Future Hockey Star

Applying Virtual Reality to Ontario Mine Rescue Operations

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Mirarco MINING INNOVATION

2005 Provincial Mine Rescue Competition Champions

Project Origin

- Comparatively few mine emergencies
- Teams and control groups must be well prepared
- TAC identified virtual reality as a training support tool.

Virtual Reality project is a collaboration of

Industry Academia MASHA

mirarco
MINING INNOVATION

Laurentian University
Université Laurentienne

What is Virtual Reality

Virtual reality is a highly interactive, computer-based, multimedia environment in which the user becomes a participant with the computer in a 'virtually real' world.

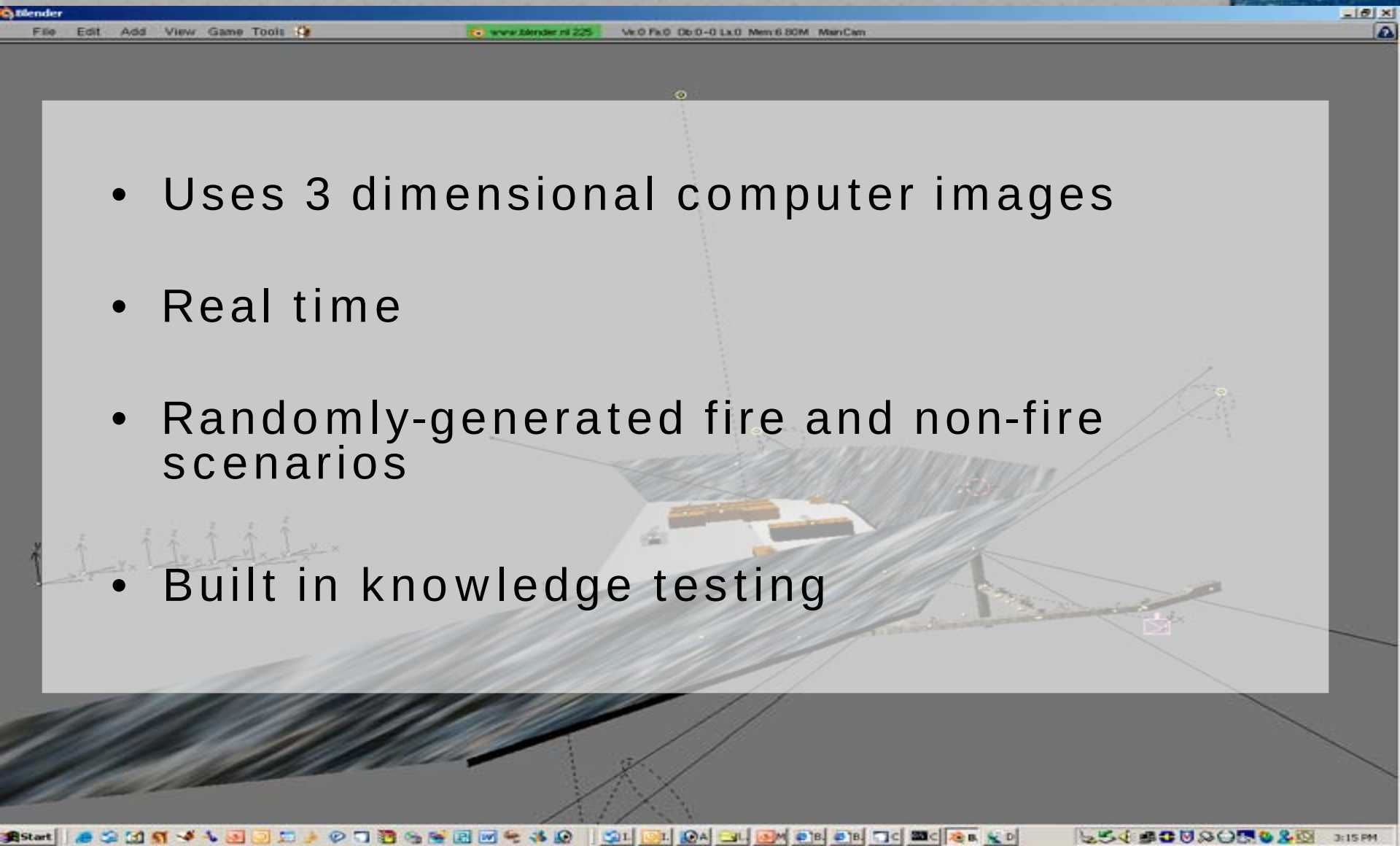
Purpose of Project

To explore the use of virtual reality as a decision making tool to assist control groups during an emergency.

