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CAD Manager's Newsletter

STRATEGIES AND SOLUTIONS FOR THE REAL WORLD

By Robert Green

October 26, 2022
Issue #501

CAD Management Constants: File Security

From accidental deletion to disaster preparedness, file security should be one of your top concerns.

In the 500th edition of the *CAD Manager's Newsletter* I went over some constants — things that don't change — in a CAD manager's job. One of those key constants is the need to facilitate production and smooth workflow. Not surprising, right? But, what subtasks facilitate this discussion? Starting with this issue I'll be writing about some of these CAD Management Constants, beginning with File Security.

In this edition of the *CAD Manager's Newsletter*, we'll explore the high-level file security tasks you must cover and I'll suggest strategies for doing so. Here goes.



Image source: [knowhowfootage/stock.adobe.com](https://www.knowhowfootage.com/).

File Security is Job 1

Let's start here: All the greatest CAD, BIM, or mechanical modelling software in the world means nothing if you lose — or lose control of — your files. File security may seem boring and old fashioned, but if you preside over the loss of project files, you'll wish you'd paid more attention to it.

The good news is that file security doesn't have to be a big burden so long as you have a proactive plan. Then, all you must do is follow the plan and perform periodic checks to be sure everything is on track and fix any problems immediately once they are detected. Simply put, plan the work, then work the plan.

The major areas you'll need to address are:

- Stopping accidental deletion/overwrite
- Addressing cloud data risks
- Creating solid backups

Now let's expand these topics into a series of action items that assure high file security. Your job now becomes attacking any areas where your current security protocols are deficient and fixing them.

Stop Accidental Deletion/Overwrite

The number one cause of file security problems I've experienced over the years is accidental deletion or overwriting of files. If you worry about nothing else, be sure to protect against file loss by considering the following:

Stop C drive hoarding. The surest way to lose files is to let users store large caches of data on their C drives. When users copy/move files from network/cloud drives to their own drives, the chance for many users to work on the same file and thus eventually overwrite files goes up exponentially. If someone violates the "no C drive" policy, put them on notice immediately!

Stop cloud hoarding. When users copy files to their own cloud data storage utility (think Dropbox or OneDrive) the chance of accidental deletion or overwrite is just as high as it is for the C drive case. Simply put, when users start copying files from your controlled network drives to their own personal devices, trouble will be with you soon. Consider unauthorized cloud storage violations in the same way you would a C drive storage violation.

Review network/cloud folder security. Most projects use a directory structure to manage files and some of those directory folders will contain files that are project standards (think blocks, families, standard parts, sub-models, etc.) that should never be deleted. The surest way to deal with these types of accidental deletions is to review your network/cloud security group structures to keep standards secure. As a side note: Don't just make the standards folders delete protected but keep them non-writable if at all possible so nobody puts non-standard content into the folder in the first place.

While accidental deletion will never be 100% eliminated, it can be substantially minimized by ensuring the above procedures are in place. And, by stopping accidental deletion you'll have fewer panic moments and won't have to rely on your backups (which we'll cover shortly) as much.

Address Cloud Data Risks

In most companies, network file/folder security (as reference above) is a well understood concept that IT departments can implement easily. But, in the rapidly evolving world of cloud data storage solutions like Box, Dropbox, OneDrive, etc., there is much work to be done to assure a company of proper file security. Before implementing any cloud-based file management systems, consider the following issues carefully. . . .

When dealing with cloud data, what risks should you consider? And, how should you handle backups. [Continue reading! >>](#)

Tools & Resources



Webinar Watch: AMC Bridge Executive Series: Game Engines and Digital Twins. Let's Play.

Recently, AMC Bridge held a webinar discussing the combination of game engines and data as a new stage of digital twin and simulation development. Held on September 22, 2022, an expert panel discussion was devoted to digital twins and game engines. The event was moderated by Jim Brown, Founder and President of Tech-Clarity, and comprised of David Craig Weir-McCall, Industry Marketing Manager—Architecture, Epic Games, Elizabeth Baron, Senior Manager—Enterprise Solutions, Unity, Erin Khan, National Director of Construction Solutions, Suffolk

Construction, and Igor Tsinman, Co-founder and President of AMC Bridge. Read a [summary of the event](#) or [Watch the recorded webinar >>](#)

Case Study: GIS Keeps Leaders Safe at G7 Summit

At the 2021 G7 Summit, Devon and Cornwall Police partnered with Precisely to keep world leaders safe using GIS technology for security planning.

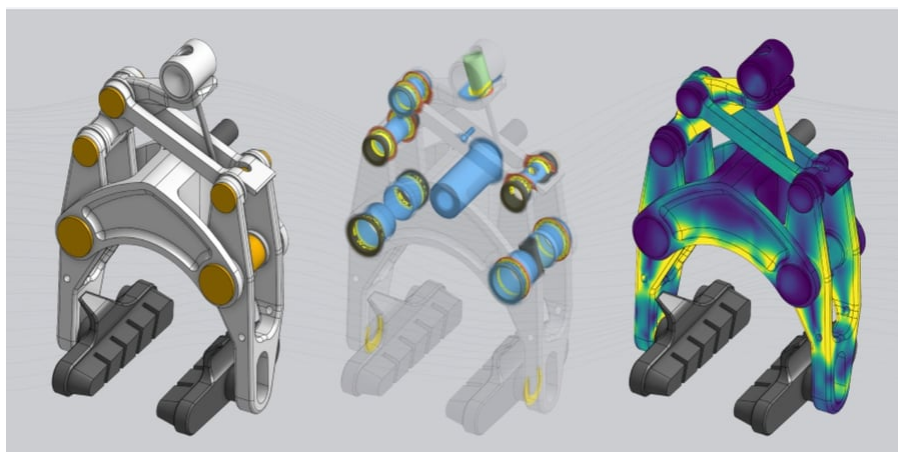
[Find out more >>](#)



