

# IMMOTION



## A short story

Immotionar is a division of Beps Engineering focused on emerging technologies, particularly on Virtual Reality.

It was born in 2014, when Beps Engineering employee *Gianni Rosa Gallina* proposed to explore the new technology advancements in Augmented Reality and Virtual Reality, by opening a new division focused on these new technological horizons. He immediately called his friend and former classmate *Antony Vitillo* to join him in this new adventure.

It was the beginning of 2014, the year of the hype for *Google Glass* and other Augmented Reality glasses, so the two engineers started working on a number of Augmented Reality projects: but that technology was too rough to produce something usable. Thus, they switched soon to Virtual Reality, where they began prototyping a number of solutions in different sectors: interior design, video-surveillance and security, automotive designer, museum exploration, exhibitions, games and fitness.

In all the prototypes it was mandatory to push the technology to the furthest possible limits, mixing VR headsets with all kinds of innovative tracking sensors (like Microsoft Kinect, Leap Motion, Intel RealSense).

The dream of the division founders is to make virtual experience the most immersive and the closest to real world interactions for everybody.

The key product of this dream is **ImmotionRoom**: a complete cross-platform framework for Virtual Reality User Immersion, compatible with the latest Virtual Reality headsets and body tracking sensors/wearables.

## Biographies

### *Gianni Rosa Gallina*

Currently he is the head of Immotionar division and he is Software Architect/Developer in BEPS Engineering since 2007. He graduated MSc Information Technology Engineer at the Polytechnic of Turin in 2009. Since 2011, he has been awarded Microsoft MVP for Windows Development (former Embedded/IoT MVP).

He owns a high number of Microsoft certifications; he is a Pluralsight author and an active blogger and member of local communities, like the *TTG – Torino Technologies Group*.

Since 2014, he's focused on Virtual Reality (Oculus Rift, Gear VR, HTC Vive, OSVR, Unity 3D), Augmented Reality, Computer Vision, wearable technologies (Android Wear and Microsoft Band) and NUI (Natural User Interfaces), in the specific using Microsoft Kinect, Intel

RealSense and Leap Motion sensors. He also develops Windows/Windows Phone/Android apps and cloud solutions, using ASP.NET MVC, Umbraco CMS and Microsoft Azure.

## ***Antony Vitillo***

In 2007, he graduated BSc Information Technology Engineer at the Polytechnic of Turin, where he met Gianni, with whom started a great friendship and a professional collaboration.

His passion for computers made him starting programming since when he was a child. In the last years he developed a true passion for Computer Vision: his portfolio contains one of the first EAN13 barcode scanners for Windows Phone 7, a bi-manual hand tracking system from stereo video streams, an Augmented Reality 3D engine prototype (never released) and many other things (like a little project to cheat on three-in-a-row PC games).

In the last years, he started working in Immotionar on all the latest technology gadgets for Virtual Reality and innovative tracking sensors: he loves in particular the Oculus Rift and Microsoft Kinect. He's also blogger, as well as PR and media manager of the team and in these years he has learned how to properly use the social media.

You can find additional details about the team at this page:

<http://www.immotionar.com/en/about/>

For more information about Beps Engineering, refer to this link: <http://www.bepseng.it/en/>

## **Product**

Immotionar has created *ImmotionRoom*, a complete cross-platform solution for full user immersion into a Virtual World, with natural interactions.

ImmotionRoom works as follows:

- 1) **The system sensors (e.g. Microsoft Kinects) are installed in a room** in order to track user position and actions
- 2) **The user launches a Virtual Reality application and puts the headset on**
- 3) **The user sees himself in the Virtual world, with its full avatar, at 360°. His avatar interacts with the virtual world in the same way the user can interact in the real world:** he can grab objects with his hands, move around with his body, and walk in place and in the room to make its virtual counterpart wander in the virtual world.

The product is made of:

- **A runtime to let people experience full body virtual reality, regardless of the owned tracking sensor.** Currently only Kinect sensors are supported, but more are to come in the future.
- **An SDK to let developers create full body virtual reality experiences very easily,** caring only in implementing the peculiar stuff of their application. Develop the code once, then deploy everywhere, for every headset (even mobile ones). Currently only supported engine is Unity 3D, but soon others will be supported.

