RexxOpt

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	TITLE : RexxOpt		
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REVISION HISTORY			
NUMBER	DATE	DESCRIPTION	NAME

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RexxOpt

1.1   RexxOpt - ARexx script optimizer

```
            RexxOpt - ARexx script optimizer

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          Development by Ulrich Sibiller


              RexxOpt 1.7 User Manual


   Copyrights            Copyright information
   Disclaimer            Legal stuff

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1.2   Copyright notices...

```
                  COPYRIGHTS


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      Freeware © 1993-95 by PROXITY SOFTWORKS
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```

1.3   What does the RexxOpt archive consist of?

CONTENTS

This software package consists of the following files:

```
RexxOpt                      - the optimizer itself
RexxOpt.guide                - this documentation in AmigaGuide format
```

If you find anything else in this archive, delete it!

1.4   What is RexxOpt?

DESCRIPTION

ARexx scripts are an easy way to adapt programs to your needs. The only
problem with this is that ARexx is an interpreter language and due to this it
is slow.   Some have tried to write compilers for ARexx, but those compilers
produce long (well, very long) executables and that's what I dislike. You
can't just change something in a compiled script because it is no more a
script but an executable. You can use this as a kind of protection against
people hacking around in your ARexx scripts but if you get such a script and
it doesn't work correctly on your system you have no chance to fix it.

This is where RexxOpt appears: Using RexxOpt you have the possibility to
speed up your scripts a lot while still being able to edit them. When run in
default mode (no switch given in command line) the following is done:

  - all unnecessary blank characters (ASCII 9, 32 and 160) are removed
  - all comments are removed
  - consecutive strings are merge to one single string
  - ; is inserted in front of any DO within the script
  - all blank characters outside strings and comments are replaced by
    <space> (ASCII 32)
  - all (remaining) lines are put into one single line
  - a new comment line is put in front of the script because ARexx requires a
    script to begin with a comment.

The optimized script you get will look like "spaghetti code" but is still a
complete ARexx script and ready to be run. It will (in most cases) be
shorter than the original script and can be executed much faster, making
working with ARexx much more comfortable. Many editors aren't capable of
handling extremely long lines like they can occur here. Consequently it is
advisable to keep the original script and if you have to change something
change it there and optimize it again. Another reason for not killing the
original is that I can't guarantee RexxOpt to work perfectly (I'm only human,
you know, and it worked well with MY scripts...) and so it can happen that

your scripts fail to work afterwards. Keeping the original is always a good
idea. (BTW: If you find an ARexx script that fails to work after using
RexxOpt please send it to me. Perhaps I can improve my code.)

1.5 What does RexxOpt need to work?

                              SYSTEM REQUIREMENTS

You need AmigaOS 2.0 or better to run RexxOpt.

Additionally it would be a good idea to have ARexx installed on your system
since it makes not much sense to optimize ARexx scripts when you can't use
them.

1.6 How do I install RexxOpt?

                                INSTALLATION

Installation is very simple. Just copy the file RexxOpt to somewhere in your
command path. That's it...

1.7 How do I use RexxOpt?

                                   USAGE

Using RexxOpt is very easy. The syntax is as following:

    RexxOpt <srcfile> [<destfile>] [COPYCOMMENTS] [SINGLEBLANKS] [RETAINLINES]
                                   [NOTITLECOMMENT] [SHOWNESTED] [NOBLANKSTRIP]
                                   [KILLBLANKLINES] [NOREPLACE] [NOSTRINGMERGE]
                                   [QUICK] [DEOPT] [FIRSTCOMMENT]

Template:
    SOURCE/A, DEST, CC=COPYCOMMENTS/S, SB=SINGLEBLANKS=SINGLESPACES/S,
    RL=RETAINLINES/S, NTC=NOTITLECOMMENT/S, SN=SHOWNESTED/S,
    NBS=NOBLANKSTRIP=NOSPACESTRIP/S, KBL=KILLBLANKLINES/S, NR=NOREPLACE/S,
    NSM=NOSTRINGMERGE/S, Q=QUICK/S, DEOPT/S, FC=FIRSTCOMMENT/S

