TO:	T10 Membership
FROM:	Paul A. Suhler, Certance
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SUBJECT:	T10/03-087r2, ADC Data Transfer Device Status Masking

Revision 2:
- Return to using a command to notify the DTD when media access attempt is abandoned by automation. This command is described in T10/03-165.
- Eliminate mode page data. Link to previous revision with mode page data added to ADI-2 change tracker (T10/03-133).

Revision 1:
- No need to have a special command
- Clause for model section
- Mode parameter field to enable/disable the feature
- Automation AER IU field to inform DTD when media access attempt is abandoned by automation

Revision 0:
- MASK UNMASK SENSE command.

Discussion:

An open question at the end of the 10 – 11 March WG meeting was whether to control this feature via a mode page. I believe that we should be able to turn off any behavior that causes the drive to behave differently from a standalone drive. However, this can be satisfied if the drive can sense the presence of the automation device and only enter masking mode when automation is present.

I've added a model section since this is a separate behavior and I think that it needs a separate explanation, rather than just covering it as part of the discussion of the relevant parameter fields.

New model clause:

4.2.x Sense data masking

In the process of loading a medium into a data transfer device, it may be necessary to retry the operation in order to overcome transient failures. This may require removing and re-inserting the medium into the data transfer device. If an initiator is testing the status of the device, it may see an initial failure and abandon a backup even though the loading eventually succeeds and the MOVE MEDIUM command returns GOOD status.

If the drive's status is masked during automation-initiated loads – i.e., failures are not reported – the automation device will be able to retry the load without causing an unnecessary failure of the backup. This behavior is termed "sense data masking" and its implementation is optional.

While in masking mode, the data transfer device shall report SCSI statuses and sense data consistent with a normal loading operation. These values are vendor-specific.

If the data transfer device implements sense data masking, then when it begins loading a medium it shall enter masking mode. The device shall exit masking mode when any of the following events occur:

- Loading succeeds

- Loading fails and for a time of SM_TOV (SENSE MASKING TIMEOUT VALUE) the automation device issues no media access commands and does not remove and re-insert the medium

- The data transfer device receives a NOTIFY DATA TRANSFER DEVICE command with the LDFAIL field set to one

During the SM_TOV period, if the automation device either issues a media access command or removes and re-inserts the medium, then the data transfer device shall remain in masking mode and the SM_TOV timer shall be restarted when either the medium is re-inserted or the command is received. If the medium is removed and SM_TOV expires before it is re-inserted, then the data transfer device shall exit masking mode.

The value of SM_TOV is vendor-specific.