



HOW NICE DCV ENABLES DOOB METAVERSES

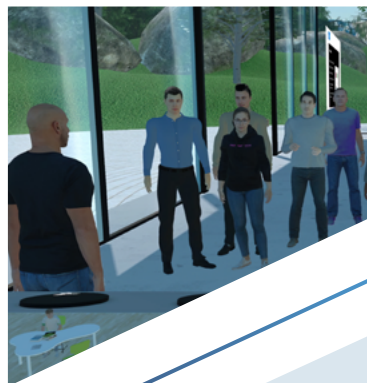


Doob Group AG is a leading innovator in avatar creation and pioneers in the digital metaverse. It was founded by serial entrepreneurs Vladimir Puhac (CEO/CTO) and Sascha Cramer (Head of VR & Imaging) at the end of 2013. The business initially focussed on providing high resolution 3D printing of human figurines to consumers, and has grown rapidly year over year. Customers can visit a doob store location, have a high resolution full body scan taken of themselves and then have this processed scan 3D printed as a highly detailed figurine. Since then the business has expanded and now employs almost 100 staff with multi-million dollar annual revenues and operating doob 3D scan and print outlets in 20 locations around the world.

However, doob Group is undergoing a transformation to becoming a fully digital platform business, driven partly by the opportunity presented through the 3D scanning process and partly by leveraging the large library of high resolution human scans it has amassed over the years of digitally processing the human form. This large database has enabled the creation of machine learning algorithms that understand the human form and subsequently has enabled doob to create full body high resolution human avatars that can be placed into a customised digital metaverse of your choosing. This interactive metaverse is then streamed to your browser or 3D headset in real time with full interaction and control of your avatar.

The interest in this type of immersive experience has been dramatically accelerated by the global Covid-19 pandemic which has driven the transformation of doob to focus on the increased demand for remote experiences with interactive avatars within VR metaverses.

Due to massive increased interest during pandemic lockdowns, doob has expanded their avatar offering to provide so-called hybrid avatars, where a user can have their own head mated with a body type from the doob library to avoid the need for a full body scan.



OUR GROWTH AND SCALE WERE LIMITED BY OUR ORIGINAL ARCHITECTURE

The initial implementation of the doob metaverse platform with interactive avatars was based on a client/server architecture. Whilst this provided capable performance in localised environments where deploying software onto a client device was easy to do, this had severe limitations in being able to scale the platform to a wider audience and avoid the need to deploy software on the client device in order for the solution to work effectively.



This led the doob founders and senior technical teams to explore different technology options to try and move away from a client/server architecture. Ideally doob wanted to shift to being 100% web based with the fully interactive VR experience being delivered within a user's browser or 3D headset. The team from doob Group reached out to NI SP, the distributor for NICE DCV, to assist them in evaluating the DCV software alongside competing technologies. Several solutions were evaluated by the CTO and development team who compared the performance, latency and stability of each software product, but it became clear very quickly that only NICE DCV could deliver the required performance and user experience.



WE SOLVED A FUNDAMENTAL PROBLEM WE COULD NOT ADDRESS WITHOUT NICE DCV. IT ENABLED US TO SCALE IN A WAY WE WERE DREAMING OF BUT COULDN'T DO ON OUR OWN.



» The original architecture for the doob platform was client/server, meaning users needed to install and run software on their local computer in order to interact with the platform. Whilst this is less of an issue for a consumer user, managing this in the enterprise is much more demanding.

» There are significant challenges associated with trying to work through firewalls and content filters and needing to deploy the doob client software into an enterprise organisation, especially given most have managed desktop computing environments with controls and policies in place for publishing, deploying and managing approved desktop applications. This presented a fundamental challenge in wanting to deliver a fully interactive cloud-based avatar experience without having to depend on installing a doob client application on the user device.

» Solving this problem became the absolute focus, as until this was addressed, doob's ability to grow and scale the business was completely hampered. Overcoming the challenges and hurdles of a client server architecture by shifting to a high performance web-based platform would enable users to connect and interact with their avatar in a real-time metaverse from within their browser or 3D headset.



HAVING THIS CAPABILITY IS FUNDAMENTAL TO THE GROWTH OF OUR BUSINESS.

On discovering NICE DCV and running some initial tests, it became clear to the team that DCV was the most stable and best performing platform to provide the 3D experience they desired. It enabled the delivery of a fully interactive user avatar in real time running inside the user's browser and streamed from a cloud-based server running on a GPU with interactive audio and full control for the user.

