

BENTLEY'S CONSTRUCTSIM WINNING APPLAUSE FROM MAJOR PLAYERS

OIL and gas operators and construction and engineering companies around the globe are heralding the arrival of a revolution in software support to the construction process.

Bentley Systems' ConstructSim construction simulation tool is being integrated into the early phases many of the major new oil and gas projects around the world.

Supporters of ConstructSim say it is the link between engineering and construction that they have been waiting for.

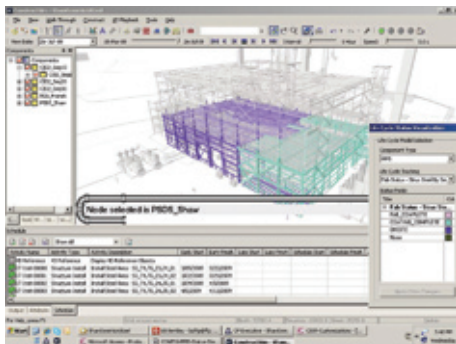
Ivy Branson, Bentley's regional engineer - 3D Plant Design and Engineering, told *Oil & Gas Australia* recently that ConstructSim has made a dramatic impact on planning and completion of petroleum projects around the globe in recent years.

"Our ConstructSim customer list reads like the Who's Who in the oil and gas industry - Shell, Mobil, BP, Chevron, ConocoPhillips, ExxonMobil, Petro Canada. Even in the consultant and contractor world, we have users like Fluor, Bechtel, Jacobs, Zachry and J.Ray McDermott - which used ConstructSim on its fabrication work for the \$2 billion 5th LNG train for Woodside.

"This is no coincidence. I think it's something to do with the survival of the fittest. They say that the best are never satisfied. They are always looking for ways to get even better. They run their business based on the philosophy of 'work smarter, not harder'.

"Here in Australia, Leighton Contractors in Perth is the first company to use ConstructSim."

Ms Branson said that ConstructSim has become so important to those planning major projects that some operators are now specifying that it be used when calling for tenders.



Isolation of areas according to trade function with status visualisation.



Crew density analyses facilitated with vivid 3D walk-throughs.

ConstructSim is a revolutionary program that optimises a project through the planning, sequencing, execution and monitoring of construction activities from within a virtual plant model.

The ConstructSim programme links together project IT systems including: the 3D CAD model (all major formats: AutoPLANT, PlantSpace, PDS, PDMS, etc.); scheduling software such as Primavera; materials management system; project controls databases and others to create an integrated virtual environment that is constantly up-to-date.

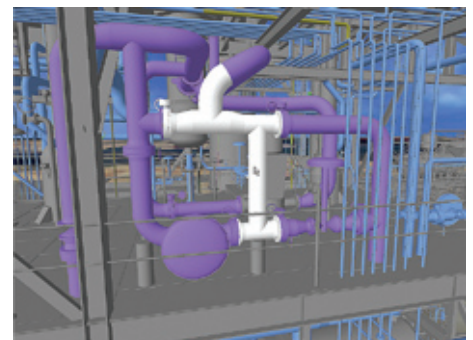
That integrated virtual environment enables a wide range of functionalities within ConstructSim, including:

- Virtual walk throughs;
- 4D (3D + time) schedule simulations;
- Automated construction material take-offs;
- Automated detail task list generation;
- Life cycle status tracking (colour coding material availability and progress by area, system, spool/sheet, piece mark, task, etc.)
- Pipe and steel work packaging at weekly crew level;
- Generic work packs for other disciplines (E&I, Civil, Mechanical) that take advantage of the database more than the virtual plant model;

- Pipe and steel change order impact analysis;
- Tracking of the design changes back to the model;
- An eight week look ahead planner/constraint analysis and crew planning;
- Weld tracking QA/QC (Beta); and
- Crane and scaffold simulation/crew density analysis (Beta development).

According to Bentley, the implementation of ConstructSim on a project will improve productivity by providing a range of benefits, including:

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Point-and-click work packaging.

IFS' NEW EPCI TOOLKIT PROVIDES BETTER CONTROL

IFS has launched the EPCI Toolkit, a software tool that offers engineering, procurement, construction and installation (EPCI) contractors complete control of projects regardless of their size.

The EPCI Toolkit provides system support for all the operational processes in an EPCI project and comes with a modern, web-based user interface with flexible solutions for information exchange based on a variety of standards.

Many organisations have adapted their business applications to suit large projects, but as these decline they are faced with changing their procedures and methods to support modification assignments and smaller projects.

Using the EPCI Toolkit, it is possible to set the status of a project across disciplines and see how changes in one discipline are registered in the others. Project management, document management, and support for fabrication, installation and go live have all been included so EPCI contractors can use the new IFS Toolkit without abandoning their legacy solutions for financials and human resource management.

"It is becoming increasingly important for EPCI contractors to manage the entire project lifecycle from engineering, project management, procurement, material management and fabrication to installation and after sales. The number of major projects in both Australia and New Zealand is falling, so it's a case of making the existing projects as efficient and profitable as possible", said Rob Stummer, IFS' managing director, Australia and New Zealand.

The EPCI Toolkit can be included into existing enterprise applications because IFS Applications are built on open, service-oriented architecture.

IFS customers in the oil and gas sector include Grenland Group, Babcock Engineering services, Heerema Fabrication Group, Dresser-Rand, Yantai Raffles, STX Norway Offshore, SeaDrill, Seawell, NCA, Hertel, Bergen Group Rosenberg, Hamworthy Gas Systems, RR Offshore, Rotary Engineering, Harland & Wolff, ShawCor and Sheddin Uhde.

SEA TRUCKS NEW VESSEL WORKING OFF WA COAST

SEA Trucks Group's new-build pipe-lay vessel "Jascon 25" has arrived in Australia to undertake work on BHP Billiton's Pyrenees field development.

Subsequent to its delivery by the Drydock World shipyard in Singapore, the "Jascon 25" arrived in north west Australia in March.

After successful sea trials and subsequent mobilisation the vessel commenced work on its first major contract offshore for the Seastream Joint Venture to install the SURF facilities at the Pyrenees field.

"Jascon 25" was built according to the Sea Trucks Group's hybrid design philosophy and is the third vessel to be delivered in the group's seven vessel new-build pipe-lay / construction programme, each of which have DP3, large decks, big cranes, as well as very substantial offshore accommodation capacity.

The hybrid configuration of the vessel makes it suitable to execute a wide variety of marine construction and pipe-lay tasks in both the SURF and conventional pipe-lay and platform installation markets, both in deep-water and continental shelf environments.

"Jascon 25" is a 120 m DP3 pipe-lay crane vessel with a total thruster power of 12,155 kW, an 800 tonne subsea Huisman crane, 355 men accommodation block and the capability of laying both rigid (S-lay) and flexible pipe.



The "Jascon 25" is now working off the coast of Western Australia.

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- Improved constructability analysis, interactive planning and coordination between engineering office and site field office using Virtual Plant Model;
- Visually plan more optimal pipe installation and hydro test work crew packages;
- Streamline material, equipment and sequencing;
- Reduce rework/out-of sequence work;
- Automated task estimates/automate data entry;
- Speed time to start-up by systems tracking;
- Better predictability of where you are on the project; and
- Reduce time looking for information via visually monitoring the status of engineering, materials and construction execution progress

The company said clients that have implemented ConstructSim and workflow methodology for pipe workface planning have experienced savings ranging from one to five per cent of the total installed cost of the project. ■