

# Now in HD

By Gary Pageau

The move back to Las Vegas was more than a change in venue. It was a change in vision

Trendspotters have always used **PMA** trade shows to determine the direction of technology. **PMA 07** was no different. Digital technology is driving rapid change in the photo/imaging industry, forcing some basic assumptions to be revisited.

A simple example is aspect ratio. By virtue of its 24-by-36mm aspect ratio, 35mm film dictated print shapes. In the digital age, however, the display determines the format. Photos are cropped and resized to fit different monitor displays and different print options.

Toward that end, one of the most influential technologies at **PMA 07** is actually coming from the broadcasting industry: HDTV. There was a big influx of HD-format products, ranging from still cameras to camcorders to photo viewers. HD-format devices display images in a 16:9 aspect ratio.

Among the **Sony** cameras were several new Cyber-shot models that connect to HDTVs with an optional cable. The DSC-T100 features a 3.0-inch LCD screen, 5x optical zoom lens, and HD component output in 1080 HD. The DSC-T20 is an 8.1-megapixel model with a 2.5-inch screen, 3x optical zoom, and

1080 HD component output. Other Sony Cyber-shots with HD capability include the 8.1-megapixel DSC-H9, the 8.1-megapixel DSC-H7, the 12-megapixel DSC-W200, the 8.1-megapixel DSC-W90, and the 7.2-megapixel DSC-W80. To achieve the HD resolution in Sony cameras, users must select the 16:9 mode.

**Panasonic**, which also makes widescreen TVs, brings HD to its DMC LZ-series still cameras. The high-performance cameras have 7.2-megapixel CCD sensors, a 6x optical zoom lens (equivalent to 37-222mm on a 35mm film camera), and AA battery power. The DMC-LZ7 and DMC-LZ6 incorporate intelligent image stabilization, and also feature 2.5-inch and 2.0-inch LCDs, respectively, and are equipped with the Panasonic Venus Engine III image processing engine for higher image quality and speedy processing. Additionally, each camera accepts large-capacity SDHC memory cards.

Other HD features include the ability to capture “wide-aspect VGA motion images.” In addition to recording standard VGA (640-by-480) motion images at 30 frames per second, the DMC-LZ7

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## What is HDTV?

HDTV in widescreen format provides the highest resolution and picture quality of all digital broadcast formats, according to the **Federal Communication Commission** (FCC). Combined with digitally enhanced sound technology, HDTV sets new standards for sound and picture quality in television. HDTV and digital televisions are not the same thing – HDTV is one format of digital television, according to the FCC. As of March 1, all new televisions must have digital tuners. (Analog programming continues until Feb. 17, 2009.)

HDTV formats generally refer to the number of vertical display resolution (720 or 1,080), and whether progressive scan frames or interlaced fields are used. Current HDTV standards are defined as 1,080 active interlace (1080i) or progressive scan lines (108p), or 720 progressive (720p) scan lines, using a 16:9 aspect ratio. A single 108p frame is 1,920-by-1,080 pixels. For information, visit the FCC digital television site at [www.dtv.gov](http://www.dtv.gov).

and DMC-LZ6 can record wide-aspect VGA (848-by-480) motion images at 30 frames per second. The company says these 16:9 motion pictures are impressive on a widescreen TV. The 7.2-megapixel Panasonic Lumix DSC-LS70 also offers wide-aspect VGA motion pictures.

The **Canon** PowerShot TX1 straddles the worlds of still cameras and camcorders. Although it resembles the now-classic Elph series still camera, the pocket-size PowerShot TX1 also boasts HD video capability. The camera has a 10x optical zoom lens and a swing-out LCD screen, like a camcorder.

The TX1 can capture 30 frames per second HD video in 720p widescreen, and includes a “MovieSnap” mode for capturing stills from recorded movies. In camera mode, the TX1 has 14 shooting modes, including auto, manual, and super macro; and seven scene modes, including portrait, night snapshot, foliage, snow, and more. The camera includes a component video cable for connecting to HDTVs.

The Canon PowerShot TX1 captures 30 frames per second HD video in 720p widescreen.



Given the growth of HD as a video format, it's natural HD camcorders made the scene at PMA 07. **JVC** upped the ante with its HD Everio GZ-HD7 camcorder, sporting resolution of 1,920-by-1,080 resolution. Using the optional \$400 CU-VD40 Share Station dock, the camera can burn DVDs that can be played, through the Share Station, on a television. The built-in 60GB hard drive can hold up to 5 hours of full-resolution movies. The camera has three 0.5-inch CCDs and a 10x optical zoom with image stabilization.

Canon also introduced the HV20, featuring a 10x optical zoom, 2.7-inch widescreen LCD, Canon DIGIC processor, and optical image stabilization.

The camcorder can record with a resolution of 1,920-by-1,080. The camera also has extensive still capability, with the ability to shoot 3.1-megapixel still photos or 2.0-megapixel images while shooting video (and saves them to a mini-SD card). Two-megapixel still images can be extracted from video.

The new **Hitachi** DZHS500A boasts a 30GB hard drive, 30x zoom, and users can choose to record directly to DVD or onto the hard disc.

