

A-V, the new stained

glass



The use of a-v in houses of worship is a massive market in the USA. It is now growing fast in the UK and Europe. **Geny Caloisi** set out to explore the market

CHURCHES USED TO attract their congregation and teach them by using the spoken word, music, singing and images in the ecclesiastical windows. These days the new 'stained glass' experience comes in the shape of a-v.

The a-v installations range from PA systems that take into account the size of the house of worship and its acoustics, to full-on professional video, presentations and audio facilities.

The trend leaders so far have been Christian churches in the USA, where every denomination has a different way of attracting new members and keeping the ones they already have. There are almost 1,000 new mega churches (seating 1,000+) being built each year and countless smaller ones.

churches built every year in the USA, says Donnie Hauk, president of American specialist Audio Ethics. These are purpose-built houses of worship, so the acoustics, cabling and planning for the a-v are done before hand.

'I have been a Christian all my life and a professional Christian for the past 20 years', says Hauk. 'These days a-v is crucial for preaching. In the old times, when preaching was in Latin, it didn't matter that much whether people could hear and understand what was said. Today, intelligibility is crucial.'

In Europe we have centuries-old churches that have been designed to handle voice and 'noble' instruments such as the organ. Electric guitars and wireless mics were

not included in the holy plans. But now more people are looking to use a-v. 'The church used to lead the way in innovations to propagate the word of the Lord,' Hauk says, 'but things slowed down for quite a while.'

'Now they are picking up again. Preachers realise the importance of a good presentation and the audience is expecting it.'

Temporary or bodged installations are out of the question. The a-v put into houses of worship is as demanding as that used for a rock concert. Rigging, planning for cables and sound systems are all essential.

BUSINESS ISSUES

One of the difficulties when servicing churches is that, unlike a corporate client, the funding and decision-making comes to update these buildings comes from the congregation. In the Church of England, for instance, the Parish Church Council (PCC) is the organisation that will decide what is done and how much they can afford.

DM Music for Churches is an a-v company that specialises in this market. Ian Harvey-Smith, the company's communications officer, says that the decision-making process can be long. 'Some times it takes a year to get a decision. And the fact that so many European churches are in old buildings adds more complications.'

Harvey-Smith said that many times churches

DM thinking of updating their audio but then they realise that what they need is a whole a-v upgrade. But providing a-v to houses of worship is not for the faint hearted. DM is a Christian company and has been doing churches for the past 15 years.

'You need to understand what the churches are after,' comments Harvey-Smith.

'In our time we have seen many a-v companies seeing the niche market and trying to get into it, but unless you know how the whole process works and listen to the churches' needs, you will find it very tough.'

On the Church of England for example, you need to take into account that in order to do any modifications to the religious building, the congregation has to have its 'faculties' approved. This is a kind of planning permission.

Installations have become more complex and demanding in the past five years in Europe. While in the past the main concern was in updating PA systems, now 60 per cent of DM's jobs are whole a-v projects.

'The house of worship market is probably the second largest market for video scalars after the education market,' says Kramer Electronics marketing manager Nick Mawer.

'We have dealers queuing up to borrow scalars from us to demonstrate at the Christian Resources Exhibition (CRE), which lists 41 a-v suppliers/dealers and installers – in it's a-v resources section.

'The use of video scalars allows the churches to integrate live moving images with presentations and song sheets, and they are often used in conjunction with the Cat-5 transmission needed to send signals over long distances. Given the size of some of the European projects we have come across, there'll soon be a healthy market in extenders.'

CASE STUDY: CHURCH OF OUR LADY REBORN

Just over 15 years after the reunification of Germany, one of the most important chapters in post-war history drew to a close in Dresden, the re-consecration of Dresden's Frauenkirche.

The church, which had been almost completely destroyed in the Second World War, has been rebuilt and although externally it is hardly distinguishable from the original it features both state-of-the-art building work and cutting-edge technology – three Helvar Imagine lighting routers that control more than 400 lighting circuits.

Lighting planner Walter Bamberger developed a lighting design that sets the grand Baroque dome structure and all its decorative gold leaf to optimum effect, whilst also making maximum use of the natural daylight.

