

**MARK CISZEWSKI:** Welcome everybody. Thanks for joining us. We really appreciate you guys making it this late in the day to our presentation. It means a lot. Today we're going to go over, for those of you aren't familiar with Revizto, some of the basics. Our product manager and founder of Revizto is going to go through the methodology behind Revizto. We're going to walk through some of the most used features of Revizto and some of the newly-added features, and then we're going to have our special guests, Marin and Ian, from batesENG speak about how they're utilizing Revizto and how they've utilized it on some of their projects. Good and bad, hopefully more good than bad. And then we're going to have a special announcement to make with one of the releases we've kind of held off just specifically for AU that we are going to announce right here in this class. So without further ado, here's our product manager, Arman Gukasyan.

**ARMAN GUKASYAN:** Thanks. Thank you. So, first before I start, I just want to know how many of you already use Revizto as of today? All right. So 40%. So, I want to start from three basic ideas of Revizto, why we started to this product which was back in 2011 and brought the first version at AU in 2012, and evolved from that passed a long, long way from that period of time.

It's kind of given easy access to your BIM data and for conveying your designs in a more natural way. Second is that to keep all your information in one place you don't have to take screenshots of Navisworks putting the notes and send to emails to project team members, and keep all the data in one place, assigning tickets, assigning issues, and having the switchbacks through Revit, Navisworks, so on and so forth. The biggest advantage that we hear of course we always hear and you know here and to our users is the ease of use. When I stepped into this industry, back in 2005 I would say, what was amazing for me is that every single tool which is designed in this industry is designed by engineers for engineers. And a lot of communication is lost because you can't communicate really with other team members who have no idea how to use authoring tools that such as Revit, Navisworks, and any other. So that was the main principles that we basically took and we started to bring this gaming technology into this AEC world to revolutionize the way people are communicating.

So, I would actually maybe go-- So, the biggest advantage we so far see is the bridge between Revit and Navisworks that we created with Revizto. And I think Mark is going to be showing in a little bit all that in more details, and then Marin with Ian is going to be talking about their workflows, as Mark said. And so I don't want to maybe take too much time, and I'll pass it over

to Mark for live presentation for the workflows, because I think that's why you came here to learn. Thank you very much, and I'm passing the word to Mark.

**MARK  
CISZEWSKI:**

Thanks, Arman. So, Arman kind of addressed, he kind of went over the three main components of why folks are utilizing Revizto. I think this does an excellent illustration in terms of the most popular reason people are utilizing Revizto, and that's going to be the issue tracker. For the 40% of you or so that have utilized Revizto, hopefully you've already seen the advantages of that and how that comes into play for coordination, for tracking issues, and understanding where those issues stand in the design or project workflow.

So, if we take a step here, I'm going to play this video here. I think this is a really telling video. This is actually a video AECOM utilized to explain to some of the folks that weren't technical, in this case with Navisworks, the process of why they need Revizto. So they said, you know, here we are with our coordination manager. We have the Navisworks model. We push it out to our MEP subs. This is how Navisworks should work in theory. We have a coordination issue. We update the model, and all is well. For those of you guys technical in Navisworks or have seen this workflow in Revit, you know that's not always the case. So we're taking screenshots, we're sending out viewpoints and views and then pushing out the model, and we really don't know what happens with these issues and when they necessarily get resolved.

So here is what was actually happening as we heard from AECOM. With their workflow, they said here's what's going on in reality based on in theory how it's actually supposed to work. So, most of you guys have a smile on your face. Some people can relate to this specific problem. But we set out to address this. And we knew that, with the nature of how communication has happened in the AAC industry, it needed to be simple. The reason people like to take screenshots is because it's so simple. You take a screenshot. You send it to somebody in an email. You cc a couple of people. You market up in a 2D PDF markup tool, and the problem is solved.

So we knew that we had to integrate Revizto and be just a simple yet have additional benefits to that workflow. So, when we take screenshots in a program such as Revizto, it's intelligent. So it's taking all that design and BIM data that you guys worked so hard to retain, and it's keeping that within your model. It's keeping that within multiple platforms and then translating that into easy-to-use and easy-to-understand visual information that Revizto holds.

