# The Resource Decompiler

**Version 1.1**
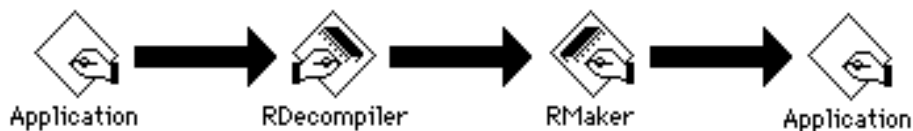
**by**

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## Introduction

The Resource Decompiler is a Macintosh application which can convert certain types of resources in a resource file into source code suitable for compiling by RMaker, the Apple Macintosh Resource Compiler.  This permits a programmer to capture a resource such as an Icon, Dialog Box, or Window from an existing application, possibly modify it for other purposes, and add the new resource to another application.
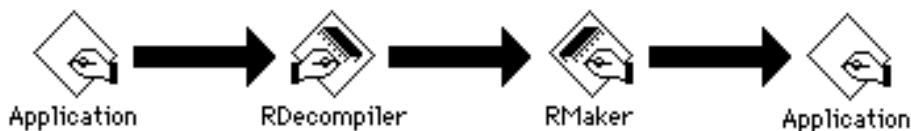
The Resource Decompiler is more flexible than the Decompile option in Apple's ResEdit resource editor.  This program decompiles the resource more completely, has the capability to add comments to the preamble of the resource source text, can decompile resources selectively, can mix resources from several different resource files, and contains a simple built-in editor for editing the decompiled resources.

The Resource Decompiler is distributed as user-supported software.  It is **not** public domain software.  Please honor my rights to the software and the documentation.

If you find the decompiler useful, please register your copy by sending $25.00 to:

> SysCon Consulting
> 9001 Laurel Grove Dr.
> Austin, TX 78758

Registered users will receive notice of future updates to the program.   You may **give** a copy of the software and documentation to others under the condition that you do not charge for the copy and that you accompany the program with this documentation file.



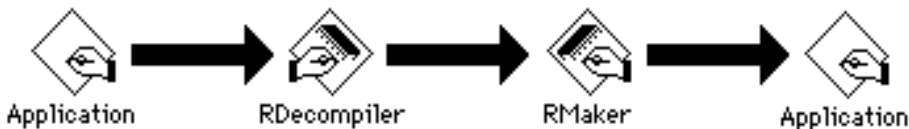Application → RDecompiler → RMaker → Application

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Please report any bugs or enhancement ideas to me at the above address.

## Resource Types Supported

The Resource Decompiler supports all standard resource types supported by Apple's RMaker Resource Compiler.  Specifically, the supported types are ALRT, BNDL, CNTL, DITL, DLOG, FREF, MENU, STR , STR#, and WIND.  In addition ICN# and ICON are supported as extensions to the type GNRL.  For ease in editing the output from the Resource Decompiler, each different resource ID carries its own preamble comments and its own TYPE statement.  Other types could be easily added if required.

## The Menus

In addition to the standard Apple menu with the installed desk accessories and an  About Resource Decompiler... entry, there are other menus.



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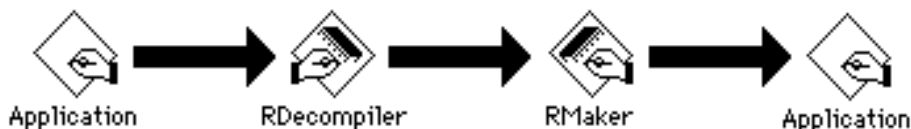
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The File menu

```
┌──────────────────────────────────────┐
│ File                                   │
├──────────────────────────────────────┤
│ Open Resource File...          ⌘R      │
│ Close Resource File            ⌘K      │
│ ┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈ │
│ New Text File                  ⌘N      │
│ Open Decompiled Text...        ⌘O      │
│ Save Decompiled Text           ⌘S      │
│ Save Decompiled Text As...             │
│ Revert to Prior Text File              │
│ ┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈ │
│ Close                                  │
│ Quit                           ⌘Q      │
└──────────────────────────────────────┘
```

controls the opening and closing of both resource files and TEXT files.  The current text files is the one to which the decompiled resources are written.  The currently open resource file is the one from which the resources to be decompiled are taken.

