

BTD

Markus Illenseer

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COLLABORATORS

	TITLE : BTD		
ACTION	NAME	DATE	SIGNATURE
WRITTEN BY	Markus Illenseer	November 23, 2024	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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Chapter 1

BTD

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1.2 Beyond the Dark V1.0 - Manual

BTD V1.0 - Manual

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1.3 BTD/Synopsis

NAME

BTD:BTD-CX (Commodity)

BTD:BTD (Preference Program)

Synopsis

BTD-CX (No Paramters) The Blanker

BTD (No Paramters) Preference Program

1.4 BTD/Description

Beschreibung

Modular Screen Blanker with high security features, does not burn the graphics into the Monitor when the CPU is busy. Does only work under Workbench Release 2.04 and above. Requires the **MUI** User Interface for the preference program, but does work without MUI!

BTD is the preference program, where all of the modules can individually be configured. This program requires MUI 2.1 and above, but don't worry, MUI will only be required for the preference program.

BTD-CX is the blanker itself, running with comfortably stability. From ENV:BTD.prefs the blanker will read the preferences configured with BTD and will load the modules on demand.

Whilst separating the user interface and the real blanker, it was made possible to minimize the needs in terms of memory and CPU. Only very few kilobytes are actually allocated, the modules themselves even are only loaded on demand and freed upon non-usage.

The blankers themselves, the modules we call them, are shared libraries and therefore can be flushed out of memory if not in use.

1.5 BTD/Source Code

Source Code

The sources for some of the modules are distributed and can be compiled with SAS/C 6.50 and newer, or with a registered version of DICE V2.06.54 and newer.

The sources are distributed to give interested programmers a chance to make their own modules.

Please do not re-distribute changed or optimized versions of these modules under the same name. This would confuse the users and simply is unfair, too. Please let the author of a module know what you would like to have changed, and let him decide to update the module, or write your own module and distribute this one.

1.6 BTD/Copyright

Copyright

Copyright © 1994 and 1995 by the Beyond the Dark Group.

Author of the preference tool and the server is

Matthias Scheler

Schützenstraße 18

33178 Borcheln

Germany

BTD V1.0 is freely distributable.

BTD V1.0 is Giftware. If you believe BTD pleases you and you think the authors deserve it, send them a small gift. Whatever it is, we sure will like every present, ie. a chocolate, a key file for your program, a CD-ROM. Nobody should feel obliged though to send anything, but it would be fair and honest...

BTD V1.0 can be distributed on Public-Domain and Shareware Disks, as long as these are not sold or a price exceeding the costs of a copy fee and distribution, this is as much as US\$6 or DM 8.- per disk.

For use in conjunction or integration with commercial products, a permission is to obtain from the authors.

BTD V1.0 can be copied and redistributed over electronic networks such as the Internet, also it may be made available on anonymous FTP-Serves, Mail-Boxes or Boards.

BTD V1.0 can be distributed on freely obtainable CD-ROMs. Diese CD-ROM darf nicht kommerziell verwendet (z.B. professionelle Kopierstation) werden. The price of the CD is not important, though we strongly recommend to sell the CD for about 13\$US or DM19.80 but no more than 20\$US or DM29.80.

There is no explicit permission given for specific CD-ROMS, but we hereby grant the permission to distribute on the CD-ROMS 'Meeting Pearls', 'Aminet' and 'AmigaLib'.

BTD V1.0 is not to be used by military institutions and other institutions serving for military purposes.

The Copyright © is still by the authors.

The sources can be changes or even be optimized. But please to not distribute your own version of BTD unde the name of BTD, use your own name.

The authors are not responsible or held responsible for any damage caused by the usage of BTD V1.0 or other versions of BTD, not even for hypnosetic Trauma.

1.7 BTD/Authors & Support

Authors & Support

Matthias Scheler # Server-Client Model

Schützenstraße 18 # User interface

33178 Borcheln # SAS/C Support

Germany

INTERNET: tron@lyssa.owl.de

FIDO : Matthias Scheler 2:243/6301.223

IRC: Tron

Markus Illenseer # many Blankermodules

Kurt-Schumacherstraße 16 # Documentation

33615 Bielefeld

Germany

INTERNET: markus@tiger.teuto.de

IRC: ill

WWW: <http://www.teuto.de/~markus>

SUPPORT FTP ADDRESS:

ftp.Uni-Paderborn.de [131.234.10.42] anonym access.

(and therefore any Aminet Mirror round the globus)

Please first refer to the topic "KNOWN PROBLEMS" before trying to contact us for a bug report. Comments are of course welcomed.