So that's kind of what we want to walk through today. We're going to spend most of the time

on the issue tracker, but we didn't want to walk through the process of how we get this model in there. We're going to spend a couple of minutes on that for those of you who are new. So, for those of you not familiar, Revizto integrates with programs such as ARCHICAD, SketchUp, Revit, Navisworks, AutoCAD, almost anything CAD-based. Civil 3D, anything CAD-based. Civil 3D is also CAD-based.

I'm going to bounce over here to Navisworks. And this process is going to be the exact same if we are exporting out of Navisworks or CAD or Revit. Simply all we're going to do after installing the platform is clicking on Revizto 4 here and export to Revizto. It's as simple as this one-click process. If we're coming from Revit, it's going to take our Revit plans and sheets, even the linked sheets that are within your model, into a game engine format in Revizto.

So if I were to select Next here, this project would export. This process can range from a couple of minutes to a couple of hours depending on the sheer size of the model. We have some extremely massive models. Marin's been a very good tester in trying to break our technology with models most computers can't open. So we can thank him for that. But, anyways, would say most models probably range between that 10- to 20-minute range in terms of export. Once that model has been exported, you can actually set up an export scheduler to have it automatically export on a daily or weekly basis, whatever you guys prefer.

So I'm going to jump directly into our Revizto model. And this is what it looks like after it's exported out of Revit, or in this case Navisworks. So all the information is exported, done locally. The geometry is still there. So if we select an object, we're going to see the metadata that derived originally from that RVT file. In addition, if we decide to walk into this model, we're going to be able to see that all the geometry is still there.

So if I select our measuring tool, we can see that all this information is in there. We can check the ceiling height. We could select the distance between a couple of objects. And as you can see, the learning curve and the ease of use of this is fairly simple. It's very intuitive.

So that kind of covers the first point that Arman talked about. Short learning curve, ease of use, and getting this information in the hands of people who might not be technical on Navisworks Manage, or Revit for that matter.

So going into the effective communication, that's definitely going to be the issue tracker. So, as I discussed before, we have this mentality in the industry. You know, back in the 1700s, we see people sketching out plans on a 2D blackboard. And now we see in 2015, 2016, we see

people doing the same thing except for they're doing it on a whiteboard, or they're doing it in a 2D format. So taking that a step further, we know a lot of people want to still do that in 2D. So if I wanted to create an issue in a 2D environment as we discussed, those plans are going to come through. So any of these plans, we can scroll, zoom in. Maybe we want to make an issue of this door. We simply drop the tag by that door, and we can make any kind of markup directly in the technology. So, I'm going to mark up this door just as a quick example, and I'm going to say AU class test.

When I select done here, it's retaining all this information. So this isn't a dumb document like a PDF from a screenshot. So we're able to do now, instead of emailing this, is we can simply come down here and we can add an assignee. So I'm actually going to pick on my colleague Greg here who chose to sit in the front row, and I'm going to add Greg on there. Instead of cc'ing people on here, I'm going to add actually Nathan as a watcher on this. So when we come down here. I'm going to edit watchers. I'm going to add Nathan because I think I've invited Nathan to this project as well.

Now those guys are going to be notified of this issue. So it's as simple as that. We have that information. Instead of going to our email now, we'll simply select the chat box, and I can see these guys have already been collaborating or commenting on this. We can see Greg immediately responded.

So, instantly we have this collaborative aspect. On the left side here, we can see that we have the ability to jump into 3D, and we're going to be right next to the door that we marked up. So, Revizto is taking that information, taking that coordinate system, and it's converting it to a number of different formats. For example, let's jump back to Revit. If we jump into Revit, we can select Revizto, issue tracker, and now we have to go back and we have to fix that door that Greg's made this comment on. Well, we don't have to go to a separate secondary program and then try to find that door in Revizto like we would with a 2D PDF.

So simply all we're going to do is open this up as our secondary monitor in Revizto, and we're going to double click on this. As you're going to see, instantly it's going to take us to that door in our Revit model so we can make that change.

So what we've done here is we've allowed multiple people. Greg might not be technical in Revit, yet he can still collaborate on this project. I can stay as a designer or an architect. I can stay in Revit and no longer have to go to a third-party technology. I see this information in real

time, and it's just up on my secondary monitor.