Panasonic AVCHD camcorders include the HDC-DX1, which records to miniDVD, and the HDC-SD1, which records to an SDHC memory card. The HDC-DX1 features three 0.25-inch CCDs, a 12x **Leica** lens, 32x optical zoom, image stabilization, and it can record in widescreen. Up to 90 minutes of content can be recorded on a 4GB SDHC card from the HDC-SD1, which

The JVC HD Everio GZ-HD7 camcorder sports a 60GB hard drive.



### What is SDHC?

Joining the cornucopia of digital media formats is the SDHC format, a large-capacity variation of the common SD card. SDHC cards are similar in many ways to SD cards, but have a greater than 2GB capacity. SDHC cards, however, are not compatible with older SD devices; so an older camera can't use the new cards. Existing SD cards can, however, be used in newer SDHC-compatible devices.

As more cameras incorporate high-quality video shooting, they need higher-capacity cards like SDHC to which they can record. According to the **SD Card Association**, a 4GB SDHC card can store 1 hour, 40 minutes, of MPEG-2 (704-by-480 pixel) video, recorded at 30 frames per second. For more information, visit the SD Card Association at [www.sdcard.org/sdhc/index.html](http://www.sdcard.org/sdhc/index.html).

is equipped with a 3CCD system, Leica Dicomar lens with 12x optical zoom, built-in Optical Image Stabilization, and 5.1-channel recording.

Sony featured the HDR-UX5 and HDR-UX7 camcorders, which can record in 1080i high definition and 5.1 channel surround sound. The HDR-UX5 has a 2-megapixel CMOS sensor for taking 4-megapixel still images; a 2.7-inch-wide touch-panel LCD, and 10x optical zoom. It supports DVD-R/-RW/+RW/ and +R dual layer media formats. The HDR-UX7, with a 3.5-inch LCD, can take 6-megapixel still images, has a 3-megapixel CMOS sensor, and a 10x optical zoom.

Both camcorders feature x.v.Color, a technology Sony claims allows for capturing and displaying nearly twice as many viewable colors as previously possible, resulting in a more natural and vivid picture. Each can also simultaneously record high-definition video and 2.3-megapixel still images directly to Memory Stick Duo media.

While most digital cameras can connect to televisions, that's not always convenient. Sony has a dedicated photo storage unit, with HD output. The 80GB HDPS-L1 has eight slide show styles with image transitions synchronized to background music. The device, which accepts seven types of media cards, automatically sorts picture files by creation date. The user also has the option to group images by type. A wireless remote control is included to sort photos by theme or by date, to select show styles, and adjust the volume.

Another solution is the new **Samsung** HD Photo Box, a photo storage device

### HDTV at a glance

- High-definition broadcasts offered.
- Best available picture resolution, clarity, and color.
- Dolby theatre surround sound.
- Dolby surround sound.
- Widescreen "movie-like" format.

### Getting images from cameras wirelessly

While the prediction of cameraphones making a big impact on the photo printing market has yet to be fulfilled, there were still examples at **PMA 07** of how a wireless future is coming to cameras.

**FotoNation** announced its FotoNation MTP-IP that allows users to transfer large photos, movies, and audio files at speeds up to 10 times faster than Bluetooth. For example, with FotoNation MTP-IP, a 3-megapixel mobile phone photo can be transferred to another mobile phone, a computer using Windows Vista, or other device at speeds of 0.3 second or less, the company claims. The MTP-IP responder is available for Wi-Fi-enabled mobile phones, digital cameras, and other devices.

Another interesting technology was a form of "wireless USB" connection shown by **Artimi Inc.** The chip-based solution is integrated within cameras; when activated, it appears to the desktop PC or laptop that the camera is attached via the USB port. According to Artimi, the A-150 chipset offers USB 2.0 connection speed without the fuss of cables. The company says the A-150 is standards-compliant, including WiMax and next-generation USB.



The Canon HV20 has the ability to shoot 3.1-megapixel still photos.

with 250GB of internal memory. Users can load photos directly from a camera, or connect it to a computer. When the device is plugged into an HDTV, the user can use the remote to navigate the photo library or select categories of photos. The HD Photo Box automatically categorizes photos by composition, orientation, and even color.

While HD is often considered a "display" format, the printing side of the industry has yet to catch up. (Actually, some could argue, since the now-dormant APS film format had an HD print size, it's been there for a decade; but that's a discussion for another day.)

**Express Imaging Systems LLC** (EIS) announced at PMA 07 a marketing campaign for central photo labs and

photo retailers based on its 450 ppi photo output available exclusively from its Europa series high-speed digital printers. The HD Prints branding campaign creates an association between high-definition TV (HDTV) and high-definition photographic prints produced by the Europa digital silver-halide LCD printer, the company says. The HD Print brand is a "tangible reference point for quality," the company says, but doesn't limit the print aspect ratio to 16:9. The Europa printer uses LCD-exposure technology with a resolution eight times higher than HDTV, claims EIS.

HD Prints are available in 3.5-by-5.0, 4-by-6 and 5-by-7-inch print sizes, as well as an optional 4-by-8-inch size for panoramics and greeting cards. ■