I.3-FREEFMT-UFIELD FREE FORMAT SYNTAX RULES FOR INPUT READ BY ROUTINE
                    UFIELD

The routine UFIELD is used by several programs to read input fields
using free format. Free format allows input fields to be entered
without a predefined format.

Input fields are character strings, integer values or real values.

Input fields must be entered using the following rules in order to be
correctly interpreted:

Field Location: Only columns 1 through 72 of the input record are
                    interpreted. The first field can start in any
                    column of the input record.

Comments: All comments start with a $ and continue from the
                    $ to the end of the card. The $ can be in
                    column 1, in which case the whole card is a
                    comment. Comments can also be included on command
                    cards by entering the $ at least one space after
                    the command. For example:

                        $ THIS IS A COMMENT RECORD
                        @COMMAND $ THIS IS ALSO A COMMENT

Continuations: Many commands can have more input fields than can
                    fit on one input record. These fields can be on
                    as many input records as needed. The field
                    containing an input field can not be split between
                    two input records. For example:

                        @COMMAND OPTIONS VALUE1
                        VALUE2

Delimiters: Input fields must be separated by at least one
                    blank or a comma. The following statements are
                    equivalent:

                        field1 field2
                        field1,field2

Null Fields: A null field is two consecutive commas. Null
                    fields can be used when no value is to be input or
                    the default value is to be used. A single null
                    field would be specified as follows:

                        @COMMAND
                        FIELD1 ,, FIELD3

Character Strings: All input enclosed in apostrophes is considered
                     to
                    be a character string. If a character string has
                    embedded apostrophes, each of them should be
                    replaced by two apostrophes. Any input field

which is not an integer or real value is assumed
to be a character string. For example:

Input	Field Type	Field Value
STRING	character	STRING
'STRING NEW'	character	STRING NEW
'DON''T'	character	DON'T
109	integer	109
'109'	character	109

Integer Values: Any field that contains only the characters 0 thru
9 is an integer. The number may be immediately
preceded by + or -. For example:

Input	Field Type	Field Value
109	integer	+109
-109	integer	-109
-10 9	integer	-10 and +9

Real Values: Any field that contains only the characters 0 thru
9 and only one decimal point is a real value. The
number may be immediately preceded by + or -. For
example:

Input	Field Type	Field Value
real	+109.0	
-.109	real	-0.109
.10 9	real and integer	+.10 and +9
1.09.	character	1.09.