

dnpbackstage

THE REAR PROJECTION MAGAZINE



dnp ViewFlex™
- the seamless optical solution

Take off from
Frankfurt Airport

A new vision of
Ice hockey

January 2002

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Opportunities and crisis



After several years of continuous growth, the world suddenly changed on September 11th – the most dreadful day in our recent history.

improve the best shipping service within the industry and we have developed a range of new sales and marketing tools to support our dealers.

New products and support tools

In this issue of Backstage, we are happy to present the first results – the dnp ViewFlex system and a new website with powerful support tools for dnp distributors and dealers. And we look forward to introducing a wide range of new products and improved specifications through the year.

So, let us turn the emerging crisis into a challenge. Let us think positively and be open to new possibilities. Together we have got all it takes to succeed in a changing world.

Niels Hermansen
General Manager, dnp denmark as

New business opportunities

In times of crisis, many companies cut down on investments and look for cost reductions. At dnp we have a different approach. We believe that the best way to support our dealers is to intensify our product development and create new business opportunities. And it seems that this strategy has been successful!

Intensified development

The year 2000 was a fantastic year for dnp and our distributors and dealers. And despite the emerging crisis, we and our business partners have managed to continue this positive trend in 2001.

At dnp we have intensified our investment in R&D and production facilities. We have increased our stock capacity to further

New Product Manager



On December 1st dnp welcomed our new International Product Manager Jacob Christensen, who will be working closely together with

Jacob's responsibilities will also include education and support for distributors and dealers, as well as giving advice concerning rearpro installations.

Jacob can be contacted via e-mail on jch@dnp.dk

the dnp Sales/Marketing team and R&D organisation.

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The disappearing screen



Belgium: AV installer Mediatone has designed a spectacular new rear pro solution for The Belgian National Trains Company, SNCB. When required the dnp screen disappears through the ceiling of the boardroom.

SNCB's new boardroom is a tour de force in modern presentation and video conferencing equipment. A 120" dnp Wide Angle Screen displays high-quality images from different sources – including six Pan & Tilt cameras, which film each position (president or attendee) in synchronisation with the “open microphone”. And built into the table, each attendee has his own remotely controlled and motorised LCD screen, notebook connection and simultaneous translation system.

But the real masterpiece of the installation is the fact that it disappears when not in use. By the push of a button, the 2.4 metre wide screen glides silently into the ceiling on a motorized lift system.

– We paid special attention to the acoustics of the rooms and asked the well-known Belgian company A-Tech to do this particular study. And as a result we designed special acoustic housings to avoid any noise inconveniences. This means that the total

noise from the motorized dnp screen and the smaller screens never exceeds 36 dBA, says Mr. Pol Burnotte of Mediatone.

All the available image sources are switchable and can be routed to either or both the projector and the LCD screens from the central control unit.

Facts

Installer = Mediatone

Screen = 120" dnp Wide Angle Screen + individual LCD screens for each participants

Projector = Barco Reality 6400

Framing = Customized rig in acoustic housings installed on motorized lift

Control equipment = Crestron control unit



At the click of a button the screen appears through the ceiling.

First impressions last

Germany: The first impression creates a lasting impact when you visit a company. The German manufacturer Stihl has installed a state-of-the-art information display in their reception to give visitors powerful first impressions of this modern, visionary enterprise.

Stihl is the World's largest manufacturer of motorsaws, advanced gardening tools and other Do-It-Yourself products. Recently

Stihl completed their new headquarters in Germany, and during the planning they decided to fit in an advanced image and information display in the reception area.

Stihl contacted dnp's German distributor, Screen New Technologies (SNT), dnp's distributor in Germany, for advice.

– Stihl wanted a large built-in screen which supports advanced multi-media presentations and displays bright, sharp images in the brightly-lit reception environment.

The tricky part was that the room required a very compact installation with a short built-in depth. So instead of one big display, we suggested a multi-screen installation with dnp Black Bead Screens which have a strong contrast ratio and short focal lengths, says Achim Hannemann, Managing Director of SNT.

