

Integrated structural modelling

Bentley's launch of ISM allows structural engineers to participate in multi-disciplinary, integrated project workflows and get more value from BIM

Bentley Systems, Incorporated has launched its Integrated Structural Modeling (ISM) methodology for structural project information, bringing structural engineers into the mainstream of integrated project workflows. They also can take advantage of Building Information Modeling (BIM) best practice. ISM's flexible workflows support design review of various structural assets, such as buildings, bridges, towers, and industrial structures, by aggregating information-rich content, in both proprietary and interoperable formats, from multiple data sources. The benefit is intelligent structural designs, more successful projects, and better-performing buildings and structures of all types.

The new apps – consisting of Structural Synchronizer V8i and Structural Dashboard V8i – let structural engineers immediately and quickly use ISM in their integrated projects. Both can be downloaded for no charge from the website at (www.bentley.com/getISM).

Structural Synchronizer

Structural Synchronizer provides:

- A shared repository of common structural model data;
- The ability to track revisions and compare differences between versions;
- Enhanced coordination through the synchronisation of data

across products;

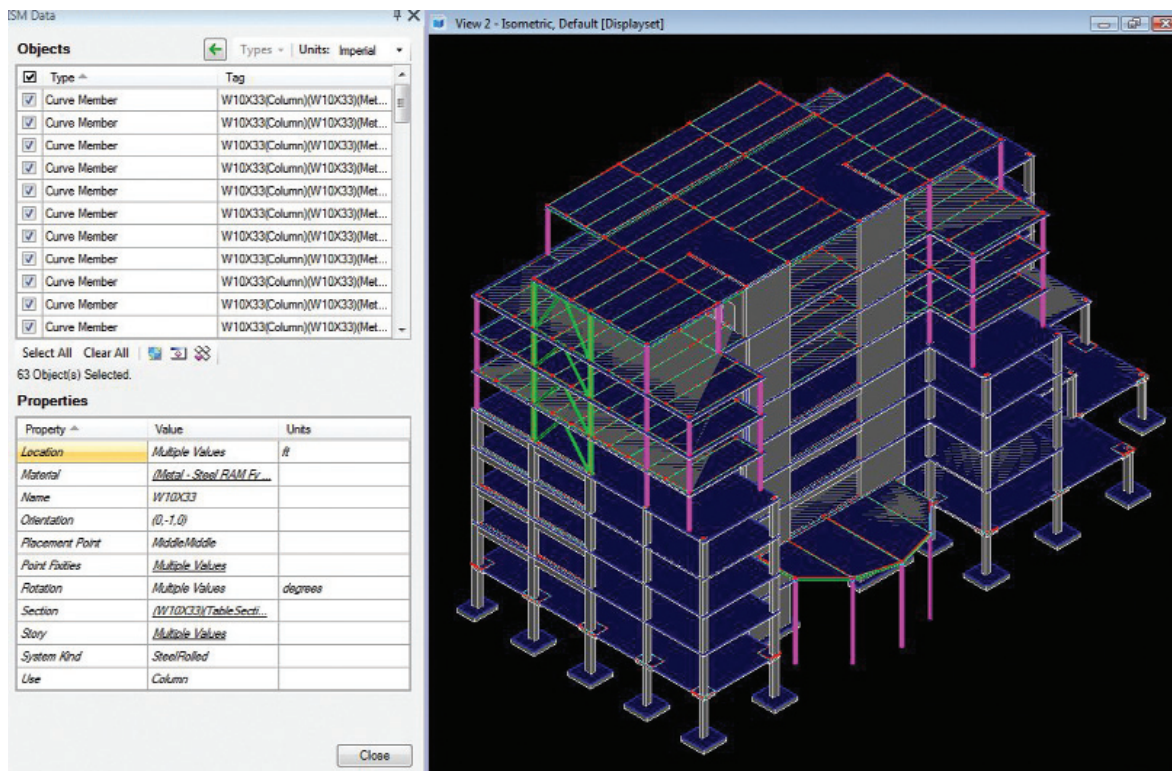
- Review facilitated by a structural model and drawing viewer with data interrogation capabilities;
- Integrated applications and data for structural modelling, structural analysis and design, structural documentation and drafting, structural detailing and fabrication, plus industry-neutral formats;
- An open API enabling third-party vendors to integrate with the ISM workflow.

