

Location Based Hide & Seek

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The premise behind location based hide and seek is to use location awareness technology to merge two or more physically separated games of hide and seek into a single mixed reality game.

Hide & Seek

In regular hide and seek there are hidiers and one or more seekers. The hidiers have X number of seconds at the beginning of the game to hide. The seekers then attempt to find and tag the hidiers. Hidiers do not have to stay in the same hiding spot and may move around as much as they want. The game ends when all the hidiers have been tagged or after N number of minutes. A variation of the game is where there is only one seeker at the beginning of the game. Every hider that is discovered becomes a seeker.

Location Awareness

For location based hide and seek (LBHS), each player is given a handheld device with a GPS receiver in it that transmits its GPS location to the game server. Additionally, the handheld device acts as a motion detection radar similar to the one found in the game Halo. That is, it can detect the presence of other handheld devices that are moving within R number of meters.

This location awareness enables us to merge two or more physically independent games of hide and seek. Players may “teleport” between games at any time. The game server then maps their true physical location to a location in the other game where the player is now a virtual entity that can only be detected via the radar. The teleported player continues to move in his physical world but can only tag or be tagged by players in the teleported world. A virtual player can tag or be tagged if he shares a location with another player virtual or otherwise. Virtual players ignore all physical barriers. They are constrained, however, by the physical barriers of the controlling players world. For example, if an MIT student is on a football field controlling a virtual player in a building in Singapore he can run freely in any direction allowing his virtual player to move through walls, furniture, and the like. On the other hand, a Singapore student in a building controlling a virtual player in a field at MIT faces a considerable number of invisible barriers.

Seekers can also communicate with each other via the handhelds to better coordinate their efforts. Hidiers must possess their handheld device at all times and must have it turned on. Seekers, on the other hand, may switch them off or plant them as decoys. The tradeoff is that the seeker then becomes a traditional seeker: He can only tag physical players. He can no longer detect other handhelds. He can no longer communicate with other seekers except verbally in the physical world.

A variation of the game could be where everyone is virtual, but I believe the mixed reality game has more tactical complexity and is more fun. The purely virtual game is little more than a game of virtual tag as physically hiding has no value. The mixed reality game becomes a game of tradeoffs. Hiding in a wide open area is bad for your physical player but good for your virtual self, and vice versa for finding a good physical hiding spot. Depending on your handheld device makes you vulnerable to seekers who have gone “off radar” by switching theirs off or planting them as decoys. Teamwork and communication between seekers is also very important as hidiers are invisible on the handhelds if they're not moving but they can still be seen by the naked eye.