Stihl finally chose a cube wall comprising four 50" Synelec Cubes with dnp Black Bead Screens. The built-in solution is perfectly integrated in the elegant lounge-style environment where it runs company presentations using a combination of PC and DVD.



Facts

Installer = Screen New Technologies (SNT)
Screens = 4 Synelec Cubes with 50" dnp Black Bead Screens
Projectors = 4 Synelec LITEMASTER 800
Special equipment = Synelec Splitcounter Icon 2000, 2 x PC Lab, SNT - Linedoubler XD1, Pioneer DVD 7300

New marketing support package

dnp has introduced a completely new marketing support package which features a dnp image brochure and eight new product brochures – including the brand new dnp ViewFlex system.

The new concept provides dnp distributors and dealers with an excellent opportunity for new campaigns and mailings. All brochures have been upgraded from six to eight pages to give space for a range of

new exciting application examples. The brochures also include revised product specifications.

The new marketing support package also includes a complete redesign of dnp's website – www.dnp.dk – which now features more than thirty updated rear pro case stories from all application types.

If you have questions to the new marketing support package, please contact marketing@dnp.dk.





A new vision of ice hockey

Sweden: As the first teams in Sweden's major ice hockey league, HV71 of Jönköping and Färjestad from Karlstad have invested in their own arenas, which are completely dedicated to ice hockey. The brand new arenas feature state-of-the-art AV solutions including a Sport Event Display, a Sportsbar and a TV studio.

Both solutions were designed and installed by dnp's Swedish distributor, SIE Skandinaviska Industrietelektronik AB, which has pioneered the sport event market with their large screen Media Cube concept.

Giant cube above the ice

The main display in the two ice hockey arenas is a Media Cube, which shows live broadcasting and slow-motion replays during games and breaks.

The 5700 kg cube is based around four 160" dnp Giant Wide Angle Screens – each powered by two stacked Barco Graphics

9300 with a total maximum light output of 14,000 ANSI Lumens. The result is bright, high-contrast images, which provide excellent viewing from all locations in the arena.

Replay and evaluation in the Sportsbar

As a unique service, spectators can also follow the game while buying food and drinks in the Sportsbar, which features a 100" dnp New Wide Angle Screen.

– When the teams play away games, the game can be shown in the Sportsbar where the fans can view it without travelling all around Sweden. The Sportsbar is also used



The giant Media Cube and the Sportsbar displays give fans a great visual ice hockey experience. The large photo shows Färjestad's new ice hockey arena in Karlstad. The small photo is from the Sportsbar at HV71's arena in Jönköping.

by the team. From the arena's TV studio it is possible to replay the game so that the coach can evaluate the match with the players, says Andreas Bragd of SIE.

Facts

Installer = SIE Skandinaviska Industrietelektronik AB

Screens = Sports Display: Four 160" dnp Giant Wide Angle Screens, 3800 mm focal. Sportsbar: 100" dnp New Wide Angle

Projector = Sports Display: Two stacked Barco Graphics 9300 projectors (1024x768) for each screen. Sportsbar: Barco Reality 6400 projector

Scoreboards = Four Match Time 708 scoreboards from Omega Electronics



Introducing dnp ViewFlex

– the seamless optical display solution

In the brave new IT world, the volume of information is growing rapidly. The dnp ViewFlex system addresses two basic needs in the decision making process of modern business. The need to display more information from several image sources simultaneously – and the demand for larger high-quality displays which work in high ambient light.

The philosophy of the new dnp ViewFlex system is to help improve decision-making by providing an effective tool for monitoring large volumes of visual information.

As seamless as it gets

The modular dnp ViewFlex system comprises two or three optical screens mounted in a unique frame construction which provides an image-to-image separation of only 0.3 mm – a new benchmark within the industry.

