

---

## A Method and System for immersive sketching in a virtual ideation context

Reference: VAL-531-UM

**Keywords:** Virtual reality, Interactive tactile display system, Design process, 3D Modeling

---

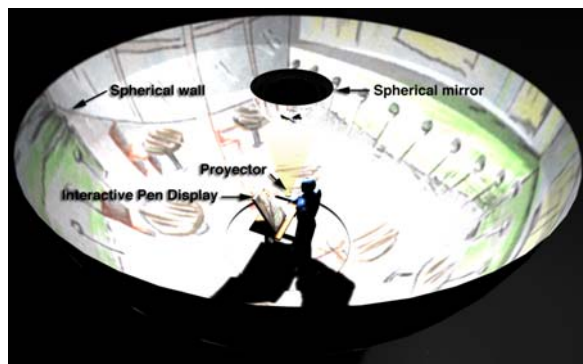
### Background

Due to their limitations, most virtual reality tools are considered passive instruments in the process of ideation. Having an immersive 3D virtual reality environment would remedy this restriction and be a creative and productive boon for all types of designers.

### Technology

This technology is a novel conceptual tool for sketching in a virtual world. Using a digital pen and a graphic tablet inside a spherical projection system, designers can sketch in real time while being surrounded by the conceptual representations of their sketches.

With the proposed technology, when the basic shapes of the spatial model are complete, they are mapped as a spherical template image and projected through an immersive spherical display like the Panoscope.



Designers can then sketch freehand on the spherical template image and see in real time the results of their work as it is projected simultaneously through the display. Interaction between collaborators can happen instantly and spontaneously within the sphere through live communication.

### Applications

This tool was developed chiefly for designers and architects, and anyone involved in ideation.

### Competitive Advantages

Any abstractions, ambiguities or inaccuracies of a sketch can be addressed without disrupting the design process. Current technologies cannot provide this type of flexible, time-saving feature.

The template image is displayed on a digital freehand sketching device and is simultaneously projected on an immersive display, providing instant perspective and creating an interactive, productive environment. Using off-the-shelf low-cost components is an appealing prospect for any designer.

### Patent Status

US Provisional Patent Application

### Business Opportunity

Univalor is seeking early investors for this technology in order to develop a real application case.

### Contact

**Normand Gadoury, P. Eng.**  
Manager, Business development,  
Sciences & Engineering  
**Univalor**  
+1 (514) 340-3243 ext. 4224  
[normand.gadoury@univalor.ca](mailto:normand.gadoury@univalor.ca)

**Tomás Dorta, PhD**  
Professor  
**University of Montreal**  
+1 (514) 343-6111 ext. 5010

[tomás.dorta@umontreal.ca](mailto:tomás.dorta@umontreal.ca)  
<http://www.din.umontreal.ca/dorta.html>