Pattern Match Operator (Alternation).

7. Issues, Pros and Cons, and Discussion

February, 1994 MDC Meeting

Pro: 1. Has been implemented
2. Original intent

Con: None

October, 1993 SC 13 Meeting

Pro: 1. Has been implemented
2. Incorporates original intent
3. Needed functionality

Con: None

June, 1993 SC 13 Meeting

Pro: 1. Has been implemented
2. Incorporates original intent
3. Needed functionality

Con: None

8. Glossary

None.

9. Appendix

None.