So for those folks that are technical in Navisworks, maybe we're doing a coordination meeting actually in Navisworks. Well, typically, we create a viewpoint or assign a screen shot to somebody. Maybe we'll pick on this fridge here. Simply I'll click on the Revizto plug-in. Hit new issue. And from here, it's going to take a screenshot, and it's going to link it and convert that instantly as you kind of saw in that flow chart. So it's converted it now. It's taking this information that's pertaining to our Navisworks model, and it's converting that into not only a Revizto format but also a format that's consumable by CAD, or by Revit, or by other users on a mobile device. So, with that being said, you can also see and do everything I've showed you on an iPad, a surface tablet, an Android tablet. You can do it on a Mac. You can also do everything I'm showing you in VR. So, if you guys haven't seen our booth or had a chance to stop by, we have a HTC VIVE hooked up. We can do all this, view issues, view clashes, all in a virtual environment.

So after I've created this issue here, we're complaining that Greg replaced this fridge in the wrong location. And I'm just going to maybe write a quick note. And so we can additionally mark this up. So I'm just going to say, AU test number two. So maybe my colleague Nathan over here had something to say about the fridge. He would be able to not only add comments to this because this issue is located in the issue tracker, but he can additionally add markups even though this screenshot derived from Navisworks. So instantly, Nathan, if he's looking at his feed, is going to be able to see those issues, make a markup on those, and add comments. So maybe I'll assign this to him. I'm going to assign a deadline of the 26th. And I'm going to add Nathan as a watcher here. There is assignee.

So after I've assigned Nathan, he's going to get a notification via email saying, hey, Mark's assigned you this issue, something about a fridge needing to be removed. Nathan might not be technical in Navisworks yet. He's going to be able to see this in Revizto or he's going to see it in Revit or he's going to be able to see it in CAD. So you can see Nathan started watching this. Looks like Nathan actually made a markup here. So we can see in our timeline all this information, as Arman originally said, is organized by topic.

So we have AU test number two. It looks like at 7 o'clock Mark made a comment. Come down the line, it looks like Nathan added something a minute later. Please put my hot pockets over here. So, we'll make sure that we put Nathan's hot pockets, it looks like they need to be not in the fridge, but we'll place them over here in this example.

So next even, though this is taken in Navisworks, we're able to associate that to any of the architectural sheets that have been integrated in here. So, any of the linked sheets. For example, we'll pull up the ventilation plan. We can see this issue along with the rest of our issues color coded by status. So if you saw, I actually had this as an open issue. You can see the other open issues in red, the solved issues in green. The closed issues are now off of our plan, and the orange issues, as you see down here, are issues that are currently in progress.

So very easily we can jump around to different issues. We'll go to this in-progress issue. And we can see all the information that pertains to that specific issue by color coordination.

So after we've done this collaboration, we might want to go back and we might want to view that fridge issue in Revizto. So I'm going to go back to AU test two. And now we can see the screenshot in Navisworks with the notes. We have the ability to go in 3D and now navigate around or see additional areas within that area that we marked up, or we can jump into our 2D plans and see all of the linked models as well. So I'll pull up our power plant in this example.

Now going back, we need to fix this fridge issue now in Revit. Even though this issue has been taken in Navisworks, we can simply select this issue and it's going to open up this issue as you guys can imagine in Revit to be able to be changed. So we've done here is allowed these folks to stay in Navisworks if they're comfortable with Navisworks, stay in Revizto if they're not technical in any other software, to stay out in the field on their iPad or on their surface tablet. And we found that a lot of firms have utilized this to sync and centralize their communication and keep everything in one spot. So we never run into that issue where I addressed in the beginning, where we don't know where an issue stands. We have no excuses now.

I guess with that being said, I want to make sure that we have time for our big announcement, which I think we'll make now. I'm going to pass it over to-- you want to do it after? OK. So, I'm going to give Marin and Ian some time to discuss what you guys really want to hear, which is actually how the product's been utilized in the field. And I'm going to pull up their PowerPoint for them. So if we can give a warm welcome to Marin and Ian. [APPLAUSE]

Let me know when you want to play.

**MARIN PASTAR:** Thanks, Mark. We're actually going to play a little video as well, a screen capture of one of the projects that you said we were trying to break Revizto with. So we've used Revizto for about three years or so now, and at the very, very beginning we really weren't even using the issue

tracker and all these other tools. We were really just using Revizto as a visualization tool. So maybe for about 60% of you that haven't really seen Revizto and what it can do and some of the other features that anybody can literally be using at any given time now, we're here to be showcasing some of those things as well.