RexxOpt will read <srcfile>, optimize it and save the result to <destfile>.
If there's no destfile given RexxOpt does the following:

If <srcfile> has the extension ".long" already <destfile> will be <srcfile>
without the extension (result of optimizing "TerryPratchett.rexx.long" is
saved to "TerryPratchett.rexx"). Otherwise <srcfile> is renamed to
"<srcfile>.long" and the optimized file is written as <srcfile>. If this
fails it tries to save optimized file as "<srcfile>.opt". Finally, if this
fails, too, nothing will be written and RexxOpt will abort.

Some examples:

```
RexxOpt ex1.rexx ex2.rexx        "ex1.rexx" will be  optimized and  the result
                                 will be saved in "ex2.rexx".

RexxOpt ex3.rexx                 "ex3.rexx" will be renamed to "ex3.rexx.long"
                                 and the  optimized result  will be stored  in
                                 "ex3.rexx".

RexxOpt ex4.rexx.long            "ex4.rexx.long" will  be  optimized  and  the
                                 result will be written to "ex4.rexx"

RexxOpt ex5.rexx                 RexxOpt    tries   to   rename   "ex5.rexx" to
                                 "ex5.rexx.long". Let's  say this  fails. Now
                                 RexxOpt  will write  the optimized  result to
                                 "ex5.rexx.opt".
```

There   will be no warning if <destfile> already exists, it will be
overwritten, so be careful. If <srcfile> has a filenote this will be copied
to <destfile>, too, otherwise a filenote telling you that this is a
(de)optimized script will be attached. You can stop optimization by pressing
CTRL-C, nothing will be written then. Any error happening while running will
cause the program to exit, not saving anything. RexxOpt will show you an
error message then and abort with return code 20 (RETURN_FAIL). If you break
the program with CTRL-C you'll get return code 5 (RETURN_WARN). In any other
case it shows how many bytes were gained by the optimization and returns 0
(RETURN_OK).

Running RexxOpt without any arguments results in a little help page being
displayed.

1.8   Option Description

<div align="center">CC=COPYCOMMENTS/S</div>

This will prevent RexxOpt from removing the comments and so gain less speed.
In former versions (< 1.4) of RexxOpt this switch was needed when /* was used
within strings, but due to the quotation check introduced with V1.4 it is
rather superfluous. Use it if you don't want any comments to be removed.

1.9   Option Description

<div align="center">SB=SINGLEBLANKS=SINGLESPACES/S</div>

Normally a line like "filename__=__RESULT" (_ stands for a blank character
here) will cause RexxOpt to remove the blanks and convert this to
"filename=RESULT" (provided it doesn't belong to a string or comment). The
SINGLEBLANKS switch will suppress this behavior, RexxOpt won't remove the
blanks but compress them to a single one, resulting in a line like

"filename_=_RESULT" (in the above example).

Blanks are normally removed when they are
  – preceding or following + – , < > & * = / | % ^ or :
  – preceding)
  – following (or ~

If you find a case where this switch is needed please report it to me so that
I can improve my code (again). SINGLEBLANKS has no effect with NOBLANKSTRIP
given in the command line.

1.10   Option Description

RL=RETAINLINES/S

Prevents RexxOpt from merging all lines into one single line and will keep
all linefeeds so that you still have an easily readable (and editable) file.

1.11   Option Description

NTC=NOTITLECOMMENT/S

Normally RexxOpt inserts a little comment in the first line of the script
which tells about the used version of RexxOpt and if it was run in optimize
or deoptimize mode. It is necessary for ARexx scripts to have a comment at
the beginning but if you don't want that use this switch. Scripts which lack
a titlecomment won't be accepted by the ARexx interpreter. When you use the
NOTITLECOMMENT switch don't forget to add a comment at the beginning of the
file.