More than 400 light circuits are controlled via two Imagine 900 lighting routers in the upper church, as well as one further lighting router in the lower church.

The lighting management system offers 78 different lighting options with an easy-to-use menu of options. For example, if the user selects 'worship' as the basic scene, a second menu then offers the choice between 'daily worship,' 'midday worship' and 'Friday worship'.

After making the appropriate selection, the user can then switch on additional lighting systems in the galleries and inner cupola.

The lighting design took account of three separate areas of the church, which are the lower church, the main church and the stairs to the lantern platform, as well as the three main uses of Frauekirche, namely: church services, celebrations, and its concerts or events.

Indeed, this is the reason why three lighting routers are used in the church, although just one would be able to

cope with the number of lighting circuits actually required. The lighting router is the central element of the Helvar Imagine product range. It enables a seamless link between Digidim operating panels, input units and sensors with dimmers, relay units and control modules. An advantage of the lighting router in the Frauenkirche is that it is able to bridge very long distances via DMX and SDIM. The lighting is networked via TCP/IP and 10/100 Mbit/s Ethernet.

www.helvar.com

RESEARCH SHOWS STRONG GROWTH

TO HELP INCREASE understanding of the UK market for a-v in houses of worship, AV posted a short online survey on the subject and we received some 30 responses from a mix of end users (42 per cent of respondents), equipment manufacturers (21 per cent) and dealers/systems integrators 37 per cent).

The market is growing strongly, said AV's respondents, with 32 per cent saying that they thought the market was growing at between 10-15 per cent a year and a further 22 per cent stating that they thought the market was growing at 15-20 per cent a year. Twenty per cent thought the market was growing at more than 20 per cent a year, 16 per cent said that it was growing at under 5 per cent a year and 11 per cent said it was growing at 5-10 per cent.

Average spends are hard to deduce from the small sample, but the mean spend by the predominantly Christian end-users surveyed was around £7,000 per year – although the highest spend was over £500,000.

We asked respondent to specify what a-v facilities they supplied or bought, and large screen displays (projectors and/or flat screens) came out top, with 84 per cent of respondents saying they bought/supplied them. Live audio reinforcement was next highest, at 74 per cent, followed by audio replay (68 per cent) and video recording/editing (also at 68 per cent). Video duplication and distribution came in with a healthy 48 per cent, while videoconferencing had a five per cent score.

We also asked which market issues were the most difficult to deal with. Technical difficulties were rated as the most awkward hurdle to deal with, followed very closely with 'working in listed or architecturally difficult buildings' and training of users.

What equipment and services do you buy? Response per cent

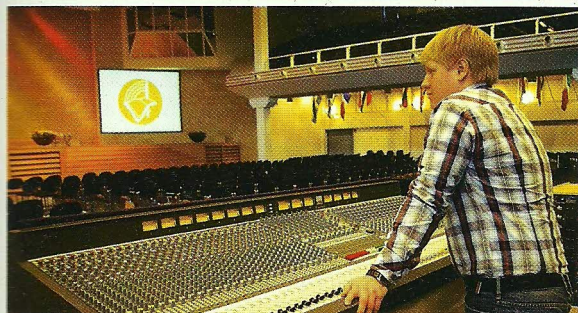
audio for speech reinforcement	73.7%
audio for music reinforcement and / or replay	68.4%
large screen displays (projection or flat screens)	84.2%
videoconferencing	5.3%
video recording and editing	68.4%
video duplication and distribution	47.4%

How fast do you think the UK market for a-v in churches is growing?

less than 5 per cent	15.8%
5-10 per cent	10.5%
10-15 per cent	31.6%
15-20 per cent	21.1%
20-30 per cent	10.5%
30-40 per cent	5.3%
more than 40 per cent	5.3%

Source: AV Magazine survey, October 2007

CASE STUDY: THE WORD OF LIFE



David Grunditz at the Soundcraft console

The Word of Life Church, located to the north of Stockholm, has an auditorium which seats over 6,000 people and hosts regular seminars and conferences. The Livets Ord auditorium is also used for Sunday services.

The Centre also functions as a Bible institute with over 9,000 graduates, printing its own books and course literature and producing audio-cassettes, videos, and television programmes.

