

**THIC Inc.**

The Premier Advanced Recording Technology Forum

## 12" Optical Technology Present and Future Advancements

Cherie Davis

Plasmon Inc

4425 Arrowswest Dr

Colorado Springs CO 80907

Phone: +1-719-593-4214 FAX: +1-719-593-4597

e-mail: [cherie\\_davis@plasmon.lms.com](mailto:cherie_davis@plasmon.lms.com)

THIC Meeting at the Embassy Suites Hotel Denver South

Englewood CO 80112

July 13, 1999





# Plasmon

## 12” Optical Technology Present and Future Advancements

Presented by:

Cherie Davis, Marketing Specialist

# Agenda

Who is Plasmon

History of 12" Optical Technology

Current Advancements

Future Advancements

The Marketplace

# Who is Plasmon.....

Storage Centric Company

- Drive Technology
- Automation
- NAS/Jukebox Management
- Optical Media

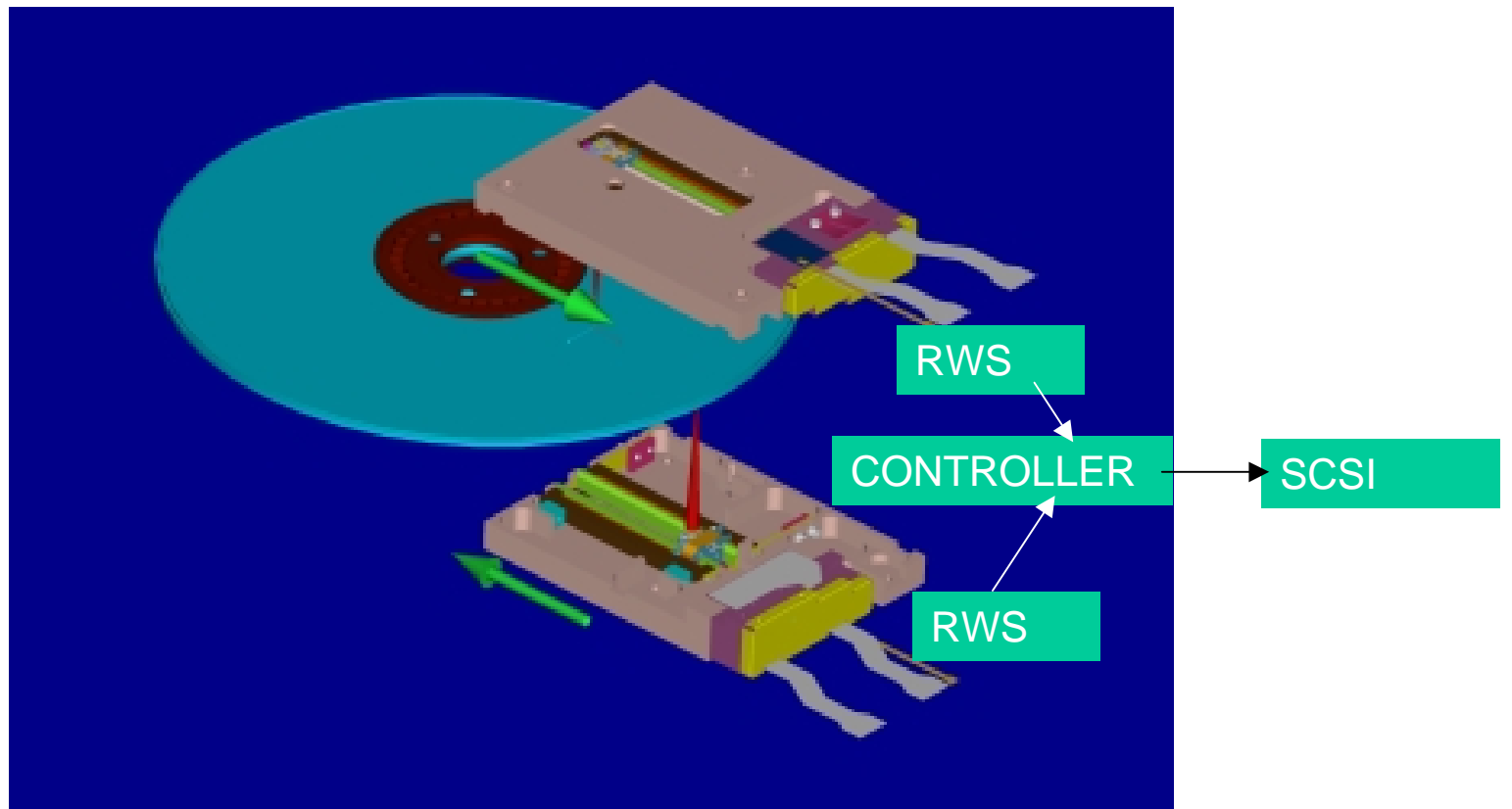
# History of 12” Optical Technology

- 1985 First Single-head 12” Drive, 2.0GB
- 1991 First Dual-head 12” Drive, 5.6GB
- 1995 Second Generation Dual-head 12” Drive, 12GB
- 1999 Third Generation Dual-head 12” Drive, 30GB

# Current Advancements

- Dual Head
- Phase Change Media
- Digital Read Channel

# Plasmon's Dual-Head



# Plasmon's Dual-Head

- Assembly Built at LMS
- Field Replaceable Unit (FRU)
- Vertical or Horizontal Orientation
- Stripe Data on Disk
- Constant Data Rate to User



# Phase Change Media

- Clean Mark
- Short Crystallization Time (<8nSec)
- Stable Material
- High Write Sensitivity (<10mW)
- Mark-size Control

# Phase Change Media (Continued)

- Single Layer
- Relatively High Reflectance
- Contrast vs Write Power is Very Linear
- TRUE WORM

# Digital Read Channel

- Simple Analog Read Channel
- Digital Signal Conditioning
  - Selective ISI Cancellation (Patent Pending)
- Digital Maximum Likelihood Detection for the 1,7 RLL Code

