Collecting, Cataloging, and Leveraging Room Data

Nicholas Kramer
HMC Architects | Project Leader/ BIM Project Administrator
Revit Technology Conference | Program Manager – North America
Class Summary

**AB2579** Building Information Modeling: the Building and Modeling parts seem to be down pretty well. It’s the Information that continues to evolve and change the AEC industry. The problem with the Information is not its existence, but rather its longevity and connection to the Building. The Information exists, but in too many forms; spreadsheets, databases, catalogs and other miscellaneous documents. The question is, how do you tie these other data sources to the Model?
Learning Objectives

At the end of this class, you will be able to:

- Build families for data harvesting
- Describe options for collecting and cataloging room data
- Explain your options for data export to Microsoft® Excel®, Microsoft® Access®, and MySQL
- Maintain information from design through facilities management
Data Harvesting | Revit Tips

Consistency

- Standards
  - Company Standard not project or personal
  - Not centered around one discipline
- Shared Parameters
  - Way Finding
  - Naming
Data Harvesting | Revit Tips

- Single Connection Point
  - What is the data origin?
- Super Families
  - Change Parameters not Families
  - 2d/ 3d
  - Central data location
- What is in Revit
  - Data, Geometry or Both?
Data Harvesting | Data Only Families

- Data Rich
- Geometrically Weak

- Uses
  - Large Projects
  - Non rendering/visualization
  - Production Drawings

- Swap Families
Data Harvesting | Geometry Only Families

- Real world Geometry
- Light on Data
  - Maintain data connection point

- Uses
  - Smaller Projects?
  - Design
  - Renderings/ Visualization

- Swap Families
Collecting and Cataloguing Data | Routes
Data Routes | Internal

Data Rich Families | Single repository for all information

- Drawings, Schedules, Estimates from single source
- Minimize errors and risk
- Everyone must work in and own Revit
- Heavy modeling
Data Routes | External

Data Dumb Families | Multiple repositories for information

- Use most efficient program for the task
- Less learning curve
- Models contain only as much information as needed
- Multi source coordination
- Errors and Omissions
Data Routes | Round Tripping

Data Origin

- Revit
  - Simple starting point
  - Unique ID (not element ID)
  - Deletion breaks the link
  - Project start in Revit?

- Outside Database
  - Data ≠ Model
  - Unlimited data sources/origins
  - Complex backend setup
Data Routes | Central Database Options

- Rdb Link
  - Powerful
  - Connects to most databases
  - Requires Programming
- Excel
  - Universally Used Program
  - Schedule Export
  - BIM Link
  - Revit Excel Link
Creating an Ecosystem
Creating an Ecosystem | Gestalt

- Multipoint access
- Revit (and other BIM platforms), PDF, Excel (or any other database)
- Usable points for all project team members
- Programming; Details; Schedules; Version tracking; Estimating; QA; Facilities Management;
  + more
Creating an Ecosystem | Data CCL

- **Data Collection**
  - Multisource harvesting
  - Multipoint access

- **Cataloguing Data**
  - Authors maintain data seamlessly
  - Database backend challenges

- **Leveraging Data**
  - Data lifecycle
  - Platform Neutral
Collecting | Starting Out

- Data does not need to originate in Revit
  - Bi-directional linkages
- Unifying Factors
  - Revit
  - Prepopulated
  - Manual
  - Both
Collecting | Determining Your Needs

- Intended Uses
  - Programming
  - Documentation
  - Construction
  - Maintenance and Operations
- Revit
  - Schedules
  - References
Collecting | Excel Links

BIM Link/ Revit Excel Link
- Separate Data Sets
- Access to Unique ID
- Raw Data | no calculations/ work in export
- Excel formatting
  - Materials = Text
  - Lengths + Integers are Numbers
- Separate Excel Files
  - Export/ Import
  - Working
Cataloguing | Big Data

- Room Data Examples
- Categories = Islands
  - workFlow | Bridging the Divide
- Limited Revit Users
- Data Warehouse | Excel
Cataloguing | Bridges

- External Edits
- workFlow
  - autoLink
  - Finish Floors
Leveraging
Leveraging | Formats

- Portable Formats
  - PDF
  - DWF
  - Excel (kind of)
Leveraging | Connections

- Blink Forward
  - Agnostic Authorship
  - Links
  - Tracking
  - Secondary Product
Leveraging | Connections

- DWF
  - Native | Autodesk Authorship
  - Built In
  - Users
  - Limits
Leveraging | Connections

- Excel
  - Original database
  - Platform Inconsistencies
Gestalt | Data Lifecycles

- Plan First
- Start Small
- Project team
- Just because you can...
Gestalt | Super vs. Stupid

Building Information Model
Gestalt | Questions

Is this your BIM?

nicholas.kramer@rtcevents.com  bugie@live.com  nicholas.kramer@hmcahitects.com

Nicholas M. Kramer