BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHENZHEN TUOZHU TECHNOLOGY CO., LTD.	**§**	**Petition for Inter Partes Review of U.S. Patent No. 8,562,324**
Petitioner,	**§**	
VS.	**§**	**Case No. IPR2025-00311**
STRATASYS, INC.,	**§**	**Ref. 56224-0014IP1**
Patent Owner.	**§**	

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ORAL AND ZOOM DEPOSITION OF

DENIS CORMIER, Ph.D.

NOVEMBER 19, 2025

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The Oral and Zoom Deposition of DENIS CORMIER, Ph.D., produced as a witness at the instance of the Petitioner, and duly sworn, was taken in the above-styled and numbered cause on NOVEMBER 19, 2025, from 9:04 a.m. to 11:36 a.m., before Nicole A. Hatler, CSR No. 11275 in and for the State of Texas, reported by machine shorthand, in their respective locations via Zoom, pursuant to the Texas Rules of Civil Procedure.

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APPEARANCES ALL REMOTELY VIA ZOOM

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EXHIBITS

NONE MARKED

DENIS CORMIER,

sworn as a witness

testified as follows:

MR. BISENIUS: We are here today regarding IPR proceeding IPR 2025-00311, regarding US Patent number 8562324.

Q. EXAMINATION BY MR. BISENIUS: Dr. Cormier, is there any reason that you cannot give truthful and accurate testimony today?

A. No.

Q. Do you have any hard copy printouts of any documents with you today?

A. I do not.

Q. Do you have any windows open on your computer other than this Zoom chat?

A. Just the PDF file that you sent in the chat.

Q. To ensure clarity, I will define several terms that will be used throughout this deposition.

When I use the terms "patent owner" or "Stratasys," I'm referring to Stratasys Inc., the patent owner in this proceeding.

Do you understand?

A. Yes.

Q. When I use the term "petitioner" or "Shenzhen Tuozhou," I'm referring to Shenzhen Tuozhou Technology

Company LTD.

Do you understand?

A. Yes.

Q. When I use the term "'324 patent," I am referring to US Patent number 8562324.

Do you understand?

A. Yes.

Q. When I use the phrase "this IPR" or "this proceeding," I'm referring to IPR proceeding number IPR 2025-00311 filed against the '324 patent.

Do you understand?

A. Yes.

Q. When I use the acronym "POSITA," I'm referring to a person of ordinary skill in the art at the time of the alleged invention.

Do you understand?

A. Yes.

Q. Your declaration in this proceeding is Exhibit 2009, signed on September 10th, 2025. When I use the term "your declaration," I'm referring to Exhibit 2009 in this proceeding.

Do you understand?

A. Yes.

Q. Can you please describe how you prepared for today's deposition?

A. So I reviewed as much of the material -- hang on one sec.

I reviewed as much of the material as I had time for in the exhibits that were all relevant and listed everything that I wrote in my declaration. I met with Aashish to walk me through the mechanics of -- of what will happen today and took notes myself of -- of the highlights, I guess you would say.

Q. Other than Mr. Kapadia, did you communicate with anyone else in preparing for today's deposition?

A. Brian Oaks was in the meeting. He was mostly just listening in the background, but he was in the meeting.

Q. Approximately, how much time did you spend preparing for today's deposition?

A. Just to clarify, not counting writing the document previously or --

Q. Correct. Not counting your time --

A. Okay.

Q. -- preparing the declaration.

A. 15-ish hours, maybe. I'm -- I'm guesstimating. I -- I don't have it exact.

Q. When were you first contacted by someone on behalf of Stratasys?

A. I -- I can't recall when it was, to be honest

with you. I mean, it's been a while, but I -- I'm hand waving a yearish ago, but it's -- yeah, it wasn't recently, obviously. It was going a while back.

Q. Sometime in 2024, though?

A. I want to say it was late '24 probably. Again, I -- you know, I would have to pull up my e-mail to see when I got the first inquiry.

Q. Do you recall who contacted you on behalf of Stratasys?

A. I believe it was Mr. Kapadia.

Q. What did you do, if anything, before agreeing to be retrained on behalf of Stratasys?

A. I discussed the -- I guess the high level thumbnail of -- of -- you know, of what the case was first, just to get some level of comfort in what was being discussed before I agreed to go forward.

Q. Do you have a written agreement that governs your work on this matter?

A. There is a -- there is a signed contract, yes. Or a consulting agreement, I guess you would call it.

Q. When was the first time that you had heard of Stratasys?

A. That would be in the '90s. I want to say 19 -- roughly '98 or so, I bought my first of a handful of Stratasys 3D printers. So late -- late '90s, we'll call

it.

Q. When did you first become aware of the '324 patent?

A. Not until -- not until being reached out to regarding this case.

Q. Are you aware that the '324 patent is currently involved in a district court litigation between Stratasys and Shenzhen Tuozhu?

A. Yes.

Q. Were you aware of this litigation when you prepared your declaration?

A. I -- yes, I believe I was.

Q. Without revealing privileged communications, can you please describe the process by which you prepared your declaration?

For example, did you write every word throughout the entire process, did counsel for the patent owner prepare the first draft that you revised, or was there another process?

A. So I reviewed the materials that were provided to me, the -- the exhibits and all of the preliminary back and forths. I went through those. I highlighted, took notes, rendered opinions. And then there were a series of follow-up Zoom meetings with the -- Mr. Kapadia -- and I'm sorry for mispronouncing your

name before -- and so then we had a series of Zoom meetings where I was discussing my thoughts, and then collectively the document came together.

So I was -- you know, there are materials that I agreed with from previous content. You know, some of that is -- is in there, and then there is other things that I wrote -- you know, new text. So that's how it came together.

Q. What percentage of the words in your declaration did you write as opposed to merely reviewing words written by someone else?

A. I -- I -- honestly, I don't know.

Q. What percentage of the arguments and theories for validity and other topics addressed in your declaration did you, personally, create as opposed to being told those arguments and theories by someone else?

A. Again, I -- I have no idea what the percentages would be.

Q. As part of your work on this IPR, did you ever communicate with Nathaniel Pettis, the named inventor of the '324 patent?

A. No.

Q. As part of your work on this matter, did you ever communicate with anyone from patent owner other than patent owner's counsel?

A. No.
Q. Approximately when did you begin working on your declaration for this case?
A. Okay. You said approximately, so it was -- it might have been late -- late spring or very early summer. In that approximate time frame.
Q. Did you have anyone, such as an assistant, help you with your declaration for this case?
A. On my side, outside of the -- the firm representing Stratasys, you're saying?
Q. Correct.
A. No, it was just me.
Q. In forming your opinions in this IPR, did you rely on any assumptions that are not identified in your declaration?
A. I -- I can't think of any off the top of my head.
Q. Do you currently hold any opinions about the '324 patent that are not contained in your declaration?
A. None that I can think of. None that come to mind.
Q. Has anything happened since you prepared your declaration that has changed any of your opinions that you provided in your declaration?
A. Not in a material way. I mean, just every time

you read -- you read things a second or third time, then, you know, you might pick up nuances there, but nothing material.

