



Client

Client is a World Fortune 50 oil and gas major involved in exploration, production, refining and distribution. Client has invested in a mix of proprietary and vendor-supplied exploration, drilling, and reservoir management software.

Challenge

Massive technology upgrade to migrate all proprietary exploration software from Linux to Windows/Linux by upgrading graphical user interface from Motif and Qt3 to Qt4. Further, upgrade all software by reorganizing, re-architecting old components and algorithms, enhancing codes to employ new hardware (i.e. GPGPUs) and industry standard libraries, and implementing a new platform on which to add future advanced components. Modernize software development methodologies and implement best practices.

Solution (What Bluware Did)

- Integrated individual Bluware developers into existing client teams.
- Built entire teams of Bluware professionals, including developers, testers, tech writers, geoscientists, configuration/build administrators, team leaders, and project managers. Integrated Bluware teams into client teams and worked together as peers.
- Provided secure offsite facilities to house some developers in order to foster team interaction and conserve client budget.
- Acted as change agents, adopting and demonstrating best practices in software development.
- Built schedules and deliverables in conjunction with overall project plans, and delivered components on time.
- Timely delivered a full technology refresh by porting, upgrading, and integrating a suite of applications and plugins according to specifications.

Benefits

- Knowledgeable and experienced team-oriented professionals became effective quickly.
- On-time delivery of technology refresh without disrupting the existing client work.
- Introduction of fresh ideas, experience, skill sets and methods from people outside the company culture, yet under direct management by the client.
- Improve best practices within company.
- Enhance existing client teams with high quality professionals.
- Provide secure offsite office space for Bluware and client teams, meeting client security and safety requirements, at a reduced cost compared to permanent expansion.



Consultants

This was a multi-year project involving 100+ specialists in software development organized into small teams porting several million lines of code. Consultants included software developers, system architects, configuration/build administrators, maintenance programmers, project managers, testers, technical writers, and geoscience domain specialists (SMEs).

Type

Development of complex mathematical and algorithmic software for massive datasets and high speed computing environments (work station and cluster), involving analysis, management, and visualization of multiple data objects employed in exploration: seismic, mapping, well logs, rock properties, potential fields, and magnetics.

Project Length

Continuous. The project began in 2006 and delivered its first major phase in early 2010, and second phase by summer of 2010, with subsequent phases planned until all legacy software is converted and new components are added.

Tools/Technologies Utilized

Linux (Redhat), Windows Vista, C++, Python, FORTRAN, STL, Boost, Motif, Qt3, Qt4, OpenGL, OpenInventor, CVS, SVN, Jira, UML, Design Patterns, Agile software development methodologies (scrum, continuous integration, feature driven development, code refactoring, pair programming), and Agile project management.