TRIMENSIONS
virtual/augmented reality | ux/web design

BY CREATIVELY USING **ART, DESIGN AND TECHNOLOGY** **WE CHANGE** YOUR PERCEPTION OF **REALITY.**

UX

User Experience Design

Virtual Reality

AR+
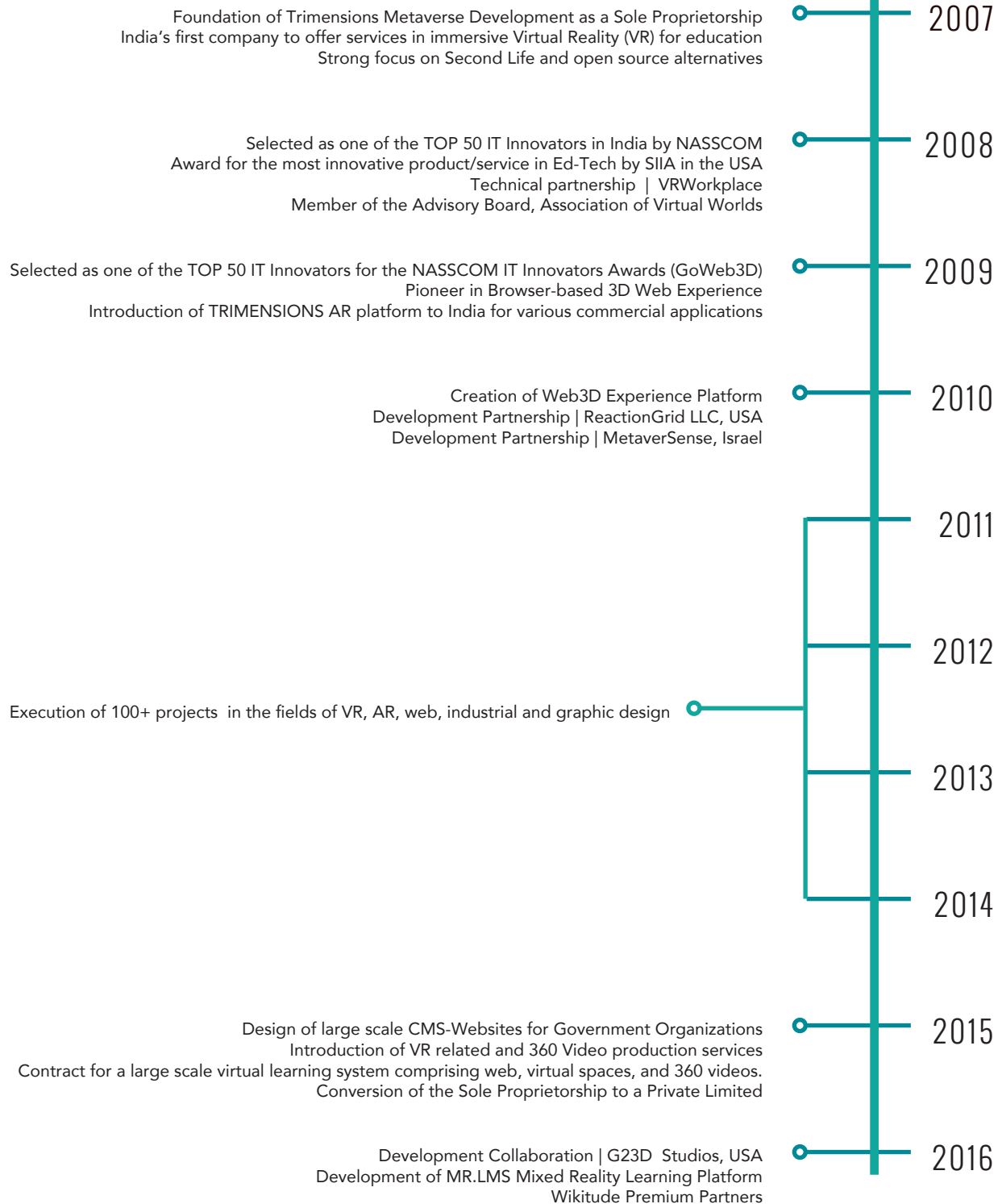
Augmented Reality

360°

3D 360 Video

Graphic Design

Web/UI Design

TRIMENSIONS

Founded in 2007 by Rahul Dutta, a graduate of the prestigious NID – the National Institute of Design, Ahmedabad, TRIMENSIONS is a multidisciplinary digital design studio, focusing on User Experience design and the application of emergent technologies.

