Revolutionizing Global Manufacturing Training with Augmented Reality -Introducing Frontlines AR SaaS for Remote Support

"Frontline.io's cutting-edge AR technology transforms global manufacturing training, reducing downtime and increasing efficiency for remote teams

REHOVOT, TEL AVIV, ISRAEL, March 13, 2023 /EINPresswire.com/ -- If the convenience of air travel made the business world feel small, the Covid-19 pandemic and the ensuing travel difficulties have widened the distances between a company's locations worldwide.
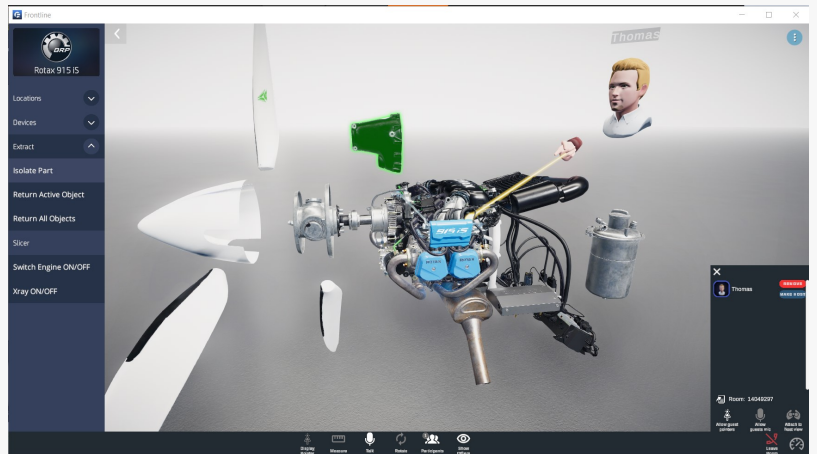
Pre-Covid, companies were able to rely on regular travel to ensure that disparate manufacturing teams could be well-trained and in sync with how a new product was meant to look and operate.

When travel became impossible during the pandemic, large companies had to move to remote training. Without being able to physically touch and feel a prototype, it's much more challenging for engineers to manufacture efficiently.

3D Remote Training

AR remote support Session

What's needed is a new level of remote training that goes above and beyond the standard talking head showing an assortment of pictures and diagrams over Zoom-like video meetings. By capitalizing on advanced digital twinning and AR/VR/MR technologies, companies can offer employees a remote training experience that closely mimics a true face-to-face session.

Real-Life Challenge

A 3D-printer manufacturer with design and manufacturing teams located in different parts of the world felt the Covid-distance particularly strongly. Pre-Covid, it was not a problem for the technicians to rely solely on 3D CAD files to manufacture the printers because they would also receive an in-depth in-person training. Once those training sessions were cancelled, the field technicians were left high and dry without a clear understanding of the product they were meant to be manufacturing.

Without proper training, the inevitable challenges that often arise when manufacturing something new were compounded, leading this company to face rampant inefficiencies, confusion, and rising costs.
Run-of-the-mill remote training sessions just didn't cut it for this company. The technical and support team needed to have intricate, almost in-person, knowledge of the product to manufacture it. Remote Zoom sessions were not enough to give the technicians a deep understanding of each part that makes up the printer, the different methods of using the product, and various procedures to troubleshoot and fix the complicated and sophisticated physical products.

The Solution – frontline.io

Where there is a complex problem, there is always a creative solution and that's what frontline.io was able to offer the 3D printer manufacturer. To offer an effective remote training system, the company needed a digital twin model of the product and a platform providing full AR remote training capabilities.

The Digital Twin Model

When you can't get your hands on an actual prototype, the next best thing is a digital twin model. This pixel-based replica looks exactly like the final product, right down to the colors and textures. Within 2 weeks of receiving the CAD file, frontline.io had produced a digital twin model of the 3D printer that included the following features:

Realistic view – a fully animated 360-degree view with all colors and labels matching the actual product.

Parts extractions – with the click of a button, the viewer can extract a particular part to examine it more closely.

X-ray vision – unlike with a real-life model, it's easy to get a view inside the machine and see its

inner-assembly and how each part works.

Digital parts catalog – rather than searching all over the model to find a specific part, another click of a button takes the viewer directly to the part they need.

Animation – all moving assemblies are animated to show exactly how they are meant to work.

Common procedures – several of the more common technical procedures were animated and loaded to the program so that the technicians could watch and learn.

While it's possible that nothing may beat touching and feeling the model during a training session, the digital twin model does come close. The technicians were able to virtually examine the model and all its parts just as they would have done with the physical product. In some ways, the digital twin is better than the 'real' thing with the addition of the x-ray feature which allows the technicians to virtually take the machine apart. This way, they can isolate internal pieces and get a good look at them (in 3D) and how they function independently without risking causing real harm to the actual product.

Remote Training

By installing frontline.io's app on the field technicians' devices, they were able to virtually attend training sessions of the same caliber that they would have been in person. Each technician had to simply log in to the virtual training room and immediately had access to the digital twin model of the product and all the training necessary to manufacture it.

Training was done in a combination of "live" sessions with a trainer as well as self-directed at each technician's own pace. The training sessions and detailed animated instructions for common procedures were always available to be re-watched as needed.

The End Result

Because of the technology offered by frontline.io, the 3D printing manufacturer was able to launch the newest printer on schedule as planned, despite the unexpected disruptions to their training plans.

Company management realized that this solution was not only a stop-gap for an emergency situation but actually one that could be used all the time. With frontline.io as a long-term solution, the company will be able to save on travel costs and technicians' time on an ongoing basis. Best of all, they can do this while offering optimized training with an easy-to-use remote platform that offers self-directed learning in addition to frontal sessions.

About Us

frontline.io is a XR platform developed by LLS Ltd. frontline.io has revolutionized the way manufacturers and service providers train their technicians and operators while cutting costs and streamlining procedures. frontline.io's customers use it to drastically cut training and support expenditures within their businesses and with their customers. HP,Landa Digital Printing, Israel Aerospace Industries, BRP Rotax, and Elbit Systems are among the major clientele. If you'd like to discuss how your manufacturing business can benefit from new remote training tools, please□click here□to set up a call!

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