TLM 2.0 LT with Mandatory Extension System Example

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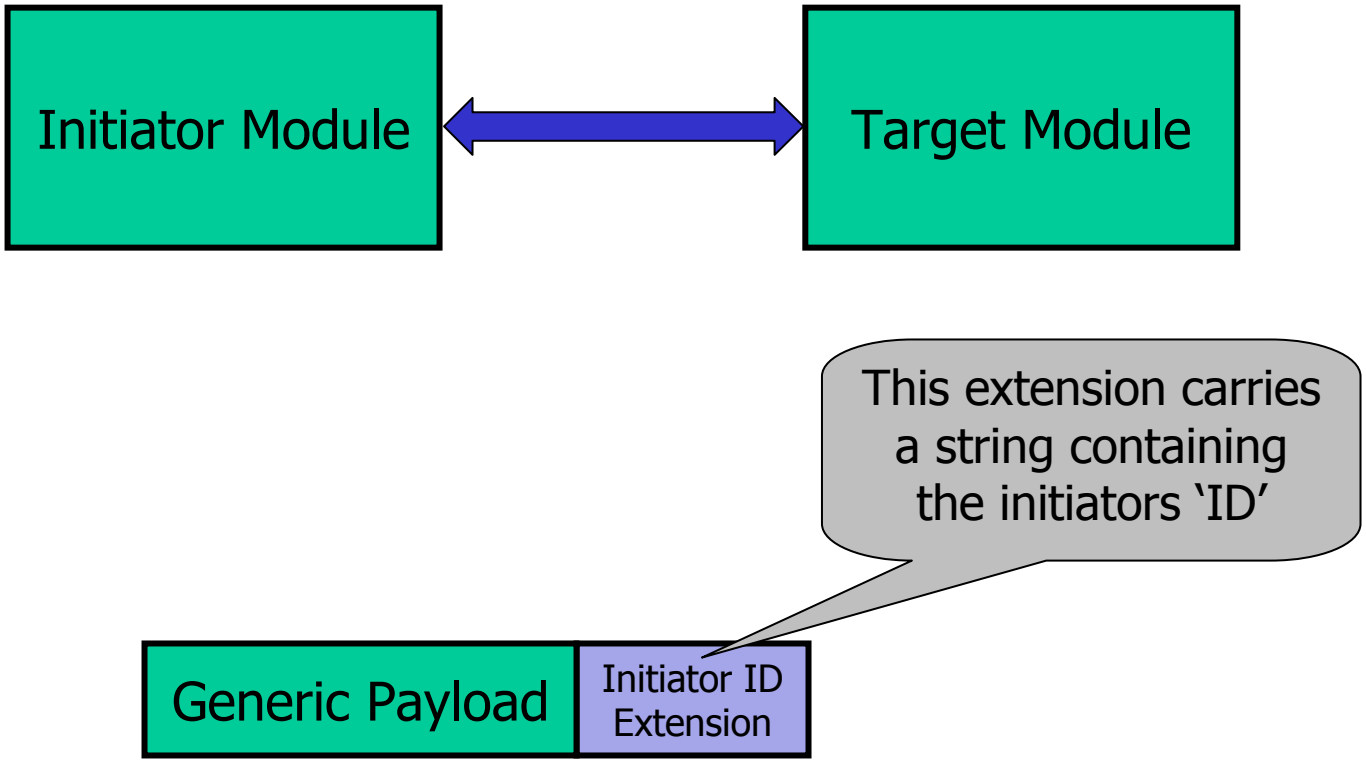
LT with Mandatory Extension Example

- **The Goal is to Illustrate:**
  - **Application of TLM 2.0 in a real system**
  - **Use of a mandatory extension**
- **Possible Applications:**
  - **Architectural exploration**
  - **Early software development**

Example Block Diagram



TLM 2 GP with mandatory extension

How to run this example (Linux)

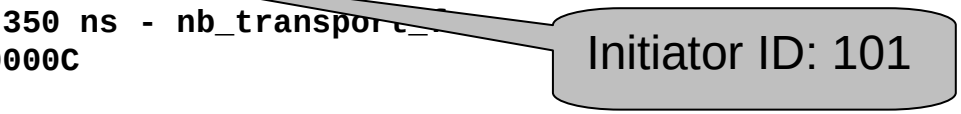
- Set **SYSTEMC_HOME**
- **cd examples/tlm/lt_extension_mandatory/build-unix**
- **make clean**
- **make**
- **make run**

How to run this example (MSVC)

