



Santa Clara Valley IEEE  
Consumer Electronics Society

***CES Download***

December 4, 2007

[www.ieee.org/scvce](http://www.ieee.org/scvce)



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# 2008 SCV IEEE CE Society Officers Nominations

- Gary Sasaki, Chairman
- Winston Chen, Program Chairman
- Will Lumpkins, Program Vice-Chair
- Bill Orner, Secretary/Marketing
- Rich Elder, Treasurer
- Chris Pedersen, Victor Ramamoothy, Michael Wang, Tom Coughlin – Program committee



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# 2008 Schedule

- Jan 22 - CES Download (Perhaps with additional comments about ICCE and SCTE)
- Feb 26 - DisplaySearch: Inside the DTV
- Mar 25 - Cyber Security
- Apr 22 – Wireless, Atheros Communications
- May 27 – OCAP/BD-J Java, Sun Micro
- June 24 – Micronix, Flash in CE



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# Tonight's Talk

## 2008 CES Download

*Speakers:*

Gary Sasaki

Chris Pedersen

Will Lumpkins

Tom Coughlin

Victor Ramamoorthy



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## **Gary Sasaki** **DIGDIA**

See [digdia.com](http://digdia.com) for many more photos & comments



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# Displays

Panasonic's 4K 150" Plasma.  
Geoff is 6' 3" tall.



Samsung  
going 3D



Philips  
targets  
Women



Sharp  
Gen 10 LCD



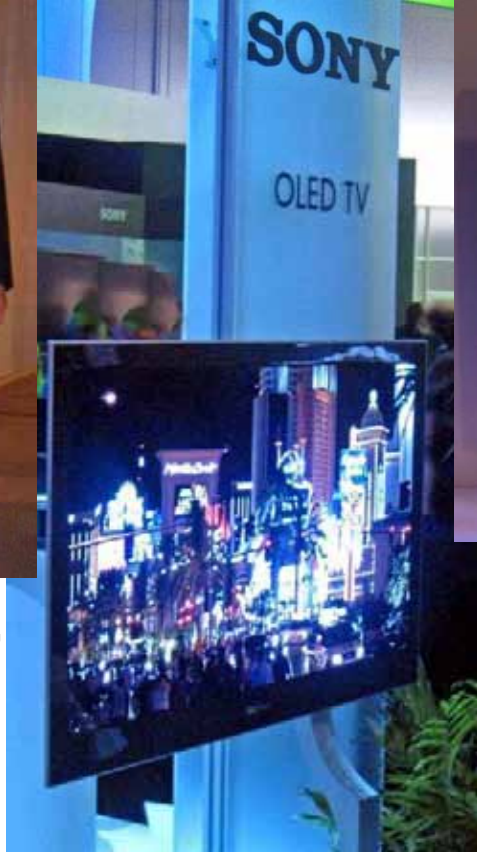
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Sharp is among many that demonstrated  
“Thin is In”.



Sony's 27"  
OLED  
30k hour life?



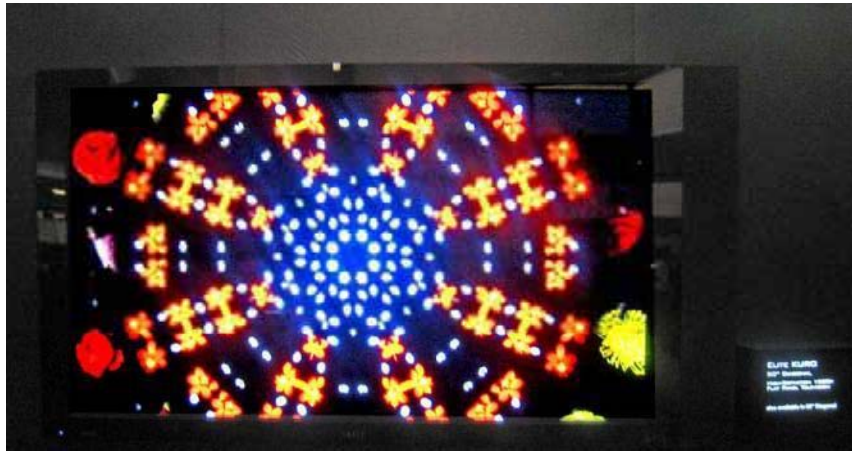
Samsung  
(and Sony)  
Show 82"  
4K LCD

