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SUBJECT: ADI ADC Device Server Interaction (document T10/03-217r0)

Introduction

This document proposes text for section 4.2.2 of ADC describing the interaction of the various device servers resident in the data transfer device.

Proposed Changes

[all new text]

4.2.2 Device server interaction

Figure 3 illustrates a data transfer device and the various device servers it has – an RMC device server, an ADC device server, and an optional SMC device server (see 4.2.2.1). The RMC device server shall be accessible as a logical unit on the DTD primary port. The ADC device server may be accessible as a logical unit on the DTD primary port. The ADC device server shall be accessible as a logical unit on the ADT port. The RMC device server should be accessible as a logical unit on the ADT port. This logical unit may be an asymmetric logical unit (see SAM-3).

Because the RMC and ADC device servers coexist within and serve the same target device, they interact with each other in various ways. The RMC and ADC device servers avoid reservation conflicts (see 4.2.9.1). In particular, the ADC device server is not subject to reservations held on the DTD by the RMC device server. The ADC device server does not support reservations. This approach allows automation to interact with the DTD without conflicting with or creating a conflict for the RMC application client.

The ADC device server logical unit supports mode pages that can affect the RMC device server logical unit (see 6.2.2.3.2). The ADC mode pages can override behavior of the RMC device server for operations such as the loading and unloading of media. Changes to the RMC device server logical unit's Control mode page (see SAM-2) may affect the ADC device server unless specifically overridden via the ADC mode pages.

Some commands supported by the ADC device server are dependent upon the readiness of the removable medium (see table 5). The ADC device server does not have a Not Ready state, and a TEST UNIT READY issued to the ADC device server indicates the readiness of the removable medium, not the ADC device server. The ADC device server shall issue a NOT TO READY TRANSITION Unit Attention only based on the readiness of the removable medium, and not the state of the RMC device server.

Since the RMC and ADC device servers share the same physical target device, operations related to the physical device are cause for interaction between the two device servers. Unit Attentions shall be issued by both the RMC and ADC device servers for causes based on the shared physical device, such as pressing an eject button on the DTD, or a power on of the DTD. Unit Attentions shall not be propagated across both the RMC and ADC device servers for causes that are strictly within the domain of one device server (such as changes to mode parameters that only are supported by one device server).

A LOAD UNLOAD command issued to and performed by the ADC device server will affect the readiness state of the RMC device server. This will cause the RMC device server to issue appropriate Unit Attentions as well. A LOAD UNLOAD command issued to and performed by the RMC device server will affect the readiness of the removable medium, which also affects the ADC device server. This will cause the ADC device server to issue appropriate Unit Attentions as well.

Sense data reported by the RMC device server may be masked for a period of time while automation is in the process of loading media (see 4.2.5). The ADC command NOTIFY DATA TRANSFER DEVICE provides a mechanism for automation to indicate that the load attempt has ended in a failure, such that

the RMC device server can resume reporting sense data for the failure. This cooperative interaction between the device servers facilitates better error handling.

The RMC and ADC device servers maintain independent TapeAlert flags (see 4.2.6) and present them in different ways. Retrieving the flag information from the ADC device server has no impact on the flags reported by the RMC device server. Retrieving the flag information from the RMC device server has no impact on the flags reported by the ADC device server.