CASE STUDY

AES-Buran forms expert team to issue project documentation for nuclear and petrochemical

Key facts:

Company: LLC 'AES-Buran'

Website: www.aes-buran.ru

Industry: Nuclear, engineering services

Country: Russia

Octave products used: Forte 3D *(Smart 3D),* Facets P&ID *(Intergraph Smart P&ID),* Forte Review *(Intergraph Smart Review)*

LLC 'AES-Buran' provides organizational and technological support for projects throughout the EPC cycle, from site selection to commissioning.

Identifying goals

LLC 'AES-Buran' is oriented towards performing a full range of work within the nuclear industry. The company relies on a variety of assets to fulfill its roles, namely proven and recognized solutions, innovative technologies and 60 years of experience in the development of the nuclear industry in Russia. These assets enable LLC 'AES-Buran' to implement unique and ambitious projects in Russia and abroad.

Under a new initiative, AES-Buran decided to create an expert group to develop and execute engineering services in the nuclear sector in Southeast Asia in relatively small periods of time. This was the motivation behind partnering with Bureau ESG – a systems integrator company – to implement Octave design technology for nuclear power plant (NPP) units and in turn train employees to work with Octave solutions.

Realizing challenges

The main project challenge was the lack of a pipe elements data base. This was necessary to start working in Forte 3D where the NPP unit model was going to be created. With the help of Bureau ESG specialists, this database was completed and the resulting catalogues included information on all types of pipes existing in the Russian Federation.

Key benefits:

- Formed expert group to issue project documentation for nuclear, petrochemical and other sectors
- Created NPP model
- Using Octave for design needs
- Design team coordination rules were set

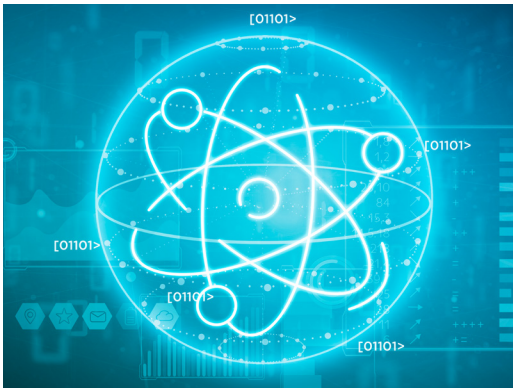
Realizing results

In the course creating the Octave Expert Team the following tasks were completed:

- Octave solutions were set up and implemented
- Thirty AES-Buran employees went through extensive training on Octave solutions; training was partially supported by experts from the CAXperts Germany team
- A single automation system was launched, based on Octave components - Forte 3D and Facets P&ID
- The information model of the NPP was created
- The equipment catalogues were created

The results of the project:

- In less than a year, it was possible to form an expert group trained to issue project documentation in Forte 3D, not only for the nuclear sector, but also for the petrochemical industry, amongst others.
- In less than a year, the complex model for the NPP was created (including the atomic reactor), which consisted of 13 buildings and seven tunnels. The overall number of objects is 1,500,000, the data volume is 23,576MB, and the designed pipe diameter is 6 – 2500mm.
- Employees were trained to use Octave technologies for design needs.
- Rules of coordination between the AES-Buran design team were set, including rules on how to use the database.



Moving forward

The CEO of AES-Buran Maksim Elchischev said, “It is known that this project in not unique, but we have been able to succeed due to several reasons:

- We formed a new expert team with great motivation and the intention to succeed. We prepared everything for the project – the database as well as creating the rules of coordination between team members. This was done both internally and with the help of Bureau ESG employees and the Octave partner.
- When technical support was needed, we always could rely on both Octave and Bureau ESG.
- Octave offered us as many temporary licenses (in addition to those purchased) as needed.”

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we’ve partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what’s possible from day one onward.

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