

THE VESA MONITOR

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■ **MDDI Delivers Cost-Effective, Short-Range, High-Speed Communication**

The Mobile Display Digital Interface (MDDI) describes the requirements of a high-speed digital packet interface that allows portable devices to transport digital image data.

Portable electronic devices have increasing features and capabilities, are becoming smaller, and consume less power. Many have wireless network communication capability, more powerful processors, larger amounts of bulk storage, and enhanced input devices. These capabilities can all be integrated into smaller devices, but there is a limit to the small size of a high-resolution display. This makes it necessary for portable devices to export their display information in order for the portable device to have a high-resolution display. Also, within a device there are often high-bandwidth connections to an internal display. Present solutions use parallel interfaces and relatively high signal levels, causing the connection to be more costly and less reliable. They also can cause radiated emissions that interfere with proper operation of the device.

The new Mobile Display Digital Interface standard (MDDI) is a cost-effective low-power solution that enables high-speed short-range communication with a display device using a digital packet data link. It uses a miniature connector system and a thin flexible cable that makes it especially well suited for connecting portable computing, communication, and entertainment devices to wearable micro displays. MDDI may also be used to simplify the connections between a host processor and a display within a device to reduce the cost of these connections and improve reliability.

Mobile devices are easier to use when fewer cables are required to connect multiple devices that are commonly needed for a full audio-visual experience. MDDI provides support for audio transducers, keyboards, pointing devices and other input devices integrated with a mobile display. MDDI is extensible so it can support user defined data types. Specific examples include:

- **Full-motion video in the form of full-screen or partial screen bitmap fields or compressed video, depending on device capability.**
- **Static bitmaps at low rates to conserve power and reduce implementation cost in some portable devices.**
- **PCM or compressed audio data at any resolution or rate compatible with the serial link speed.**
- **Pointing device position and selection.**
- **Control and status information in both directions to detect the capability of the opposing device and set its operating parameters.**
- **User-definable data types for capabilities yet to be defined.**

The aggregate serial link data rate on each signal pair can vary over many orders of magnitude and that allows the system designer to easily optimize cost, power, implementation complexity, and the display update rate.

The attributes of MDDI are independent of display technology. In fact, the timing of data packets transferred through the interface can be easily adjusted to adapt to idiosyncrasies of particular display devices or combined timing requirements of audio-video systems. While this allows the system to have the smallest power consumption possible, it is not a requirement of the display to have a frame buffer in order to use MDDI.

The new MDDI standard is available for member download and non-member purchase at www.vesa.org.

IN THIS ISSUE:

- ✓ MDDI Delivers Cost-Effective, Short-Range, High-Speed Communication
- ✓ New 'Plug and Play' Standard Designed to Achieve True Display/Graphics Subsystem PnP
- ✓ Deadline Fast Approaching for Presentation Proposals at DI Symposium September 16 – 17 in Milpitas
- ✓ COMPLIANCE - Apple Computer is First PC Manufacturer Awarded VESA's New Mounting Compliance Logo
- ✓ New VESA Panel Standards Seek Easier, Faster LCD Selection for Notebooks and Other Products
- ✓ New Members



■ New 'Plug and Play' Standard Designed to Achieve True Display/Graphics Subsystem PnP

VESA has introduced a significant new standard developed to support 'ease of use' and true Plug and Play capability for display and graphics subsystems in the personal computer.

VESA's new PnP Standard originates from the rapid growth of the industry, and increasing pace of new hardware and software products impacting graphics and display. It defines a procedure for "Plug & Play" (PnP) in the Display/Graphics Subsystem, covering operations that take place in the monitor, video interface, and from any sources of computer-generated images. These include a graphics card, chip or system on a motherboard, a tablet PC, PDA workstation computer or a notebook PC's external monitor video ports. The standard also includes references to operations that occur in the OS and in device drivers, as well as a list of required elements and processes for true PnP. It assumes that the graphics subsystem in the computer has been installed, enumerated and configured by a computer system. As a basic recommendation, the new PnP standard suggests that the capabilities of the video generating hardware -- such as video pixel formats, color depth, vertical refresh rates, and others -- match or exceed the capabilities of the monitor.

"The new standard supports VESA's efforts to promote 'ease of use' and improvements of the user's experience," according to Bill Lempesis, VESA's executive director. "It was developed to meet, exceed and/or complement standards objectives including support for Microsoft's Plug and Play definitions and the Digital Visual Interface (DVI) specification version 1.0 and other recognized digital interface standards."

A large group of industry leaders were members of the VESA PnP Task Group and supported the efforts to refocus the Digital/Graphics industry towards true 'Plug and Play.' These included ATI, Dell, IBM, Genesis, Microsoft, Qualcomm, Samsung, Total Technologies, and ViewSonic.