Panasonic's Sakamoto  
Cuts HDMI cables  
(for WirelessHD)



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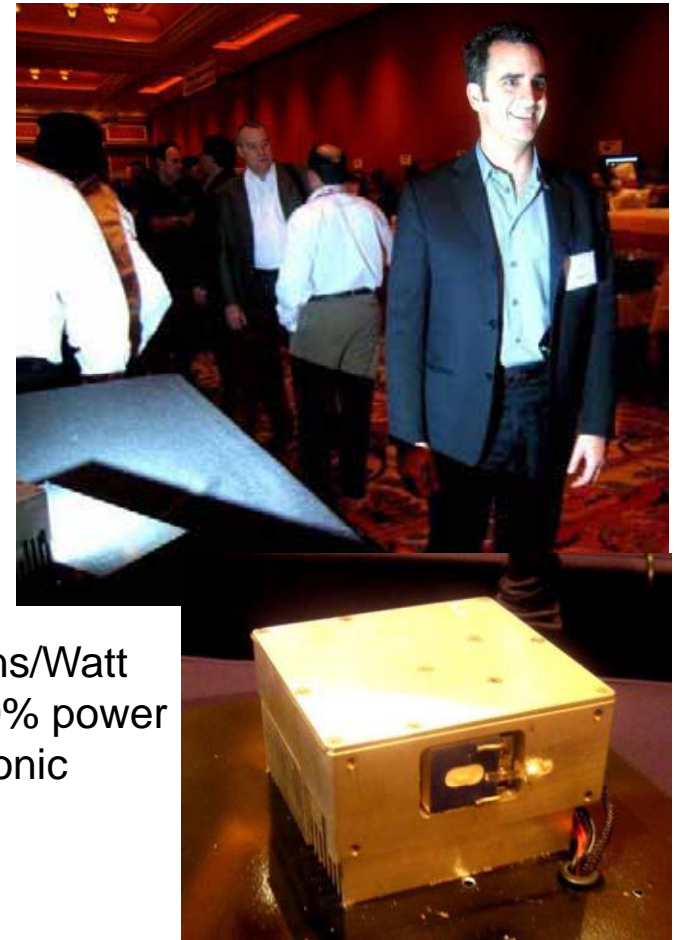


Pioneer – Black is the new Black in Plasma



Luxim's  
"RF Bulb"

75 – 140 Lumens/Watt  
20K hours at 80% power  
Used by Panasonic



E-Detail Tablet PC w/dual Display



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Toshiba's Jodi Sally admits to having a "bad day" After Warner Blu-ray decision.



Show buzz was HD DVD is dead



Warner: "We were Not paid"



Hitachi working on Dual format drive



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# Fashion Fashion Fashion



Philips USB Drive



Edifier Speakers



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# *Cars to Beep & Boom*

Rick Wagoner,  
1<sup>st</sup> Auto Co.  
Keynote at CES



Microsoft's  
AutoPC Lives (Sync)



Treo  
Idea of mobile  
CE



Diesel Audio  
1600 W Amp  
for Cars that  
Go Boom



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License to Kill Laser Toothbrush (Microtech)



Air Rocker (Jada Toys)



RC Cooler  
(Interactive Toy Concepts)

PVR  
(Viewu)



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*The Relative Stabilities of Optical Disc Formats*

Table 3: Percentage of discs with a change in average BLER less than 220 for the CD samples and average change in PI less than 280 for the DVD samples.