1.8 BTD/Changes

Changes

The hereby distributed Version V1.0 is the first official Release for all interested users. It will serve as large field test to detect problems and to ask for ideas and enhancements.

This version sure is not perfect, all problems are asked to be reported promptly to the authors!

1.9 BTD/Purpose & Theory

Purpose and Theory

The BTD-Package is a screen blanker. Splitted into a preference program and the continously running blanker server, it will only require very few amounts of memory, will non the less offer interesting modules and is all over even capable to show several modules at the same time on the same screen.

The goal of a screen blanker should be to turn off the screen, or to prevent all activity on the screen, and then prevent that pixels can burn into the monitors phosphor, or even more bad, to prevent ghost images when the screen is really turned off.

As it is quite boring only to turn off the screen, and the Amiga is a true multitasking machine, we could offer some funny things on the screen, until the screen is really turned off.

We only have to ake care about that our very own graphics does not burn into the monitor, when we do not get a bigger chunk of CPU time ourself.

This happens, wenn another, important program requires much CPU time, such as a C-Compiler or Raytracer.

There are hence two possible states. The blanker gets CPU time or nor. When it does, we can draw or graphics, when not, the screen is to be shut down, turned off.

Technically we do that with a simple server-client modell. The server runs with normal priority, and has no more than a WaitPort()-Loop (no real CPU usage!) and sends commands to the client after the TIMEOUT is reached. The client runs with low priority. If the client does not answer after a timeout, another, more important program is overtaking him. We then have to turn of the screen. Please do not try to give the client a higher priority.

The above mentioned client are modules. Each module is a library, which can be loaded on demand (!), and be driven over a standardized interface.

It is fairly easy to write your own module, try it! You only need to know about C or assembler.

There have been (long) discussions on comp.sys.amiga.misc (Usenet 1992) where we discussed the security of screen blankers. We believe that BTD fits the need pefectly.

1.10 BTD/Version

Version

BTD 1.0

BTD-CX 1.0

1.11 BTD/Start

Start

BTD-CX is a commodity and therefor only runs under Workbench 2.04 (V37.175) and above.

BTD is the preference tool to configure all options.

Both programs do not have paramters.

For the preference (and only for it!) the Magic User Interface (MUI) with the version 2.1 and above is required.

Distributed is an Install-Script, for which you need the Installer from Commodore.

A commodity normally will be started from the "SYS:WBStartup"-drawer. This way it will be started automatically.

To ease the installation and the de-installation, we thought it might be better to change this a bit:

This archive is to be unpacked in the usual manner somewhere. Then set an Assign with the Name "BTD" to this directory. In 'S:User-startup' you will then need to add the following lines:

Assign BTD: MyDrive:MyTools/BeyondTheDark

Run >NIL: BTD/BTD-CX

The best is to copy the modules to BTD:Blankers, if they aint there already.

To start BTD-CX right now, without rebootung, just double-click the icon in the usual manner.

Then change the options with BTD, start this tool in the usual manner, too.

BTD-CX is now started. After 60 seconds the screen will be blanked, o course only if you haven't changed anything in the preferences ye and haven't touched a key and the mouse.

If you haven't changed any options in BTD, you will only see a black screen.

1.12 BTD/Hotkeys

Hotkeys

Hot Key

Refer to your AmigaDOS Manual (Section The Extras Programs, The Commodities Drawer) to get a valid list of the available hot keys, the following may obsolete on a new "commodities.library" version.

The Hot Keys can be edited with the String-Gadgets in the **Preference-Window** of BTD. The syntax and correctness is checked.

One word for typing the Hot Keys:

In the String-Gadget a description of the Hot Key in textform is beeing asked, not the Hot Key himself. Thus the Hot Key 'left Amiga Key + q' would be typed in as 'lcommand q' (all ten chars inclusive the space). After the Key was added to the Commodities Queue, the Hot Key can be activated by pressing and holding the left Amiga Key followed by pressing and releasing the 'q' Key and releasing the left Amiga Key.

