

CBE

Anthony J Moringello

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COLLABORATORS

	<i>TITLE :</i> CBE		
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REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

CBE

1.1 Clip Board Enhancer © 1994 by Anthony J Moringello

Clip Board Enhancer V 3.3
by Anthony J Moringello

Introduction	Please be sure to read the Revision
Important	History and WeirdThings/Bugs before
System Requirements	writing to me if you have any questions
Installation	or problems. It would be best if you
Using CBE	were to read all the documentation
ToolTypes	even if you have a previous version
Menu Items	of CBE since so many changes have
ARexx Commands	been made since the previous
Reserved Keys	public release. Almost all known
Weird things/Bug List	problems/quirks are covered in
Revision History	the documentation.
Thanks	
To Do list	
About the Author	

1.2 Introduction:

Clipboard Enhancement Project

Clipboard Enhancer (a.k.a. CBE) is a commodity that enhances the way that the Amiga clipboard works. The clipboard (as I am sure most of you already know) is a device that allows programs to copy data from one application, and allow the user to paste that data back either to the same application or even to other applications that are capable of using the clipboard.

The Amiga has 256 such units, unfortunately almost all programs only use one unit. This I thought seemed a waste of quite a powerful system feature.

Another problem comes in when you cut/copy a second time, since the previous data is lost, the only way to paste that same information

back is to find where you got it from, and recopy/cut again. This of course is not always possible.

Well worry no longer for CBE is here. CBE keeps track of every piece of data that has been sent to the clipboard, and allows you to select any previous item, and paste it back. CBE's concept works similarly to another review buffer you are probably quite familiar with . . . what else but the CLI or Shell.

PLEASE be sure to read the Revision History, and Weird Things/Bugs if you have any questions or problems BEFORE writing to me. It is best to read ALL of the documentation even if you have a previous version of CBE since so many changes have been made since the last public release.

There have been MANY changes made to CBE. Please read these docs to find what all has changed so as to eliminate possible problems. At the VERY LEAST, read the Revision History, to see what has been changed.

1.3 Important Information:

Important Information

This software is provided as-is, without warranty either expressed or implied. In no event will the author be liable for direct, indirect, incidental or consequential damages or loss of data resulting from the use of this software. The risk as to results and performance of this software is assumed entirely by the user.

CBE is shareware, so if you find it useful, and use it regularly, I ask that you register CBE for \$5.00-\$15.00 (U.S. or even equivalent in your own currency). If you really cannot afford the registration fee, you may send me a registered version of a program you wrote that you feel is comparable in worth to CBE. Hard drives, A4000's, or a nice 20" monitor will also be accepted without question. Keep in mind the cost of mailing Over-Seas. ;-}

You will find my address at the end of this documentation.

1.4 System Requirements

System Requirements

- Any Amiga computer with KS2.04 or above.
CBE is KS3.0 aware and will use some it's special features if possible.
- MultiView with datatypes.
Although not required this is the default.
(Read Tool Types for more information).
- CBE will work with any program that uses Clipboard Unit 0.
- ARexx must be installed and running to use the ARexx features.

No other extra libraries or files are required.

1.5 Installation

Installation

Just drag the CBE icon to any drawer, or copy CBE to the directory where you wish it to run from. The best place for this of course is the WStartup directory on your boot drive.

You may wish to install the ARexx scripts to your REXX: directory, but the included files are more for example than any real practical purpose.

No additional libraries or handlers are required.

1.6 Using CBE

Using CBE

Using CBE to recall previous pieces of clipboard data is very easy. The following is a more detailed description of CBE's features and how to make them work.

- What you probably notice first is the large Listview gadget containing the clipboard data. As you Cut or Copy data from another program like CygnusEd, or Final Writer, you will see that the data you just clipped will be added to the displayed at the bottom of the listview box. You may scroll through the review list by using the scrollbar, by dragging the mouse up or down off the top or bottom of the box.
- To recall a previous clip to allow you to paste it back into an application, just select any item in the list. Pretty simple eh?
- Under the scroll-bar of the ListView box you will see a [J] button. This allows you to make the CBE window 'jump' to the next screen, and bring that screen to the front. This button is only active if you have turned on the ToolType USEFRONTSCREEN.

