

Der Assemblercode ohne die Optimierung:

multacc(unsigned long*, unsigned long*, unsigned long*, unsigned int):

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    cmp     r3, #0
    bxeq    lr
    add     ip, r1, #4
    push    {r4, r5, r6, r7, r8, r9, lr}
    sub     ip, r0, ip
    sub     lr, r3, #1
    cmp     ip, #8
    cmphi   lr, #2
    add     lr, r2, #4
    movhi   ip, #1
    movls   ip, #0
    sub     lr, r0, lr
    cmp     lr, #8
    movls   ip, #0
    andhi   ip, ip, #1
    cmp     ip, #0
    beq     .L8
    lsr     r5, r3, #2
    mov     ip, r0
    mov     r4, r1
    add     r5, r0, r5, lsl #4
    mov     lr, r2
.L9:
    vld1.32 {q10}, [r4]!
    vld1.32 {q9}, [lr]!
    vld1.32 {q8}, [ip]
    vmla.i32      q8, q10, q9
    vst1.32 {q8}, [ip]!
    cmp     ip, r5
    bne     .L9
    bic     ip, r3, #3
    cmp     r3, ip
    popeq   {r4, r5, r6, r7, r8, r9, pc}
    ldr     r4, [r1, ip, lsl #2]
    ldr     r5, [r2, ip, lsl #2]
    ldr     lr, [r0, ip, lsl #2]
    mla     lr, r5, r4, lr
    str     lr, [r0, ip, lsl #2]
    add     lr, ip, #1
    cmp     r3, lr
    lsl     lr, ip, #2
    poplsl  {r4, r5, r6, r7, r8, r9, pc}
    add     ip, ip, #2
    cmp     r3, ip
    add     r3, lr, #4
    ldr     r4, [r1, r3]
    ldr     r5, [r2, r3]
    ldr     ip, [r0, r3]
    mla     ip, r5, r4, ip
    str     ip, [r0, r3]
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        pop!s    {r4, r5, r6, r7, r8, r9, pc}
        add      r3, lr, #8
        ldr      ip, [r2, r3]
        ldr      r1, [r1, r3]
        ldr      r2, [r0, r3]
        mla      r2, ip, r1, r2
        str      r2, [r0, r3]
        pop      {r4, r5, r6, r7, r8, r9, pc}

.L8:
        cmp      r3, #8
        bls      .L15
        sub      lr, r3, #9
        add      r4, r0, #64
        bic      lr, lr, #7
        add      r5, r1, #64
        add      lr, lr, #8
        mov      r6, r2

.L12:
        ldr      r8, [r5, #-64]
        add      ip, ip, #8
        ldr      r9, [r6]
        cmp      ip, lr
        ldr      r7, [r4, #-64]
        add      r6, r6, #32
        pld      [r5]
        add      r5, r5, #32
        pld      [r4]
        add      r4, r4, #32
        mla      r7, r9, r8, r7
        str      r7, [r4, #-96]
        ldr      r7, [r4, #-92]
        ldr      r8, [r5, #-92]
        ldr      r9, [r6, #-28]
        mla      r7, r9, r8, r7
        str      r7, [r4, #-92]
        ldr      r7, [r4, #-88]
        ldr      r8, [r5, #-88]
        ldr      r9, [r6, #-24]
        mla      r7, r9, r8, r7
        str      r7, [r4, #-88]
        ldr      r7, [r4, #-84]
        ldr      r8, [r5, #-84]
        ldr      r9, [r6, #-20]
        mla      r7, r9, r8, r7
        str      r7, [r4, #-84]
        ldr      r7, [r4, #-80]
        ldr      r8, [r5, #-80]
        ldr      r9, [r6, #-16]
        mla      r7, r9, r8, r7
        str      r7, [r4, #-80]
        ldr      r7, [r4, #-76]
        ldr      r8, [r5, #-76]
        ldr      r9, [r6, #-12]
        mla      r7, r9, r8, r7

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        str    r7, [r4, #-76]
        ldr    r7, [r4, #-72]
        ldr    r8, [r5, #-72]
        ldr    r9, [r6, #-8]
        mla    r7, r9, r8, r7
        str    r7, [r4, #-72]
        ldr    r8, [r5, #-68]
        ldr    r9, [r6, #-4]
        ldr    r7, [r4, #-68]
        mla    r7, r9, r8, r7
        str    r7, [r4, #-68]
        bne    .L12
.L11:
        lsl    ip, lr, #2
        add    r0, r0, ip
        add    r1, r1, ip
        add    r2, r2, ip
.L13:
        ldr    ip, [r0]
        add    lr, lr, #1
        ldr    r4, [r1], #4
        cmp    r3, lr
        ldr    r5, [r2], #4
        mla    ip, r5, r4, ip
        str    ip, [r0], #4
        bhi    .L13
        pop    {r4, r5, r6, r7, r8, r9, pc}
.L15:
        mov    lr, ip
        b      .L11

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