Quake

Quake is a game created by ID software. The player walk by some mazes using weapons to kill 3D monsters. The game has a realistic vision using several techniques of virtual environments modeling. It can be used by one person alone, or in multi-user mode.

When in multi-user mode, the system uses TCP/IP protocol over the backbone of the Internet, local network or serial cable connection. The system is also a server, with a few easy sets to be done which guarantee easy management to the user.

The system is one of the best home systems for virtual reality in terms of ease to use, realism and performance. Obviously, this is the positive part for being a closed system, with limited interaction and no explicit method of expansion. Still, it was the best software analyzed.

BlackSun

Blacksun, as Community Place, is a VRML browser with expansion for multi-user. Has a good rendering quality and many worlds active, being well frequented.

Interface is simple and all movements are made with mouse or keyboard. Probably the good appearance of the worlds and the ease of use is the reason of the success of this system, one of the most frequented on the internet.

The main problem analyzed on the Blacksun is the drastic performance loss when a great number of users come together in the same area.

7. Conclusion

The Internet is a creature of the computer, not the traditional networks of the telephone or television industries. Therefore, It will – indeed it must – continue changing at the speed of the computer industry to remain relevant.

Among the analyzed virtual worlds there is no one for explicitly professional use. All of them are entertaining environment, being games or chats. The fact is that on the Internet the shared virtual environments are still not well used. For professional use the preferences are still the teleconference which is probably caused by no knowledge or lack of more support for virtual systems. There are some experimental environments for professional use of virtual reality on the Internet, but none of them are active in public use.

Another factor for virtual environments is the well know balance between flexibility and performance. VRML based systems make possible a great variety of applications, with several different interactions between the user and the world, multi-user support and Java integration. This facilities are going to result in more complex systems and, therefore, in loss of performance.

Another issue found today in 3D on the Internet is the lack of support for non-usual input devices, such as 3D mouse, HMDs, gloves, among others.
Certainly, the most attractive power of a 3D world on the Internet would be the performance. No matter how realistic an environment is, user will stop using it if: the environment lasts too much to load (more than a minute), the frames-per-second rate is too low; there is constant flickering.

References

7. http://vs.sony.co.jp/