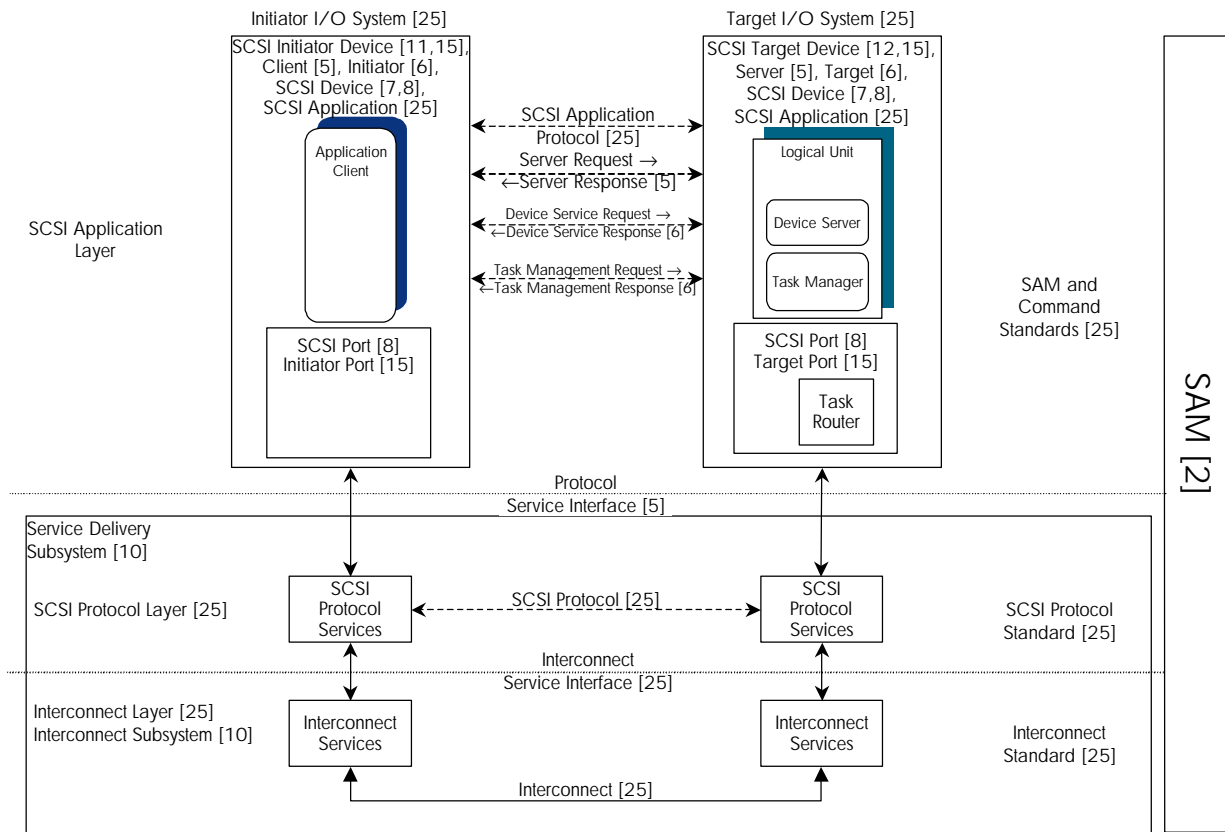# Diagrams pertaining to HP comments on sam2r23

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T10 document: T10/02-153r0
Date: 21 Apr 2002
Author contact: Randy_Haagens@hp.com
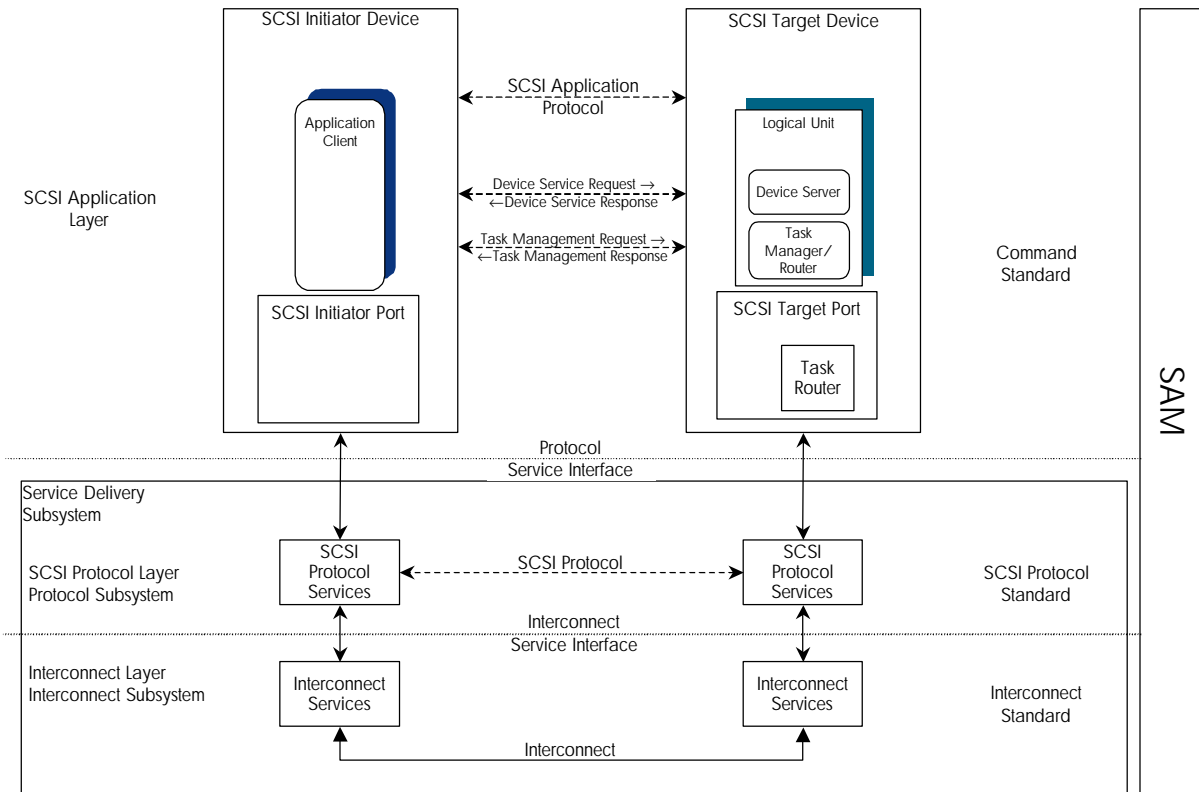
Need Composite Layer Diagram

