



## Making the Real World Safer: TÜV NORD Group in Second Life



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**– Frank Boerger, Head of Client Management, TÜV NORD**

### Executive Summary:

Since 1869, when the company was founded in Germany to inspect boilers, TÜV NORD Group’s unwavering mission has been to “make the world safer.” Today, TÜV NORD Group has over 8,500 employees in more than 70 countries and a broad international client base for its unique consulting, service and inspection portfolio and management of complex safety solutions. The company’s 3D presence can be found in Second Life by the region name of “TUV Nord”. Since 2007, the region has been used for recruiting, meetings, game based education and other new ways to share knowledge. An ambitious long-distance training project produced a complete return on investment within a year. Now the company is ready to share the benefits of its extensive virtual development with clients.

**“As the number of experts we need to connect with worldwide is constantly growing, we’ve been searching for a less expensive and more flexible method for a long time.”**

**– Nicole Sohn, Head of Notified Body for Pressure Equipment, TÜV NORD**



## The Traditional Ground Stone Ceremony Goes Virtual

“In Germany, when a company starts work on a new building, the owner or CEO lays the ground stone,” said Frank Boerger, Head of Client Management.



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BÜRO X Media Lab

Boerger also directs the TÜV NORD IN 3D projects, conceived with solution provider BÜRO X Media Lab. Indeed, on October 11, 2007, Dr. Guido Rettig, Chairman of the Board of TÜV NORD, presided over the groundbreaking ceremony for the company’s 3D campus in Second Life during a mixed reality press conference. In keeping with tradition, the hollow stone included artifacts, in this case, Second Life publications filled the space.

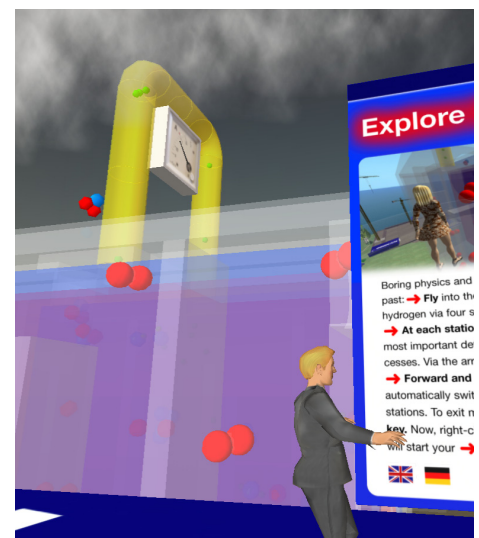
Rettig noted that an “important experimental lab” was set up in Second Life to “connect TÜV NORD with the knowledge community in this virtual 3D world” and at the same time to create a new engagement opportunity for the company’s 70-country network and its clients.

Predicting that multiuser virtual environments would grow, the Group aimed to position itself at an early stage.

## Crafting Memorable, Meaningful Experiences

“Second Life is a great platform for new developments in social communication, simulation, 3D visualization, and immersive education,” Hanno Tietgens of BÜRO X Media Lab said. “To start with, we looked at climate protection, where TÜV NORD has an active part in making tomorrow’s world as safe as today’s.”

On December 7, 2007, virtual TÜV NORD opened to the public to reveal a number of visionary installations, including an immersive larger-than-life fuel cell to “make climate protection a real experience.” In the physical world, a fuel cell can be as small as a few inches, with its inner workings hidden from view. In Second Life, avatars can fly straight into the massive, colorful





heart of a giant 200-foot interactive structure created by TÜV NORD. The company highlights its expertise in this critical area by giving visitors a chance to experience the process of gaining clean energy from hydrogen and oxygen in ways that cannot be replicated in the physical world.



**“Second Life provides the ideal venue for breaking complex processes down into understandable, and entertaining, activities.”**

– Frank Boerger, Head of Client Management, TÜV NORD

### Branding through Engagement in a Serious Game Environment

In another exhibit, visitors are engaged to find problems hidden beneath ground soil. They face six challenges to learn about ground penetrating radar (GPR) technology in a playful but memorable way. The installation uses a digital model of the high-tech equipment and allows avatars to slip into the role of a TÜV NORD expert focused on environmental protection and soil conservation. Participants in Second Life seek old oil tanks, forgot-

ten pipes and cables, tree roots, and even leaks in a dike, experiencing first hand how TÜV NORD’s use of the technology reduces many of the risks and costs associated with such discoveries in the physical world.

“Second Life provides the ideal venue for breaking complex processes down into understandable, and entertaining, activities,” Boerger noted.

### Global Collaboration in Second Life

By 2008, many TÜV NORD employees were collaborating and connecting in Second Life.

Wolfgang Mecke, Senior Vice President Operation, TÜV NORD International, was giving a real life presentation for clients in Singapore when, during a short demo of Second Life, he encountered Tietgens on the virtual premises. Their spontaneous SL voice chat, Mecke remembers, gave them a better trans-continental connection than he had over the phone – inspiring the idea of a 3D auditorium with meeting rooms.

