




American Concrete Institute®
Advancing concrete knowledge

Advancements in the Use of Building Information Modeling (BIM) Systems

ACI Fall 2012 Convention
October 21 – 24, Toronto, ON

ACI
WEB SESSIONS



Leveraging Structural BIMs to Increase Efficiency

by
Mike Buckley, Practice Leader for Structures, Halsall Associates, Toronto, ON, Canada

ACI
WEB SESSIONS



Halsall

Leveraging Structural BIM's to Increase Efficiency

October 22, 2012 – ACI Convention Fall 2012

Agenda

- Implementation
- BIM Workflows
- Future of BIM
- Case Studies



Redevelopment of Frank Clair Stadium
Ottawa, ON
Cameron Design


BIM at Halsall




- Producing contract documents with BIM on a variety of projects
- Producing models for our DBFM pursuits

Caesars Windsor Hotel & Casino

Implementation





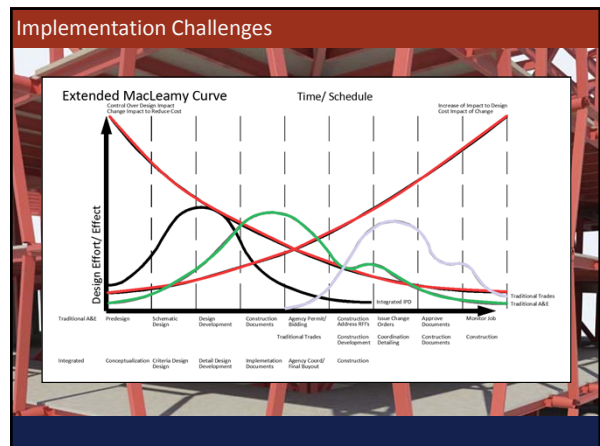
ROM Crystal Expansion Toronto, ON
Studio Daniel Libeskind / B + H Architects

Image Courtesy of Waters, Inc.

Implementation Challenges

Structural model that can be used by others to produce drawings

Structural drawings as traditionally delivered to satisfy current contracts



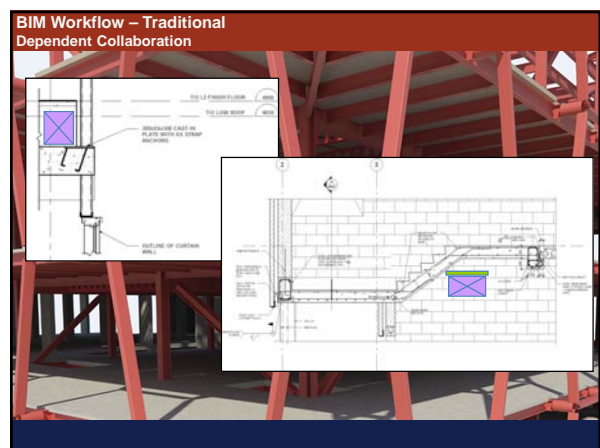
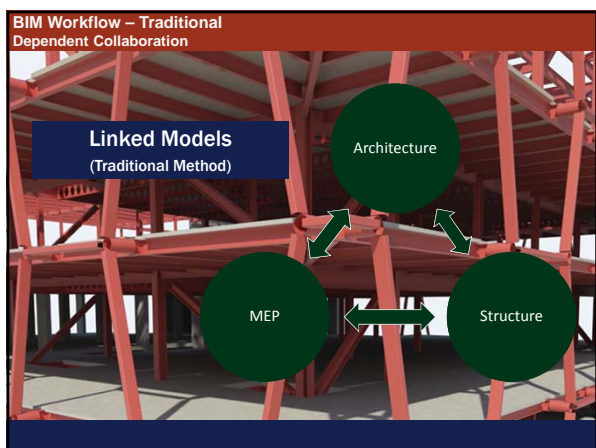
BIM Workflow