The current draft of SAM (r23) includes many different layering diagrams, with conflicting terminology. The diagram below is a composite diagram, with information from each of the figures that illustrates the conflicting terminology. References to the figures are shown in [square brackets].

The SCSI model for distributed communications

We suggest that alternatively, a single composite layer diagram be used, and that where appropriate, subsets of the diagram be reproduced in the various SAM sections. Below is an example layer diagram that removes all the redundant terms.

The SCSI model for distributed communications

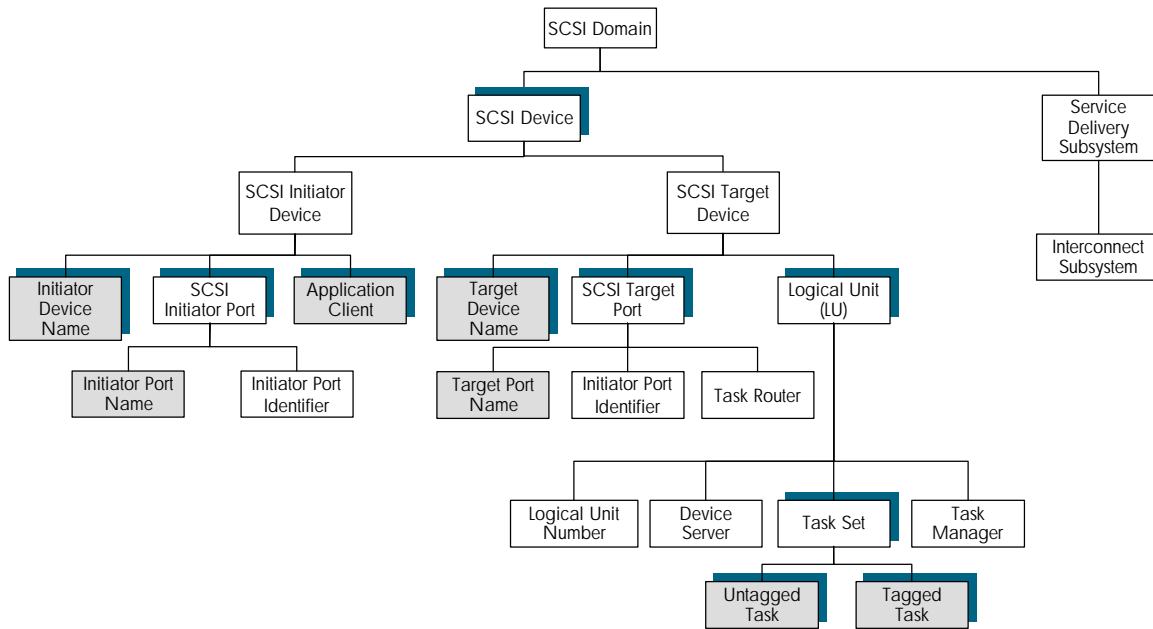Note that in this model, the SCSI Initiator Port and SCSI Target Port are shown as entities entirely above the Protocol Service Interface. We believe that this model is most consistent with the definitions text and with the several figures.
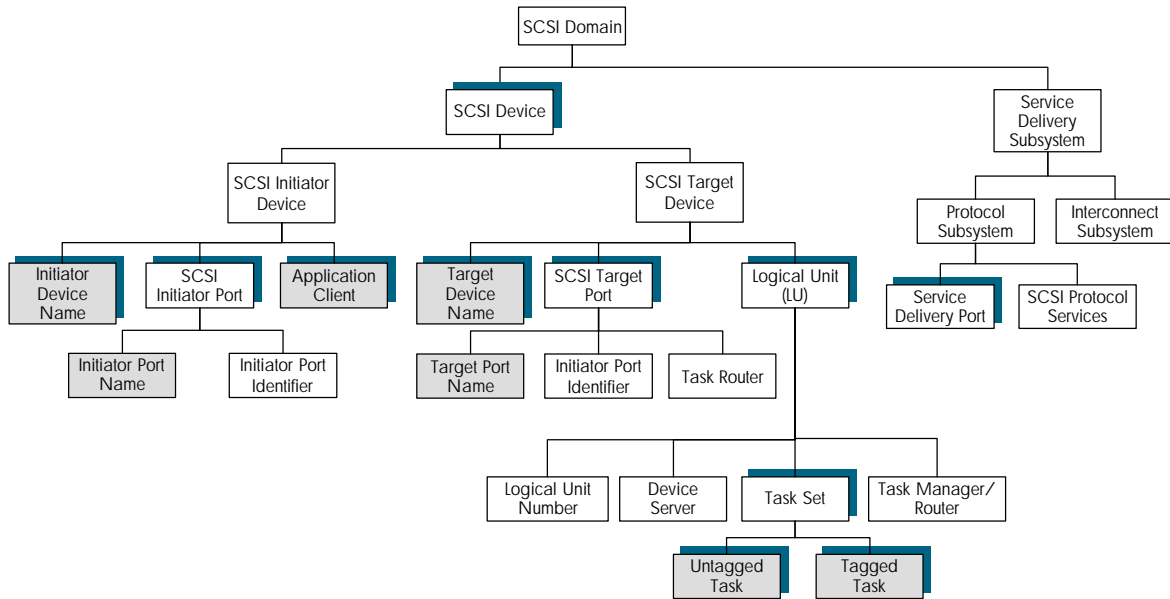
Need Composite Object Diagram

