EUROVISION SONG CONTEST

Case Study

Lightware Visual Engineering

Market	Country
Rental and Staging	Ukraine

Lightware Equipment Used in Project

3 x MX-FR33R and 168 x video layers

Technical Battle at the Eurovision Song Contest

When I watch bigger shows on TV, which are elaborately produced, where every detail is perfect, where every pixel and every stage lamp is matching the vision perfectly, the camera shots are 100% accurate, then I wonder, what is behind the scenes of such a production? Which technologies have been used? Who is the lighting designer? Which company is the technical service provider?

By investigating the example of the Eurovision Song Contest 2017, I finally got to the bottom of these questions!
What is the Eurovision Song Contest?

The Eurovision Song Contest is a music competition that takes place annually and has existed since 1956, it is organized by the EBU, the European Broadcasting Union. All European countries, which are members of the EBU can participate and compete against each other, each country is represented by an artist who performs on stage.

An expert jury rates the individual performances with points from 1 to 8, 10 and 12. In addition to the expert jury, the spectators and audience can also vote by phone, with the same point ratings. Each country is phoned during live broadcast to announce their voting results. The country which has the most points in the end wins the Song Contest and may also host the event in the following year.

visual engineering
LIGHTWARE

What technology was used at Eurovision in 2017?

A lot of technology was used that year, a total of 200 truckloads of equipment were delivered.

A total of 1816 lamps were used, which have a power consumption of 854,000 watts. With over 61 km cable were used to connect them, the lamps used a total of 67,000 channels and were controlled by 5 consoles, while another 5 consoles were used as backup.

40 people in total were in charge of controlling the lights during the show, in order to always keep the artists in the right light, 16 tracker operators were needed.

AV Equipment

The LED screen had a size of 1000 m2 and a resolution of 71,000,002 pixels, which were controlled by 10 people via 12 media servers. Additionally, 56 high-output projectors and 4 high-end MMS systems were used.

Here is a detailed list of the video equipment:

- **16x Hippotizer V4 Boreals (9 active and 7 as backup)**
- **35x Active HD Outputs**
- **168x video layers**
- **3 x 33×33 Lightware MX Modular Matrix switchers**
- **2x Avitech Titan 9000 Multiviewers**

Sound and Other Tech

The sound came from a total of 258 speakers which had a total output of 825 600 watts and was managed using 13 consoles by a total of 34 people.

Pyrotechnics were provided by 48 Flame Jets fired from a total of 50 positions in the hall.

The stage had a weight of 30 tons and 350m² of playing surface with a width of 70 meters, it was built by 40 people within 8,000 hours.

The power supply was provided by 18 generators, which were able to produce 7 megawatts of electricity at the peak and consumed around 20,000 liters of fuel per day. 38.5 km of power cables were laid, 6.7 km of which were multicore cables.

A total of 30 cameras were used, the broadcast was managed by 50 people.

At ESC, the best SteadyCam operators are hired to achieve the best possible camera movements on the ground. Since the hall is very large and long distances must be covered, one of the SteadyCam operators was even put on a Segway. He then drove up to the edge of the stage and continued straight from the Segway on stage.

The technical implementation was performed by the PRG Group, who have the necessary experience and res
ources to implement such a major event.

Conclusion

The ESC thrills the masses every year and is a top class event with over 200 million TV viewers. Every year, the lighting designer devises new ways to get the audience excited with the acts' shows. For event technicians this show is an interesting event every year, a state of the art technology battle.

This documant was rough-translated and edited from German original. You may find the original article in German here:
https://www.stage223.com/news/technikschlacht-beim-eurovision-song-contest/