

Advanced Digital Information Corporation

CentraVision & Storage Area Networking

Presenter

Steve Rovarino

CentraVision / MountainGate - Reno, NV USA

Business Relationships World Wide

Agenda

ADIC Corporate Overview

Storage Area Networks

CVFS as a Critical Component of SAN's

CVFS Features

Backup/Archive on a SAN

Q&A

About ADIC

Annual Revenue

\$230 million FY99

Installed Tape Libraries:

Over 55,000 units

Installed Storage Management Software:

Over 4,000 sites

Total Data Managed:

Over 50,000 terabytes

ADIC Corporate Offices

Corporate Manufacturing and R&D Centers

Redmond, Washington

Denver, Colorado

Frankfurt, Germany - Grau

Paris, France

Software Products

AMASS for UNIX

DataMgr for Unix

Client Based Migration

FileServ

Large Library HSM

VolServ Media Management

large library specific

CentraVision

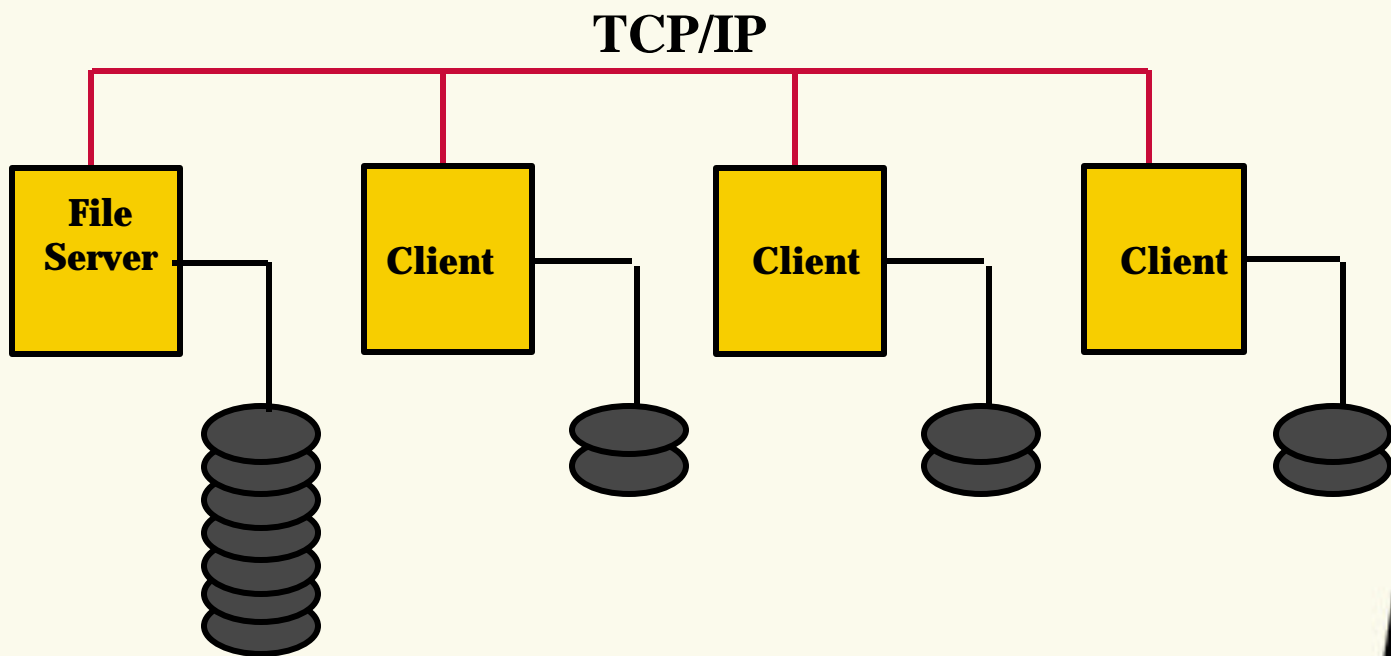
SAN File System



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SAN's

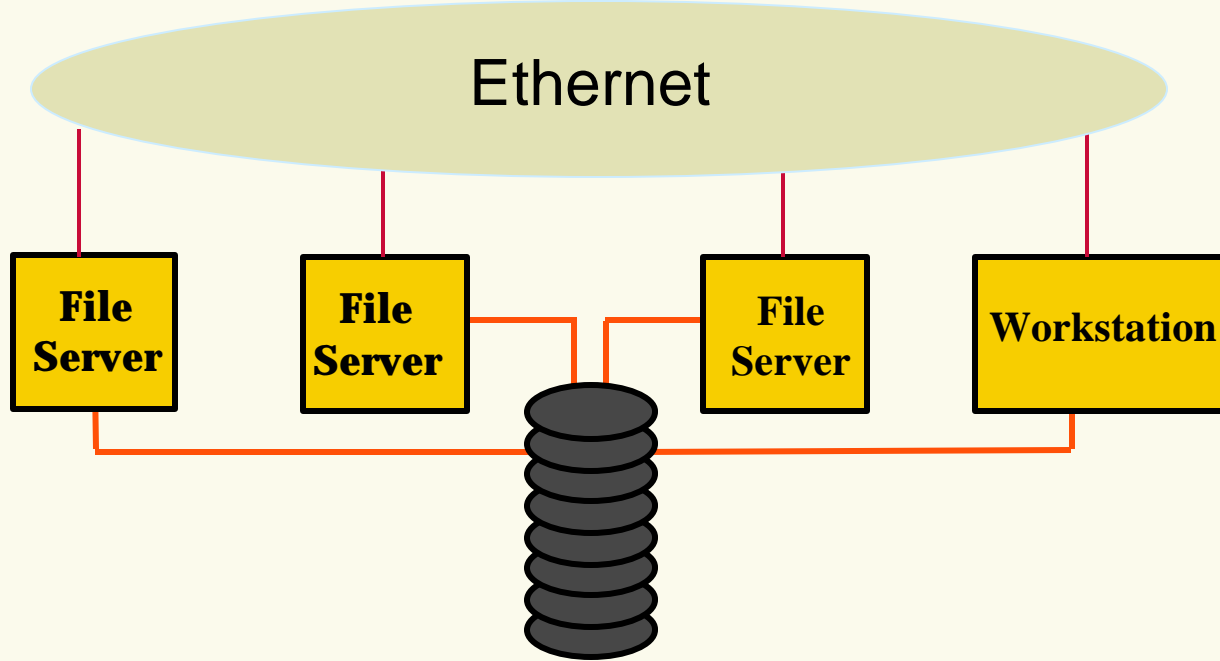
Network File Server Architecture



Today's File Server Model

SAN

NFS Transfers via TCP/IP to Clients



Fibre Channel

Enterprise SAN Direction



Storage Area Network Implementation

CentraVision (CVFS) is a Critical Component in Implementation of SAN's

The CVFS Architecture is a Superior Method of Providing Native Access to Shared Storage in a Heterogeneous Environment

Complete shared data across all Operating Systems

Key Benefits of CentraVision File System

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Designed to be a **Cross-Platform** Shared File System

Allows **Simultaneous R/W Access at the Block Level** across operating systems

Appears as **Native** Local Storage to the User

Accommodates **High-Bandwidth** Data Transfers via Striping across Multiple Fibre Channel Paths

64 Bit File System



Benefits of a Shared Storage Architecture

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ROI points for Customers adapting a SAN :

Reduction of File Copies and Redundant Copies

Shared Work Environment (High Availability to Data)

Ease of Data Management

Streamlined Movement of Large Files

Consolidated Mass Storage Pool

Typical Productivity Gain 30-40%

Specialties of CentraVision

Best performance with Large Files

SCSI speeds for small file transfers

20-30 Mb/sec small files

Uses TCP/IP for MetaData control

Keeps FC free to data bursts

Adjustable Stripe and block sizes

64 bit Posix compliant file system

CentraVision File System & SAN

CVFS Currently Supports:

WindowsNT version 4.0

SGI Irix versions 6.2, 6.3, 6.4 & 6.5

The CVFS Product Roadmap Includes:

Support For:

Sun Solaris (Q3)

Linux (Q2) ALPHA and INTEL

Windows2000 (Q3)