!!NOTE: The USEFRONTSCREEN is not a system friendly option. See the ToolTypes section for more info.

- The "VIEW" button allows you to see what is contained in the selected unit.

The ListView displays only a part of the data actually contained in the Clipboard history. If there is more data in the clipboard than is displayed in the listview, the last character will be shown as a '»'. You can view the data by pressing the [VIEW] button, or by double-clicking the item with the mouse.

MultiView is capable of automatically displaying text, images,

or even playing sounds. Use the Tool Types TXTVIEW, GFXVIEW, and SNDPLAY if you do not have MultiView.

The line displayed in the listview box contains a limited part of the clipboard's data as well as the IFF type specification for that unit. This will normally be FTEXT for a text clip. But it may display ILBM, or 8SVX and possibly others. The latter may just have a file name in the display, so some form of 'viewing' is needed to know exactly what is there.

Viewing is done asynchronously, so you may view as many units as memory allows.

- The CLEAR button allows you to empty the selected clipboard unit. If you double click on the Clear button a requester will pop up asking FREE, ALL, or CANCEL. Selecting ALL will clear out every unit in the clipboard including those that may be 'locked'. Selecting FREE will only clear those that are not 'locked'. These will clear the active unit as well, so further Pasting will yield no results until another Cut/Copy action is done. CANCEL will return, but the selected unit will still be cleared.
- The Free/Lock cycle button allows the user to Lock or unlock any unit in the review list. Locking a unit will keep CBE from selecting that unit for normal review storage. Under normal use, this unit will no longer be changed. The Reserved Key units start out locked. Freeing a unit will allow it to be unused when needed to store clipboard review history data. Locked units are signified by a '-' between the IFF specifier, and the clipboard data. Else a ':' is displayed. Reserved keys units are signified with a '='. If you unlock then try to re-lock this unit, only a '-' will be displayed. Use the Update button to reset the reserved key status. See warnings/notes under Reserved Keys.
- SaveLocks ToolType added. If set to 'YES', the lock on the current units will be saved, and will exist the next time CBE is run, even after power is turned off. This works by setting the comment on the files in 'CLIPS:' so if you want this feature to work fully, you must assign 'CLIPS:' to a disk or hard drive. (Doesn't really make sense to save locks if the data being locked is not kept, does it.)
- The Update button will free, and re-read all the clipboard review data to make the display current. CBE does not listen for changes on every clipboard unit available to the system, so it is possible for another program to alter the clipboard data of another unit (number 5 for example), and CBE will never know the data changed, so the review list will not change. You can use Update to see this new data.

!!Note: The system clipboard device saves all clipboard units 1-255 to disk. These files are saved in the logically assigned directory "CLIPS:". This is worth noting in case you were to clip a large section of 24 bit ILBM data for example. This is a lot of data to keep on disk. Normally the s:Startup-sequence assigns this to RAM:

If you assign CLIPS: to disk, these pieces of data will be there for you again, even after you re-boot the system. If you choose to delete any of the files from this directory, you would want to press Update to reflect those changes.

- Pressing the Window's close gadget or by pressing the [ESC] key will hide CBE's window. You may bring up the window again by pressing the hot key. Even though the window is not displayed, CBE keeps track of new Cut/Copy actions.
- CBE has an ARexx port for more advanced system usage. See the ARexx section for full usage instructions.
- The Menus allow the user to Quit, see an about window, as well as other special actions.
- Now CBE can zoom down to a tiny window by use of the ZOOM gadget in the title bar. Note that ALL features of CBE still function. You can use the cursor keys to select a Clipboard unit and View or even Clear it from the keyboard, although you will of course not be able to see what you are doing.
- Pressing [RETURN] will automatically Hide CBE's window and Paste the current item into the previously active window.
- Open and Save allow you to load an item into the clipboard, or save the clipboard to a file. Since all clipboard data are stored internally as IFF data, text will be saved as plain text with no IFF information contained within it. Images, sounds, and other data will be saved AS-IS directly from the clipboard. Open and Save do nothing in the unregistered version.

