Infosys EMMV Solution

Infosys Enterprise Mobile Multi-Dimensional Viewer (EMMV) is a visualization platform which analyzes complex and high volume real-time data to build real-time, interactive 3D and 2D visualization applications on mobile computing devices that help users take quick and well-informed decisions.

Apart from visuals, the solution also provides notifications and reports which are used to assess and interpret an optimal well path. This enables risk mitigation and precise, informed and timely decision making thereby supporting enhanced well planning and well drilling operations even in remote environment with low network connectivity.

EMMV also enables the experts or geologists to collaborate with rig teams and provide their advice without having to be present on-site, thus enabling remote and faster solutions.

Figure 1: Need of the E&P enterprises

Figure 2: Applications of EMMV across O&G value chain

In the pursuit of exploring new oil & gas (O&G) resources and increasing production, the exploration & production (E&P) enterprises encounter unique challenges in terms of working in remote locations, taking real-time decisions and complying to stringent safety norms. Figure 1 highlights some of the operational challenges and capabilities required by E&P enterprises.

**Figure 1: Need of the E&P enterprises**

**Figure 2: Applications of EMMV across O&G value chain**
Solution Value Proposition

CUSTOMER ORIENTED
- Layered architecture
- Fast development of specific systems catering to unique requirements

UNIVERSAL MOBILE VISUALIZATION
- Multiple channels
- Multiple devices
- Scaled to touch/non-touch events
- Cross platform

DEVICE SPECIFIC DATA MODELLING AND ADAPTATION
- Data processing on server based on the visualization device
- Optimal model adaption and data scaling for best user experience

COMPLEX AND HIGH VOLUME REAL-TIME DATA VISUALISATION
- Robust visualization and data management core
- Hybrid server-client design for near real-time user experience

CONTEXT-RELEVANT (Network/Device) PERFORMANCE
- Sensitivity to network bandwidth, device and browser
- High performance on low quality of service (QoS) environment

Solution Architecture

Overall Drilling Cycle Support
- Seamless Real-time Integration
- Multiple Platform Support

User Preference Handling
- Interaction Models

Mobility Services
- Alert Engine
- Report Generation
- Data Synchronization
- Device Adaptation

Data Modeling
- Context Sensitive Data Optimization
- Handset Option 1
- Handset Option n

Client Specific Context
- LAS / WITS
- PPDM
- WITSML

Data Adaptation
- Geological Model
- Sensor Data & Simulation Model
- Seismic / Earth Model
- 3D wellbore Trajectory

Business Benefits
- Enhanced operational efficiencies and work productivity: Enhances well planning, optimization and maximization of workforce effectiveness.
- Developing insights: The visualization of well equipment within its geologic context provides insight that is difficult to detect through direct measurements.
- Transparency in operators’ performance monitoring and evaluation: The ability to connect directly to various WITSML data sources allows visualization of both offline and real-time datasets through a common interface spanning across E&P operators.
- Quick and informed decision making: Enhances ability to anticipate undesirable events and enables the user to take mitigation actions quickly.

Figure 3: EMMV value proposition

Figure 4: EMMV Architecture

For more information, contact askus@infosys.com

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