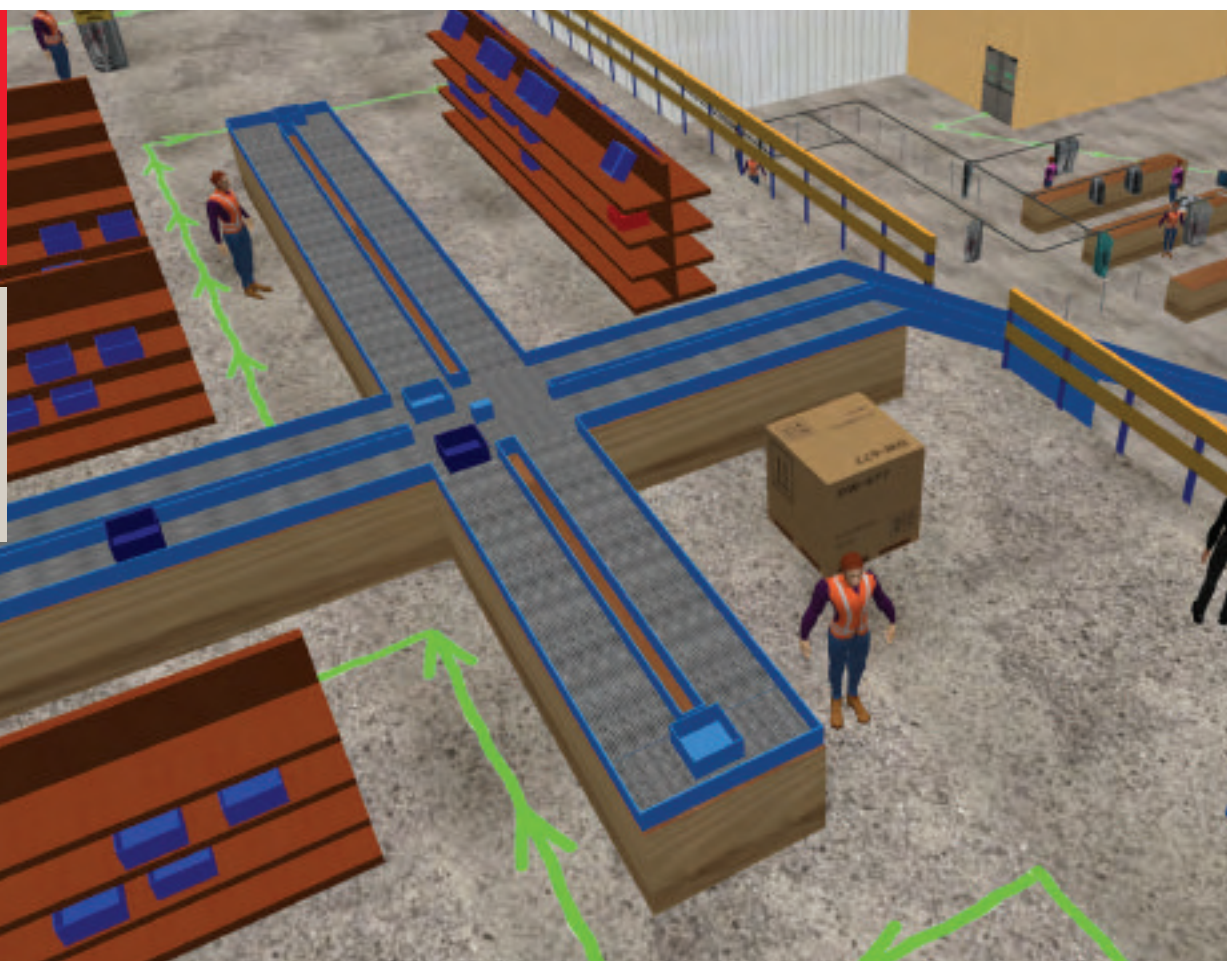


## SUPPLY CHAIN

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The 3D world in Second Life



# Health and safety training in 3D

- Health and Safety is a key aspect of running a successful logistics business. Clipper Logistics recently took on the role of 'critical friend' supporting a team of academics developing a CILT Seed Corn funded 3D warehouse in the popular virtual world website 'Second Life'.