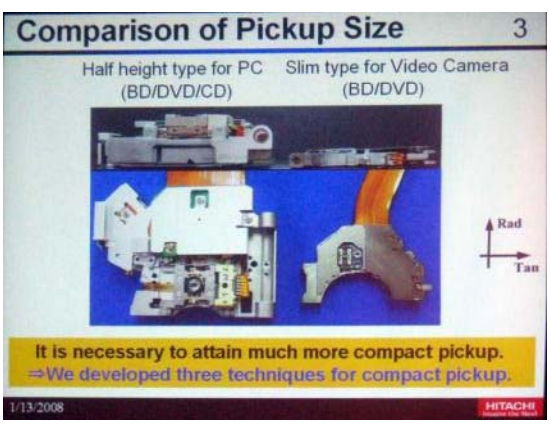
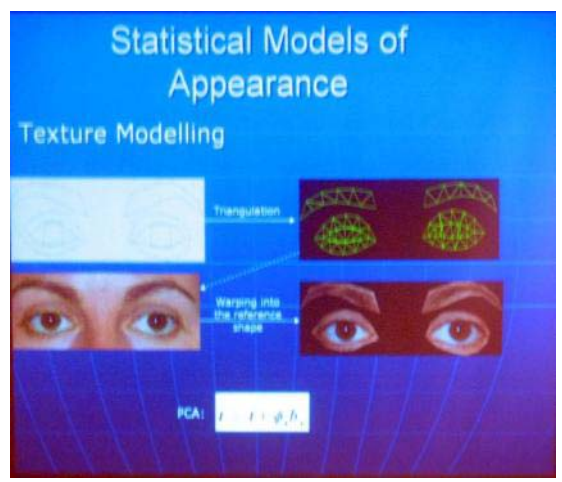
	Aging (days)				Rank after 84 days	Overall rank*
	21	42	63	84		
CD-R (phthalocyanine dye)	97	81	75	72	1	1 (4)
CD (audio)	75	67	54	38	2	2 (9)
DVD (movie); double-sided/single layer	54	27	27	27	3	3 (18)
DVD (movie); single-sided/dual layer (gold)	81	56	12	6	6	3 (18)
DVD-R; single-sided/single layer	50	37	18	8	5	5 (22)
CD-RW	38	22	20	12	4	6 (26)
DVD (movie); single-sided/dual layer (light gold)	75	25	0	0	9	7 (28)
DVD (movie); single-sided/single layer	42	26	16	5	7	7 (28)
CD-R (azo dye)	75	0	0	0	9	9 (32)
DVD (movie); single-sided/dual layer (silver)	36	11	0	0	9	10 (34)
CD-R (cyanine dye)	20	12	12	4	8	11 (36)
DVD-RW	21	0	0	0	9	12 (40)

\* Overall rank is based on the sum of the ranking for each aging interval. For example, the phthalocyanine discs aged the best in each aging interval and therefore were given a value of 4 (1+1+1+1).

Jan 11, 2008 International Conference on Consumer Electronics 11

Brigham Young:  
1000 Year CD/DVDs

Natl. Univ. Ireland:  
Blink Detection



Hitachi:  
Blu-ray Camcorder  
OPU

Philips:  
3D Blu-ray



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**New Layout – construction start Spring 2008**



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# Chris Pedersen

DIGDIA



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# Sunday Morning Press Conferences



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*In recognition of  
Our venue hosts*