Other solutions that were tested did not provide the performance, audio quality

and real-time interactivity that doob were seeking. The doob platform is very demanding with real-time movements, texturing with voice and audio synchronised with the avatar in real time and all running together. With NICE DCV embedded in the doob platform, along with the responsive professional support provided by NI SP, the desired performance was achieved, with the user able to fully control their own high definition avatar in a shared metaverse without any changes required to the enterprise environment. No client software is required, firewalls do not prevent connectivity and the users are able to fully interact with their avatar in real time.

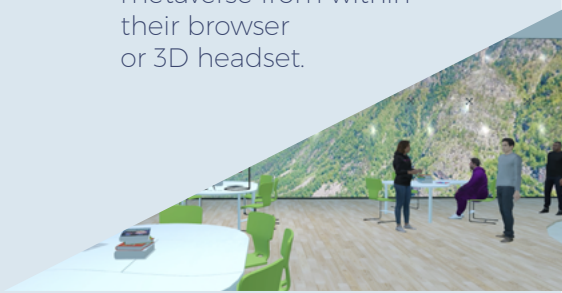


PUT YOURSELF THERE - GET DOOBED...

Given the recent global pandemic and restrictions on travel and social gatherings, social distancing rules etc, virtual meetings and events have seen explosive growth and are becoming increasingly popular as a way of interacting when we can't meet face to face.

Doob scanners are now being deployed into shops where a customer can have a full body scan of themselves and then receive their own high definition personal avatar. Alternatively, users can request a hybrid avatar created from photos, and mated with a standard avatar body. Either option enables them to participate in a doob metaverse, or use their avatar in certain popular gaming

platforms NICE DCV is a core component of the doob metaverse, with DCV connecting each user with their personal avatar, doob are able to provide you with your personal full body high resolution or hybrid avatar immersed in your own customised metaverse. This virtual space can be shared with others for avatar based meetings, education and training, gaming, hosting and concierge services, events, conferences, exhibitions and many other applications. The possible metaverses and use cases are extensive and only limited by your imagination.



INCORPORATING NICE DCV INTO OUR DOOB METAVERSE PLATFORM HAS ENABLED US TO BUILD A HIGHLY DIFFERENTIATED OFFERING.

We asked the doob Group senior leadership team how much of an impact NICE DCV had on the new generation doob platform:

Head of VR and Imaging, Sascha Cramer told us: "The most important feature for me and my team was the ability of NICE DCV to enable the doob platform to work in real time. This was a critical element to creating a highly responsive avatar with smooth motion and realistic rendering, which in turn creates a far more engaging customer experience."

"We love it!" Said Vladimir, CEO/ CTO of doob Group "The DCV technology from NICE Software has been a critical component in the solution we have developed and makes it possible to address potential new markets and revenue streams by enabling us to scale our technology in a way we had only dreamed of previously. Giving our users the chance to 'meet' and interact with friends and colleagues in a virtual metaverse is very exciting and opens all sorts of new business opportunities."

"Our new platform has strengthened our partnerships with leading telecoms providers and is opening up further research to extend the reach and capability of the doob platform even further into fully immersive AR/VR environments."

"NICE DCV with the support from NI SP was the missing piece of the puzzle that enabled doob to scale in a way we were imagining but couldn't do ourselves"



ABOUT NI SP

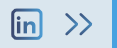
NI SP GmbH is a leading European 2D/3D VDI and HPC software distributor, selling and supporting VDI and HPC management and productivity applications from NICE Software and is headquartered in Tübingen, Germany. NI SP provides expert consulting, advisory services and support on Remote 2D/3D VDI and HPC deployments, HPC management, productivity and cloud adoption to resellers and end users. NI SP solutions help clients to maximize system performance and make media use cases, pre-/ post-processing and HPC easy to use for everyone.

ABOUT DOOB GROUP AG

Doob Group AG is a pioneer in advanced 3D technology services and operates from locations in Germany, USA, Japan and others. Founded in 2013, doob Group AG today employs around 100 people, and develops cutting edge 3D scanning, avatar, immersive 3D VR/ AR environments and 3D printing solutions for various consumer products and business applications. Doob provides immersive 3D services to international clients such as Deutsche Telekom, Uniqlo, Bayer AG, Samsung, Dr. Oetker, MICHALSKY, Sprit to bring 3D experiences to life.

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Interview with doob founder Vladimir about NICE DCV enabling doob Metaverses on YouTube:

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