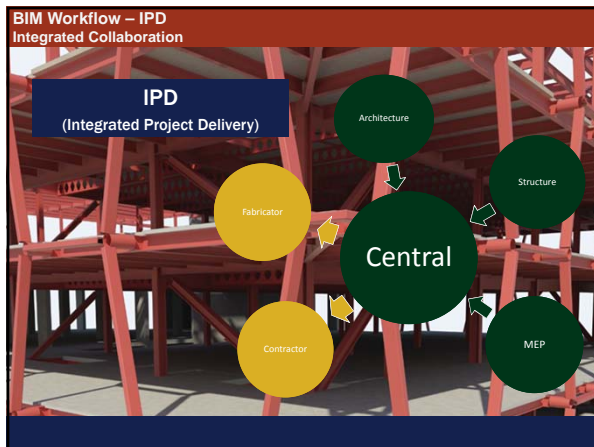
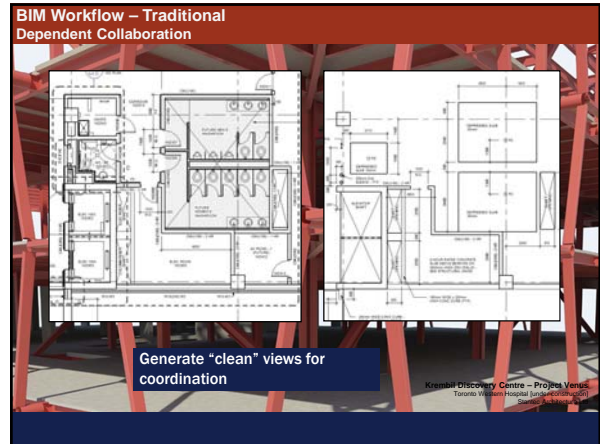
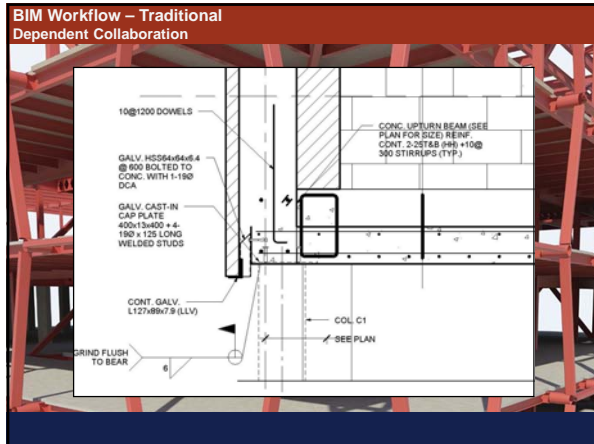
BIM PROJECT EXECUTION PLANNING GUIDE
VERSION 2.1
RELEASED - MAY 2011

