You Are Now a BIM/VDC Coordinator: A Talk About the Journey and What Happens Next

Brett Gatti
BIM Coordination Specialist/BIM Manager
IBI Group – brett.gatti@ibigroup.com
The Genesis of a Session

When thinking about the role of a BIM/VDC Coordinator, I realized that even though the title has been around for a while now, it is still an evolving position.

There are many titles being used in the industry that may or may not include the same responsibilities. In many cases people who have these titles and responsibilities got them via roundabout ways with no clearly defined path.

This session came to be because I thought it would be a benefit to newer BIM/VDC Coordinators to outline and share some of the tasks/duties that they may find themselves being responsible for as their role develops within their organization. Part of what is being shared will include some problems/pitfalls that you might encounter and how you may be able to work around them.

The hope is that each of you will leave this session with a better understanding of what to expect on your journey as a BIM/VDC Coordinator.
A little bit about me

Experience / Professional History:

• 25+ years experience with multiple CAD packages
• Began my career in the Manufacturing / Automotive field
• In the AEC community for over 11 years
• BIM Manager for the IBI Group in Southfield, MI
• Have been with IBI Group since 2016
  • IBI Group is a full service A & E firm with over 60 offices across the globe
• Previous BIM/CAD related positions:
  • Design Technology Leader/BIM Manager
  • IS/IT Manager / CAD Manager
• Multi-year Speaker at Autodesk University and other industry events
• Revit Architecture and AutoCAD Certified Professional
• AGC CM-BIM & CANBIM BP3 Certification
Class Summary

The concept of a BIM (Building Information Modeling) coordinator and Virtual Design and Construction (VDC) manager/coordinator is still fairly new, and most of those with the responsibilities of BIM/VDC coordination came upon their duties, responsibilities, and titles in a roundabout fashion.

In this session we will take a look at the paths that many BIM/VDC Coordinators, BIM/VDC Managers, VDC personnel, and BIM project team members responsible for project coordination took to get where they are. This session will also cover common duties, responsibilities, and best practices regarding the specific items for which most BIM/VDC Coordinators are responsible.

This session is intended for BIM Managers, VDC Managers, BIM Coordinators, BIM Job Captains, and others who are responsible for coordination on BIM/VDC projects.
Learning Objectives

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

• Understand some of the common duties and responsibilities of a BIM/VDC Coordinator

• Recognize the importance of consistent coordination methods throughout the lifecycle of a BIM/VDC project

• Discover best practices for multi-discipline/multi-organization coordination

• Determine the most-effective methods for interacting with project partners who are utilizing different software packages
Among other things; today we will talk about…

- Paths that may have led to you becoming a BIM Coordinator
- Potential duties / responsibilities of a BIM/VDC Coordinator on projects with different team structures
- Exporting and Delivering data to project partners (internal and external)
- Utilizing Navisworks to help streamline the coordination review process
- Recommendations for project archiving at key milestones
The Position can go by many names…

- BIM Manager
- BIM Captain
- BIM Technologist
- BIM Facilitator
- CAD Coordinator
- CAD Administrator
- Coordination Manager
- Collaboration Specialist
- VDC Modeler
- VDC Administrator
- BIM Coordinator
- BIM Administrator
- BIM Specialist
- Building Information Modeler
- CAD Manager
- Project Coordinator
- Collaboration Manager
- Digital Designer
- VDC Specialist
- VDC Coordinator
- Model Manager
- BIM Modeler
- BIM Lead
- VDC Facilitator
- IPD Collaboration Manager
- Design Technologist
- VDC Manager
- IPD Collaborator
- IPD Facilitator
- BIM Engineer
The Position can go by many names...
How/Where did your BIM journey begin?

A few quick questions for the group:

- Who started off with a career goal of being a BIM/VDC Coordinator?
- Did anyone start off with BIM/VDC Coordination as their area of study?
- On the path to becoming a BIM/VDC Coordinator, who started out as…
  - an Architect?
  - an Engineer?
  - an IT Support person?
  - a BIM/VDC/CAD Draftsperson?
  - a BIM/VDC/CAD Modeler?
  - a position completely unrelated to BIM, VDC or CAD?
How did you end up as a BIM/VDC Coordinator?

