Case Study
Intel® Core™ Processors
PilotTV*
Digital Signage

Digital Signage Specification Increases Profitability for Solution Provider

PilotTV* reduces support costs and boosts advertising revenue using Intel's Intelligent Pluggable System Specification (IPSS).

"IPSS enables us to save over 30 percent on installations and more than 70 percent on routine service."

– David Mou
Director of Business Development at PilotTV

Venues

Convenience stores, drug stores, and quick service restaurants.

Business Challenges

- Lower digital signage support costs: Improve the productivity of the field service team.
- Drive higher revenue: Expand advertising opportunities by providing greater value.

Technology Solutions

- Intelligent Pluggable System Specification (IPSS): Simplifies digital signage installation, maintenance, and upgrades, and makes it easier to design systems that support compelling usage models and address emerging trends.
- Data analytics: Increases marketing campaign effectiveness by playing directed advertisements based on viewer demographics.

About PilotTV*

In business since 2006, PilotTV* is a digital signage service provider supporting over 5,000 signs in convenience stores, drug stores, and quick service restaurants, including 7-Eleven* and McDonalds*. The company operates its own micro TV station that plays advertisements on the signs for its customers, who are mostly media agencies. A future goal of PilotTV is to evolve digital signage into an intelligent store information system with capabilities like quickly creating and playing directed ads based on customer in-store behavior.

PilotTV has four main departments that offer a wide range of services:

- **Systems integration** – installs, operates, and maintains the digital signage networks
- **Production team** – assists customers in developing effective content
- **Sales** – sells advertising time similar to the Nielsen* viewership paradigm
- **Numerical analysis** – analyzes viewer analytics data for customers

"Data analytics increases the value of advertising by two to three times," said David Mou, director of business development at PilotTV.

Business Challenges

Support Effort: For digital signage solution providers, like PilotTV, delivering a complete system requires the integration of many diverse components such as an LCD display, media player, content management system (CMS), device management console, wireless networking, and security. For many years, PilotTV typically sent three technicians to every installation, so the company sought ways to reduce this number in order to lower support costs. In addition, stores wanted to minimize the disruption from ongoing maintenance and insisted service visits last no longer than 20 minutes.

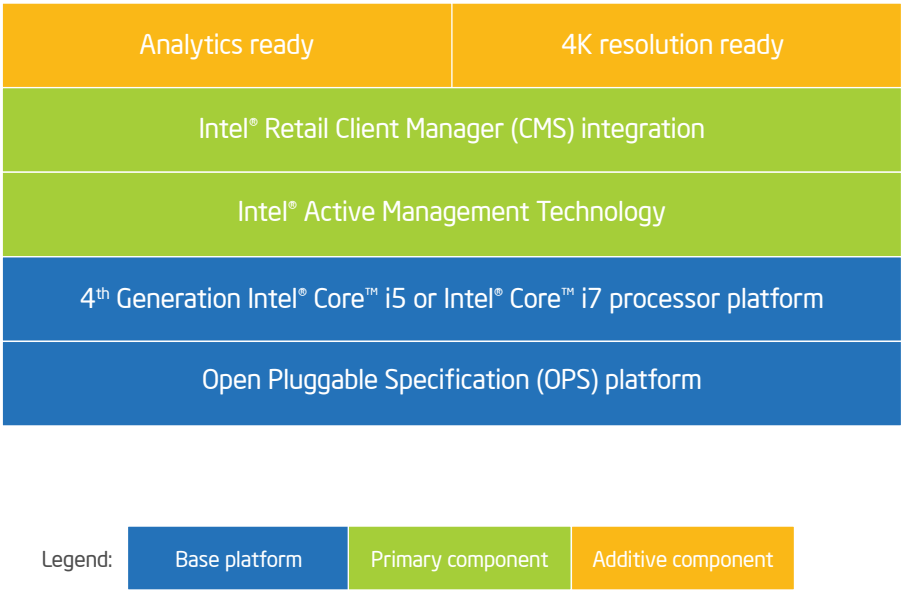
Audience Measurement: Media agencies are a major source of revenue for PilotTV, and one of their biggest concerns is paying for unwatched ads. In fact, advertising contracts are often based on delivering a specific number of viewers, playing ads when stores are busy, or reaching a particular customer demographic. To address these requirements, PilotTV needed to deploy technology capable of anonymously measuring the audience size and demographics, and then running ads when they would be most effective.

