Readme guide for DX11 Flasher

Option	Details
Preset Mode	This option controls the currently selected group of preset options. There are up to 20 different sets defined as 0 to 19 and each can have custom settings for each of the other options. The only options not affected are: "Show Flash", and the read only text for Clock Time, FPS, and Frame Time.
Flash Time	The time spent showing the "flash" image/s in milliseconds. **NOTE: If the flash time is lower than the Frame Time it will appear as if flashes do not occur at a consistent frequency.**
Flash Off Time	The time spent not showing the "flash" image/s in milliseconds.
Flash %	The % of the time during each interval that is spent showing the flash image.
Flash Off %	The % of time during each interval that is spent showing no image.
Interval	The interval for each block of flash time + flash off time in milliseconds.
Interval Hz	The interval represented as a value in Hz (times per second).
Show Flash	This option disables the flashing entirely if disabled. Except for the graphic flash if that is enabled. This is mainly for making it easier to have rest periods easily enabled if required.
Flash Black	This option toggles the colour of the flash that occurs. If enabled the flash will be black, but if disabled the flash will be white.
Show Video	If enabled the video will play over the top of any background colour otherwise it will remain hidden.
Black Background	This is the other variation to "Flash Black". This option controls the background colour. It will be obscured by the "Show Video" option when that is enabled. If enabled this option forces the background to show as black. If disabled the background will show as white.
Flash Grid	If this option is enabled the display of flashes will be overridden to show the flashing block in a smaller targeted region. The screen is split into regions defined as a quantity for width and height of the grid by the Grid Width and Grid Height variables. The region the flash occurs at is based on the current location of the mouse.
Grid Width	This option controls the number of columns that are created for the grid used by flash grid and edge flash options.
Grid Height	This option controls the number of rows that are created for the grid used by flash grid and edge flash options.
Edge Flash	This option when enabled will causes a sequence flash that will go around the edge. Starting at the top left it will travel to the bottom of the screen and then continue to the bottom left before returning to the start. Each cell is defined by the grid width and grid height variables. Each cell flashes once and then at the start of the next interval the next cell in the sequence is used. Note that in the current build a double flash occurs in the bottom right corner. NOTE: When Edge Flash is enabled it will override the Flash Grid option.
Fixed X	When using a default grid based display this setting may be used to set the column that is always flashing. (Use fixed Position must be enabled)
Fixed Y	When using a default grid based display this setting may be used to set the row that is always flashing. (Use fixed Position must be enabled)
Use Fixed Position	When this option is enabled along with the grid based flashing the position of the flashing cell will change from that of the mouse's location to a static position as defined by Fixed X and Fixed Y.

Graphic Flash	This option enables the up to 3 flashing graphics that may be shown on the lower area of the screen. When enabled it will switch from showing the normal flash and override everything else to show the alternate graphics. Each of the three graphics comes with 3 options “BitmapID”, “Flash” and “Show” .
Black Underlay	When enabled this will place a black strip covering the lower quarter of the screen. This can be used to make the graphic flashes more defined. This graphic is placed behind all other flashing that occurs and when enabled will permanently show the black strip.
Sequence Flash	This option forces the flash graphics to alternate between each other in a left to right cycling motion. If this option is enabled the graphics will be disaplayed based on the primary time and will either show permanently when the “show” option is set and considered for flashing when the flash option is ticked for each graphic. Each graphic once the time for the start of the next flash occurs will search for the next available graphic to flash if there is one. (So for example you can make just two graphics flash by disabling the flash option for any of the graphics).
Per Graphic Timer	When this setting is enabled all the graphics will be controlled by their own unique timers. These timers are not truly synchronised, but should not be too out of synch if they do become so. The parameters for these timers are all uniquely controllable using the exact same setting as are available to for the primary timer. They will only flash if the flash option is ticked and the show option is not though.
BitmapID	This option allows selection of the specific graphic to show for the specific flashing graphic. This list may be defined as desired in the appropriate configuration file. For more details on the specification of this list please see information regarding the heading “flashgraphics.dat definition”. When using this selection option each flash graphic may only be used once (although the definition in the file does allow defining of the same texture file to be used as many times as desired). Each numerical id must be uniquely assigned though. When selection of an already chosen ID occurs the application will automatically select the next valid id searching up or down from the value depending whether the change from the previous value is an increment or decrement.
Flash	This option determines whether the flash graphic can flash using the global flash settings.
Show	This option will permanently show the flash image. When this setting is enabled the Flash option is ignored.
Clock Time	This value represents the current time value for the video player’s progress. Using the sample video the time will go from 0 to 13.94 seconds and then reset. (Note that updates to this value occur infrequently based on observation of the way the GUI handles automatic updates).
FPS	This value shows the current Frames Per Second. This value show be relatively constant after the first couple of seconds. If it fluctuates a lot for this application it may suggest there are other applications that are hogging resources.
Frame Time	This value represents the time in milliseconds between render that occurs. Use this value to determine suitable frame times when choosing low intervals. Choosing values lower than this value is not recommended and may result in unexpected visual feedback.

Save	This button immediately saves all the current preset options. This action occurs when the application exits, but it is important to have this option available if required.
Reload	This option clears all the settings that were preloaded and potentially changed from the presets file and restores them to those inside the file.
Reset Default	This option clears the current preset mode's values back to the defaults. Use this option to quickly reset everything.

Flashgraphics.data Definition

The first line of this file needs to be a number defining how many graphics are on the following lines in the file. This number must be 4 or larger. A number less than 4 will result in the application's termination. The remaining lines each should indicate the file names for each file located in the Resources directory.

Modes.dat Definition

When this file does not exist or is unsupported a new file with defaults is automatically generated. The first line of the file defines the application version the file was developed for. This variable indicates whether the rest of the file will be supported by the current version of the application when it is opened. The remaining lines each contain the raw values for each preset mode. The order of variables is as follows:

- `flashTime`
- `flashOffTime`
- `flashBlack`
- `showVideo`
- `blackBG`
- `useGrid`
- `gridW`
- `gridH`
- `edgeFlash`
- `fixedX`
- `fixedY`
- `useFixedPos`
- `graphicFlash`
- `showBlackUnderlay`
- `sequenceFlash`
- `perImageClock`
- `bitmapID1`
- `flashBitmap1`
- `showBitmap1`
- `flashTimeBitmap1`
- `flashOffTimeBitmap1`
- `bitmapID2`
- `flashBitmap2`
- `showBitmap2`
- `flashTimeBitmap2`
- `flashOffTimeBitmap2`
- `bitmapID3`
- `flashBitmap3`
- `showBitmap3`
- `flashTimeBitmap3`
- `flashOffTimeBitmap3`

Generation of graphic files that are supported by this application

To generate DDS files that are supported by the application you need to use the texconv.exe command line converter. To use this simply make a windows batch file in the same directory as both the file to convert and the texconv.exe file. Then in the batch file you need to use one or more of the following line:

texconv -f DXT1 -nologo arrowleft.png

The “-f DXT1” forces the converter to format the files using compression. The “-nologo” reduces the output text. And the final parameter is whatever the file is that is being converted.