- The position found you or others identified you for it
- You excel at problem solving and were the logical choice
- You were volunteered/drafted by others
- You are the only one in the office with Navisworks experience
- You have a working knowledge of all required software packages
- You never say no to a challenge – and everyone knows it
- You are known for always sticking around to resolve project related problems – even when they happen at “quitting time”
- You can communicate effectively with anyone/everyone
How did you end up as a BIM/VDC Coordinator?

• You identified the position as a good fit for your skills
• You wanted the position and set a goal to be “the chosen one”
• Your BIM knowledge and work ethic is a perfect fit
• You expanded your personal software knowledge in order to better fit the requirements for the position
• You can be discipline/trade agnostic
Some Common Duties of a BIM/VDC Coordinator

Generic Duties

• Involved in creation of the BIM Execution Plan/Project Execution Plan
• Verify and/or manipulate Point Cloud data for project use
• Setup project models (Revit or other) for the project team
• Verify and document Coordinate System requirements
• Create and Name Export Views (2D and 3D) within Revit
• Export data for use in other software packages
• Generate model elements, when necessary (i.e. Revit Families)
Some Common Duties of a BIM/VDC Coordinator

Generic Duties

• Create Export Sets in the Revit model(s)
• Export to Navisworks format for use in coordination reviews
• Create Collaboration / Federated Navisworks file(s)
  o Can be design or construction models
• Perform Clash Detection and generate reports
• Export to DWG format when CAD backgrounds are needed
  o Hint: Create and Save export settings for consistent output
• You are the communication “bridge” between the different project participants
  o *Your role can help to keep finger pointing to a minimum*
Some Common Duties of a BIM/VDC Coordinator

BIM Coordination duties on an “internal only” project

• Exporting to Navisworks Format
• Performing Clash Detection/Model Coordination via Navisworks
• Lead internal Coordination Meetings to review identified issues
• Publish/Post the “Clashed” Navisworks data for review by the project team
• Exporting to DWG format for use as CAD backgrounds
• Process Point Cloud data
  o Can involve simply linking into Navisworks or creating model from data
Some Common Duties of a BIM/VDC Coordinator

Possible BIM/VDC Coordinator duties on a “multi-party/multi-firm” project
(your organization is performing the overall project BIM Coordination)

• Exporting your organization’s Revit data to Navisworks Format
• Performing Navisworks Clash Detection/Model Coordination
• Lead Project Coordination Meetings to review identified issues
• Publish and/or post the “Clashed” Navisworks file for review by team
• Process Point Cloud data
  o Can involve simply linking into Navisworks or creating model from data
Some Common Duties of a BIM/VDC Coordinator

Possible BIM Coordinator duties on a “multi-party/multi-firm” project

(another company is performing the overall project BIM Coordination)

• Review the findings of the Coordination Review with your organization
  o With the appropriate project team members
• Exporting your organization’s Revit data to Navisworks Format
• Exporting data from the Revit models – to all required formats
  o For use in Coordination Meetings, as background files, etc…
• Post your exported files (on schedule) via the agreed upon method

For step-by-step info, see “Exporting Data from Revit – Creating Export Views” on pages 10-17 of the handout
Consistent Coordination

Creating an environment for successful coordination

• Communication is key
  o Project kick off meeting with all partners (all that are known at that time)
  o Up to date list of appropriate project contacts
• Document the process (to be discussed in the next section)
• Data Consistency
  o File versions and formats must be consistent throughout the project
  o Origins and orientations should not change
  o Save settings for consistent exports (i.e. Revit files)
Consistent Coordination

Creating an environment for successful coordination

• Set a Data Exchange schedule and hold team accountable
  o How often to exchange data & what method will be used?
• Coordination Model (Navisworks)
  o The same model should be used throughout the coordination process
  o Save or Publish a date stamped version for sharing / review
  o Holds the project history (i.e. Saved Viewpoints and Clash Records)
• No surprise upgrades – by anyone
  o Upgrades to new versions must be discussed as a team
Developing Coordination Best Practices

Creating and completing a BIM/VDC Coordination Checklist

What topics should the Checklist cover?

