

Subject: MCR10112, Allow build script directory identifier to begin with a digit

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[Multics Ticket #276](#) reports an mbuild bug in which mbuild complains if the installation directory and build script file are identified by a name beginning with a digit. There is no particular reason why a directory or file entry name may not begin with a digit. This limitation should be removed from mbuild.

Proposed Changes

The restriction is imposed only by mbuild_script_parse_.rd, the program that parses build script files. It was using the <ename> syntax routine to validate names of bound and unbound object segments, and names on source files, include files, info segments, archives, and build script-related files (the .mb file, and its derived update_seg install exec_com, and update_seg data files).

The repair is to create a separate <progName> syntax routine to validate names on Bound_obj: and Unbound_obj: statements; and to broaden the limits of the existing <ename> syntax routine.

The change in requirements is most clearly shown by comparing the ename subroutine in the installed mbuild with the revised ename and progName subroutines in the repaired mbuild_script_parse_.rd source.

```
pr [lpn mbuild_script_parse_.rd] -fm "/ename:/" -to "/end ename;/"
```

```
ename:
  proc() returns (bit(1) aligned);

  if token.Lvalue > 0 then
    if token.Lvalue <= 32 then
      if verify(substr(token_value,1,1),
"ABCDEFGHIJKLMN O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z _") = 0 then
        if verify (token_value,
" !&+-. / 0 1 2 3 4 5 6 7 8 9 : A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z ^ _ ~") = 0 then
          if index(token_value,":") = 0 then
            if index(token_value,".") = 0 then
              return("1"b);
            return("0"b);
          end ename;
r 13:08 1.324 15 level 2
```

```

pr mbuild_script_parse_.rd -fm "/ename:" -to "/end ename;/"
ename:
    proc() returns (bit(1) aligned);

    if token.Lvalue > 0 then
        if token.Lvalue <= 32 then
            if verify(substr(token_value,1,1),
"!&+-/0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz^~") = 0 then
                if verify (token_value,
" !&+-./0123456789:ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz^~") = 0 then
                    if index(token_value,":") = 0 then
                        if index(token_value,".") = 0 then
                            if substr(token_value,token.Lvalue,1) ^= "." then
                                return("1"b);
                            return("0"b);
                        return("0"b);
                    return("0"b);
                return("0"b);
            return("0"b);
        return("0"b);
    return("0"b);

progName:
    entry() returns (bit(1) aligned);

    if token.Lvalue > 0 then
        if token.Lvalue <= 32 then
            if verify(substr(token_value,1,1),
"ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz") = 0 then
                if verify (token_value,
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz") = 0 then
                    return("1"b);
                return("0"b);
            return("0"b);
        return("0"b);
    return("0"b);

end ename;

```

The new progName syntax routine is used in Bound_obj and Unbound_obj statements, and in the compiler option of source lines in build script files.

Files changed by this proposal are shown in the following build script.

Description:

- A) Repair Multics Ticket 276: Allow mbuild install directory identifier and build script name to begin with a digit.

Installation_directory: >udd>m>gd>w>mb;

Build_script: mb.mb;

Bound_obj: bound_mbuild_ IN: tools UPDATE;
source: mbuild_script_parse_.rd REPLACE compiler: rdc -ot -trace off;

Testing

An mbuild containing the repair was used to build an install directory names 1mb containing a trivial changes to the library_fetch.pl1 source program. All mbuild steps through up to running the "update_seg install" command completed without errors being reported.

Documentation

This change removes an undocumented restriction. Therefore no document changes are needed.

Version History

Date	Revision	Author	Comment
2022-01-07	1.0	Gary Dixon	Initial version of this MCR.