The project we're going to be showing, Mercy Hospital Jefferson is the project that we used this project, Revizto, about two years ago or so. And so if you want to play the video, that's probably be great. This just really showcases the ability to transfer a massive project into a very, very simple format. This was about concurrent with the same time we were using the beginnings of Autodesk A360 and their 3D viewer. It just couldn't process projects that were this magnitude, this size. So, what we doing is we actually shared Revizto files. We would export Revizto, and we would share the Revizto files through the A360 cloud for people to see.

So, on this project, we modeled absolutely everything. This a hospital tower addition project. And all the MEP architectural, everything was meticulously modeled. And we were going to project meetings, we were actually teaching the subcontractors and consultants and designers about how to use Revizto and how to visualize this project much, much better. The great thing for all of them, nobody has Revit, nobody has all these things, and sheets run really, really smooth in Revizto. So, initially, we were just using this. Hey, can we tie in the 2D sheets to the 3D models? So, the ability for all of our engineers and the contractors and the owner to have this much control over their product-- and to understand, this is this massive hospital that we have and we're able to see absolutely every single aspect of it. That was just absolutely a game changer for them really.

For me, by trade I'm an architect. So when I put my project architect hat on and decide to do a little bit of QAQC visually, being able to overlay some pretty intricate connection details between existing hospital, new hospital, and being able to kind of check to make sure, hey, am I missing out any single details of how this goes together? Are there any specific conditions that are missing out here? That was really, really huge for me and for my team.

During the pre-bid conference for one of the big packages of the structural package, I was able to go in and in a live pre-bid conference open up the structural model and the structural bid documents and speak to a roomful of subs overlaying these documents over the top with 3D models. Every single one of them was actually coming to me and saying, can you share that model with us because is awesome. I can do all this. This is great. They were busy telling me they're understanding the project so much better by being able to visualize it, by being

able to take a look at every single system. MEP the same way. We actually use design assist on this project as well, and for the subcontractors to be able to look through the project and look through all these meticulous systems in a hospital, that just gave them that extra level of comfort. When they're bidding the project, they know what's in there. They know it's coordinated. They're able to visualize it and do all that. We actually used ground-penetrating radar on this project as well to locate all the existing utilities that have been built over the last 50 years.

So being able to visually coordinate all the systems and making sure that we've got all the inverse of civil and everything located in the model, and giving that piece of mind that we have got all these in our models, that was huge. And it was a massive, massive campus project that had a lot of interesting things. And the cool part about it is it's not even the coolest thing we're doing. This was what we have been doing. Ian's going to talk about what we're doing right now.

**IAN MCGAW:** Yeah, that's right.

**MARIN PASTAR:** If you could jump into the PowerPoint again.

**IAN MCGAW:** So this was kind of like our baby steps into using Revizto and being able to tie Revit over and having everyone just kind of float around in there nicely and be able to see the sheets as Marin was showing. But now, we have a \$250 million hospital improvement. It's an eight-story tower with a pretty full and extensive renovation and gut of this hospital down in Northwest Arkansas. And we're actually implementing Revizto as full as it possibly can be, or so as Mark had explained from earlier today.

So, as designers, what we're doing is we're taking our Revit models, we're pushing it over to Revizto. We have everyone invited there. We also have our subcontractors on early. We're actually doing a modified design assist on this project. So it's more of a IPD project actually. And they're all in Navisworks. So they're pushing all their issues and clashes over to Revizto. And so of course we have our owners in Revizto as well. And so we're going through and we're creating issues, as you can see here. This was just some sample isoroom that was kind of just floating off as Marin and his team were trying to figure out the fit.

**MARIN PASTAR:** I got on to my modeling team about, hey guys, no junkyard in models. Revizto showed us, hey, keep your models clean.

**IAN MCGAW:** And then the image up here is to show how, again, we've got the MEP drawings right over the model there. And one of the very interesting things that we've been doing, too, is when we're pushing these Navisworks models, some of our subcontractors are using fabrication. I don't know if anyone is familiar with that, academy p suite of products from Autodesk. Very highly detailed duct work, very highly detailed piping, and some conduit and things like that. That is being pushed into Revizto and is flying almost better than Navisworks. And especially when we push that over into the virtual reality that Mark was mentioning, it's nearly flawless, especially when we try and compare it to something like Live from Autodesk or a couple of the other tools that are out there, too.

