



# CES 2008: Thinner, Larger, Wireless, and Disc-less

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# Setting The Table

- Flat-panel HDTV prices continue to drop
- The blue laser format war is over...
- ...but we might not need blue laser at all!
- Coming to a living room near you: 3D
- Just how much can they jam into a flash drive?
- HDTVs are going on a diet, big-time!
- You thought lasers were just for pointers?

# Recent Price Benchmarks

- Sony KDF-50E3000 50-inch 1080p 3LCD \$1,349
- Samsung HPT5054 50-inch 1080p plasma \$1,499
- Hitachi P50H401 50-inch 1280x1080 plasma \$1,499
- Samsung HLT5076S 50-inch 1080p DLP \$1,599
- Westinghouse TX-52480S 52-inch 1080p LCD \$2,199
- Vizio VM60PHDTV10A 60-inch 1080p plasma \$2,499
- Mitsubishi WD-65833 65-inch 1080p DLP \$2,499
- **Wow! 65 inches of HDTV for less than \$2,500!**

An aerial night view of a city skyline, featuring numerous illuminated buildings and streets. The scene is captured from a high angle, showing a dense urban environment with various architectural styles and light trails from traffic.

**Read All About It!**

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# Ripped From The Headlines

- Toshiba Throws In The Towel

- *Toshiba surrendered in the high-definition home movie war on Tuesday, giving up on its HD DVD format after losing the support of key studios and retailers to the Blu-ray technology backed by Sony...The decision by the electronics maker ends the battle with a consortium led by Sony over who would set the standard for the next generation of discs, a fight that confused shoppers...Toshiba, which had hoped HD DVD would drive growth in its consumer electronics business, said it would aim to end its HD DVD business by the end of next month. (From Yahoo/Reuters 1-19-08)*

# Ripped From The Headlines

- One Step Forward, Two Steps Back?
  - *The number of plasma display panel (PDP) modules shipped in 2007 increased by 20.7% over 2006, reaching 12.178 million units in total. However, drastic decline in module prices lowered revenue for the year by 14% from 2006, down to \$6.7 billion. Average sales price of PDP modules took a 29% nosedive, falling from \$774 in 2006 down to \$552 in 2007...however, PDP demand increased substantially going into the second half of 2007, catapulting shipments to a record-breaking 1.53 million units in November. (From DisplayBank 02/14/08)*

# Ripped From The Headlines

- Toshiba, Hitachi, Sony Abandon RPTV
  - *In the past year, we've seen **Hitachi** and **Toshiba** exit the **RPTV business**, choosing instead to concentrate on higher-margin LCD and plasma products. Toshiba was an early adopter of DLP RPTV technology and an aggressive discounter, while Hitachi moved from CRT light engines to 3LCD imaging before they threw in the towel. (From [HDTVexpert.com](http://HDTVexpert.com) 10-19-07)*
  - *Due to the high consumer demand for BRAVIA flat-panel LCD televisions combined with the accelerating industry trend toward flat-panel displays, **Sony Electronics** will discontinue producing rear-projection televisions based on 3LCD and Silicon X-tal Reflective Display technologies. (From Sony Corporation memo 12-17-07)*

# Ripped From The Headlines

- Fighting Over A Smaller Piece of Pie
  - *Unit sales for flat panel televisions and business displays worldwide are expected to reach 113 million units in 2008, a 41% increase over the estimated 80 million units sold in 2007... "We estimate that the overall average street price declined 14.7% in 2007," said PMA vice president Rosemary Abowd. "Growth in the flat panel display market is beginning to slow down...Overall street price is predicted to drop another 15.6% in 2008...Manufacturers will be competing for their share of less than a 19% increase in total revenues worldwide." (From Pacific Media Associates 01-04-08)*



# Ripped From The Headlines

- Gimme Those Customers!
  - *Verizon continues to grapple with cable, suffering voice-line losses to MSOs while at the same time using FiOS TV to sap away some of cable's video market share. In both cases, one side is going after the other's bread and butter...recent data from Massachusetts suggest Verizon's FiOS TV is having an effect on Comcast. In areas where the two compete head-to-head, Comcast lost 28,762 video subscribers in 2007, but Comcast gained 24,176 subscribers where FiOS wasn't available. (From Cable Digital News 02/12/08)*



**Gems, Newsworthy  
Items, and Other Finds  
at CES 2008**

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# Help Doc, I'm Seeing Triple!

- **LG Philips tri-screen demo**
- 47-inch 1080p panel
- Advanced Super IPS system
- Custom front lens provides three viewing angles as LCD monitor rotates
- LED backlight system used
- Concept demo only



Three display ads for the price of one!

# Blue Laser, Schmoos Laser

- **VuDu media player (\$299)**
- Download HD movies via Internet connection
- Choice of rentals or purchases
- No monthly subscription
- 1080p/24 playback through HDMI is standard
- Question: Do we really need to “possess” the media?



▪ Where's the disc?

# Point And Shoot

- **Pocket laser projectors are coming to market**
- Numerous demos by Novalux, 3M, TI
- Built-in to cell phones, PDAs, even notebook computers
- Look for market-ready products in late 2008



▪ Your cat will love this...