Q. Are you, currently, aware of any errors that exist in your declaration?

A. I know I spotted some typos. I couldn't tell you where they were. But again, nothing -- nothing jumps to mind other than, you know, just minor typos.

Q. During your career, approximately, how many times have you been retained as an expert in litigation matters, either as a testifying expert or nontestifying expert?

A. Just once prior to this.

Q. Approximately, how many times have you been deposed as an expert in litigation matters?

A. Just one associated with that previous case.

Q. Before reading his declaration in this case, did you know of Dr. Andrew Wolfe?

A. I did not.

Q. I'm going to put a file in the chat. This is the Anderson reference, Exhibit 1013 -- sorry, 1012.

A. Okay. It's downloading.

Still downloading.

Q. No worries.

A. I've got the spinning wheel of despair. Not a

large file, so I don't know why it's -- let me cancel and try it again.

There we go. All right. Okay. I see it now.

Q. This is US Patent application publication number 2004/0207662, which is Exhibit 1012 in this proceeding, referred to as Anderson --

(Technical interruption.)

Q. BY MR. BISENIUS: I want to talk about figure 2A of Anderson.

Anderson, in general, is discussing three-dimensional printing systems; is that correct?

MR. KAPADIA: Objection. Form.

THE WITNESS: On the whole, it discusses 3D printing, yes, as part of it. Yep.

Q. BY MR. BISENIUS: Figure 2A shows an image of an object that's being fabricated by a 3D printer; is that correct?

MR. KAPADIA: Objection. Form.

THE WITNESS: So it shows a graphic of a part, and it shows percent completed and percent remaining, which could refer to how much of a part has been 3D printed.

Q. BY MR. BISENIUS: Is the image here an image of the actual object being taken by a camera, a simulation

of the object derived from a model, or is the image in figure 2A generated in some other way?

MR. KAPADIA: Objection. Form.

THE WITNESS: So it's clearly not an image from a camera. That was your first option, correct?

Q. BY MR. BISENIUS: Correct?

A. Okay. And then the second and third options, refresh my memory.

Q. Is it a simulation of the object derived from a model or is the image in figure 2A generated in some other way?

MR. KAPADIA: Objection. Form.

THE WITNESS: I -- I don't know how they generated this image. If you want me to look through the text, I can look for where it describes -- I don't recall how this image was generated.

Q. BY MR. BISENIUS: If you want to turn to paragraph 25 of Anderson, this paragraph discusses figure 2A. Could you please read that paragraph to yourself and let me know when you're done?

A. Okay. Okay. So I see the -- the text that says wire frame model. So -- and I apologize. One more time, give me that second and third options again?

Q. Yeah. So I had asked if the image in figure 2A is a simulation of the object derived from a model or is

the image in 2A generated in some other way.

MR. KAPADIA: Objection. Form.

THE WITNESS: So it doesn't explicitly say in that paragraph. I can hypothesize that the wire frame -- would you like me to hypothesize?

Q. BY MR. BISENIUS: Yes, please.

A. Okay. So a wire frame model could be derived from a 3D CAD software package. You can generate a wire frame model from a simulation, as well. So the -- it actually could be one or the other. It's hard to say based on the information in paragraph 25.

Q. BY MR. BISENIUS: What is the difference between generating the image from a model and generating the image from a simulation?

A. You're saying in the general sense or are you referring to a specific sentence here?

Q. In a general sense, in your answer, you mentioned it could have been generated from a model or could have been generated from a simulation. I'm wondering what the difference those two would be.

A. Okay. So I, specifically, said a CAD model, or computer aided design model. So that would be an instance where you've designed three-dimensional geometry in a software package and then a wire frame would be a representation of the surface of that 3D

model.

In the instance of a simulation, you might, for instance, simulate based on G code tool path when you're 3D printing a part and simulate fabrication layer by layer and then generate that image in figure 2A, I believe it was. So it -- it could be done either way.

Q. Figure 2A shows a visual representation of the percentage of the object that is completed; is that correct?

A. There is -- there is text on there, so I guess that would be representative of that. Yes.

Q. The image of the object itself also shows a percentage of the object that is completed; is that correct?

A. It shows -- yeah. It shows that -- what appears to be the complete shape that's going to be printed and then the graphics of updated to what I assume refers to the 60 percent completed. So that's the lower region with the dots on the car.

Q. Does Anderson provide details on how to display a visual representation of the portion of the object that is completed based on the model of the object?

A. I don't recall. I'd have to refresh my -- myself with Anderson to answer that question.

Q. Would a person of ordinary skill and experience

with the CAD software know how to generate a virtual image of an object based on model to reflect the physical completion of the object?

A. What -- I'm sorry. Repeat the question one more time?

Q. Would a person of ordinary skill with experience in CAD software know how to generate a virtual image of an object based on a model to reflect the state of the physical completion of the object?

MR. KAPADIA: Objection. Leading.

THE WITNESS: And "completion" referring to 3D printing, I assume?

Q. BY MR. BISENIUS: Correct.

A. Okay. There are software packages that would allow you to do that. So for instance, there are slicer -- today, there are slicer software packages where you can show what -- well, let me take one step back or -- just to clarify something.

So the top half of figure 2A where it shows the percent remaining with the wires on there, that portion of it would be trickier to generate that image. It's relatively easy with slicing software, for instance, to basically scroll -- scroll bars that scroll up and down and will give you an image at that particular point in time, but, you know, an -- a

particular percentage of completion.

Q. Did that type of slicing software exist in 2004, when Anderson was published?

A. Well, slicing software, yes. I don't have any specific recollection of slicing -- just to be clear, slicing software evolves month by month. So going back to 2004, honestly, I couldn't tell you whether there were slicers in 2004 that showed the preview that I just described.

Q. Would that type of slicing technology that you just described have existed in August of 2010?

A. Probably get -- so you're getting closer -- you know, you're getting into the gray area now of maybe yes, maybe no. So I wouldn't say it was widespread, but it's possible it existed in 2010.

Q. I want to talk about figure 1 of Anderson.

A. Okay.

Q. Reference numeral 108 in figure 1 indicates a graphical user interface; is that correct?

A. It doesn't -- well, it's not labeled in that figure, but I can take your word for it. Let me jump to my previous --

Q. It starts -- yeah. It's -- it's discussed in paragraph 19, if you want to look at that.

A. Yeah, I'll -- I'll take your word for it.

Q. The graphical user interface 108 in figure 1 shows three different print jobs along with their respective status and progress; is that correct?

A. The label says, "3D object fabrication process," so that would appear to be correct.

Q. In the example shown in figure 1, when the job labeled J108 starts in the status changes from waiting to printing and the progress of the printing increases above 0, the graphical user interface 108 would update to reflect those changes in status and progress; is that correct?

MR. KAPADIA: Objection. Incomplete hypothetical.

THE WITNESS: So -- so I agree, there -- I don't know definitively. I -- I can hypothesize that -- based on job 107, where it does show a percent completion, that it would update in the manner that you just described, but that's a hypothesis.