**MARIN PASTAR:** Speaking of VR, we actually just came back from this morning teaching a class about virtual reality, and we gave a live demo of Revizto VR in that class as well. But it's really great because, as Ian said, you can put in fabrication models and Navis models into VR, which from Revit or any other tools you really can't. So Revizto is that platform that, even though it may not be as pretty as Live and these things, it has a place in virtual reality world for sure in terms of bringing all that content where you really absolutely could not do it.

**IAN MCGAW:** I would be so bold to say that Revizto who is one of the first to have true interaction inside of VR, where we can actually create and look at issues and use that information while we've got our headsets on.

**MARIN PASTAR:** So one thing that we're actually doing, we've just started doing the fabrication and all that. We're really excited about being able to work with facility managers quite a bit because what we do is we are connecting the planning, design, construction, operations, maintenance, manufacturing industries together, and we're able to talk the facility managers ahead of time with the detailed fabrication models and bring them into VR and make sure, hey guys, you're going to be maintained this facility. This is your above ceiling right now. I need your name on here saying that you're going to do this and this is exactly what you're getting. So, sign offs and be able to understand and make changes to the design when it really truly matters, rather than fabricating everything and then them coming to the facility and saying, well, I can't do that anymore. We're going to have to change that. No more.

And VR is just a huge extension of it. We tested it under the Oculus platform, HTC platform, and I mean the speed of the model is absolutely amazing. Even the massive models that we have, we're trying to break them up a little smaller, the whole millions of polygons in VR.

**IAN MCGAW:** We don't want to break everything.

**MARIN PASTAR:** But it works really, really well, and we're really happy to have Revizto as a tool to be able to achieve this for sure.

**IAN MCGAW:** That's how we're using it on a couple of different products.

**AUDIENCE:** [INAUDIBLE] scan data [INAUDIBLE]?

We have on both projects actually, both the Jefferson and the Rogers project, or the Northwest Arkansas project. We got both of those scanned. Marin had mentioned, we did the groundwork penetrating radar at Jefferson. We pulled that scanned in and then and then traced that and verified and everything too.

**ARMAN GUKASYAN:** If you guys have some questions for Marin and Ian, it's better to ask now and then we'll switch to what's coming on the website. So, when you're saying you're trying to model, it's trying to break [INAUDIBLE] how big is it? How many square feet?

**MARIN PASTAR:** Square footage wise it's kind of difficult to say, but the model itself was an aggregation-- the first one that we did three years ago was 22 Revit models that totaled more than 2 gigs in just Revit files. The project we're doing right now is actually close to 30 Revit models and close to 3 gigs of Revit files, that we're actually doing from collaboration on Revit.

**IAN MCGAW:** And we're only in DD

**MARIN PASTAR:** We're only in DD, so it's just growing right now.

**AUDIENCE:** Where do all these files live? Everybody's working on different [INAUDIBLE]. How does that work?

**IAN MCGAW:** So, Marin mentioned we're using collaboration for Revit for all of the design files. The Navisworks files and everything like that are actually all living on M360 Team instead of Glue, so we're going down that path. Yeah.

**AUDIENCE:** Does each team separately upload [INAUDIBLE] onto [INAUDIBLE]? Or is it [INAUDIBLE]?

We actually have it scheduled, so what we do, because we are using Navisworks as well, we have once a week the bin managers for each team will go through an export NWCs for Navisworks. At the same time, they'll publish to Revizto

**AUDIENCE:** Can you link any scheduling software?

**MARIN PASTAR:** Linking scheduling software into Revizto. We haven't.

**ARMAN** We don't we don't have anything on the 4D or 5D side yet.

**GUKASYAN:**

**AUDIENCE:** Part of the science of 2D, is it ever gonna incorporate [INAUDIBLE]?

**MARIN PASTAR:** Oh, most certainly. Most certainly, yeah.

**ARMAN** You can bring direct when you have [INAUDIBLE] you can just export from AutoCAD. And

**GUKASYAN:** actually what Mark's showed, we have three components, the 2D, 3D, and issue tracker. That's the beauty, that you have all in one interface. Whether you want to start from your 2D markups and stuff, you can do that and then switch to 3D. Or you can have simultaneously both components. And the issue tracker works identical for both components. Yeah, each version. We keep all the revisions. We keep all the information in one place. You can always go both and say, I want to see one and half years ago revision ABC. You open, and you not only see the 3D model, but you see all the issues with that back then at that time. So all that is in there.

