

# **StorageTek Libraries in a TSM environment**

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**Oxford University TSM Symposium 2005**

**Tivoli Storage Manager : Facing the Future**  
**St Catherine's College, 27-29 September 2005**



# Agenda

- Library „internal“ addressing
- Library / drive „sharing“ + communication
- TSM configuration

# Libraries

FC / SCSI



L20, L40,  
L80



L180



L700e  
L1400



SL500

Addressing  
based on elements

Addressing  
based on DriveID/Slot



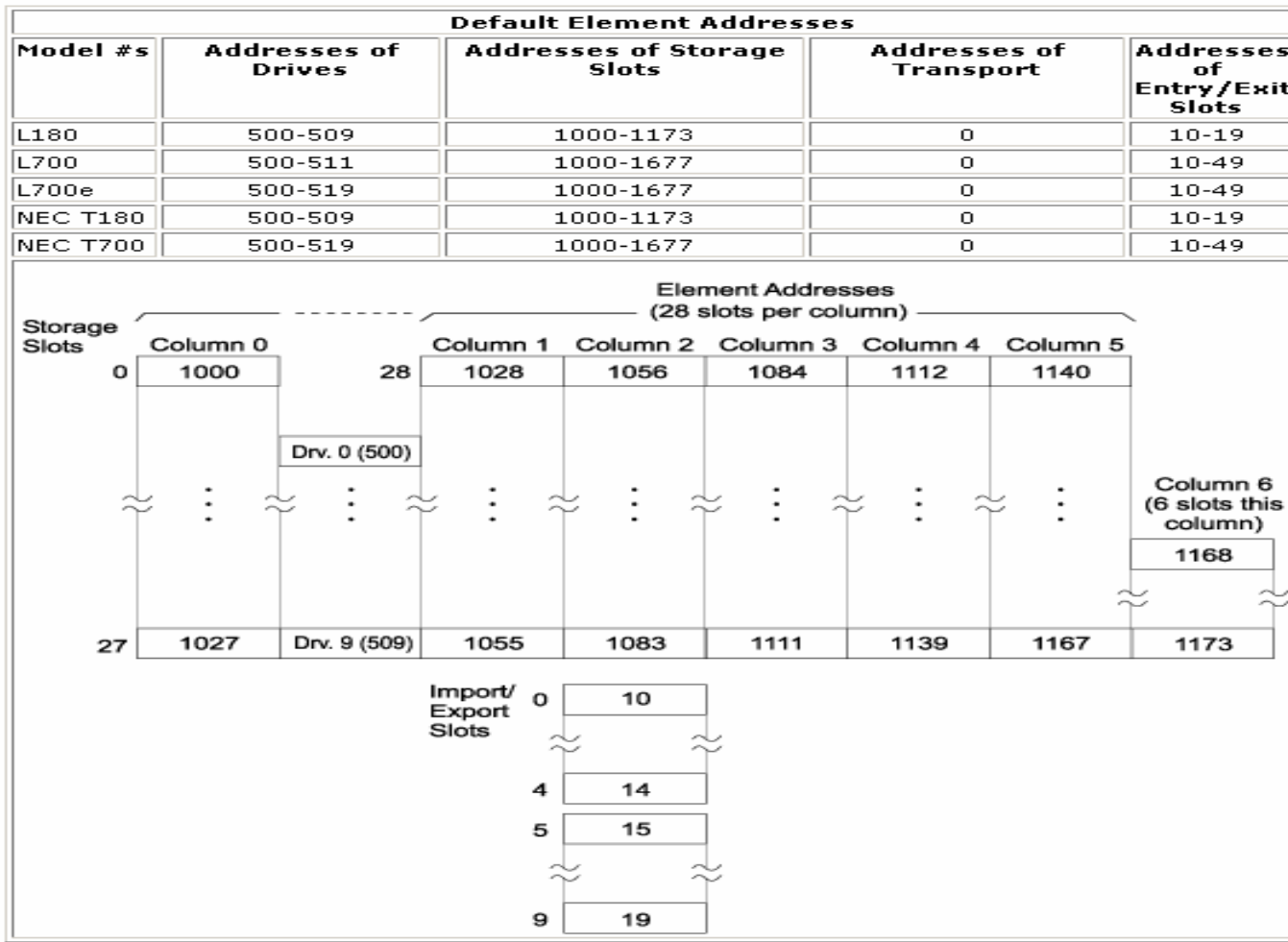
9310 / L5500



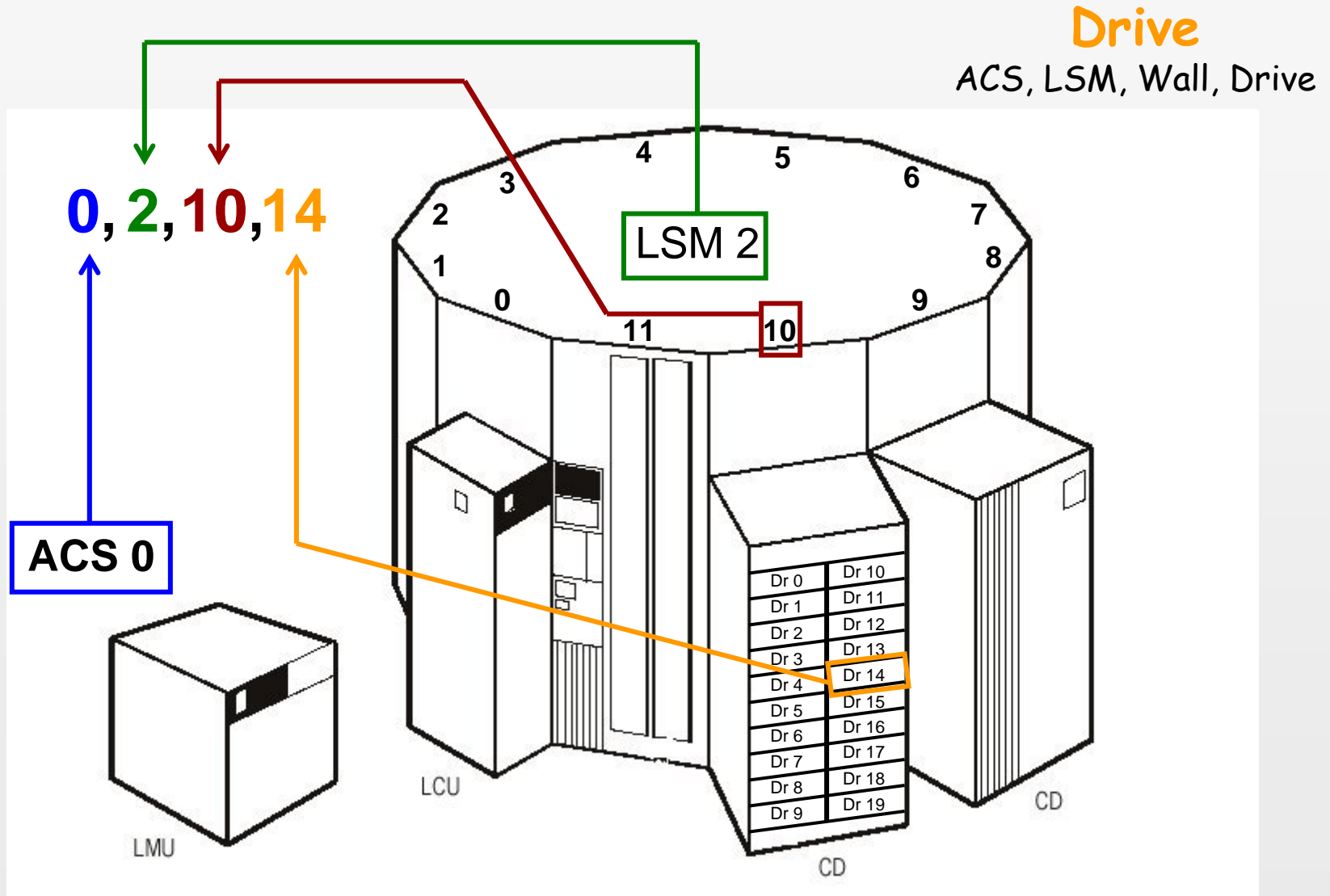
SL8500

Serial

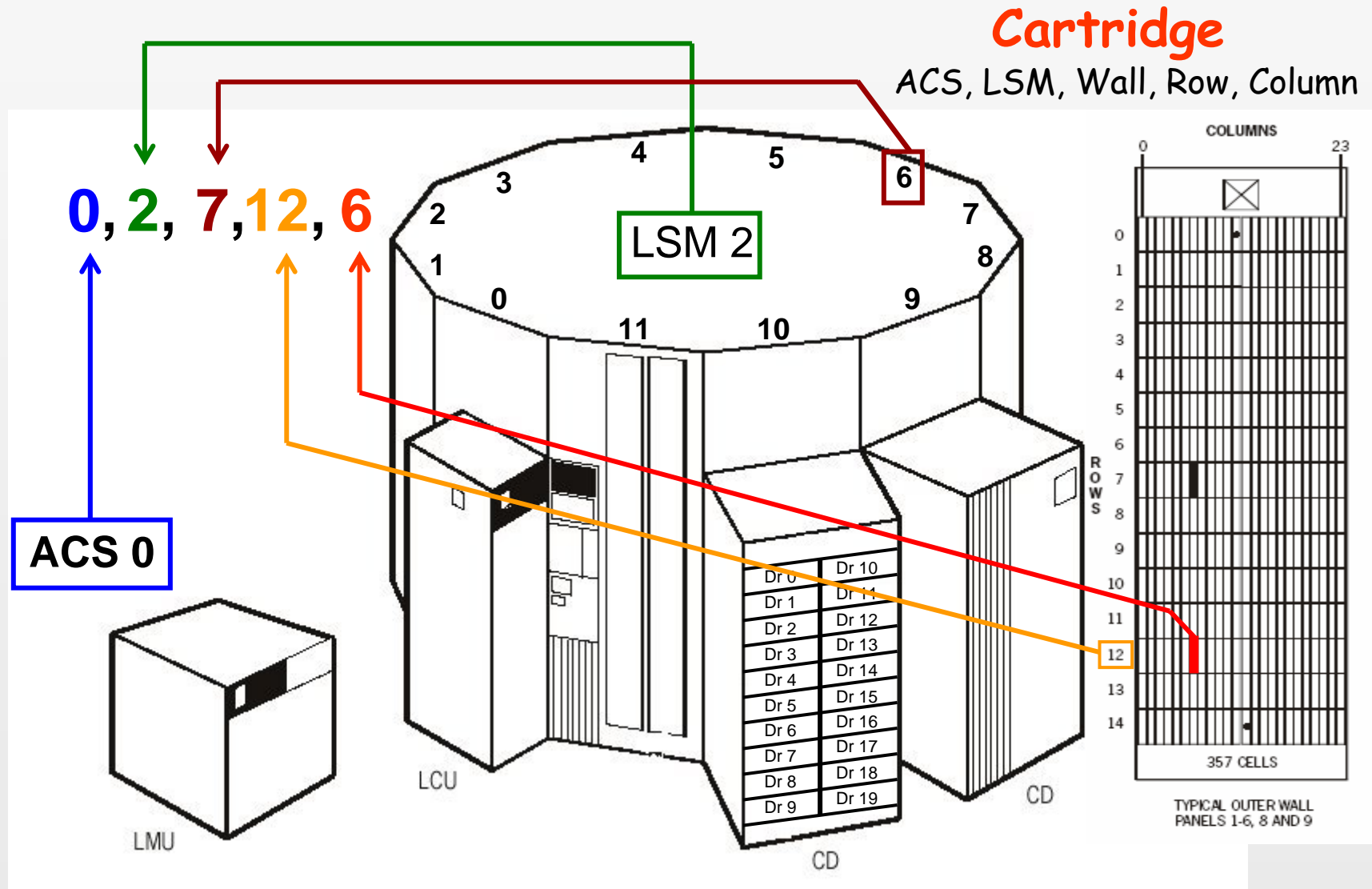
# Element based addressing



# Slot based addressing



# Slot based addressing



# Library Control Software

Media Manager

(Library Manager, Media Server)



HSC (Mainframe), ACSLS (Open Systems)

