Singapore, 4 February 2004

NTU WELCOMES VISITORS TO ITS SHARED CYBERWORLD

In an exciting development, a professor from Nanyang Technological University (NTU) and his students have developed what is probably the largest shared cyberworld.

Assoc Prof Alexei Sourin of the School of Computer Engineering, NTU, first latched onto the idea of building a shared cyberworld some six years ago. Since then, and using a powerful graphics workstation and advanced modelling software systems, he has built a shared cyberworld modelled on the NTU campus.

Unlike a website which individuals can visit but not meet one another, a shared cyberworld is one in which visitors can meet and interact in a common environment.

Virtual NTU is realistic. It has the same buildings one can find at NTU, the same roads and even the same amenities. This world was built by referring to physical contour maps of the NTU campus. The buildings were constructed one by one using photography and geometric modelling for a photo-realistic effect.

Numerous users can visit Virtual NTU, see one another and interact. Using interactive graphics modelling, Assoc Prof Sourin and his team have also built corridors and rooms within the buildings. Users may walk along these corridors and enter these rooms at will. They may literally speak to a stranger they meet in Virtual NTU in a computer-simulated voice since Virtual NTU is also voice-enabled. When a user first visits he or she may adopt an avatar from the range available. An avatar is his or her physical representation in cyberspace. With an avatar and voice, a user creates his or her cyberself and an existence in virtual reality.
The applications of shared cyberworlds are numerous. Virtual NTU is planned for e-learning. With it, students and their professors can meet in virtual classrooms in a shared virtual world, wherever it is that they actually exist in the real world. Shared cyberworlds are also useful for research on cyberspaces and crowd simulation. They may also replicate environments in cyberspace for training purposes. For example, if the tough terrain of Mars had been duplicated in a shared cyberworld, scientists would have been able to practice landing and manoeuvring robotic devices in a realistic cyberworld before actually deploying them in reality.

Cyberworlds research is one of several important research directions of the School of Computer Engineering. The School facilitates the intellectual exchange of ideas and knowledge on cyberworlds by organising an annual international conference through which eminent researchers in this field can meet.

Launched in late 2003, Virtual NTU has begun to see visitors from Singapore and abroad, mainly during peak hours around midnight. Besides visitors, autonomous avatars known as bots also roam Virtual NTU, adding to its resident population and increasing the level of interactivity of this shared world.

Assoc Prof Sourin and his students will introduce cyberguides to Virtual NTU next. They will also add other finishing touches such as adding lecture theatres and laboratories within the virtual buildings and soon even features within these amenities, such as a window, which a visitor can open and through which he can look out to see another area of Virtual NTU and maybe another visitor passing by.

Asked if his research ends with the completion of Virtual NTU, Assoc Prof Sourin simply smiled in anticipation. Not content with having built what is probably the world’s largest shared cyberworld, Assoc Prof Sourin now has his sights on building an even larger one – a shared cyberworld of the whole of Singapore.

Visitors with a personal computer running MS Windows and connected to the internet may visit Virtual NTU at www.ntu.edu.sg/home/assourin/VirCampus.html/. Install the freeware plug-in software and begin exploring.

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