

Client:



Kategorie: Traffic control center, Critical infrastructures.

JST control room technology visualizes space simulation



JST Control Room: With the new Jungmann technology, specialists at the European Space Research and Technology Center monitor all processes in the Large Space Simulator (LSS).

Conditions that could hardly be more extreme: On one side the icy cold of space, on the other the blazing heat of the sun. If technology is to work reliably under such conditions, it must be tested and monitored closely to ensure that the materials used can withstand such extreme conditions. For the satellites of the European Space Agency (ESA), a so-called Large Space Simulator, or LSS for short, is available in Noordwijk, Netherlands. Using products from JST – Jungmann Systemtechnik®, specialists from the European Space Agency monitor the processes in this space simulation facility in the new control room .

A flood of monitors and computers “graced” the former control center of ESA’s European Space Research and Technology Center (ESTEC) in Noordwijk, the Netherlands. Those responsible, above all project

manager Alf Schneider, wanted to get to grips with this with an extensive modernisation. While searching for suitable partners for the realisation of a new control room, the electromechanical engineer came across JST- Jungmann Systemtechnik and it quickly became clear that the Jungmann components were an excellent match for the ESA requirements.

For the monitoring of the space simulation facility, a proactive large display wall consisting of eight business large-screen displays, optimised for 24/7 operation, is now available in the control center after successful modification. JST MultiConsoling[®], a concept for controlling all workstation computers and the large-screen system, enables administrators to conveniently display all processes running within the LSS on the large display wall as BigPicture, or to exchange screen contents from workstation to workstation within the control room.

For example, a vacuum is created in the chambers, liquid nitrogen is used to create temperatures below -180° C to simulate the background of space, while on the other hand the satellites are exposed to a solar simulation via extremely powerful spotlights and mirrors. Thanks to the Jungmann devices, not only the processes in the simulation chambers can be visualised, but also the temperatures can be monitored and the image signals of the control computers and the measuring technology can be received.

The LSS operator team in the ESTEC test center, which monitors the functional tests of the space satellites around the clock, does not only benefit from the new technical equipment in the control room in Noordwijk: the equipment is supplemented by high-quality ergonomic control center furniture from the Stratos X11[®] range. Alf Schneider: “The furniture is very well received by our colleagues – the feedback confirms this”. He also has special praise for the Jungmann technicians who were active on site: “The team was really great, communication was perfect and there were no delays.

European Space Agency (ESA) control room after modernisation / before modernisation

Information about ESA and ESTEC

The European Space Research and Technology Center (ESTEC) in Noordwijk, near The Hague in the Netherlands, is one of the largest sites of the European Space Agency (ESA) and houses not only numerous research laboratories but also a large test center where all ESA’s spacecraft are put through their paces before being released for use. These include vibration and shock tests as well as thermal and vacuum tests. The ESTEC Test Center thus plays a central role in the overall ESA mission sequence and provides valuable results for commissioning and operation with its large number of generously dimensioned test rigs.



"The JST components fit our requirements exceptionally well"

Alf Schneider

Electromechanical engineer and simultaneously responsible for the current project of ESA (European Space Agency)

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The components used in this project:



DisplayWall with special S-PVA panels for reliable 24/7 operation - optional with proactive alarm function



MultiConsoling® System – complete control room system for workplace, monitor wall and other systems