# Can't Stop The Bragging

- **Panasonic 150-inch plasma**
- Concept display to show fab capabilities
- Capable of 4K resolution in manufacturing
- No price or availability yet (OK, stop drooling!)



OK, we give up, you win...

# Mirror, Mirror On The Wall

- **Samsung 14-inch OLED**
  - Super-thin HDTV monitor
  - High color saturation
  - Excellent contrast
  - Less than ¼" thick
  - Prototype demo, none in production yet
  - 31-inch model also shown



Can't get much skinnier than that!

# HDTV To Go

- **Slingbox HD**
- Hijack your family's set-top box while on the road
- Streams HD content to your notebook PC
- Only component video connections used (that doggone DRM stuff!)
- Question: Is it really full HD?



Watch your TV anywhere on earth...



# We're The Thinnest

- **Hitachi .75" LCD HDTV**
  - 32-inch glass cut
  - 1920x1080 resolution
  - High-brightness LCD
  - "Floating" support stand
  - Coming in 2009
  - Hitachi also showed a 1.5" thick 50-inch plasma



George Jetson would be proud

# No, We're The Thinnest!

- **Pioneer thin plasma demo**
  - 9mm thick (that's about .35 inches!)
  - 1920x1080 resolution
  - "KURO" black technology
  - Now, you can lose both your HDTV and its remote in your couch!



At just the right angle, it disappears!

# Lose Those Wires, Champ

- **Amimon WHDI TV Demo**
- Proprietary solution for streaming HD media
- Operates near 5 GHz
- Capable of high bit rates (over 1.5 Gb/s claimed)
- Now integrating with Sony Bravia LCD HDTVs
- Branded solutions (Belkin)



Look Ma, no fiber optic cables!

# Watch Two TV Shows At Once

- **TI DLP DualView Demo**
- 57-inch LED-powered DLP
- Active stereoscopic demo with alternate frame refresh
- Two video programs can be shown simultaneously
- Perfect for today's multi-tasking teenagers! (Also for bored babysitters...)



Two for the price of one

# “In Your Face” Displays

- **Ostendo CRVD-42DWX+**
- 2880x900 pixels (WXGA+)
- 10,000:1 claimed contrast
- DLP rear-projection engine
- LEDs for illumination
- 42-inch screen uses soft edge blending (tiling)
- Also demo'ed by Alienware



Gimme that steering wheel!

# Now, That's a Camcorder!

- **Hitachi DZBD7HA**
- Records directly to Blu-ray optical media (BD-R)
- 30 GB hard drive
- 1920x1080 HD recording
- Uses MPEG2 (SD) and MPEG4 H.264 (HD) codecs
- 10x optical zoom



One way to record to HD

# Super-Powered HDTV

- **Mitsubishi 65-inch 1080p Laser DLP**
- Custom Mits laser engine
- Also capable of 3D displays
- No price or delivery dates yet, anticipated shipping sometime later in 2008
- Question: Can Laser DLP save the RPTV category from LCD and plasma?



Why, that's – that's simply incredible!

# Out Of Space? No Prob, Dude!



Sanyo PLC-XL50 Projector Demo



**Sanyo's PLC-XL50 3LCD projector (1024x768) will throw an 80" diagonal image 3.5" from the screen**



# It's All About The Storage

Corsair Flash Voyager and Survivor 32 GB  
USB 2.0 flash memory drives



**32GB is equal to the capacity of SL HD DVD and more than SL Blu-ray**

# HD Displays – For The Boardroom?

- **Mitsubishi FL7000U**
- 3LCD front projector
- 1920x1080 native resolution
- Interchangeable lenses
- 5000 lumens brightness
- MSRP about \$15K
- Question: Can we finally get the pro AV channel to specify widescreen projectors?



Welcome to the 21<sup>st</sup> century

# 3D Plasma? Cool!

- **Samsung 3D plasma demo**
- 50-inch screen used
- 1920x1080 resolution
- Active shutter glasses
- 120 Hz refresh
- Plasma is indeed fast enough to show 3D!



Now, that's entertainment.

An aerial night view of a city skyline, featuring numerous illuminated buildings and streets. The scene is captured in a monochromatic, high-contrast style, with the lights of the city providing the primary illumination against a dark background. The text 'Things To Ponder' is overlaid in a bold, orange-red font, centered horizontally and slightly above the vertical center of the image. The overall mood is contemplative and urban.

# Things To Ponder

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# Things To Ponder

- #1: Do we really need blue laser DVD, if HD video can be downloaded via fast Internet connections?
- #2: Is it finally time for 3D HDTV in the home?
- #3: Are time-shifting (TiVo) and place-shifting (Slingbox) becoming more important than picture quality (HDTV)?
- #4: How will portable/mobile TV viewing disrupt the market?
- #5: Is secure flash memory a practical media playback format?
- #6: Will wireless HD connectivity rule the roost, going forward?
- #7: When will we see super short-throw HT projectors?
- #8: Will it be possible to get a cab at CES in less than an hour?

An aerial night view of a city skyline, featuring numerous illuminated buildings and streets. The scene is captured from a high angle, showing a dense urban environment with various architectural styles and light trails from traffic.

Thank You!

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