WBStars

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ACTION	*NAME*	*DATE*	*SIGNATURE*
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WBStars Version 1.11

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Diese Dokumentation ist auch auf deutsch verfügbar.

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1.2 WBStars Changes

This is only a minor bugfix:

- using a backward direction (azimutangle between 90 and 270) now looks better

- really use 100 stars instead of 50 (oops)

- now uses only the Workbench- and no other backdrop-windows (oops, too)

- uses a bit less CPU (really ;)

- program is shorter than any of the previous versions!

- the documentation has a new chapter (Hints and Tips)

1.3   WBStars Introduction

WBStars is a program to animate the background of the WorkbenchScreen.

I´ve written the first running test for this in november ´95.

This version (WBStars1.0) has been almost completely rewritten since the last (and first released) version 0.9. It does not write through icons, but it uses more memory.

For more information on the program see Technical.

1.4   WBStars Requirements

This program needs WB2.0 or higher, because it uses the commodities.library .

It may use a lot of CPU-time (I hope, this will change in the near future). For WBStars881 you need in addition to the coprocessor at least a MC68020.

It is not required to be a member of the United Federation of Trekkies ;).

1.5   WBStars Installation

WBStars consists of the following Files:

- executable WBStars / WBStars881

- config-file WBStars.prefs (without icon)

- documentation drawer Docs

- Startup-Icon WBStarsUp.info

All these files don´t have to be moved for running WBStars.

See Configuration to learn how to use "WBStars.prefs" .

Move the file "WBStarsUp.info" to "SYS:WBStartup" and change the default tool to start WBStars every time you boot (you can also start WBStars from startup-sequence; without "run", because it is automatically started in the background).

To quit WBStars use the program "Exchange" as described in your user´s guide of the workbench.

IMPORTANT:

To see the stars you may have to set the correct backgroundpen in WBStars.prefs !

1.6   WBStars Configuration

The configuration is stored in the file "WBStars.prefs". If this file is present in the current directory or in "ENV:" (usually assigned to Ram:Env) it will be read while starting WBStars. You may copy "WBStars.prefs" to "ENVARC:" (SYS:Prefs/Env-Archive) and it will be copied to ENV: every time you boot. If WBStars is startet from Workbench (or WBStarsUp), the current directory will be the directory of the executable (starting from CLI with eg "WBStars/WBStars" does not affect the current directory, so "WBStars.prefs" may not be found).

The file has the following format:

A capital letter specificates the value to be set, the next character doesn´t matter (an "=" or a space is recommended) and is followed by the value.

The following options are available:

T (taskpriority -128 - 127)

M (mode: 0=Screen 1=Window)

S (number of stars 0 - 100)

W (warpspeed 0 - 9)

A (azimutangle 0 - 359)

H (heightangle -90 - 90)

B (backgroundpen 0 - number of WB-colors)

P (foregroundpen)

T, S, W and B don´t need any explanation, A and H are to set the direction of the stars (see WBSPrefs for example).

The stars may be coloured. Use P to set a list of colors. P has to be followed immediately by the position in the list, and after the "=" you can set the pen-number.

For example:

P2=4

P0=7

P3=2

P1=3

creates the list {7,3,4,2} (the positions need not to be in order).

With this option you can create the spectrum-effect used in StarTrek-The Next Generation (again for example WBSPrefs).

Modify the config-file to see how it works (it is commented in small letters which will be ignored by the program).

These are the defaults for the values that you don´t set:

T=-1

M=0

S=100

W=3

A=0

H=0

B=1

P0=2

(unfortunately i do not know who made this nice Enterprise in the "WBSPrefs" picture, but it is somewhere from Aminet and i just wanted to say thanks for this)

1.7 WBStars Technical

The stars are calculated in 3D, 2D-coordinates are only calculated for the plotting (2D-Projection).

The stars are calculated until a distance is reached (the distance is 850000 km (3 lightseconds) for warp 1, and grows with the warp-speed because of the growing subspace-distorsion (sounds very logically and looks much better ;).

The speed of the stars is calculated as follows:

(c=lightspeed)

Warp 0 = 0.3*c (impulse-engine)

Warp 1 = 1*c

Warp 2 = 10*c

Warp 3 = 39*c

Warp 4 = 102*c

Warp 5 = 214*c

Warp 6 = 392*c

Warp 7 = 656*c

Warp 8 = 1024*c

Warp 9 = 1516*c

Warp 10 is physically impossible (perhaps the next version of WBStars has transwarp :-)

To draw a line instead of a point, the next position is calculated and connected to the actual position (using the Bresenham-algorithmus).

WBStars was written in C and compiled with SAS/C 5.10b on a A4000 Cyberstorm060 12MB RAM 170MB HD 4speed CD-ROM.

1.8   WBStars Hinweise und Tips

WBStars eats a lot of CPU (even on my A4000-060 :( ), so here are some Tips, to get it run faster:

- (probably the best way ;) buy a PowerAmiga

- less stars, more free CPU

- reduce warpspeed (eg Warp9->50%CPU, Warp1->40%CPU, Warp0->30%CPU)

- dependent to your configuration either Mode 0 (screen) or Mode 1 (window) may be slightly faster (just test it)

- a backgroundpattern or -picture , with many pixel different from the backgroungpen, can accelerate WBStars (only every second pixel set looks very interesting)

1.9   WBStars History

First running in november ´95.

The first released version was 0.9 (15. 5. 1996).

Version 1.0 (4. 6. 1996) provided the following enhancements:

- no "write through Icons"

- Direction, colour and number of stars could be changed via config-file

- Documentation

version 1.1 came with this features:

- restoring drawmode (old version caused graphic-errors with mode 0)

- smaller and faster

- all files may stay in the same directory

V1.11

- see Changes

1.10   WBStars Future

There are two known problems that will be solved as fast as possible:

- closing the WB-window in mode 1 will stop the drawing and you will be unable to quit WBStars

The following enhancements are currently in progress:

-automatically calculate the number of stars that uses a constant amount of free CPU-time

-autoconfigurating colours (auto-fit to Workbench-preferences)

-calculation of stars done with integers (dramatic speed increase :-)

If these things are done, i will write the prefs-program WBSPrefs .

1.11   WBStars Author

WBStars was developed by:

Alexander Pokahr

Adress: Lapplandring 74

D-22145 Hamburg

Germany

EMail: 5pokahr@informatik.uni-hamburg.de

Thanks for reading the documentation :)