The Open Resource File... menu item presents a standard open file dialog box with files of type APPL.  Once a resource file is open, this menu item is disabled so that only one resource file may be open at a time.  Also the Resources menu is enabled once a resource file is open.

The Close Resource File menu item is enabled once a resource file is open. Choosing this item closes the currently open resource file and enables the Open Resource File... menu item.  Quitting also closes any open resource file.

The New Text File menu item opens an empty edit window with the title Untitled. Multiple edit windows may be open simultaneously.

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The Open Decompiled Text... menu item presents a standard open file dialog box with files of type TEXT.  Opening a file opens an edit window a places the text of this file in the window.  This file then becomes the current text file.
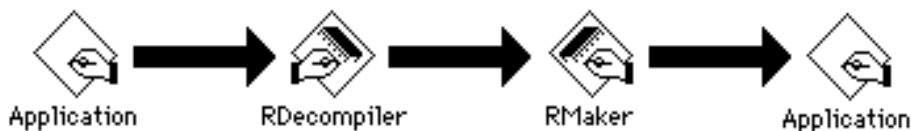
The Save Decompiled Text menu item saves the current text file onto disk, overwriting the file on disk.  If the current file is Untitled, a dialog box will be presented to allow the file to be named.

The Save Decompiled Text As... menu item saves the current text file onto disk after presenting a standard save file dialog.  If the chosen file name already exists, the system asks if the file should be replaced.  Choosing this item allows the current file to be saved under a new name.

The Revert to Prior Text File menu item will restore the current file to the state of the file as of the last time it was saved.  A dialog box will ask you to confirm the action.

The Close menu item closes the current text file (or desk accessory if it is the current window).  If the file has been changed, a dialog box will be presented to confirm saving the changes.

The Quit menu item closes any open text or resource files.  If a file has been changed, a dialog box will be presented to confirm saving the changes.  The program is then exited to the finder.
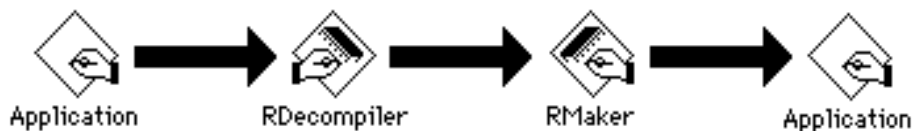


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The Edit menu



follows the standard Macintosh user interface for the edit menu.  The Undo menu item is not implemented in the current version except for desk accessories.  Choosing the Select All menu item causes all the text in the current text file to be selected.
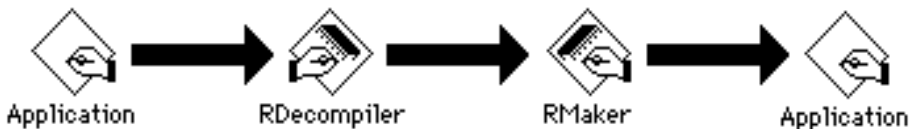


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The Resource menu

```
 Resource 
 ALRT
 BNDL
 CNTL
 DITL
 DLOG
 FREF
 ILN#
 ICON
 MENU
 STR
 STR#
 WIND
```

is enabled once a resource file has been opened.  Only those resources present in the open resource file are enabled.  Choosing a menu entry for a resource type causes the resource to be decompiled and the source text suitable for compilation by Apple's resource compiler, RMaker, to be placed into the current text file at its insertion point.

If no text file is open when this menu is chosen, a dialog box will remind you to open one.

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The Options menu

**Options**
**Creator**
**Comments**
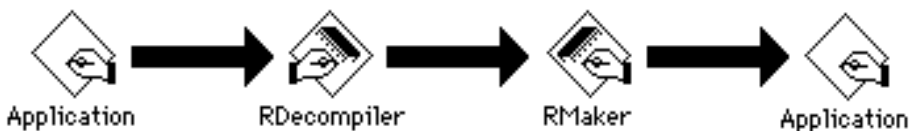
allows the user to change the default File Creator signature and to decide whether comments are to be added as a preamble to each decompiled resource.

The default creator is EDIT.  Any change becomes effective with the next new text file created.  Only the first four characters of the input string are used.  For example, if the creator is changed to MACA, MacWrite will be launched when the document is opened.

