the Naledi3d Factory
Industrial training – mine haulage safety (2005)

Purpose: It is generally accepted that mining is an extremely hazardous working environment. For this reason, safety regulations are rigorously enforced and many resources are dedicated to safety awareness and training to help mining teams better understand the consequences of unsafe actions or conditions. Unsafe behaviour can lead to fatalities and VR is a powerful tool to visually demonstrate the consequence of bad practices. This simulation addresses the haulage, where it is important that miners walk on the "travelling way side" - to do otherwise is to court disaster.


Partner:

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In a Nutshell:
Miners are taught to stay on the travelling way side when walking along the haulage. This side is designed with extra room allowing the miner to avoid dangerous situations caused by passing trains. This simulation demonstrates the danger and consequence of walking on the non-travel way side when trains pass in the haulage.

The hazard:
As a NEL (New Era Locomotive) moves in the haulage, it can happen that either a wagon derails or the load on a flatbed moves around and overhangs the side of the wagon. If this happens on the travel way side, the miner has room to avoid the hazard. However, if a miner is walking on the non-travel way side, there is a very good chance that the miner will be crushed against the wall. The **dangers** and **consequences** of this illegal practice are clearly and visually demonstrated in this simulation.
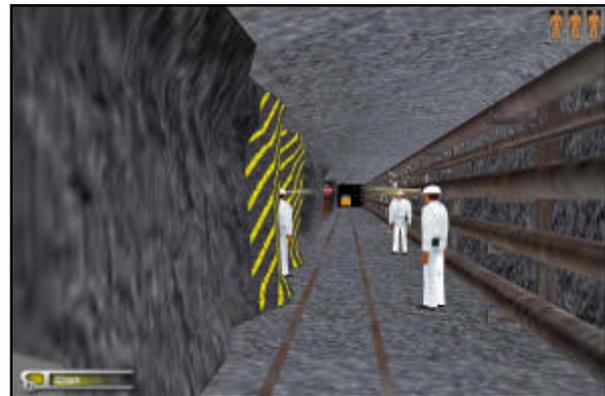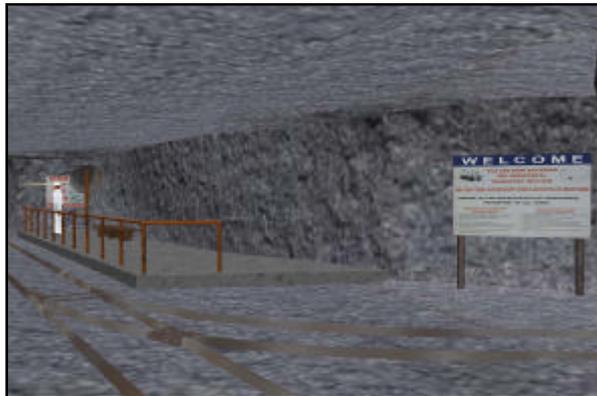
Interactive safety awareness:
Up to seven miners can be located and when the locomotive moves along the haulage, the correct safety procedure can be demonstrated (the train driver stops, blows a whistle and the miner moves to the correct side). However, one of four accident scenarios can also be configured - and the consequence graphically demonstrated. The affected miners change colour - red (fatal), and green (safe). The scene can be rotated and viewed from any angle and a second "window" activated to see a selected miner's view of the scene. Audio is also used to add realism - background mine sounds as well as screams from the affected miner when an incident occurs.

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