Thanks to its a-v infrastructure the church is able to take its message globally to members through television and internet broadcast.

The latest upgrade has seen the introduction of a 48 mono/4 stereo Soundcraft Series Five FOH mixing console, a 48-way BSS active splitter rack and Soundweb London BLU-80 and Crown I-Tech amplifiers. The newly integrated equipment was a co-operative effort between the church's head of technical services, David Grunditz and freelance installation contractor Kjell Lundstrom, with support from the Swedish Harman Pro distributors, Septon AB.

www.soundcraft.com

CASE STUDY: ON SCREEN, ON CAMERA

Florida institution Northland, A Church Distributed in Longwood, Florida has equipped a 3,000 person sanctuary and teaching rooms with Meyer sound systems, a broadcast control centre and a 75ft-wide projection screen.

The screen displays ambient, scenic images and song lyrics. It's flanked by two drop-down screens at mid-stage which are used to display live-camera IMAG feeds of the services. Electrosonic provided six Christie DS+ 8K projectors, four for the rear-projection screen and two for the drop-down screens. A Barco Folsom HD video control board handles big-screen sources, including Ikegami HD cameras, DVD players and computers which generate text for lyrics.

Northland is linked by fiber optic cable to other locations and AMX touch screen panels have been installed in classrooms to control audio, while TV/VCR/DVD units offer video live from the sanctuary or from other sources.

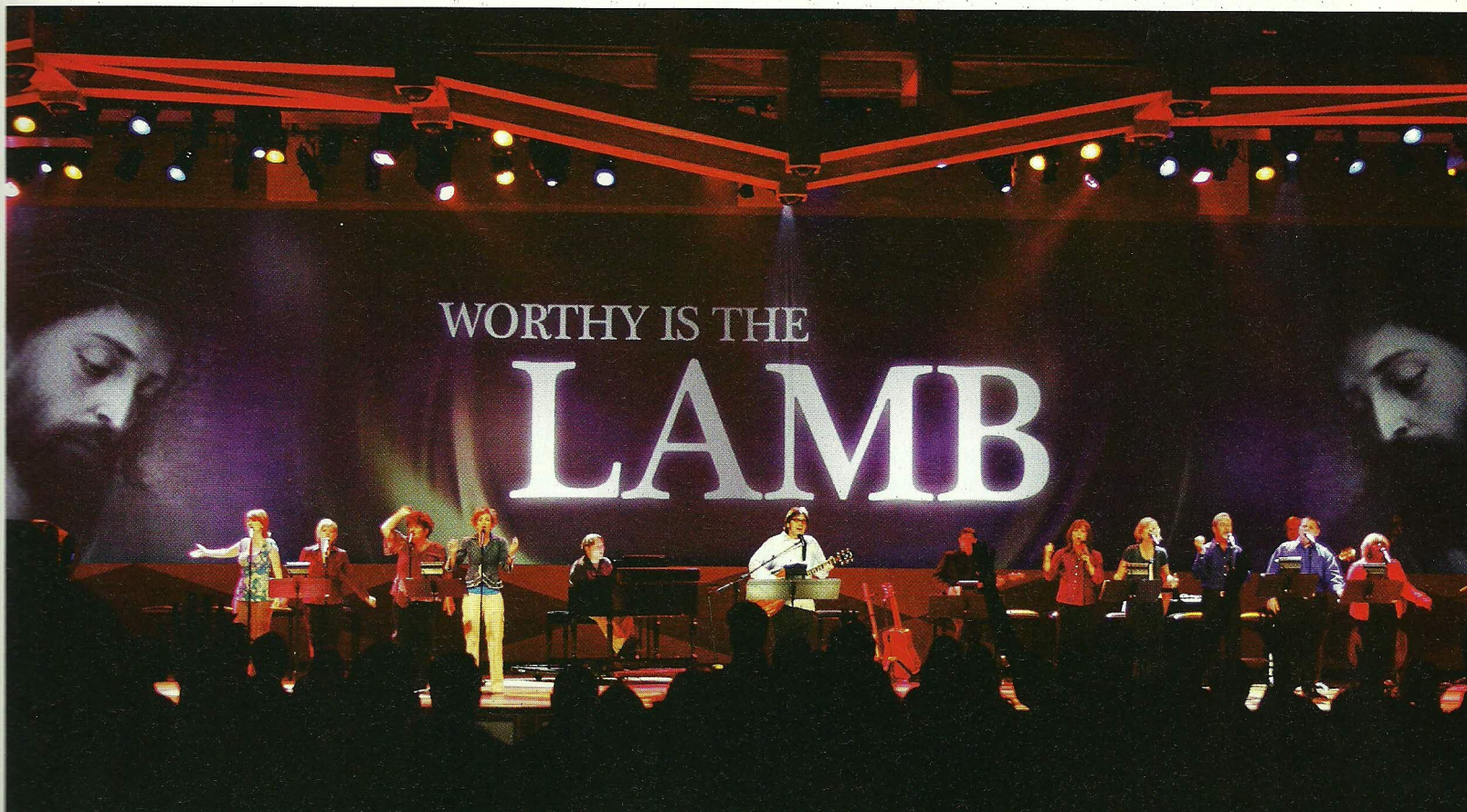
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CASE STUDY: 6,800 SEAT AUDITORIUM