Structural Dashboard

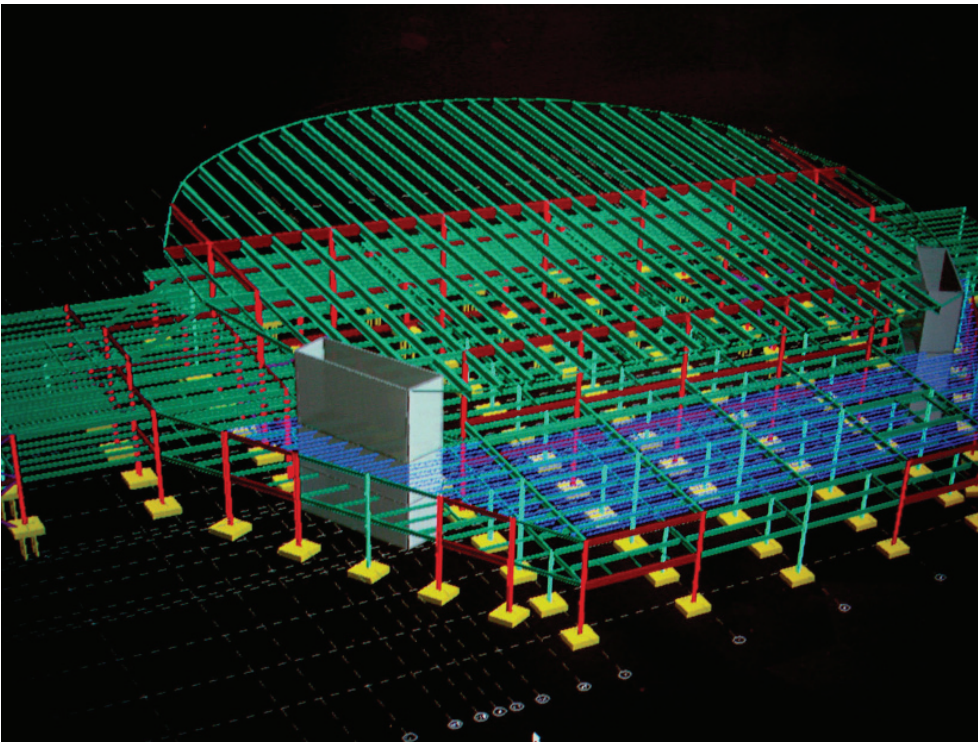
Structural Dashboard enables structural engineering professionals to:

- Manage workflows for common project types;
- Launch all structural applications from a unified interface;
- Create customised workflows specific to individual projects;
- Receive structural news from customisable RSS feeds;
- Join a structural online community and access blogs, wikis, and forums;
- Download product upgrades from the Bentley SELECTserver;
- Manage project files and links within project workflows.

