

Application Story

Counting down along the historic Bund in Shanghai



Thirty-four Christie projectors lighted up the sky along the Bund at Shanghai Countdown 2013

By 11pm on Dec 31, 2012, hundreds of thousands of people thronged the Bund, especially the stretch across Zhongshan Road that housed many historical buildings when Shanghai was an international trading settlement. Running over a mile long and dotted with 52 buildings of various architectural styles, the Bund is the pride of the Shanghainese, a must-see spot on every tourist's agenda and a flashback to the flamboyant and frenzied world of Shanghai during the Republican era.

The Pudong Development Bank building and the Customs House stood out from the row of buildings along the Bund. These two structures were slated for a 3D architectural projection for the Shanghai Countdown 2013.

Formerly the Hongkong and Shanghai Bank Building, the Pudong Development Bank building was constructed in 1923. Square in shape, this five-storey building has a round roof and a hemisphere-shaped top. Equally distinctive was the eight-storey Customs House built in 1927 topped by a clock tower which is 90 meters tall. The 3D projection was part of the 2013 new year countdown party initiated by the Shanghai Municipal Government and Shanghai Media Group.

The eight-minute 3D light show not only illuminated the two buildings but the use of beam lights literally lighted up the sky over the Huangpu River. With one of the most mesmerizing night scenes, the Bund also features a row of architecture that is

Customer:

- Shanghai Municipal Government
- Shanghai Media Group

Location:

Shanghai, China

Industry/Market:

Event

Partners:

Beijing Feng Shang Century Arts, Co. Ltd

Requirements:

- A powerful projection mapping
- High brightness
- Clear displays and rich contrast ratio
- Quiet operation

Summary:

3D architectural projection mapping, which has gained popularity in recent years in many countries in Europe and North America, is catching on fast in China. The organizers of the Shanghai Countdown event chose 3D projection mapping as a main highlight and a way to achieve a dazzling visual effect for the audiences.

Products:

- Christie Roadie HD+35K projectors
- Christie Roadster S+20K projectors

Results:

The eight-minute 3D light show not only illuminated the two buildings but the use of beam lights literally lighted up the sky over the Huangpu River. The last 30 seconds of the projection mapping brought the audience to the Chinese roots by showcasing the faces of 2013 local Chinese collected through Weibo and governmental official website.



inimitable, enabling one to get completely lost in this abyss of time, space and lights.

“Activate 2013 with Dreams is the theme of this Countdown. Following the success of the last party, which captured the world’s attention, we elevated the show to a new height of 4D show with live performance. Working with Hollywood’s special effect team from *The Fifth Element*, it took us six months to put together larger-than-life-images multimedia contents to impress the audience. The last 30 seconds of the projection mapping brought the audience to our roots in China by showcasing the faces of 2013 local Chinese collected through Weibo and our governmental official website,” explained Xiaolan Sha, director of Beijing Feng Shang Century Arts, Co. Ltd, Christie’s partner for this event. “The large-scale projection mapping required clarity and brightness of the images to be uncompromised. Thanks to the superb quality of Christie projectors, the visual effects surpassed our expectation.”

3D architectural projection mapping, which has gained popularity in recent years in many countries in Europe and North America, is catching on fast in China. It was therefore reasonable that the organizers of this Countdown event would choose 3D projection mapping as a main highlight and a way to achieve a dazzling visual effect for the audiences.

According to Frank Xiao, general manager of Christie China, architectural projection is a great challenge for all projector manufacturers. Firstly, it’s done outdoors so naturally, there are strict requirements for the installation, debugging and dealing with conditions in the external environment. Secondly, we need to consider the quality and luminance of the complex surface of



the building instead of a simple screen. Thirdly, the projection area is quite large, and that means we need high levels of brightness for the projected images to be seen and for color stability.

Sha fully agreed: “The Bund is famous for the various architectural styles of the many historical buildings lining the financial hub of Shanghai. We did many projections onto flat surfaces but this time, we have to project onto two buildings with very uneven surfaces, two wholly different structures and heights, with many columns. Compared to the other big scale projection mapping which we did with Christie previously, this installation is technically more demanding. We overcame the challenge by using three layers of overlapped images.

For this, we attributed our success to the superb image-blending capabilities of Christie's projectors."

As both the Customs House and Pudong Development Bank buildings were constructed in the 1920s, there is a low reflection rate on the façade and walls. To overcome the brightness issue, we needed to triple stack the projectors to achieve the desired visual effect.

The most important thing for 3D architectural projection is the combination of projection technology and 3D walls, the combination of content and materials of the projection surface that will work to create completely different visual images compared with visual display effects in other places like a cinema.

"We used eighteen units of Christie Roadie HD+35K in total and we stacked three of these projectors in two rows for the projection on the Pudong Development Bank. Each projector could project up to 38 meters of the width of the building surface. In addition, four units of Christie Roadster S+20K were installed to project onto the surface of the hemispherical shape on the building's apex," explained Nan Cao, the overall project coordinator from Beijing Feng Shang. "For the projection mapping on Customs House, we had eight units of Christie Roadie HD+35K placed in a one by two configuration, with four units used for each level. There're another four Christie Roadster S+20K projectors deployed for projecting onto the large bell at the top. This is the one way we can ensure that we can achieve the right brightness level as well as overall color synchronization and vibrance."

Cao continued, "For the Shanghai Countdown 2013, lighting, the weather and wind conditions by the river, and the design and set-up of the area were also some of the challenges faced. For one, sturdy steel frameworks were installed along the Bund to support the heavy projectors and other audio-visual equipment. Being right next to the Huangpu river at the end of December means that the whole area was very windy and cold in the later part of the evening. Christie projectors overcame these issues of temperature and humidity. We'd also like to thank Jun Liang, Christie Shanghai's field service engineer, for his professional technical support throughout the project."



Lighting coordination was also another challenge faced by the technical team. Cao explained that lighting is a very strong element in projection mapping, and therefore how architectural lighting gets integrated with the projected images is critical to the success and visual quality of the show. "We had to do many dry-runs just to achieve the right level of coordination with the different lighting and also with the music. We used the lights to control the music and when the music reached a peak, we used the major lights to complement the images. We had to make sure that the lights, colors and rays come together to make the projected images more lively and vibrant," said Cao.

According to Sha, people were impressed and could relate well with the lively visual effects of projection technology, especially after witnessing the visual feasts of advanced projection

technology presented at the Beijing Summer Games' opening ceremony in Beijing and the Expo event in Shanghai.

"Christie was the first name that popped into our mind for the Shanghai Countdown because we had very successful cooperation with them during the Beijing Summer Games. Christie provided us with very outstanding technical support, even to the extent of flying their engineers from the US and Canada to ensure all the projectors were operating smoothly. I am still very impressed," revealed Sha.

"The selection process was very rigorous. We conducted many experiments with the projectors, including the tilt angle, the projection parameters, the safety and cooling mechanism of the projectors. After testing several brands, we concluded that Christie's projectors are the brightest in the market, reaching up to 35,000 ANSI lumens per projector. We also know that the Christie Roadster S+20K has the lowest failure rate as compared to projectors in this class. So we decided to go with Christie for the countdown project."



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