!!NOTE: If you assign CLIPS: to your hard drive, I would suggest using a disk caching program of some sort. This will eliminate disk access while searching through the clipboard's contents. I would highly suggest using a cache program anyway, as it can give totally new life to your system performance all around.

1.7 ToolTypes

Tool Types

The following tooltypes may be entered into CBE's icon info, or they may be used from the CLI/Shell. When entering parameters from the shell, remember any arguments with spaces MUST be surrounded by double quotes (").

e.g. CBE TOPUNIT=5 "CX_COPY1=lalt ctrl c"

CX_POPKEY - Key used for HotKey to pop window up or to front.
 CX_POPUP - Should interface window open on start. (YES/NO)
 CX_PRIORITY - Priority for input-event processing. (default -5)
 WINTOP - Top edge for Window. -1 for center on mouse. (default -1)
 WINLEFT - Left edge for window. -1 for center on mouse. (default -1)

ZOOMTOP - Where to put window when ZOOM gadget is pressed.

ZOOMLEFT - -1=Shrink to current position. (Shrink to Open position on KS2 ↔
.04)

FIRSTUNIT - First clipboard unit to use for history. (default 1)

MAXUNITS - Number of units used for review buffer. (default 30)

TXVIEW - Full path name of file for

GFXVIEW - you own text, graphics and

SNDPLAY - sound viewers/players.

LISTLINES - Number of lines to display in ListView. (3 thru 255)

LISTWIDTH - Number of characters wide for ListView. (16 thru 128)

CX_COPY1...CX_COPY10 \ Keys to use to copy or paste to/from

CX_PASTE1...CX_PASTE10 / reserved clipboard units.

SAVEDIR - Default directory for saving clips to.

OPENDIR - Default directory for loading clip data from.

SAVELOCKS - Will keep locks even after power down...if 'CLIPS:' is
assigned to disk. (Default=NO)

PUBSCREEN - Name of public screen for CBE to pop up on. Workbench as ↔
default.
This also tells where to open MultiView. (Even if ↔
USEFRONTSCREEN is used)

USEFRONTSCREEN - Will open CBE on the front most screen rather than
always on the default Public screen. (YES/NO)
YES for this tooltype takes precedence over PUBSCREEN.

!!NOTE: that USEFRONTSCREEN is NOT a system friendly method of doing things.
You may cause system problems if you close a screen that CBE is open
on. You have been warned.

The ZOOM gadget works slightly different under KS3.x than KS2.x. Under
KS3.x, if you specify a -1 for ZOOMTOP/ZOOMLEFT, the window will shrink
down at the window's current location. Under 2.x, this feature does not
exist, so the ZOOM gadget shrinks the window to it's starting position.

1.8 Menu Items

Menu Items

- ABOUT
Displays the ABOUT requester. This will tell who CBE is registered
to (if anyone), and will show the hot key used to bring up CBE's window,
as well as the Public Screen name that CBE is to appear on.
- Open
Allows the user to open any file and place it into the clipboard.
- Save
Allows the user to save the current item as a file.
- Hide
Hides the window.
- Quit
Quits CBE. Brings up a requester to verify your choice.

- Clear ALL, Clear FREE, Clear Unit 0
Allows the user to clear CBE's history. ALL and FREE work as described above. Unit 0 will allow you to clear ONLY clipboard unit 0...the history buffers are not effected.
- Jump Screen
Move CBE window to the next screen, and bring that screen tot the front.
- Update
Free CBE history buffer, and re-read all clipboard units.