Q. BY MR. BISENIUS: In the example graphical user interface 108 in figure 1, as the printing of job J107 progresses, would you expect that the progress percentage would increase for that job?

A. Again, hypothetical, but I would guess that, yes, based on the information that I'm seeing there showing the 45 percent.

Q. So in this hypothetical where that progress percentage is changing, would you consider that updating to the progress percentage to create a different user interface or would it be an update to the same user interface?

MR. KAPADIA: Objection. Form.

THE WITNESS: Assuming it's the same software, I think this is a reasonable assumption. Assuming it's the same software package and no windows have -- this window hasn't closed and a new one hasn't opened, then, yes, I would describe that as the same -- the same user interface.

That's what you're asking, correct?

Q. BY MR. BISENIUS: Correct.

A. Yes. Okay.

Q. Continuing with this hypothetical involving the graphical user interface 108 in figure 1, if this window remained open and a new job were added to the graphical user interface 108, would displaying that new job make this a new user interface or would you consider that the same user interface?

MR. KAPADIA: Objection. Incomplete hypothetical.

THE WITNESS: Again, I -- the hypothetical -- assuming that the window isn't closed

and, you know, new windows aren't opened, I probably would describe that as the -- as the same user interface.

Q. BY MR. BISENIUS: I want to move to your declaration Exhibit 2009 that I provided in the chat earlier.

A. Okay.

Q. I want to start at paragraph 6.

A. Way too far.

Okay. Now I'm there.

Q. Paragraph 6 is in the qualifications and experience section of your declaration; is that correct?

A. That's correct.

Q. In paragraph 6, you state that your primary teaching, research, and service focus has been additive manufacturing and three-dimensional printing, 3D printing. In paragraph 11, you mention that you serve on the editorial advisory board for two of the most prominent additive manufacturing/3D printing research journals. And in paragraph 12, you state that you have taught classed in additive manufacturing/3D printing for approximately 25 years.

Do any of the courses you teach or have taught in the past include instruction or work dealing with networked rapid fabrication systems?

A. The 3D printers themselves are -- at least some of them are networked, so yes, the students are able to use network 3D printers to make their -- to make their jobs, and I do that, personally.

Q. In those courses, do the students ever operate the 3D printers remotely?

A. Yes.

Q. Have you ever taught a course that included instruction on networked systems other than networked rapid fabrication systems?

A. So CNC, or computer numerically controlled machining, I've also taught classes on CNC machining in those in which those machines, in some instances, are networked and jobs can be loaded to the machines over the network.

Q. In these courses that involve networked 3D printers, did the students ever remotely monitor the three-dimensional printers?

A. In some instances, yes. It depends on if the 3D printer they're using has that capability.

Q. Did this include camera-based monitoring of remotely located 3D printers?

A. Yes.

MR. KAPADIA: Objection. Leading.

Q. BY MR. BISENIUS: In any of the classes that

you've taught, did the coursework ever involve instruction on remote monitoring of automated manufacturing processes other than 3D printing?

A. So there's a difference between the instruction that students are given and things like lab activities where they might use a machine. So the lecture materials, themselves, I don't typically -- I don't typically talk about that aspect of it. But if they're doing lab activities, there might -- they might use that remote monitoring.

Q. So you have had students that, as part of their class work, conducted remote monitoring of automated manufacture progresses other than 3D printing; is that correct?

A. It's relatively infrequent, but seeing -- like the example I gave earlier with CNC milling machines, so those machines sometimes can have cameras, in some instances cameras that we put in them.

Q. What is a CNC milling machine?

A. CMC -- I'm sorry. CNC refers to computer numerically controlled. So that simply means a milling machine, which is a subtractive manufacturing process where you start with a chunk of metal and then you have cutting tools that cut chips or remove material from that block. CNC simply means that a computer is doing

the control of that machine based on instructions that you've provided it with.

Q. Okay. Would that sometimes be referred to as machining or machine tooling?

A. It's a -- it's a subset. So you can do it manually without any computer -- I'm sorry, "it" being machining -- you can do machining manually without any computer interface. So CNC specifically refers to computer numerically controlled. There's nobody standing there turning knobs, you know, moving -- moving the bed of the machine back and forth. So CNC is a subset of what you just described.

Q. Do any of the courses you teach or have taught in the past include instruction or work dealing with user interface design for rapid fabrication systems?

A. It's been a while, but yes, earlier in my career, we did graphical user interfaces, including for 3D printers.

Q. So you have supervised students who are designing a user interface for a rapid fabrication system, correct?

A. I have -- again, it's -- it's modest. It was -- it hasn't been recent, but -- but yes, there have been instances.

Q. Approximately, when did you teach courses

involving user interfaces designed for rapid fabrication systems?

A. So I -- when you asked the original question, I thought you said worked with students.

Q. Yeah.

A. If you said teaching, I misheard you. Sorry.

Q. I did. You're right. I can rephrase that question.

A. Okay. Sorry.

Q. Approximately, when did you work with students who were designing user interfaces for rapid fabrication systems?

A. Okay. So that -- that would have been in the mid 2000s, 2005-ish. And I actually misspoke because it just -- I do have a student right now who is right outside my -- the machine he's working on, he built his own 3D printer for a research project, and he had to do the user interface for that, as well. So there is a current situation where that applies.

Q. Have you ever, personally, contributed to the design or the development of a user interface or rapid fabrication system?

A. Yes, but that -- again, that's going back pretty early in my career, say the early 2000s.

Q. Do any of the --

A. The --
Q. I'm sorry.
A. I'm sorry. I was just going to say I'm at a point now where the -- I have enough gray hair where the students are doing most of that stuff now instead of me.
Q. Do any of the courses you teach or taught in the past --
(Reporter clarification.)
Q. BY MR. BISENIUS: Do any of the courses you teach or have taught in the past include instruction or work dealing with computer imaging or scanning of real world three-dimensional objects?
MR. KAPADIA: Objection. Form.
THE WITNESS: So yes, I -- I currently and previously have taught courses where we do scanning of objects.
Q. BY MR. BISENIUS: Continuing with your declaration, at paragraph 13, you state that, in addition to teaching additive manufacturing/3D printing classes, you have taught computer-aided design and computer-aided manufacturing classes over the past 30 years.
In these courses, did students learn to generate three-dimensional models using CAD software?
A. Yes.

Q. Around the 2010 time frame and earlier, what were some of the CAD programs that were used as part of your instruction in those courses?

A. SOLIDWORKS -- excuse me.

SOLIDWORKS was one; AutoCAD was another. Those would be the two most prominent examples.

Q. Would the students that design these models use them for three-dimensional printing?

A. Sometimes, yes.

Q. What were some other uses for these models other than three-dimensional printing?

A. In some instances, they would machine them on a CNC milling machine. In some instances, they were simply learning how to use the CAD software. That -- that was the end goal. Those would be the primary -- primary examples.

Q. In general, was there an overlap between students who took your computer-aided design and computer-aided manufacturing courses and the students who took your additive manufacturing and 3D printing courses?