The Comments item contains buttons to choose the status of comment inclusion.  The default is to include the comment preamble.

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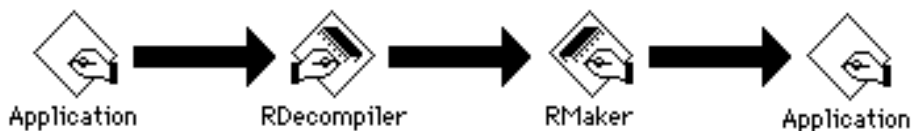
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## Operating the Decompiler

The recommended procedure for operating the Resource Decompiler is to first open a new or existing text file.  Then open the chosen resource file.  Next, choose those resource types from the Resource menu that you wish decompiled.  Finally, save the text file, possibly after minor editing.

## Using the Built-in Editor

The Resource Decompiler contains a built-in editor for minor editing of the decompiled text.  Because of the exclusive use of the toolbox TE (TextEdit) commands, the editing is quite slow.  All standard text editing functions except Undo, Search/Replace and extensions of the selected text by dragging the mouse pointer above or below the window are available.  Major editing is probably best done within your favorite text editor.

## Combining Resource Files

Decompiled output from several resource files may be combined by decompiling resources from one resource file, closing it and opening another, and decompiling resources from the next resource file.

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## Combining Source Text Files

Several text files can be opened in separate windows.  Standard Cut, Copy, and Paste can be done between the windows.

## Hints, Kinks (Bugs), and Limitations

The RMaker commands for naming the Resource File must be added by hand to the beginning of the text file.

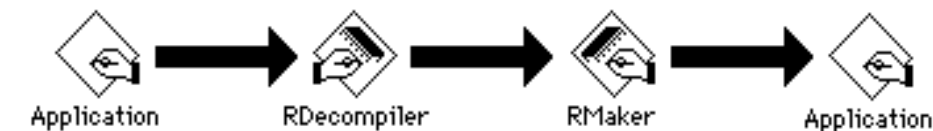The file type of the saved text files is TEXT and the default creator is EDIT.

Types of dialog items besides Static text, Editable text, Radio Buttons, Check Boxes, and Buttons will be decompiled as "unknown type nn" where nn is the dialog item type.  These must be edited before compiling.

Decompilation is quickest when the decompiled text is being placed into a small text file at the end of the file.

The desk scrap is not read upon entering the Resource Decompiler nor is it saved upon exiting.  Similarly, the desk scrap is not handled with desk accessories.

Version 1.1 has been recompiled with LightSpeedC and now works correctly with HFS, System 4.x and the Macintosh II.

## Examples



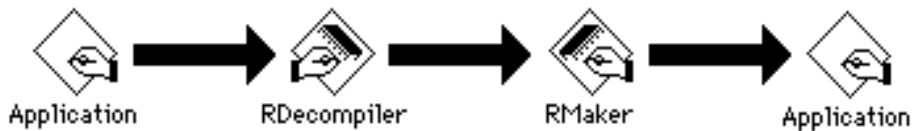Application     RDecompiler     RMaker     Application

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The following is decompiled output from RMaker.

```
* An Alert template
*   ,ID (attributes)
*   boundsrect (global Top, Left, Bottom, Right)
*   resource ID of item list
*   stages word in hex
Type ALRT
 ,20 (0)
100 96 228 416
20
7777

* An Application Bundle
*   ,ID (attributes)
*   bundle owner, ID of version data
*   resource type
*   local ID .. maps to resource ID ..
Type BNDL
 ,128 (0)
RMKR 0
ICN#
0 128 1 129
FREF
0 128 1 129
```