Authority, which controls the library



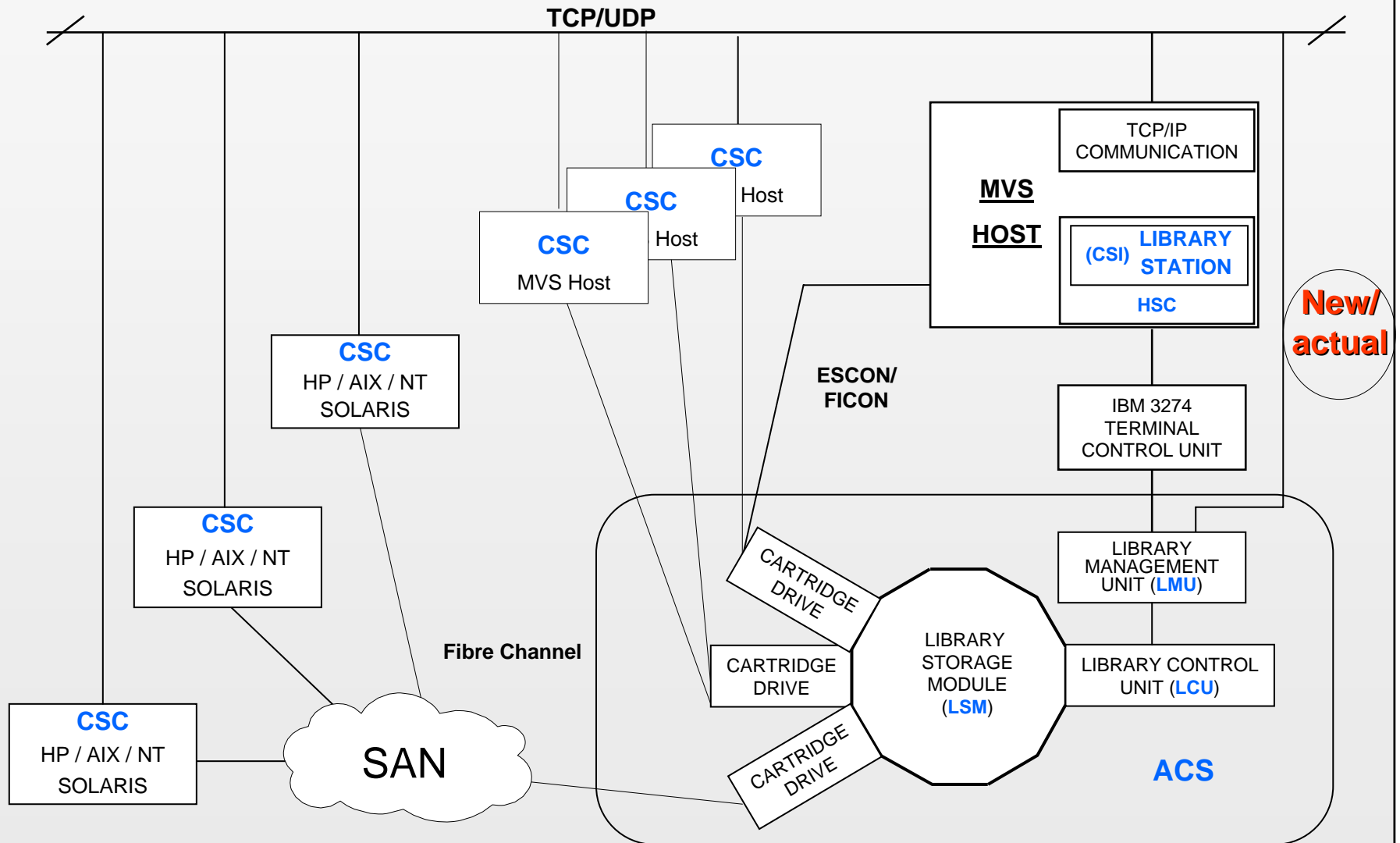


# Agenda

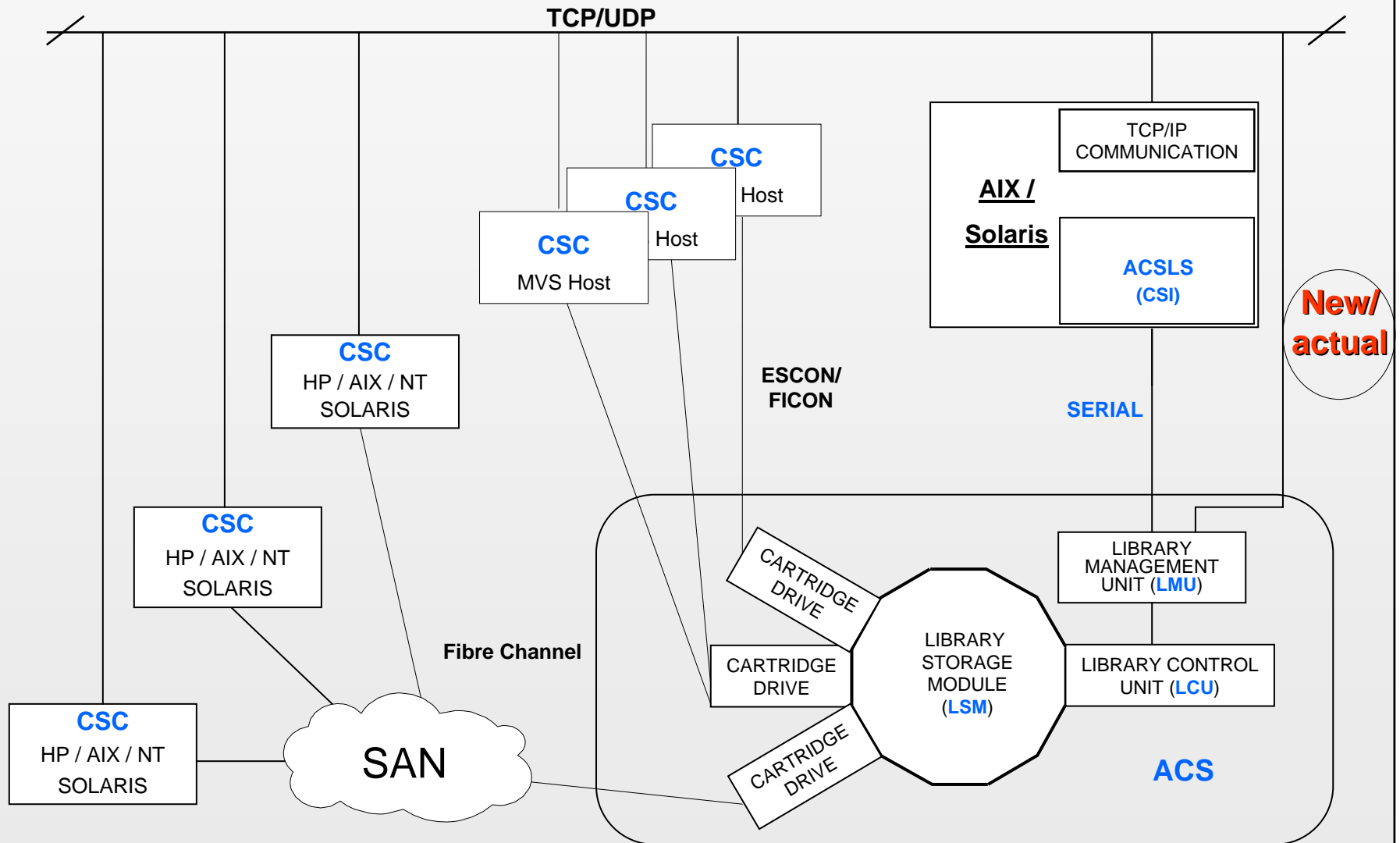
- Library „internal“ addressing
- Library / drive „sharing“ + communication
- TSM configuration