A. I would say maybe -- I can give you a guess, maybe 25 percent overlap. Again, that's an estimate.

Q. I'd like to move ahead to paragraph 20 of your declaration.

A. Okay.

Q. In paragraph 20, you have included a chart that lists the claims language of the challenge claims of the '324 patent; is that correct?

A. Yes.

Q. Element 1C recites, quote, "A video camera positioned to capture video of the build volume from a point of view," end quote.

What does it mean to capture video from a point of view?

A. So in that case that -- the -- the camera is positioned at a specific location and space and it's pointing towards something. And so, the location and the orientation where it's pointing refers to the point of view.

Q. Does this claim element require that the point of view be a set point of view that cannot change?

A. Let's see. This language right here says, "From a point of view." So it doesn't really -- it doesn't really say one way or the other. It just says a point of view.

Q. Moving on to element 1D, at the end of element 1D, it recites, in part, quote, "Present in the user interface an image of the build volume from the video camera and a two dimensional projection of the

three-dimensional model from the point of view of the video camera," end quote.

Do you see that?

A. I do.

Q. In this claim recitation, does the term "an image of the build volume from the video camera" require the image to be a still image?

A. It -- so it says, "An image from the video camera." An image can be taken from a video stream, but in this instance, an image being singular appears to be one image. I might have misunderstood your question, but -- if I did, rephrase it. But if I addressed it, then feel free to move on.

Q. My question was, Does this claim language require the image to be a still image?

Or another way of framing that would be, would a video image be able to satisfy this claim language?

A. I think a -- so a video image might be one of multiple specific instances which I think is an example given further on down.

Q. So would you agree that both still and video images could satisfy this claim recitation?

A. Let me just look at the difference here. I think if the -- if the image is taken from -- if the

image is extracted from a video stream, then it could possibly satisfy this claim. Yes.

Q. Would the video --

A. I'm sorry. This language, yeah. Sorry.

Q. Would the video stream, itself, satisfy this claim language?

A. Well, if you're -- any time you play a video stream, a video stream is a collection of images that -- that you're -- you know, you might be watching 30 frames per second, which means 30 images per second. So if -- any one of those images would satisfy the image in this instance.

Q. I'd like to move ahead to paragraph 59 in your declaration.

A. Okay.

Q. Here you've provided a summary of the '324 patent, correct?

A. Yes.

Q. In paragraph 59, you state, quote, "I have reviewed the '324 patent which relates to three-dimensional fabrication using networked resources."

In this part of your declaration, the statement, quote, "Relates to three-dimensional fabrication using networked resources," end quote, is a

quote directly from the '324 patent; is that correct?

A. I'd have to -- I'd have to look at it, but it does cite the -- the column and lines there, so it appears to be yes, based on the -- on the citation there.

Q. Additive manufacturing is a type of three-dimensional fabrication; is that correct?

MR. KAPADIA: Objection. Leading.

THE WITNESS: It -- so there -- it is one instance, yes. The -- essentially, every -- every manufacturing process is a three-dimensional fabrication process. If you make a part, it has thickness in the -- so yes, in that -- in that sense, it is one instance that is.

Q. BY MR. BISENIUS: Administrative manufacturing is sometimes referred to as rapid fabrication or rapid prototyping; is that correct?

A. It, historically, has been. Yes.

Q. Other than additive manufacturing, what are other types of three-dimensional fabrication that a POSITA would have been aware of in 2010?

A. I'm sorry. Did you say 3D manufacturing processes would have been aware of?

Is that --

Q. Yes, three-dimensional -- three-dimensional

fabrication.

A. Okay. Not -- not -- no word printing in there. So just, generically, three-dimensional fabrication.

So the -- the -- POSITA as defined -- you know, I think there are very minor differences in POSITA, but either way, that -- so some instances of the background there is -- that were listed was mechanical engineering, computer engineering, electrical engineering, computer science.

So the mechanical engineering students, as a general rule -- or graduates, I should say -- they have degree at this point in time for POSITA purposes -- they would, typically, have -- they would, optionally, have 3D printing experience. Most of them would have taken a machine shop and -- and had some machining. Possibly they've had an introductory processes course where they do molding or sheet metal, those sort of things.

The other disciplines, computer engineering or electrical engineering or chemical engineering was one of the other disciplines, they might have expertise -- or experience, I should say, with 3D printing. That subset of them, it would be fairly unheard of them to have machining experience, for instance.

Q. So machining is a type of three-dimensional fabrication; is that correct?

MR. KAPADIA: Objection --

THE WITNESS: It's one --

MR. KAPADIA: -- leading.

THE WITNESS: I'm sorry. It -- I would call it one family under the umbrella term.

Q. BY MR. BISENIUS: Is machining sometimes referring to as destructive rapid fabrication?

A. That's -- that's one description of it.

I'm sorry. I want to clarify.

Did you say "destructive rapid fabrication"?

Q. Correct.

A. Okay. It's -- destructive, yes. Rapid is debatable, but it is a destructive process. Yes. You're removing material.

Q. Now might be a good time for a break before my next line of questioning, if we want to go off the record.

A. Okay. I'm fine. Yeah.

Q. All right. Should we reconvene at five past the hour?

A. Okay. Ten minutes? Yeah.

Q. Yeah.

A. Procedurally, just turn off camera and mic, or what's --

Q. Yeah.

A. Okay. All right. Thanks.

(A recess was held from 9:55 a.m. to 10:06 a.m.)

Q. BY MR. BISENIUS: All right. I'd like to move to paragraph 62 of your declaration.

A. Okay. I've got it.

Q. Here you're discussing the user interface shown in figure 5 of the '324 patent; is that correct?

A. Yes.

Q. In paragraph 65, you discuss a, quote, "Third display area 506 that shows a print queue," end quote.

Do you see that?

A. I do.

Q. When new print jobs are added to the print queue, the user interface will be updated to reflect this new print job; is that correct?

A. I would -- I would -- I would have to read what's in the description, but that would be a typical action.

Q. Would this updated print queue still be considered part of the same user interface?

A. I think consistent with the description before that, as long as the graphic window hasn't opened and

closed, it would be considered part of the same graphical user interface.

Q. Moving ahead a couple paragraphs to paragraph 67, here, you're discussing a visualization area 510, correct?

A. Yes.

Q. A few sentences into paragraph 67, you quote the '324 patent description that, quote, "The visualization area 510 may also instead show assimilated print object such as a rendering of a three-dimensional model depicting a current state of the completion of an object being fabricated," end quote.

Then in the next sentence, you, again, quote the '324 patent description that, quote, "The visualization area 510 may also or instead show an image of a working volume of a three-dimensional printer or other fabrication resource captured during execution of the print job," end quote.

What is the difference between a rendering of a three-dimensional model of an object and an image of a working volume in which the object is being fabricated?

MR. KAPADIA: Objection. Misstates the evidence. Objection. Leading.

THE WITNESS: I didn't hear the --

Mr. Kapadia, what -- could you repeat what the objection was? I actually couldn't hear that.