The system has been positively reviewed by many users (more than 200) that tried it at the WTT exhibition in Turin, Italy, in November 2015. Full user avatar and natural form of interaction proved to be a key factor for user satisfaction. Other 50 users tried it in another public event (Wonder Light Night) in Bardonecchia (Turin, Italy) at the beginning of January

2016, where we introduced some interactivity with hands and feet. Other 100 users tried it at EIA 2016 or in private tests in our laboratories.

**It is a very ambitious project**, which is currently in its fourth prototype stage.

For more info about this system, refer to this link:

<http://www.immotionar.com/en/services/immotionroom-your-full-body-in-virtual-reality/>

## Prototypes

Immotionar also produced prototypes in the following fields:

- **Interior Design** (virtual interior designer for everyone's home)
- **Video-surveillance and security** (virtual control room and remote cameras)
- **Fitness** (virtual reality fitness game)
- **Museum exploration** (virtual museum objects manipulator)
- **Exhibitions**
- **Games**
- **E-commerce** (augmented reality clothing shop catalogue)
- **Automotive Design** (virtual car interior configurator)

## FAQ

### *Are you a founded startup?*

No, currently we are a division of Beps Engineering. We are planning to become a separate startup, though. At present time we are supported by Treatabit, the ICT branch of the Incubator of Polytechnic of Turin (I3P), to help us in reaching this goal.

### *So, which is your main interest: Virtual Reality or Augmented Reality?*

At present time, Virtual Reality. However, we are still monitoring and experimenting with Augmented Reality devices and side-projects, waiting for the hardware to be good enough for practical applications.

### *Why ImmotionRoom should be better than HTC Vive or Oculus+Touch?*

HTC Vive and Oculus are marvelous, have super-accurate room-scale tracking, but:

- 1) **They are not cross platform** (SteamVR is, but the room-scale hardware is not)
- 2) **Provide no avatar and no tracking of the full user's body**
- 3) **They are not multiplayer**
- 4) **Require controllers in user's hands**
- 5) **Miss a valid nausea-free locomotion system**

ImmotionRoom solves all of these problems, integrating with these devices.

### *Why ImmotionRoom should be better than products like Virtuix Omni or Virtualizer?*

Virtuix Omni & Co. are surely excellent products, but we think they have the following limitations:

- 1) **No multiplayer**: one must have a Virtuix for each player
- 2) **No room-scale**: if you use this kind of treadmills, you can't move in your room anymore, so you can't use that great feature that room-scale is

- 3) **Big room space occupation:** we want something that can be put even in a small room, like three small boxes nailed to the walls. Existing alternatives require big devices or uncomfortable ones
- 4) **Cross-platform:** many devices can be used only with specific devices or sensors. We want the user to be able to choose his favorite VR device, even mobile VR solutions.

***Systems like Artanim provide the same features of yours, with better accuracy. How do you respond to them?***

Their systems are really impressive, but they cost \$100,000+, while a full setup of ImmotionRoom costs less than \$5,000.

***Have you ever tried HoloLens?***

Yes, we've tested them and we're waiting for their availability in Italy, to evaluate projects for interested customers.

***What are your future plans?***

We are improving ImmotionRoom each day and, in the meanwhile, we're working hard to distribute its SDK to developers worldwide. In the near future, we want to build a virtual reality community around our SDK and let Turin become an important virtual reality pole for Italy. In the distant future, we're evaluating to produce a proprietary tracking hardware.

## Photos

You can download them from here:

[http://www.immotionar.com/presskit/photos\\_Immotionar.zip](http://www.immotionar.com/presskit/photos_Immotionar.zip)

## Logo

You can download our logo from here:

[http://www.immotionar.com/presskit/logo\\_Immotionar.zip](http://www.immotionar.com/presskit/logo_Immotionar.zip)

## Videos

This is our YouTube official channel:

<https://www.youtube.com/channel/UCnkru5DOoPoOPqrEINBERQA>

## Events

Immotionar has taken part to the following events:

- *Internet of things conference*, in November 2014
- *WTT (Wearable Tech Torino)*, in November 2015
- *Bardonecchia Wonderlight Night*, in January 2016
- *Faber Day 2015*, in January 2016
- *Global Game Jam 2016 (Turin)*, in January 2016
- *TechHeroes loves GameDev Tour (Turin)*, in April 2016
- *Microsoft IoT Conference (Naples)*, in May 2016
- *Microsoft MVP Open Day (Rome)*, in May 2016

- *European Innovation Academy award ceremony*, in May 2016
- *European Innovation Academy*, in July 2016
- *Disruptive Technologies Conference*, in September 2016
- *Supernova Brescia*, in October 2016
- *WTT 2016*, in November 2016

## Awards

Classified between first 35 projects at StartCup 2016, a local startup competition

Winners of EIA 2016 Technical Innovation Award, with ImmotionRoom project

Winners of a grant for the *European Innovation Academy 2016*, with *Immotionar* startup project.