# ACS Library sharing „MVS“



# ACS Library sharing „Open System“



# Terms Software (library sharing)

SSI

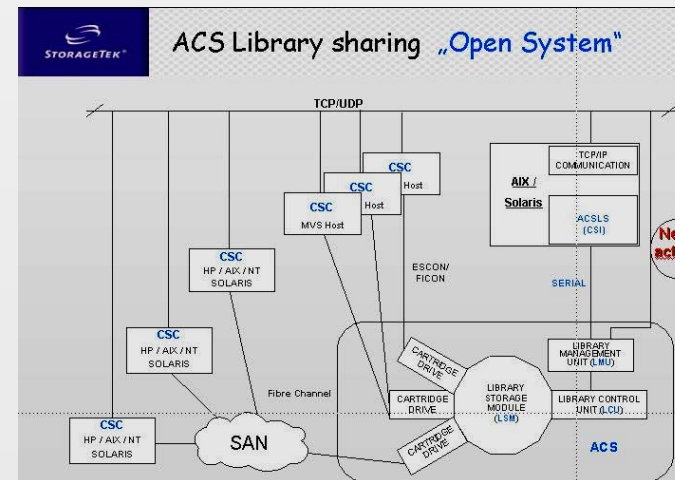
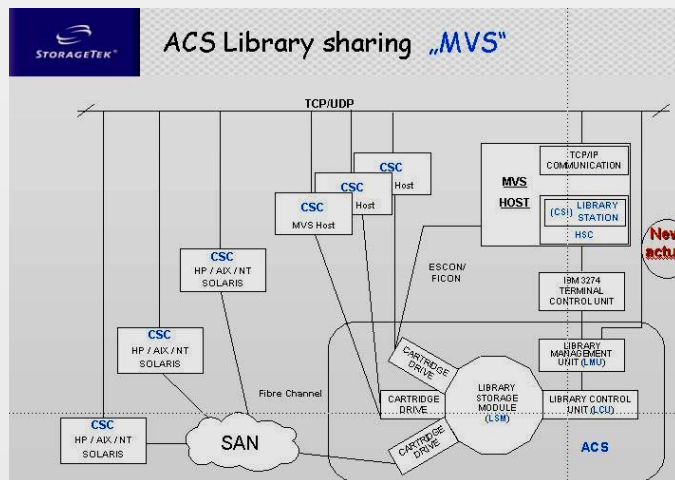
-> Storage Server Interface  
Deamon, communicates with the Media Manager

CSC

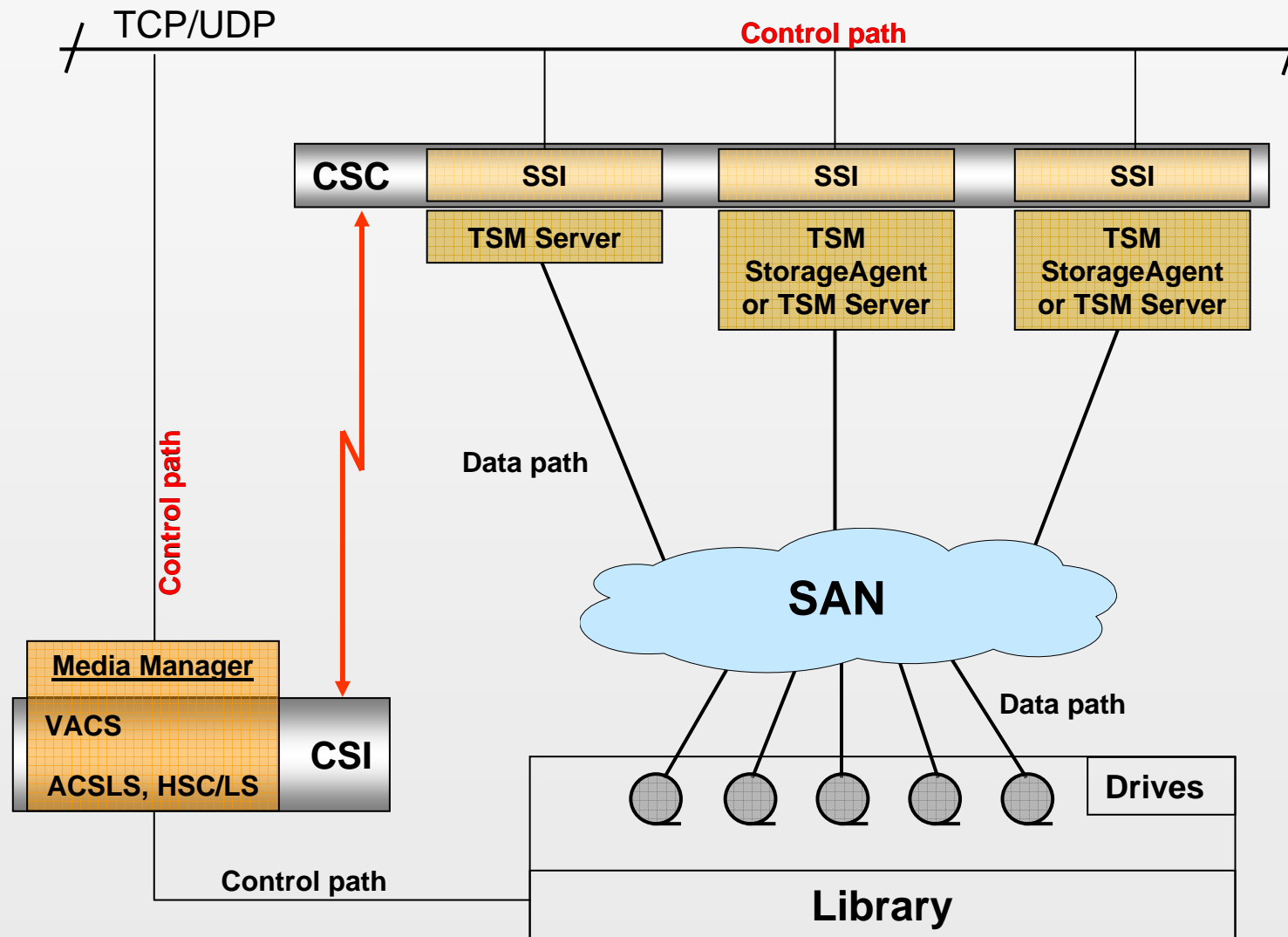
-> Client Software Component  
Software component on the client = SSI  
Software that provides an interface between the client computing system's operating system and the StorageTek library Software, such as HSC (Library Station) and ACSLS

CSI

-> Client System Interface  
The software component that translates and routes messages between the ACS Library Manager and the Storage Server interfaces.