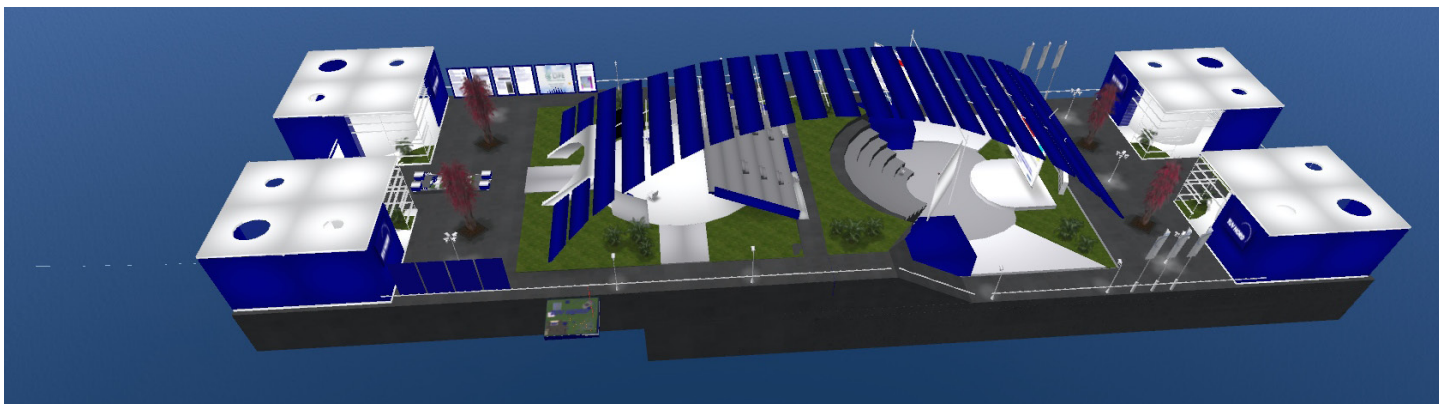
“With a notebook, a headset, and a decent internet connection, anybody can log into Second Life, basically from any point on the planet—any time,” Mecke said. “Video conferences, on the other hand, demand a huge investment, with access limited to a few people.”



### Saving Time and Money

For Nicole Sohn, “tremendous savings on travel cost” is a major benefit of TÜV NORD’s Second Life project. As Head of

Equipment Directive, is one of the tutors in her team. He frequently travels to host global lectures. The virtual auditorium has given him a sharp new venue. “Initially, I thought SL would be



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Notified Body for Pressure Equipment of TÜV NORD Systems, she trains 70 experts from 18 countries.

“As the number of experts we need to connect with worldwide is constantly growing,” Sohn said, “we’ve been searching for a less expensive and more flexible method for a long time.”

Uwe Klinger, an expert in design examination for the European Pressure

software for some kind of game play,” Klinger said. “I changed my mind when I saw how it worked.”

The ability to spontaneously join a team meeting or workshop on the other side of the world without even leaving the home office has served the company well. Pawel Kaczmarek, Head of TÜV NORD Industrial and Building Systems in Poland, stated that the 15 inspectors who work with him there have been taking far fewer business trips for training purposes, saving time and money, for the customer’s benefit.

### Easy to Do the Math

According to Boerger, TÜV NORD invested less than \$140,000 USD for the 3D Auditorium and conferencing system, including many helpful extras such as staff orientation and avatar customization.





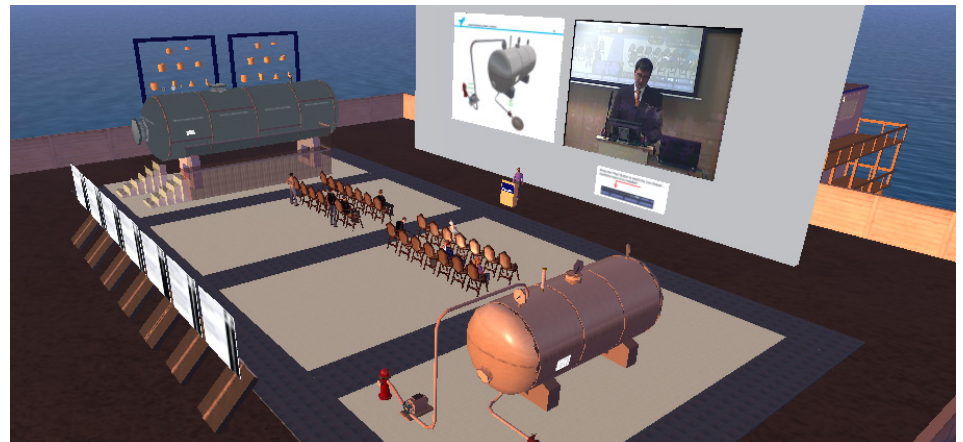
“Flying in ten people from Poland, Croatia, Turkey, Brazil, Hong Kong, Thailand and India for one training session can cost as much as US \$37,800 for tickets, plus thousands of dollars for hotels, expenses and food, plus far more than 150 expensive hours spent traveling instead of serving customers,” Boerger said.

