

Apple's iPod and iPhone are breaking into the commercial AV market, displacing some equipment and complementing others, writes Tim Kridel. Here he looks at the potential for mobile devices to be used in the pro AV space.

# Say i for AV

Apple sold 11 million iPods in spring 2008. At that rate, the iPod could pass 200 million in lifetime sales by year's end. Sales of the iPhone are even more brisk: Apple sold 1 million of the 3G version within the first three days of its July 11 launch.

That adoption is having a ripple effect in the pro AV market, where vendors such as Crestron, Peavey and Yamaha have developed products that turn the iPod and iPhone into everything from a media server to a giant remote control. For some applications, the timing couldn't be better: With some end users on tight budgets due to the sluggish, uncertain economy, the iPod is an attractive, low-cost alternative to retired devices such as audio servers and PCs.

"The advantage is that for \$229 [£165], the cost of an iPod Touch, customers can have a very nice, configurable remote control," says Charles Anderson, technical director at Peavey Electronics, whose MediaMatrix application lets the iPhone control and monitor any function in a MediaMatrix NION system. "Previously, the only wireless solution for controlling our systems was a laptop. A laptop is still a nice solution, but in many cases it is too bulky."

Some markets – such as education, medical offices and restaurants – like the iPod because it gives them more choices and flexibility. For example, the end user could download a series of podcasts or build a playlist of songs in the morning and then dock the iPod with the PA system for playback that day.

"Fitness centres are using them pretty extensively," says Eric Snider, CTS, an AV engineer at

Conference Technologies, a U.S.-based integrator.

Some vendors expect the iPod to expand into other areas.

"I haven't had this specific discussion with integrators, but an application we expect to see is in conference centres," Anderson says. "Using the iPod/iPhone, an operator can quickly, easily and discreetly select sources and adjust levels."

In the process, iPods are displacing a variety of hardware and services.

"They [restaurants and retail] don't subscribe to Muzak anymore," says Jeff Singer, marketing communications director at Crestron Electronics. "They personalise it. They put it on their iPod."

In many cases, they already have it on their iPod: Part of the appeal is being able to use content that they've already paid for, such as song and albums downloads. The more that they already own, the more receptive they may be to an AV system that supports the iPod,

especially if the alternative is shelling out \$3,000–\$7,000 for an audio server.

"That's becoming a very hard value proposition when everybody says: 'But I've got this content already on my \$300 [£217] iPod. Why do I need a \$6,000 [£4,300] audio server that, by the way, won't play my iTunes content?'" Singer says.

## Integration options

iPods sales are brisk because they're widely perceived as convenient and user-friendly. A growing number of AV vendors are looking to leverage that perception, familiarity and installed base.

One example is Crestron, which currently uses the iPod and iPhone in two roles: as an audio server and as a controller, respectively. The CEN-IDOC systems consists of a docking station that's tethered to a black box, which puts the iPod on the network so it can be controlled from any Crestron touch panel in a facility.

Why put an iPod on a network?

Peavey Electronics is the latest in a line of vendors who have adopted the iPod as a control device.



► One reason has to do with the iPod's svelte design, which limits the display size and thus the amount of information – such as playlists and album information – that can be comfortably presented on-screen at one time.

“You really can do only one thing at a time,” Singer says. “You get an enhanced experience on the touch panel. You can emulate that iPod experience on any touch panel anywhere in the room or anywhere in the facility.”

CEN-IDOC also allows a single touch panel to control multiple iPods around a facility. That can be a plus if it eliminates the need to trek to another part of the building or campus to retrieve an iPod that has a video or other files that suddenly are appropriate for a meeting or lecture. Not having to cart an iPod to each meeting or class, just in case, also reduces the risk that it will be lost or misplaced – a major concern not just because of the iPod's cost, but also because of the amount of information it can carry, especially if some of it is personal or confidential.

Crestron also offers the iServer, which is a dedicated network audio server that uses an iPod as its hard drive – a design that targets end users who already have an extensive library of iTunes. iServer is rack-mounted, with the iPod locked down in the rack, as well.

