

## T10/07-094 revision 0

Date: March 01, 2007

To: T10 Committee (SCSI)

From: George Penokie (IBM)

Subject: SAS-2:UML changes for logical phys

### 1 Overview

- | When logical phys were added as a result of the multiplexing proposal the phy UML diagrams for the new logical phy class and logical expander phy class were not updated. This proposal recommends changes to the phy UML diagram that for those new classes.

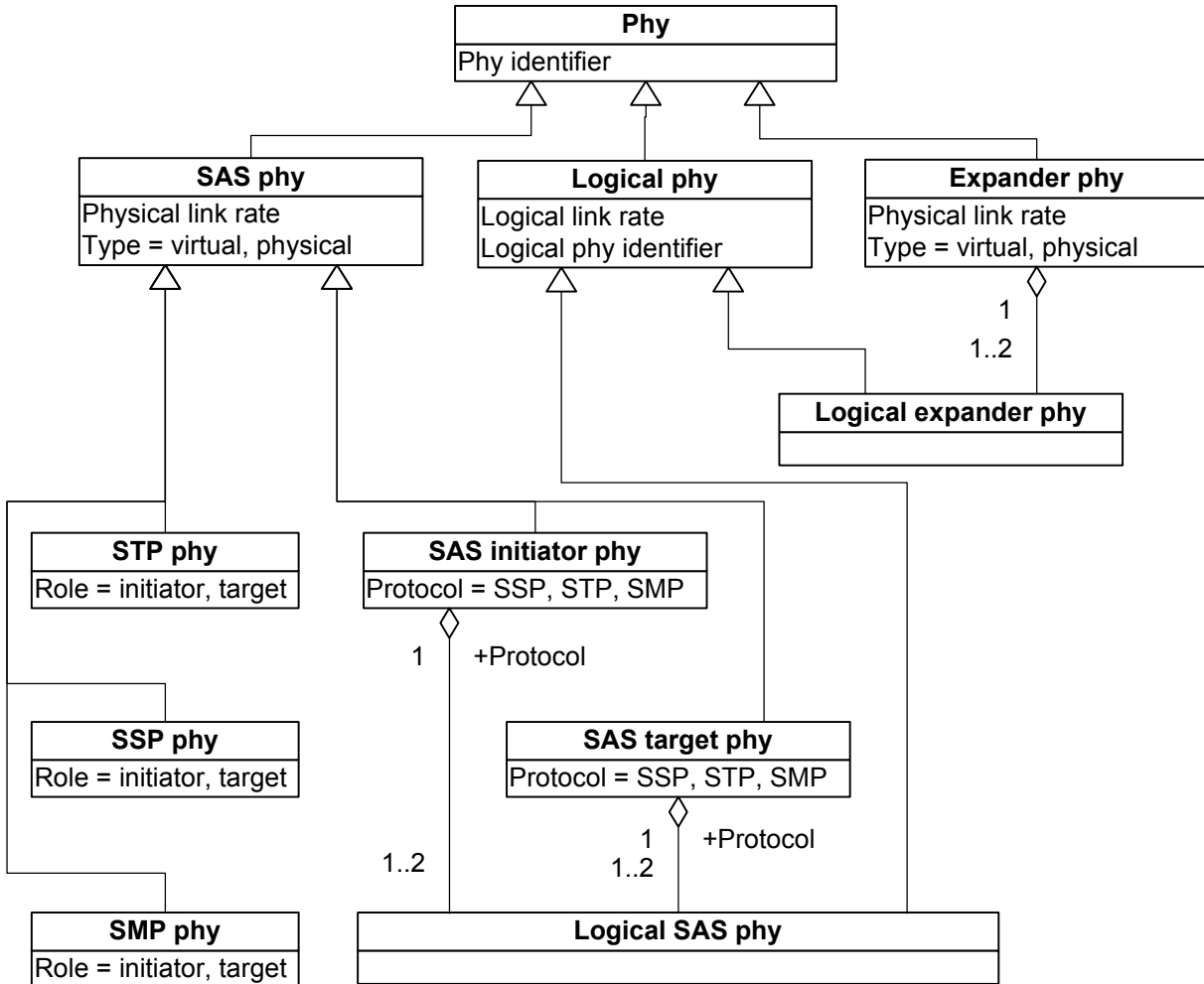
### 2 SAS-2 Modifications

#### 4.1.3 Physical links and phys

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Figure 1 defines the phy classes, showing the relationships between the following classes:

- | a) phy;
  - | b) SAS phy;
  - | c) logical phy;
  - | d) expander phy;
  - | e) logical SAS phy;
  - | f) logical expander phy;
  - | g) SAS initiator phy;
  - | h) SAS target phy;
  - | i) SSP phy;
  - | j) STP phy; and
  - | k) SMP phy.
- | SATA phys are also referenced in this standard but are defined by SATA (see ATA/ATAPI-7 V3).