The SCSI object model is not so complex that it needs to many individual, partial depictions. The entire model can be drawn on one page, as indicated below:

2

SCSI Model

```
                              ┌──────────────┐
                              │ SCSI Domain  │
                              └──────┬───────┘
                    ┌────────────────┴──────────────────────────┐
             ┌──────────────┐                          ┌──────────────┐
             │ SCSI Device  │                          │   Service    │
             └──────┬───────┘                          │   Delivery   │
         ┌──────────┴──────────┐                       │  Subsystem   │
  ┌──────────────┐      ┌──────────────┐               └──────┬───────┘
  │ SCSI Initiator│      │ SCSI Target  │               ┌──────────────┐
  │    Device     │      │   Device     │               │ Interconnect │
  └──────┬────────┘      └──────┬───────┘               │  Subsystem   │
                                                        └──────────────┘
```

SCSI Domain
  SCSI Device
    SCSI Initiator Device
      Initiator Device Name
      SCSI Initiator Port
        Initiator Port Name
        Initiator Port Identifier
      Application Client
    SCSI Target Device
      Target Device Name
        Target Port Name
      SCSI Target Port
        Initiator Port Identifier
      Task Router
      Logical Unit (LU)
        Logical Unit Number
        Device Server
        Task Set
          Untagged Task
          Tagged Task
        Task Manager
  Service Delivery Subsystem
    Interconnect Subsystem

We suggest that a single, composite model diagram be used, and that where appropriate, subsets of the diagram be reproduced in the various SAM sections. Below we have shown a diagram with some changes and additions.

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SCSI Model

SCSI Domain
├── SCSI Device
│   ├── SCSI Initiator Device
│   │   ├── Initiator Device Name
│   │   ├── SCSI Initiator Port
│   │   │   ├── Initiator Port Name
│   │   │   └── Initiator Port Identifier
│   │   └── Application Client
│   └── SCSI Target Device
│   ├── Target Device Name
│   ├── SCSI Target Port
│   │   ├── Target Port Name
│   │   ├── Initiator Port Identifier
│   │   └── Task Router
│   └── Logical Unit (LU)
│   ├── Logical Unit Number
│   ├── Device Server
│   ├── Task Set
│   │   ├── Untagged Task
│   │   └── Tagged Task
│   └── Task Manager/Router
└── Service Delivery Subsystem
    ├── Protocol Subsystem
    │   ├── Service Delivery Port
    │   └── SCSI Protocol Services
    └── Interconnect Subsystem

This diagram implies other changes to SAM:

1. No such thing as a Target/Initiator device. In this model, a SCSI device can include a SCSI Initiator Device, a SCSI Target Device, or both. Device names and Port names and identifiers may be the same or different.

2. The Service Delivery Subsystem is shown to contain more than just the Interconnect Subsystem. The Protocol Subsystem also is called out, along with its Service Delivery Port and Protocol Services. This re-introduces the notion of a Service Delivery Port, as an object within the Protocol Subsystem. The Service Delivery Port is in corresponsdence with the SCSI Target (or Initiator) Port, but it is not the same thing.

3. The Task Manager is renamed Task Manager/Router, to allow for task routing to dependent LUs. Arguably, a separate Task Router and Dependent LU could be shown in the diagram.

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