Traditional Control Group Training Methods

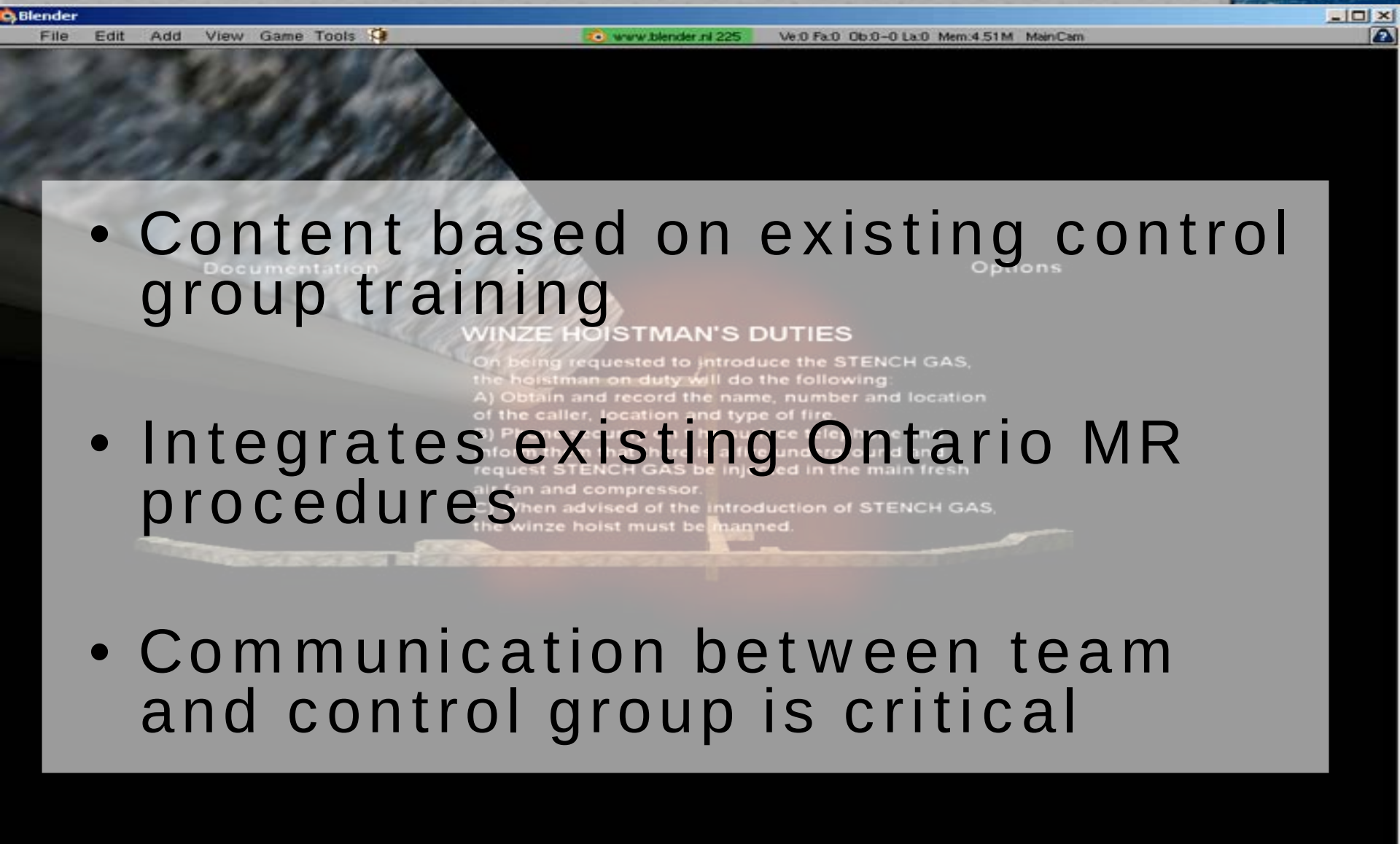
- Classroom environment
- Lecturing
- 2 dimensional plans and sections

Demonstration Project



- Uses 3 dimensional computer images
- Real time
- Randomly-generated fire and non-fire scenarios
- Built in knowledge testing