TRIMENSIONS is India's first Virtual Services and Augmented Reality Solutions provider, using these technologies to create immersive experiences for education, entertainment and enterprise.

In the past 9 years, TRIMENSIONS has won a series of national and international awards, such as the prestigious US-based SIIA (Software and Information Industry Association) Award in 2008 and has been listed as one of the top 50 IT Innovators in India by NASSCOM (The National Association of Software and Services Companies) in both 2008 and 2009.

2007
Foundation of Trimensions Metaverse Development as a Sole Proprietorship
India's first company to offer services in immersive Virtual Reality (VR) for education
Strong focus on Second Life and open source alternatives

2008
Selected as one of the TOP 50 IT Innovators in India by NASSCOM
Award for the most innovative product/service in Ed-Tech by SIIA in the USA
Technical partnership | VRWorkplace
Member of the Advisory Board, Association of Virtual Worlds

2009
Selected as one of the TOP 50 IT Innovators for the NASSCOM IT Innovators Awards (GoWeb3D)
Pioneer in Browser-based 3D Web Experience
Introduction of TRIMENSIONS AR platform to India for various commercial applications

2010
Creation of Web3D Experience Platform
Development Partnership | ReactionGrid LLC, USA
Development Partnership | MetaverSense, Israel

2011

2012

Execution of 100+ projects in the fields of VR, AR, web, industrial and graphic design

2013

2014

2015
Design of large scale CMS-Websites for Government Organizations
Introduction of VR related and 360 Video production services
Contract for a large scale virtual learning system comprising web, virtual spaces, and 360 videos.
Conversion of the Sole Proprietorship to a Private Limited

2016
Development Collaboration | G23D Studios, USA
Development of MR.LMS Mixed Reality Learning Platform
Wikitude Premium Partners

NASSCOM 2008

SIIA INNOVATOR OF THE YEAR 2008

NASSCOM 2009

Amul

BBC
WORLD
SERVICE

CNN
IBN

DELL

Dhoomimal
ART CENTRE

Giftmilk
Gift a child a better tomorrow
NDDB Foundation for Nutrition

Godrej

HERO
HONDA

ITC
ITC Limited

JCBL

NDDB

nift

NOKIA

PEPSICO

SIEMENS

TATA

During the course of the past 9 years, TRIMENSIONS has managed a plethora of challenging tasks, ranging from small to enterprise level across hundreds of highly innovative projects. From graphic, web and industrial design to Virtual and Augmented Reality, the TRIMENSIONS team is continuously working on new things. Each project provides a rich base of experience that is applied to all subsequent projects.

TRIMENSIONS utilizes high technology and injects design thinking into it, so that it becomes easily usable by the specific target audience.

Beyond simply executing projects, it is TRIMENSIONS mission to help clients understand how a particular aspect of technology can help them better their overall user experience, internal process management or business performance.

USER EXPERIENCE
DESIGN

At its core, TRIMENSIONS is a User Experience design firm. Hence it does not really matter which specific genre the client's project might fall under, the aim for TRIMENSIONS is always to tailor its developments so that they provide a unique experience to all individual users.

"The technology you use impresses no one, the experience you create with it is everything."

Following this internal guideline, the team of TRIMENSIONS is focusing on how experiences should be designed in order to increase their usability and effectiveness in the user interaction.

WE COMBINE **HIGH TECHNOLOGY**
WITH **CREATIVE** AND **INSPIRING DESIGN**

WE ARE **EXPERIENCE ENABLERS**

VIRTUAL
REALITY

All reality is virtual.

Our entire perception of the world around us is solely through our senses. By replacing sight and sound with virtual content, TRIMENSIONS creates a large variety of immersive experiences for its clients.

