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SUBJECT: ADI ADC Device Server Interaction (document T10/03-217r1)

Rev1 – Changed wording for reservations, device readiness, mode pages, added prevent/allow behavior.

Rev0 – Initial draft.

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). Because the RMC and ADC device servers coexist within a single target device and serve the same physical device, they interact with each other in various ways. 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).

The ADC device server does not support reservations. The ADC device server avoids reservation conflicts with other device servers (see 4.2.9.1) since reservations held against one device server do not affect other device servers. This approach allows the automation application client to interact with the DTD via the ADC device server without a conflict due to reservations on other device servers.

PREVENT ALLOW MEDIUM REMOVAL commands issued to the RMC device server shall not affect the ADC device server.

The ADC device server supports mode pages that can affect the RMC device server. The ADC mode pages can override behavior of the RMC device server for operations, e.g. the loading and unloading of media (see 6.2.2.3.2).

Some commands supported by the ADC device server are dependent upon the readiness of the removable medium (see table 5). A TEST UNIT READY issued to the ADC device server indicates the readiness of the removable medium. The ADC device server shall issue a NOT READY TO READY TRANSITION Unit Attention based on the readiness of the removable medium in the data transfer device, which corresponds to the DAcc field in the VHF data (see 6.1.2.1).

Since the RMC and ADC device servers share the same physical 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 affects the readiness state of the RMC device server. This shall 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 affects the readiness of the removable medium, which also affects the ADC device server. This shall 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 the application client to indicate that the load attempt has ended in a failure, such that the RMC device server that was configured to mask sense data changes shall 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.