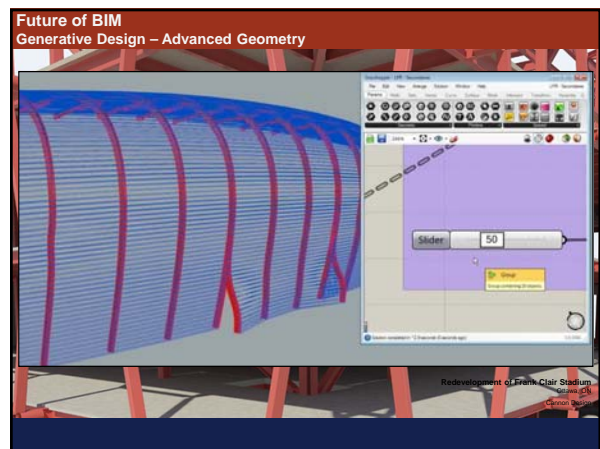
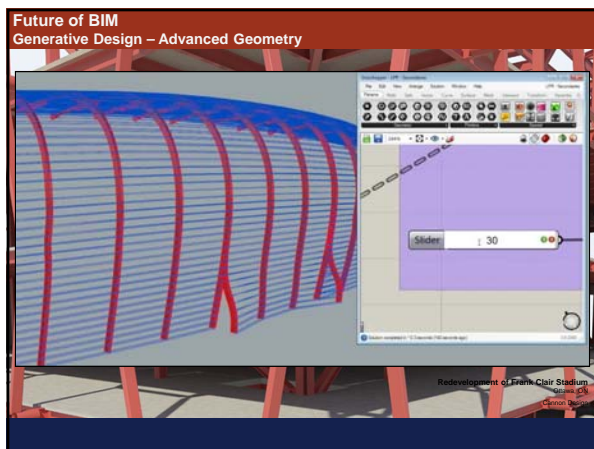
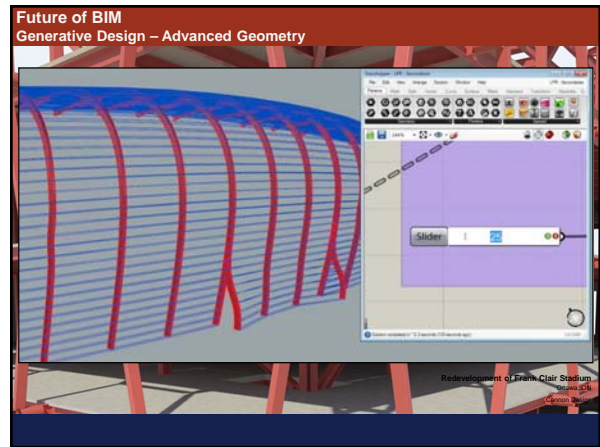
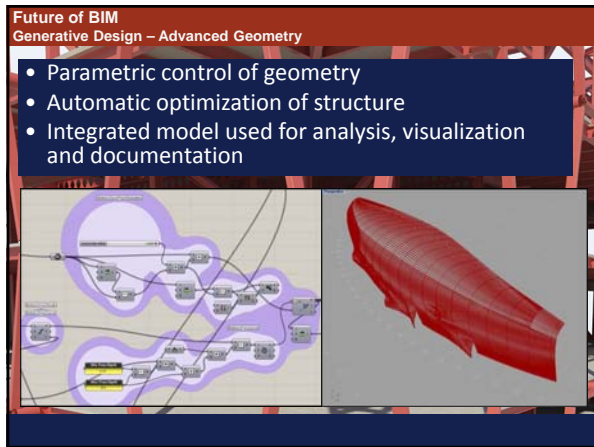
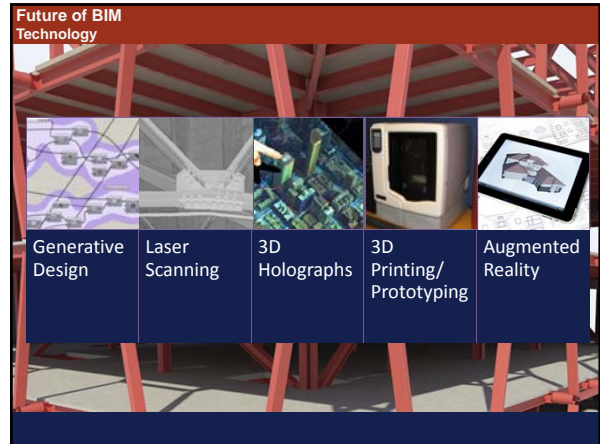
Phase	Activity	Responsible Party	Start Date	End Date	Status
Conceptualization	Develop PEP	Owner	2011-01-01	2011-01-31	Complete
Criteria Design	Develop PEP	Owner	2011-02-01	2011-02-28	In Progress
	Review PEP	Owner	2011-03-01	2011-03-31	Not Started
Detail Design	Develop PEP	Owner	2011-04-01	2011-04-30	Not Started
	Review PEP	Owner	2011-05-01	2011-05-31	Not Started
Implementation	Develop PEP	Owner	2011-06-01	2011-06-30	Not Started
	Review PEP	Owner	2011-07-01	2011-07-31	Not Started
Agency Control	Develop PEP	Owner	2011-08-01	2011-08-31	Not Started
	Review PEP	Owner	2011-09-01	2011-09-30	Not Started
Construction	Develop PEP	Owner	2011-10-01	2011-10-31	Not Started
	Review PEP	Owner	2011-11-01	2011-11-30	Not Started