By the end of 2009, the Group had already hosted seven workshops in Second Life. “For TÜV NORD, being a knowledge-driven company, Second Life is most promising when it gets both to the efficiency of sharing, and the quality of improving our expertise,” Boerger added.

TÜV NORD experts were able to save 52 trips at an average cost of \$3,126 per trip, or a total of \$160,595. Now that cost savings have covered the total cost of the initial investment for the project, the training sessions that will be held in 2010 and beyond will be in the black, just as TÜV NORD Group turns an eye to creating revenue streams from its successful build.

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### Virtual Recruitment for Real Employment

Adoption grew quickly on the company’s side, and more projects evolved.

In August 2009, Stefan Luckmann, a grad student at Wismar University, defended his diploma thesis in a mixed media presentation live in Rostock and in Second Life. TÜV NORD Systems had given him the opportunity to accompany their training project, exploring how employees interact inworld, and how an expert’s inspection capabilities could be enhanced through interactive 3D learning opportunities.

Luckmann said he was “surprised at the technological progress Second Life had made” since his early days as a user in 2006. After successfully defending his thesis, Sohn offered him employment on the spot; his first task was to design a feasibility study for many of the aspects that he covered during his thesis—the usage and application of immersive learning.



**“Initially, I thought Second Life would be software for some kind of gameplay. I changed my mind when I saw how it worked.”**

– Uwe Klinger, Design Examination Expert for the European Pressure Equipment Directive, TÜV NORD

### Increasing safety by “Training for Traffic”

In September 2009, some 2,000 future drivers and other young people tested a learning installation for increased traffic safety. Eleven traffic situations were converted into interactive tasks and presented in the virtual “Training for Traffic” exhibit of TÜV NORD Mobility – simultaneously at the innovations fair IdeenExpo 2009 in Hanover, Germany, and in a secure Second Life environment. “The 3D course was a main attraction here at the exhibition. People were standing in line to get a chance to drive,” reported trainee Mario Grauer. Even Christian Wulff, Governor of Lower Saxony, and Wolfgang Tiefensee, then German Federal Minister of Transport, took a look at the 3D installation.

### Sharing the benefits with clients

After successfully testing the Second Life environment, TÜV NORD Group is ready to share the 3D internet expertise with its clients. In 2010, subsidiary TÜV NORD Academy – one of Germany’s major training companies – is offering a seminar introducing human resource executives, quality managers and corporate educators to the immersive 3D conferencing techniques. Other enterprises will also have a chance to experience the new opportunities on virtual premises provided by the TÜV NORD Group in Second Life – making the real world safer, once again.

### About the TÜV NORD Gruppe / TÜV NORD Group

With over 8,500 employees, including more than 6,700 with a technical and scientific background, the TÜV NORD Group ([www.tuv-nord.com](http://www.tuv-nord.com)) is one of the largest technical service providers in Germany. It also operates in over 70 countries in Europe, Asia, Africa, and the Americas. The Group owes its leading market position to its technical competence and a broad range of advisory, service, and testing services in the mobility, industry services, international, raw materials, education, and human resource fields. Its motto is “Making our world safer.”

### About BÜRO X Media Lab

Solution provider BÜRO X ([www.buerox.de](http://www.buerox.de)) has an impressive track record in advertising and corporate communications since 1990, creating strategy, design, ads and media for market leaders like German national television ARD Das Erste and reinsurance company Munich Re. BÜRO X Media Lab explores the convergence of media on the internet, with a focus on virtual 3D environments. Since 2007, the Lab brought Hamburg City, Campus Hamburg and the University of Hamburg to Second Life, and has been a part of the TÜV NORD IN 3D project from day one.

Visit TÜV NORD Group in Second Life:

<http://slurl.com/secondlife/TUV%20Nord/44/224/27>



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#### About Second Life and Linden Lab

Developed and launched by Linden Lab in 2003, Second Life is the world's leading immersive social ecosystem. A uniquely collaborative and creative environment, Second Life provides the platform for transforming familiar experiences and pioneering new ones. More than a social network, Second Life enables Residents from around the world to create content, interact with others, launch businesses, educate and more. Powered by the collective energy of its highly engaged user base – one million strong and growing – there is no limit to the innovation and self-expression Second Life can enable.

Founded in 1999 by Chairman of the Board Philip Rosedale as an experiment, Linden Lab has helped to define and create new ways for people to communicate, socialize and collaborate. Privately held and headquartered in San Francisco, Linden Lab is led by CEO Mark Kingdon, and has more than 350 employees in the U.S., Europe, and Asia. For more information, visit [www.secondlife.com](http://www.secondlife.com)

#### Linden Lab

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