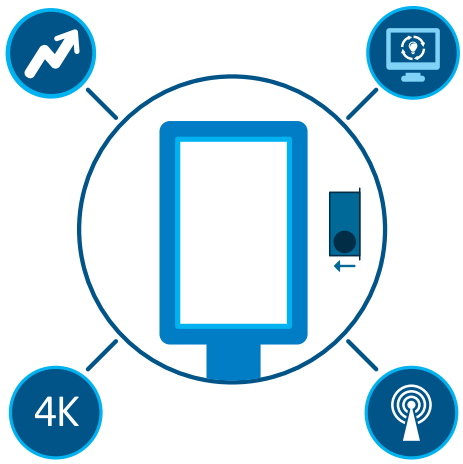
Technology Solution

After learning about Intel Intelligent Pluggable System Specification (IPSS), PilotTV found digital signage components built to this spec could significantly reduce support costs and generate valuable data analytics. IPSS provides digital signage vendors with a comprehensive recipe that simplifies the design, deployment, use, and management of digital signage networks.

Building upon the Open Pluggable Specification (OPS), IPSS includes various "out of the box" capabilities, enabling vendors to differentiate themselves by supporting compelling usage models and addressing emerging trends. These capabilities include 4K compliance, CMS, analytics, remote device management, and secure connectivity.[1]

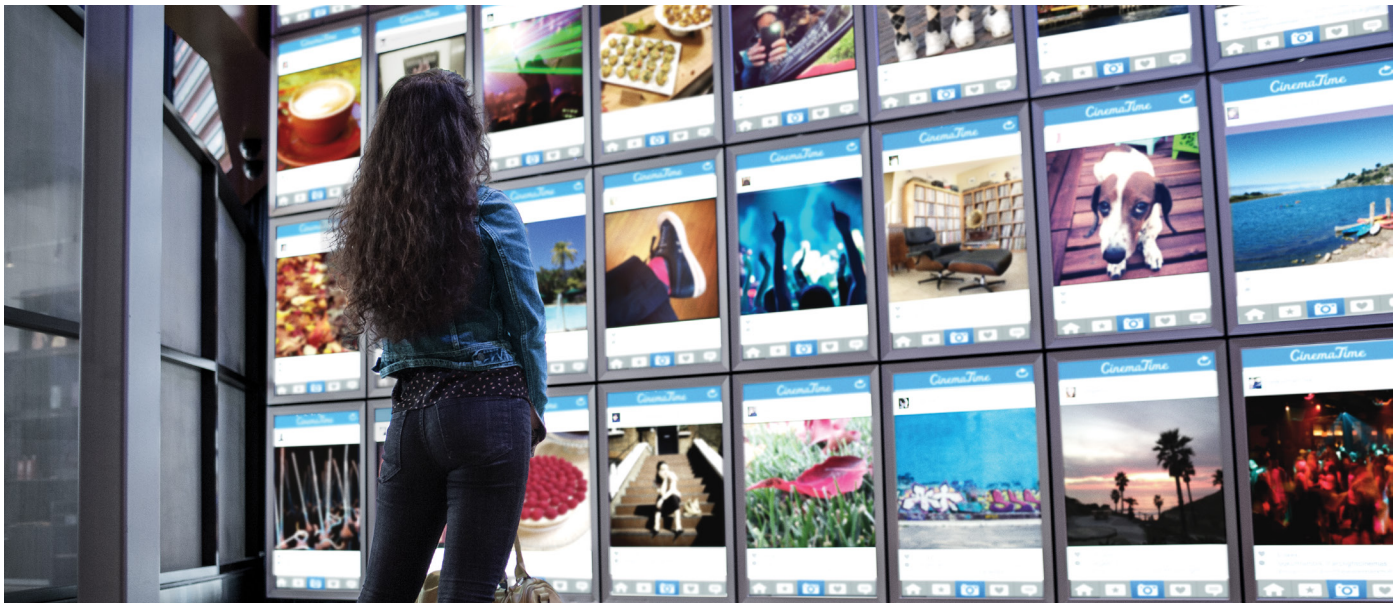
Media players based on IPSS are equipped with 4th generation Intel® Core™ processors, which feature high performance compute, media, and graphics processing with low power consumption – down to 15-watt thermal design power (TDP). These capabilities allow Pilot TV to install digital signage networks that are future-proofed with respect to satisfying performance expectations and supporting computing-intensive features.





