

# Van Woods

▪ 1127 N 78<sup>th</sup> St, Seattle, WA 98103 ▪ 206.999.9532 ▪ van.woods@gmail.com ▪ <http://www.linkedin.com/in/vanwoods> ▪

## PERSONAL PROFILE

Strategic, creative, collaborative, passionate, and results-oriented innovator in the Architecture, Engineering, Construction, Owners and Operators (AECO) industry with expertise bringing positive transformational changes within large organizations. Recognized for unique ability to draw on experience from both research and production environments to bridge complex theories into practice.

## PROFESSIONAL EXPERIENCE

### **BIM Innovation Program Manager**

**2012 - Present**

*US Army Corps of Engineers (USACE) - Seattle District, Seattle, WA*

Responsible for strategic BIM initiatives, applied research and development, and innovation incubation within a production environment on high-priority BIM capabilities across the project lifecycle such as: design program and criteria validation, automated and semi-automated quality assurance and quality control (QA/QC) methods, advanced techniques for AECO data management and information exchange, quantity takeoff standards, and content management.

Significant Accomplishments:

- Author and Technical Lead on a Memorandum of Understanding (MOU) between USACE and the University of Washington, College of Built Environment titled "Advanced Modeling Innovation Partnership." The MOU will enable the collaborative incubation of innovative BIM, CIM, GIS, and Reality Capture technologies in the built environment at the USACE Hiram Chittenden Locks.
- Technical Lead on USACE/Industry BIM Consortium (UIBC), with major contributions to USACE BIM Contract Requirements, O&M Facility Data Exchange (COBie), and Quantity Takeoff efforts (details in "Organization & Committees" section below). Collaboration with ENR Top 100 firms on contractual definitions of BIM capabilities feasible within the current state of technology and standards while pushing for innovation. Provide requirements and technical feedback to major software vendors.
- BIM Support Technical Lead for USACE Medical Center of Expertise, providing process testing and development, internal and external coaching, Scope of Work and specifications authoring, technical guidance and oversight for contract execution, and quality assurance for projects with BIM and COBie-MHS mandatory requirements defined in the MHS Minimum BIM Requirements (MBR). Provide feedback for process improvements to contract requirements and future system development. Development of the MBR Implementation Guide for coordination between USACE Project Manager, BIM Support, and Contractor activities.
- Technical Lead for projects involving high-profile customers with high-visibility projects, including Military Health Systems, Veterans Affairs, Air Force, GSA, NASA, and others.

### **BIM Manager**

**2006 - 2012**

*US Army Corps of Engineers - Seattle District, Seattle, WA*

Managed all aspects of and champion for the use and advancement of BIM with responsibilities including: software configuration and deployment, hardware, troubleshooting, training, standards development, project coaching, and facilitation of interference management activities.

Significant Accomplishments:

- Senior technical representative for the development of enterprise-wide BIM program strategy documents and policies, as well as Corps-wide BIM Standards and reusable resources.
- Performed pilot projects to develop and test BIM Use capabilities on Facilities and Civil Works structures for program validation (space assignment), quantity takeoffs (material quantities), energy analysis, sustainable design documentation, integrated structural analysis, integrated specifications, interference management (clash detection), and other advanced features and BIM Uses.
- Championed and executed transition to dual-platform production and support capabilities, with Autodesk (Revit) and Bentley (InRoads, MicroStation) as the two primary authoring platforms. Grew capabilities to support multi-discipline collaboration between Architecture, Cost, Civil/Landscape, Electrical, FF&E, Fire Protection, Geotechnical, Interiors, Mechanical (HVAC), Plumbing, Specifications, Sustainability, and Telecommunication disciplines with 110 users with over 90 software titles covering BIM, CAD, Civil modeling software, Specifications, Structural Analysis, Energy Analysis, Engineering Document and Content Management, and Cost Engineering platforms.
- Champion and technical lead for the initial deployment of Bentley BIM in a multi-disciplinary environment. Project team received award for being one of the first wide-scale USACE BIM implementations in a multi-discipline environment on a large-scale project.

**Research Architect**

**1998 - 2006**

*US Army Corps of Engineers - Construction Engineering Research Laboratory (CERL), Champaign, IL*

Conducted research specializing in preliminary design modeling and criteria management. Managed developers and worked independently on Object Orientated Analysis and Design activities including software requirements solicitation, user interface and system architecture design, coding, change management, version control, unit testing, and maintenance of tools for design professionals.