1.9 ARexx support

ARexx support

- CBE has ARexx support, as all software should by now. The portname is: CBERexx.1
This ARexx support functions are rather simplistic, but gives the user the capability to do anything he/she can do from the user interface.
(<> denote required arguments, and [] denote optional arguments.)
 - QUIT
No parameter are given. CBE will simply clean up and exit.
 - LOCK [unit] : unit = 1 though MAXUNITS.
Sets the lock on the currently selected unit.
If [Unit] is given, the specified unit will have it's lock set.
[unit] is relative to the displayed data, not based on actual system values!
 - FREE [unit] : unit = 1 though MAXUNITS.
Frees the lock on the currently selected unit.
If [Unit] is given, the specified unit will have it's lock freed.
[unit] is relative to the displayed data, not based on actual system values!
 - SELECT <unit> : unit = 1 though MAXUNITS
Makes the specified unit the currently selected item.
<unit> is required.
<unit> is relative to the displayed data, not based on actual system values!
 - VIEW [unit] : unit = 1 through MAXUNITS
Views the currently selected item
If [Unit] is given, the specified unit will be viewed.
[unit] is relative to the displayed data, not based on actual system values!
 - UPDATE
Same as selecting the update button. UPDATE will free and re-read all clipboard data.
 - INACTIVE
-

Will deactivate CBE's commodity key input features. These include The reserved keys, and hotkey window popup. CBE will also not listen for changes in the clipboard, so the list will not change. You are still allowed to use the GUI, and paste from the items in the review list. Same as INACTIVE from Commodities Exchange.

- ACTIVE
Will make CBE active again. Same as ACTIVE in commodities Exchange.
- COPY [unit] : 1-10 (or as many keys defined).
Copy will simply send an [RAMIGA-c] to the system. If unit is Specified, CBE will copy the data into the specified reserved key number. [unit] is relative to the end of the list.
- PASTE [unit] : 1-10 (or as many keys defined).
This will paste the current contents to the active clipboard unit by sending an [RAMIGA-v] to the system.
If [unit] is given, the specified reserved key number will have it's data copied to clipboard unit 0 before the [RAMIGA-v] is given.

!!NOTE: PASTE will ALWAYS paste from what is in unit 0. Remember the reserved keys sequence first copies it's data into unit 0. If simply do a PASTE again with NO unit specifier, the same data from the reserved key will be pasted again. This offers some speed increase, but also possible confusion as you really do not know what might be in unit 0 at any given time this way.
- WINDOW <SHOW | HIDE | JUMP>
This change the windows orientation. SHOW will bring the window to the front of the frontmost screen. The window will be opened if needed. HIDE will close CBE's window, but let the main program remain active.
JUMP will force the window onto the next screen.
Use only when necessary, remember this is NOT a nice thing to do to the system. Although no damage is caused from normal operation, the danger comes in when a screen tries to close when it does not know about CBE being there. The result of this action can range from a permanently open screen to a system crash.
- CLEAR [unit | FREE | ALL]
Clears the currently selected item. If unit is given, the specified unit will be cleared. [unit] is as above in VIEW, etc...
FREE will clear all non-locked items.
ALL will free every item in the review list.
- OPEN [filename]
Loads any file into the clipboard. A file requester will be displayed if no file name is given.
- SAVE [filename]
Saves the selected item to disk. A file requester will be displayed if no file name is given.

A simple ARexx script has been included merely to allow the user to test these features.

```

CBERexx.rx:
===== cut here =====
/* CBE ARexx port tester */
PARSE ARG CBEcmd

ADDRESS CBERexx.1 CBEcmd
===== cut here =====

```

Example Usage: rx CBERexx.rx WINDOW HIDE

!!NOTE: One simple note to ARexx programming. There is no locking mechanism through the Amiga system for the clipboard device. What I mean is, just because you may do a COPY command and immediately follow it with a PASTE command, there is no 100% guarantee that the data will remain the same. This is really only a concern if some one does not know what is going on, and they can clip data REALLY, REALLY fast.

1.10 Reserved keys

Reserved Keys

You may reserve up to 10 clipboard units for the use of quick access key cut/copy/paste actions.

As defaults, the function keys are used for these reserved keys" You must use the ToolTypes to assign keys to any, all 10, (or none) of the units. If you set a COPY key, you must set PASTE KEY for the same number. Failure to do so will eliminate the use of both functions for either key without a matching Copy/Paste key ToolTypes.

