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CAD Manager's Newsletter

STRATEGIES AND SOLUTIONS FOR THE REAL WORLD

By Robert Green

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Autodesk University 2023 for CAD Managers

A look ahead with 10,000 Autodesk software users.



Autodesk University 2023, held in Las Vegas this year brought more than 10,000 attendees together to attend 600+ classes over three days. Ad rendering image courtesy of The Mill.

I get a good number of questions about how to best manage CAD and BIM data across wide area networks (WANs) to support distributed- and home-based work teams. What continues to surprise me is that the problem has gotten worse over time as data set size and expectations have exploded while Internet speeds have remained static.

In this edition of the *CAD Manager's Newsletter*, I'll start to guide you through discovering your WAN needs and talk about how to manage your data, plus offer some possible solutions of how to manage work via WANs. Here goes.



Image source: Christina/stock.adobe.com.

AI, AI, AI — How many times can they say AI?

If you didn't have AI (artificial intelligence) fatigue before attending AU, you're sure to have it afterwards. Like most conferences in the last year, the recurring theme was AI. Phrases like, "AI is going to change how you work," and "Be ready for the change AI is bringing," seemed to be on auto-repeat. And while the references were many, the specifics simply weren't there. In year's past, Autodesk has stressed concepts like "generative design" along with "the Internet of things" and "the cloud," but those phrases have given way to "Autodesk AI" and "single source of truth" in this year's general sessions.

As with most technical conferences, the mainstage presentations were showy, slickly produced and almost 100% marketing with little concrete information on how the technology will ultimately work. Consequently, I've never taken mainstage presentations very seriously and this year's AU didn't change my thinking on that. Although it was cool seeing actor Ryan Reynolds on stage, the conversation about his Group Effort Initiative organization was more inspirational than practical.

Why AU Represents the Industry at Large

Now, I fully realize that most CAD managers (including myself) must manage all manner of software and technology tools that don't come from Autodesk. So a reasonable question becomes: Why should we go to — or even care about — AU. Well, let me share a few of the reasons I've found it valuable:

Because other CAD managers are there. There's no larger gathering of CAD managers anywhere that I'm aware of and tapping into the knowledge of such a large group allows for a glimpse into broad market trends and techniques that

benefit everyone. Of course, if you don't manage any Autodesk products it may not make sense to go.

Because CAD management is product agnostic. When you think about the use of standards, programming, and management strategies in detail, you realize that managing Autodesk tools isn't much different than managing Solidworks, BricsCAD, Bentley products, or anything else. Therefore, CAD management courses at AU really are representative of CAD management at large — even though the technical product sessions may not be.

Glimpse future trends early. Autodesk is a big company that tries to set industry trends. Things like new product evolution, cloud implementation strategies, licensing, and IT management structures from Autodesk tend to be announced first at AU. And once announced, these policies — whether deemed good or bad — are a big topic of conversation in the halls and on the show floor. So, doesn't it make sense to start discussing those policies when announced while surrounded by hundreds of other CAD managers?

Current Impressions via Informal Survey

But beyond the new announcements, what else can we learn at AU? My answer has always been to talk with other CAD managers and ask the same questions over and over to see what types of responses I get and then note how the answers have changed over the years. I try to survey a broad variety of topics and note particularly passionate responses, so I can draw conclusions about current problems and trends facing CAD managers. This year I also placed some poll questions on my CAD Managers Unite! Facebook group page to assist in observing some current trends. Here's what I've concluded this year:

We still have too little authority. When I ask, "How many of you have the authority you need to enforce standards?" and "How many of you have the budget authority to get the hardware you need?" almost nobody said yes. The problem for CAD managers continues to be how to do the job when management isn't listening or giving you funding. This problem never goes away it seems.

Local CAD still wins. Despite the barrage of marketing, hype, and unending mentions of the cloud, the fact is that most work we manage is still done on a local workstation (desktop or mobile) on AutoCAD, Inventor, Civil 3D, or Revit. Of course, there are cases where movement to tools such as Fusion or ACC (Autodesk Construction Cloud) is happening, but most users are still on tried-and-true local CAD tools. And, try as they might to kill it, AutoCAD is still widely used.

CAD and IT are increasingly intertwined. When I asked questions like, "Who handles the hardware purchasing process" or "Who dictates deployment and security policy?" virtually everyone I talked to said IT was in charge. That number was more like 50% prior to the pandemic. This means that CAD managers need to know more about IT than ever, and vice-versa.

Work from home/remote problems. Piggybacking on to the above — the inconveniences of dealing with home/remote work is an ever-increasing problem. Problems from remote access to download speed to training/standards methods for home/remote work have changed CAD management.

