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MicroStation to GIS: West Virginia DOT's Experience

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The ongoing Enterprise Resource Planning (ERP) at the West Virginia Department of Transportation (WVDOT) requires that right-of-way information, traditionally stored in MicStation DGN files, is in a GIS format that can be consumed by ERP's Asset Management System (AMS). By working with business users, the WVDOT Geospatial Transportation Information (GTI) Section has developed a solution to convert CAD data into GIS information for that purpose. First, the CAD standards at WVDOT are updated. A few changes, including adopting a real world coordinate system and storing right-of-way data in several designated levels, are implemented so DGN files could be in a proper format for data extraction. Second, an Extract, Transform, Load (ETL) tool is built by using the Data Interoperability Extension for ArcGIS and geoprocessing functionality in ArcGIS. The tool performs the duty of exacting right-of-way data from a DGN file, saving it to a GIS file, and attaching attributes to it. Third, a final step of examining the GIS file is carried out manually to ensure quality assurance and quality control. This presentation will share the solution and lessons learned from the development.

Bio(s):

Dr. Wu is a GIS Manager at the West Virginia Department of Transportation. He is a member of the GIS Advisory Committee at Marshall University and the West Virginia GIS Steering Committee. His major interest is in Geospatial Technology for Planning.

Kyle Weatherholt is the GIS Coordinator at the West Virginia Department of Transportation. He holds a M.A. in Geography from Marshall University and has over 10 years of GIS experience.