

Test to comparatively analyze spatial memory between VR, Gaming and Reality.

The goal of the test is to measure how many spatial information are gathered through a 10min discovery of a totally new environment. For this test, we need:

- 4 real environments (E1, E2, E3, E4) composed of multiple rooms (apartment, house...)
 - o Each one must have the same complexity.
 - o Must be on one floor.
 - o Be a little decorated to present some landmarks.
- 4 “scan-photogrammetry” of the 4 precedent environments
- 3 applications that explore the photogrammetry environments:
 - o Non-VR with FPS control, called FPS
 - o VR with dash-teleport movement (like Raw Data), called DT
 - o VR with Pull your Arm movement (like Gorn), called PA
- 1 application to give notation on
- 20 testers
- 2 HTC Vive
- 3 Computer

We gather all the testers and we tell them that they must visit a location and 10min after that draw a top-view simplified map of that location. They will do so for each of the 4 locations. We devise 20 testers into 4 groups of 5 people, each one is called group A, B, C, D. I also add 10min per session (time to switch, etc...)

Here is a matrix of a test sessions:

	A	B	C	D	Time per test
E1	Reality	FPS	DT	PA	60min
E2	FPS	Reality	PA	DT	60min
E3	DT	PA	Reality	FPS	60min
E4	PA	DT	FPS	Reality	60min
Total time					240min

After a test session, we give the participant copy of the map of other. They will rate it to 0 to 10. This removes the bias.