Demonstration Project



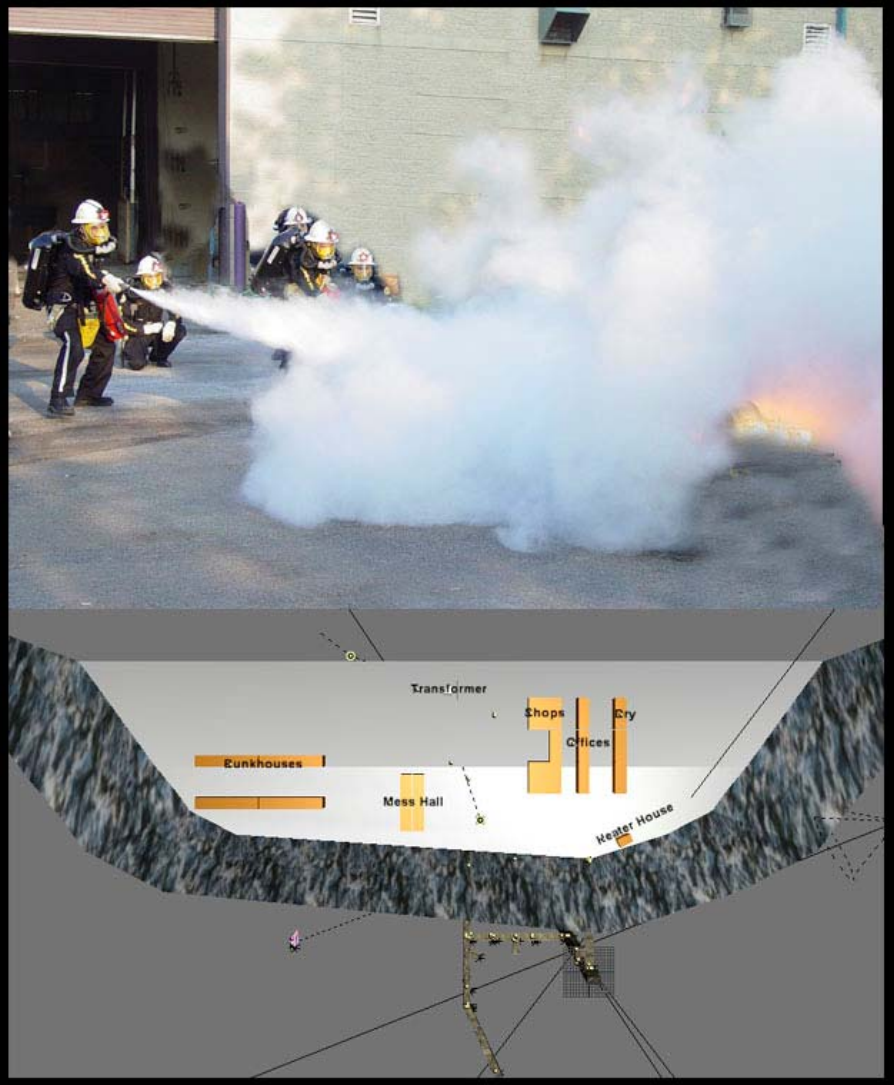
- Content based on existing control group training
- Integrates existing Ontario MR procedures
- Communication between team and control group is critical

Regional Mine Demonstration

Click here to view DEMO

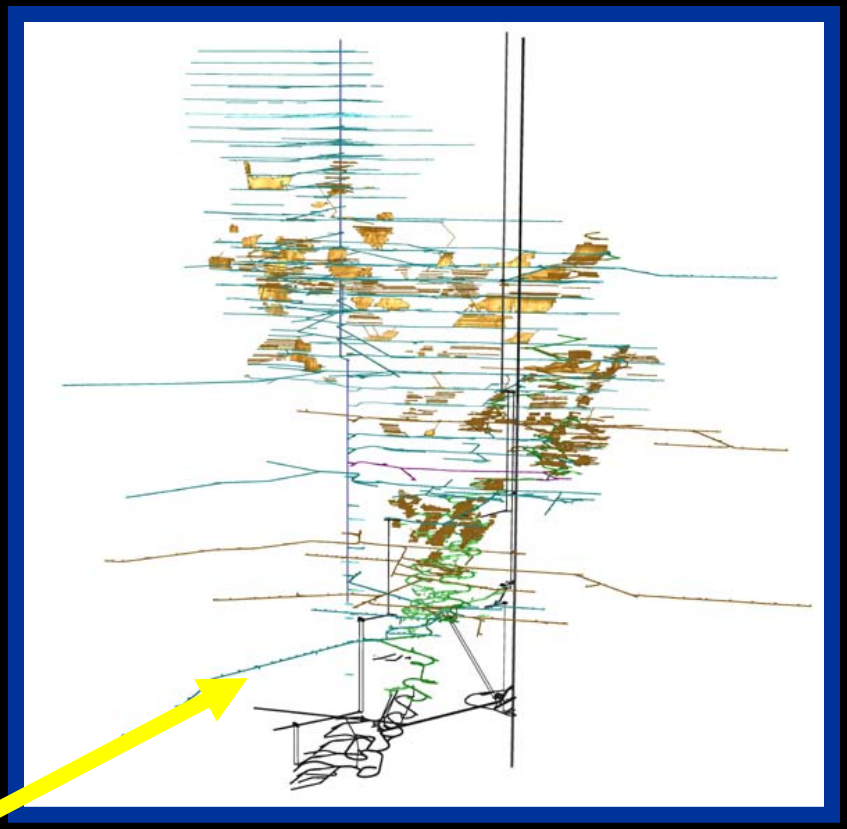
Conclusions

- Simulation demonstrated to numerous groups (TAC, Labour)
- Feedback very favourable
- VR seen as a powerful decision making tool



Next Steps

- Integrate more complex fire and non-fire scenarios
- Variable ventilation network
- Incorporate geomechanics component into future development.



Isometric

Red Lake Mine 2