# „Interplay“ of Components



# Agenda

- Library „internal“ addressing
- Library / drive „sharing“ + communication
- **TSM configuration**

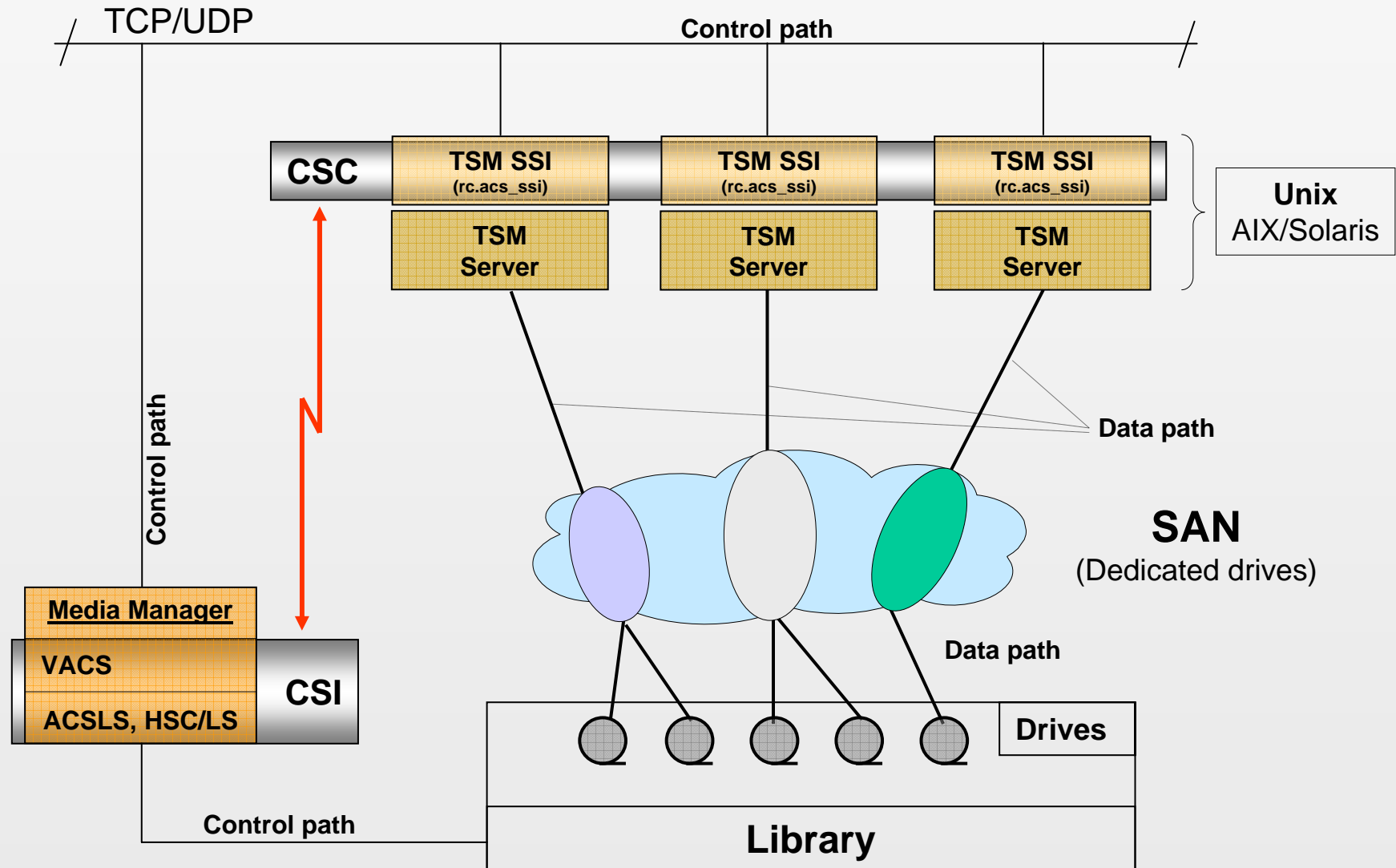
# TSM Library Type

**ACSLs (HSC)** -> DEFine LIBRARY *library\_name* LIBType=ACSLs  
**rc.acs\_ssi** (startup file)

**EXTERNAL** -> DEFine LIBRARY *library\_name* LIBType=EXTernal  
(Gresham EDT-DT) **rc.edt** (startup file)

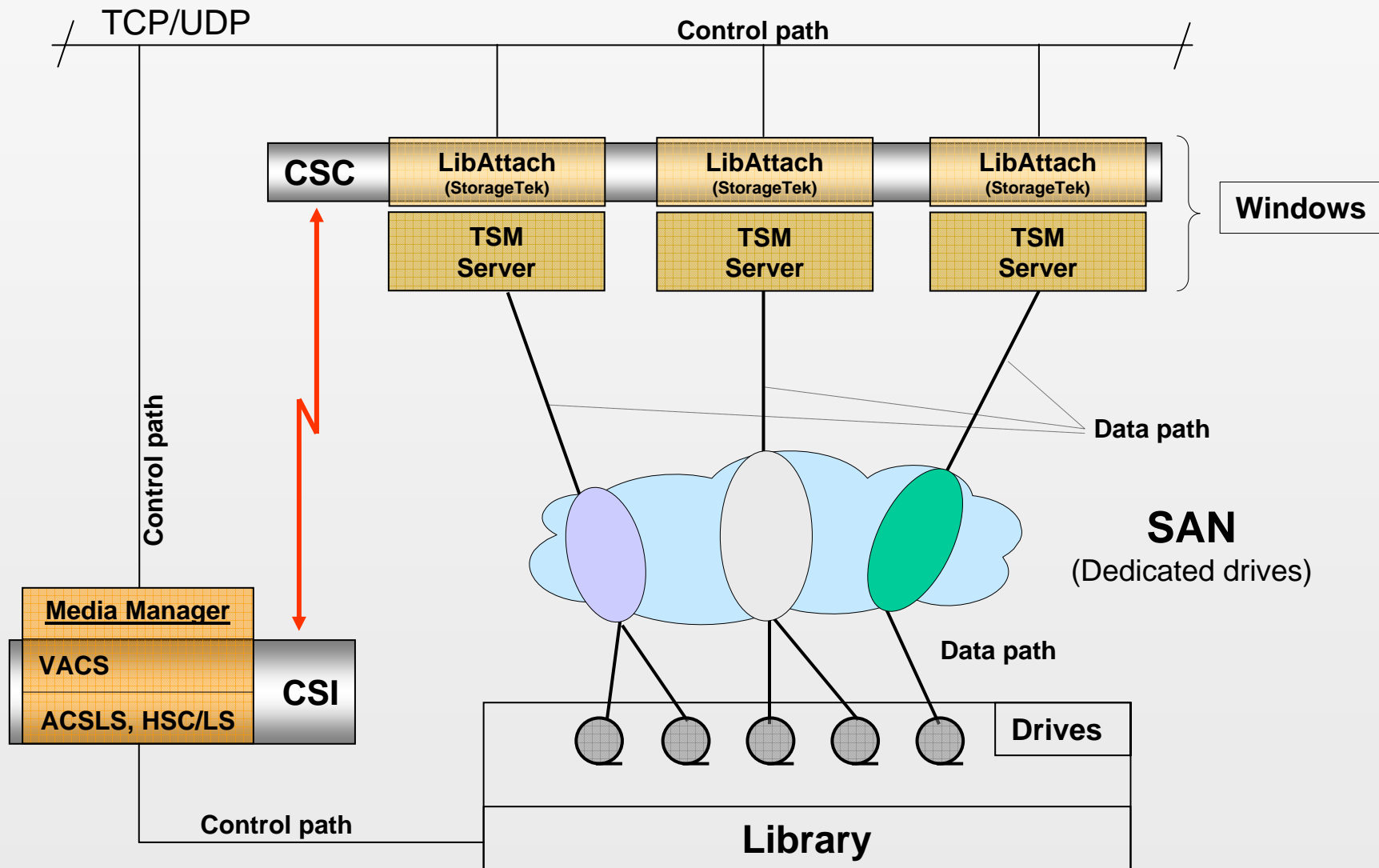
**EXTERNAL** -> DEFine LIBRARY *library\_name* LIBType=EXTernal  
(eRMM) **elm** (startup file)

