

BIM Resources for the AEC Community

By Thomas A. Faraone, P.E., LEED AP, Andrew W. Gayer, P.E., S.E., LEED AP, Brian M. Volpe, P.E., S.E., LEED AP and Bruce Burt, P.E.

BIM (Building Information Modeling) is all around us in the Architecture, Engineering and Construction (AEC) community. It is in our strategy sessions, our sales meetings, and our planning sessions. Our universities, business partners, and project team members are spending countless hours trying to figure out how to leverage BIM and the information held within these databases to improve the projects we work

on, and the process and workflow we implement. Sometimes we are so immersed in the topic, and so inundated with information, that we may start to feel overwhelmed with the task of staying on top of it all.

As a way to help the AEC community understand and make the transition to BIM, the SEI Committee on BIM was formed in 2007. In 2008, the committee joined forces with the

CASE BIM Committee resulting in the Joint SEI/CASE Committee on BIM, in order to consolidate efforts on providing structural engineers with a forum to discuss, research, and investigate the topic of BIM. This committee has several subcommittees, each working on various topics. The following subcommittees are currently active: BIM Implementation and Monitoring Subcommittee; Legal and Contractual Subcommittee; Development, Software and Training Subcommittee; Production Process Subcommittee; Interoperability Subcommittee.

The Joint SEI/CASE Committee on BIM web site can be accessed at www.seibim.org/about.htm.

Each of these subcommittees is working on various activities in an attempt to gather and distribute data to the engineering profession relevant to the topic of BIM. As this is an ever-changing and ever-evolving topic, it is the intent of this committee to provide a forum for structural engineering professionals to access and gain a better understanding of BIM and how it is affecting our profession. It will also be a forum where knowledge of the complexities, hurdles, benefits and best practices can be shared to enable our organizations and the engineering profession to continue to move forward.

Over the next few months, the Interoperability Subcommittee will publish a series of articles beginning with this one. The intent of these articles is to bring some clarity and definition to some topics of interest in the realm of interoperability. The following articles will be presented over the coming months:

- BIM Power: Interoperability
- API's, Neutral File Formats and IFC's
- Legal and Practical Issues

These topics will be discussed in detail, with the intention of presenting this information and the research that goes into them as a topic item at the Joint 2010 AISC/Structures Congress in Orlando, FL. As an introduction to this series of articles, the Joint SEI/CASE Committee on BIM has compiled a list of resources. This resource list is meant to be comprehensive in nature and provide an overview of organizations, publications, software companies, university research programs and websites that are critical to the development of BIM. While there is no way to include every resource, we hope this collection will be useful. These resources will be placed on the Joint SEI/CASE Committee on BIM web site at www.seibim.org/resources.htm. We would appreciate and encourage the readers to assist this committee in continuing to develop this resource list. Please send relevant resources or other information that has not been included to resources@seibim.org. We will evaluate all emails and continue to update the list on the SEI/CASE Committee BIM web site.



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SEI BIM Committee Resource List

ORGANIZATIONS

- AEC Bytes: www.aecbytes.com/
- AGC BIMForum: www.bimforum.org
- Alliance for Construction Excellence: <http://construction.asu.edu/ace>
- Applied Technology Council: www.atcouncil.org/atc75.shtml
- buildingSMART Alliance: www.buildingsmartalliance.org/
- SEI-CASE Joint Committee on BIM: www.seibim.org
- IAI International: www.iai-international.org/
- OmniClass: www.omniclass.org/
- National Institute of Building Sciences: www.nibs.org/index.html
- National Institute of Standards and Technology (NIST): www.bfsl.nist.gov/top/Whatwedo.htm
- Whole Building Design Guide (WBDG): www.wbdg.org

UNIVERSITY RESEARCH PROGRAMS

- CIS/2 at Georgia Tech: www.coa.gatech.edu/~aisc/index.php
- Stanford University Center for Integrated Facility Engineering: <http://cife.stanford.edu/>

SOFTWARE COMPANIES

- Autodesk Revit Structure: <http://usa.autodesk.com/adsk/servlet/index?id=5523749&siteID=123112>
- Bentley Structural: www.bentley.com/en-US/Products/Bentley+Structural/
- Tekla Structures: www.tekla.com/INTERNATIONAL/PRODUCTS/TEKLA-STRUCTURES/Pages/Default.aspx
- Navisworks: <http://navisworks.com/>
- Solibri: www.solibri.com/
- Gravisoft: www.graphisoft.com/partners_product.php

PUBLICATIONS

- AGC Contractors Guide to BIM: www.agcnebuilders.com/documents/BIMGuide.pdf
- AIA Integrated Project Delivery: www.aia.org/ip_default
- AISC: www.aisc.org/Content/NavigationMenu/Steel_Solutions_Center/My_Project/Utilizing_CIS2_Interoperability/Interoperability_white_paper11_29.pdf
- GSA BIM Guidelines: www.gsa.gov/bim
- National BIM Standard (NBIMS): www.buildingsmartalliance.org/nbims/
- NIST General Buildings Information Handover Guide: http://cic.nist.gov/staff/NISTIR_7417_GBIHG_2007-08.pdf
- Smart Market Report: www.buildingsmartalliance.org/pdfs/mhc_bim_smartmarket.pdf
- NIST CIS/2 and IFC - Product Data Standards for Structural Steel: <http://cic.nist.gov/vrml/cis2.html>, www.aecbytes.com/buildingthefuture/2005/CIS2format.html
- Industry Foundation Classes - Release 2x (IFC 2x), IFC Technical Guide, Enabling Interoperability in the AEC/ FM, 2000: www.iai-international.org/Model/documentation/IFC_2x_Technical_Guide.pdf

FORUMS & BLOGS

- All Things BIM: <http://allthingsbim.blogspot.com/>
- BIM & Beam: <http://bimandbeam.typepad.com/>
- Revit OpEd: www.revitoped.com/

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