Specialising in pan-European retail and high value logistics, Clipper Logistics Group has unrivalled retail and fashion logistics expertise including consolidation centres, e-fulfilment, port deconsolidation, pre-retail, high secure and bonded operations. With 27 UK and European distribution centres, circa 5.5 million ft<sup>2</sup> of warehousing space, over 320 vehicles and a workforce of 2,500, Clipper has the size and ability to tackle any project matched with the agility to respond quickly to customers changing requirements. Clippers impressive client list includes industry leading brands such as John Lewis, ASDA/George, Tesco, New Look, Morrisons, Harvey Nichols, Mint Velvet, Liberty, Bench, Build-a-Bear and Aurora Fashions.

## Health and safety

The role of the Health and Safety Executive is to 'prevent people getting killed, injured or made ill by work'. [www.hse.gov.uk](http://www.hse.gov.uk)

Clipper Logistics take their Health and Safety responsibilities very seriously, and are constantly reviewing ways in which they can target training for their staff more effectively. Clipper already has robust procedures, accurate reporting on accident statistics, comprehensive auditing processes and effective communication channels via annual updates for managers and the use of H&S committees. The Company has IOSH trained managers at each location, ensures its statutory training obligations are met; includes H&S awareness training in its management



development programmes and ensures all new starters receive 'traditional' induction training. Strategically Health and Safety is an agenda item at their monthly board meetings which reviews safety data and legislation to help set policy, manage the care of staff and target areas for improvement.

### CILT seedcorn funding

*'More and more, people expect to be able to work, learn, study, and connect with their social networks wherever and whenever they want to.'* New Horizons report 2010:5

The increasing use of 3D and other 'Virtual Worlds' for educational and business use is a highly contested area. Although there are a number of refereed papers on the theoretical constructs and underpinnings of Second Life – [www.secondlife.com](http://www.secondlife.com) – there is little formal research reported as yet into the learning experiences of student and lecturer interactions within these worlds.<sup>Herold, 2010</sup> By 2011 it was estimated that about 80% of active internet users will have an 'avatar' and/or a 'second life' in some form of virtual world environment.<sup>Chang et al 2009</sup> The highest growing area of 'Second Life' user is the 35–43 age group, which challenges current assumptions that these new technologies are of interest to younger students only. Whilst one may contest the exact figures it seems reasonable to assume that use of 'Virtual World' technology is only going to increase.

CILT awards seedcorn funding each year to support research into different aspects of the logistics sector. The panel were pleased to get a proposal suggesting the exploration of an aspect of warehousing in the immersive world of 'Second Life', especially as this could enable CILT students from all over the world to engage with each other 'in world' as well as

undertaking individual health and safety tasks to develop their awareness of this crucial aspect of the business.

### The project

Clipper Logistics was introduced, by CILT, to a project team from Anglia Ruskin and London Metropolitan Universities. Having been briefed on the requirements Clipper was keen to work in partnership to share their knowledge. It was agreed they would be the industry lead in a project to explore health and safety dimensions in new and innovative formats. This project developed a new learning tool to overcome some of the obstacles to on-site visits, and also to address changing learning patterns and methods of teaching delivery. Part of the project was to develop a warehouse in 3D, using the affordances of technologies powering immersive virtual worlds – in this case 'Second Life': [www.secondlife.com](http://www.secondlife.com) – that would be accessible to any student with a PC and broadband connection.

The research team and industry experts then set up a number of briefing meetings to agree the shared outputs of the work. From Clipper's viewpoint there were concerns around commercial sensitivities of their warehouse operation; disruption to the business; ensuring the wellbeing of their staff during filming; misuse and misrepresentation of any materials developed and accuracy of content. The research team were concerned about ensuring the open dissemination of final materials and the informed consent of those agreeing to take part in filming. Clipper Logistics offered Board Member and specialist expertise to lead the project, and facilities by way of a 'real life' warehouse – at their Selby location – for the research team to locate their study. Clipper also provided the content needed to illustrate the importance of health and safety in today's busy warehousing environment.

By creating an online warehouse with a number of design and operational flaws, the problems of bridging time and space, especially for international students or students with learning disabilities, can be overcome.