Significant Accomplishments:

- Lead developer for the Building Composer module of the Facility Composer suite to support designers in early exploratory design concept generation and evaluation against customer requirements, with an emphasis on reusable parametric spatial configurations.
- Principal Investigator for a research project to advance the state-of-the-art in parametric design and visual programming, working on early predecessors to technologies such as Grasshopper and Dynamo.
- Managed Cooperative Research and Development Agreement (CRADA) with Bentley Systems.
- Managed contracted research with Carnegie Mellon University on the "Software Environment for the Early Phases of Design (SEED)" project.

**EDUCATION**

**Master of Architecture (MArch)**

**1997**

*University of Illinois, Urbana-Champaign, IL*

- Specialties: Practice & Design Integration Option, Computational Design Research
- Office for Capital Programs, University of Illinois: Employed during graduate program. Developed computerized system for transforming electronic survey data into full color, large format, UV protected posters of the campus Master Plan and Campus Directory.

**Bachelor of Science in Architectural Studies (BSAS)**

**1995**

*University of Illinois, Urbana-Champaign, IL*

## ORGANIZATIONS & COMMITTEES

### **Vice Chair, Board of Direction**

**2018 – Present**

*BuildingSMART Alliance® (bSa)*

Providing vision, leadership, and effective execution of the chapter within the nonprofit organization with a mission to stimulate innovation and efficiencies in the AEC industry through professional collaboration, information technology, and open standards. Second in command on the Board of Direction consisting of five voting members.

Significant Accomplishments:

- Reorganization of the National BIM Standard – US (NBIMS) charter and rules of governance in order to incorporate improvements learned from NBIMS v3 in order to modularize and make the standard more able to be operationalized in the context of a project.
- Liaison with FedBIM to formulate a strategic alliance between Federal agencies and the National Institute of Building Sciences, leveraging the enabling legislation established to foster public/private partnership and industry-wide innovation.

### **Secretary, Board of Direction**

**2015 – 2017**

*BuildingSMART Alliance® (bSa)*

Providing vision, leadership, and effective execution of the chapter within the nonprofit organization with a mission to stimulate innovation and efficiencies in the AEC industry through professional collaboration, information technology, and open standards. Third in command on the Board of Direction consisting of five voting members.

Significant Accomplishments:

- Contributing author to the bSa “2015 Strategic Plan” which details the restructuring of the organization to provide focus on thought leadership, information standards, proven practices, and education. The plan also provides more rigor to the project management processes to make them more agile, transparent, and accountable.
- Ensured continued growth and improvement of the four primary bSa products, the National BIM Standard, National BIM Guideline for Owners, COBie, and the National CAD Standard.

### **Technical Lead - BIM Consortium**

**2009 - Present**

*US Army Corps of Engineers (USACE) / Industry BIM Consortium (UIBC)*

Responsible for direction and execution of USACE-wide standards development initiatives in collaboration with AECO industry members, academia, and legal experts.

Significant Accomplishments:

- Major contributor to the USACE BIM contract language, Minimum Modeling Matrix (M3) for LOD standardization, and Project Execution Plan (PxP) products. Products were nationally recognized by industry consensus as a best practice in the National BIM Standard v3: [5.8 Practical BIM Contract Requirements](#).
- Technical Lead for USACE O&M Facility Data Exchange workgroup responsible for USACE-wide implementation of COBie-compliant products, processes, and policies.
- Originator and Technical Lead for Quantity Takeoff workgroup responsible for standardizing information and process standards for effective utilization of BIM for USACE Cost Engineering requirements.

**Founder and Owner****2008 - Present***BIM Experts LinkedIn Group*

- Founder and maintainer of the BIM Experts LinkedIn Group, the largest and most active international online BIM forum (66,000 users) dedicated to providing an independent, vendor-neutral information sharing and networking platform.

