INTRODUCTION

Curious about how Building Information Modeling (BIM) affects the profession? Hear an honest assessment about the benefits and challenges of BIM from professionals using related software as part of their project workflow. Learn the associated terminology so you can talk to clients and consultants intelligently about BIM.

SPEAKERS

Brandon Hartz, ASLA, LEED AP
Senior Landscape Architect, HOK, Washington, DC

Jessica M. Henson, ASLA
Senior Landscape Architect, OLIN, Chicago, Illinois

Danelle Briscoe, Assoc. AIA
Assistant Professor, University of Texas
Austin School of Architecture, Austin, Texas
BIM IN LANDSCAPE ARCHITECTURE: OPPORTUNITIES AND CHALLENGES

LEARNING OBJECTIVES

• Understand opportunities and limitations of BIM for landscape architecture applications.
• Understand which types of projects might benefit from the use of BIM.
• Learn the basic terminology associated with BIM software.
• Understand lessons learned and best practices from firms leading the effort on BIM integration.

FURTHER READING / REFERENCE


http://www.di.net/articles/landscape_information_modeling/ (Retrieved December 28, 2014)
BIM IN LANDSCAPE ARCHITECTURE:
OPPORTUNITIES AND CHALLENGES

WHAT IS BIM?

a. Introduction to speakers

b. Introduction to case studies (referred to throughout the presentation)
   i. Arnold and Porter Roof Terrace (HOK)
   ii. US Embassy in London (OLIN)
   iii. Green Wall Garage Pilot Project (University of Texas at Austin, School of Architecture)

c. Basic terminology
   i. Available software
   ii. Parametric modeling
      1. 3 dimensional “building” components
      2. Views
      3. Annotations
BIM IN LANDSCAPE ARCHITECTURE: OPPORTUNITIES AND CHALLENGES

DIFFERENCES BETWEEN BIM AND 2D DRAFTING

a. Drafting software
   i. 2D or 3D lines represent elements
   ii. Navigating model versus paper space
   iii. Drawing References
   iv. Plug-ins can help manage information
   v. Making changes

b. BIM software
   i. Building a parametric model
   ii. Model navigation
   iii. Drawing References
   iv. Scheduling
   v. Making changes becomes efficient due to Bi-Directional Associativity

BIM WORKFLOW

a. Collaboration
b. Managing Model
c. Managing plotsheets
BIM IN LANDSCAPE ARCHITECTURE: OPPORTUNITIES AND CHALLENGES

ARNOLD AND PORTER ROOF TERRACE

i. Opportunities
   1. Design and document concurrently
   2. Ease of coordination with building engineers, architects, and interior designers
   3. Generate multiple views to explain complex geometries

ii. Challenges
   1. Software tools not designed for landscape architects
   2. Lots of up-front effort getting model prepared and families generated
   3. Planting

images courtesy of HOK
BIM IN LANDSCAPE ARCHITECTURE:
OPPORTUNITIES AND CHALLENGES

i. Opportunities
1. Regular exchange of models allowed for quick coordination of areas over structure
2. Developing a “coordination” workset designed as an interface with structural engineer
3. Using the options feature to quickly model multiple versions of a particular condition
4. Ability to view any aspect of the building allowed coordination of interior garden spaces

ii. Challenges
1. Showing depth of topographic surfaces in areas over structure
2. Model size
3. Integrating the existing office workflow and institutional knowledge into Revit
BIM IN LANDSCAPE ARCHITECTURE: OPPORTUNITIES AND CHALLENGES

GREEN WALL GARAGE PILOT PROJECT

i. Opportunities
1. Design and document concurrently
2. Ease of coordination with architect, landscape architect, ecologist, facilities maintenance and urban designer.
3. Generate planting plan from ecologist’s CSV data through visual programming Dynamo
4. Scheduling

ii. Challenges
1. Rendering RCP plant files
2. Model preparation
3. Collaboration learning curve
4. Resolution/file size