MR. KAPADIA: Objection. Misstates evidence. Objection. Leading.

THE WITNESS: Okay. So -- and now, I apologize. The -- the -- you'll have to rephrase -- or I'm sorry. Not rephrase -- repeat the question again. Sorry.

Q. BY MR. BISENIUS: Yeah. So in paragraph 67, you're quoting portions of the '324 patent, and in those quoted portions, it mentions a rendering of a three-dimensional model and an image of a working volume. And I'm asking what is the difference between a rendering of a three-dimensional model of the object and an image with the working volume in which the item is being fabricated.

MR. KAPADIA: Objection. Leading.

THE WITNESS: So I'll -- I'll break it into two pieces. The rendering of a -- I'm sorry. The rendering in this -- the first half of the paragraph is specifically showing the simulated print object, so it's a rendering or such as a rendering of a three-dimensional model. So that would be a computer representation -- typically, I'll say, it would be a computer representation of the simulated print object

which is the first right before that statement there.

And then the image -- the second half of what you were asking was the image of a working volume of a three-dimensional printer. And so, the image itself, it could be a photograph, it could be a graphic image that it's -- that specific portion of what you're asking about is not specific about what type of image it is.

So did I miss something in your question or did I -- I think I answered it, but maybe not.

Q. BY MR. BISENIUS: You answered my question. Thank you.

A. Okay.

Q. I want to keep talking about figure 5 of the '324 patent, and I've uploaded the '324 patent, which is Exhibit 1001. If you could download that, please, and turn to figure 5.

A. Okay. I believe I'm looking at figure 5.

Q. Does figure 5 of the '324 patent show an image of the build volume from the video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera displayed at the same time?

A. I'm not sure I have the same document open as you do. Let me confirm. This is the '324 patent.

We're looking at figure 5, is that correct, that shows -- the title is "print management"?

Q. Correct.

A. Okay.

Q. And this is showing a user interface to the system; is that correct?

A. It has the blocks -- it has the functional areas of the user interface. Yep.

Q. Okay. So my question was, does figure 5 of the '324 patent show an image of the build volume from the video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera displayed at the same time?

MR. KAPADIA: Objection. Form.

THE WITNESS: So to -- what I'm seeing in figure 5 here is empty rectangles, so I'm not seeing anything being displayed in this particular illustration. It just has functional labels for each box.

Q. BY MR. BISENIUS: Can you identify any portion of the '324 patent that describes an image of the build volume from the video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera that are displayed at the same time?

MR. KAPADIA: Objection. Form.

THE WITNESS: And can you repeat the very first part?

Can I identify an image in this patent, was that what you were asking?

Q. BY MR. BISENIUS: Any portion of the patent. So the figures or the written description.

A. You might have to give me a few minutes to go to -- to locate. Would you like me to search for a few minutes here and --

Q. Yes.

A. Okay. Give me just a little bit here.

And you were, specifically, asking about displaying 2D image -- I'm sorry.

Q. I'm asking --

A. I'm multitasking. Is that --

Q. Yeah. I'm asking if you can identify any portion of the '324 patent that describes an image of the build volume from the video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera that are displayed at the same time.

MR. KAPADIA: Objection. Form.

THE WITNESS: Okay. So the -- if I understand your question correctly, for instance, the --

the end of Claim 1 refers to presenting, in the user interface, an image of the build volume and a two-dimensional projection of the three-dimensional model from the point of view of the video camera. So that would be one instance. And then it looks like Claim 19 has similar -- similar language.

So those would be two instances, if I understood your question correctly.

Q. BY MR. BISENIUS: Can you identify anywhere in the specification portion of the '324 patent that describes an image of the build volume from the video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera that are displayed at the same time?

MR. KAPADIA: Objection. Form.

THE WITNESS: That might take me longer to -- longer to go through it, but I'm happy to do that. And just for -- just for the sake, am I allowed to search the document for key words to speed it up or not?

Q. BY MR. BISENIUS: Yes.

A. Okay. All right. Search is not -- I don't know if this document is searchable since it's not returning any hits, so I'll have to do it the old fashioned way here and read.

Q. That's fine.

A. Okay.

MR. KAPADIA: Counsel, in the interest of time, do you happen to have a copy of this exhibit with, I guess, the search function or the search text?

MR. BISENIUS: I probably do. Let me see.

Okay. I found one. I'm uploading that to the chat.

THE WITNESS: All right. And while you're doing that, I -- let me read the rest of it. I'm at the bottom of column 24. Let me see.

Providing a user interface. So the -- it looks like row 47 on column 24 has language that says may -- may include providing a user interface to a remote user accessing the device through the network interface wherein the user interface presents an image of the build volume from the camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera.

So I believe that -- I believe that's an example of what you were just asking for.

Q. BY MR. BISENIUS: Does this authorization of the '324 patent describe an image of the build volume and the two-dimensional projection as being displayed at the same time?

MR. KAPADIA: Objection. Form.

THE WITNESS: So I -- my plain interpretation of that is, yes, the word, and it says present an image of the build volume and a two-dimensional projection. So the word "and" there is -- would be interpreted to mean presenting the two of them, yes.

Q. BY MR. BISENIUS: I want to go back to your declaration, Exhibit 2009, and talk about paragraph 71.

A. Okay. I'm there.

Q. In paragraph 71, you're discussing steps of a method 700 describes in the '324 patent; is that correct?

A. That appears to be correct.

Q. Here, you mentioned that, at step 704, the method includes, quote, "Receiving a three-dimensional model through the network interface," end quote. And then in step 706, the method includes, quote, "Fabricating the three-dimensional model as an object within the build volume of the three-dimensional printer," end quote.

In this method, the model is a software file that defines the shape of the actual physical object to be fabricated; is that correct?

MR. KAPADIA: Objection. Form.

THE WITNESS: Let me read that paragraph

again, the -- and you correct me if I'm wrong. You read the portion where it says, "As shown in step 704, the method 700 may include receiving a three-dimensional model through a network interface."

Is that -- that's correct, that was part of what you read to me?

Q. BY MR. BISENIUS: Correct.

A. Okay. And then what was your question again about the three-dimensional model?

Q. So the question is the three-dimensional model is a software file that defines the shape of the actual physical object to be fabricated; is that correct?

MR. KAPADIA: Objection. Form.

THE WITNESS: So generally speaking, if you're sending a file over the network, then, yes, it is a file generated by some sort of software. Yes.

Q. BY MR. BISENIUS: Prior to fabrication, the user would be able to use the model to view the physical shape of the object to be fabricated; is that correct?

MR. KAPADIA: Objection. Form.

THE WITNESS: So before sending it over the network with that file, would they -- you're asking would they ever be able to view it in some software package?

Q. BY MR. BISENIUS: Correct.

A. Generally speaking, yes, that -- that would be typical.

Q. And when viewing the model within CAD software, the user would be able to observe the shape of the object to be fabricated; is that correct?