Virtual Reality is a powerful tool that can considerably enhance people's understanding of the world around them. It allows the TRIMENSIONS team to take their users anywhere and make them experience effectively everything.

TRIMENSIONS creates immersive VR content along a number of different technology platforms, while focusing on key application areas such as HR-development, education, sales- and marketing support or travel and tourism.

EXPERIENCING **VIRTUAL REALITY**

GUIDED **VR EXPERIENCES**

Virtual Reality is arguably the most powerful platform to showcase anything, be it a product, process, space or service. TRIMENSIONS creates unique and highly information-dense virtual experiences.

Guided VR experiences take the user on a tour of any environment, space, product or service. These take the use on a journey through a concept by placing them in it's virtual center. It is the story of your product, told in virtual reality.

INTERACTIVE **VR EXPERIENCES**

These are custom-created experiences that allow the user to 'walk' or 'fly' within a virtual space and directly interact with the objects and UI elements within it to gain a better understanding of it. This interaction can be either gaze or controller based.

Interactive VR experiences are particularly suitable for product demonstrations or interior/exterior walkthroughs.

WEB BROWSER BASED **VR**

This is one of the oldest technologies in this space, TRIMENSIONS has been developing WebVR since its early days in 2007.

Users can enter a created 3D VR environment or simulation either in FPV (First-Person View) or collaboratively as avatars. These spaces allow for a high level of interactivity and communication, suitable for virtual conferencing, training or gaming.

AVATAR BASED **VR ENVIRONMENTS**

TRIMENSIONS creates sophisticated multi-user environments, users can participate in a shared experience from anywhere in the world. People enter the virtual space as avatars and can communicate with others in a shared experience.

Spaces can be custom designed for conferencing, networking, learning, social or business interaction.

TRAINING **SIMULATIONS**

Trimensions specializes in the conception and creation of unique virtual training simulations. These are spaces or experiences that have been created specifically for a training course or set of tasks.

VR training simulations offer a significantly higher level of understanding and retention since they allow us to place the user directly into the experience itself.

WE USE **EMERGENT TECHNOLOGIES**
TO CREATE **IMMERSIVE EXPERIENCES**

PRODUCTIONS

3D 360 VIDEO

Currently evolving into a mass market product, 360 Videos with binaural audio are some of the youngest technologies in the realm of Virtual Reality. TRIMENSIONS is using special cameras and rigs capable of recording in every direction so that the user can see all that is happening around the camera instead of within a fixed field of view. Imagine a video that can be scrolled through on a desktop or mobile device to see in every direction.

360 videos become a completely different experience when viewed via VR glasses and headphones. VR glasses invoke a sense of presence and immersion that cannot be described. TRIMENSIONS is committed to exploring new realms, particularly by combining 360 Videos with other emergent technologies.

TRIMENSIONS designed 3D camera rigs for capturing full stereoscopic and ambisonic 360 videos, thus creating virtual experiences on an unmatched and unimaginable level.

LIVING 360 VIDEO

360 VIDEOS

How to package an experience so that others can see it from a first-person perspective? 360 videos are the hot new technology today because they do exactly that.

A 360 video is experienced by the user directly from the narrator's point of view. These videos can be uploaded to both Facebook and YouTube as well as on your website. They can be viewed on a large variety of devices from desktop browsers to head-mounted devices allowing for a large user base.

3D 360 VIDEOS

These videos are created with special rigs that have a camera placed in every direction, for both the left and right eye. This is a different experience altogether since the slightly different placement of the cameras results in a 3D image, like our eyes normally see.

The user can look around a scene and get that sense of foreground and background they usually would while seeing anything around them. Combined with other technologies this is a key driving point in the overall user experience.

BINAURAL SOUND

Binaural audio is actually a technology that has been around for over a century- the first binaural audio was recorded as far back as 1881.

