Fascinating insights into earth observation:

Ars Electronica Solutions designs new ESA Visitor Center in Frascati near Rome

(Linz/Frascati, Oct 2, 2018) Since 1968, the Italian town of Frascati 20 km south of Rome has been the European center for satellite-supported earth observation (ESRIN) of the European Space Agency (ESA). In honor of the institution's fiftieth anniversary, a new center, the ESA "ϕ Experience," is now offering visitors to ESRIN exciting insights into the science of earth observation, the research projects based on it, and what we are learning from it.

This newly opened world of interactive experiences was designed by Ars Electronica Solutions in cooperation with the German Aerospace Center (DLR) and the ESA team. "We've been working regularly with ESA for some years and are proud to have implemented this exciting and challenging project," said Michael Mondria, head of Ars Electronica Solutions: "We not only developed the interactive installation, we were also able to make a substantial contribution to the architectural design as well as the light and sound. The interplay of all those things created a truly impressive and worthwhile visitors' center that presents the topic of earth observation in an innovative way."

Interactive experience

The "ϕ Experience" presents four different interactive exhibits on the topic of satellite-supported earth observation. The centerpiece is the "Half-Dome Globe": a hemispheric model onto which an entire hemisphere of geospherical data are projected. It shows a selection of detailed information representing natural processes and their effects on our planet. The globe is controlled by a crystal-glass ball and special touchscreens – depending on which topics are selected and how the ball is turned, visitors can navigate through the spheres or through time, or create layers of different textures and time series.

The "Control Room" transports visitors to the world of satellites: from planning a satellite to launching it into orbit and operating it, all current missions are on display here. A three-dimensional satellite model is used to show technical descriptions and groundbreaking inventions. The equipment here can also simulate a complete satellite launch.

At the "Elevation Model" and in the "News Room" – mainly realized by DLR – visitors find out about the kinds of data the ESA collects and the conclusions drawn from them by scientists all over the world. The first one uses an elevation model, where data about temperature, tectonics, radiology, and so on are projected. The News Room shows excerpts

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from the news and associated data sets about earthquakes, flooding, glacial melting, etc., which can be combined in different ways.

A special exhibition control mechanism allows the "moderator" to activate all the installations along with light and sound scenes at will. In addition, all the data are administered by a flexible content management system.

According to Harald Moser, the project manager of Ars Electronica Solutions, "It was a fantastic challenge to work with this interdisciplinary team and coordinate all the processes between the ESA in Frascati, Oberpfaffenhofen (DLR) and Linz. From the vision to the detailed concept, technical planning, and development of the interfaces created especially for this project, to its final completion in Frascati, the cooperation was outstanding and terribly interesting. The design for the interactive surfaces and interfaces in relation to the scientific data, the architecture of the space, the lighting plan, and the sound composed by Rupert Huber came together in harmony to make this project an extraordinary experience."

ESRIN – the Center for Earth Observation of the European Space Agency ESA in Italy

ESRIN is one of a total of five European Space Agency centers and is located in Frascati, about 20 km from Rome. ESRIN was founded in 1968 and began collecting and analyzing environmental satellite data in the 1970s. Since 2004, ESRIN has been the Center for Earth Observation of the European Space Agency.

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DLR: Nils Sparwasser, Thorsten Andresen, Stefan Keim

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Φ Experience: https://ars.electronica.art/solutions/en/esa/
ESRIN: https://www.esa.int/About_Us/ESRIN
DLR: https://www.dlr.de/
Ars Electronica Solutions: https://ars.electronica.art/solutions

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