



PRESS RELEASE

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GRADUATE STUDENT COMPLETES VIRTUAL WORLD RESEARCH 3-D Tools for Business Meetings Developed for a Thesis in Second Life®

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EINDHOVEN, NETHERLANDS – Julio's thesis was completed, revised and rewritten, and was now ready for final presentation to his professors. The 3D brainstorming, idea organizing and voting tools were designed and tested, and the month-long analysis of users' feedback was also finished. Julio Molina Orrego, a graduate student from Colombia, was about to complete his masters degree at the Eindhoven University of Technology for Master of Science in Operations Management & Logistics.

His professors and several university colleagues were present along with family and friends who came to give their support and learn about Julio's research. Although everyone was present, they were in fact dispersed around the globe... the professors in their offices in the Netherlands and Hong Kong, and the guests in Australia, Brazil, Switzerland, Colombia and scattered throughout the UK and the USA. This was an historic event for the University and for Second Life® the virtual world where the research was focused, and where this presentation was now taking place. It marked the first time an advanced degree was researched virtually and also presented and defended in the virtual world.

Julio's research centered on "*Collaborative Virtual Environments for Group Support Systems*", studying the effect of 3D space on group support systems, GSS. The end result of the research and development is the introduction of a breakthrough technology for meeting support tools that can benefit businesses and organizations everywhere. Attendees of virtual business meetings now have the opportunity to augment the existing co-presence benefits of Second Life, including voice and chat communication for presentations and interviews.

The Alpine Executive Center in the virtual world of Second Life® is host and sponsor of the research.

The voting grid tool lets participants vote on multiple criteria by standing on the voting platform. Combined results are calculated along the two axis & displayed in real time.



This opens the door to a wide variety of business applications for the virtual environment such as: focus groups, risk assessments, setting priorities, resource allocation, benchmarking, best practices, strategy planning and product design projects. The new 3D brainstorming, idea organizing and voting tools facilitate "structured meetings" that drive critical meeting processes while concurrently recording the proceedings. Regardless of the meeting objective, groups can meet and work virtually using these 3D tools to make better decisions and accomplish more.



The Research

The study describes the design and implementation of tools in a virtual world for studying the effect of space in group support systems. The research follows the design-science paradigm in which a prototype is built, then tested, gathering feedback, and finally corrections are made starting the cycle again. Specifically, three applications inside the virtual world SecondLife were built for brainstorming, organizing ideas and for decision-making. Then, the tools were tested in face-to-face meetings with professionals from real companies as well as with participants geographically distributed around the world during virtual meetings.

Supporting teams technologically, especially in a global context, is not easy. Virtual teams lack a feeling of “presence” which negatively impact a team’s performance and satisfaction. Virtual worlds like SecondLife offer this additional presence dimension for teams within an environment where real-life experiences can be attained by visualization through avatars as well as text and audio interaction. However, little is known about the impact and implications of using virtual worlds for group support. In its native state, SecondLife is weak in providing structured recorded support for team activities such as brainstorming, idea organization and voting. Group Support Systems (GSS) have historically focused on exacting the type of support that SecondLife® lacks. However, aspects of GSS have not, until now, extended into virtual world domains.

Research Questions

The research explored how can 3D space provided by virtual worlds affect group support systems, and asked two questions.

1. *How can GSS applications be implemented inside a virtual world?* Specifically, it is desired to see how the interface can be designed in order to support the visualization of the parallel contribution and visualization of the process.

2. *How do people experience the characteristics of virtual worlds that can influence GSS?* Particularly, to what extent users consider the 3D interface easy to use and understandable. Similarly, to see if a 3D interface increases the sociability of GSS tools. Additionally, to know if users think that space provided by virtual worlds helps brainstorming, idea organizing and decision making.

Research Results

The results show positive effects of space on aspects of group support systems applications like user interface and structure of the meeting process. Overall, the results indicate that the representation of space is good for brainstorming, idea organizing and voting. Specifically, the 3D space provided by Second Life is considered especially useful for voting.

Participants of virtual meetings were positive about the tools, which personal feedback obtained during the virtual meetings also indicated. The participants were very receptive of the tools and expressed their interest to use them again for a range of purposes.



Participants brainstorming with the 3D tool

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Alpine Executive Center:

Located on the MeetingSupport island in Second Life®, this Alpine ski village is surrounded by snow-covered mountains. Tucked away deep inside the mountain lies a sophisticated meeting facility that may even rival any meeting facility you will find in the “real-world”, if you can imagine that. This is a place where real-world activities take place in a virtual world environment, supported by expert facilitation and state-of-the-art meeting support tools and technologies. The center is also home to continuing innovative business education programs and research projects at various universities.



