



Product News Alert

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Brand: OpenBridge, LEAP, RM

Product Line: Bridge Design and Analysis

Products: RM Bridge, OpenBridge Modeler, LEAP Bridge Concrete, Leap Bridge Steel

Availability: General Access, Now Available

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Bentley's Expanded Bridge Design Capabilities Ensure the Delivery of Safe, Economical Structures Even in Demanding Locations

Bentley's OpenBridge, LEAP, and RM deliver a fully integrated solution for bridges of all types, and unites all disciplines involved in bridge projects from planning and design through construction, inspection, and maintenance. One single bridge model provides all deliverables required throughout the bridge project, including design details, fabrication schedules, drawings, quantities, visualization, and construction sequencing. Users of Bentley bridge applications can directly access civil designs, integrating the bridge project in the context of a broader infrastructure project.

OpenBridge Modeler, Bentley's most recent addition to its bridge applications, allows users to develop intelligent 3D bridge models quickly and within the context of an overall infrastructure project. Contractors can also plan to minimize costly construction delays with traffic and construction simulations, as well as control costs and avoid delays by using clash detection tools to solve interference problems, before construction begins.

Key capabilities for OpenBridge Modeler include the ability to:

- Interoperate with Bentley's bridge analysis applications, including LEAP Bridge Concrete, LEAP Bridge Steel, and RM Bridge;
- Calibrate design to terrain, roadways, access ramps, and related infrastructure by directly integrating with OpenRoads Designer, Bentley's civil design application;
- Enliven designs and enhance visualization with lifelike renderings and libraries of physically correct materials, lighting, and rich photorealistic content;
- Manage design changes parametrically through built-in relationships between components;
- Generate complete bridge geometry reports, including civil and bridge element reports, deck and beam seat elevations, quantities, and cost estimates.

In addition, Bentley's RM Bridge application for design and analysis of complex bridges now offers unique analytical capabilities for floating suspension bridges. These new capabilities are being used on one of the most challenging bridges in the Norwegian Public Roads Administration's E39 coastal highway project. Several floater concepts have been proposed for the 2,400-meter-wide Halsafjorden crossing project. One concept is a two-span suspension bridge supported by a central floating tension leg platform and two onshore concrete pylons. TDA COWI, a Norwegian engineering firm, required this advanced functionality in RM Bridge in order to evaluate the dynamic response caused by wind and wave loading, which can now be predicted in time domain.

Arne Bruer, senior consultant with TDA COWI, said, "Now the bridge industry has a bridge engineering tool for complex analysis and verification that accounts for the coupled dynamic effects of wind, waves, and current."

André Tousignant, P.E., construction engineer, PCL Civil Constructors, Inc., said, "Finally, a purpose-built bridge modeling software that is parametric and easily editable. In just minutes, I had results that would have taken at least a half hour in other civil engineering applications."

Phil Christensen, VP, analytical modeling, Bentley Systems, said, "As highway agencies and their bridge engineering supply chain transition from 2D to 3D workflows, making the creation of information-rich bridge models fast and easy becomes an efficiency imperative. Bentley's ongoing expansion of the modeling capabilities in OpenBridge Modeler – including full roundtrip interoperability with bridge structural analysis tools – supports the industry's move to using 3D models as early as possible in the design process."

Bentley bridge applications provide engineers and designers the ability to design bridges in context of their surroundings as well as deliver safe, well-engineered bridges, even in the most complex conditions and environments.

About OpenBridge Modeler

OpenBridge Modeler helps engineers develop intelligent 3D bridge models within the context of an overall infrastructure project. Users are able to calibrate design to terrain, roadways, access ramps, and related infrastructure by directly interoperating with Bentley's civil design applications. You can enliven designs with lifelike renderings, minimize costly construction delays with traffic and construction simulations, and control costs using clash detection tools to reduce interference problems before construction begins.

About LEAP

LEAP helps engineers easily handle the vast majority of the bridges built today, with the smart choice for concrete and steel bridges. Innovative analysis, design, and load-rating functionality come together in one advanced environment with LEAP, a powerful modeling and analysis solution for small- to medium-sized concrete and steel bridges of all types. Users experience a synthesis of geometric modeling, substructure, and superstructure analysis and design, and load rating in a single, information-rich environment.

About RM Bridge

RM Bridge is a bridge design, analysis, and construction application. Engineers can perform bridge design, analysis, and construction simulation to determine resiliency during seismic and natural events and analyze rolling stock. You can streamline massive analytical tasks and save time on complex engineering issues by taking a more integrated approach in the design and construction of your bridge systems.

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- [Image 1](#)
Image 1 Caption: Mitigate risk with OpenBridge Modeler by performing conflict analysis of the bridge structure with existing infrastructure to save time, eliminate building errors, and reduce project costs. View clashes in 3D or in table format. Check for required minimum clearances between adjacent structures and roadways.
- [Image 2](#)
Image 2 Caption: RM Bridge rendering of Halsafjorden supported suspension bridge.
- [Video](#)
OpenBridge Modeler