Digital  
Media  
Receiver



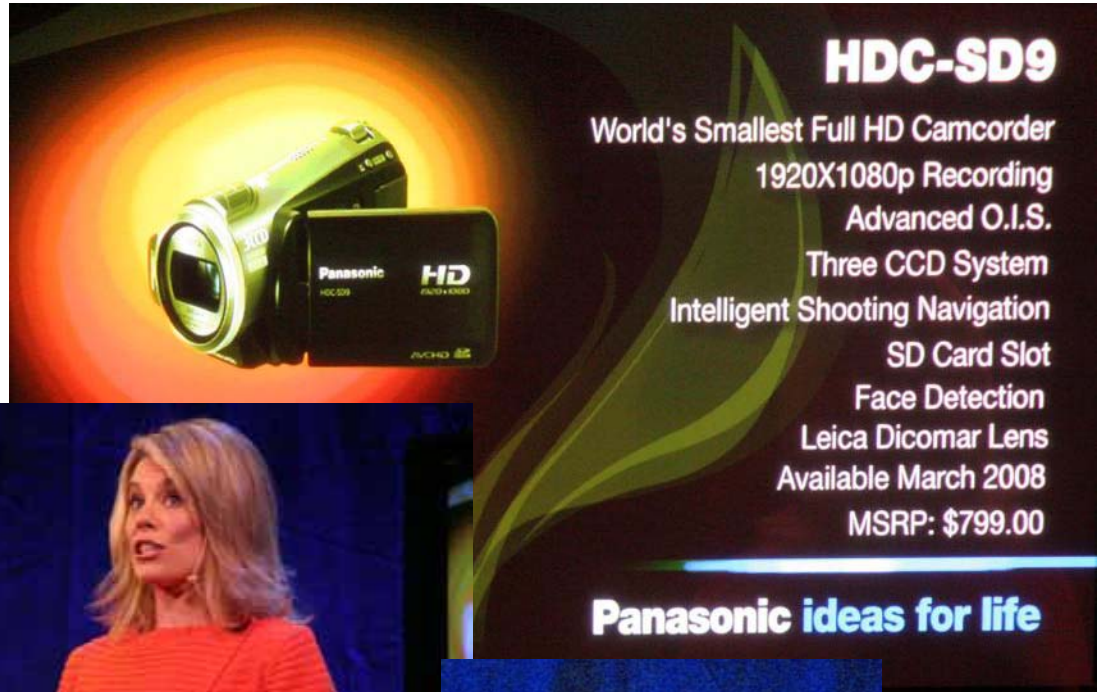
Voodoo



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# Flash-based HDTV Camcorders goes mainstream



**HDC-SD9**  
World's Smallest Full HD Camcorder  
1920X1080p Recording  
Advanced O.I.S.  
Three CCD System  
Intelligent Shooting Navigation  
SD Card Slot  
Face Detection  
Leica Dicomar Lens  
Available March 2008  
MSRP: \$799.00

**Panasonic ideas for life**



Sanyo



Panasonic  
32 GB SD Card



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## EchoStar and Sling



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# GPS & Automotive



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Sony Rolly



Alienware



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Microsoft Surface



LG Watch Phone



Nikko R2D2 FP



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# Show Stoppers, Digital Experience



SE2 Labs



Sentry Group



Wow Wee (above), Oregon Scientific



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**Will Lumpkin**  
**IEEE CES National Chairman**



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Lenovo's  
Frances O'Sullivan  
on global operations



Ralph Baer, winner of  
2008 Ibuka Award



CEA's Virginia Williams



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Grant Imahara  
“Mythbusters”, “Star Wars”, and more



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# Digital Storage and Applications at SV08, 2008 ICCE and 2008 CES

Tom Coughlin

Coughlin Associates

[www.tomcoughlin.com](http://www.tomcoughlin.com)

2008, Coughlin Associates



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# External Storage 1

- External Storage was all over the CES including many mobile backup devices as well as desktop devices
- There were Direct Attached Storage (DAS) as well as Network Attached Storage (NAS)
- Several companies were showing mostly eSATA interface external storage for DVR expanders
- One company, Clickfree, showed a portable external storage device that backed up automatically when it was plugged in without backup software on the computer or a button to touch



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# Mobile External HDDs



Growing Category  
of Products



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# Personal Area Network Storage (PANS)



- A hard disk drive-based external storage device with wireless connectivity allows storage expansion, streaming and content aggregation

Seagate's  
DAVE



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# iVDR

- Seagate announced that they were joining the iVDR Alliance, promoting a format of removable hard disk drives that has been in development, primarily in Japan for the last 5 years