1.12   Option Description

SN=SHOWNESTED/S

When this is given RexxOpt will report every nested comment it finds. I
don't know if this is of use for anyone but I needed it for debugging
purposes ;-). If someone needs this please tell me. I'm going to throw it out
some day...

1.13   Option Description

NBS=NOBLANKSTRIP=NOSPACESTRIP/S

This prevents RexxOpt from reducing multiple blanks in a row to one single blank. Blanks preceding a linefeed or ; are still removed! This switch is most useful if you just want to strip all comments off a script by specifying RETAINLINES together with NOBLANKSTRIP in the command line. NOBLANKSTRIP overrides SINGLEBLANKS.

1.14 Option Description

KBL=KILLBLANKLINES/S

This removes any empty lines in the script and also prevents the program from creating any. It is only useful in conjunction with RETAINLINES.

1.15 Option Description

NR=NOREPLACE/S

With NOREPLACE you can switch off blank character replacement. Normally all blanks (these are ASCII 9, 32 and 160) which don't belong to a string or comment are replaced by <SPACE> (ASCII 32).

1.16 Option Description

NSM=NOSTRINGMERGE/S

Two consecutive strings are normally merged to one, for example mystring="Hello"_"World" (_ means a blank here) will be converted to mystring="Hello_World". I don't expect this situation to happen very often, but optimization is optimization. With NOSTRINGMERGE the strings remain untouched.

1.17 Option Description

Q=QUICK/S

With this switch given RexxOpt will not show which line is currently processed. This results in a great speed gain with very long ARexx scripts.

1.18 Option Description

DEOPT/S

RexxOpt will (re)insert linefeeds instead of semicolons (;). This enables
you to make an easier readable script again (e.g. when you lost the
original). This is quite simple yet. I am planning to improve this one day to
make the deoptimized script more structured (indentions etc.).

1.19 Option Description

FC=FIRSTCOMMENT/S

This tells RexxOpt not to remove the first comment block found in source
file. Everything in this first comment block will be copied to destination
unchanged (including nested comments). If this comment block is followed by
a linefeed this will be copied, too. A following semicolon is replaced by a
linefeed. If FIRSTCOMMENT is given RexxOpt will not insert a titlecomment in
the first line of the script (unless script doesn't contain any comments).
The first comment in an ARexx script is usually used to give some information
of the script's purpose, the way it is called and copyright information.

FIRSTCOMMENT is overridden by COPYCOMMENTS.

1.20 What errors can happen?

ERRORS

In case of an error RexxOpt will give you one of following error messages and
fail with return code 20 (RETURN_FAIL).

The following errors can happen during optimization:

*** Comment termination without start in line xxx.
    RexxOpt found a comment terminator ("*/") but no corresponding comment
    start ("/*"). This is impossible since you can't terminate a comment
    which you didn't start before.

*** Comment not terminated.
    This occurs when there where more comment starts ("/*") than
    terminations ("*/") in the source file. Try to specify COPYCOMMENTS in
    the commandline and remove the comments "by hand". A script which
    provokes this error to happen can not be run from ARexx since the
    interpreter also checks this and exits with an error.

*** Destination file length: 0 bytes – nothing written.
    This happens when there's nothing left after optimization. Normally
    it shouldn't occur because this means the source file doesn't do anything

and a script that does nothing is quite useless.

*** Unmatched Quote.
    This occurs when a quotation started and was not terminated. Try to
    find the last quotation start (" or ') and check it. A script which
    provokes this error to happen can not be run from ARexx since the
    ARexx interpreter also checks this and exits with an error.

*** Source filename is too long.
    RexxOpt recognized that appending ".long" to source filename would
    result in a string that exceeds the maximum filename length of 30 bytes.
    This error can only happen when there is no destination filename given
    because it is needed to rename the source file in order to preserve the
    original script then. Try to shorten the filename (upto 25 characters
    allowed) or provide a destination filename. See usage for further
    explanations of filename handling.