Case Study:

Additive Manufacturing Amps Up Fuel Cells, Drives Down Cost

A promising approach for cleaner energy, now emerging from the research stage into commercialization, is solid-oxide fuel cell (SOFC) technology. The U.S. Department of Energy describes an SOFC as an electrochemical device that produces electricity directly from the oxidation of a hydrocarbon fuel (usually natural gas), while eliminating the actual combustion step. Basically, an SOFC acts like an infinite-life battery that is constantly being recharged—without burning the gas that recharges it. But SOFCs are expensive, in particular the special blowers they need to keep them operating properly. Mohawk Innovative Technology teamed with Velo3D to make blowers using additively manufactured impellers and saved thousands of dollars per part, according to the company. [Read more >>](#)



Product Announcement: Cloud Simulation Platform

PTC released Onshape Simulation, a cloud-native integration of CAD, PDM, and simulation in a cloud-native simulation tool. The platform allows designers and engineers to simulate full assemblies in a cloud-native environment, reducing time and effort, according to the company. PTC states that key benefits include: Accurate mechanical guidance, such as strength and rigidity, without leaving the design environment. Elimination of the need to defeature, simplify, or set up connections for models before running simulations through use of existing assembly mates in the definition of the part-to-part interactions, and more. [Read more >>](#)

What's New from Our Sponsors



The Equipped Mold Designer:

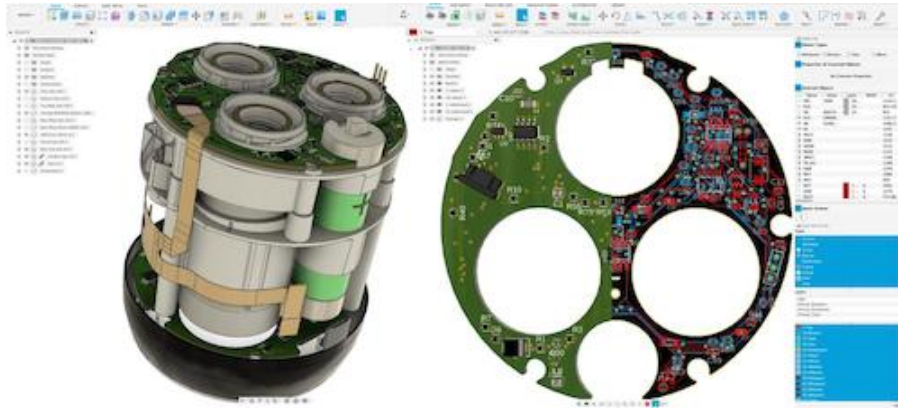
Siemens NX Mold Connect = Cloud Data Management Made Easy

Part 5: Follow this team of designers as they learn how to use NX Mold Connect. In this article, they are moving forward with the project and using Siemens' Connector to manage workflows in the cloud versus bogging down their desktop systems as they work with very large data files to get this project completed. By Cynthia Kustush, *October 20, 2022*. [Read more >>](#)

What is PDM and Why Do You Need it?

If you're searching for data in different locations, it might be time to implement a PDM system. *October 19, 2022*. [Read more >>](#)

What's New at Cadalyst



MCAD Solutions:

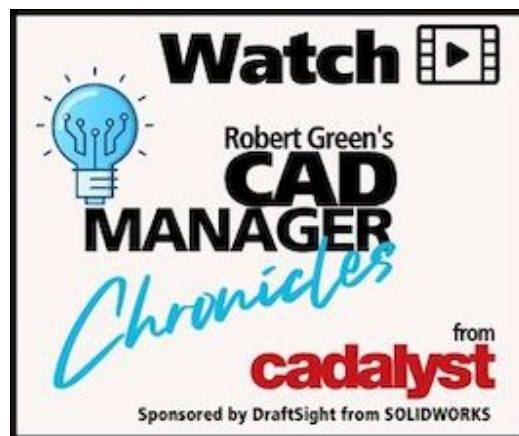
Uniting Mechanical and Electronic Engineering in Product Development

Simultaneous collaboration brings model-based design to life by allowing mechanical and electrical engineers to design together. *By Cadalyst Staff, October 13, 2022.* [Read more >>](#)

CAD Programming: Combining Python and .NET

Automate AutoCAD using two different programming platforms — one for the program and the other for the GUI. *By Andrew G Roe.* [Read more >>](#)

Free Resources



CAD Manager Chronicles Video Series

Episode 3: CAD Management Constants

While many things change as time goes on, there are key parts of being a CAD manager that remain the same. What are they and how do you keep improving on those things to build success? *By Robert Green*

WATCH NOW



A CAD Manager's Guide to Reducing Errors

Whether your problems stem from users who ignore standards, a company culture that doesn't prioritize quality, or self-sabotaging management techniques, this guide will set you on the path to greater efficiency, fewer mistakes, and better results. *(Compiled from Robert Green's CAD Manager's Column.)*

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