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Electronics giants to create wireless HD standard

PETER SVENSSON AP Technology Writer

Sony, Samsung and other consumer-electronics heavyweights are uniting to support a technology that could send high-definition video signals wirelessly from a single set-top box to screens around the home.

The consortium announced Wednesday is an important development in the race to create a definitive way to replace tangles of video cables, but doesn't end it -- both Sony and Samsung also are supporting a competing technology. In the new consortium, Sony Corp. and Samsung Electronics Co., along with Motorola Inc., Sharp Corp. and Hitachi Ltd., will develop an industry standard around technology from **Amimon** Ltd. of Israel called WHDI, for Wireless Home Digital Interface.

"If you have a TV in the home, that TV will be able to access any source in the home, whether it's a set-top box in the living room, or the PlayStation in the bedroom, or a DVD player in another bedroom. That's the message of WHDI," said Noam Geri, co-founder of **Amimon**.

Amimon is already selling chips that fulfill part of that promise, but the creation of a broad industry group makes it more likely that consumers will be able to buy WHDI-enabled devices from different manufacturers and have them all work together.

Geri expects TVs with **Amimon**'s chips to reach stores next year, costing about \$100 more than equivalent, non-wireless TVs.

Wireless streaming of high-definition video is a relatively tricky engineering problem that many companies are trying to tackle. It can be done with the fastest versions of Wi-Fi, a technology already in many homes, but that requires "compression," or reduction of the data rate, with picture quality degrading as a result. There's also a delay in transmission as chips on both ends of the link work to compress, then decompress the image.

That's prompted much research into radio technologies that are faster, requiring less compression. A leading contender is WirelessHD, centered on technology from SiBEAM Inc. of Sunnyvale, Calif. It uses an open portion of the radio band, at 60 gigahertz, for ultrafast transmission of uncompressed video, but it could be years away from commercialization. Its range is limited, meaning that it would be used for in-room links rather than whole-house networking, like WHDI.

Sony is part of the WirelessHD group as well, and is supporting WHDI to have "wider options," the company said in a statement.

Samsung, on the other hand, looks at WHDI as a stopgap technology until the higher-picture-quality WirelessHD takes over. JaeMoon Jo, Samsung's vice president of TV research, said the company believes WirelessHD will be the "ultimate solution in the long run."

Still another contending wireless technology is ultra-wideband, or UWB. It requires less compression than Wi-Fi, but its range is more limited, generally to in-room networking. Monster Cable Products Inc. plans to introduce a kit that produces a wireless video link using UWB.

WHDI is less exotic than either WirelessHD or UWB. It uses a radio band at 5 gigahertz that's used by some Wi-Fi devices, which means it can take advantage of research in that field. To get around the limitations of the limited bandwidth, **Amimon** uses a clever trick instead of compression.

Before transmission, **Amimon's** chips separate the important components of the video signal, the ones that really make a difference to the viewer, from the less important ones, like tiny variations in color over a small area. It then gives priority to the important parts, while putting less effort into getting the fine nuances to the receiver.

That means the transmission works over relatively long distances, albeit with lower image quality as the distance increases.

Motorola has looked at competing technologies, but WHDI is the only group it's joined because of **Amimon's** "extremely unique" approach, said Paul Moroney, a Motorola research fellow who works with WHDI.

Motorola plans to build the technology into its set-top boxes, which are used by many cable providers around the country. But the first product will likely be a pair of adapters that talk wirelessly to one another. One could be attached to a set-top box, the other to a TV set, Moroney said.

Belkin International Inc. already sells a pair of adapters based on **Amimon's** chips for \$1,000, and Sony has announced a similar set for its TVs. Moroney said Motorola hopes to sell a kit for significantly less than Belkin's price next year, as the technology matures.

Kurt Scherf, an analyst at Parks Associates, noted that wireless video technologies have been talked up for years, but haven't lived up to their promises so far. Professional audio-video installers surveyed by his firm aren't excited about wireless, because they're afraid of reliability problems.

Still, he said, WHDI's range should give it an edge, since it allows the technology to do more than just replace a cable in the entertainment center.

On the Net:

<http://www.amimon.com>

<http://www.wirelesshd.org>

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