**Redundancy/Resiliency for File System
Services (Q2)**

**Integration of Archiving Technology onto the
SAN (Q4)**

CentraVision File System & SAN

Under current form

Uses SCSI protocol over Fibre Channel

Can be adapted to use:

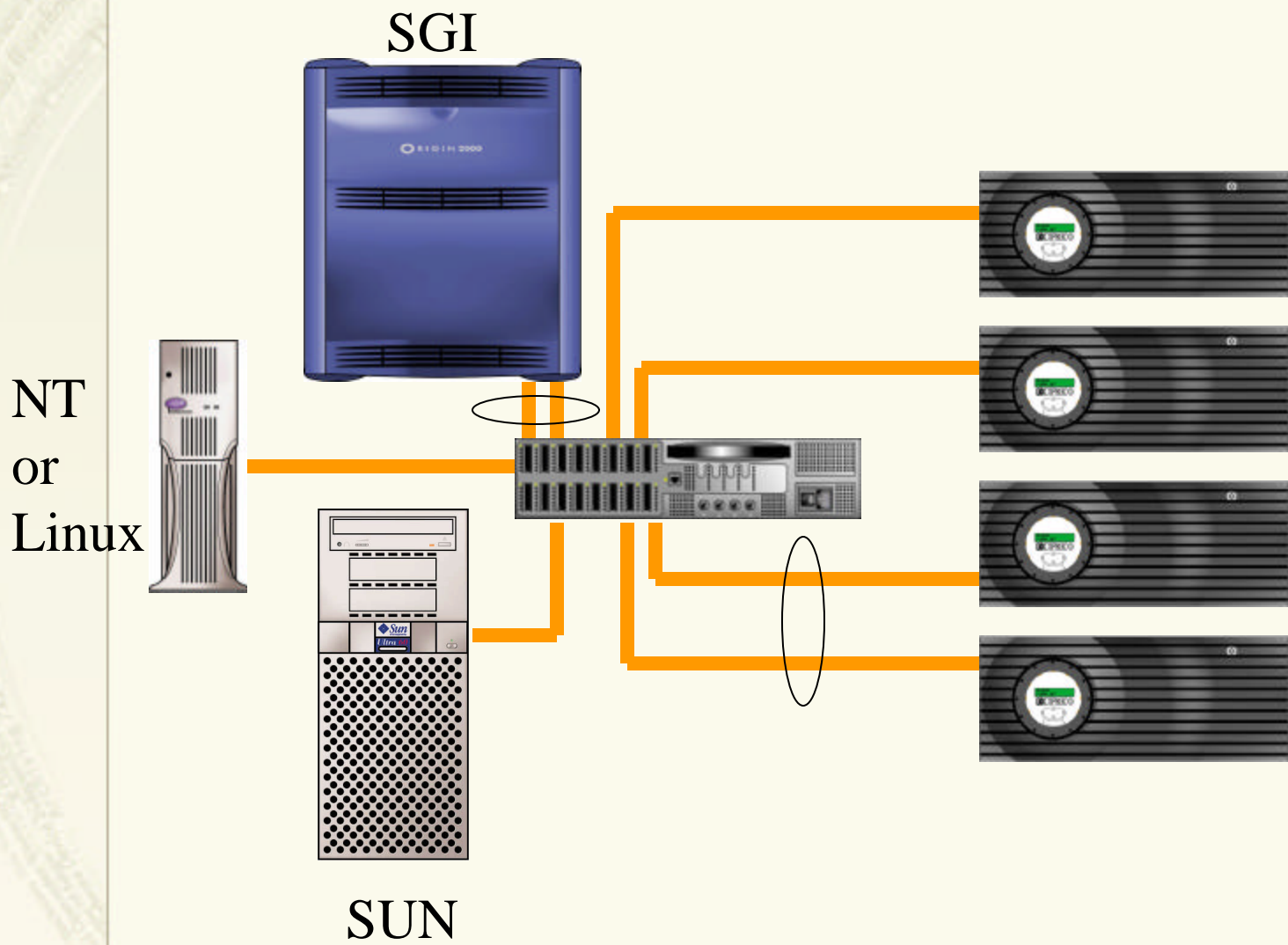
SCSI protocol over other Transport Mediums

