
Subject: Re: BufferPainter::Clear() optimization
Posted by [mirek](#) on Mon, 01 Jun 2020 13:47:18 GMT
[View Forum Message](#) <> [Reply to Message](#)

Well, that is intentional - it is not worth the effort of final combining unless there is more memory to process.

In the end, 32bit variant is for now:

```
hash_t memhash(const void *ptr, size_t len)
{
    const byte *s = (byte *)ptr;
    dword val = HASH32_CONST1;
    if(len >= 4) {
        if(len >= 16) {
            dword val1, val2;
            val1 = val2 = HASH32_CONST1;
            while(len >= 8) {
                val1 = HASH32_CONST2 * val1 + *(dword *)(s);
                val2 = HASH32_CONST2 * val2 + *(dword *)(s + 4);
                s += 8;
                len -= 8;
            }
            val = HASH32_CONST2 * val + val1;
            val = HASH32_CONST2 * val + val2;
        }
        const byte *e = s + len - 4;
        while(s < e) {
            val = HASH32_CONST2 * val + *(dword *)(s);
            s += 4;
        }
        return HASH32_CONST2 * val + *(dword *)(e);
    }
    if(len >= 2) {
        val = HASH32_CONST2 * val + *(word *)(s);
        val = HASH32_CONST2 * val + *(word *)(s + len - 2);
        return val;
    }
    return len ? HASH32_CONST2 * val + *s : val;
}
```

(I have for now reduced that to 8 bytes being processed as I am afraid about register pressure there - not enough registers in 386 ISA. Perhaps needs more testing...)
