
Subject: SSE2 and SVO optimization (Painter, memcpy....)

Posted by [Tom1](#) on Mon, 27 Apr 2020 17:19:48 GMT

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Hi,

Here's an optimization for BufferPainter.

BufferPainter::Clear(RGBA) speed is improved by over 30 % with the following change in Painter/Render.cpp:

```
void BufferPainter::ClearOp(const RGBA& color)
{
// UPP::Fill(~*ip, color, ip->GetLength());
FillRGBA(~*ip, color, ip->GetLength());
ip->SetKind(color.a == 255 ? IMAGE_OPAQUE : IMAGE_ALPHA);
}
```

And in Painter/Fillers.h:

```
namespace Upp {
```

```
// Add the following line:
```

```
#define FillRGBA(a,b,c) memsetd((a),*(dword*)&(b),(c))
```

```
struct SolidFiller : Rasterizer::Filler {
```

This may be significant in some usage scenarios as it can currently take e.g. 4.5 milliseconds to clear a 4K ImageBuffer before drawing to it. This can now be reduced to 2.8 milliseconds.

Best regards,

Tom

EDIT: Changed code to use the newly optimized FillRGBA() found in Fillers.h. This can be found at:

https://www.ultimatepp.org/forums/index.php?t=msg&th=11011&goto=53752&#msg_53752