IPSS: Ready for analytics, content management, remote manageability and 4K resolution.

Figure 1. Key Features of the Intelligent Pluggable System Specification (IPSS).



Lowering Support Costs

After adopting IPSS-based digital signage systems, PilotTV dramatically decreased installation and service costs, as shown in Table 1. The specification defines an 80-pin JAE connector that allows displays and media players to be connected together in less than a minute, greatly speeding up digital sign installation. The connector supports all the commonly used interfaces, such as DisplayPort* and USB, which could enable digital signage manufacturers to deploy interchangeable systems faster and in higher volumes, while lowering the costs for deployment and implementation.

PilotTV also deploys IPSS-based media players that can be powered on/off remotely because about 80 percent of the time, power cycling can get digital signs up and running again.[2] Taking remote management one step further, PilotTV began deploying signs with Intel® Active Management Technology[3] (Intel® AMT), which can be used to fix corrupted software remotely, thus avoiding an onsite visit. The advanced diagnostic and repair capabilities of Intel AMT reduce service costs by around 95 percent for four out of five service requests.[2,4]

Support Costs	Savings	Reason
Installation	31 percent lower	Faster equipment setup
Service	73 percent lower	Power cycling
Service with Intel® AMT	95 percent lower (4 out of 5 calls)	Advanced remote capabilities

Table 1. Installation and Service Cost Savings from Adopting IPSS-based Digital Signage Systems

Driving Higher Revenue

For media agencies paying to advertise on digital signs, knowing their ads are watched by consumers is extremely valuable. Instead of paying every time an ad plays, some media agencies prefer to pay for confirmed views: for instance, five million consumers in Taipei or ten thousand young females in a convenience store near an all-girls high school. This is analogous to the Nielsen ratings that inform advertisers of the audience makeup during a TV program.

Some media agencies are willing to pay up to three times more for an advertising segment that can target viewers with a high degree of specificity.[2] This is why PilotTV runs anonymous viewer analytics (AVA) on its signs to detect audience size, viewer gender and age bracket, dwell time, and time of day. This capability, along with insights from PilotTV's numerical analysis team, drives up the value of digital signage.

IPSS was developed with data analytics in mind as it requires that media players have an Intel Core processor with enough performance to handle compute-intensive data analytics applications. In the case of AVA, small optical sensors connected to digital signs send video streams to an Intel processor, which extracts viewer information from the video.

Increasing Profitability

Employees at PilotTV understand how to roll out and support large, complex digital signage networks. Crucial for keeping support costs down and delivering greater advertisement value is IPSS, which addresses the emerging requirements of deploying and managing next-generation digital signs. "IPSS gives us a competitive advantage and saves us money in a measurable way," said David Mou.

To learn more or to contact PilotTV, please visit www.pilottv.com.tw.

For more information on IPSS, visit
www.intel.com/ipss

Solution Provided By:

[1] No computer system can provide absolute security under all conditions. Built-in security features available on select Intel® processors may require additional software, hardware, services and/or an Internet connection. Results may vary depending upon configuration. Consult your system manufacturer for more details.For more information, see https://security-center.intel.com/

[2] Source: PilotTV*

[3] Requires activation and a system with a corporate network connection, an Intel® AMT-enabled chipset, network hardware and software. For notebooks, Intel AMT may be unavailable or limited over a host OS-based VPN, when connecting wirelessly, on battery power, sleeping, hibernating, or powered off. Results dependent upon hardware, setup, and configuration. For more information, visit Intel® Active Management Technology.

[4] Intel does not control or audit the design or implementation of third party benchmark data or Web sites referenced in this document. Intel encourages all of its customers to visit the referenced Web sites or others where similar performance benchmark data are reported and confirm whether the referenced benchmark data are accurate and reflect performance of systems available for purchase.

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