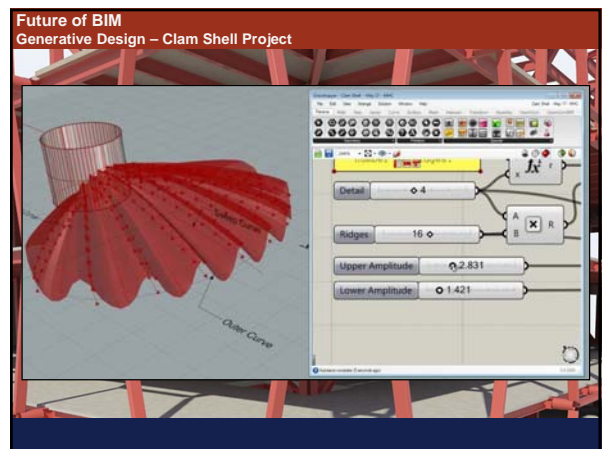
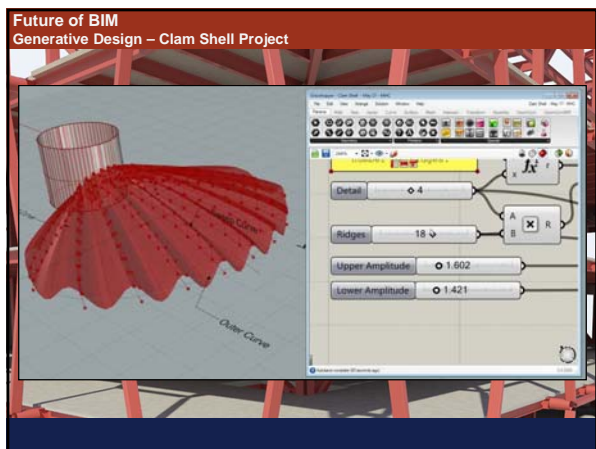
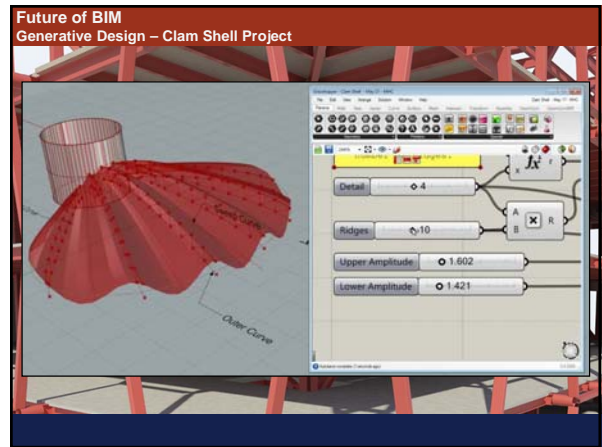
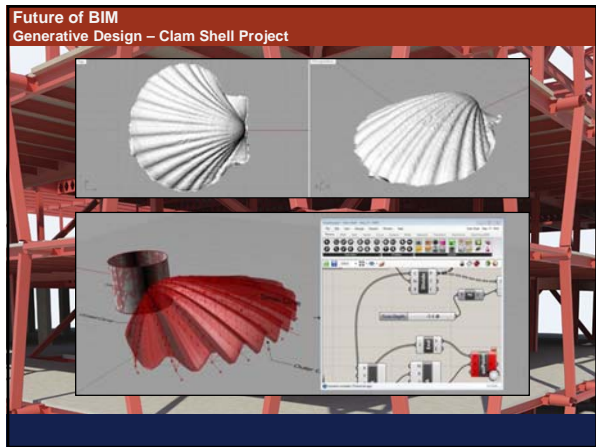
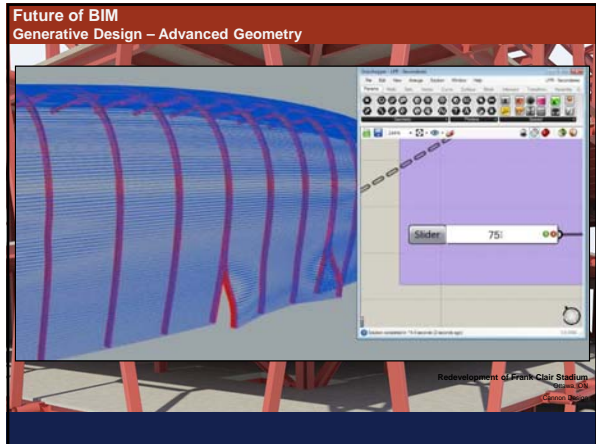
BIM Workflow Communication