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# Storage in Set Top Boxes and DVRs

- Many HD set top boxes shown
- DVR expanders from several vendors allow DVR expansion
- Internet and home networks allow sharing content



DVR  
Expander



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# Media Servers

- Microsoft introduced Home Media Server Software and HP used it to show a Home Media Server Product (their goal was to make this easier to use)
- Many other companies had home media servers including some very inexpensive systems



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# Automobile Storage



**Automotive Application**

**Media On Demand In-Car Infotainment Solution**

VMOD™ by Visualogic®

A compact, powerful computing module that combines a Toshiba automotive-grade hard drive with an Intel® processor and simple plug and play operating system that let's consumers download virtually any digital media into their vehicles. The module is paired with software and head rest monitors to offer a complete user experience in an automotive-friendly package.

**TOSHIBA**  
Leading Innovation



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# Hard Disk Drives



Fujitsu



Toshiba



1.8 inch HDD mockup sample with microSATA interface connect



Seagate

## PipelineHD Series

The gold standard in high definition performance and capacity

- A perfect match for high definition content with capacity that allows consumers to expand their digital content libraries while enjoying best-in-class performance
- Capacities: 320 GB, 500 GB and 1 TB
- Interface: SATA

Samsung Spinpoint F1, 1 TB 3.5-inch drive



Spinpoint N2, 160GB	Spinpoint A1, 40GB
<ul style="list-style-type: none"> <li>- Industry's highest capacity of up to 160GB</li> <li>- Designed to meet the surging capacity requirements from multimedia applications</li> <li>- Advanced free fall sensor enhances reliability by helping the drive to protect itself in the event the drive is dropped while functioning.</li> </ul>	<ul style="list-style-type: none"> <li>- Ultra compact 1.3 inch hard drives up to 40GB with 3,600 rpm</li> <li>- Optimization for portable music players, mobile phones, camcorders and PMP</li> <li>- Optimized System On Chip (SOC) technology consumes less power, enabling longer mobile device use times</li> </ul>



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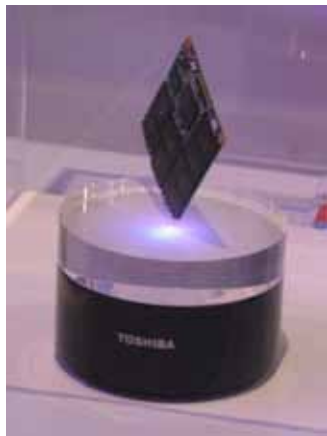
# Solid State Drives (SSD)



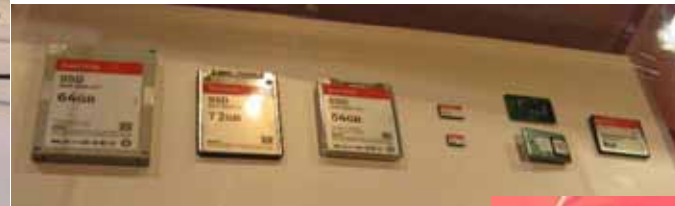
Intel  
Z-P140



Inexpensive PCs



Samsung



SanDisk

SanDisk Vaultler



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# Flash Memory



Sandisk Ducati



Corsair

Team

LG



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# Victor Ramamoorthy

## Infinite Algorithms



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## MLB's Spherical Speakers



MLB Gold Plated CD/Vinyl Player



Minimalist Entertainment System



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Tubes Rule in high end Audio!



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Speakers Galore!