All reserved keys reserve the last allowed clipboard units. These may move depending on user actions, but the data will not be affected by normal copy actions due to the locking feature of CBE. If you unlock any of the reserved key units, the data stored there may be changed when another cut/copy action takes place.

To use the reserved keys, just highlight the data in any application that you want to copy. (Do this in the normal way for the application in use). When you press (default as an example...) [lalt shift f1], the data will be copied into the active clipboard unit and it will also be copied into the review list as normal.

i.e. You have 5 keys reserved, f1-f5 with SHIFT ALT for Copy actions, and lets say just for S&G's you have f6-f10 with the same qualifiers for Paste actions. Go to you application (CygnusEd is good), highlight some text, and do [RAMIGA-c]. Do this a few times while CBE's window is visible. You will see the list change with each copy action. Now highlight some text and press your [shift alt f4] key combination you will see a new item at the bottom of the display. This item will also have the '=' lock character showing it to be used by one of the reserved keys.

You may now do [RAMIGA-v] to paste as normal or [alt shift f9] to paste the data back. (Note f9 corresponded with the f4 above). Now highlight and clip

text the normal way using [RAMIGA-c], and you will see the 'Free' part of the review list change, but your reserved key does not change. Now you may press [alt shift f9] and paste that reserved data back. Pretty nifty eh? You may now paste this item as you would any other.

This is handy for custom Copy/Paste operations using ARexx from another application I suppose.

The following are valid qualifiers and keys Just as for HotKeys:

lshift	rshift	shift	(Left right, or either shift key)
lcommand	rcommand		(Left or right Amiga keys)
lalt	ralt	alt	(Left, right, or either Alt key)
capslock	caps		(Capslock key, or ANY shift/capslock)
ctrlr			(CTRL key)
leftbutton	midbutton	rbutton	(Mouse buttons)

The following keys as well as any normal keyboard keys are valid:

```
space backspace tab enter
return esc del up down left ( other misc keys )
right f1...f10 help
```

You may be wondering exactly why CBE requires an application that uses clipboard unit number 0 to work properly. The reason is simple in that all CBE does is set what are called "Call-back hooks" in the system for Clipboard unit 0, so it "hears" all Cut/Copy actions to that clipboard unit. Also the reserved keys simply send a [RAMIGA-c] to the system. This does a generic Copy command, then CBE will copy this data into the specified unit for that key.

For pasting just the opposite is done. CBE will copy the data from the selected reserved key into clipboard unit 0, then CBE will send an [RAMIGA-v] key sequence, thus pasting the data to your application.

Pretty simple isn't it. Now why wasn't this done years ago??!!??!!

OK, so you now have a program such as PowerSnap/SnapIt, or even Terminus. These programs copy the data without you needing to hit [RAMIGA-c]. In fact you cannot even if you wanted to. So, does CBE's reserved keys work with these programs? Of course, but you must do things in a slightly different way.... Normally you highlight the text, then press the key combination to Copy the data. Well since there is no time allowed for you to do this, simply press the reserved key sequence BEFORE you highlight or box the text from these programs. If nothing is available for the clipboard when a copy command is sent, the system will wait until something is sent to the clipboard device. CBE will then intercept this and put the data into the correct slot.

I wish I could take credit for this, but it is a fine side effect of the clipboard device itself.

1.11 Weird Things/Bug List

Weird things / Bug list

This version of CBE has no bugs that I am aware of. All have been eliminated

or worked around safely. I have had no bug reports in several months now.

Please report any bugs, enforcer or mungwall hits, etc... I need your help to make CBE the best possible program for all users. Any suggestions for appearance, or usefulness are always welcome.