*** Rename failed. Source filename is now "<filename>".
    If RexxOpt finds that only source file is given and the extension of
    this file is not ".long" it changes the name of the source file to
    "<srcfile>.long" before saving the result to <srcfile>. If save fails
    the file is renamed back to its original name. Above error occurs when
    this rename fails. See usage for further explanations of filename
    handling.

Some other errors result in common DOS error messages which are rather
self-explaining.

1.21 About the development of RexxOpt...

                              HISTORY

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1.7 (09.01.95) release

    - Guidefile improved again (repaired broken link)
    - New switch DEOPT: (re)insert linefeeds
    - Minor code optimization concerning nested comments
    - New switch FIRSTCOMMENT: Don't strip first comment
    - Filehandling rewritten: it is no longer necessary to provide a
      destination filename. This introduced some new error messages and
      made some of the old obsolete.
    - Titlecomment and filecomment are now set according to current mode
      (optimize/deoptimize).
    - If FIRSTCOMMENT is used, RexxOpt checks if the copied comment is
      followed by a linefeed or semicolon and copies that char, too (the
      semicolon is replaced by a linefeed then).

~~~~~~
1.6 (16.05.94) release

- Strings can be spread over several lines. They end with the second
  appearance of the quotation mark that started the string. RexxOpt
  didn't take care of that and inserted a ; where it shouldn't. Fixed.
- Blank char detection now also handles <ALT SPACE> (ASCII 160). RexxOpt
  treats this like <SPACE> (32) and <TAB> (9).
- Filenote from source file is now copied to destination file.
- Blank stripping now works with blanks surrounding : and
  following ~ (NOT preceding!).
- Blanks preceding (or following) won't be stripped anymore because
  this is the way the ARexx interpreter itself works. Due to this it can
  happen that optimized scripts get a bit longer than with previous
  versions of RexxOpt,
- Implemented blank replacement and switch NOREPLACE.
- Code totally revised.
- Improved handling of "" and '' within strings.
- Introduced string merging and corresponding switch NOSTRINGMERGE.
- RexxOpt now returns standard error codes, for use in batch files.
- Added shortcuts for all switches.
- Renamed SINGLESPACES to SINGLEBLANKS and NOSPACESTRIP to NOBLANKSTRIP
  because they act on all blank characters, not only on spaces. The old
  names are still supported but should not be used anymore.
- New switch: QUICK suppresses output of line numbers.
- RexxOpt adds a ; before every DO it finds. This speeds up loops a lot.
  Thanks to "wl-the_wizard-vtx" for the idea.
- Optimization can be stopped with CTRL-C now.
- Revised documentation.

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1.5 (27.02.94) release

- Forgot to remove spaces surrounding % and ^. Fixed.
- Problems with the continuation character (,) fixed. Thanks to Daniel
  J. Barrett for reporting this.

~~~~~~
1.4 (23.01.94) release

- Improved space/tab stripping (didn't work with several spaces before
  an '=' character)
- New switch: NOSPACESTRIP: Don't strip spaces.
- Quotation check. From now on RexxOpt won't change anything
  inside strings (starting/ending with ' or ")
- New switch: KILLBLANKLINES: Kill empty lines.
- No more problems with /* or */ inside quotes.
- Spaces are now stripped preceding/following: + - ( ) , < > & ; * = / |
- renamed EQUSPACES to SINGLESPACES, because of the above change

~~~~~~
1.3 (31.10.93) release

- Spaces/tabs at the end of lines are removed now (not within comments)
- Destination won't be written if file length is 0
- Added a linefeed to titlecomment string
- New switch: SHOWNESTED: Report nested comments
- BUGFIX: Sometimes a comment termination wasn't removed
- Byte gain is shown now

```
    - Improved error handling
    - Name of currently processed file is displayed now

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1.2  (05.09.93) release

    - New switch: NOTITLECOMMENT
    - BUGFIX: Didn't work correctly when a single "/" char was found within
      a comment

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1.1  (05.09.93)

    - New switch: RETAINLINES

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1.0  (28.08.93) release

    First release.

