

Megafon, Saint Petersburg and Samara, Russia



Megafon is a leading telecoms provider serving the Russian Federation and surrounding countries, providing mobile and landline telephony, internet and cable TV services to over 67 million subscribers.

PROJECT LOCATION

Saint Petersburg, Samara, Russia

CUSTOMER

Megafon

APPLICATIONS

Network Control Center

PRODUCTS USED

38 x VS-72WE78UA (19x2)

38 x VS-PE73RU (16x2 and 6x1)

2x Datapath Vision 890 controller

INSTALLATION

Viking

FURTHER INFORMATION

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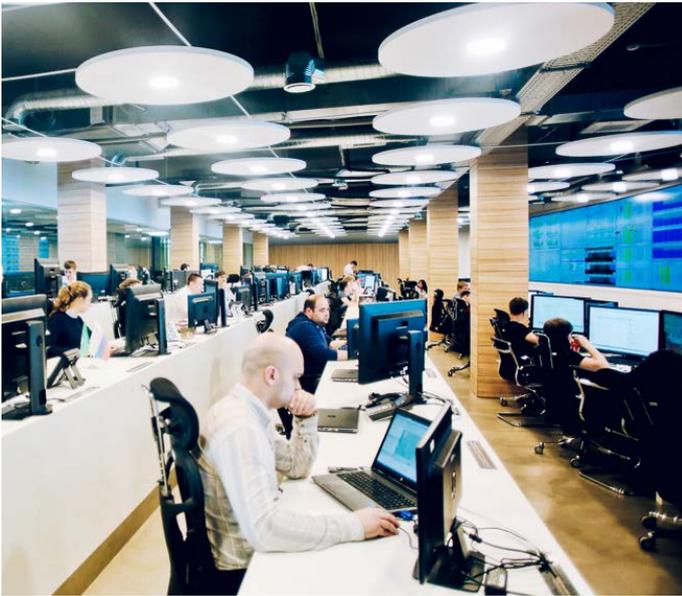
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BACKGROUND

Since 2007, the Megafon network has been managed from two network control centres; one in Saint Petersburg and the other in Samara. However in 2013, the company decided to combine its network management functions into a Common Network Control Centre, allowing the two sites to manage the western and eastern parts of the network respectively, while sharing data and the ability to take over management of the entire network if necessary.



PROBLEM & SOLUTION

Both sites employed large Mitsubishi Electric DLP video wall systems, installed in 2007 and 2008 respectively. While the mercury lamp illumination employed in both systems was considered the industry standard at the time, in comparison to modern systems equipped with LED light sources, running costs had become unjustifiably high. As the Megafon network has grown, the demands on its operations centres have also increased. The two Network Control Centres deal with more than 13 million network status messages and 4000 customer enquiries daily. With both centres in operation 24/7, the ability for operators to comfortably visualize and manage vast amounts of data was crucial. Although day-to-day operation of the western and eastern sections of the network would continue to be managed by their respective centres, each centre had to be able to assume control of the entire network in the event of a major problem. Naturally, total system reliability and long operational lifespan was a key objective.

To address these multiple issues, Megafon once again turned to Mitsubishi Electric. Mitsubishi proposed a complete replacement of the outdated mercury lamp DLP cubes with the latest universal LED upgrade engines.

With no need to regularly replace mercury lamps and thanks to Mitsubishi's maintenance-free air-cooled projector technology, running costs would be dramatically reduced. For the Saint Petersburg site, a completely new system of WUXGA cubes would replace the existing screen, allowing more data to be displayed, with special thin bezel screens allowing a virtually seamless display surface.

For the Samara site, the existing video wall was enlarged to 16 x 2 50" cube system using equipment from the former Saint Petersburg installation. The entire system was then upgraded using Mitsubishi Electric's universal LED upgrade engines. This allowed the display to be brought up to the very latest modern specifications, while retaining the existing framework and screen hardware. Replacement of the old mercury lamp projectors with LED modules ensured a rapid installation and an immediate significant reduction on operating costs.