# Future Advancements

- Blue Laser Technology
- Grey Scale Encoding
- High NA (about 0.85)
- Dual Layer Media

Overall, we can see viable routes to a 10 fold increase in density!!

# What does this mean.....

- Plasmon is Committed
- Product Roadmap
- Product Positioning

# Plasmon's Commitment

- Expertise and Discipline
- Customer Support
- Engineering and R&D into latest technologies

# Product Roadmap

<b>LD4000</b>	<b>5.6 GB</b>	<b>1024 Bytes</b>	<b>SCSI F/N</b>		1 9 9 1
Sustained Data-rate Write 0.3 MB/s - Read 0.7 MB/s      Transfer rate: 4 MB/s					
Compatibility: None      Recording Technology: Ablative WORM					
<b>LD6000</b>	<b>12 GB</b>	<b>1024 Bytes</b>	<b>SCSI F/N</b>		1 9 9 5
Sustained Data-rate Write 1.1 MB/s - Read 2.7 MB/s      Transfer rate: 10 MB/s					
Compatibility: read LM4000      Recording Technology: Ablative WORM					
<b>LD8000</b>	<b>30 GB</b>	<b>2048 Bytes</b>	<b>SCSI F/W</b>	<b>FIBRE Bridge</b>	1 9 9 9
Sustained Data-rate Write 2.4 MB/s - Read 6.0 MB/s      Transfer rate: 20 MB/s					
Compatibility: read LM4000 & LM6000      Recording Technology: Phase Change WORM					
<b>LD10000</b>	<b>60 GB</b>	<b>2048 Bytes</b>	<b>Ultra SCSI F/W</b>	<b>FIBRE</b>	2 0 0 2
Sustained Data-rate Write 3 MB/s - Read 7 MB/s      Transfer rate: 40 MB/s					
Compatibility: read LM6000 & LM8000      Recording Technology: Phase Change WORM Multi-Layer (4)					

# Product Positioning

- High-end Niche Applications
  - ⇒ Frequent Ad hoc Requests, High Retrieval and Fast Access
- High Reliability
  - ⇒ Minimal Disk Swapping=Reduced Mechanical Wear
  - ⇒ Stable Glass Media
  - ⇒ Over 50% of all Drives from 1986 Still in Use
- True Permanent WORM Storage
  - ⇒ Unalterable, Virus Proof





Plasmon

Thank you!