

1. Gaussian Blur Filter with TLM interface

```
SystemC 2.3.3-Accellera --- Mar 17 2022 13:55:26
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Image width=512, height=512

Info: /OSCI/SystemC: Simulation stopped by user.
Simulated time == 3962880 ns
[100%] Built target run
```

2. Gaussian Blur Filter with quantum keeper

```
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Info: /OSCI/SystemC: Simulation stopped by user.
Simulated time == 2641920 ns
[100%] Built target run
```

quantum keeper version 減低了約 3 分之一的 simulation run time。

```
void Initiator::do_trans(tlm::tlm_generic_payload &trans)
{
    m_qk.set_global_quantum(sc_time(5, SC_NS));
    m_qk.reset();
    // sc_core::sc_time dummyDelay = sc_core::SC_ZERO_TIME;
    sc_core::sc_time delay = sc_core::SC_ZERO_TIME;
    // Call the transport and wait for no time, which allows the thread to yield
    // and others to get a look in!

    i_skt->b_transport(trans, delay);
    // wait(sc_core::SC_ZERO_TIME);
    // wait(dummyDelay);

    m_qk.inc(delay);
    if (m_qk.need_sync())
        m_qk.sync();
} // do_trans()
```

因為 time quantum 要在 b_transport 後緊接著進行，所以放在 Initiator.cpp 的 do_trans

3. Gaussian Blur Filter with TLM interconnect

```
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Info: /OSCI/SystemC: Simulation stopped by user.
Simulated time == 2641920 ns
read num == 264192
write num == 1320960
[100%] Built target run
```

read number == 264192

write number == 1320960