The shared project aims:

1. To provide insights into the learning experiences that can be offered to students and/or staff studying both locally or at a distance.
2. To develop insights and capture the experiences of developing a virtual warehouse that will have some health and safety features lacking; thus offering a 'task' for students to undertake in small teams.
3. To scaffold the student experience of learning in a new learning environment.
4. To develop a sustainable resource that can be used and updated as industry standards for health and safety continue to improve.



Clipper warehouse, Selby



Ted Johnson



Debbie Holley FCILT

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## SUPPLY CHAIN



A video was also recorded as part of the Health & Safety Project with Clipper. Debbie Holley is pictured with the film team.

## Project outputs

The final resource offers two different paths to work through:

1. The first path comprises a 'real life' area starting with a video of a hapless 'warehouse operative' having a bad day as he is filmed walking through a number of 'staged' health and safety hazards. This scenario is backed up by a number of interactive exercises to 'test' the user's wider knowledge.
2. The second path is the guided tour of the warehouse in 'Second Life' – a free immersive 3D world. Full instructions are given as to how to access and navigate through this world, which may be unfamiliar to some. A set of helpful documents is available, including a briefing on using 'Second Life' safely.

Both paths have easy navigation back to the home page, and it is anticipated that users would make use of both sets of materials in developing their own knowledge. However, the two paths have been developed such that they can be used independently and hence the package can still be beneficial, particularly for in-house staff, who may be uncomfortable in embracing 3D technology.

The content of the programme was sense checked with a representative from the Health & Safety Executive for accuracy before final release.

The material can be used by individuals remotely and in their own time, access can be given in the context of a company's open learning resource centre or can be projected on to a screen as part of a tutor led exercise.

So as not to put users off it was decided that the programme would not culminate in a 'test' or 'exam' but was intended to be thought provoking in a 'safe' environment.

Clipper Logistics offered Board Member and specialist expertise to lead the project, and facilities by way of a 'real life' warehouse – at their Selby location – for the research team to locate their study

## Conclusion

The site now offers a 'health and safety trail' for visitors to navigate around the warehouse being exposed to a number of 'risks' – for example, tumbling boxes; toxic materials in the wrong place and a number of other hazards. Interactivity is provided by the generation of a 'score' by correctly identifying the hazards, thus offering feedback to the visitor on their H&S knowledge. The package also provides an imaginative, user friendly and interactive 2D environment which can be used independently or in conjunction with the 3D option. This also provides a useful confidence builder for users wanting to start in a more traditional environment before perhaps progressing to the 'new world'.

As well as an engaging and interactive set of learning activities, this site contains a set of specially selected journal papers and articles – copyright cleared by the CILT Knowledge Centre – which visitors can access and save on to their own PC. The companion website has links to useful websites, and Clipper Logistics have shared examples of their health and safety policy documents.

The final resource is now freely available to CILT members. Please login to the CILT Members' Area of the website, and follow the link to the 3D warehouse. The first section of the website has some general information about Clipper Logistics and health and safety, and then there is an option page where the reader can decide whether to explore the multi-media information and tasks (2D) or to start to explore the warehouse in 3D by creating an avatar and taking a visit. Full information as to the process and navigating in 'Second Life' safely is available before the entry website.

## Outcomes

Our project has had both academic and industry impact – the academic team have presented the work at a number of conferences and workshops, and Clipper Logistics are using the 2D activities as part of their induction and ongoing health and safety training.



## ESSENTIALS

### About the authors

**Ted Johnson** has a degree in Business Studies from Aston University in Birmingham and is a Fellow of the CIPD. Having worked in many industry sectors such as brewing, automotive and wall coverings, Ted now works in the 3PL logistics sector and since 2006 has been employed by Clipper Logistics Group Ltd as their HR Director.

For further information on Clipper, see their website: [www.clippergroup.co.uk](http://www.clippergroup.co.uk)

**Dr Debbie Holley** FCILT is an academic at Anglia Ruskin University, interested in engaging students with learning through different digital mediums. For this project, colleagues Alan Hudson – Pell Juran in 'Second Life', and Chris O'Reilly – film, editing, animation, website design – from London Metropolitan University provided technical support.

For more on Debbie and her work see her website: <http://drdebbieholley.com>

### Further information

For more information on 3D warehouse training and WMS why not join our Warehouse Management Systems Forum? See our website [www.ciltuk.org.uk](http://www.ciltuk.org.uk) for more details.