CBE has been tested on:

```
A1200/030 OS3.0
A3000/030 OS2.04
A1200/020 OS3.0
A2000/020 OS2.1
A4000/040 OS3.1
A4000/030ec OS3.1
```

CBE was created on:

```
A1200 w/ CSA's 12-Guage 50MHz 68030/68882 with 8M Fast RAM,
420M of HD space, external 880K floppy, internal 1440K
floppy, Chinon-535 CD-ROM, Archive-Viper tape backup unit,
Supra 14.4 modem, HP500 DeskJet...blah, blah, blah...
```

and was written in C and assembly using SAS/C 6.51, nearly a case of Mt Dew each day, a lot of pizzas, and very little sleep.

1.12 Revisions

Revisions: ('-' =Bug fixes, '+' =Additions or improvements.)

V3.3 (18-Jun-94)+Pressing the [J]ump button will now center the button itself under the mouse rather than centering the window. Using the keyboard or menus still centers the window as normal.

V3.2 (06-May-94)-Window now opens centered on mouse correctly.

Not released +Added SaveLocks feature.

publicly -Fixed Enforcer hit when no OPENDIR/SAVEDIR given.

V3.1a(29-Apr-94)-V3.0/3.1 used a KS V39 function SetWindowPointer() to set the busy pointer. This no longer happens under KS less than V39. I still use the 3.0 function for the operating systems that can handle it.

V3.1 (23-Apr-94)+All input now blocked while BUSY pointer is displayed.

+Press [RETURN] to auto HIDE+PASTE.

-Could not clear Unit0 if no items were in the history list.

-If all clips were deleted from CLIPS: and UPDATE was done, and data still existed in clipboard unit 0, then the listview box would not display that data. It does now.

V3.0 (15-Apr-94) About 75% re-written from scratch.

+Removed empty items from display.

+Removed useless Up/Down/Top/End garbage.

+Selected item is immediately placed in Clipboard Unit 0.

+ToolTypes, GUI, and Menus adhere better to OS2.0 standards.

+Can now chose display height and width.

+MultiView may now be opened on PUBSCREEN.

- Now that the selected item is always placed into clipboard unit 0, the bug in MultiView no longer causes Enforcer Hits. (or at least decreases them)
- Enforcer hit when attempting to open on a PUBSCREEN that does not exist is now fixed.
- +Added Busy pointer during requesters, and Update.

V2.4 and below are too obsolete to worry about revision history. Besides, V3 ←
.0
is nearly a total re-write.

1.13 Thanks

I'd like to thank:

Jan van den Baard for GadgetToolsBox,
Jerry Cheung for the icons.
Nicola Slamoria for near endless patience and suggestions.

The makers of "Mountain Dew" for keeping me awake.
Trent Reznor, for "PLHM", one of the greatest albums ever produced.

Thanks also go to my guinea pigs:

Arian T Kulp
Scott Unger (1st registered user. Thanks Scott.)
Nicola Salmoria

For bug reports and other friendly annoyances that helped make this version of CBE even better:

Jerry Cheung
Chris Mann

1.14 Things left to do

To Do:

- Remove redundant code to make this program smaller.
- Real time graphical display of data.
- Any good ideas you suggest...

1.15 About the Author

How to get in touch with the author:

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USA

-----BEGIN PGP PUBLIC KEY BLOCK-----

Version: 2.3a

mQBNAi15ROwAAAECAK3ihMbc5/1zz9iEWBbgd8NBLDj2/XRhkQIrNU8K4IrW8zd
7PzL+B2oX1YrqUPWMHpZYDx2q2AdDX3I+VCX/n0ABRG0MkFudGhvbknkgSiBNb3Jp
bmdlbGxvIDxhbnRob255bUBhbHBoYTEuY3NkLnV3bS5lZHU+
=OpxA

-----END PGP PUBLIC KEY BLOCK-----

1.16 Registration

When you register, please include the following information:

Name (These three items are)
Address (of course required!)
"CBE" - Tell me which program you want.

E-Mail address if any.
Model (A1000, 2000, 3000, 1200, 4000, etc...)
CPU (68000, 020, 030, 040, etc...)
Amount of RAM,
and KS/WB version. (OS2.04, OS3.1, etc...)

These last items are not required, but will help me determine what changes may be needed to make my program appeal to more users.

All information is kept private.