**Various USACE Committees****2006 - Present***US Army Corps of Engineers (USACE)*

- USACE Centers of Standardization, BIM Technical Coordinator (2011-2013)
- USACE Northwest Division, Regional BIM Lead (2007-2010)
- USACE Autodesk & Bentley Steering Committees, Member (2006-Present)

**Member****2009 - Present***Puget Sound Design Technology Leaders***PUBLICATIONS & PRESENTATIONS**

- Woods, Van. "[\*Identifying Data Patterns from Professional Practice\*](#)." Presentation and paper for Digital Built Environment Institute, Building Content Summit conference, July 2019, Seattle Washington.
- Woods, Van. "*Is There Any Place for COBie Outside of the Building?*" University of Washington, 2015 CERC Conference: New Frontiers, March 2015.
- Bell, Robert, and Van Woods. "*Check Out This Model! (Revit QC)*." Presentation and paper for Revit Technology Conference, June 2014, Chicago, Illinois.
- Woods, Van, and Tim Grimm. "*Revit QA/QC From An Owner's Perspective*." Presentation and paper for Revit Technology Conference, July 2012, Stone Mountain, Georgia.
- Significant contributing author of National BIM Standard v3, "[\*5.8 Practical BIM Contract Requirements\*](#)," approved by industry consensus as a national best practice.
- Co-author and presenter on "*A Dissection of the U.S. Army Corps of Engineers BIM Requirements*." Autodesk University, July 2013 and July 2012.
- Contributing author to ERDC SR-12-2: *The US Army Corps of Engineers Roadmap for Life-Cycle BIM*, ECB 2013-18: *Building Information Modeling (BIM) Requirements on USACE Projects*, ECB 2012-22: *Standardization of Computer Aided Design (CAD), Building Information Modeling (BIM) and Geographic Information Systems (GIS) Deliverables for Military Design and Construction Projects*, ER 1110-1-8156: *Policies, Guidance, and Requirements for Geospatial Data and Systems*, EM 1110-1-2909: *Engineering and Design, Geospatial Data and Systems*.
- Various Society of American Military Engineers (SAME) presentations: "*USACE BIM: 2006-2010 and Beyond*," Feb 2011. "*BIM & Civil Works*," Feb 2011. "*AECOM Lifecycle Data Exchange: Architecture, Engineering, Construction, O&M, and Master Planning Data Exchange Efforts Between: AEC Community, USACE-NWS, Fort Lewis Army Installation*," August 2007.
- Woods, Van. "*Delivering a Bentley BIM to USACE*." MCMC Conference, August 25, 2009, Overland Park, Kansas.
- Woods, Van and Joel Schlagel. "*BIM and CorpsMap: A Concept for BIM/eGIS Integration*." USACE Infrastructure Conference. July 20, 2009, Cleveland, Ohio.
- Woods, Van. "*BIM & COBie*." AGC Federal Facilities Committee Meeting, November 6, 2007, Seattle, WA.

- Woods, Van. [n-Dimensional Abstraction Patterns in NP-Hard Design Space: A Parametric Methodology for Spatial \(Re\)Configuration](#). Construction Engineering Research Laboratory (CERL) Technical Report, September 2005.
- Ozkaya, Ipek, Akin O. and Woods V. "[Emerging CAD Processes: The Case of Computer Aided Requirement Management](#)." Proceedings of the International Symposium on Generative CAD Systems, July 2004, Pittsburgh, PA.
- Member on academic peer review panel for Carnegie Mellon Generative CAD 2004 Symposium.
- Woods, Van. "*Programmatic Reasoning for Strategic Design: Using Composition for Adaptable and Reusable Spatial Configurations.*" Presentation at Bentley Research Seminar, May 2003.
- Woods, Van. "*Conditional Modeling as a Platform for Interactive Design Automation.*" Presentation at Bentley Research Seminar, May 2002.

## AWARDS

- USACE Seattle District T.E.A.M. award for "Model Based Quantity Takeoff for Cost Estimating" project, 2015.
- "2012 USACE Autodesk BIM Awards: BIM Supporting Energy Analysis" award, team lead, 2012.
- Commanders Award for Civilian Service, 2009.
- "2009 CAD/BIM Award for Professional Excellence" from Engineer Research and Development Center, Tri-Service CAD/BIM Technology Center.
- General's Coin in 2008 from LTG Van Antwerp for efforts on furthering BIM and COBie technologies in the District and Division.
- "USACE Honor Award" and "USACE Design Team of the Year Award" in the 2008 Chief of Engineers Design and Environmental Awards Program, team member, BIM lead.