**Figure 1 — Phy class diagram**

Figure 2 shows the examples objects instantiated from the SAS phy class and the logical phy class, including:

- a) SSP initiator phy;
- b) SSP target phy,
- c) virtual SMP initiator phy;
- d) virtual SMP target phy; and
- e) logical SAS phy.

A SAS phy and logical SAS phy is represented by one of these objects during each connection. A SAS phy and a logical SAS phy may be represented by different SAS phy objects and logical SAS phy objects in different connections.

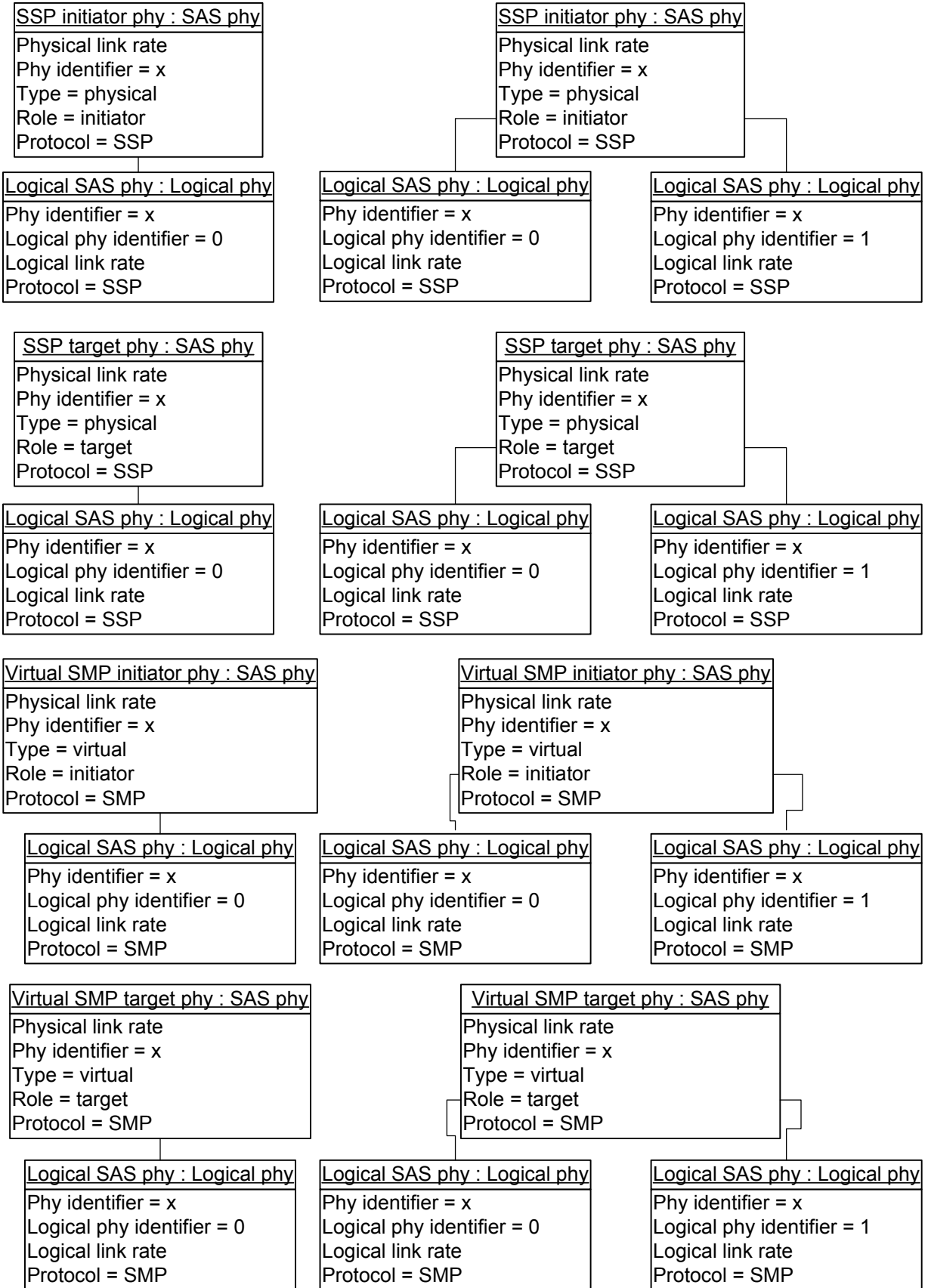


Figure 2 — SAS phy object and logical SAS phy object diagram

Figure 3 shows the objects instantiated from the expander phy class and the logical phy class, including:

- a) expander phy;
- b) virtual expander phy; and
- c) logical expander phy.