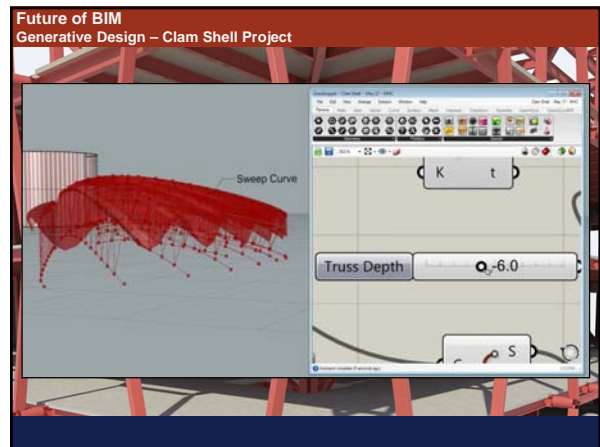
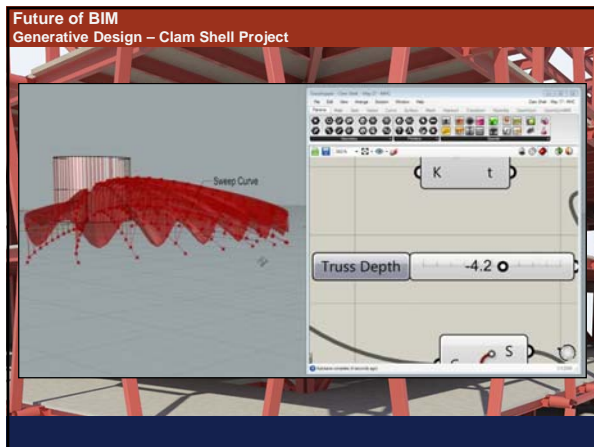
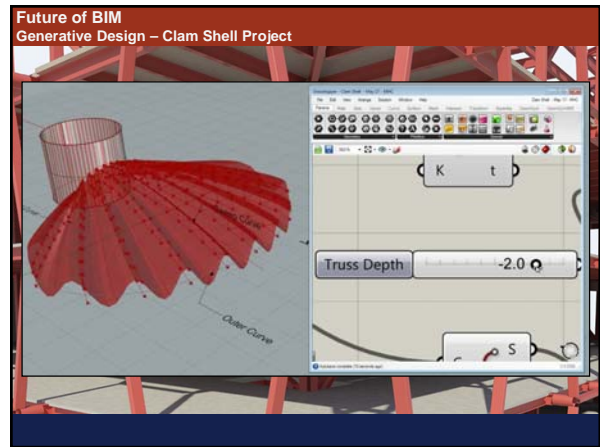
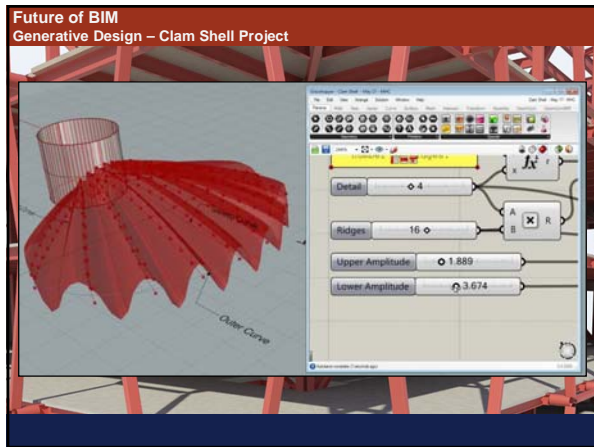
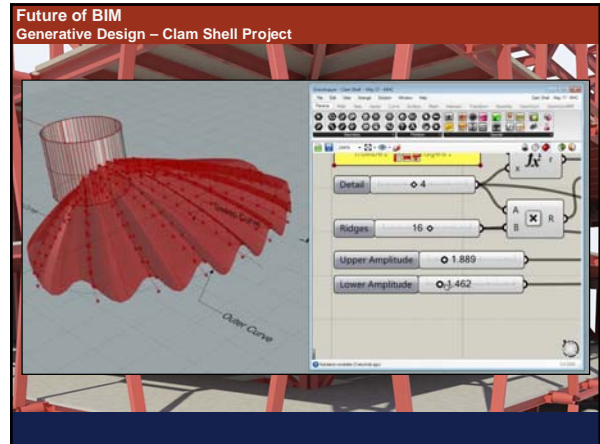
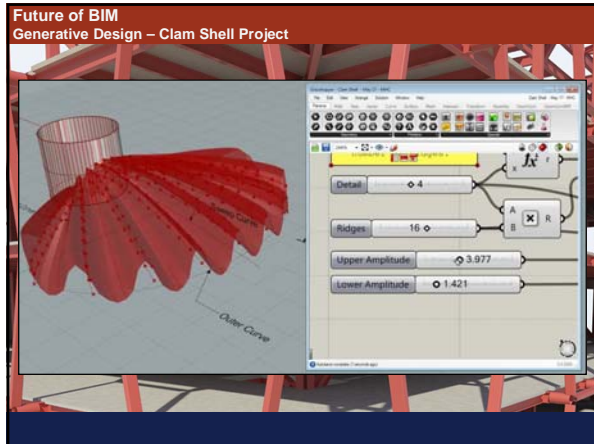
- Have a BIM start-up meeting, even if it's just internal!