SYNOPSIS: [<qualifier> [<qualifier>...]] <key>

Qualifier keywords (Press and hold one or more qualifier)

alt either Alt key

ralt right Alt key

lalt left Alt key

shift either Shift key

rshift right Shift key

lshift left Shift key

capslock Caps Lock key

rcommand right Amiga key

lcommand left Amiga key

control Control key

numericpad Enables the use of a key on the numeric keypad

rbutton Click (and hold) the right mouse button

midbutton Click (and hold) the middle mouse button

(only avail for mice with a connected third button!)

leftbutton Click (and hold) the left mouse button

newprefs Preferences changed

diskremoved Disk removed

diskinserted Disk inserted

Keys (to be pressed and released, only ONE Key can be chosen)

a .. z, 0 .. 9, etc. Normal keys

f1 .. f10 Function keys

up, down, left, right Cursor keys

help Help key

del Delete key

return Return key

enter Enter key

(MUST be combined with 'numericpad'!)

backspace Backspace key

esc Escape key

space Space key

comma Comma key

upstroke Upstroke key

Examples

lalt ralt return

rcommand f10

alt x

lalt numericpad enter

NOTE: Choose your hotkeys carefully, because

Commodities have a high priority in the input events

chain (i.e. will override existing definitions). Also

some hotkeys don't make sense or do collide with other

tools or functions of the WB.

NOTE: The Workbench screen (or the default PubScreen,

if this one has activated the Shanghai-mode) will be

moved to front before starting the tool via HotKey.

NOTE: When a combination of qualifiers and keys is

illegal, BTD will start, but the Hot Key won't work.

Example for illegal combinations:

lalt a b # Two keys specified

control rcommand lcommand # Reboots the System, Oops!

lbutton # No key specified

If you edit the Hot Key's in the Edit-Window

EDIT 35}, the Combination will be checked. If invalid,

the old Hot Key is still used.

NOTE: Due to a bug in the commodities library, it is

impossible to use a Mousebutton w/o a Qualifier and a

Key.(ParseIX() doesn't set

the ix_QualMask field right)

1.13 BTD/Configuration Window

Configuration Window

If you start BTD, a window will be opened to alter the options of BTD-CX.

All preferences will be saved in ENV:BTD.prefs. Permanent changes will also be saved in ENVARC:BTD.prefs

Blanker modules are only detected in BTD:Blankers. An Assign-ADD will make modules be visible from other pathes as well.

We have tested the configuration window under many circumstances. Please tell us, if you have problems with it.

You now will see some gadgets, hopefully they are not too confusing.

By the input of a hot key, the given string will be checked, on error the old string will be used.

You will see that most gadgets have a name with one char underlined, this is a hotkey for this gadget to reach options quickly over the keyboard.

In Slider- and Cycle-Gadgets you can, after their activation, scroll with the cursor keys and set a value. See more in [MUI](#).

The window is separated into three groups, according to your preferences in MUI, you will see a cycle-Gadget or a register group.

/ [Blankers](#) \ / [Display Mode](#) \ / Server Options \

| |-----

| |

Blankers:

In the blanker part, you will see a listview. It is a multiple listview, where you can choose several modules at the same time.

The active entries represent the to be used modules. On each blank, as many modules as a given by X- and Y-Resolution in the Server options, are being chosen for the blank screen. If not that much modules are available, random modules are activated.

If this option does not please our need, write us! We have been thinking for a long time about this topic and found this a good solution. Remember that we can run more than one module at the same time.

Display Mode:

In usual manner you can choose your beloved screen resolution. New is the possibility to clone the active pubscreen, this prevents a re-synch of the monitor.

[Display Modi](#)

Server Options:

All options which are important for the real blanker are here.

[\[T\]imeout](#)

[C\[I\]ient timeout](#)

[\[F\]inal Timeout](#)

[Blank \[K\]ey](#)

[\[J\]oystick](#)

[Blankers \[X\]](#)

[Blankers \[Y\]](#)

[Overview](#)

1.14 BTD/Edit Window/Blank Key

Configuration-Window/Blank Key

BLANKKEY=<Hotkey>

Please read more in [Hotkeys](#).

With this hotkey, the blanker will be started immediately.

[Overview Configuration-Window](#)

1.15 BTD/Edit Window/Timeout

Configuration-Window/Timeout

[T]imeout: <1 - 3600>

The given value for the timeout of the blanker. After this time (in seconds) the blanker will be enabled.

[Overview Configuration-Window](#)

1.16 BTD/Edit Window/Client Timeout

Configuration-Window/Client Timeout

C[l]ient timeout: <1 - 60>

The time the server gives to the client to respind and to work.

After this time the screen will be turned black! One of the major features of BTD!

[Overview Configuration-Window](#)

1.17 BTD/Edit Window/Final Timeout

Configuration-Window/Final Timeout

[F]inal timeout: <0 | 1 - 3600>

The time ater the blanker started. After this timeout, the screen will be turned black. The value 0 will disable this feature.

[Overview Configuration-Window](#)

1.18 BTD/Edit Window/Joystick

Configuration-Window/Joystick

[J]oystick: <Yes | No>

Enables the request for joystick movements. This only required for specific environments, ie. for games which are not compatible with screen blankers.