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1.22   disclaimer

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                              DISCLAIMER
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This software package is freely distributable, as long as no files are
modified or removed from the archive.

This software and information is provided "as is". No representations or
warranties are made with respect to the accuracy, reliability, performance,
currentness, or operation of this software and information, and all use is
at your own risk. Neither PROXITY SOFTWORKS nor the author assume any
responsibility or liability whatsoever with respect to your use of this
software and information.

1.23   proxity softworks

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                           PROXITY SOFTWORKS
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Proxity Softworks is a cooperation of Amiga developers. Their intention is
to release high quality software under one label.

Small utilities are released as freeware, larger tools will be distributed
using the model of shareware.

We are planning to develop some great standard tools in the future and
distribute them through commercial software distributors.

1.24   How to contact Proxity Softworks

                                   SUPPORT

Send bugreports or suggestions to Proxity Engineering and Technical Support
at Amiga Universe, the Proxity Softworks Support BBS.

   Usenet: pets@amiuni.tynet.sub.org
   Fidonet: 2:246/1416.0 (pets)

Messages will be read and replied by all Proxity Developers and Senior
Betatesters. If you don't have any access to electronic mail systems please
directly contact the software's author.

Any other donations, money or gifts are welcome.

Proxity Developers:

    Boris Folgmann
    Ulrich Sibiller
    Christian Hechelmann

1.25   Where to get new releases

                                   UPDATE

The latest versions of this software and other Proxity tools and utilities
are available:

 o On any AmiNet site, e.g. ftp.uni-kl.de 131.246.9.95.

 o At Amiga Universe, the Proxity Softworks Support BBS.

 o On SaarAG freely distributable disks and CD-ROMS.

1.26   amiuni

                                AMIGA UNIVERSE

  System: A2000/030/882/25/13
  Harddisk: 2.4 Gigs
  CD-ROM: Aminet 3
  Software: TrapDoor 1.85, Dialog Pro 1.0

  Usenet: amiuni.tynet.sub.org
  Fidonet: 2:246/1416
  Gernet: 21:492/1616
  X-Net: 56:56/716

```
++49-(0)7195-61970  USR DST HST 14.4
++49-(0)7195-920677 SupraFax V.FC 28.8
++49-(0)7195-63848  ZyXel E 16.8 MEMBERS ONLY
++49-(0)7195-91092  SupraFax V.FC 28.8
```

All lines support V.32bis with V.42bis.

System Operators: Jan Schmidwenzl, Peter Meyer, Jochen Grosenick.

All Proxity software products available.

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V.32bis 14.4 or HST 16.8 with ASL/V.42bis
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  IRC:    DrDisk

  PGP Fingerprint: 79 AA 6C 63 84 52 32 79  3C A9 B6 79 BD B7 4B 17

  Phone:     ++49-(0)7193-8057

  V.32bis 14.4 or HST 16.8 with ASL/V.42bis
```

1.30 credits

```
                    CREDITS


PROXITY SOFTWORKS and the author would like to thank the following persons:


   Jan Schmidwenzl  for running the Amiga Universe BBS!

   Peter Meyer     for his work as File-SysOp

   Marcus Kuba     for the IntuitionBase BBS!

   Michael Dreher for doing Marcus' work... ;-)

   Stefan Stuntz  for making Magic User Interface

   Armin Sander    for making RAP!TOP!COP!

   Martin Huttenloher for creating MagicWB

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```

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Markus Stipp

Peter Kunath   for DeliTracker
Frank Riffel

Olaf Barthel        for Term

...and of course all our beta testers!
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