Blending modes

Most visual effects have source and destination blend modes:

- `Both blends use inverse source alpha` (Obsolete): Source blend factor is (1 - A, 1 - A, 1 - A, 1 - A), and destination blend factor is (A, A, A, A); the destination blend selection is overridden. This blend mode is supported only for the D3DRS_SRCBLEND render state.
- `Constant blend factor`: Constant color blending factor used by the frame-buffer blender. This blend mode is supported only if D3DPBLENDCAPS_BLENDFACTOR is set in the SrcBlendCaps or DestBlendCaps members of D3DCAPS9.
- `Destination alpha`: Blend factor is (A_d A_d A_d A_d). May cause rendering issues with sky.
- `Destination color`: Blend factor is (R_d, G_d, B_d, A_d).
- `Inverse destination alpha`: Blend factor is (1 - A_d 1 - A_d 1 - A_d 1 - A_d).
- `Inverse destination color`: Blend factor is (1 - R_d, 1 - G_d, 1 - B_d, 1 - A_d).
- `Inverse source alpha`: Blend factor is (1 - A, 1 - A, 1 - A, 1 - A).
- `Inverse source color`: Blend factor is (1 - R, 1 - G, 1 - B, 1 - A).
- `Inverted constant blend factor`: Inverted constant color-blending factor used by the frame-buffer blender. This blend mode is supported only if the D3DPBLENDCAPS_BLENDFACTOR bit is set in the SrcBlendCaps or DestBlendCaps members of D3DCAPS9.
- `min(source alpha, 1 - destination alpha)`: Blend factor is (f, f, f, 1); where f = min(A, 1 - A_d).
- `Obsolete`: you can achieve the same effect by setting the source and destination blend factors to `Source alpha` and `Inverse source alpha` in separate calls.
- `One`: Blend factor is (1, 1, 1, 1).
- `Source alpha`: Blend factor is (A, A, A, A).
- `Source color`: Blend factor is (R, G, B, A).
- `Zero`: Blend factor is (0, 0, 0, 0).

Notes:

- As, Rs, Gs, Bs are the ARGB components of the source image.
- Ad, Rd, Gd, Bd are the ARGB components of the destination image.
- SourceBlend seems to be always D3DBLEND_SRCALPHA, no matter the value you set.
- Undernlined blend modes are probably the most useful ones

Source:

from Freshlook:

> *This is the relationship between the blend modes of visual effects and the D3DBLEND enumeration:*
>
> ```
> Zero                                  D3DBLEND_ZERO
> One                                   D3DBLEND_ONE
> Source color                          D3DBLEND_SRCCOLOR
> Inverse source color                  D3DBLEND_INVSRCCOLOR
> Source alpha                          D3DBLEND_SRCALPHA
> Inverse source alpha                  D3DBLEND_INVSRCALPHA
> Destination alpha                     D3DBLEND_DESTALPHA
> Inverse destination alpha             D3DBLEND_INVDESTALPHA
> Destination color                     D3DBLEND_DESTCOLOR
> Inverse destination color             D3DBLEND_INVDESTCOLOR
> min(source alpha, 1 - destination alpha) D3DBLEND_SRCALPHASAT
> Obsolete                              D3DBLEND_BOTHSRCALPHA
> Both blends use inverse source alpha  D3DBLEND_BOTHINVSRCALPHA
> Constant blend factor                 D3DBLEND_BLENDFACTOR
> Inverted constant blend factor        D3DBLEND_INVBLENDFACTOR
> NWN2_BLEND_FORCE_DWORD                D3DBLEND_FORCE_DWORD
> ```
>
> *By looking at https://docs.microsoft.com/en-us/windows/win32/direct3d9/d3dblend you can understand the meaning of each blend mode.*
>
> *SourceBlend seems to be always D3DBLEND_SRCALPHA, no matter the value you set.*