[Overview Configuration-Window](#)

1.19 BTD/Commodities Exchange

Commodities Exchange

With the Commodities Exchange Tool you can temporarily disable BTD with DISABLE, and restart with ENABLE.

This is a comfortable way to shut down BTD.

Please also refer to your AmigaDOS manual, chapter AmigaDOS reference and workbench programs.

1.20 BTD/Display Modi

Please, please, please have care here !!!!!

We are NOT responsible for ANY user-error. The given list depends on the used System. All newer Amigas, such as A500+ , A3000 do have the ECS Denise for extended Screen Modes (Notall Amiga's with Kick 2.0 on ROM do have a ECS Denise..). Of course you can start the desired Modes, but not all modes are available on all MONITORS ! Please do refer to your Manual of the Monitor and to the AmigaDOS Manual (Section Workbench Programms, AddMonitor) for more informations.

Why ? Simply because you can DESTROY your Monitor!

Here is a list of the (normally given) ECS Display Modes: This list may be obsolete when a new workbench is released.

NTSC:Lores

NTSC:Hires

NTSC:SuperHires

NTSC:Lores-Interlaced

NTSC:Hires-Interlaced

NTSC:SuperHires-Interlaced

PAL:Lores

PAL:Hires

PAL:SuperHires

PAL:Lores-Interlaced

PAL:Hires-Interlaced

PAL:SuperHires-Interlaced

VGA-ExtraLores # -

VGA-ExtraLores-Interlaced #

VGA-Lores #

VGA-Lores-Interlaced # Multiscan Monitor needed

Productivity #

Productivity-Interlaced # -

A2024_10Hz #

A2024_15Hz # A2024 needed.

Other Modes are available from 3rd. Party, but not mentioned.

Overscan is used for all modes, adjust your Overscan-size with the ScreenMode Preference Tool.

This list will only be available if the icon called "Mode_Names" supplied with Workbench 2.0 is in the WBStartup directory of your boot drive.

This Mode_Names may also be obsolete in new versions of the workbench.

NOTE:

DON'T use VGA-Modes on a NON-Multisync or NON-VGA-Monitor DON'T even test Modes if you aren't sure about your Monitor-capabilities.

NOTE:

Again, be careful please.

NOTE:

The above list will be COMPLETELY different if you use WB 3.0 on one of the new AGA Amigas (A1200/A4000).

1.21 BTD/Known Problems

Known Problems

We do know about some problems and magic matters, some of them are explainable even.

- Most of them are covered by the new and all over complicated MUI and the preference program. Sometimes it is useful to delete the MUI-preferences: ENV(ARC):MUI/BTD.#?
 - You have chosen 4 modules, but not even one will be used! This is not a bug, this is a configuration problem. Normally this is a color problem, as the total usage of colors of all the modules does not have to exceed the number of colors a screen mode is offering you. Solution: configure each module to use less colors and that the total use is feasible. Or use less modules.
 - You are running a C-Compiler or a raytracer. BTD goes blank, but doesn't show any swarm, and during disk-access BTD comes up for a while.
- This is not a Bug, this is the FEATURE of BTD !! This is the way BTD blanks when high Cpu-use happens on the startup. And during disk-access the Cpu-time is usually less, so BTD may find time to draw something.
- Collision with other Blankers. Well, in fact you can run as many Blankers as you want. Such as DMouse, Spliner, FracBlanc. BTD does always try to move its screen to front, when it detects to be behind some other screens.
 - When a disk is inserted, BTD closes the screen (dis-blanks). This is normal. Disk-replacement is detected as an input Event. As all input events shall disable the Blanker this one should, too. And this event is obvious, the user is alive :-)
 - The window doesn't open if the hotkey is pressed. Perhaps you have supplied a wrong hotkey description. Use the Commodities Exchange Tool to open the **Edit Window**. The Hot Key will appear in the Gadget 'Pop Key'. You can test the hotkey there. If an incorrect hotkey was submitted, the old hotkey will reappear.
 - BTD shows up the window though the Tool Type CX_POPUP is set to 'NO'. This happens when BTD is started twice. (Double-click (or call from CLI) = start, another double-click (or call from CLI) opens the window). Please do also check the entries in the MUI Preferences.
 - BTD makes noise when it blanks the screen. This may happen when a Display Mode is chosen, which is not of the size of the since then active screen. Nothing dangerous. Hardware.
 - BTD makes flickers on the Monitor when it blanks the Screen. This happens when BTD blanks on a PAL-Screen, but the since then or then active Screen is or was NTSC. (Or vice versa) The Monitor needs a bit time to synchronize again. Nothing dangerous.
 - The Edit Window does not open when the Pop Key is pressed. Maybe you have used the wrong Hot Key. Use the Commodities Exchange Tool to open the window. In the gadget 'Pop Key' you can enter a Hot Key. If the Key description is wrong, the old (may be default) Hot Key is displayed and used. Please do also check the MUI Preferences.
 - Some of those Power- Pro- and whatever-Tracker have serious problems, when BTD blanks. In fact they do have problems with all blankers. As for PowerTracker I know for sure, it's its own fault, because this program does NOT open an Intuition-Screen, but a CopperList. And then it believes it does own the whole system.. *sigh*