- electrical interfaces and protocols for displays;
- display interface requirements for non-PC displays such as PDAs and TVs;
- future display interface and graphics hardware architectures;
- display timing standards;
- physical connectors intended for display interface use;
- overall trends in the display industry or markets, and their impact on interface requirements and standards.

Presentations can be either 20 to 30 minutes or 50 to 60 minutes. Proposals must be sent to moderator@vesa.org in PDF, plain text, or Word (.doc) files and the final presentations must be prepared in a PowerPoint file. After abstracts are reviewed, presenters will be notified as soon as possible, and final presentations are due Aug. 27.

The symposium is open to VESA members and to non-members. Information and intellectual property described in any of the presentations will be subject to VESA policies and procedures.

For more details about the conference and registration, visit http://www.vesa.org/events_symposium.html



■ Deadline Fast Approaching for Presentation Proposals at DI Symposium September 16 – 17 in Milpitas

It's five minutes to midnight for all VESA members who would like to propose presentations at the annual 2004 Display Interfaces Symposium, September 16-17 at the Embassy Suites Hotel, 901 East Calaveras Blvd, Milpitas, Calif.

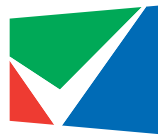
With the theme "Convergence of PC and CE Displays" now set, all proposed presentations are due by month's end on these topics:

■ Compliance

Apple Computer is First PC Manufacturer Awarded VESA's New Mounting Compliance Logo

Apple Computer's new aluminum designed Cinema HD Flat Display Series, introduced last month, have met all of VESA's mounting compliance requirements, making Apple the first PC company to be issued the new VESA Mounting Compliance logo.

The new widescreen HD flat panel series, which was introduced at Apple's Worldwide Developers' Conference in June, features the 30-inch Cinema HD Display and the 23-inch Cinema HD Display, along with its 20-inch Cinema HD Display.



Apple's official release to the press announcing the new line of displays mentions the VESA compliance. Apple also featured the compliance announcement on the Apple and Apple Store web sites. Apple joins other companies that have been issued the mounting compliance logo for successfully meeting all of the compliance tests conducted under VESA's Flat Display Mounting (FDMI) standards.



Apple Computer's new family of widescreen Cinema HD Flat Displays for Power Mac, PowerBook and PCs will feature the VESA Mounting Compliance Logo. Apple Computer is the first PC manufacturer to be awarded the VESA Mounting Compliance Logo.

■ New VESA Panel Standards Seek Easier, Faster LCD Selection for Notebooks and Other Products

VESA has established new panel standards developed to enable transparent usage of panels in LCD notebooks without requirements for alterations to product tooling or to the display module.

The new standards define electrical interface requirements and mechanical dimensions for 12.1-inch, 12.1-inch wide, 15.4-inch wide and 17-inch wide panels used in notebooks and related applications.

The new standards were developed to minimize or eliminate alterations and modifications that are typically required when industry manufacturers bring unique designs to a market -- and to encourage product development around the standard panels. The objective is to ensure that panels from all of the many display module suppliers can be interchanged easily, without requiring alterations in product tooling or the display module.

This kind of goal has become necessary as more panel suppliers enter the market. The more unique designs that appear, the greater the risk that OEMs and display module suppliers are forced to change their packaging, interfaces, and tooling when a new panel supplier or module is selected. The result is often schedule slippages or missed market opportunities, along with logistic and product obsolescence challenges. Some display module manufacturers have been unable to become potential suppliers because of the burden of modifying end products.

The Display Device Standards Committee is continuing its standards development work through several key task groups that will focus on specific physical, mounting, electrical and other specifications, in an attempt to alleviate the compatibility and interoperability challenges that have emerged in the rapidly-growing display markets.

The Monitor Panel Standards Task Group has been assigned to develop physical/mechanical mounting requirements, electrical interface selection and connector type and pinout, and other relevant standards that are designed to ensure compatibility between display panels developed for desktop PC monitor and similar applications. A particular focus will be on compatibility between products from different manufacturers.

The Notebook Panel Standards Task Group is being asked to develop requirements for the same set of factors, as they pertain to notebook PCs.

The Flat Panel Display Measurements Task Group is chartered to continue the development of the VESA Flat Panel Display Measurements (FPDM) Standard and similar standards for display performance and image quality measurement.

■ NEW MEMBERS:

CORNING

Corning Incorporated (www.corning.com) is a diversified technology company that concentrates its efforts on high-impact growth opportunities. Corning combines expertise in specialty glass, ceramic materials, polymers and the manipulation of the properties of light, with strong process and manufacturing capabilities to develop, engineer and commercialize significant innovative products for the telecommunications, flat panel display, environmental, semiconductor, and life sciences industries.

autronic-MELCHERS GmbH

Founded in 1972 Autronic GmbH originally developed nuclear measuring instruments. Today the company is a leading manufacturer of instruments and tools for measuring and modeling the electro-optical properties of LCDs in research, development and quality control. For more information please visit www.autronic-melchers.com.