Staff recruitment and assessment. CAD managers suffer greatly from the loss of experienced staff and the inability to recruit new employees because they must train the new staff. Ask CAD managers how easy it is to hire great CAD/BIM staffers and the uniform response is "It's a nightmare." This problem will continue and will only make the likelihood of hiring more remote workers higher.

Licensing costs have become a real sore point. Now that Autodesk software (and software from other vendors as well) has gone from perpetual to subscription

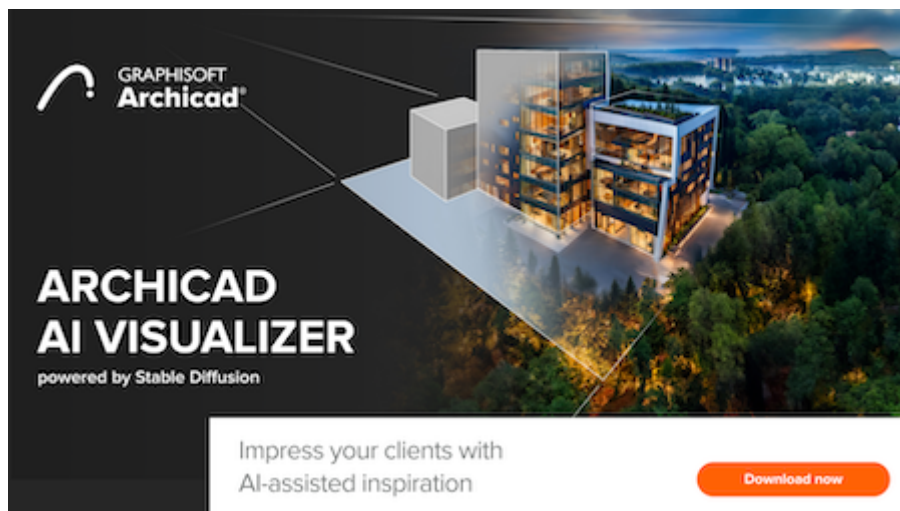
and from sharable to named user, the cost of software has gone up, up, up. This conversation came up frequently at AU and the overwhelming impression is that named user licensing is a burden that CAD managers are spending too much time dealing with. I heard a lot of comments like, "Well, we just have to live with it and keep track of usage better," but I never heard anyone express happiness at the new policy.

Overall. Taken together I view the CAD management work environment as mainly unchanged but the very real problems associated with staffing and software costs are two more headaches to add to the job. CAD managers are, of course, figuring out how to react to these problems but having too little authority and budget makes things even harder.

To gain insight into where the future may be headed, I spoke to some power CAD managers from my Facebook CAD Managers Unite group and combined that input with broader conversations to draw some conclusions I think are worth sharing (and that I believe your management team will be asking you about).

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Tools & Resources



Product Watch: Graphisoft Visualization using AI

Graphisoft recently held its annual Build Together Digital Event. At that event, the company announced the Archicad AI Visualizer powered by Stable Diffusion. The company explained, users can create inspiring, detailed 3D visualization during the early design stages. Type in a simple text description and concept sketches and the AI Visualizer lets designers explore several ideas and get inspiration from the generated results based on a 3D model inside Archicad. [Watch video >>](#)

6-Month Trial for Onshape Professional

PTC is now offering free access to Onshape Professional for up to six months, to give development teams time to test the cloud-native product development platform, with the only requirement being to qualify as a user. According to the company, Onshape is the only product development platform developed natively for the cloud. The company states that it offers CAD and PDM (product data management) functionality and enables companies to improve design collaboration and increase the productivity, flexibility and efficiency of internal and external teams.

[Read more >>](#)

Blog Watch: Must Try Apps for Designers, Drafters & Engineers!

Canadian civil designer, Brandon at CAD Intentions gives his latest list of apps you have to try out, plus offers some organizational tips. [Read more >>](#)

Geospatial Policy Reports

WGIC (World Geospatial Industry Council) recently released three policy reports that address critical aspects of the geospatial industry's evolving role in a rapidly changing world. The first, "Bringing Geospatial Context to the Metaverse," delves into integrating geospatial tech into the metaverse. The second report, "Leadership Diversity in Geospatial Industry," highlights the significance of fostering diverse leadership within the geospatial sector. The third, "Africa Geospatial Public-Private Partnerships," covers the business and financial aspects of geospatial PPPs in Africa. [Read the reports >>](#)

Blog Watch: AI Cannot Replace Creativity, but It Can Help

Will artificial intelligence (AI) replace designers? Solid Apps blogger looks at how AI may not replace designers, but how it certainly will help them do their jobs better.

