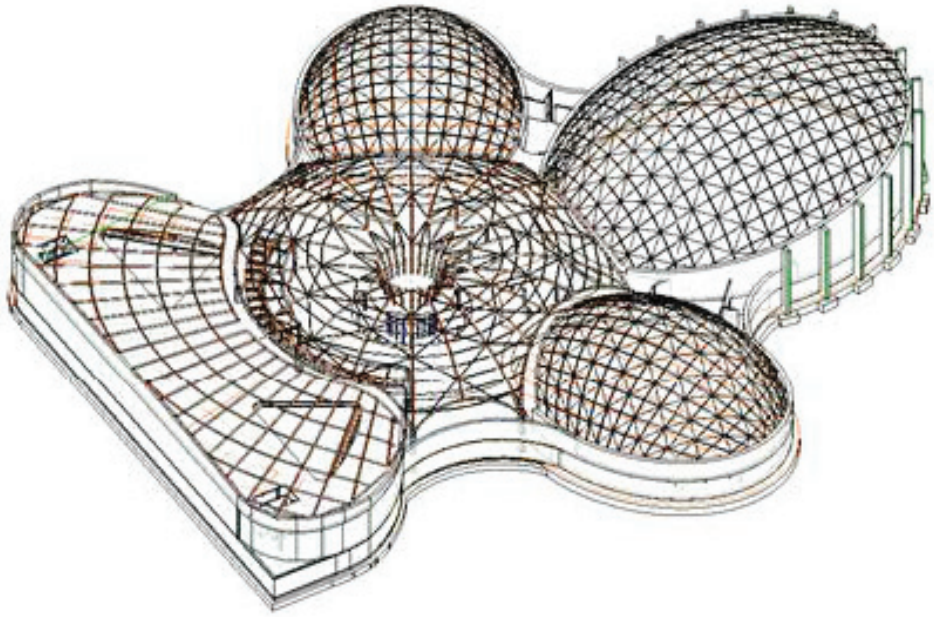
ATC 75

Improvements to BIM structural software interoperability



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Applied Technology Council

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Project management and administration are carried out by a full-time Executive Director and support staff. Project work is conducted by a wide range of highly qualified consulting professionals, thus incorporating the experience of many individuals from academia, research, and professional practice who would not be available from any single organization. Funding for ATC projects is obtained from government agencies and from the private sector in the form of tax-deductible contributions.

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ATC-75

Improvements to BIM Structural Software Interoperability

by

APPLIED TECHNOLOGY COUNCIL
201 Redwood Shore Parkway, Suite 240
Redwood City, California 94065
www.ATCouncil.org

Funded by

CHARLES PANKOW FOUNDATION
P.O. Box 820631
Vancouver, Washington 98682

PROJECT MANAGER
Thomas R. McLane

PROJECT TECHNICAL DIRECTOR
Edwin Dean

PROJECT MANAGEMENT COMMITTEE
Wai Chu
Santanu Das
Brad Douglas
Luke Faulkner
Raoul Karp
Robert Lipman
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Chi Ng
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TECHNICAL CONSULTANTS
Erleen Hatfield* (Lead Engineering Consultant
Thomas Leibach (IFC Consultant)
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Aaron White (Engineering Consultant)

PROJECT ADVISORY PANEL
Francois Grobler (Chair)
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Preface

In September 2007 the Charles Pankow Foundation awarded the Applied Technology Council (ATC) a Research Grant for the Development of Industry Foundation Classes (IFCs) for the Structural Domain (ATC-75 project). The goal of the ATC-75 project was to develop a basis for incorporating and integrating structural design parameters, codes, analysis tools and methods into the Industry Foundation Class (IFC) data model, an open-source object-oriented exchange language (file format) that is being developed by the International Alliance for Interoperability (IAI) for Building Information Modeling (BIM) software. The IFC data model is viewed as a critical component of the building industry's efforts to save time and money by enabling software platforms to "talk to each other" intelligently.

The project development effort included the formulation of a Strategic Work Plan early on in the project, and the conduct of a variety of critical tasks, including (1) documentation of structural engineering business processes, (2) development of IFC exchange requirements, (3) the conduct of benchmark and validation tests, and (4) the conduct of an information dissemination effort to distribute project results and encourage their use, all of which are described in detail in this ATC-75 Report.

The ATC-75 project was carried out by leading available design professionals, industry representatives, and software developers. Edwin Dean, Thomas R. McLane, and Michelle Kernen served, respectively, as Project Technical Director, Project Manager, and Project Administrator. A broadly based Project Management Committee (PMC), chaired by the Project Technical Director, formulated and managed the practical direction of the Project. This group consisted of Thomas Liebich, (IFC Consultant), Erleen Hatfield (Lead Engineering Consultant), Aaron White (Engineering Consultant), Wai Chu, Santanu Das, Brad Douglas, Luke Faulkner, Raoul Karp, Robert Lipman, Ken Murphy, Chi Ng, Herman Oogink, Stacy Scopano, Paul Seletsky, Matthew Senecal, Dennis Shelden, Douglas Sordyl, Rasso Steinmann, Rob Tovani, Frank Wang, Tom Williamson, and Angel Velez. Overview and guidance were provided by a Project Advisory Panel consisting of François Grobler (Chair), Chuck Eastman, Dan Frangopol, David Hutchinson (ATC Board Representative), James Jacobi, Steve Jones, Paul Mlakar, and Deke Smith. Peter Mork created the project web site and assisted in the preparation of this project report. The affiliations of these individuals are provided in the list of Project Participants

ATC gratefully acknowledges the funding provided by the Charles Pankow Foundation, the support and guidance provided by the Foundation's former and current Executive Director's, Robert Tener and Mark Perniconi, respectively, and the encouragement and support by the Industry Advocate for this project, Charles Thornton (former ATC Board President). The services of the industry representatives and software developers, who served without compensation on the Project Management Committee, are also highly appreciated.

Christopher Rojahn
ATC Executive Director

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