The dnp ViewFlex concept offers a high-quality display wall of up to 13 m² (7.3 x 1.8 metres). And depending on the projection

environment, the system is available with dnp Black Bead Screens or dnp New Wide Angle High Contrast Screens, which produce perfect images – even in brightly-lit rooms.

This makes the dnp ViewFlex concept well-suited for monitoring complex processes in control rooms. Another key application is the business intelligence display, which shows any combination of live news broadcasts, real-time internet information, video-conferencing and files from business servers.

The dnp ViewFlex system also allows teams of product designers and engineers

to share their visions and evaluate full-scale CAD models during the design process.

Unique framing principle

The secret of the dnp ViewFlex system is a flexible suspension system, which is built into the frame. This advanced spring-system prevents screen warping as it allows the screens to adjust to changes in temperature and humidity.

The spring system also means that screens are kept together with an image-to-image gap of less than 0.3 mm. Unlike most



An example of a modern conference room with Barco's IntelliRoom® concept.

Barco chooses dnp Black Bead Screens to construct a multiple screen system

Barco has selected the dnp Black Bead Screen for their strategic IntelliRoom® concept.

– The high-contrast dnp Black Bead Screen provides crisp detailed images over wide viewing angles under high ambient-light conditions. The perceived contrast is enhanced by the screen's ability to absorb incoming light, says Inge Deprez, Marketing Communications Manager, Barco Control Rooms.

– dnp is as committed to quality as Barco is. That is why we have been integrating dnp screens for many years. At Barco we consider screens to be a crucial part of our rear projection solutions. And we are happy to work with dnp because of dnp's wide variety of screen types and optical specifications for different applications – and their commitment to delivery terms.

ViewFlex™

"seamless" screen systems on the market, the dnp ViewFlex system has no visible T-profiles.

Furthermore, the dnp ViewFlex system features integrated baffles between each screen. This prevents stray light from one projector interfering with the next screen – and makes projector adjustments easier.

To ensure a solid set-up, the frame construction features an 8 mm standard T-groove slot which allows easy attachment of mirrors, rigs and stands. And the standard multiple track system enables you to adjust the frame as well as the wall aperture.

For more details, please contact your local dnp distributor or dnp denmark.

The cost-effective control room



The dnp ViewFlex system is a cost-effective alternative to conventional control room applications.

In combination with modern PC technology the dnp ViewFlex system provides a unique opportunity for the small control centre to save money on projectors, video-splitters and control software.

All you need are two projectors, a 1x2 dnp ViewFlex display and a PC with a dual out-put videocard, which can display two separate images.

Thus you achieve a control room display with superb contrast and image uniformity, which works in even the brightest control room environments.



Large screens in control at POWER station

UK: Due to the requirement for greater flexibility in meeting demand for power to the UK's National Grid, the Didcot Power Station has installed a new command and control centre to provide an operational overview of its four massive generating units.

The brief was to enable flexible operation and easy management of tasks, including alarm handling, plant-automated control and automatic sequencing for start-up and shut-down.

With each unit generating different amounts of electricity, individual control is necessary; the visual displays monitor essential aspects of generation – such as the condition of the fuel turbine, the feed to the boiler to drive the turbine and the output of the electricity from the turbine.

To meet these display requirements, Didcot chose a solution based on a central control display comprising twelve dnp New Wide Angle Screens fired by DLV 1280-DX projection systems from Christie Digital Systems. The screens are installed in four 3 x 1 arrays, where each of the four generators is moni-

tored by three 3-chip DLP™ technology projectors, which are mounted on specially-designed floor stands to ensure stability, with intricate adjustment facilities.

The current operator interface uses Unix graphic workstations, driving eight 21in SXGA (1280 x 1024) resolution displays, for monitoring and control, with a further three Unix workstations generating projection displays as plant overviews.

The AV company Planet undertook the whole design, including the building of the rearpro enclosures and commissioning of the installation.