A. It doesn't have to be a CAD software package. It could be a 3D slicer, for instance. So there are a number of different software packages that you could, potentially, view the file on, not just CAD.

Q. If the user can view the shape of the object using the file for the model, what is the point of using a camera to observe the fabrication process?

MR. KAPADIA: Objection. Form.

THE WITNESS: So there can be a handful of reasons to include and use a camera in the 3D printer. To be honest with you, the most common one is just to see when the job is done so you can go pick it up. But there may be instances where you're looking to see if there was a problem with the build, you know, the -- you know, the print head jammed, whatever. There could be any number of -- any number of things that you would be monitoring in that case.

Q. BY MR. BISENIUS: Would monitoring the build process with a camera allow the user to determine if the model actually works for its intended purpose?

MR. KAPADIA: Objection. Leading. Objection. Calls for legal conclusion.

THE WITNESS: That's a really hard question to answer. You're saying would -- did you say would the camera allow you to see if the model works as -- as intended, basically?

Was -- it was the camera that you were referring to?

Q. BY MR. BISENIUS: Well, I was referring to the user monitoring the build process with the camera.

A. Oh, okay. The -- again, that's -- that's actually -- it sounds like a simple question. It's a long answer.

So when you -- the language that you used about the part performing as intended I think were your words, or something to that effect, the -- the functional performance of a part after 3D printed and you're testing it out, the camera may or may not -- you know, if you have defects on the inside of the part that are not visible from a camera, then you might not see that part of it. But there are -- if the part splits or, you know, has other defects, you might be able to detect those with the camera.

So the answer is possibly. It just depends on -- on the function that you're referring to.

Q. So the user would be able to use the camera to remotely monitor the build process to determine if errors occurred during the fabrication; is that correct?

MR. KAPADIA: Objection. Misstates the testimony.

THE WITNESS: So there are some types of -- some types of errors that you might be able to see with the camera, and there are some that you would not be able to see with the camera.

I --

Q. BY MR. BISENIUS: In some cases -- go ahead.

A. I'm sorry. I was going to say I could give examples if it's important, but I'll let you go ahead now.

Q. In some cases, would the user be able to use CAD software to make adjustments to the model to correct for errors observed using the camera?

MR. KAPADIA: Objection. Beyond the scope of the declaration.

THE WITNESS: Yeah. So I -- again, I can answer the question, I -- I don't have a recollection of -- of saying anything to that point in the declaration, but the -- I'm sorry. Repeat the question one more time. I have a short attention span, apparently. It's better to be safe than sorry.

Q. BY MR. BISENIUS: In some cases, would the user be able to use CAD software to make adjustment to the model to correct for errors observed using the camera?

MR. KAPADIA: Objection. Beyond the scope of the declaration.

THE WITNESS: So the -- normally, if you're changing the design, that would be after you 3D printed the part and you, maybe, assembled pieces together or did mechanical testing, you know, how strong is it, how stiff is it, you -- after doing testing when it comes off of the 3D printer, that's when you would make a change to the design in the CAD software. If there is a print defect, that's unlikely -- well, I won't say unlikely, but it's -- it's typically more attributed to a problem with the 3D printer as opposed to the design of the part.

Q. BY MR. BISENIUS: I'd like to move ahead to paragraph 76 of your declaration.

A. Okay. Okay. I'm there.

Q. In this paragraph, you quote statements made by the applicant during prosecution of the '324 patent; is that correct?

A. That appears to be. Yes.

Q. The quotations in paragraph 76 are statements from the applicant and not claim language; is that

correct?

MR. KAPADIA: Objection. Form.

THE WITNESS: Give me a second to read that.

That -- that -- I'm sorry. Exhibit 1002, if you can -- is Exhibit 1002, which -- which document is that?

Q. BY MR. BISENIUS: That's the prosecution history of the '324 patent.

A. Okay. Prosecution -- okay. That's it.

So -- so that appears to be a quote from the prosecution history then, which is from the applicant filing.

Q. BY MR. BISENIUS: In paragraph 76, near the top of page 31, you state that, during prosecution of the '324 patent, the applicant stated that the claimed invention leads to, quote, "Advantageously permitting side-by-side comparison by the remote user of the model and the resulting output," end quote.

What advantages are provided by preventing side-by-side comparison by remote user of the model and the resulting object?

A. One of them can just be the progress of how far you have to go or if it's completed. But more often, you might compare them side by side to see if there

was -- if there was a problem with the 3D printing itself, in which case you might, for instance, choose to stop the printer, fix something, and restart it, or you might have to scrap the job entirely and start over.

Q. Do any claims of the '324 patent recite side-by-side comparison of the model and the resulting object?

MR. KAPADIA: Objection. Calls for legal conclusion. Objection. Leading.

THE WITNESS: It -- it talks -- it talks about displaying the two images. There's -- I don't recall language -- and you said in the claim specifically, correct?

Q. BY MR. BISENIUS: Correct.

A. I don't recall language in the claim that specifically alludes to comparing side by side.

Q. Moving ahead to paragraph 78, here, you're, once again, quoting statements made by the applicant during prosecution of the '324 patent; is that correct?

A. That appears to be correct. Yep.

Q. Here, you identify that the applicant argued that the Taminger reference was different from the claimed invention because Taminger did not disclose that the model view were from the same point of view as the video of the three-dimensional build; is that correct?

A. I'm trying to find that portion.

Okay. At the bottom of the paragraph.

Correct.

Q. I want to continue on to paragraph 81 of your declaration.

A. Okay. I'm there.

Q. Here you're discussing the Mazumder reference; is that correct?

A. That's correct.

Q. Moving on to page 35, in the last sentence of paragraph 81, you mentioned that Mazumder provides, quote, "image and video observation of the laser aided direct material deposition process," end quote.

Do you see that?

A. I'm sorry. That's the last sentence, correct?

Q. Yes. Just directing you to the last sentence of paragraph 81.

A. Yes. Okay. Two monitors, one with the graphical user interface and the other for image and video observation.

Yes, I see that.

Q. In this context, what is the difference between image observation and video observation?

MR. KAPADIA: Objection. Leading.

THE WITNESS: You said what's the

difference between image and video, that was the question?

Q. BY MR. BISENIUS: Yes.

In this context, what is the difference between image observation and video observation?

MR. KAPADIA: Objection. Leading.

THE WITNESS: So I would interpret image -- image to be a static image and video to be a live video, or, you know, playing of the -- of the video stream there that could, for instance, be coming from a camera.

Q. BY MR. BISENIUS: So a Mazumder system provides both video images and still images of the three-dimensional build process; is that correct?

MR. KAPADIA: Objection leading.

THE WITNESS: It could -- there's two different monitors there, so there -- okay. I'm sorry, I misread that. So yes, it can, yeah.

Q. BY MR. BISENIUS: Moving ahead to paragraph 83, you're discussing the Mori reference here, correct?

A. Yes.

Q. In paragraph 83, you discuss Mori's description of selecting virtual cameras using virtual image data and displaying sectional image data.

Do you see that?

A. I remember it. I'm just looking for the word

"sectional" here.

