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> "Digital signage screens can be divided into eight separate areas, each playing different, full high-definition content, powered by energy-efficient Intel Core 2 Duo processors."
>
> – *Dr. Daw Tsai, president, DT Research*

Reaching Consumers at Key Decision-Making Locations

AirMedia advertising content is dynamically displayed at major airports in China

With over 150,000 travelers passing through every day, Beijing International Airport offers an opportunity for advertisers to reach an extremely desirable audience. As China's top provider of advertising in airports and on planes, AirMedia deploys and maintains a digital signage network for displaying high-quality images, RSS feeds, video, Flash and animation. For AirMedia, deploying state-of-the-art signage technology is essential, because today's consumers expect to see top-quality, complex content everywhere they go, including in shopping malls, supermarkets, hotels, restaurants and cinemas.

"In this economic climate, advertisers need new ways to capture consumers' attention," said Dr. Daw Tsai, president of DT Research, a company that develops and manufactures Web-enabled information appliances. He adds, "Airports offer a strategic venue for advertisers because they can target a highly valuable, captive audience."

To satisfy industry demands for very high image quality and reliability, DT Research wanted to build an exceptionally reliable, fanless system that could handle multiple independent content sources. They developed the WebDT* SA3000 signage appliance, featuring the powerful and energy-efficient Intel® Core™2 Duo processor, which is capable of delivering dynamic content while communicating with the server for continuous updates. By integrating the robust processing power of Intel® processors with its WebDT signage technology platform, DT Research is able to offer the most optimal visual experience while addressing other challenges, such as improving reliability, increasing energy efficiency and reducing operating costs.

Challenges	▪ **Enhance content delivery.** Deliver the computing performance required to dynamically support up to eight content sources in various formats, with full high-definition (HD) video.
	▪ **Improve reliability.** Eliminate moving parts, such as fans and hard disk drives, thereby reducing the machine fault rate and system maintenance cost.
	▪ **Increase energy efficiency.** Use power-efficient processors and power management features to enable an energy-saving "green" appliance design.
	▪ **Reduce operating costs.** Implement a remote management capability that tracks hardware operation status in real time and facilities fast troubleshooting without costly on-site human intervention.
Hardware Platform Solution	The WebDT* SA3000 signage appliance features the Intel® Core™2 Duo mobile processor P8400△ and Mobile Intel® GM45 Express Chipset, which support the following features:
	▪ **High performance and low power consumption** to meet high-definition video broadcasting requirements.
	▪ **Integrated graphics capability** using the Mobile Intel® Graphics Media Accelerator (GMA) 4500MDH.
	▪ **Integrated HDMI** supports up to 1080p resolution.
	▪ **Enhanced Intel SpeedStep® Technology** helps achieve a fanless design.

Measures of Success

- Extending its deployment of SA3000 signage appliances in over 20 airports in China, AirMedia installed 600 systems in Beijing International Airport to deliver dynamic, quickly updatable advertising content on 82-inch and 108-inch displays.

- Expanding content delivery options, the SA3000 supports up to eight content sources in any of the mainstream formats (e.g., Flash, compound video, component video and HDTV) and hybrid display modes. It is capable of displaying up to 1080p HD content, which dramatically improves display definition.

- Eliminating two significant mechanical failure modes, the SA3000 is fanless and supports solid state drives, which can lower system maintenance costs over time.

- Consuming just under 40 watts (thermal design power), the power-efficient SA3000 can be installed without special cooling requirements.

- Cutting ongoing support costs, the WebDT Content Manager software from DT Research shortened AirMedia's advertisement redesign effort at the Beijing airport from five days down to a single day.

- Reducing operating costs and downtime, the SA3000 implements Intel® Active Management Technology (Intel® AMT),[1] which allows systems to remotely recover after software issues, like corrupted operating systems or device drivers. This is possible because Intel AMT has a unique out-of-band management capability that enables repair and status collection even when systems are hung or powered off. Intel AMT also stores hardware and software information in non-volatile memory for retrieval or updates at any time.

Simplifying Content Management

Reducing operational costs is crucial for businesses deploying digital signage, especially when administrators are tasked with managing more complex screen designs. Managing dynamic information and multiple content sources is easier and less time-consuming using a centralized content management capability. For example, AirMedia administrators who are responsible for a 600 screen installation at Beijing International Airport can remotely schedule playlists, set up content layouts, update last-minute changes and provide proof-of-play for customers. They are using the WebDT* Content Manager software system, packaged with the WebDT Signage Appliances, to remotely manage the content displayed in the airport.

WebDT Content Manager's Web-based server software provides central management of WebDT signage appliances as media players and automates the design and distribution of content for dynamic playback over a digital signage network. The management software provides intuitive navigation with support for many file formats and enables green operations through remotely scheduled power on and off timing, and remotely applied updates and upgrades.

Deployment at Beijing International Airport

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