Gigabit Ethernet

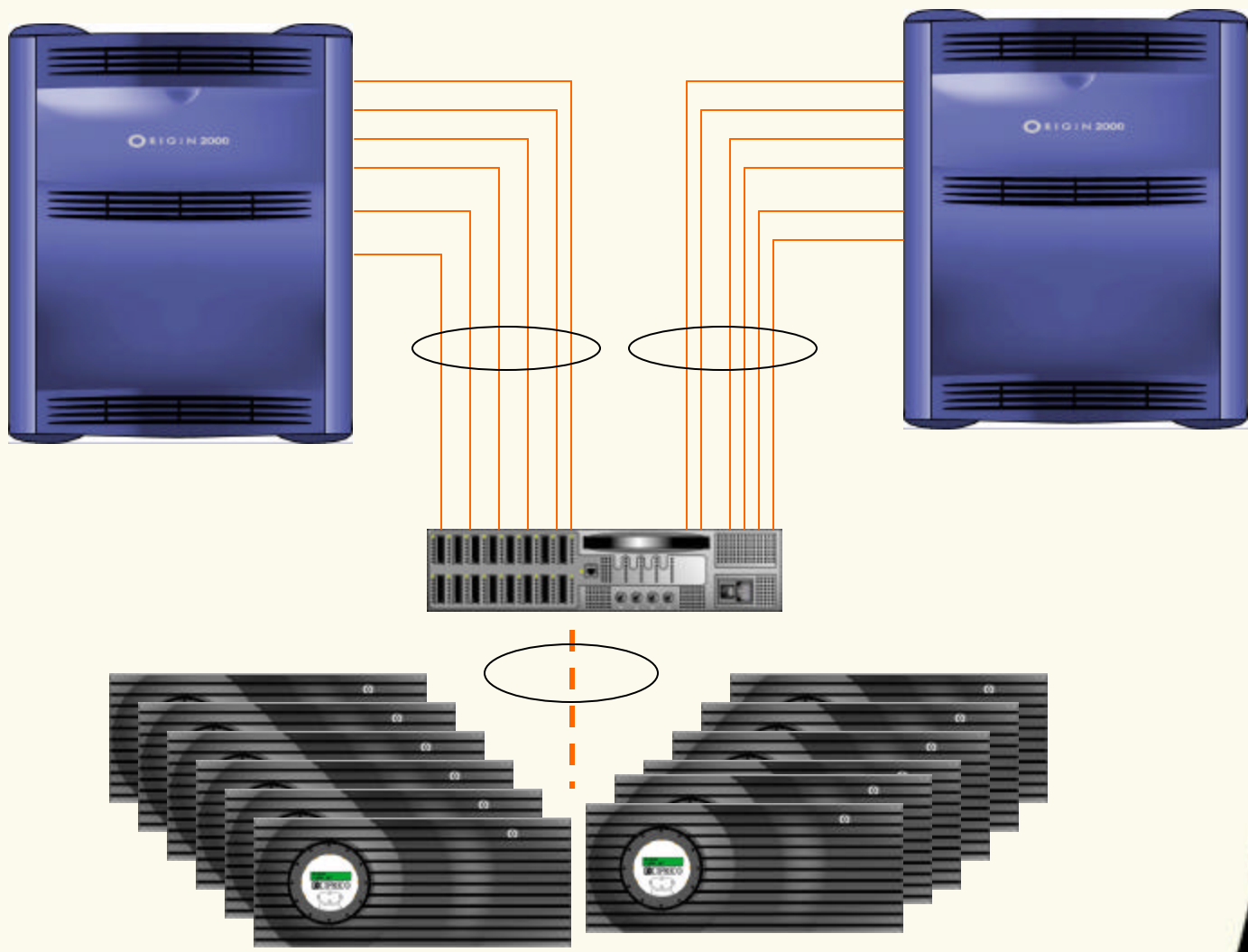
GSN

Other contemplated network backbones

Heterogeneous SAN



Supercomputing Applications



Super Computing Applications

Visualization

Simulation

File system tested to over 700 Mb/sec

File system not the limitation

Host backplane

Transport protocol

Backup/Archive on a SAN

SAN Backups