# LIBType=ACSLS, TSM before Version 5.3

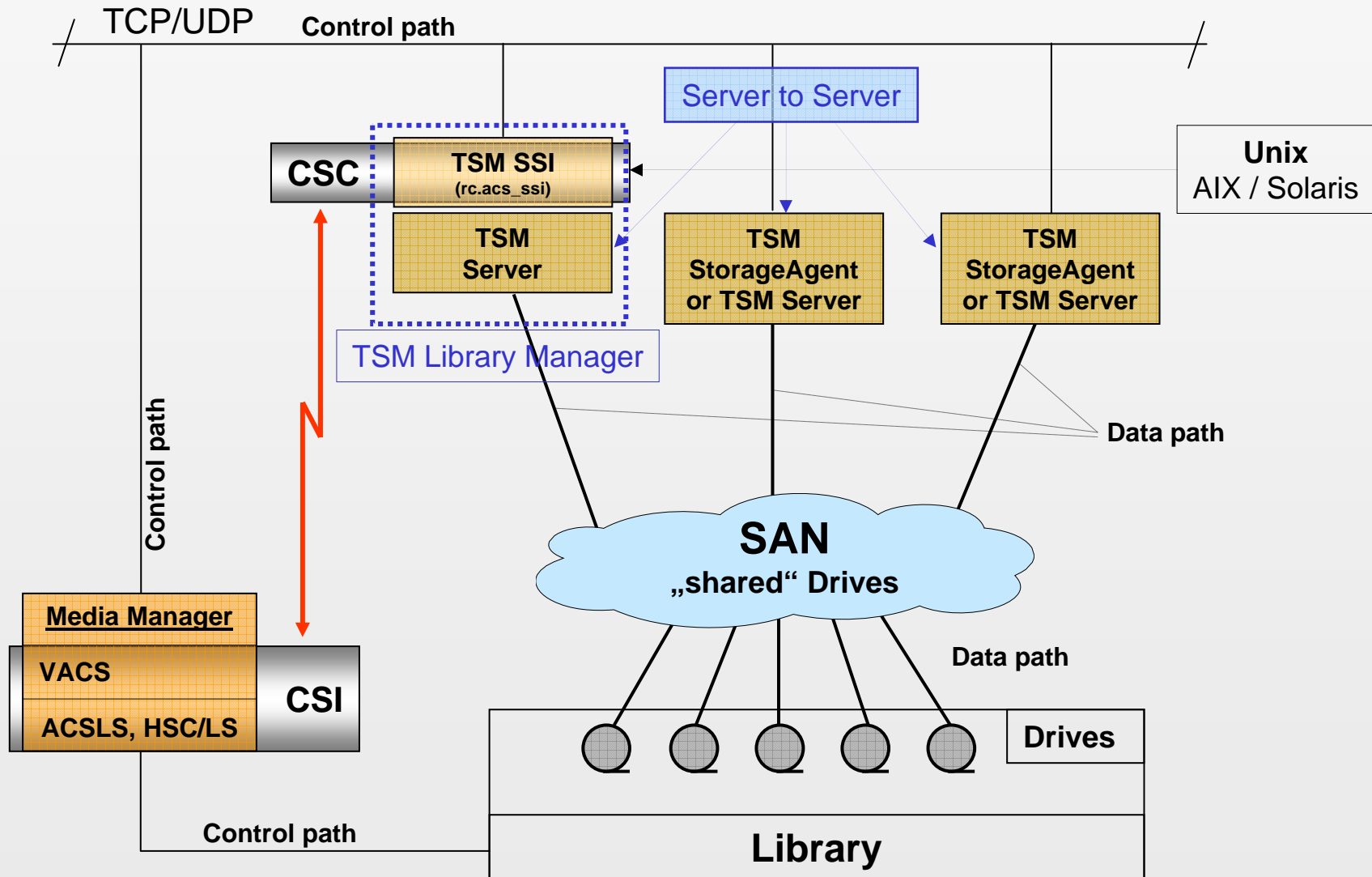




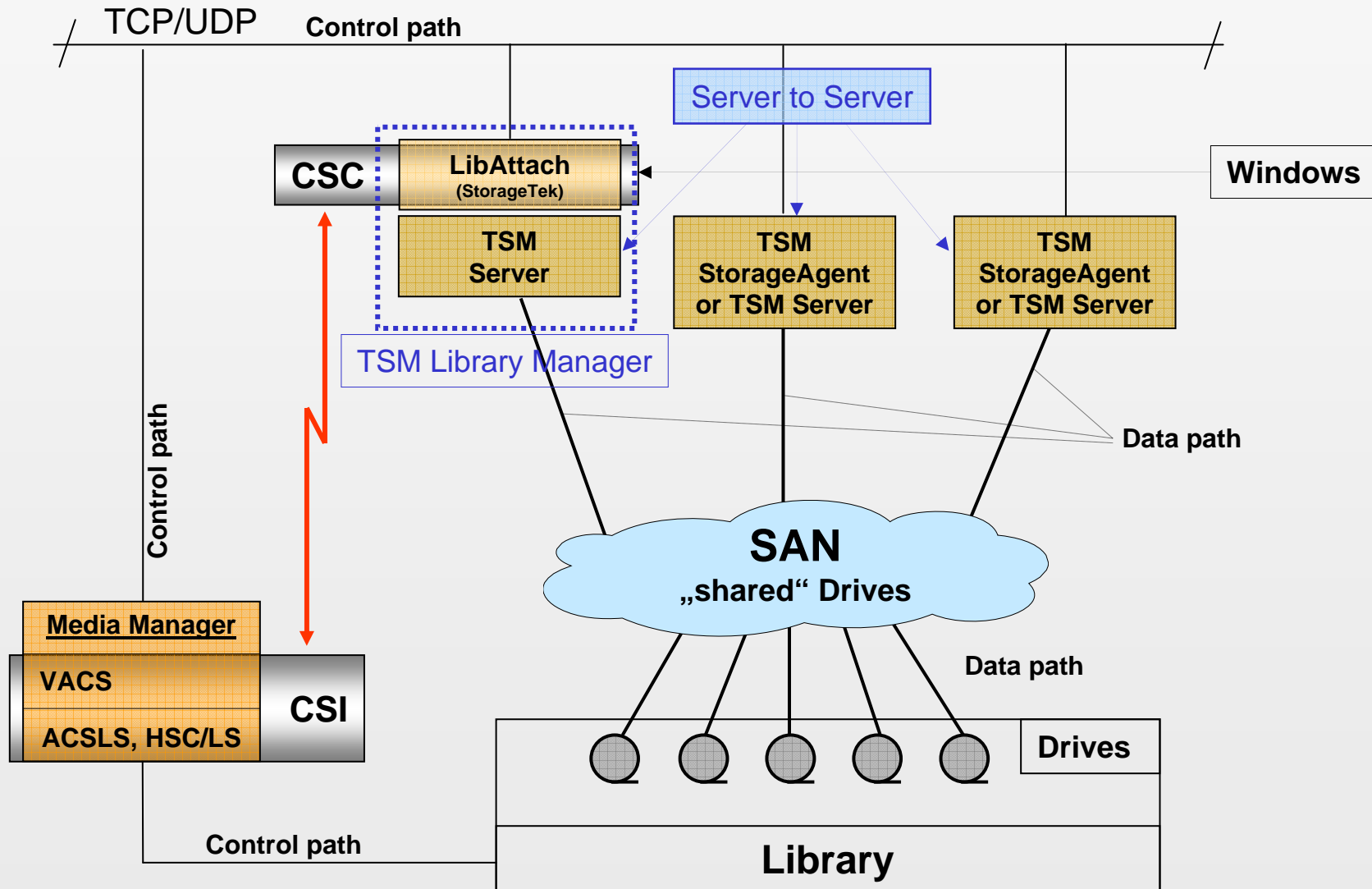
# LIBType=ACSLS, TSM before Version 5.3



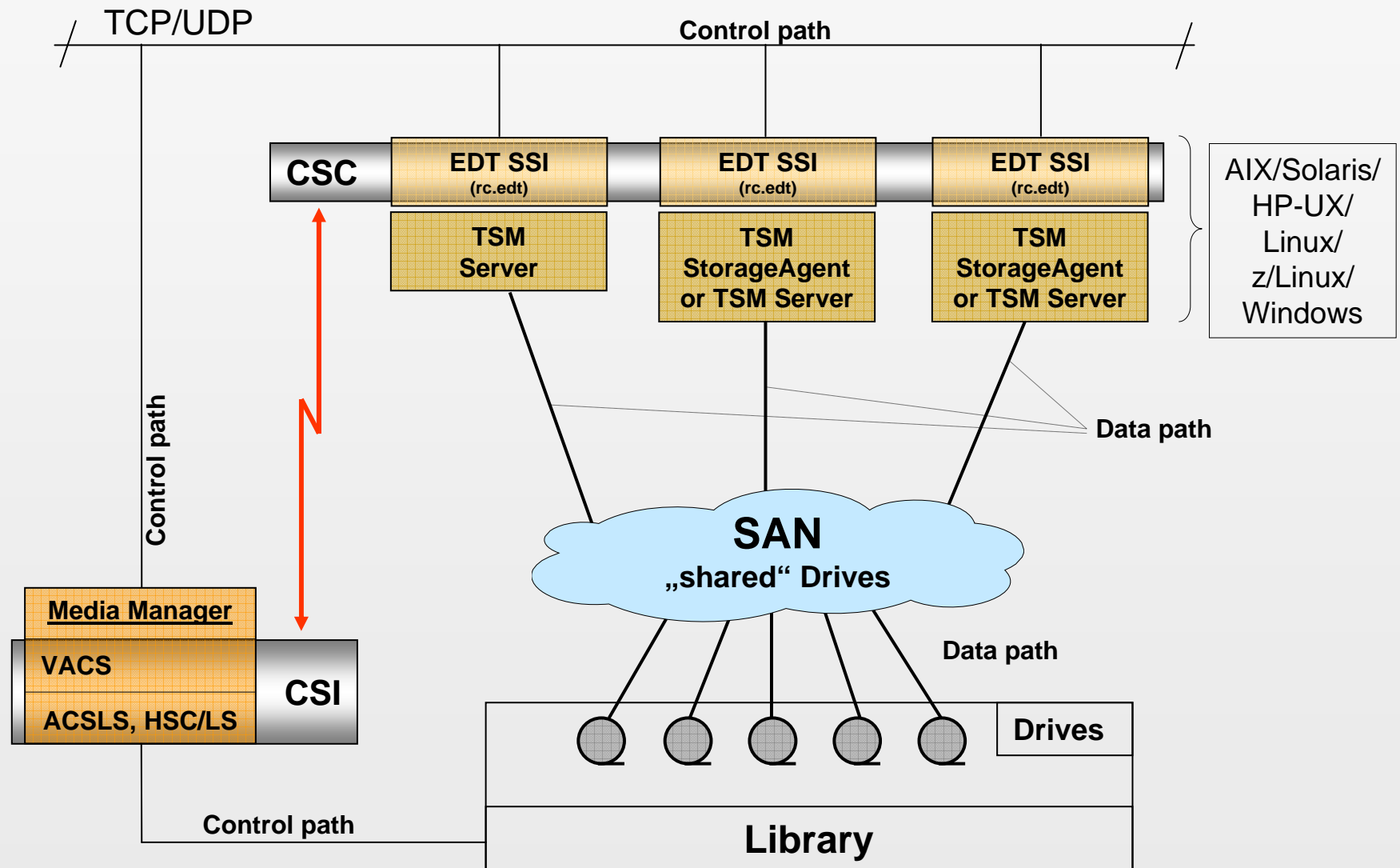
# LIBType=ACSL5, TSM with Version 5.3



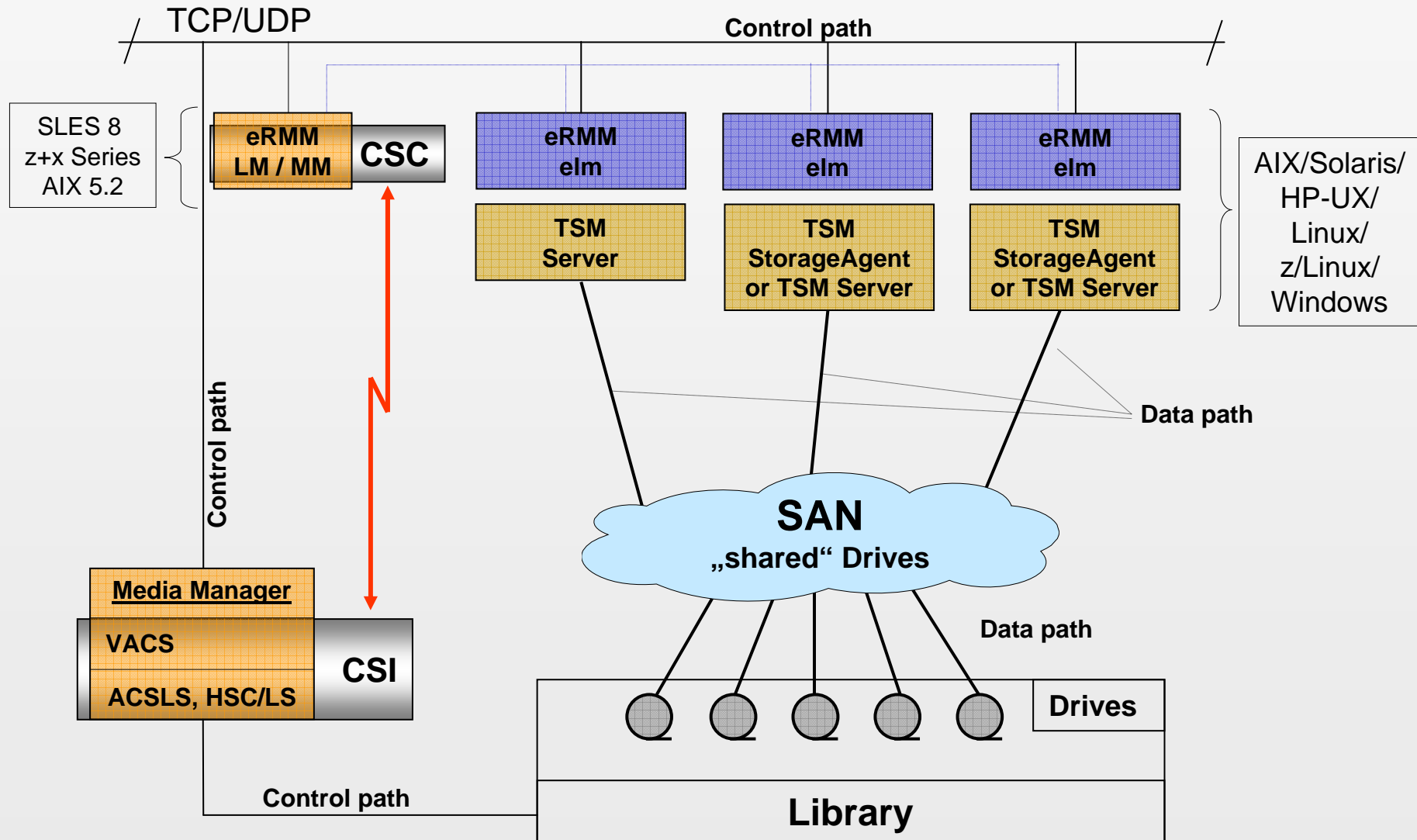
# LIBType=ACSL5, TSM with Version 5.3



# LIBType=EXternal (Gresham) TSM since V3.x



# LIBType=EXternal (eRMM) TSM since 5.x



A dramatic landscape at sunset or sunrise. The sky is filled with large, dark clouds illuminated from below by a bright sun, creating a mix of orange, yellow, and blue tones. In the foreground, a large, modern building with a glass facade is visible, reflecting the warm light of the sky. The building has a grid-like structure of dark frames. The overall scene is a mix of natural beauty and modern architecture.

That's it.  
questions?





# Library Control Software slot based libraries

**Media Manager** -> HSC, ACSLS (Library Manager, Media Server)  
Authority, which controls the library

**HSC**  
(Mainframe) -> Host Software Component  