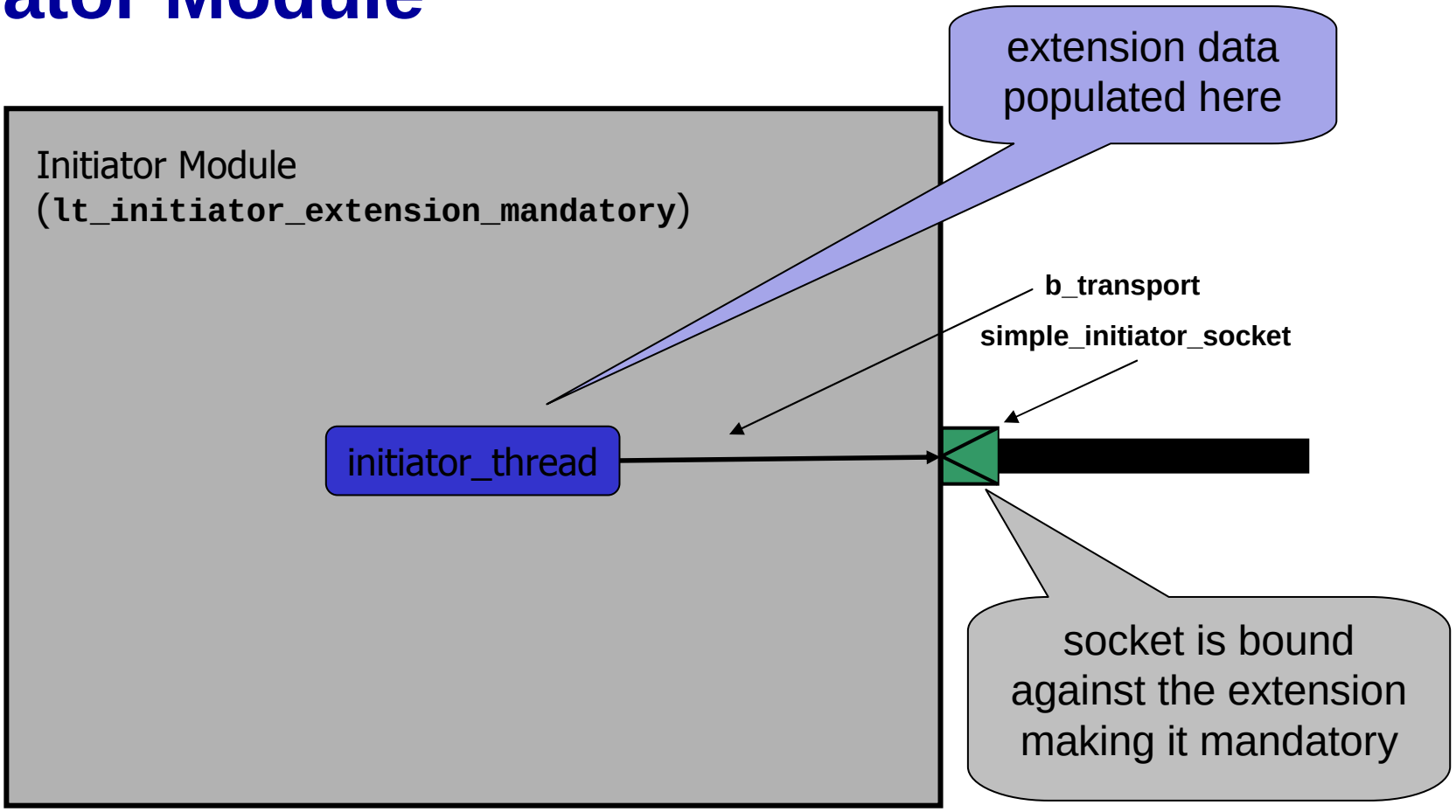
- Open a explorer window on **`examples/tlm/lt_extension_mandatory/build-windows`**
- Launch **`lt_extension_mandatory.sln`**
- Select **‘Property Manager’** from the **‘View’** menu
- Under **‘lt_extension_mandatory > Debug | Win32’** select **‘systemc’**
- Select **‘Properties’** from the **‘View’** menu
- Select **‘User Macros’** under **‘Common Properties’**
- Update the **‘SYSTEMC’** entry and apply
- Build and run

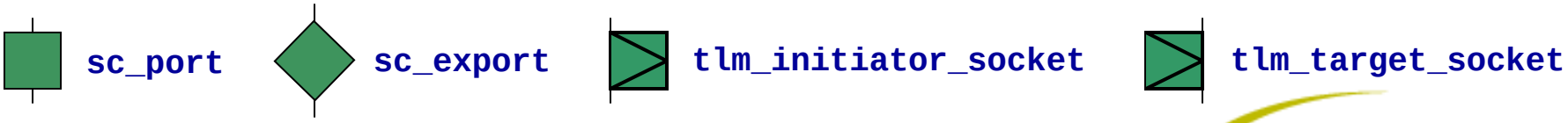
Expected Output (`expected.log`)

```
. . .

Info: lt_initiator_extension_mandatory.cpp: 275 ns - invalidate_direct_mem_ptr
      Received invalidate request - valid request

Info: lt_initiator_extension_mandatory.cpp: 350 ns - log_end
      Received TLM_OK_RESPONSE, Data: 0x00000002

Info: lt_initiator_extension_mandatory.cpp: 350 ns - log_start
      Creating read transaction - Addr: 0x000000000000000C

Info: lt_target_extension_mandatory.cpp: 350 ns - nb_transport_fw
      Extension present, Data: generic ID

Info: lt_target_extension_mandatory.cpp: 350 ns - nb_transport_
      Read request - Addr: 0x000000000000000C

Info: lt_initiator_extension_mandatory.cpp: 450 ns - log_end
      Received TLM_OK_RESPONSE, Data: 0x00000003

Info: lt_target_extension_mandatory.cpp: 450 ns - get_dmi_ptr
      Extension present, Data: generic ID

. . .
```