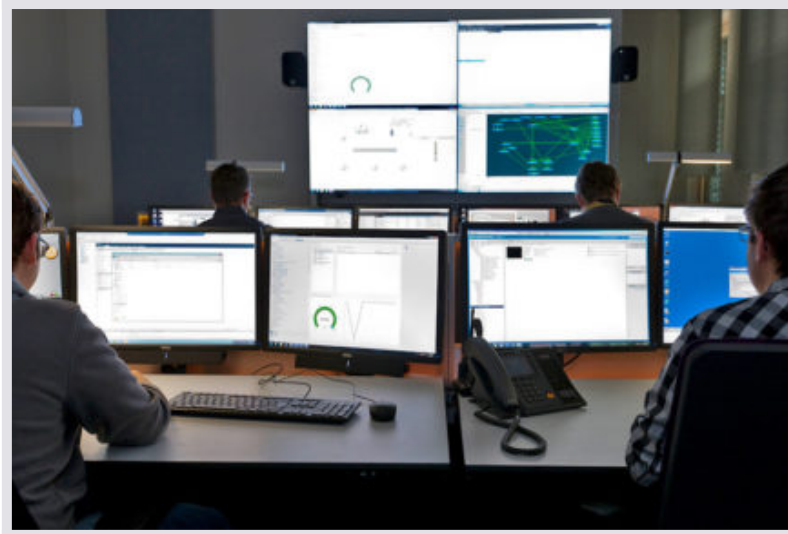
myGUI® user interface - in the intuitive 3D design of your control room for maximum user comfort



Stratos X11® control room desk – optional with height adjustment and proactive AlarmLight system

Application Server

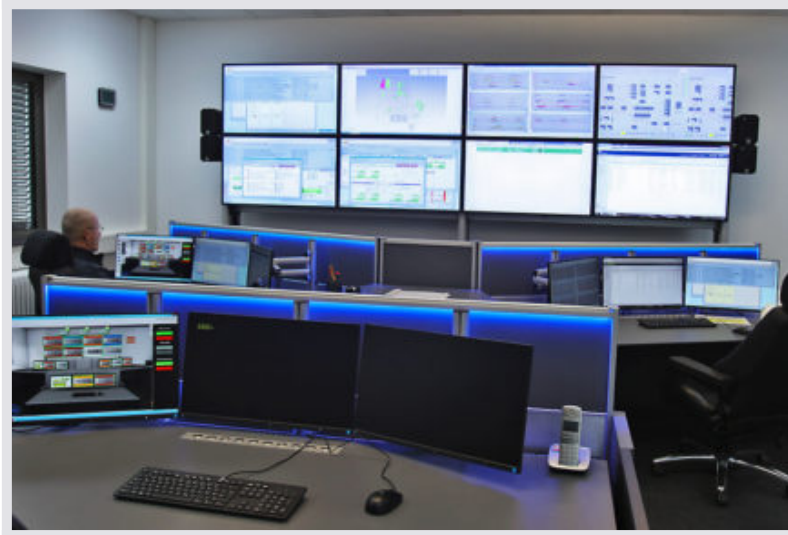
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City of Frankfurt am Main

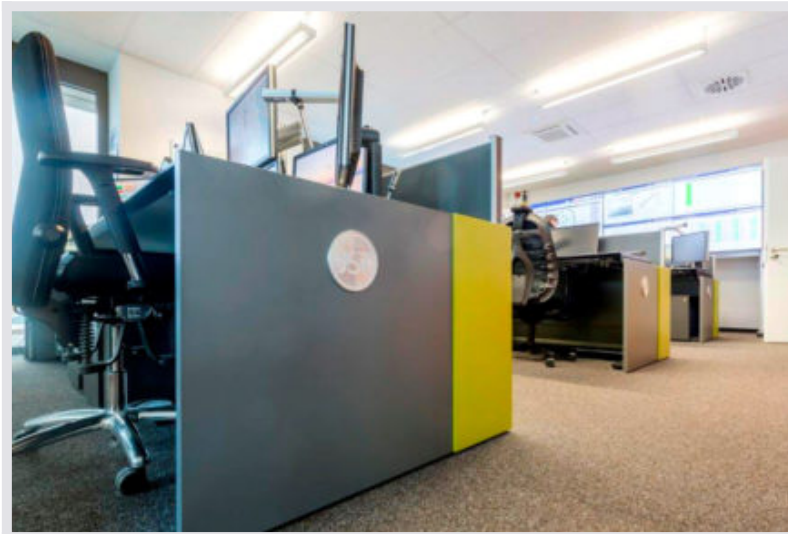


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