**SPEAKER 1:** And of course native sheets from Revit come in directly with it, and they are tied to the model wherever the 3D view or 2D view section was cut in Revit. So that is massive.

**ARMAN** All the sheets were coming from Revit, it's automatically that they will relate to the specific spot  
**GUKASYAN:** they have to.

**SPEAKER 2:** Are you doing a lot of 2D coordination?

**MARIN PASTAR:** You know, we were kind of just kind of changing our process really. We're just talking about this. We have a lot of senior architects that never go into Revit and all that, so we're really implementing Revizto to them because they are they're used to doing a QC red line set and 2D drawings and all that. We're literally giving them surface prose, and then telling them, hey guys, just you have your 2D sheets here. Just double click this little green icon over here, and you'll see that to the detail that you're used to seeing in a 3D environment. So we're teaching old dogs new tricks, and it's working out pretty nicely.

**IAN MCGAW:** It really has been we're also talking with a couple of different general contractors to go in and

use that as they would use Bluebeam for more of their page turn reviews as well.

**ARMAN**

**GUKASYAN:**

Instead of using several different products, you just have all in one. This is one thing where we came out in AU, and it's two-click integrations, and Alex, can you show? I mean, then naturally we will transition to what-- we made a special announcement today for AU, an update for 4.2, one of the biggest ones that you can import if you set a PDF document or [INAUDIBLE] document from [INAUDIBLE] software and associate all the data with two clicks over any part of the green model that you want to have. And then that PDF basically--

And then as soon as we import, let's say this you have a hand-drawn sheet, you just import that, and then click OK. Then you have the that section cut that you can cut the model on the level you want to have, and then just come to the point. And click. Now you'll have that. And then with the two dots that you have here, you can just click one corner and then the other dot to the other corner. And it will snap automatically to that space. And now this hand-drawn PDF has coordinates in 3D. And every time you are going to be marking out right now in this PDF and you will click on 3D icon, it will take you exactly to that spot in 3D. So that's what we came up with the special announcement at AU, and it's a great thing to have because you can basically have tons of stuff. So we were creating this, hearing a lot of workflows from our users, and we're really kind of thankful to all of them, including Marin and Ian and all other users that we have. And, basically, bringing a lot of you know convenient features that you can utilize and our users can utilize. And we hear tons of workflows that we don't even imagine that that can happen.

So, what else we brought? We brought for AU a special email notification. So right now, before we had like everything-- you've created an issue, then assignee, a reporter, the watchers, they will get email notification all day long whenever and whoever does anything in that issue. And that created a lot of emails to all the team, and it was a bit annoying. And right now, with today's update, you have an ability to tune your emails, an email notification based on your desire per project or globally. You can say I want to be notified only once a day or once a week. And if, let's say, the tag is change or assignees change or a PDF document is attached. So this is also which came out today. And what else? And A lot of improvements that we've been working, and I want to just maybe do some announcements what's coming up next.

Next, hearing a lot of stories and workflows, what we want to do-- we don't want to create another project management tool. Our ultimate goal is to create a go-to collaborate in AAC industry, but integrate with project management tools and all other software which is out there.

But we can't do that for everything. So we want give access to our issue tracker through the web. So we're going to be creating-- opening our issue tracker on the web. That means that without utilizing the software you can have an access through the link to that issue and basically associate that issue, that link to that issue, to your current project management tool RFIs that you're utilizing. So, that's one thing, a big thing, that we're working, and we all start working from as soon as the AU is ended. And presumably in the quarter 1 2017 we'll have that done.

And then isolating the linked models. Right now, when you have all your linked coming into Revizto, you'll see that as a one model. You can isolate them by kind of categories, saying I want to see only the pipes or only the MEP or architecture structural, but a lot of times we've been asked that we want to isolate the exact linked file. So that's also coming up early next year. And the HoloLens, which is, as we were pushing this coordination and of course we're supporting the VR, we want to play with HoloLens and see what's going to come out with that. And that's also something that is going to come out next year, you know, quarter one or whatever. But what we want to do right now is to understand the best workflow for HoloLens in Revizto, and that's also coming up in early next year or whatever, whatever would kind of define as a timing.

