

AmigaMail

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Chapter 1

AmigaMail

1.1 I-3: 2.0 Version Strings

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Unlike the 1.3 version command, the 2.0 version command has the ability to search Amiga files for a version string. If you try the 2.0 version command on any of the 2.0 Workbench commands, you will find that almost all Workbench commands now contain these special version strings. For example, running version on the current version of SYS:Utilities/More will output More 37.2.

This embedded version string provides a simple way for a user to determine the specific version of a command. This is extremely useful for bug reports and phone support. You may enter these strings in your code yourself and update them by hand when required, or you may automate updates by using the bumprev tool (provided on a variety of DevCon disk sets and also in the Preliminary Software Toolkit II).

Hand-Coded Version Strings

Automating Version Numbering with Bumprev

1.2 Hand-Coded Version Strings

The hand-coded method can be used in text files and is often quite suitable for simple programs with a single code module. If you code the version strings by hand, they should be formatted like the examples below. The example hand-coded strings are for a program named myapp, version 37.1, date 20-Mar-91 (20.3.91):

In C:

```
UBYTE versiontag[] = "\0$VER: appname 37.1 (20.3.91)";
```

In assembler:

```
versiontag      dc.b 0,'$VER: myapp 37.1 (20.3.91)',0
```

In a text file:

```
$VER: myapp.doc 37.1 (20.3.91)
```

Note that the NULL ("`\0`" or `0,`) at the beginning of the `versiontag` string is not necessary but can be useful if you choose to `#define` the string and wish to give a version number to a C program with no data segment. With the initial NULL, you can concatenate a `#defined` `versiontag` string onto an arbitrary immediate string used in your code to get the `versiontag` into your code segment.

1.3 Automating Version Numbering with Bumprev

The `bumprev` tool and the include files it creates are what we use internally to give version numbers to system ROM modules, disk-based devices and libraries, and 2.0 Workbench and Extras commands. `Bumprev` creates or updates three files -- a `name_rev.rev` file which contains the current revision number, and the C and assembler include files called `name_rev.h` and `name_rev.i`. These include files contain `#defines` (`.h`) or macros (`.i`) to define the name, version, revision, and date of your program in a variety of string and numeric formats.

By using the appropriate include file in one or more of your code modules, you can use these `#defines` (or macros) in place of hardcoded version and revision information. This way, whenever you ```bumprev``` your revision files and recompile (or reassemble) your program, all version, revision, and date references in your program will be automatically updated. You can even include a `bumprev` call in your makefile for automatic revision bumping on every make (although this can update the version number more often than is really necessary).

The usage of `bumprev` is: `bumprev <version> <name_rev>`

For example: `bumprev 37 myapp_rev`

The first time you use the above example `bumprev` call, it creates a `myapp_rev.rev` file containing ```1```, and `myapp_rev.h` and `.i` files containing a variety of version and revision `#defines` (or macros) for version 37.1. The next time you use the same `bumprev` command it updates the files so that all `#defines` (or macros) are for version 37.2.

`Bumprev` does have some caveats. If you accidentally type ```bumprev 37 myapp``` (instead of `myapp_rev`), `bumprev` will gladly overwrite any `myapp.h` or `myapp.i` file you happen to have rather than complain or automatically insert `_rev` into the output file names. Also, to make a major version switch (for example from 36 to 37), you must first delete the `myapp_rev.rev` file to make `bumprev` start the revisions over again at 1. Note that the 2.0 convention is for a major version number of 37 (to match the OS major version).

Here are example _rev.h and _rev.i files as generated by bumprev, and fragments of C and assembler code which include and reference these files.

Example myapp_rev.h generated by bumprev:

```
#define      VERSION      37
#define      REVISION     1
#define      DATE         "20.3.91"
#define      VERS         "myapp 37.1"
#define      VSTRING      "myapp 37.1 (20.3.91)\n\r"
#define      VERSTAG      "\0$VER: myapp 37.1 (20.3.91) "
```

Code example which includes myapp_rev.h:

```
/* myapp.c */

#include <exec/types.h>
#include <dos/dos.h>

/* stdlib.h and stdio.h contain prototypes for exit and printf.
 * Amiga.lib IO users could instead use <clib/alib_protos.h>
 * and <clib/alib_stdio_protos.h>
 */
#include <stdlib.h>
#include <stdio.h>
#include "myapp_rev.h"

/* NOTE: we reference VERSTAG version string for C:VERSION to find */
UBYTE versiontag[] = VERSTAG;

/* NOTE: we concatenate program name and version (VERS) with our
copyright */
UBYTE Copyright[] = VERS "Copyright(c) 1991 CATS Inc. All Rights Reserved";

void main(int argc, char **argv)
{
    /* Print our Copyright string.
     * Copyright string includes our myapp _rev.h version and date
     */
    printf("%s\n", Copyright);
    exit(RETURN_OK);
}
```

Example mylib_rev.i generated by bumprev:

```
VERSION      EQU 37
REVISION     EQU 1
DATE         MACRO
```

```

        dc.b      '20.3.91'
    ENDM
VERS      MACRO
        dc.b      'mylib 37.1'
    ENDM
VSTRING   MACRO
        dc.b      'mylib 37.1 (20.3.91)',13,10,0
    ENDM
VERSTAG   MACRO
        dc.b      0,'$VER: mylib 37.1 (20.3.91)',0
    ENDM

```

Code example which includes mylib_rev.i:

* This is an example of an initial library code module
 * Mylib_rev.i is generated with bumprev

```

nolist
    include "exec/types.i"
    include "exec/initializers.i"
    include "exec/libraries.i"
    include "exec/resident.i"

    include "mylib.i"
    include "mylib_rev.i"          ; Bumprev revision include file
list

        ; external
xref    InitLib                ; init function
xref    FuncTable              ; function table
xref    EndSkip                ; End of code segment

; code at start of file in case anyone tries to execute library as program

    entry    FalseStart
FalseStart
    moveq    #-1,d0
    rts

ResidentNode
    dc.w     RTC_MATCHWORD      ; RT_MATCHWORD
    dc.l     ResidentNode      ; RT_MATCHTAG
    dc.l     EndSkip            ; RT_ENDSKIP
    dc.b     RTF_AUTOINIT       ; RT_FLAGS
    dc.b     VERSION            ; RT_VERSION          ;From mylib_rev.i
    dc.b     NT_LIBRARY         ; RT_TYPE
    dc.b     0                  ; RT_PRI
    dc.l     LibName            ; RT_NAME
    dc.l     IDString           ; RT_IDString          ;Contains VSTRING
    dc.l     InitTable          ; RT_SIZE              ; from mylib_rev.i

```

```
LibName:      DC.B      'mylib.library',0
IDString:     VSTRING                                ;From mylib_rev.i
              CNOP      0,2

InitTable
    dc.l      XMyLibBase_Size
    dc.l      FuncTable
    dc.l      DataTable
    dc.l      InitLib

DataTable
    ; standard library stuff
    INITBYTE   LN_TYPE,NT_LIBRARY
    INITLONG   LN_NAME,LibName
    INITBYTE   LIB_FLAGS,LIBF_SUMUSED!LIBF_CHANGED
    INITWORD   LIB_VERSION,VERSION                    ;From mylib_rev.i
    INITWORD   LIB_REVISION,REVISION                  ;From mylib_rev.i
    INITLONG   LIB_IDSTRING,IDString                  ;Contains VSTRING
                                                       ; from mylib_rev.i

    ; library specific stuff

    ; end of init list
    dc.l      0

end
```