– We favoured the dnp screens because they are simply the best; we have not had the same level of success in terms of performance, colour, uniformity or brightness

– with such a lack of hotspotting – from other brands. The Power Station has taken this installation very seriously at Didcot, giving us the scope and budget to be able to build all screens into a huge enclosure, making it an integral part of the control room, says Clive Bailey of Planet (now working at Christie Digital).

– The displays are very clear and effective – and require little in the way of adjustment, says Mike Mills, Control & Instrument Engineer at the Power Station.

Facts

Installer = Planet

Screens = Twelve pieces of 84" dnp New Wide Angle Screens

Projector = 12 DLV 1280-DX projection systems from Christie Digital Systems



High Contrast screens in fashion shop

Sweden: The Point of Sale market keeps growing. The new fashion store, Top Shop, in Gothenburg, Sweden, has integrated two large dnp screens as an essential part of the in-store design.

When visiting the Top Shop, your attention is caught immediately by the impressive image on the large dnp screen, which is strategically placed at the shop entrance. In the opposite part of the store, another

130" dnp screen completes the picture of a modern, innovative fashion shop.

The installation, which is used to display music videos and promote new fashion

collections, is designed by AV company Zenita AB in co-operation with dnp's Swedish distributor SIE Skandinaviska Industrielektronik AB.

– We decided to use the High Contrast version of the dnp New Wide Angle Screen because of the high ambient light in the shop. And the image quality is superb. Just after the grand opening, word of the new installation started to spread all around Gothenburg. The store manager is really enthusiastic and reports many positive reactions from the customers, says Andreas Bragd, Manager of Home Theater & dnp Optical Screens at SIE Sverige.