Winners of the Faber 2015 contest in "Gaming, VR, AR" category with *ImmotionRoom*.

*Early demo submission award* for the Interior project designer *SixVip* at the *Intel RealSense App Challenge 2015*.

Gianni Rosa Gallina was the first one to publish two courses about Virtual Reality and Augmented Reality on the online training platform *Pluralsight*.

## Press Coverage

- After WTT exhibition, Immotionar was cited in the following articles (all in Italian language):

<http://mobile.hdblog.it/2015/11/23/Una-giornata-al--WTT-di-Torino/>

<http://www.lastampa.it/2015/11/21/tecnologia/wtt-wearable-tech-torino-la-prima-fiera-in-europa-dedicata-alle-tecnologie-wearable-teqcFYp7Z4bulC2CooJR6O/pagina.html>

<http://www.lupokkio.it/26137/2015/11/immotionroom-realta-aumentata-multiplatform-wtt/>

<http://www.zeromag.eu/sito/articolo.php?id=1191>

- Thanks to the Bardonecchia Wonder Light Night event, Immotionar was cited in the local French newspaper *Le Dauphiné* and on this local news website (in Italian):

<http://www.lagenda.news/bardonecchia-affollata-e-sotto-la-prima-neve-offre-a-tutti-la-wonder-light-night/>

- FaberDay victory has made Immotionar to be cited inside various media, like Italian famous newspaper La Stampa (all following articles are in Italian):

<http://www.lastampa.it/2016/01/22/multimedia/tecnologia/immotion-ar-k96enFpomulNCWNDUP7TfL/pagina.html>

<https://www.lastampa.it/2016/01/22/multimedia/tecnologia/faberday-premia-la-creativit-8dCLuhjvneJETQLol9oq6N/videowall.html>

<http://www.quotidianopiemontese.it/2016/01/13/scelti-i-12-vincitori-che-il-22-gennaio-parteciperanno-al-faberdag/#>

- ImmotionRoom system has been reviewed by HoloLens Italia, which is a blog specialized in AR/VR (article in Italian):

<http://www.hololensitalia.it/2016/01/Immotionar-realta-italiana-per-esperienze-immersive.html>

- The winning of a grant for the European Innovation Academy 2016, has made Immotionar cited inside the following online articles (in Italian):

[http://www.lospiffero.com/stampa\\_27199.html](http://www.lospiffero.com/stampa_27199.html)

<https://www.to.camcom.it/eia2016>

<http://torino.oggiinotizie.it/329961-3-settimane-torinesi-dell-europeaninnovationacademy-5-aziende-in-corsa-per-l-innovazione/#.VzGUQORHa20>

<http://12alle12.it/torino-innovazione-5-imprese-coach-della-silicon-valley-209173>

<http://www.smartweek.it/ecco-le-5-startup-vincitrici-dei-voucher-messi-a-disposizione-dalla-camera-di-commercio-di-torino-per-partecipare-alleuropean-innovation-academy/>

<http://ricerca.repubblica.it/repubblica/archivio/repubblica/2016/05/10/stanza-delle-emozioni-per-entrare-nel-virtualeTorino13.html>

and interviewed for a local television (interview in Italian):

<https://youtu.be/XaK1IRuzDDk?t=8m46s>

- Immotionar has been interviewed by Quad7Computers team:

<https://www.youtube.com/watch?v=DAGJhkHOIOs>

- ImmotionRoom has been reviewed by blogger Marvin Harriot, from Moments In VR:

<https://www.youtube.com/watch?v=U85awPehDVQ>

## Contact info

For more information, photos, or interviews, contact Immotionar at [info@immotionar.com](mailto:info@immotionar.com) or its current PR Antony Vitillo at [tonyvt@immotionar.com](mailto:tonyvt@immotionar.com)

For more complete contact information: <http://www.immotionar.com/en/contact/>