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SR013

## HSE Horizon Scanning Intelligence Group

### Virtual health and safety?

#### 1. Issue

Can we foresee an HSE outstation in Second Life or others of the growing numbers of virtual worlds? Should we be thinking about joining the growing number of major organisations who are establishing a presence in virtual reality? Will there be health and safety issues in virtual worlds or could our presence be a novel way of getting our message across?

Status: Active Monitoring
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#### 2. Background

For the uninitiated, Second Life<sup>1</sup> is one of several virtual worlds, or 'metaverses' that are appearing on the Internet. Others include Active Worlds,<sup>2</sup> Coke Studios,<sup>3</sup> There<sup>4</sup>, Entropia Universe<sup>5</sup> and Habbo Hotel.<sup>6</sup> Players participate through an avatar, an animated graphical image that may or may not reflect the users true appearance. Developments currently under way offer the potential for participation to move up to the next level using 'haptic interfaces'. These devices allow the user to interact with the virtual world by feel and for the avatar to mimic their own body movements.

So is it just a glorified computer game? No, it's more than that. At the basic level, participation is free, but users can move on and lease property and trade within Second Life. The first Second Life millionaire has emerged.<sup>7</sup> Trading is done in Linden Dollars (named after the company that devised Second Life), which are convertible with US dollars.

Major companies are establishing their presence within Second Life for advertising and trading. Examples include Toyota, Warner Bros, Nissan, the BBC, Adidas, Reebok, Sun Microsystems. The news agency Reuters operates within Second Life. IBM has recently bought ten islands in Second Life. A spokesman says the company needs a chat medium for its worldwide employees, and Second Life allows programmers to outline projects in a three-dimensional format. The company hopes to run training sessions in Second Life.<sup>8</sup>

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<sup>1</sup> <http://secondlife.com/>

<sup>2</sup> <http://www.activeworlds.com/>

<sup>3</sup> <http://www.mycoke.com/index.html?tunnel=cokestudios>

<sup>4</sup> <http://www.there.com/>

<sup>5</sup> <http://www.entropiauniverse.com/>

<sup>6</sup> <http://www.habbo.com/hotel>

<sup>7</sup> [http://www.businessweek.com/the\\_thread/techbeat/archives/2006/11/second\\_lifes\\_fi.html](http://www.businessweek.com/the_thread/techbeat/archives/2006/11/second_lifes_fi.html)

<sup>8</sup> <http://www.technologyreview.com/Biztech/18016/>

A lecturer in computing from the University of Florida is running some of his classes in Second Life. He claims that one of the biggest attractions of doing this is the potential for collaboration – the whole class can jointly build a computer program.<sup>9</sup>

The NSPCC has set up home in the Habbo Hotel virtual world, following a successful earlier experiment when it reached nearly 14 m Habbo residents.<sup>10</sup>

### **3. Implications for health and safety**

So what would be achieved by an HSE presence in Second Life or other virtual worlds? No-one is really going to get hurt doing virtual work, are they? Well that's not as far-fetched as it sounds. As companies set up work-spaces within Second Life for their dispersed workforces to interact, so 'players' will be at work while using Second Life. What if one day a company decides that a haptic interface will enrich the interaction between staff? Will that bring the potential for physical injury?

What about the social and psychological effects of working in a metaverse? Dependency on computer games is well known – what if this becomes a consequence of work activity? When people interact through avatars, they may not behave as themselves. What is the potential for bullying and other unacceptable behaviour in a metaverse working environment. If the participants are in different countries and the problem arises in a virtual world, who is the regulator?

Metaverse Roadmap<sup>11</sup> is a foresight project looking at developments to 2016. It expects the growth of metaverse technology to impact on a wide range of industrial sectors.

Certainly HSE will need to take an interest in this medium, even if it does not actively take part.

But what about Second Life as a communications medium? If the number of participants continues to increase, there may come a time when we have to consider the benefits of using virtual reality to get the health and safety message across. This might be a way of reaching younger people.

### **4. Recommendations**

We need to keep an eye on developments in this area. We are already talking about changing work patterns, with remote working, teleworking, flexible working, but working in a virtual world such as that described above would take us into very different territory. It is starting now and who knows how far it could go in the next few years?

*Peter Ellwood, Horizon Scanning Section, HSL*

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<sup>9</sup> <http://www.sciencedaily.com/releases/2007/02/070207193301.htm>

<sup>10</sup> <http://news.bbc.co.uk/1/hi/technology/6404231.stm>

<sup>11</sup> <http://www.metaverseroadmap.org/index.html>