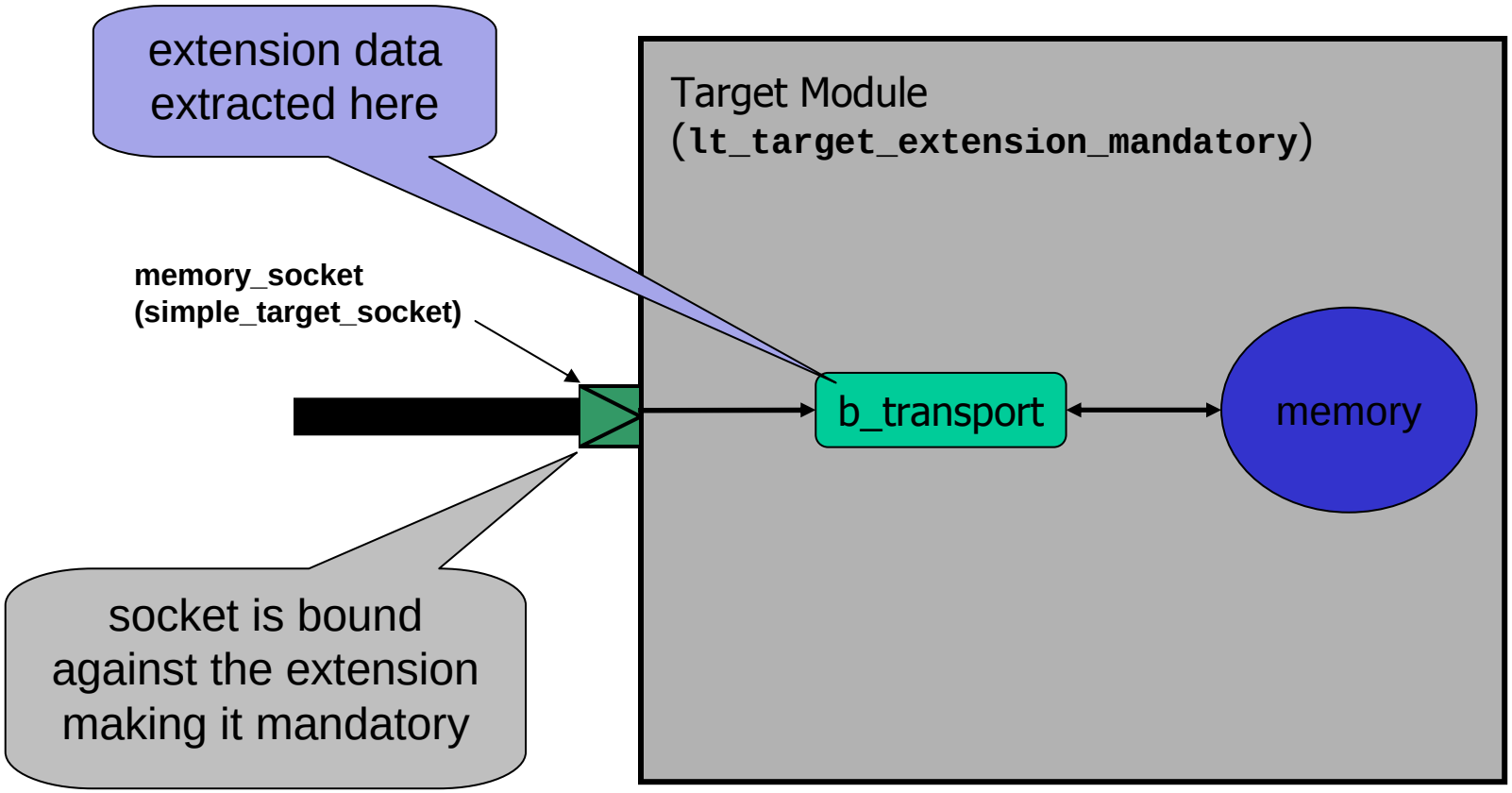
Initiator Module

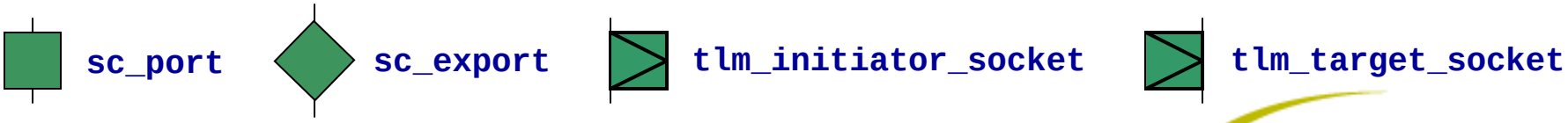




SYSTEMC™

Target Module





Expected Timing