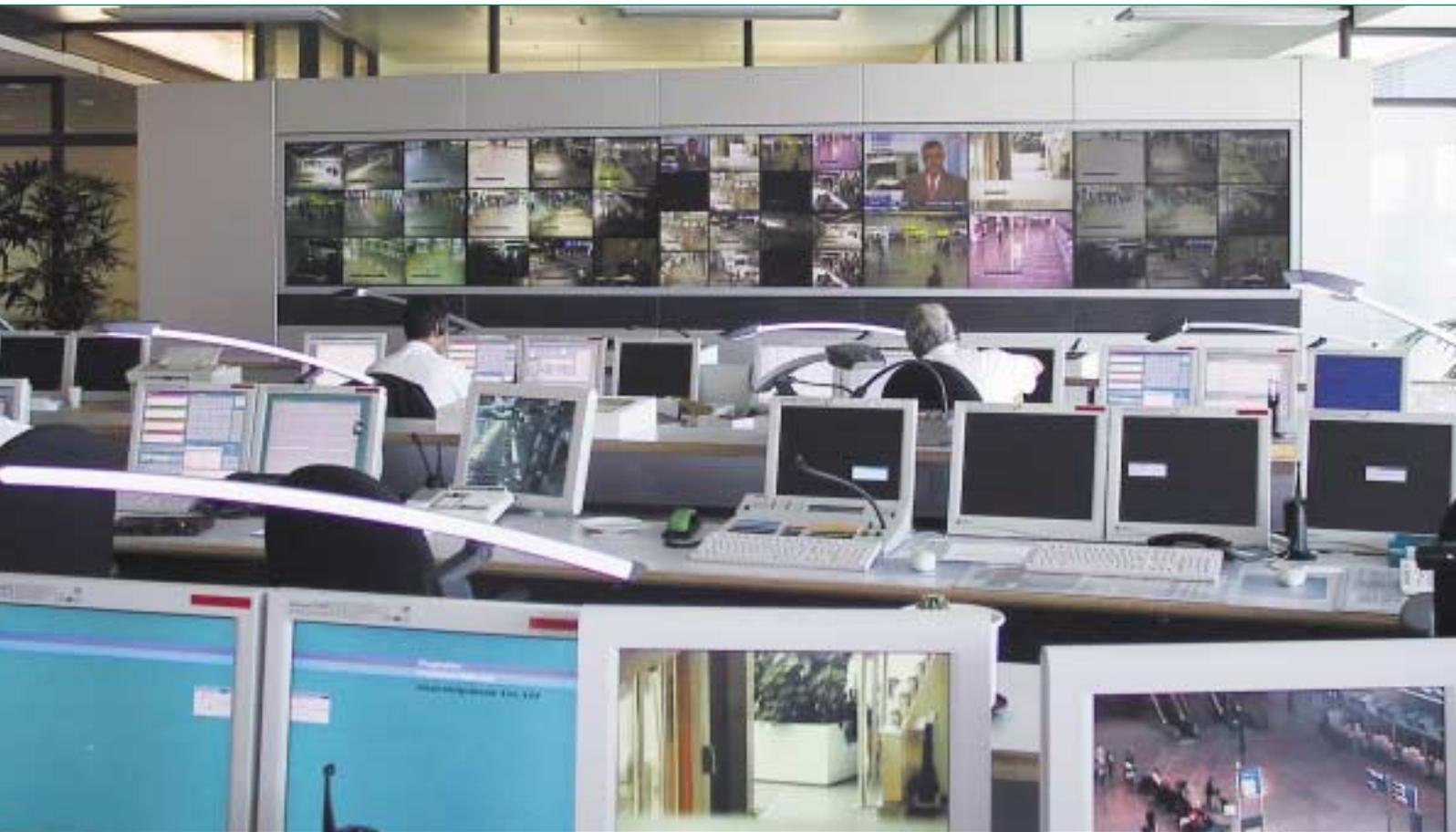
Facts

Installer = Zenita AB / SIE Skandinaviska Industrielektronik AB

Screens = Two 130" dnp NWA 3200 HC Screens installed with dnp first surface glass mirrors, frames and projector stands

Projector = Two Barco Graphics 6400i (3000 ANSI lumens, XGA) with 1.27:1 lenses

Take-off from Frankfurt Airport



Germany: One of Europe's busiest traffic centres, Frankfurt Airport, has upgraded their control centre to provide even better facilities for monitoring traffic and security. The dnp Black Bead Screen was chosen to secure an image with high contrast under difficult light conditions.

The new Fraport AG control display comprises two high contrast displays, which allow simultaneous monitoring of up to 32 different video images and three data sources. There is one large 2.3 x 6.3 metre display featuring five dnp Black Bead Screens and a smaller 2.3 x 3.8 metre display with three dnp Black Bead Screens. Both displays have a built-in depth of only 1025 mm, due to the short focal lengths of the dnp Black Bead Screens.

The state-of-the-art control room solution is designed and installed by AVS Systeme GmbH in Karlsruhe – one of Germany's leading integrators of advanced monitoring and control systems for traffic control, telecommunication, process and network control, energy production and distribution.

To secure stable 24-hour operation, AVS Systeme GmbH decided to power each

screen with special Polysilizium LCD projectors, which have an estimated lamp lifetime of 8000 hours. The displays are controlled through an integrated network. This provides easy service and support of HTML pages and allows the user to be connected to the central management system. A touch panel provides easy control of all basic functions of the entire display system.

Facts

Installer = AVS Systeme GmbH

Screens = Eight 67" dnp Black Bead Screens

Projectors = Eight Polysilizium-LCD projectors

DEVELOPERS FORUM

edited by Søren Weis Lindegaard, head of dnp's R&D team

Specifying screens for control rooms

Choosing screens for control room display applications is one of the most critical tasks for the advanced rearpro installer.

Often, such displays are described as 'mission critical', when the screens will be used to control and monitor such vital operations as electricity, gas and telecommunications networks.

! Viewing distance

Many of the rules that apply to normal boardroom and meeting room rearpro installations do not apply in control rooms. Although the overall screen size might be very large, the seated viewers can also be very close. Often the operators will need to focus on small parts of the display, rather than at the entire image. Sometimes people will walk right up to the display, individually or in groups, to look at specific sections of the content displayed.

