W3C Workshop on Web & Virtual Reality
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Position statement

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From clickable pages to walkable spaces: How is WebVR inviting us in?

To many, a social web is THE thing. With VR, the web clearly becomes a place to visit and to immerse oneself in from the intimacy of one's entry devices. Any place – physical or virtual – lacking human/human interaction will feel spooky, lonely and will quickly become uninteresting. The question then is how do architects of an inhabitable WebVR invite the body in a way to facilitate intuitive behavior and to provide a rich sense of presence.

After Second Life, places such as AltspaceVR, High Fidelity or an inhabited Minecraft are showing avatars of participants, more or less simulating their body language. If we can justify this approach by bandwidth limitations, a broader adoption of WebVR as a social space will require more accurate representations of participants in order to restore spatial behaviors and non-verbal communication cues.

If how and where we stand, how we move in space in relation to the environment and to each other, what we wear, body posture, facial expressions, eye contact… are essential parts of how we live and thrive in physical space, they will become as essential to how we do in the virtual spaces of a social WebVR.

VR is not about HMD. It is about being able to teleport oneself into a virtually constructed and fully immersive sensory space. HMDs are simply one of many teleportation

modalities. Any device or contraption able to draw the full horizon around someone, with some information above and under, is a VR enabler. Cylindrical screens, and domes are also candidates. The beauty and magic of HMDs is that they are compact and affordable; their limitation comes from masking participant’s eyes and voiding eye contact. Thus, and when possible, the ideal collaborative WebVR platform will also be compatible with non-masking immersive displays.

The ideal WebVR entry device – or teleportation apparatus – will be able to restore body language in space, and non-verbal communication cues such as eye contact. It will be made of a an immersive A/V display and presence capture and transmission gear. It will rely on a powerful network updating the shared World in real-time for each and every live participants. These will appear not as fabricated avatars with fake body language, but as photorealistic entities recorded live from their distant sources.

In a realistic social WebVR session, participants naturally recognize and interact with each other. They are dynamically represented in their respective positions and anyone's reference to surrounding objects, such as finger pointing, is accurate. If done well, the collective experience in a virtual environment will be as familiar or unfamiliar, as engaging and socially codified as a gathering in a physical environment. Eventually the virtual and the physical terrains will be cross-referenced and form a unified field of experience.

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Luc Courchesne is a pioneer in media art and design. From interactive portraiture to immersive experience systems, he has developed innovative approaches which have earned him prestigious awards such as the Grand Prix of the ICC Biennale 1997 in Tokyo, an Award of Distinction and several Honorary Mentions at Prix Ars Electronica in Linz, Austria, an exhibition at the Museum of Modern Art in New York, and participations in Wired’s Next Fest. A graduate of the Nova Scotia College of Art and Design (1974) and of the Massachusetts Institute of Technology (1984), Courchesne was a student of Toni Mann, Michael Snow and Otto Piene. Luc Courchesne [courchel.net] is a founding member and current co-director of research at

the Society for Art and Technology [sat.qc.ca], honorary professor at University of Montreal and member of the Royal Canadian Academy of Arts.

Links:

Posture Platform for Virtual Teleportation [https://vimeo.com/161620281]
Holoportation [https://www.microsoft.com/en-us/research/project/holoportation-3/]
IX [http://ix.sat.qc.ca]
SAT [http://sat.qc.ca]