The system runs USB over Ethernet, so any authorised Mac or PC connected to that network can sync with that iPod. Content also can be called up from any touch

The Crestron CEN-IDOC uses the iPod as a media server. The company also has a control application for the iPhone.



panel. In the process, that iPod becomes a centralised resource that other users can access, instead of requiring them to physically borrow the device for, say, a lecture.

The Crestron gear demonstrates how the iPod is slowly displacing other hardware. For example, at some theme parks, Conference Technologies had been using RS-232 DVD players and music servers to store and play announcements and music.

“The iPod makes it a lot more convenient for the client because it's a dockable device,” Snider said. “The manager can sit in his office, dock what he wants to play on it and then take it over to that area. So it's like a portable hard drive.”

Yamaha saw a similar fit. “We did not seek to directly

support iPod; it just worked out that way,” says Lon Brannies, consultant and AFC marketing manager at Yamaha Commercial Audio Systems. “Many M7CL users had asked for a two-track, on-board recorder since the USB port was handy but only got used for backup, updating and security. We decided to use a USB drive for the recording memory stowage, and the iPod fit, [although] it must be connected via analogue. I would say that iPod is pretty much a ubiquitous device already.”

## Cutting the cord

Although the iPhone – particularly the 3G version – is a relative newcomer compared to the iPod, some AV vendors have already pressed it into service. One example is Crestron's Control App

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► for iPhone, which is software – a free download – that basically takes the control functionality once found only on desktops, laptops and PDAs and ports it to the iPhone.

The iPhone is noteworthy partly because it uses the GSM family of technologies, which cover nearly every nook and cranny of Europe. That means Control App for iPhone works from just about anywhere that there's a signal. (The program also works over Wi-Fi, which users can switch to when they're near their company wireless LAN and thus avoid cellular airtime charges.)

"Wherever they are in the world, they can see if the lights are on, what the temperature is in any room or what content is playing and adjust it," Singer says. "They have full, real-time ability to monitor, control and manage every device in every room from anywhere in the world."

The iPhone also bears watching because the 3G version includes a variety of features – such as Microsoft Exchange support – aimed at making the handset more attractive to enterprises. Some companies – mainly small businesses thus far – have begun deploying iPhones. That trend is something to keep an eye on because it affects the market for iPhone-based AV applications, just as widespread iPod adoption

prompted AV vendors to start building products that could leverage it.

## Not the be-all, end-all

Despite its popularity with end users and the growing selection of pro AV products for it, the iPod has a few caveats. One is "podslurping," where the iPod is used to suck confidential files and other data from the device or network that it's connected to. Considering that some models can store up to 120 GB, the iPod may be a significant risk in the eyes of some CIOs and IT managers – something for integrators to anticipate when suggesting the iPod as a possible solution.

Another big concern is compressed audio files, which tend to fall apart at high volume. Pairing the iPod with a high-quality audio system also can reveal the limitations of the source material.

"Sometimes even a mediocre quality system will show the shortcomings of MP3," says Yamaha's Brannies. "Most users recognise the MP3 quality limitation and some will go to great lengths to minimise that issue."

One solution is to use files encoded with the Apple Lossless Audio Codec (ALAC).


"Lossless or especially uncompressed .wav files, which can be up to 48 KHz and 24-bit, are the

best for source material," Brannies says. "Any sound card or USB preamp, if used, should have SPDIF or AES/EBU to get into a digital mixer without any AD/DA conversion. Other iPod disadvantages include analogue signal-level mismatch."

It's also important to look at the application itself to determine whether the iPod is right for the job in the first place. For example, some integrators see the iPod as a better fit for background music in a small, relatively quiet space, such as a beauty salon or a law office, rather than a large, noisy area, such as a hotel lobby or the food court in a shopping mall.

"MP3s are good for background music," says Conference Technologies' Snider. "You definitely don't want to tune a system with an MP3 or a compressed file."

If the iPod will be playing prerecorded music, the integrator and/or its client should check to see if the installation requires any publishing licenses. For example, the Six Flags chain of theme parks was able to avoid some music licensing requirements because it has a relationship with Warner Brothers. But that's a rare exception.

"You've got to make sure that you get a BMI or ASCAP license," Snider says. 

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