AUTODESK UNIVERSITY

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Model Based Quantity Takeoff Doesn't Always Add Up

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Learning Objectives

- Learn how Holder uses model-based takeoff in project estimation
- Understand Holder's tools and workflows for BIM QTO
- Discuss quantification tools currently available in the marketplace
- Discuss the future of model-based quantification and the real needs that still must be filled by future tools

Description

Model-based quantification has long been one of the promising applications of Building Information Modeling (BIM). As many in the industry have, Holder Construction has found ways to pull quantities from models to drive project estimation. In this presentation, we will share some of our tools and processes. Additionally, we will discuss many model-based quantification tools currently available, and why there continues to be a need for better tools built for preconstruction and estimating professionals. This session features Revit, BIM 360 Glue, and Navisworks Manage.

Learn how Holder uses model-based takeoff in project estimation / Understand Holder's tools and workflows for BIM QTO

Introduction
- o About Holder
- o About the speakers

Holder's Model Based QTO Philosophy
- o Nothing should be automagic™
- o College educated people should be counting doors
- o Model must be validated against contract documents
- o Not necessarily trying to save time, just redirect time towards thinking like a builder
- o QTO and estimating are separate activities

How Holder does model based QTO Today
- o Everything is in revit
  - ▪ Occasionally we dabble in other programs, but generally it's revit
- o Concrete – as an example
  - ▪ Project parameters to add information to model
    - Validate against documents
      - o Correct discrepancies
    - Add more information to the model
      - o Concrete mix design
      - o Separate structure into budget areas
      - o Add assumptions
  - ▪ Import template schedules
  - ▪ Adjust schedules
  - ▪ Export data and add to our magic spreadsheet
    - Uses known model information to estimate items not modeled
      - o Formwork, resteel, etc
  - ▪ Export final quantities from excel tool into estimating system

Why is that so boring when there are all these cool solutions out there?
- o Now we're going to hurt some feelings
  - ▪ Those tools aren't good enough
- o Well that's not fair they're just flawed - today

Discuss quantification tools currently available in the marketplace

Other solutions - Pros and Cons
- o Autodesk QTO
- o Navisworks
- o Solibri
- o Assemble
- o Tekla
- o Vico
- o CostX
- o iTwo

- Beck

Discuss the future of model-based quantification and the real needs that still must be filled by future tools

Got anything positive to say before we're done?
- Lots of solutions are right on the edge of greatness
- Our opinion on what will take us to the next level
    - We need to focus on who the intended user is
        - BIM/VDC experts vs Preconstruction/Estimators
        - Estimators need tools that don't require BIM expertise
    - Larger platform solutions need to be modular enough to only use some parts
    - Need to be able to make changes without editing the model
        - Split elements etc
    - Quantification needs to scale with model LOD
- We are on the edge of having many great solutions from many software providers
    - Soon we may have to many good solutions