

What is the Internet of Things and How it Will Rule the (AV) World

FREMONT, CA, UNITED STATES, February 10, 2017 /EINPresswire.com/ -- As the Internet of Things begins to gain traction, Gartner, Inc., an information technology research and advisory company, forecasts 8.4 billion Internet of Things devices to be in use in 2017, a 31 percent increase from 2016. That number will multiply nearly 250% by 2020. And if CES 2017 was any indication, the Internet of Things is already all around and ready to rule everyone's lives—and the world.



What is the Internet of Things?

The Internet of Things, or IoT, is the concept of connecting devices to the internet to gather and trade data. The IoT allows these devices to be sensed and controlled remotely while reducing human intervention. With visions to automate everything, the IoT intends to create a safer, smarter, and more efficient world. Practically anything with a power switch can be connected through the IoT. From the ability to switch on room lights with a phone to monitoring bridge safety through sensors, the possibilities of IoT are infinite.

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IoT services are central to the rise in IoT devices.”
Denise Rueb, research director, Gartner

How the Internet of Things benefits the world

The Internet of Things strives to accomplish an advanced level of connectivity among devices, systems, and services.

The collection of all this data will transfer autonomously to other devices, further simplifying the entire process. The IoT will impact everyday life by connecting devices in aspects like infrastructure management, building and home automation, and energy management.

Infrastructure management is the control and monitoring of urban and rural structures like bridges and railways. The IoT helps detect changes that compromise safety or pose a public risk. Sensors can be placed within cement to monitor its stability once it has been applied to bridges or foundations. IoT also makes it simple to schedule repairs and maintenance work.

Building Automation Systems (BAS) is the automatic centralized control of a building's systems such as heating, ventilation, and lighting. The objective is to ensure efficient operations, lessen power consumption, and extend the life of the building. Other examples of such devices include TVs, air conditioners, refrigerators, ovens, washer/dryer, and even systems that notify when a fire extinguisher is obstructed or low pressure.

Optimizing power consumption is easy when the Internet of Things is integrated into equipment like bulbs, TVs, and switches. Users can remotely control these devices through a cloud-based system using a smartphone or tablet. Sensing and actuation devices connected to the internet allows utility companies to balance power generation and energy consumption. The IoT optimizes the smart grid by collecting and responding to data between utility and user. Within the smart grid, the IoT also manages distribution automated devices like transformers and reclosers.

How IoT Fits in AV

While the phrase is fairly new, the concept of the Internet of Things—a networked connection of sensors and devices for control and monitoring—has been part of the professional audiovisual industry for nearly two decades now. Extenders amplify video signals great distances using category (CAT) cables. Digital signage are optimized by networking them with computers, cameras, sensors, and databases. And AV service providers monitor their client's equipment to maximize maintenance and support service efficiency. A centralized management console allows them to manage entire groups of equipment without ever leaving the room. Here's a look at other examples of IoT in the AV industry.

Hall Research [UH2X-P1](#) is a device-to-device KVM over IP solution (KVM meaning keyboard, video, and mouse). This allows remote control of a computer with a separate set of keyboards, monitors, and mice. The UH2X-P1 is a transmitter/receiver set using HDBaseT™ 2.0 technology to support 4K/UHD and 3D. It can extend audio and video, along with IR, IP, RS-232, USB, and power, up to 100 meters over single CAT5e/6. It also features audio return extension.

Like the UH2X-P1, Adder has the ADDERview [CATxIP 1000](#). However, this not only connects device-to-device but device-to-cloud as well, allowing for global access. The CATxIP 1000 is a high density, small form factor KVM switch that possesses USB console support, global IP access, and a complete set of KVM features. It delivers 1600 x 1200 resolutions and CD quality audio all in a compact desktop format.

The latest trend in the AV industry is AV over IP. It extends and switches audio/video sources over an IP network. This solution is ideal for establishments with multiple monitors wanting to display ads for digital signage or sporting events for entertainment.

Key Digital's Enterprise AV has the capability to send 1080p and digital audio 400 feet via CAT cable. This solution uses H.264 video compression which allows up to 1,024 transmitters to connect to an unlimited number of receivers. Compass Control software controls Enterprise AV, but third-party control systems are compatible.

Atlona has a five-product series called [OmniStream](#). It is the industry's first to offer dual-channel encoding and decoding to allow two independent 4K video channels in a single device. This provides redundancy and backup should a connection fail for any reason. OmniStream also includes Dante technology which allows two-channel audio distribution. The Atlona Management System (AMS) software is used to control and manage the system, though third-party control systems can be used.

According to Gartner, total spending on endpoints and services on the Internet of Things will reach nearly \$2 trillion in 2017. In the same year, consumers will make up the largest users of IoT applications at 5.2 billion units (63 percent) while businesses will represent 57 percent of the overall IoT spending.

"IoT services are central to the rise in IoT devices," said Denise Rueb, research director, Gartner.

Total IoT services spending, including consumer, professional, and connectivity services, is projected to reach \$273 billion in 2017.

About AVProSupply

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