1.22 BTD/MUI

MUI

For BTD V1.0 the Magic User Interface (MUI) system from Stefan Stuntz was used, which helps the programmer saving a lot of time developing the GUI. Also, the user has a wide range of influence to the GUI now.

MUI is a shareware product worth using. It can be found on the AmiNet or other PD- and Shareware series.

Without registering MUI the only feature which is not available is that you can't save but change the preferences. Thus MUI is usable even without registration.

Please do read the file 'ReadMe.MUI', which should be in the Archive.

We have decided to release BTD V1.0 as MUI application, because MUI involves a new and usable standard for graphical user interfaces which we never would have achieved without serious programming, which would have exceeded the surrounding of a simple commodity.

Already the work needed to make that one window font-sensitive (we have an internal version working !) is not justified to continue with GadTools, at least not, when working non-professional. BTD II 2.0 using GadTools with the features of MUI would have been 15 to 20kb larger (not to speak from the source code) as a version made with MUI. And we only make use of the MUI-library when we open the window, thus we don't need the library at start time. And nowadays there are so many nice tools written for and with MUI, that the MUI library is not needed for BTD alone.

1.23 BTD/Blankers

Blankers

Currently the number of modules used at the same time on the same screen are defined by the server option Blankers X and Y.

Using X and Y, the screen will be separated into regular squares. Each module will be given his own square.

Which modules are used is chosen in the listview 'blankers'.

If there are then given 4 squares by choosing a 2 x 2 split, and in the listview 'blankers' 4 modules are chosen, then these 4 modules will be used.

Are there 4 squares, but only 3 modules, one random module will be used.

Are there 4 squares, but more than 4 modules, only 4 randomly chooses modules will be used. Only chosen upon start.

Colors.

Some modules offer color options. As you can run several modules, the number of chosen colors and the chosen display mode will influence the really chosen modules.

The module BTD or instance will only use 2 colors, this means many of these modules can be started. By using PAL:Lores a total amount of 12 (they all share the background color), but not 16, because that many modules would require 32 colors excluding background color.

If you additionally choose Rotor or Rain, more colors will be required. As graphic boards are not supported directly, and HAM6 and HAM8 cannot be chosen, the frontiers are given by ECS and AGA and offer up to 256 colors. By using CyberGraphics though, you can use up to 65000 colors on your graphic board!

A basic rule is: The more colors a module is given, the less modules you can run at the same time.

We currently do not have a concept to implement shared-pens, a rather complicated thing.

1.24 BTD/Rexx

Rexx

The Rexx-Interface is straight forward and useful is a program is started which does not like BTD as screen blanker.

The commands do resemble the commodities exchange program.

The ARexx-Port is called 'BTD' and does know about these commands:

DISABLE - stops BTD temporarily

ENABLE - re-starts BTD immediately.

BLANK - starts the blanking process immediately.

RELOAD - Flushes all modules and reloads them.

QUIT - Quits BTD.

SHOW - Opens configuration window.

HIDE - Closes or iconifies the configuration window.

1.25 BTD/Credits

Credits

Mario Kemper, Ral Schmidt, Markus Stipp and Stefan Becker for first beta tests, ideas and supplement of the until now only non-BTD-Core-Team-Module 'Scooter'. A fascinating module.

SAS/C group for the good work.

Markus Illenseer

Matthias Scheler

July 1995

1.26 BTD/History

BTD - Beyond the Dark - was developed for fun and love into details and has only been published by pressure of friends. We currently do not know who first had the idea for this project. We have been developed on it for more than one year without ever really intending to release it.

BTD is, what a surprise, a successor of the beloved and famous BTM. Like his predecessor, it has been designed to be stable and conform, not for speed. Hard but the truth is, that you need a faster machine. When dumb PC-games ask for at least an 486 DX/2 66Mhz, we ask for an MC68030.