Yes, I see it. Yep.

Q. What is the difference between virtual image data and sectional image data?

A. So in Mori's case, there was a distinction in some instances, from a camera view, you might not be able to see a cutting tool because it's on the backside of the part beneath the top surface and -- but might be able to see it from a different direction. And so in those cases, he talks about generating an image -- a virtual image of the cutting tool from a direction where you can see it.

The section image data refers to situations where the cutting tool is, you know, buried in the part, like drilling a hole, for instance. If you're drilling a hole, the tool is not visible from any direction. So in that case, what he refers to as a sectional image is where he's virtually taking a slice off the part so that you would be able to see a cutting tool inside a part -- or a virtual image of the cutting tool inside a part.

Q. I'd like to turn to page -- sorry -- to paragraph 106 of your declaration.

A. Yep.

Q. In paragraph 106, you're discussing the Henke reference --

A. I'm not there -- I'm sorry, I'm not -- now I'm there. Sorry.

Q. In paragraph 106 you're discussing the Henke reference; is that correct?

A. Yes.

Q. And you've copied figure 8 of Henke into your paragraph of 106; is that correct?

A. Yes, that appears to be correct.

Q. Figure 8 of Henke shows a simulation and video images of the real world implementation of the laboratory procedure simultaneously in the same user interface; is that correct?

A. It -- it shows the real world, what was at -- real world implementation and what was the second thing you said that it's showing simultaneously?

Q. It's showing video images of the real world and limitation of the laboratory procedure and a simulation of the laboratory procedure simultaneously; is that correct?

MR. KAPADIA: Objection. Leading.

THE WITNESS: It shows an image. You used the word "video image." It at least shows an image in this case, and then the graphic that you're seeing there is not quite what's in the real implementation there, but looks like a very highly -- highly simplified

version of the subset of components.

Q. BY MR. BISENIUS: I want to move up to paragraph 103.

A. Okay. Got it.

Q. Here you refer to the displayed simulation that we were just discussing as a visual model of the water level control task; is that correct?

A. Yes.

Q. One paragraph earlier, in paragraph 102, you explain that Henke is not limited to the water level example, but rather relates to a variety -- a variety of simulation and visual prototyping for remote engineering applications to allow student to test a designed control algorithm; is that correct?

A. That was paragraph 102, you said?

Q. Correct.

A. I'm not seeing the language that you just read in paragraph 102.

Could you re-read that?

Q. In paragraph 102, you explain that Henke relates to a variety of simulation and visual prototyping for remote engineering application to allow students to test the designed control algorithm; is that correct?

A. Okay. Now it -- I'm sorry. Yes. I -- yes.

That's correct.

Q. So would you agree that Henke is not limited to water level control models?

A. Water level specifically, no. I mean, it's designed for control algorithms. So water level is one specific instance of a control algorithm that they're showing in this particular publication.

Q. I just uploaded Exhibit 1005.

Can you please open that?

A. Yes. Okay.

Q. This is US Patent application number 2010, which is Exhibit 1005 in this proceeding, referred to as Mori in this petition.

Can you please turn to figure 2?

A. Okay.

Q. Figure 2 shows Mori's figure apparatus; is that correct?

A. It appears to. Yes.

Q. This machining tool performs three-dimensional fabrication; is that correct?

A. Specifically machining, yes.

Q. I want to go back to your declaration, Exhibit 2009, and move to paragraph 117.

A. Okay. Got it.

Q. Starting on the last line of page 66, in

paragraph 117, you state, quote, "I have reviewed portions of the infringement contentions in Exhibit 1016," end quote.

Do you see that?

A. I do.

Q. And then later on in that paragraph, you cite to pages 41 to 44 and 46 of Exhibit 1016.

Do you see that?

A. Yes, I do.

Q. All right. I'm going to upload Exhibit 1016, and once you have that open, I want to start at page 43 that you cited to.

A. Okay. I'm there.

Q. In your opinion, does the image shown on page 43 show an image of the build volume from a video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera?

A. It appears to. Yep.

Q. Can you identify the image of the build volume from a video camera on page 43?

A. It looks like a photograph with a green dinosaur sitting on the bed of the 3D printer.

Q. Would this be a live video feed of the build process?

A. From this photograph, there's no way of knowing whether it's a static image or a live video. So the answer is I don't know in this instance.

Q. Did you identify the two-dimensional projection of the three-dimensional model in this image?

A. Yeah. So below the -- what looks like the photograph there, below that, there's a little thumbnail of a dinosaur that -- similar to a dinosaur that was -- that was printed.

Q. In your opinion, the two-dimensional projection of the three-dimensional model that you just identified is from the point of view of the camera; is that correct?

A. It appears to be to me. Yes.

Q. Does the two-dimensional projection of the three-dimensional model that you just identified show the exact same angle of the dinosaur object as the image of the build volume in this imaged?

MR. KAPADIA: Objection. Leading.

THE WITNESS: Yeah. I -- I couldn't tell you. I'd have to -- so the green dinosaur there appears to have been shaded and -- sorry. It's very difficult to say definitively.

Q. BY MR. BISENIUS: I'd like to move to paragraph 53 of Exhibit 1016 -- I'm sorry -- page 53.

A. Okay. I'm there.
Q. What is being shown in the image on page 53?
MR. KAPADIA: Objection. Beyond the scope of the declaration.
THE WITNESS: Yeah. So I -- this is -- this is the infringement document -- give me a second. It's blurry on my screen, so I need to zoom it up a little bit.
So the -- it appears to be, based on the text that's there in the -- it's really blurry, but it says micro SD card. So this appears to be an individual frames from a time lapse video.
Q. BY MR. BISENIUS: Are these frames from the time lapse video images of the build volume from the video camera?
A. They appear to be, yep. At different points in time, of course.
Q. Are these frames from the time lapse video displayed at the same time as the live video feed of the build process?
MR. KAPADIA: Objection. Beyond the scope of the declaration.
THE WITNESS: Yeah. So I didn't study this. This particular image on page 53 is just showing the portion -- this window of the user interface is just

showing portions of the -- of the time lapse video, and, you know, I would -- I would have to have this -- this data and be able to click on the other images and be able to analyze what it's showing there that would be infringement, not invalidity. So I didn't study it in that context.

Q. BY MR. BISENIUS: What is the field of endeavor of the '324 patent?

A. The field of endeavor of the '324, I would say, is 3D printing or additive manufacturing as a synonym.

Q. I'm uploading Exhibit 1013. This is referred to as Tay in the petition.

A. Okay. I have it open now.

Q. I want to start at page 5 of Tay?

A. Okay. I'm there.

Q. Page 5 -- sorry. Page 5 includes figure 3; is that correct?

A. Yes.

Q. Do you see an image of the object generated from the model in figure 3?

A. The -- are you talking about the completed 3D printed part?

Q. I'm asking if there's an image of the object generated from the model.

A. So there -- there is a photograph of a 3D

printed part sitting on what I'm -- appears to be a table. That could be an object generated from the 3D model. That's an example of an object generated from a 3D model.

