Autodesk University Roundtable Summary

SESSION TITLE	NCS goes BIM: Implementation for the National CAD Standards
SESSION ID	CM5041-R
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COMPANY	Bullock tice Associates

MAIN DISCUSSION POINTS

- Learn to identify basic BIM guidelines and effective practices that you should implement for your BIM projects. Attendees discussed various pain/fail points within the BIM project process relating to difficulties in complying with the NCS, authoring content, and model sharing.
- Understand the content in the NCS V6 BIM implementation section. The new content was reviewed. For a more thorough review visit: http://www.nationalcadstandard.org/ncs6/
- Provide input for further development of BIM implementation within the NCS. See outline below.
- Understand why and how to become involved in national standards development. See PowerPoint for more information.

KEY TAKE-AWAYS

- NCS will continue to develop standards that relate to BIM as well as CAD and there are ongoing opportunities for representatives from the AECO community to get involved.
- Because the NCS and NBIMS-US must remain software platform neutral when establishing and defining standards there will be inherent gaps for workflows and standards for specific BIM software applications. Other groups, organizations, or firms will need to develop more *specific* standards for their uses as the national standards will remain general.
- Every project is different and it is imperative to the success of each project to have a well-defined Project Execution Plan (PxP) at the onset of the project and throughout as a living document. It is also critical to engage all project stakeholders early in PxP development/updates and keep them engaged.
- The list below is a summary of identified topics that standards could address. Some topics can be addressed on a National Standards level while others are more easily addressed by individual organizations, groups, or even on a per project basis.

Standards topics to address:

1. The NCS should better integrating Civil Information Modeling (CIM) and infrastructure.
2. The NCS should more clearly delineate what is required vs. what is optional or recommended to be considered substantial compliance.
3. The NCS needs to add language that utilizes/recognizes Industry Foundation Class (IFC)
4. Additional NCS language is needed to address the challenges of exporting to layers for software that is not layer-centric.
5. Textures and materials need to be standardized.
6. Need standardization of parameter and attribute naming.
7. Additional content authoring standards are needed.
    a. Content should be parametric, not static
    b. Equipment and code clearances should be modeled in 3D to facilitate clash detection.
    c. Manufacturer content is typically over modeled. Standards are needed to define appropriate use depending on project type and phase.
    d. Content should use appropriate classifications.
    e. Need standard family naming.
    f. Guidelines for visibility settings use are need.
    g. Content should be created in native software and imported data from other programs may be problematic.
    h. Guidelines needed for hosted vs. non-hosted elements. When to use what and why.
    i. Each company should have a defined process in place for adding external content.
8. Use of Classifications
9. Additional guidelines for developing PxPs may be needed. The following needs to be defined specific to each project.
    a. Coordinate system used.
    b. Dimensional accuracy/tolerance.
    c. Level and grid naming consistency.
    d. Use of view templates.
    e. Versions and formats used.
    f. Filing and folder structure used.

SUGGESTED FOLLOW-UP

- See PowerPoint for details on how to get involved in National Standards development.
- Review the list above for standards that need to be defined within your organization and on specific projects.