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Key chain Solar charger



Home Security in a box



Energy efficient portable dryer



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Gutter cleaning robot

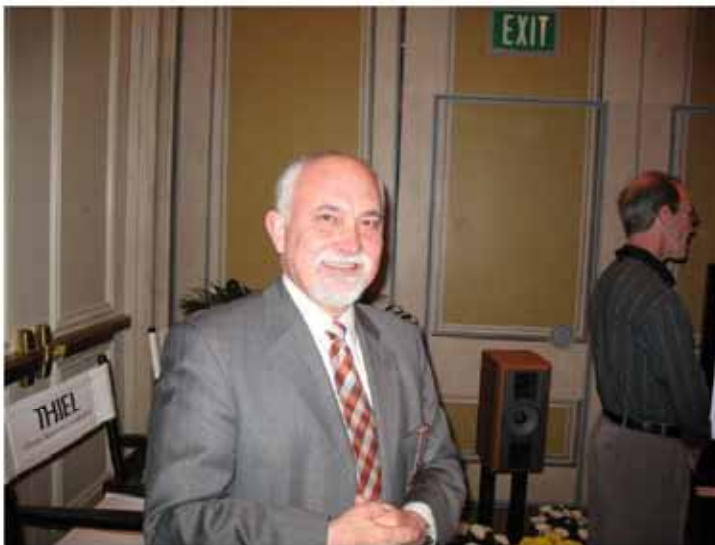


Shoe warmer



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The first networked 64 channel wireless System by Thiel.

Founder Mohammed



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Stackable Juke box



Paper-thin electronic display



You are the interface!

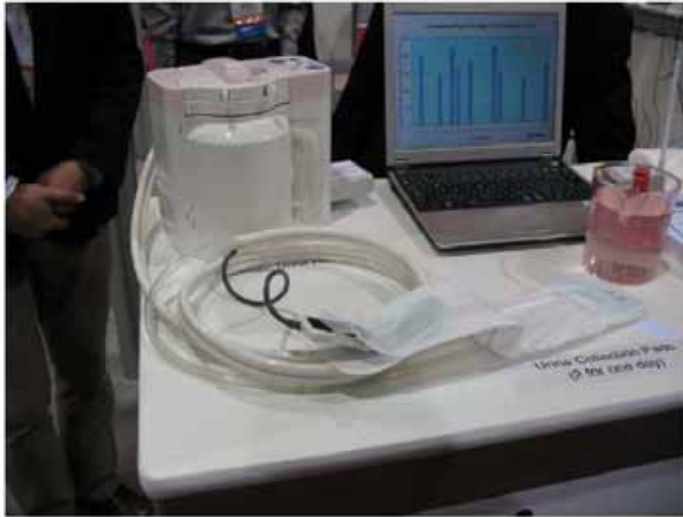


Video Jewel box



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Automatic Urine collection and analysis system



Handheld multi vital sign monitor



Let it wave's demo



OMT micro projector



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Panasonic 150" Plasma display



LG 3D display



Panasonic Razor thin displays



Hitachi 0.5" thick displays



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Dreamflyer Flight Simulator – 3 displays