Second Life® and Collaboration

The environment of Second Life® offers a compelling solution for online collaboration where remote participants can meet and work in a life-like 3D environment where they are represented by an avatar of their own design or likeness. The biggest challenge in supporting effective meetings in a virtual environment is to actively engage remote participants in a realistic collaborative experience where work can be done efficiently and affordably, to enable world-class decision-making and exceptional results for businesses and organizations. That is the mission of the Alpine Executive Center on the Second Life® MeetingSupport island.

The Alpine Executive Center has a unique ski resort setting with meeting facilities, facilitation services and innovative tools that enable guests to have a genuine sense of co-presence and participation. Taking part in a meeting at the Alpine Executive Center eliminates the dullness and boredom of participating remotely on one’s computer by creating a sense of togetherness and participation in an event. A principal goal of the center is to make the meeting an “event remembered”, a point of reference for future collaboration and decision-making. We call it “Active Spatial Immersion” because remote participants will log off their computers feeling like they were indeed “there”, leaving a mental image of the event as a future reference point.

Active Spatial Immersion

Active Spatial Immersion is our concept and driving principle to take advantage of the three-dimensional characteristics of virtual worlds to actively engage remote participants during the decision making process. The special three-dimensional distinctiveness of virtual worlds enables participants to be more completely involved with their remote colleagues in the meeting process. The development and improvement of meeting support tools for brainstorming, organizing of ideas, voting and analysis, and real-time documentation of meeting proceedings are ongoing activities at the center.



Research and Development

We drive the meeting process with our tools for brainstorming, idea organizing, voting (in multiple formats), and a two-criteria voting grid. All ideas and voting results are dynamically collected in databases and may be viewed by the facilitators and participants in real time. The meeting support tools are typically designed and researched by university students as part of their undergraduate studies, or by graduate students fulfilling requirements for their advance studies and research projects. The development of meeting support tools for GSS, group support systems, incorporates software engineering with current research in the relevant social, economic and business aspects.

MeetingSupport in Second Life® at the Alpine Executive Center is an extension of the “real-life” services of groupVision (Switzerland) AG. It is a creation of Anthony Adams to provide a unique virtual work environment for professionals where freedom of expression, creativity and innovation are encouraged... where the “normal” boundaries are removed and delegates can explore issues in ways they cannot do in real-life, taking EMS, electronic meeting support, for virtual teams to the next level. The Alpine Executive Center is a place where a sense of fun and adventure is created at the same time as building team spirit and a sense of community within the visiting groups. All this while real work is being done.



Activities and Sightseeing

Meeting guests can experience a variety of virtual winter sport activities and shop for virtual ski gear for their avatar. During an event delegates are often given time to explore, play, go ice skating or just have fun together riding the chair lift or the train and using the timed downhill and slalom ski runs. Following the event a visit to the disco and lounge in the lower level of the mountain complex is a great way to network and unwind. And when delegates get back to their real life – well how many times have we relived or chuckled over free time experiences at such events.



When arriving at the village center, a visitor will see a tempting selection of activities and places to explore. But if business comes first, you will want to make your way to the main amphitheater. To get there, you can ride the train that will take you deep inside the mountain complex, or take a walk along the ice skating pond, or teleport yourself instantly by touching the amphitheater sign at the Teleport Centre located at the visitor landing area.

The Main Amphitheater

Once inside the amphitheater you can check in at the welcome desk and pick up your personalized name tag so others will know who you really are and can see your real-life name. Name tags eliminate much of the confusion that is typically encountered when the two worlds, virtual and real, come together. Now you are ready to take your seat in the spacious auditorium where large groups come together in plenum for presentations and moderated discussions.



An elevator in the amphitheater will take you to the ski area atop the mountain complex, or you may want to first visit the ice caverns or one of the glacier rooms during the ascent to the mountain top. The ice caverns on level 3 will be the showcase of works of art and ice sculptures by the top creative artists and builders in Second Life. The two glacier rooms on level 4 are equipped to handle private meetings and also serve as breakout areas for larger meetings.

Team Meeting Sites

Small groups can meet at one of the ten unique meeting spots around the Alpine village. There are mountain huts and scenic lookouts at distinctive locations around the island that are equipped to handle breakout sessions or small private gatherings. Meeting guests can teleport directly to these locations and reconvene in the amphitheater when desired. Each of the unique locations are equipped with the preferred tools for a particular team or occasion.



The Alpine Executive Center at MeetingSupport is operated in-world by TonyEMS Heying, who in real life is Tony Adams, a fifteen year veteran of electronic meeting support, (EMS) services for face-to-face and distance events. He is supported in-world by a cadre of experienced facilitators who incorporate the most up-to-date meeting support technologies for groups, insuring their maximum effectiveness and results.

“It’s a mistake to think of the virtual world as something abstract and separate.”



More than 2,500 visitors come to the facility every month to meet, explore, socialize, and enjoy the scenery, making the Alpine Executive Center one of the most popular public business destinations in Second Life®.