So, that's been said. This is kind of the announcements that we wanted to do, but I would actually open up to for the questions. First of all, thank you Ian, and thank you Marin. I want to open up to questions for this software whatever you have and maybe show some specific stuff, because we showed really a small piece of the software, the export and a little bit the issue tracker. So if you guys have some questions, I'll be happy to hear, and we'll be happy to hear an answer.

**MARIN PASTAR:** I will say one thing as a customer of Revizto as well. We have requested so many features over the years, and these guys are constantly developing. So, there is no such thing as I wish Revizto did this. Your wish is probably one or two updates away. So, congrats guys on really being on top of everything. Because all these things that we're looking at over here have been requests by us as well, and it's great development for sure.

**ARMAN** Thank you. So some questions.

**GUKASYAN:**

You know this is an interesting question. We have been approached by Autodesk 2.2 to do

that, so we're going to be working with them. And I don't know time-wise when it's going to happen. Yeah, we might integrate BIM 360 so if you have BIM 360 model you can open up in Revizto directly. So that is something that we've been approached to do, and we're working-- I mean, we're not working, but we're looking at that.

And then another thing, if you don't have so far questions, I wanted to kind of specify that's very important, is that the cloud component we have is only a repository. So, basically, everything what you do, it's on your computer locally. So as soon as you synchronize to share that model to your team, then it creates-- we don't take your native Revit file. I mean, we don't put on a cloud. We don't take your native NWDs or NWCs. We're converting into Revizto format of file, which is non-reverse engineerable. So you can't take the Revizto file and put into Revit or Navisworks, and, I don't know, steal something, whatever, or look at some specifics of your model. It's impossible. So, once it exported on your local machine, it creates.

And when you want to share, there are two ways of sharing. One way is the cloud, through our cloud, which is Amazon cloud as Autodesk has, which we have as of today seven locations worldwide, Sydney, Singapore, Tokyo, Europe in Ireland, Sao Paulo in South America, and in America it's Virginia. Or, shared location. So let's say you have a ton of projects which are really secure and you are not allowed to utilize cloud at all. So, in that case, you're just clicking shared location.

And what it does, it gives you an ability to save that model locally on any environment on your local networks. You're just choosing or creating a folder where you want to save that model locally. And after that is done, only people who have an access to your local network will be able to work with that project. Collaboration piece issue tracker will go through the cloud, but your model will be inside of your organization. So, there's not much stuff that you will have on a cloud, only the chat and the issues, which are kind of nothing, because you see just the communications not the model itself.

So that's also one thing which is important to kind of underline. You have any questions so far?

It's clear or unclear to us.

[LAUGHTER]

Yeah? Trial version? Yeah, we do. So you just have to request the demo, and within 24 hours

we have a response rate, and then one of our associate takes care of that trial. And create that trial, right.

Issue tracker is available in VR. You come at our booth and take a look at it. And HTC VIVE. And you can actually see your clashes. I don't know whether you've seen the clash-- I think you better show the clash thing as well. So, you can import your clashes from Navisworks assigning them groups and assigned to the team. And all that is visible in VR as well. So you can basically teleport yourself, you can click and get the information from any object of your model, and you can see the specific clashes. And I'll tell you, I wouldn't even imagine that-- it's not impressive looking at the clash on a normal screen, but when you look at the clash on transparent mode inside of VR, it blows your mind. It's really nice when you see this. But it's like the wow effect, I would say. But yes, issue tracker is available in VR. It's not just for visualizing and walkthrough and stuff.

No, not yet. We're not that yet. You know, as soon as we'll see that everybody became a resident of the *Wall-E* movie, if you remember just looking in the screens and nothing else. And that trend, maybe we'll do that with voice recognition.

**MARK** I think I Alex write it down.

**CISZEWSKI:**

**ARMAN**

**GUKASYAN:**

He's recording everything. As far as licensing is concerned, maybe you will have that in your mind. I would say it's the most flexible licensing which is right now out there on the AAC market. It's subscription-based, and it starts from minimum 20 collaborator package, which is only \$5,000 a year. So basically, \$250 per year per user. And it's flexible because you can it can always add and delete the user. So it's not tied to your computer. So if you have 20 licenses, like 20 users, then 20 users can simultaneously access your project from any device. So one user can have like five devices. As Marin has, I imagine, the iPad Surface, I don't know, a desktop, laptop. As soon as you log in with your login credentials, you have an access to your [INAUDIBLE], and you can always give back. Because you can give to your subcontractor share that model and then kind of in a week you don't need him to be, you can always give back, just kind of delete that from your workspace, and that's it. So it's pretty flexible.