We record using an ambisonic microphone that captures a 360 sound field. We then convert this into fully three-dimensional audio so that our user's ears can hear sound coming from any direction.
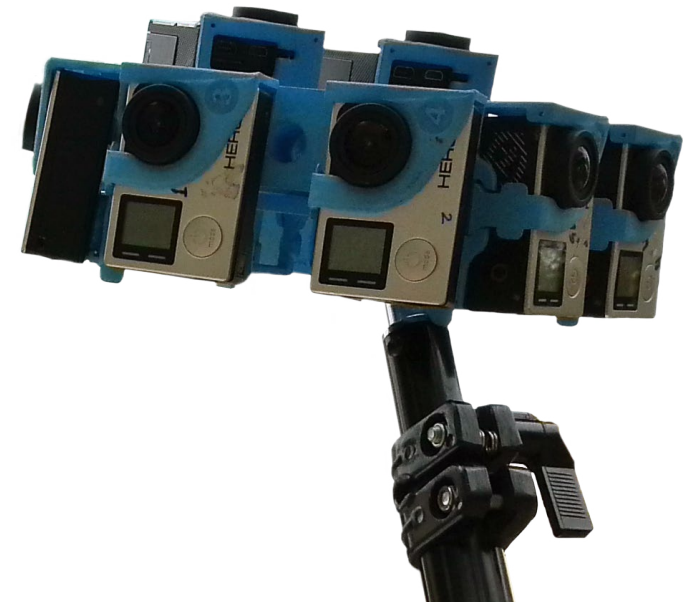
LIVE VR STREAMING

Live streaming an event in VR is currently in its early stages but evolving rapidly. A 360 live stream involves either single or multiple 360 cameras/rigs that record an event as it happens.

As the user, participating in an event virtually via the viewpoint of either the audience/actor/anchor or any other camera location allows for a new level of presence and immersion altogether.

POST PROCESSING

360 videos need a lot of stitching, editing and post production, especially the ones using multiple-camera rigs. The feeds from each camera are first stitched into a seamless 360 video, itself a very tricky process. They are taken to a video editor to correct the lighting, motion and sound. Lastly, we add digital overlays and branding to explain things in more detail as needed.

THE TECHNOLOGY YOU USE IMPRESSES NO ONE.
THE EXPERIENCE YOU CREATE WITH IT IS EVERYTHING

AUGMENTED
REALITY

While Virtual Reality creates or replicates an environment that simulates physical presence in those places and lets the user interact with that 'world', Augmented reality is a live direct or indirect view of a physical, real-world environment. Its elements are augmented, enhanced or supplemented by computer-generated sensory input such as sound, video, graphics or GPS data.

TRIMENSIONS has been working in the field of AR since 2010, considerably enhancing and simplifying the daily lives of its service users with simple but yet effective applications.

How to find the closest Chinese Restaurant? How old is the palace in front of me and who built it? How do I exchange the air-filter of my power-generator? Developments of TRIMENSIONS give answers to all of those questions, by utilizing various aspects of Augmented Reality such as image, marker, or location based AR.

APPLYING AUGMENTED REALITY

IMAGE/MARKER BASED AR APPS

Marker based AR is one of the earliest and most widespread technologies used today. The users point their device at a printed marker or image, the app recognizes it and seamlessly overlaps digital content over it.

Any image can now serve as an 'activation point' that merges the virtual content with the real world around it. This technology can be used for product demonstration, speaker presentations and to enhance ATL-marketing campaigns.

LOCATION BASED AR APPLICATIONS

These applications use a smartphone's own geolocation sensors to guide the user to an augmented experience, or pop up notifications based on where the phone is pointed.

This ability to contextually overlay digital information on to the camera's view based on its location allows for a wide variety of precise augmented user experiences across verticals such as travel, education and retail.

MIXED REALITY

Mixed reality is the seamless merging of both virtual, augmented and web technologies with real world scenarios across multiple verticals. These technologies also use headsets that directly overlap virtual information directly on the user's real-world view.

An example of a Mixed Reality environment is an AR maintenance application that guides users sequentially across various operations using digital overlays, voice control and a narrative. This can even allow for remote guidance on complex tasks by sharing the user's view of the machine with an expert.

AUGMENTED TRAINING

In this area, AR cannot be replaced by any other existing technology. The basic idea is to be able to train people to operate, maintain and repair machines, plants or entire systems by using virtual information overlaid directly on the actual machine itself, on the user's device.

These training systems can be deployed either to a mobile app or to a headset based mixed reality system. It can recognize gestures, voice commands and touch inputs.

