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Ask the Inventor Developers

Steve Dennis – Sr. Principal Engineer
Autodesk

Yun Chen – Sr. Software Architect
Gerald Hochenauer – Sr. Principal Engineer
Michael Schmidt – Principal Engineer
Shiva Sundaram – Sr. Principal Engineer
Tom Sturtevant – Sr. Principal Engineer
Autodesk

Learning Objectives

- Gain a better understanding of the inner workings of Inventor.
- Discover the development process of Inventor.
- Get answers to specific questions.
- Interact directly with Inventor developers and other staff.

Description

Have you ever wondered why Inventor software works the way it does? Ever had a question about a specific workflow or piece of functionality? Now is your chance to interact with senior developers of the Inventor product staff. Ask them why, how, or if, about any aspect of Inventor. Receive technical explanations to your questions that may help you find another way to accomplish your task or understand the reasons for the current functionality. Explain your point of view directly to the people who make Inventor work and implement changes. This will be an honest two-way communication on the hows and whys of Inventor workflows and technical details. We don't just tell you "no" or "yes"; we tell you "why" to the best of our ability.

Speaker(s)

Steve Dennis has been a software engineer coding Inventor since the first day he was hired at Autodesk in 1998 before R1 of Inventor was released. His experience started out in the user interface of assemblies before moving into workflow implementation of area like Design Views, Component Patterns, and other internals of Inventor assemblies. Over the years he has worked on Drawings, Assemblies, Parts, and Presentations. He has also been involved in the internal framework of the Inventor ecosystem.
He has been the lead developer and founder of this Autodesk University Roundtable discussion since its inception 7 years ago.

Yun Chen is a Sr. Software Architect, working on Autodesk Inventor development since 2001. He has worked in most of the Inventor feature areas over the years and is passionate about helping make customers more productive by reducing pain points, creating new ways of accomplishing the tasks and making the software just run a lot faster.

Shiva Sundaram is a software engineer in the Inventor Engineering Organization. He has been with Autodesk since 1995 and has been actively involved in the development of products like Autodesk Inventor, AutoCAD, Mechanical Desktop and Shape Manager. His expertise includes areas like product performance, modeling, graphics as well as drawing views. He is passionate about understanding customer pain-points and developing software to satisfy the needs of the customer. Shiva is based in San Francisco, California, USA.

Tom Sturtevant has been doing CAD software development since 1985 and has been an Inventor developer since 1998. He has spent the majority of this time focused on Part modeling functionality including Feature Patterns, iParts, iFeatures, multi-solid modeling, parameters and equations, and much more. Tom has been using Inventor for his personal projects for over 20 years and thinks there is no better way to understand customer workflows and pain points.

Michael Schmidt is a software developer and began his career at Autodesk in 2013. He has spent a good part of this adding new enhancements and workflow improvements to Inventor's sketch and part modeling components including fillet, face draft, curve on face, and many of the commands within Inventor's freeform environment. More recently, he was on the team that added new 3d annotation capabilities to Inventor, like tolerance annotation & analysis. He is passionate about improving processes and workflows, both inside and outside Autodesk. On a personal note, he looks forward to just about any excuse to design and print toys or home improvements for friends or family.

Gerald Hochenauer started to work as a software consultant for a company making Sheet Metal CAD software on top of AutoCAD and Mechanical Desktop while studying for his Masters Degree in Mechanical Engineering in 1998. Some of his work got incorporated into Inventor and after completing his degree he joined the Inventor team in 2000. He enjoyed working on sheet metal problems and contributed to the implementation of our own Sheet Metal Unfolder in ASM, which has been used since 2005. He has worked in Parts, 2d and 3d sketch, Drawings, and Presentations. He enjoys prototyping solutions to complex problems to help start major initiatives like the Unfolder or more recently Model States. He regularly visits customers to improve Inventor and streamline workflows.

Roundtable Expectations and Class Format

The intent of this roundtable discussion is to allow you, the Inventor user, to discuss anything Inventor related with the attending Inventor developers. This class depends on your participation and will become a back and forth discussion of your issues, concerns, or curiousity! We also encourage other attendees to put forth answers when applicable, we want the answers to be shared no matter where they come from. We will do our best to be honest and transparent in our answers.

Roundtable Discussion Topic Considerations

Bugs

A common topic at this roundtable is your "favorite" bug. There may be a technical reason why a bug remains unaddressed or maybe we have never seen or reproduced the issue you are seeing. Share the issues that cause you and your team to be less productive, we may know of an immediate workaround and we will followup to hopefully get the bug addressed.

Inefficiencies

Another common topic is around why certain workflows can be made more efficient or faster.

Enhancements

A very common topic is what workflows or functionality is missing in Inventor that would make you more productive. Let's talk about what you need, why you need it, and if we can do anything about it in the short term or long term. Get your ideas to the people that will actually implement them in the code!