Current backup model will not directly support SANs

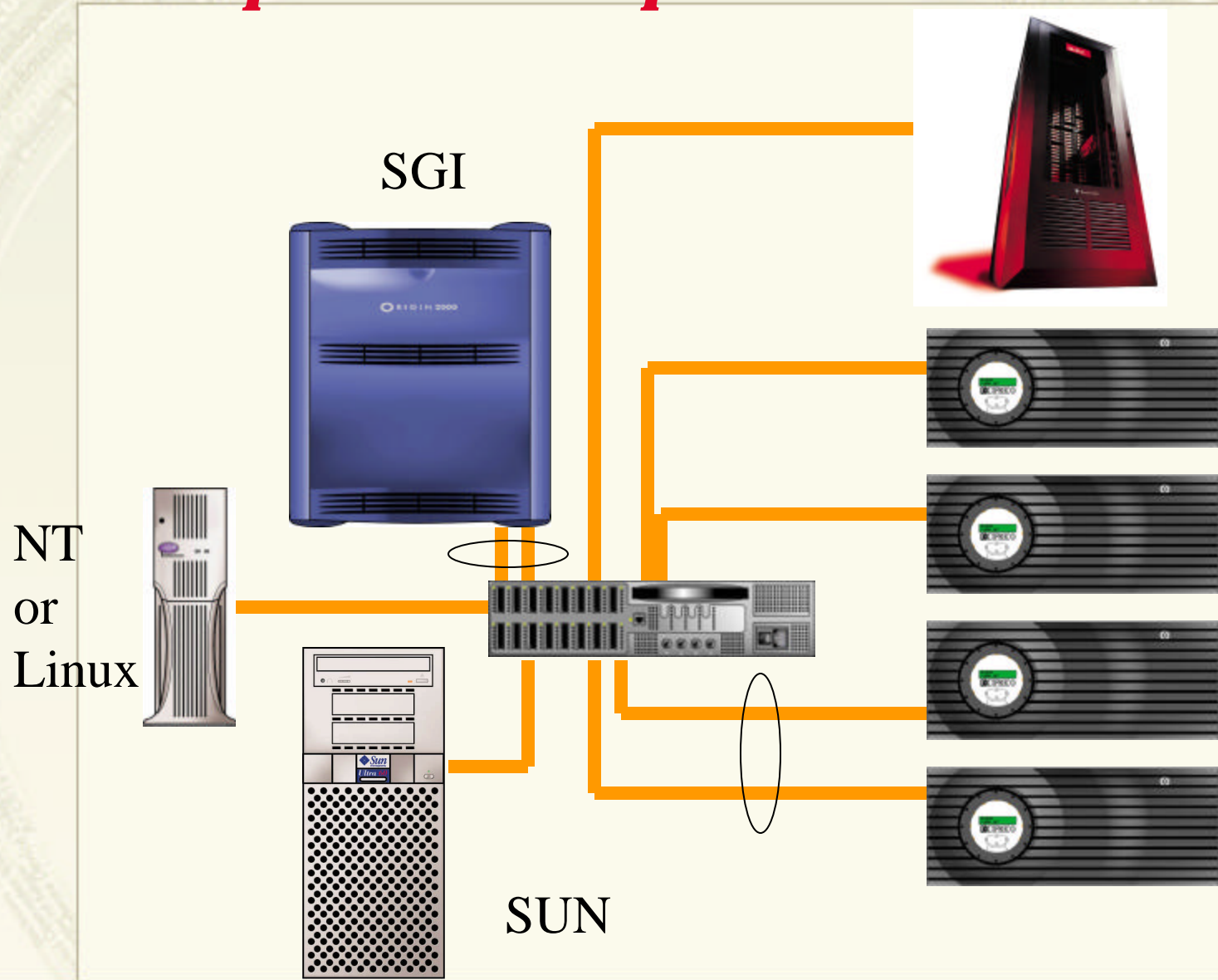
Cannot log off users for backup

New model must use on-line Archiving Techniques

ADIC is developing solution for real-time SAN backup

Summer 2001

Example of "Backup" within SAN



Questions and Answers

CVFS Architecture

CVFS Client Architecture