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# The Resource Decompiler

```
* A Control template
*   ,ID (attributes)
*   title
*   boundsrect (global Top, Left, Bottom, Right)
*   (In)Visible
*   procid: control definition ID
*   refcon, for program's use.
*   minimum maximum value
Type CNTL
 ,0 (0)
Stop
244 40 260 80
Invisible
0
0
0 1 0

* A Dialog or Alert Item List
*   ,ID (attributes)
*   number of items in list
*   type of item
*   top left bottom right
*   message
Type DITL
 ,20 (0)
2

button
90 40 118 76
OK

staticText
20 64 70 224
An Input/Output error has occurred.

* A File Reference template
*   ,ID (attributes)
*   File Type, Local ID for icon list
Type FREF
 ,129 (0)
RMKR 1
```
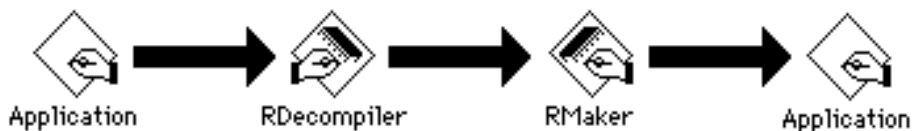


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# The Resource Decompiler

* A File Reference template
*   ,ID (attributes)
*   File Type, Local ID for icon list
Type FREF
 ,128 (0)
APPL 0

* An icon list for the icon
*   ,ID (attributes)
*   Data is Hex data (.H)
*   the icon data: 32 lines of 8 hex chars each
*   the icon mask: 32 lines of 8 hex chars each
Type ICN# = GNRL
 ,128 (32)
.H
0001 0000 0002 8000 0004 4000 0008 2000
0010 1000 0020 0800 0047 E400 008F D200
011F A900 023F 4080 047E A040 08FD 0020
11FA 8010 23F4 0008 47EA 3F04 8FD0 4082
4FA8 8041 2441 3022 1223 C814 0806 7F0F
0402 3007 0201 0007 0100 8007 0080 6007
0040 1FE7 0020 021F 0010 0407 0008 0800
0004 1000 0002 2000 0001 4000 0000 8000
0001 0000 0003 8000 0007 C000 000F E000
001F F000 003F F800 007F FC00 00FF FE00
01FF FF00 03FF FF80 07FF FFC0 0FFF FFE0
1FFF FFF0 3FFF FFF8 7FFF FFFC FFFF FFFE
7FFF FFFF 3FFF FFFE 1FFF FFFC 0FFF FFFF
07FF FFFF 03FF FFFF 01FF FFFF 00FF FFFF
007F FFFF 003F FFFF 001F FFFF 000F F800
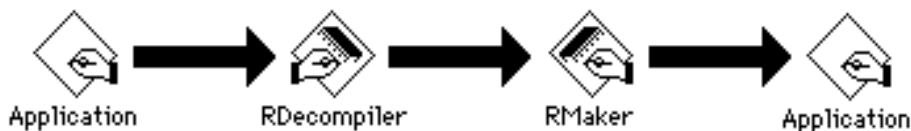0007 F000 0003 E000 0001 C000 0000 8000

* An icon.
*   ,ID (attributes)
*   Data is Hex data (.H)
*   the icon data: 32 lines of 8 hex chars each
Type ICON = GNRL
 ,511 (32)
.H
0007 FF80 0008 0000 0008 7E20 0008 0120
0008 0120 0408 0120 0C08 0120 0808 0120
6608 0120 9908 0120 8108 FE20 8008 0020
8008 0020 4A00 1F20 3400 0020 00FC 0020
0300 0000 0401 FFF0 0400 0008 03E0 1FE4
0010 0552 0010 00A9 0020 0001 0020 01FE
0018 0000 0004 0000 0000 C000 0001 2000
0002 5000 0000 8800 0000 0800 0000 1000



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# The Resource Decompiler

* Menus
*   ,ID (attributes)
*   menu title (an Apple symbol is \ 14 in hex)
*   menu items, ( means it's initially disabled.
*   (-  means a disabled line of dashes.
*   A trailing /Q, etc. means a command-key.
Type MENU
 ,3 (0)
Transfer
a.out
dis
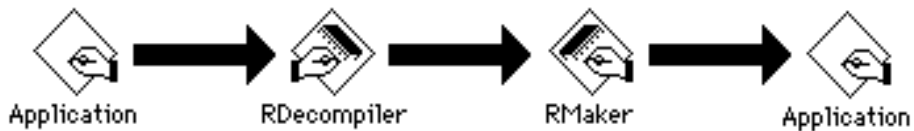Edit
mmcc
mmimp
mmlib
mmlink
RMaker

* An String template
*   ,ID (attributes)
*   string
Type STR
 ,1 (0)
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