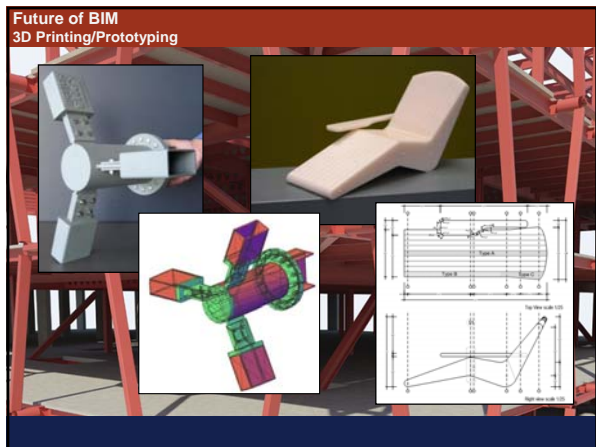
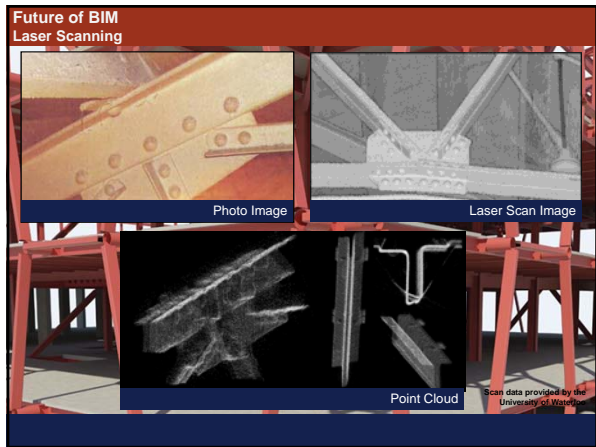
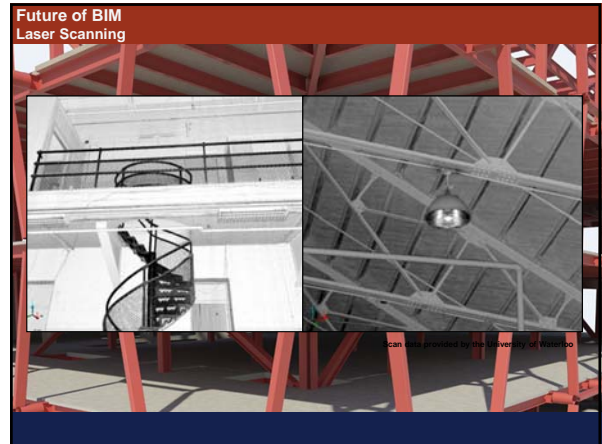
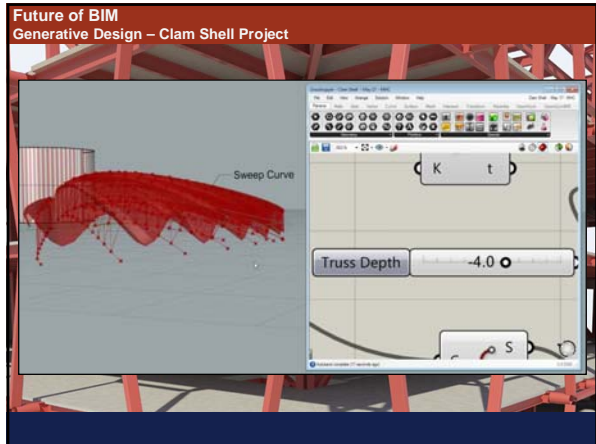












Spadina Footbridge – Waterfront Toronto
 Toronto, ON [design complete] - West 8 + DuToit Allsop Hillier

- All node details are live views of the model
- Fabricator to machine glulam from the structural model

Majdoul Tower
 Riyadh, Saudi Arabia [under construction] – Zeidler Partnership Architects

Toronto Western Hospital Krembil Discovery Centre
 Toronto, Ontario [under construction] – Stantec Architecture Ltd.

Humber River Regional Hospital & Parking Garage
 Toronto, Ontario [under construction] – HDR Architects

Conclusion

Questions?

Institute for Quantum Computing and Nanotechnology
 Waterloo, ON
 KPMB Architects