Q. Is there also an image of the model from the CAD file in this image?

A. Figure 3A refers to the slicer itself. And so, there is a model of the head in this case, which would be coming from a computer generated, you know, version of the 3D model. So that's -- that's representing that in the slicer software before it's been -- before it's been printed or started printing, for that matter.

Q. Is the information displayed in the software that you just identified and the image of the actual physical object from the same point of view?

A. Approximately -- again, the head -- the head is sitting on a table, so -- or I'm -- what looks like a table to me. So that's whatever orientation somebody set the part on the table after it was printed and removed from the 3D printer.

Q. I'd like to go back to paragraph 20 of your declaration.

A. Okay.

Q. As we discussed earlier, paragraph 20 is showing claim language of the challenged claims of the

'324 patent, and I want to talk about element 1D again.

Element 1D recites, in part, quote, "Present in the user interface an image of the build from the video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera," end quote.

Do you see that?

A. Yes.

Q. Would presenting two different images taken from the same camera positioned to capture video of the build volume satisfy the claim requirement presenting in the user interface an image of the build volume from the video camera and a two-dimensional projection of the three-dimensional model from the point of view of the video camera?

MR. KAPADIA: Objection. Incomplete hypothetical. Objection. Beyond the scope of the declaration.

THE WITNESS: Okay. And the -- I got the last half, the very -- you said would -- presenting two different images from the same camera at -- taken at different points in time, is that what you're asking?

Q. BY MR. BISENIUS: Correct.

If you were to present two different images taken at different points in time from the same camera

and present them in the user interface at the same time, would that satisfy this claim language?

MR. KAPADIA: Objection. Incomplete hypothetical. And objection. Beyond the scope of the declaration.

THE WITNESS: So there -- there could be an instance where you have the -- the video camera showing a live image of the build volume and then you might select a snapshot from the same lapse video -- for instance, one of the images from the time lapse video -- as the two-dimensional projection of the three-dimensional model.

So that would be an instance where the same camera was used to generate both images that are displayed for those two different purposes that you mentioned where the images were taken at different point in time.

Q. BY MR. BISENIUS: And that example you just described would satisfy this claim language; is that correct?

MR. KAPADIA: Objection. Form.

THE WITNESS: So that would be one instance, yes.

Q. BY MR. BISENIUS: I want to move all the way to paragraph 193 of your declaration.

A. Okay. Got it.

Q. About halfway through paragraph 193, you state, quote, "A POSITA would have recognized that Claim 5 requires dynamic updates to the two-dimensional projection that correspond to the state of physical completion," end quote.

Do you see that?

A. Yes.

Q. What qualifies as dynamic updates?

For example, would updates at regular intervals qualify as dynamic updates?

MR. KAPADIA: Objection. Form.

THE WITNESS: So the -- the plain meaning of -- so again, this is for me, my -- how I would interpret plain meaning, a dynamic update, dynamic is typically something that's changing constantly, you know, dynamic, changing -- in the context of people dynamic -- so it's, basically, a timeframe that's relevant to us, you know. So a video, for instance, if you're -- if I were watching a video at 30 frames per second or 60 frames per second, that would be dynamic updates.

Q. BY MR. BISENIUS: If the two-dimensional projection of the three-dimensional model were updated every second, would that qualify as dynamically updating

the two-dimensional model?

A. So you're, kind of, getting into a gray area then, but -- you know, where -- how slow does it have to be to where you're not really talking dynamic any more. So that really is a hypothetical that's -- it's almost impossible to give a yes/no answer to that one specific question, and that's why I said something, you know, relevant to our time frame, like watching video, you know, where it's constantly updating quick -- quickly -- what we would interpret as quickly would be dynamic. Something that's many seconds or minutes, I don't think most people would call that dynamic updates.

Q. Since you were sworn in today, have you discussed the content of your deposition with Mr. Kapadia?

A. No.

Q. To the best of your knowledge, has a court ever precluded you from offering an opinion?

A. To the best of my knowledge, that has never happened.

Q. To the best of your knowledge, has a court ever criticized one of your opinions?

A. No.

MR. KAPADIA: Objection. Form.

THE WITNESS: Sorry. To the best of my

knowledge, my opinions have never been criticized.

MR. BISENIUS: I have no further questions.

MR. KAPADIA: Okay. I think we're at, roughly, lunchtime for Dr. Cormier. So why don't we do -- would a half an hour lunch break work and then we can -- we can resume? That will give me some time to figure out if I want to do redirect.

THE WITNESS: Okay. That's fine with me.

MR. BISENIUS: Should we come back at 30 past the hour or 35 past the hour?

MR. KAPADIA: Let's do 35 past the hour.

THE WITNESS: That works. Thank you.

(A recess was held from 11:03 a.m. to 11:35 a.m.)

MR. KAPADIA: Okay. All right. Thank you. I don't have any further questions, so I just want to thank Dr. Cormier for his time.

THE WITNESS: Okay. Thank you.

MR. BISENIUS: Nicole, do you need anything from me?

THE REPORTER: I just need to get orders.

MR. BISENIUS: I'd like a rough draft, and I'd like the official transcript by next Monday. That's the 24th.

THE REPORTER: Okay. And Mr. Kapadia?

MR. KAPADIA: I don't need anything.

THE REPORTER: Okay. You'll get the final, but regular turnaround?

MR. KAPADIA: Yeah. Whatever -- whatever -- I think that's what we did in the last one, right?

THE REPORTER: Yes, sir.

(Whereupon proceedings concluded at 11:36 a.m.)

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHENZHEN TUOZHU TECHNOLOGY CO., LTD.	§	**Petition for Inter Partes Review of U.S. Patent No. 9,592,660**
Petitioner,	§	
VS.	§	**Case No. IPR2025-00257**
STRATASYS, INC.,	§	
Patent Owner.	§	

REPORTER'S CERTIFICATION

ORAL AND ZOOM

DEPOSITION OF DENIS CORMIER, Ph.D.

NOVEMBER 19, 2025

I, Nicole A. Hatler, Certified Shorthand Reporter No. 11275 in and for the State of Texas, hereby certify to the following:

That the witness, DENIS CORMIER, Ph.D., was duly sworn by the officer and that the transcript of the oral deposition is a true record of the testimony given by the witness;

That the original deposition transcript was delivered to _____;

That the copy of this certificate was served on all parties and/or the witness shown herein on

_____;

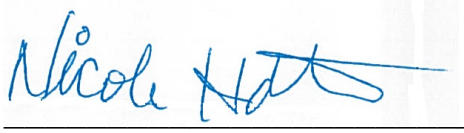
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I further certify I am neither counsel for, related to, nor employed by any of the parties or attorneys in the action in which this proceeding was taken, and further that I am not financially or otherwise interested in the outcome of the action.

Certified to by me this 24th day of November, 2025.



Nicole A. Hatler Texas CSR 11275
Expiration Date: 11/30/26
California CSR 13730, EXP 6/30/26
New Mexico CCR 588, EXP 12/31/25
NHatler@Ymail.com

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