SVOD
Stacked Volumetric Optical Discs

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Maxell Corp. of America
OSTA Symposium  Sept. 19, 2007
• Thinner Recordable Optical Disc in a Magazine type Cartridge
• Inorganic material recording layer

**Compared to conventional BD:**

<table>
<thead>
<tr>
<th></th>
<th>SVOD</th>
<th>BD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disc Capacity (SL)</td>
<td>25GB/side</td>
<td>25GB/side</td>
</tr>
<tr>
<td>Disc Diameter</td>
<td>120 mm</td>
<td>120 mm</td>
</tr>
<tr>
<td>Disc Thickness</td>
<td>0.2 mm</td>
<td>1.2 mm</td>
</tr>
</tbody>
</table>

![Diagram of SVOD and BD thickness comparison]
New Large Capacity Optical Disk Cartridge for Archive Data Storage

5.25” cartridge size
Blue laser SVOD: 1TB
20 discs @ 50GB per disc

Dictionary cartridge size
Blue laser SVOD: 5TB
100 discs @ 50GB per disc

*Using 50GB BD SS, DL media

Library storage / SOHO / S/M/B / Enterprise
Features of SVOD

- **Large Capacity**: 5TB/Cartridge (BD media SS, DL)
- **High Space Efficiency**: 100 discs/2.5” height cartridge
- **W/R Compatible** with conventional BD drives
  - Enable to use current, reliable drive technology
  - Lower Hardware Cost
- **Same Reliability** as BD disc

A True Write-Once Solution

Suitable for: Library Systems & Large Size Data Archival Applications
SVOD Mini 1

SVOD cartridge
20 or 100 discs

USB Interface

Commercialized
BD drive

100 disc cartridge for blue laser → 5.0 TB mini library
## Anticipated Roadmap of SVOD

<table>
<thead>
<tr>
<th>Generation</th>
<th>Media Type</th>
<th>20 Pc. Cartridge</th>
<th>100 Pc. Cartridge</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation 1</td>
<td>SS, SL</td>
<td>0.5TB</td>
<td>2.5TB</td>
<td>2008</td>
</tr>
<tr>
<td>Generation 2</td>
<td>SS, DL</td>
<td>1.0TB</td>
<td>5.0TB</td>
<td>2009</td>
</tr>
<tr>
<td>Generation 3</td>
<td>DS, DL</td>
<td>2.0TB</td>
<td>10TB</td>
<td>2010</td>
</tr>
<tr>
<td>Generation 4</td>
<td>DS, QL</td>
<td>4.0TB</td>
<td>20TB</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Anticipated Roadmap of SVOD

Capacity in Terabytes

- **Gen 1 (2008)**: SS, SL
- **Gen 2 (2009)**: SS, DL
- **Gen 3 (2010)**: DS, DL
- **Gen 4 (2011?)**: DS, QL

**Legend:**
- Small Cartridge
- Large Cartridge

*maxell CORPORATE TECHNOLOGY*
Where is SVOD Positioned?

Capacity

Year
Entry and Midrange Tape Libraries

- **125TB**
  - 50 cartridges
  - 2.5TB / cart. & @ 25GB / disc
  - SVOD (2008)

- **40TB**
  - 50 tapes
  - @ 800GB / tape
  - LTO 4 Library (2007)

- **80TB**
  - 50 tapes
  - @ 1.6TB / tape
  - LTO 5 Library (2009)

- **25TB**
  - 50 HDD’s
  - @ 500GB / DD
  - HDD RAID (2007)
Maxell’s SVOD won the “Mario Award” at the 2007 NAB show in April for one of the “Top Ten New Technologies” at the show.
CAPACITY - Greater than HDD or Tape Libraries.

ARCHIVAL LIFE - Comparable to Tape and HDD

SPEED - Faster access time compared to Tape Libraries.

COST – Low TCO. Initial cost in line with tape based solutions, with lower maintenance costs as compared to tape and HDD.

RELIABLE – Performance & archive characteristics as good as a commercially available BD-R.

COMPLIANT – Write once, meets regulatory compliance.

SIMPLE – Yet innovative.
Thank You

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