- Contact information for primary participants for each organization
- Software Questions
  - Who’s in Revit? What Version?
- What other software packages and versions will be in use?
- Does the Project require Navisworks?
  - If so, who is doing the “Clashing”?
  - What version?
- Coordination Checklist can be specific to your organization or a project
  - Should fit your needs
Developing Coordination Best Practices

Creating and completing a BIM/VDC Coordination Checklist

What topics should the Checklist cover?

• File transfer schedule and method
  o Define how and when to share project data
  o Daily, Weekly, Bi-Weekly, as needed, etc…
  o File transfer method = Dropbox, FTP, Newforma, BIM 360, etc…

• Do team members require other Export Formats?
  o If so, what formats and versions are required?

• Overall, generic Project Information
  o Project name (for border sheets), Client specific information, etc…
Developing Coordination Best Practices

Recommendations when working with Navisworks

• Append vs Export and Link
  o Determine the best fit for the project and different file formats
• Create and save/export Clash Tests to be used for project duration
  o Can be used as a starting point for any/all projects
  o Can exist in a Navisworks startup file or in XML format for importing
• Create Selection Sets to help with Clashing and Identification
Developing Coordination Best Practices

Recommendations when working with Navisworks

• Appearance Profiler assists in establishing consistent visibility
  o Use your saved Selection Sets
  o Share Color listing with the team
• Clash Reports
  o Use consistent groupings & report formats
• Switchback can be a benefit
  o Proper setup and use can save time and effort

For step-by-step info, see “Navisworks Clash Detective & Navisworks Switchback” on pages 21-26 of the handout
Team Members using “other” software packages

Suggestions for when team members are using multiple software packages

• Verify the titles and versions of all software that will be in use
  o This can (should) be captured on the BIM Coordination Document
• Acquire and install all necessary Object Enablers (for all users)
• Acquire and install all necessary Importers or Exporters (for all users)
• Establish project Origin / Coordinate System
  o Based upon supplied data (Survey, Site, Civil data, etc…)
  o Shared Coordinates vs Project Internal
  o Publish the basis of the Coordinate System and identify a common point
  o Verify that all files link together properly
  o If manual adjustments need to be made – document coordinate shifts
Team Members using “other” software packages

Suggestions for when team members are using multiple software packages

• If exports are necessary, establish data exchange rules early
  o Are there special requirements on either end?
  o Test the export and import process prior to a project deadline
• Set a file exchange schedule and stick to it (both directions)
• File names should not change during the project
  o Changes must be communicated to the rest of the team
• Unless there are specific requirements, everyone should be using the same border sheet/title block
  o One organization should “own” this and will share it with the project team
Another possible BIM/VDC Coordinator responsibility

Archiving Revit/BIM Projects at key project milestones

*Some typical scenarios that might result in the need to archive your Revit project before completion:*

- The owner has decided that the design needs to go in a different direction
  - You wish to retain a Record Copy of the project “before change”
- A change in Project Scope
- Moving between project phases
- A Design Option has been selected
- You want to create a “point in time” snapshot – just in case
Some potential archiving methods for Revit projects

- Print to PDF
- Export to DWF/DWFx
- Export to DWG
- Manually copy all files related to the Revit model(s)
- Publish when working in BIM360 Team
- eTransmit for Revit

For step-by-step info, see “Archiving Revit/BIM/VDC Projects at Key Milestones” on pages 28-34 of the handout
Things we talked about today

During today’s session, we covered:

• Paths that some took on their journey to becoming a BIM/VDC Coordinator
• **Some of the possible duties & responsibilities of a BIM/VDC Coordinator**
• **The importance of consistent coordination methods on BIM/VDC projects**
• **Some best practices for multi-organization BIM/VDC Coordination**
• **Interacting with partners who are utilizing different software packages**
• Exporting and Delivering data to project partners (internal and external)
• Utilizing Navisworks to help streamline the coordination review process
• Methods for archiving your projects at key milestones

**Bold & Italicized text** = primary learning objective
Thank you for your time!

QUESTIONS??

Don’t forget about the step-by-step info sprinkled throughout the handout

Contact:
Brett C. Gatti
brett.gatti@ibigroup.com