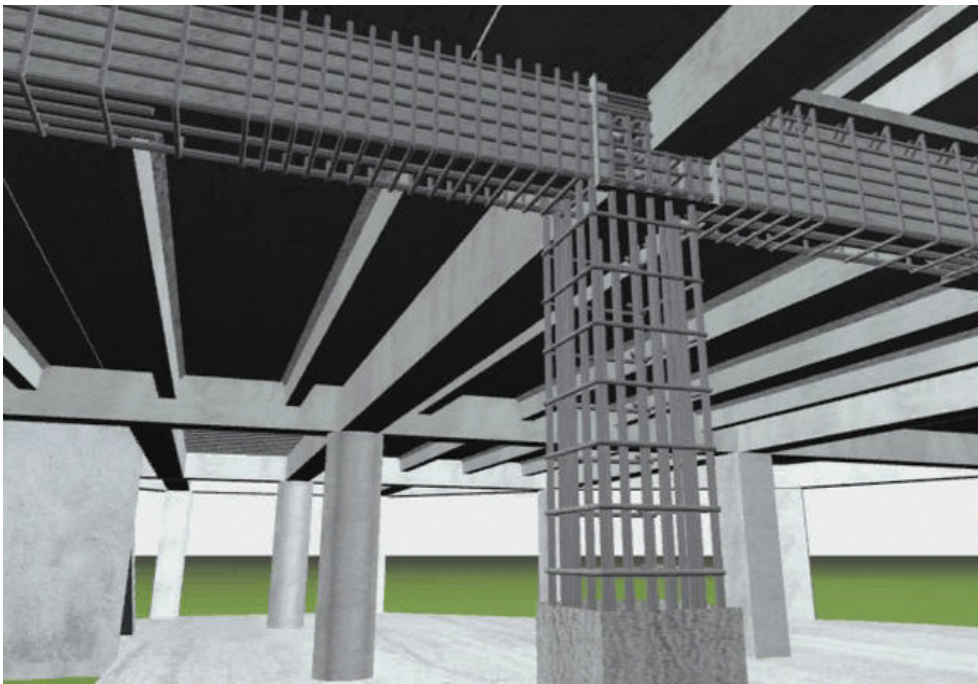
1 Structural Synchronizer as viewer



- 2 Modelling a building
- 3 Modelling reinforced concrete components



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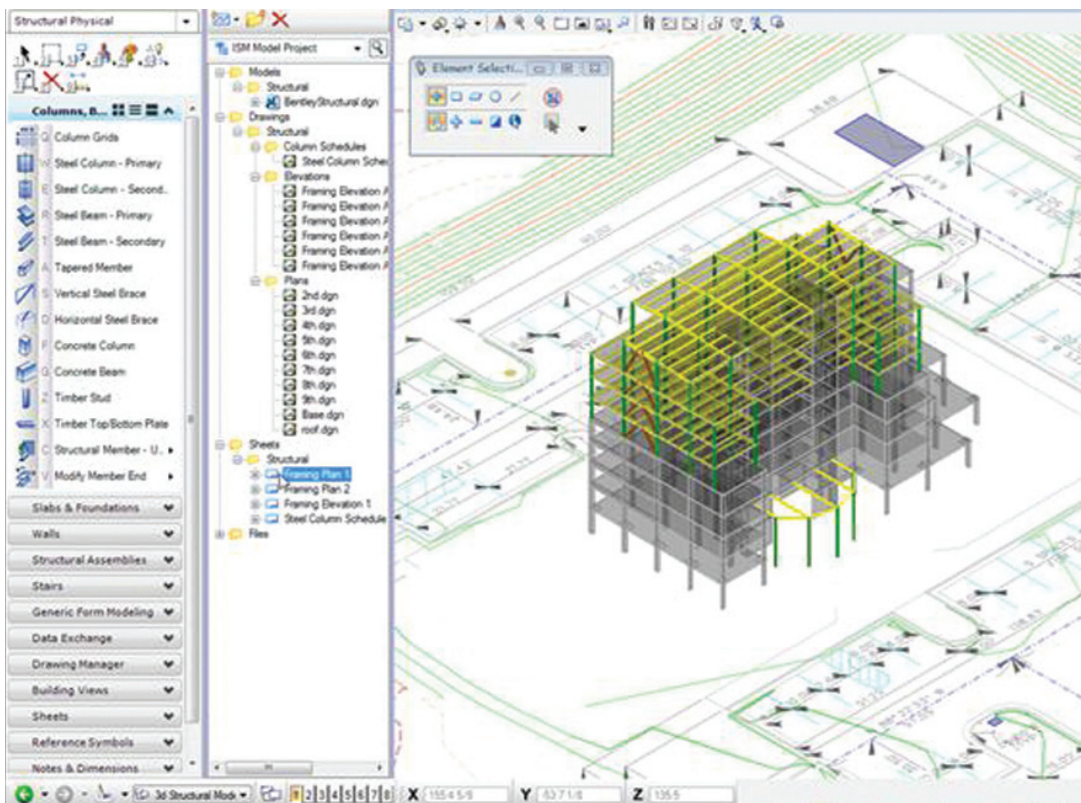
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Up to now, a lack of interoperability among software applications has kept most engineers from sharing the maximum business value that can be derived from integrated projects and the BIM best practices required for their successful completion.