An expander phy and logical expander phy is represented by one of these objects during each connection. An expander phy and a logical expander phy may be represented by different expander phy objects and logical expander objects in different connections.

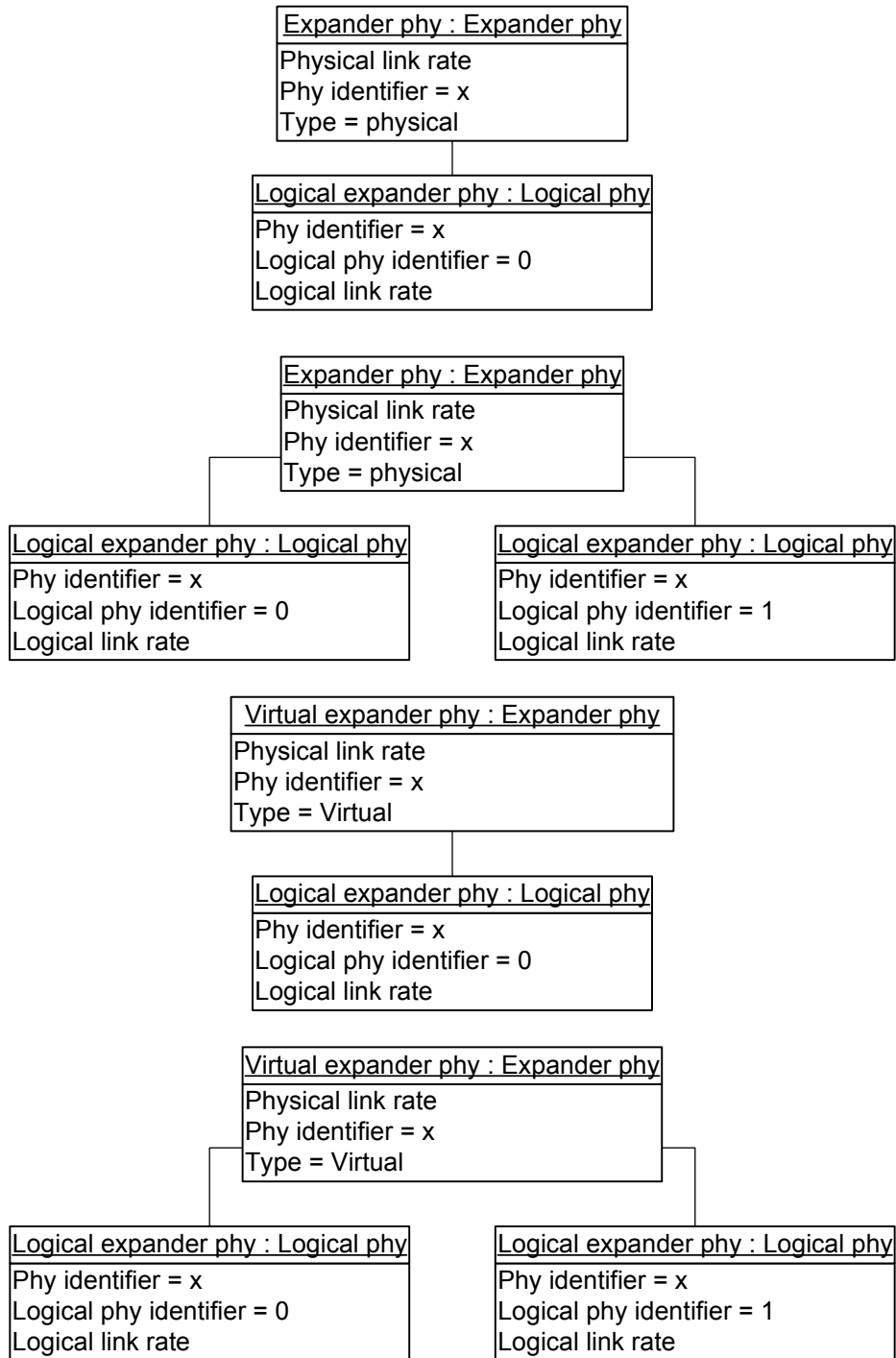


Figure 3 — Expander phy object diagram