Norway's new Brunstad Conference Center (BCC), owned by The Christian Church – an international fellowship – is now using one of the largest and most advanced Soundweb London network systems ever supplied by BSS Audio.

Situated along a fjord near Tønsberg in Vestfold, the auditorium in the 6,800 seat conference centre is run by a volunteer staff of professionals and technicians. Acoustically-optimised, it is said to be one of the best sounding concert halls of this scale in Norway, while no fewer than 870 guest cabins have been built in the surrounding valley. Not only does the multi-functional auditorium require a public address system offering evenly dispersed coverage and a high degree of intelligibility but BCC also has its own

Below: Northland in Florida with its 75ft-wide projection screen, here utilised for religious imagery and song





Above: Brunstad Conference Center, replete with HD video transmission capability designed to go out from Norway to more than 50 other countries

satellite uplink station, as well as IPTV distribution and simultaneous translation capabilities for 20 languages.

'The specification was quite detailed and BCC knew exactly what it wanted,' says LydRommet sales manager, Flemming Bjerke. 'But once we were chosen as its audio partner we proposed a system that could do more than the specification required, and in a much slicker way.'

Although the network would be based around a complex Soundweb London design, LydRommet knew that the HiQnet London Architect software would not be released until the first phase of the installation was complete, so it specified a temporary solution of 23 Soundweb Original SW9088s and SW9000 hubs, seamlessly replacing these late last year with 15 of the Soundweb London devices.

Soundweb London is used to optimise the large JBL VerTec loudspeaker system in the auditorium, where the Crown I-Tech amplifier power source is controlled by two

Soundweb London BLU-80 devices. But up on the control bridge, the TV commentator and interpretation system has also been custom-made to incorporate Soundweb London.

The output from the floor speaker and the podium, currently mixed by a Soundcraft GB4, is transported to the Soundweb system, and fed to the 20 translation booths by five BLU-80 devices. Each booth contains two mics and two headphone outputs, in addition to the simple custom made control surface for the translators.

The audio sent to the satellite link and the IP-TV is fed from the Soundweb interpretation system, where the translators' mic signals are mixed with the floor audio. Duckers, with carefully adjusted parameters, ensure that the source audio remains in the background – overridden by the interpreter's voice – returning to normal level when no translation is taking place. In addition to the 20 local translation booths, the system is connected to 12 ISDN audio codecs used for remote translation.

To gain some idea of the scope of BCC's facility, 10,500m² of the building's overall 24,000m² are dedicated to the conference area which is served by flexible staging, retractable seating using hydraulics and three screen (6m x 4.5m) I-mag. While the floor is serviced by a multiple-camera PPU and six Barco G10 projectors, all cabling is prepared for HD video transmission, incorporating RGB-HV and SDI, and there's an elaborate video production suite.

With its 100,000 watts of sound, and capability to produce nearly every type of event, BCC can easily deliver its events to fellowships in more than 50 countries. And the development is ongoing, with talk of streaming even more video channels in the future and the construction of a 15-seat 4D stereoscopic HD cinema planned for later this year – which will also use BSS Audio Soundweb London as the main audio matrix.

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