The StorageTek software that provides client volume location information through it's Control Data Set (CDS) and provide the interface to the Nearline ACS hardware and client operator console

**ACSLs**  
(Open System) -> Automated Cartridge System Library Server  
Unix-based software that interprets library commands from client applications or library operators and routes them to the appropriate LMU.

# Terms Hardware

ACS

-> Automatic Cartridge System

The library subsystem consisting of one or two Library Management Units (LMUs) and from one to 16HSC/24ACSLs Library Storage Modules (LSMs) connected to the LMUs.

LMU

-> Library Management Unit

The portion of the Automated Cartridge System (ACS) that coordinates LSM communication and communicates with the HSC/ACSLs

LCU

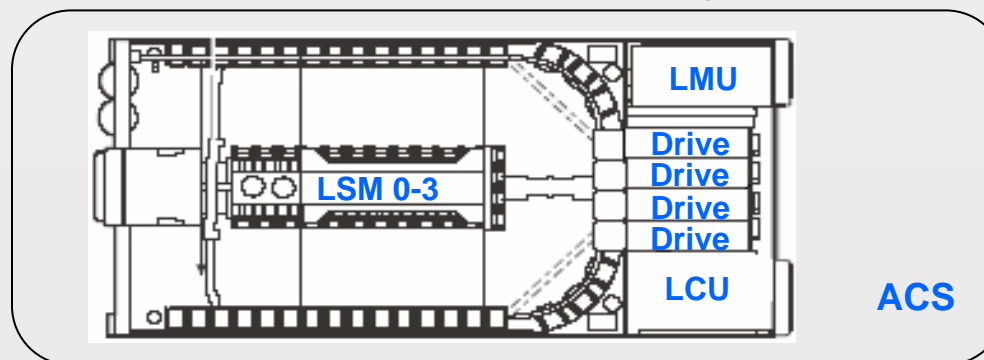
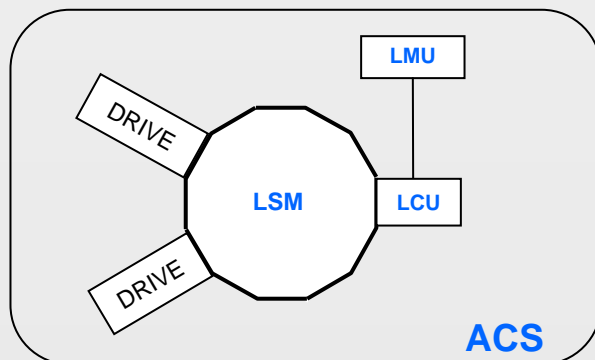
-> Library Control Unit

The portion of LSM that controls the LSM's robotic movement

LSM

-> Library Storage Module

The portion of the Automated Cartridge System (ACS) that selects, mounts, dismounts and store tape cartridges



# Terms Software

- Media Manager** -> HSC, ACSLS (Library Manager, Media Server)  
Authority, which controls the library
- HSC** -> Host Software Component  
The StorageTek software that provides client volume location information through it's Control Data Set (CDS) and provide the interface to the Nearline ACS hardware and client operator console
- LS** -> LibraryStation  
A feature of the HSC that allows MVS hosts to share Automated Cartridge System facilities with heterogeneous network client systems.
- CDS** -> Control Data Set  
The data set used by the HSC software to control the functions of the ACS
- ACSLs** -> Automated Cartridge System Library Server  
Unix-based software that interprets library commands from client applications or library operators and routes them to the appropriate LMU.

# Terms Software (library sharing)

SSI

-> Storage Server Interface  
Deamon, communicates with the Media Manager

CSC

-> Client Software Component  
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