Both systems would be controlled by Datapath Vision 890 controllers, with each site having a backup controller running in parallel to ensure total reliability. The Datapath controllers allow operators a great deal of flexibility in the way they can access and display data, helping them to manage daily operations more effectively. The system architecture would ensure that control of the entire network could be transferred to either control centre in less than 15 minutes in the event of a major network outage.

Specifications

Model	VS-72WE78UA
Technology	LED video wall cube
Overall Size	56,9 m ²
No. of Modules	38
Cooling system	Air cooling system with efficient cooling pipe and aluminum plate (No liquid)
Type	DLP™ technology (0.95" DLP™ 1 chip), DarkChip3™, BrilliantColor™
Resolution	WUXGA, 1920 x 1200 pixels (per module)
Light Source	Redundant LED (RGB)
Light Source Service Life	≤ 100,000 hrs.
Brightness	860 cd/m ² bright mode 600 cd/m ² normal mode 410 cd/m ² eco mode 130 cd/m ² advanced eco mode
Contrast Ratio	1500: 1
Power Consumption	96 W in advanced eco mode 124 W in eco mode 174 W in normal mode 258 W in bright mode

DLP™ and Digital Light Processing are trademarks of Texas Instruments.

INSTALLATION & RESULTS

The Saint Petersburg display consists of 38 Mitsubishi Electric VS-72WE78UA 72" WUXGA cubes in a 19 x 2 configuration. The total screen area measures 29.4m wide by 1.9m high, delivering an impressive total resolution of 36480 x 2400 pixels, allowing a significant increase in the amount of data that can be displayed. Despite delivering a light output of 860 cd/m² the new system delivers much low power consumption and heat emission. Improved efficiency means not only lower running costs but also less demand on the room's air handling system. The rear-access VS-72WE78UA means that the maintenance area behind the video wall could be sealed-off from the control room, enabling it to be maintained at a constant 18°, independent of the more comfortable 22-24° control room environment. The inter-screen gap of just 0.5mm and dividing wall also greatly reduces the noise of operating fans and air handling, ensuring a quieter working environment.

At the Samara installation, the existing mercury lamp cubes were replaced with VS-PE73RU Universal LED Upgrade modules. The new LED engines deliver 980 cd/m² brightness and SXGA+ resolution, taking the total resolution of the 16 x 2 50" screen to 22400 x 2100 pixels. Along with the greatly improved resolution, the replacement of the projection units removes the need for the regular replacement of lamps and other moving parts such as colour wheels. With no need for any structural work or replacement of the screen hardware, the installation was carried out with the minimum of disruption, enabling Megafon to realise a very rapid return on its investment thanks to greatly reduced running costs.



REPLACEMENT CUBES FROM MITSUBISHI ELECTRIC

VS-PE73RU Universal LED Upgrade modules used at the Samara site employ the same LED technology as Mitsubishi Electric's pioneering Seventy Series. Upgrade models are available for most makes of DLP cube manufactured over the last 15 years, enabling owners of all legacy mercury lamp systems to easily upgrade to the latest LED technology. Mitsubishi Electric's innovative Smart 7 concept delivers a wide, intensive colour spectrum, optimum energy efficiency and a minimum operational lifespan of up to 100,000 hours. As a global market leader in LED cubes, Mitsubishi Electric currently offers the widest selection of models and is able to provide first-rate, well-engineered technology for customised solutions. The company has over 30 years' experience in LED solution development and large screen project management. We have already installed more than 78,000 DLP projector units worldwide.



CUSTOMER REACTION

The installation at both sites was a great success, enabling Megafon to benefit from greatly reduced running costs and improved performance. With Mitsubishi Electric LED DLP cubes offering an operational lifespan of up to 100,000 hours, Megafon can look forward to a decade of reliable and efficient operation, with little if any maintenance required over that period.

Huge savings in running costs are matched by improved performance and versatility thanks to the Datapath controllers and the increased total resolution of both screens. Furthermore, operators benefit from a quieter, more comfortable working environment, allowing them to continue to deliver the high level of service Megafon's 67 million customers have come to expect.