Dreamflyer single display flight simulator



Sound Furniture



Sound Furniture



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# Appendix

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# 2008 CES



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# External Storage 2



Oxford Semi  
Prototype at  
MoCA Press  
Conference



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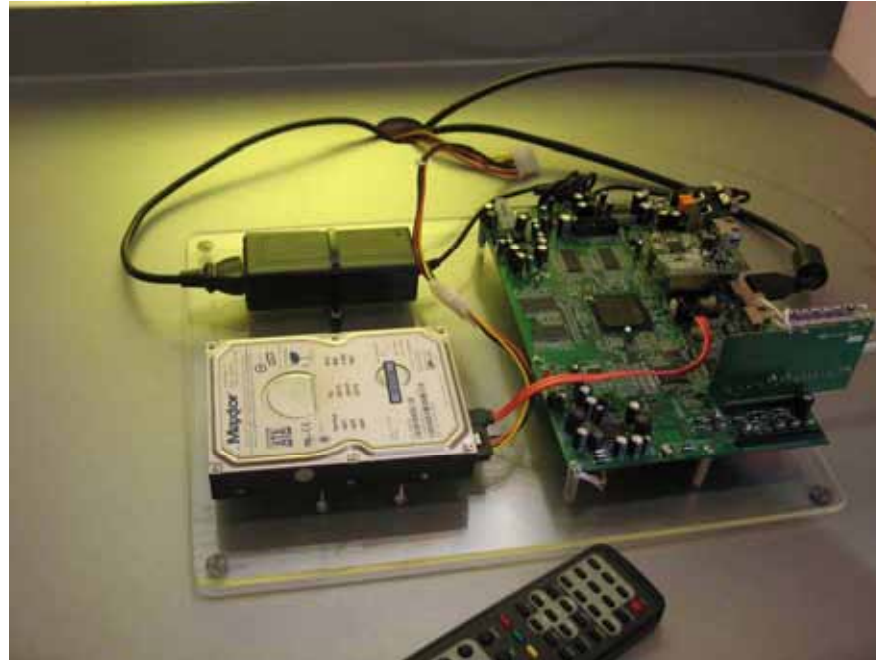
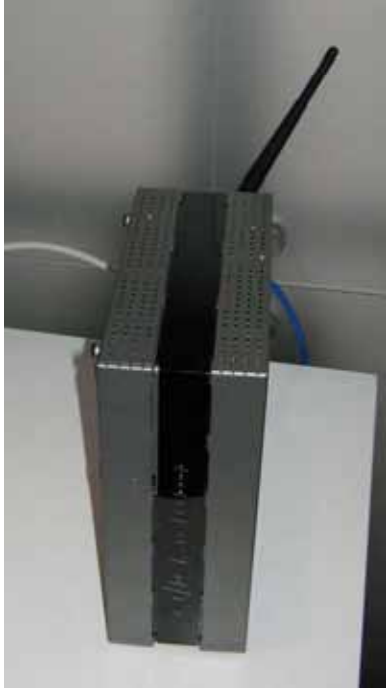
# Storage in Set Top Boxes and DVRs 2



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# Media Servers 2



Cisco



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# Camcorder Storage



Combination Blu-ray and HDD Camcorder, Hitachi

New Breed of Inexpensive Flash-Based Camcorders



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# Removable HDDs



Seagate Removable  
Drives



Imation  
Odyssey

- There were several products with removable hard disk drives for large capacity removable storage—these are complete drives in portable packages



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# Optical Storage




- Warner Brothers announced that they were dropping the HD-DVD format and rumors were that Dreamworks and Universal could follow
- The HD optical format war may be close to resolution—Blu-ray wins



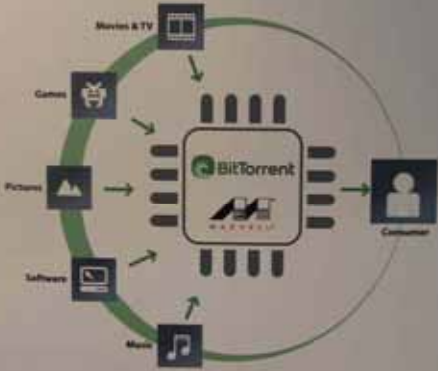
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# Content Distribution


**BitTorrent Certified for Marvell** 

- Embedded BitTorrent™ optimized for Marvell Chipsets
  - BitTorrent file downloads without the PC
  - SHA-1 hardware acceleration for faster downloads
  - Reference web browser based user interface
  - HTTP API for easy integration on media vaults, set-top boxes or home routers
  - BitTorrent DNA™ streaming support
  - Fully compatible with all standard BitTorrent clients



**PARTNER**


MOVING FORWARD FASTER® 

**HIPSERV™** 

Software Optimized for Marvell Media Vault

- Personal digital media software platform for CPE devices such as media vaults, set-top boxes, or home gateway/routers
- Easy-to-use home network management and personal digital media server solution
- Modular operating environment and applications suite for any Marvell-based embedded device
- Securely store, manage, distribute, and share your digital photos, music, and videos from any connected device - anywhere, anytime!



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# Kiosk Content Distribution



At IBM  
Booth



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