[Read More >>](#)

Webinar Watch: The Digital Twin's Role in the Product Lifecycle

30 November. 11am EST. Today, the phrase "digital twin" is ubiquitous in the PLM market, with virtually all of the top 25 global market leaders in CIMdata's PLM market research offering solutions. But if you dig a bit deeper, you will find that most providers mean something different when they use the same phrase. How should we think about digital twins? What enables them? What use cases are important? What kind of benefits can we expect? At this webinar, you will: gain a better understanding of the origins of the digital twin concept, learn more about the types of digital twins of interest in industry, and find out how you can shape CIMdata's research into this topic. [Read More >>](#)

What's New at Cadalyst



MCAD Solutions: Digital Transformation and the Engineering Team

Five aspects of digital transformation in engineering that will boost efficiency.

[Read more >>](#)



Infrastructure Design and Intelligence

Show Report: Bentley Systems' Year In Infrastructure and Going Digital Awards highlight best practices in infrastructure design and technology use. *By Lara Sheridan.* [Read more >>](#)



Printing in 2023 and Beyond

VIEWPOINT: Print remains an important part of today's business world. *By Jacob Hardin.* [Read more >>](#)

CAD Cartoon



By [Roger Penwill](#)

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Free Resources



Take the Gradual Path to BIM

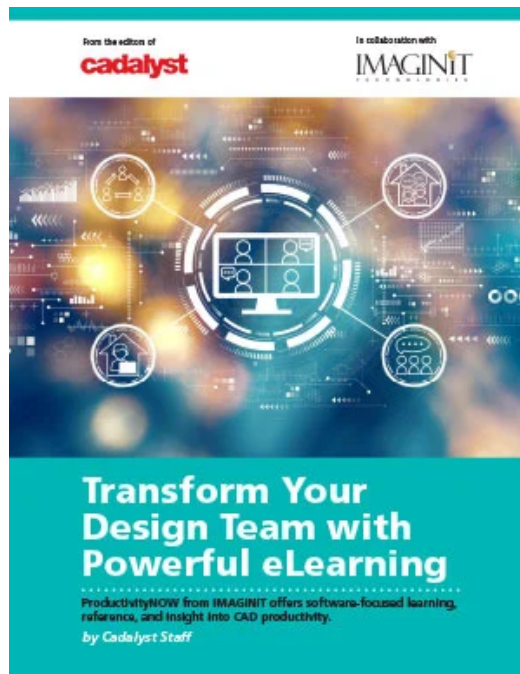
Implementing building information modeling can be an overwhelming challenge fraught with risk and uncertain benefits, but you don't have to take on everything at once — Bentley MicroStation allows you to make progress one step at a time.

Take the Gradual Path to BIM

Implementing BIM can be an overwhelming challenge, but you don't have to take on everything at once — Bentley MicroStation allows design and construction firms to progress one step at a time.

To learn how incremental advances leveraging your existing investments in CAD and related technologies can yield big benefits over time — for both your company and the project owner — download your copy of this free white paper today.

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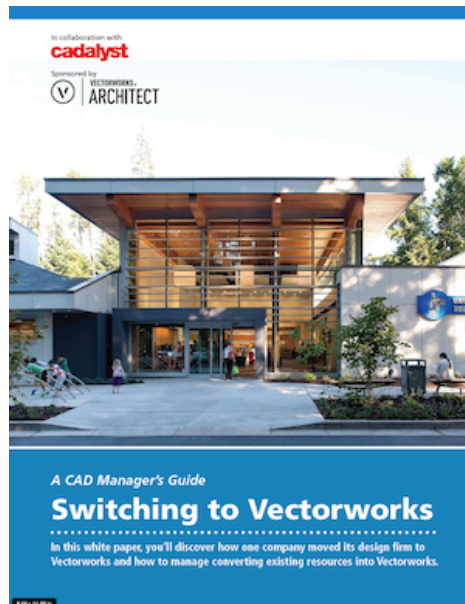


Transform Your Design Team with Powerful eLearning

Training your workforce continues to be one of the most important pillars to forming a strong and efficient team. The challenge becomes making sure your staff are using their design software to the best of their abilities and following your CAD standards. How do you build this foundation and continue to invest in your employees?

Find out how ProductivityNOW from IMAGINiT offers you software-focused learning, reference, and insight into CAD productivity. *By Cadalyst Staff*

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A CAD Manager's Guide to Switching to Vectorworks

Discover how one company moved its design firm to Vectorworks and how to manage converting existing resources into Vectorworks.

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