! High resolution

For these kinds of reasons, the resolution of the overall image may need to be very high indeed. It is possible that the display could have been created by, say, a single dnp Giant Wide Angle Screen and a single projector. But usually the display is made up of a number of screens as a kind of videowall.

! Brightness uniformity

So what kind of screens should we consider using? Well, assuming this will be a multi-screen display, there is one important headline point to be made. Even though an individual screen can seem to have perfectly uniform brightness when used individually, when side-by-side with other screens our eyes become much more critical. This means that the super-enhanced uniformity features of double element optical screens become the deciding factor.

dnp makes the following double element screens:

- Videowall – dnp Black Stripe Screen, optimized for CRT projectors.
- dnp Ultra Contrast Screen (UCS) – designed for LCD and DLP retro boxes. Available up to 70".
- dnp Black Bead Screen – the very latest technology for control rooms, co-manufactured with 3M. Available up to 80".

For some special requests, dnp still delivers dnp Black Stripe Screens. This screen is designed for CRT projectors and available up to 67". The dnp Black Stripe Screen was a clear leader in the days before the dnp Black Bead Screen, but dnp Black Bead seems to be the screen of choice for most leading users at the time of writing.

! The contrast issue

The dnp Black Bead has a Gain of 1. Coupled with the truly astounding black levels it offers, this creates images of unparalleled contrast – but with a unique quality more like a high quality poster. These qualities are much easier on the eye – particularly in control room environments with relatively low and uniform lighting levels, and where operators might have to view the screens intensely over extended periods. Also, Black Bead offers very wide vertical viewing angles – again a bonus for control rooms where close viewers might have to look up at steep angles to the top of a high display.

But control room displays can be still be created from a large single element optical screen, such as New Wide Angle and Giant Wide Angle. So remember that you can enhance the brightness uniformity by making the projection throw distance longer than the focal length of the screen, if the viewing distance is relatively short.

! Screen colour uniformity

Screens from some manufacturers can vary slightly in colour. This can be a disaster in a multi-screen installation! And this is why dnp's quality processes have been recognized worldwide as vital for high level installations. Project managers are recommended, at time of order, to ask for screens to have sequential serial numbers, and to inform dnp on the Purchase Order that the screens are to be used in a multi-screen application.

! Seamless screens

Another key issue for multi-screen control displays is how to minimize the gap (often called the 'mullion') in between the screens. This is a separate topic in its own right. You will find an important announcement about this on the centre spread of this edition!

Whether it is a case of choosing the screen type, or asking for practical assistance in minimising screen gaps, dnp's R&D team are there to support you – whether by e-mail, phone or site meeting!



EMT wins Turkcell tender with dnp Black Bead Screens

Turkey: Turkcell, the largest GSM operator in Turkey, has installed a 30 m² dnp Black Bead control display at their Network Control Centre to provide better service to their cell phone customers.

The huge control wall was designed and supplied by the Turkish AV company, EMT Electronics, who won the tender for the prestigious project with a solution based around dnp Black Bead Screens.

The huge control display in the Network Control Centre is the first of its kind in Turkey. Operating on a twenty-four hour basis, the Network Control Centre will be used to monitor Turkcell's local GSM centres and radio-based stations all over Turkey. On the display, operators are able to trace any fault in the entire Turkcell GSM

network – and to solve 70% of all problems remotely. The rest will be fixed in association with local field teams which – assisted by advanced technology in the control centre – can access any network error within two hours from when it initially appears on the control wall. This allows Turkcell to reduce their long term maintenance costs and to provide superior quality service to customers.

The installer, EMT Electronics, has been one of the rear projection pioneers in the Turkish AV market, since they installed

the first video cube with dnp Wide Angle Screens in a Turkish sports arena in 1997.

By winning the Turkcell tender, EMT has expanded their successful rear pro business to the fast growing control room market.

Facts

Installer = EMT Electronics

Screens = Videowall comprising 30 pieces of 52" dnp Black Bead Screens

Control equipment = Comview Visual Systems

