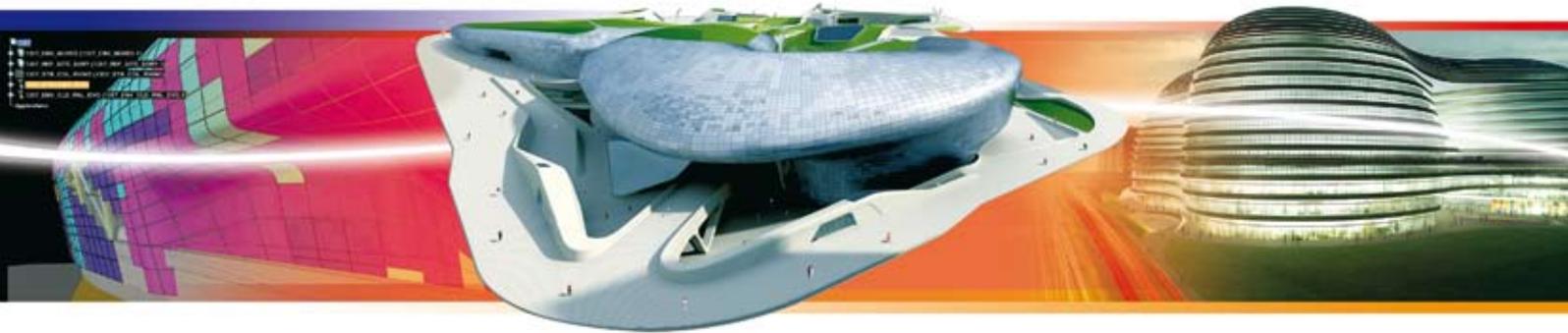


Zaha Hadid Architects

Developing grandly innovative building projects with software from Dassault Systèmes partner Gehry Technologies



Overview

■ Challenge

Zaha Hadid Architects needs to design and produce unique, iconic building developments quickly with high levels of engineering accuracy and minimal risk throughout the process.

■ Solution

The renowned firm uses CATIA-based 3D Building Information Modelling system Digital Project from Gehry Technologies to control, accelerate, and automated productivity.

■ Benefits

Efficiency, quality and ingenuity have flourished with improved control, making more time for innovation and creativity.



“CATIA-based Digital Project from Gehry Technologies allows us to tackle projects better, faster and in more detail to explore a greater range of solutions.”

Cristiano Ceccato
Associate
Zaha Hadid Architects

ZAHA HADID ARCHITECTS

Designing a vision

Zaha Hadid Architects is a London-based firm of more than 300 professionals that pushes the boundaries of architecture and urban design. The firm's work experiments with spatial quality, extending and intensifying existing cities and landscapes in the pursuit of a visionary aesthetic on a huge and complex scale.

Revolutionary facades and the use of glass, steel and composites in entirely new structural ways require unique processes and special methodologies. Functional, environmental and sustainable aspects of the buildings are equally complex with novel designs that must accord with practical and planning needs as well as providing significant visual and emotional responses.

Vision into practice

Taking these designs through to project delivery is a significant challenge. As building designs develop, a multitude of designers, contractors, engineers, planners, clients, project managers, fabricators, and

other stakeholders need availability to, and interaction with, accurate current project status in 2 and 3D formats to suit their needs.

Cristiano Ceccato, Associate, Zaha Hadid Architects, explained the process of developing a design into a built environment. “We explore a range of solutions from the primary gesture through the use of digital tools within the overall creative process. Numerous, often overlapping data sources are used for our work and these must be assembled and centralized, formalized and integrated, into a cogent whole. On projects of this scale and complexity, accuracy is as crucial as flexibility and speed because 3D data is a critical component of project execution.”

Building a methodology

To handle this level of complex diversity, Zaha Hadid Architects deploys Gehry Technologies Digital Project (DP). Digital Project is a 3D Building Information Modelling (BIM) system developed by Dassault Systèmes' partner Gehry Technologies, a BIM consultancy, software and services firm.



DP uses CATIA as a core engine. Currently, more than ten major schemes are being developed at the firm using DP. These include the 340,000 square meter Soho Galaxy mixed office and retail site in Beijing and the radical 85,000 square meter Seoul Dongdaemun Design Plaza that includes a museum, library and educational facilities.

Cristiano Ceccato explained how the software functions as a digital master system for its work. "These unique, highly innovative structures, and the mechanical and other services that they house, are modelled in 3D using DP, which becomes a central reference point for the design and all data associated with it. DP is an ideal repository for data from multiple sources and provides access from a single unified platform. The design capabilities of DP are the same as CATIA. This makes it very appropriate for our work and because the system operates parametrically enabling speedy multiple iterations while automatically updating the central model geometry."

Creative review

Ceccato continued, "DP allows us to creatively evolve digital 3D models while retaining original design intent. It introduces a high level of concurrent design automation that increases productivity to levels than would be difficult to achieve with any other methodology.

DP builds confidence at Zaha Hadid Architects by allowing us to design innovative, sophisticated, elegant structures on a grand scale in the knowledge that what we design can be constructed. It also provides the methodology that assures quality and accuracy throughout project processes. Risk can be accurately assessed and reduced by avoiding errors from design clashes or inaccuracy."

"As a 3D tool for concurrent collaboration and facilitator of formal centralized methods, DP allows us to leapfrog the hold-ups experienced in the conventional delivery process while giving us more time to concentrate on creativity and problem solving. CATIA methodology lets us explore more 'what-if' options and this amplifies and acts as a catalyst for innovation."

"As the central 3D design visualisation tool of our practice, Digital Project enhances the creative process while applying a strong technical and commercial foundation."

Cristiano Ceccato
Associate
Zaha Hadid Architects

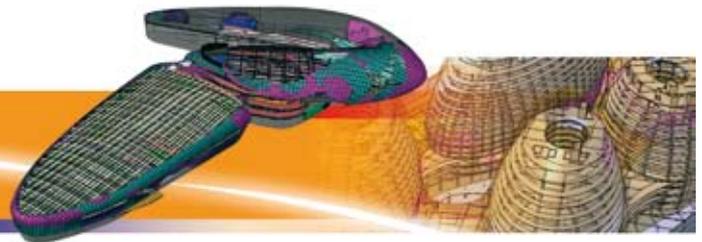
Focus on Gehry Technologies

Gehry Technologies provides building information modelling (BIM) technologies and services for construction project planning, analysis, control, and evolution. The company has provided digitally guided construction practices to a broad spectrum of professional organizations and project typologies, from commercial and institutional building projects to large-scale infrastructure works.

Gehry Technologies develops Digital Project™, a suite of integration, modelling and analysis applications. The company offers Digital Project training and consulting services, and provide comprehensive, cross platform project strategies implementing a range of building information modelling (BIM) software products and custom solutions. <http://www.gehrytechnologies.com>



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