

HDMI could soon be replaced by new cable technology

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(PhysOrg.com) -- A new audio/video cable technology is being developed that might spell the end of HDMI cables, which are currently used to connect a wide range of audio and video devices. The new technology is known as HDBaseT and carries audio and video signals and power on standard Cat 5e/6 Ethernet cables.

The new technology has been developed over the last six months by four technology companies: Sony Pictures Entertainment, Samsung, LG, and Valens Semiconductor, which together form the HDBaseT Alliance. The group hopes the new technology and products conforming to it will begin to be shipped later this year and predict its use will become widespread during next year and beyond.

The HDMI (High Definition Multimedia Interface) cable was introduced

in 2003 and has been gaining popularity, especially with the rise of Blu-ray and the adoption of [high definition television](#), so much so that almost all televisions now ship with HDMI technology.

HDMI has advantages over other types of audio/video cables but also has disadvantages such as switching delays and cable length limitations, both of which are addressed by HDBaseT. HDMI only carries uncompressed audio and video signals. Wireless technologies such as WiGig, WHDI and Wireless HD offer alternative options, but they cannot transfer power to devices as HDBaseT can.

HDBaseT is a network-based standard called “5Play™” that enables a single cable to carry high definition video, audio, up to 100 watts of power, 100BaseT Ethernet, and control signals simultaneously. The cables, which are inexpensive Cat5e/6 type rather than expensive HDMI, can be up to 100 meters in length. The [HDMI](#) ports are replaced by standard RJ-45 connectors. The HDBaseT specification supports the latest HD video, 3D, and high resolution 2K x 4K (4096 by 2160).

Criterion	HDMI 1.4	DIIVA	DisplayPort 1.2	HDBaseT 1.0
Uncompressed Video/Audio	10.2Gbps	11.5Gbps	Up to 21.6Gbps (17% of actual data)	Up to 10.2Gbps HDBaseT is capable of scaling up to 20Gbps
Maximum Cable Length	Few meters	30m	15m for 5G (limited to 1080P, 24Hz) 3m for 30-21.6Gbps	Up to 100m (Including the support of multi hops (8 x 100m))
Cable	HDMI Cable	A DVI-A Proprietary Cable	DisplayPort Cable	Low cost standard Cat5e/6 LAN cable
Connector	HDMI Connector	A DVI-A Proprietary connector	DisplayPort Connector	Standard RJ-45 connector
Charging Power	No	5W	No	Up to 100W Can be used for powering remote TVs
Ethernet	100Mbps	Gigabit	7.20Mbps	100Mbps HDBaseT is capable of scaling up to Gigabit
Daisy Chain	No	Yes	Yes	Yes
Installation-Friendly	No	No	No	Yes Use existing network wiring, field terminated connector
USB	No	Yes	Yes	Yes
Networking	No	Daisy Chain and Star topologies	Daisy Chain and Star topologies	Extended-range Daisy Chain and Star topologies Entire home and in-room coverage as well as commercial and industrial installations

Technology Comparison Table

Chairman of the Alliance, Ariel Sobelman, said the new technology is

“poised to become the unrivaled next-generation home networking transport to meet the ever-changing trends in the digital media market.”

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