According to McGraw-Hill Construction's SmartMarket Report 2009 *The Business Value of BIM*, almost 50% of the AEC industry is now using BIM, and the vast majority of these users, including architects, contractors, and owners, are experiencing real business benefits directly attributable to BIM. Strikingly, however, the study also points out that less than half of the engineers employing BIM experience a positive return on their investment (ROI) – with one-third saying they are seeing a negative ROI. When asked for the top factors that would increase an engineering firm's ability to see

business benefits from BIM, 83% of the engineers surveyed ranked improved interoperability among software as 'highly important'.

Bentley has addressed this problem and, through its new ISM, has brought structural engineers integrated-project benefits. Facilitated by Bentley's new i-model container for open infrastructure information exchange and Structural Synchronizer V8i and Structural Dashboard V8i apps, ISM maximises the interoperability of structural information among different specialised applications, CAD and BIM platforms, and design review environments. The resulting integrated structural information workflows enable structural engineers to add value to, and now get value from, integrated projects.



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Santanu Das, Bentley Vice President, Integrated Engineering Group, said: 'Integrating the structural project workflow – including modelling, analysis, design, documentation, and detailing – through ISM enables structural engineers, detailers, and fabricators to dramatically improve project efficiency and safety, reduce errors, and enhance quality control. Moreover, it enables engineers to investigate more design iterations and what-if scenarios, and brings downstream processes, such as fabrication, into consideration much earlier.'

'Although those using Bentley's intra-operable structural products and dynamic collaboration software will gain the most advantages from ISM, every structural engineer and every project employing this new methodology will realise significant benefits. We've done this to ensure better-performing, more successful projects, and, thereby, help sustain the structural engineering professions.'

Das continued: 'The breadth and depth of Bentley software, combined with its industry-leading intra-operability, enable our users to analyse, design, document, and deliver structures in an integrated project workflow that maximises the application intelligence at each step. But with the new ISM apps, project teams ultimately will be able to deploy a wide array of applications from multiple vendors and maintain interoperability throughout the structural project lifecycle.'

ISM-enabled structural tools currently include Bentley's Structural Modeler (formerly known as Bentley Structural), RAM Concept, and RAM Elements, as well as Autodesk Revit. For additional information about ISM and these products, and to download Structural Synchronizer and Structural Dashboard free, visit www.bentley.com/ISM.

Bentley's comprehensive portfolio of software is available through a number of innovative subscription offerings, including Bentley's Enterprise License Subscription, SELECT subscription, and new Passport Subscriptions that provide an affordable alternative to perpetual license purchases for architectural, engineering, and mapping professionals. For additional information, visit the website: (www.bentley.com/subscriptions).

Structural software portfolio

Bentley's structural software portfolio includes applications within RAM, STAAD, ProSteel, Structural Modeler, and Bentley AutoPIPE offering post-tensioned slab and mat design, reinforced concrete design, steel connection design, advanced analysis such as nonlinear and base isolators, fabrication detailing, pipe stress analysis, 3D modeling and 2D drawing production, and much more. For additional information about Bentley's structural software portfolio, see website (www.bentley.com/structural).

Further information

For additional information about Bentley, see website (www.bentley.com). To subscribe to an RSS feed of Bentley press releases and news alerts, see: (www.bentley.com/rss/news). To view a searchable collection of innovative infrastructure projects from the annual Be Inspired Awards, visit (www.bentley.com/yearininfrastructure). For information about Be Communities, a professional networking site that enables members of the infrastructure community to connect, communicate, and learn from each other, visit (<http://communities.bentley.com>).