

BERCHTESGADEN SALT MINE

The Salt Time Journey



In the „Salt Laboratory“ visitors can learn about the mine shafts complex and the actual salt extraction process

A variety of multimedia equipment gives visitors a unique insight into the production processes used in one of Germany's few remaining working salt mines.

The one and a half hour tour through a disused part of the mine, described as the "Salt Time Journey", attracts around 350,000 visitors per year and is projected soon to hit 400,000 after the mine re-opened in May 2007 following a major Euros 8.4 million complete overhaul.

A NEW CONCEPT OF PRESENTATION

Sebastian Brandner, manager of the visitor centre at Berchtesgaden Salt Mine, says: "The investment was made because we needed to both attract new visitors and to ensure some of those people who have visited before returned. Since the re-opening there has been an increase in visitor numbers of 6.8 per cent."

The overhaul took eight months to complete fully (running from October 2006 through to May 2007) and involved the re-building of the entrance hall and visitor centre as well as a significant upgrade to many aspects of the tour itself set deep within the salt mine.

THE PROJECT

CLIENT	The Berchtesgaden Salt Mine "Salt Time Journey" (Berchtesgaden/Germany)
WEBSITE	www.salzzeitreise.com
INDUSTRY	Industrial/Leisure
APPLICATION CATEGORY	Museum/Showroom
SYSTEM INSTALLED BY	HB-Laserkomponenten GmbH (Schwäbisch Gmünd/Germany)

Deep underground at the Berchtesgaden Salt Mine is an innovative tour that utilises a variety of multimedia equipment.



Entering the saltmine by electrical train

The development of the concept and the implementation for both the visitor centre and the underground tour experience was handled by Stefan Seigner of Intertainment Kulturmanagement GmbH, who was also responsible for the revival of Vienna's Giant Ferris Wheel. Designer agency 3deluxe was brought onboard as the consultant for the audio visual (AV) aspects of the tour.

It is these AV elements that help bring both the visitor centre and the tour to life. They enhance the experience of visitors by helping to explain the workings of the mine and the history of the Berchtesgaden works.

Bringing crystals to life.

This starts in the visitor centre where two ceiling-mounted Panasonic PT-D3500 single-chip DLP projectors are used to display video footage of the Berchtesgaden area and its local wildlife onto two screens measuring approximately 4m by 1.5m located at each end of the centre. The content for both screens is on a loop controlled by a single PC-based player.

The environment for the visitor centre projectors posed few problems to the AV consultant when making its choice of manufacturer (apart from the long operating hours of 9am to 5pm during the peak season of the attraction in July and August) but it was a different matter for the projectors in the "Sink Works" part of the tour.

THE SALT CATHEDRAL

This is a large cathedral-sized cave from where salt was once extracted and which is reached by taking a miner's train journey 140m under-

ground. Housed within the "Sink Works" are six ground-mounted PT-D3500 single-chip DLP projectors that deliver a light show directly onto the rock walls, imitating the salt extraction process.

An additional projector to the same specifications, but fitted with motion-detection sensors, was also mounted on the side of the cave wall to display moving images of salt crystals onto the floor when visitors pass under its beam following their descent down a 36-metre recreation of a wooden miner's slide.

The AV elements
add the thrill to the
Salt Mine Journey.



2x PT-D3500 in the visitor center



The huge "Salt Cathedral" is equipped with 7x PT-D3500 projectors showing various light effects

Reliable operation in a rough environment.

"The challenge for the projectors in the "Sink Works" was not the humidity but the salt in the air, which is very aggressive, and so they had to be covered in special cabinets to protect them against the dust," explains Josef Helming an electrician at the Berchtesgaden Salt Works.

The durability of the Panasonic projectors made them an ideal choice for operating in this tough, dusty environment especially in the case of the wall-mounted device as it is difficult to reach to carry out maintenance.



Due to "aggressive" salty dust the technical equipment has to be covered and cooled properly

"SALT LABORATORY" VISUALIZATION

After the "Sink Works" visitors then walk through the salt mine's old tunnels to the "Salt Laboratory" which uses three more ceiling-mounted projectors that combine to show the salt production process and highlight the complex nature of the 40km of mine shafts that make up the entire Berchtesgaden Salt Mine.

This arrangement involves two PT-D3500 DLP projectors that direct an image onto a specially-built Perspex model of the mine shafts. A third cost-efficient "home cinema" projector



Projection illuminated mine shafts model

PT-AX100 displays a film of mining taking place which includes showing how the mined raw materials are processed into the salt types that are suitable for culinary usage or as grit on roads. The operation of this equipment is controlled from a touch-screen.

The AV equipment installations in the visitor centre, "Sink Works" and 'Salt Laboratory' involve a network of 28 PCs that are all linked together plus a further two main control PCs that are all located underground. The control PCs oversee the running of the overall network and check the diagnostics of all the devices used as well as reporting any error messages to another PC located above-ground in the control room.

Such has been the success of the upgraded 'Salt Time Journey' that during peak times later this year a new party of visitors will descend into the mine approximately every five minutes which equates to around 4,000 people visiting the mine each day. This means the attraction is able to contribute an impressive two per cent to the total turnover of parent company Südsalz

PT-D3500



PROJECTOR APPLICATION

Mood creation in visitor center by showing videos from Berchtesgaden area

SOLUTION

2x Panasonic Projectors PT-D3500
(1 Chip-DLP, 3500 ANSI lumens, XGA)

WHY WAS SOLUTION SELECTED

- ◊ Capability of running for several hours/day
- ◊ Easy maintenance

PT-D3500



PROJECTOR APPLICATION

Lightshow in 'Sink Works' imitating the salt extraction process & interactive light effect at end of wooden miner's slide

SOLUTION

7x Panasonic Projectors PT-D3500
(1 Chip-DLP, 3500 ANSI lumens, XGA)

WHY WAS SOLUTION SELECTED

- ◊ Capability of running for several hours/day
- ◊ Reliability
- ◊ Easy maintenance

PT-D3500, PT-AX100



PROJECTOR APPLICATION

Illumination of different sectors on a Perspex model of the mine shafts & projection of a video about the salt extraction process

SOLUTION

2x Panasonic Projectors PT-D3500
(1 Chip-DLP, 3500 ANSI lumens, XGA)
1x Panasonic Projectors PT-AX100
(LCD, 2000 ANSI lumens, HD)

WHY WAS SOLUTION SELECTED

- ◊ High video picture quality
- ◊ Easy maintenance