**MARIN PASTAR:** And what we have done also is some of the users that-- for example, we don't want somebody to be on the project at all time, but we just want them to do QAQC set real quick. Or a

subcontractor we want to share a model with for their purposes. They're not a part of the real team, but we just want to share the model with them. We'll just create an EXE export and share the file with them. So they can use the issue tracker. They can see all your sheets and drawings and 3D models and absolutely everything without any license and without absolutely any resources.

**ARMAN**

It's a self-executable file with everything at that point that you had in your model. Or Mac App.

**GUKASYAN:**

So we have two exports. It's EXE and Mac Apps. So if you have somebody who is on a Mac, you can just export your model with all your, as Marin said, issues sheets and everything you have at that point to a Mac App and just send through whatever, Dropbox or whatever file exchange. So it's really thought through a lot of workflows. We have, as of today, more than 60,000 users in all continents and growing every day. So we've been witnessing a lot of workflows. But what we want to do and keep our focus is on collaboration piece, because this is what we see in communication which literally solves a lot of problems. We've seen in health care projects, where you can easily share the model with doctors and nurses and in coordination meetings with them they understand, because they don't understand the 2D drawings. They don't understand Revit model, because to navigate in it is not an easy thing to do. And it's not our job to do. So non-expert users, getting your and understanding your [INAUDIBLE] data and exploring that in a natural way, that's what we see which has a huge kind of impact on efficiency of all these projects.

And, of course, the issue tracker, which keeps all your information with all revisions, all that stuff, all day long during your project life cycle. So that's why we want to keep that and keep adding any integrations whatever, but in that field and enhancing that side of the product. So kind of slack communications in AAC through Revizto still

**MARK**

And Arman, I wanted to touch on something that you had mentioned with the clash detection.

**CISZEWSKI:**

So we just released a new upgrade to our clash detection workflow. And, for those of you guys not familiar with Revizto, Revizto does not do clash detection. So it's utilized, so the way folks work with clash detection is doing all that through Navisworks.

There we go. So, setting up everything through your clash detective in Navisworks and setting up those clash tests and then choosing to come into the Revizto 4 plug-in, and exporting those clashes. You can select the clash groups or the individual clashes that you want to bring in and import those as issues. So as you can see here, we have a dummy class group that we made before this class, and we can see that and we can isolate those.

So what this allows for is it allows for accountability on these clashes. We want to be able to get these clashes out, assign them to the people that need to be need to be notified, and then move on with the project.

**ARMAN**

**GUKASYAN:**

And it's automated, actually. Let's say you run the clashes, you assign it, people solve those clashes. You can click and see in Revit actually the same clashes through Revizto. And let's say you're done and you correct it, and then you rerun the clash detection and re-export it to Revizto, Revizto will identify that these clash groups are solved, and it will automatically close all those issues. So you don't have to go one-by-one and close all those issues. So it's automated in that sense.

**IAN MCGAW:**

Yeah, and so that's exactly what we're doing on the Northwest Arkansas project. It took a little bit of time to get used to, or actually have the designers to get used to opening up the issue tracker while they're inside of Revit, as opposed to jumping right to Revizto and seeing it there. So that they're able to double click on it, and, just as Arman said, jump right to that area, right to that sheet, whatever it is. And we are actually seeing the subcontractors doing the same thing going the other way, back in Navisworks.

**ARMAN**

**GUKASYAN:**

That's pretty much it. If you don't have any more questions, you guys are welcome to come to our booth. Yeah?

[QUESTION FROM AUDIENCE]

Yes. All the issues have reports. So you can have weekly reports in Excel file, PDF file. That's all automated, and we have it on the back end.

**MARK**

**CISZEWSKI:**

Thank you guys all for coming.

**ARMAN**

**GUKASYAN:**

Thank you very much.

**MARK**

**CISZEWSKI:**

We really appreciate you guys.

**ARMAN**

**GUKASYAN:**

And thank Marin and Ian for coming.

[APPLAUSE]