PHYSICAL AR

By using different technologies like gesture or voice recognition, 3D projection and full-body tracking we can create unique digital experiences directly overlapped on the physical world.

Any surface including floors and walls can be converted into an interactive Augmented Reality experience for events, fairs, showrooms or even entertainment.

WE **SEAMLESSLY OVERLAY** DIGITAL EXPERIENCES
DIRECTLY ON THE **PHYSICAL WORLD**

UI AND VISUAL
DESIGN

User Interface, graphic and visual design are key pillars of the overall User Experience.

TRIMENSIONS specializes in creating incredibly detailed and information-rich graphics across all projects. Whether it is conceptual art or a control panel, TRIMENSIONS follows an iterative design process to develop solutions precisely tailored to their specific requirements.

There is an art to combining design with emergent technology to provide the best possible virtual experience. TRIMENSIONS has over a decade of experience combining visual and virtual paradigms which is reflected in its thorough yet humorous approach to design.

UNIQUE **VISUAL DESIGN**

GRAPHIC **DESIGN**

Graphic design has been one of TRIMENSIONS main skills since its inception. It is a constant and persistent process across every design project.

Graphic and visual design for Virtual and Augmented Reality is a completely new field in itself, one that TRIMENSIONS has been a pioneer in since 2007.

CONCEPTUAL **ART**

Being artists, designers, technologists and futurists, the team of TRIMENSIONS is always creating new visions, art and experiences.

TRIMENSIONS visualizes your concepts using both traditional and digital media. In all cases, it is extremely important to get a clear understanding of the concept before one creates it, and go over iterations to see which one fits the overall vision best.

WEB AND UI **DESIGN**

TRIMENSIONS designs sophisticated, responsive, SEO-friendly and highly creative CMS websites and web applications.

Website design goes far beyond simply throwing together some nice images and words. A website is the face of your organization or idea today- it has to intelligently adapt both its design and content across hundreds of devices, resolutions and geographical locations. It needs to compete with thousands of other sites, no matter how small the niche.

TRIMENSIONS designs detailed web frameworks that address all these technical details while providing users with the best possible browsing experience regardless of the device being used.

MOBILE APP **DESIGN**

TRIMENSIONS designs and develops mobile applications across a range of verticals, including but not limited to VR and AR. Creating an excellent app involves a lot of analysis, creativity and technical expertise.

DESIGN IS
THINKING MADE **VISIBLE**

unity

360Heros

wikitude Premium Partner

Drupal

GoPro.
Be a *HERO.*

TECHNOLOGY
PARTNERS

Coming together is a beginning. Keeping together is progress. Working together is success.

Over the years, TRIMENSIONS has built up a rich and varied base of technological, creative and content partners. TRIMENSIONS has a policy of freely sharing its large database of knowledge, resources and network with creative professionals across the world.

THE VISION

TRIMENSIONS pioneers in bringing enhanced content and interesting virtual experiences to users in India and all around the world.
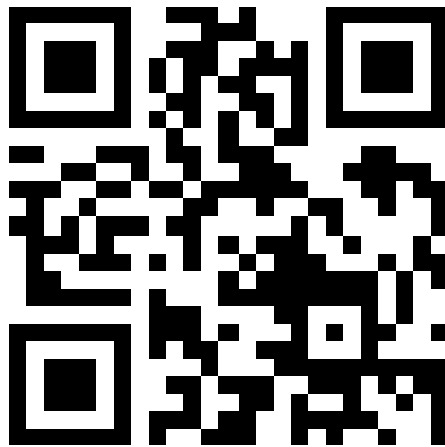
TRIMENSIONS will bring about a fundamental change in the field of education, shifting it to experiential learning by using enhanced, yet easily usable technologies and hardware available to the target audience or common consumer.

TRIMENSIONS will become the market leader in Virtual & Augmented Reality in India, developing a variety of tools and applications across these exciting and emerging technologies.

- Rahul Dutta, MD

THERE ARE NO **BOUNDARIES OR BORDERS**
IN OUR **DIGITAL AGE.**

TRIMENSIONS

virtual/augmented reality | ux/web design

Trimensions website

Trimensions video

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