The RGU Virtual RIG

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**ROBERT GORDON UNIVERSITY ABERDEEN**

Introduction

The Virtual Rig is a development by the School of Engineering with the intention of enhancing student engagement and experience.

As site visits are not always practical, and as the School of Engineering has a large number of Distance Learning Students, it was decided to develop a virtual space for students to visit and take part in simulations.

The environment has recently been opened to MSc students in the School of Engineering and the intention is to create a guided tour of the rig initially and later develop real time simulations.
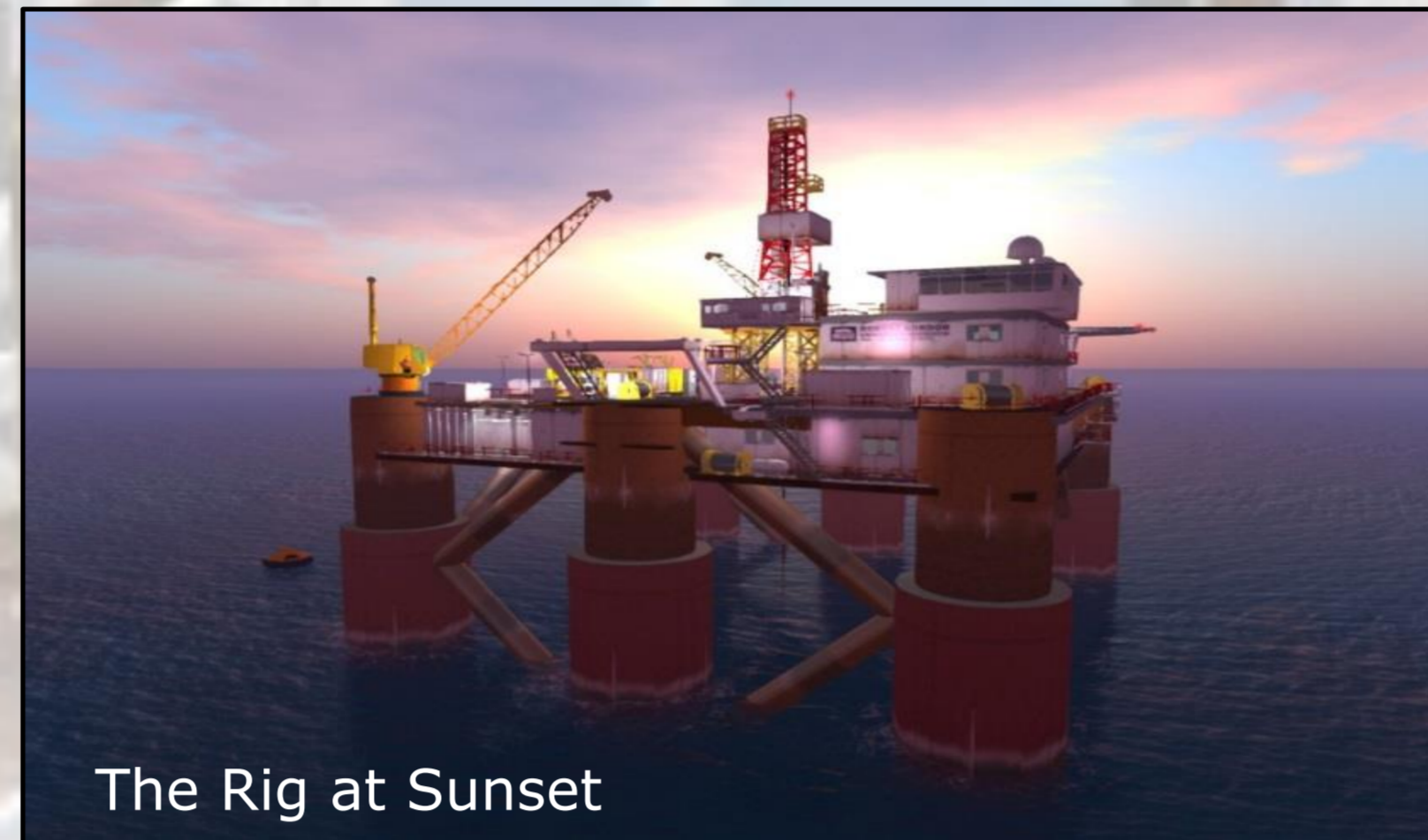

The Rig at Sunset

Student Response

The Virtual Rig was made available to students for feedback and testing in March and continues presently. There have been no technical issues with login and the server that OpenSim is hosted on has remained stable. Students who have visited the rig have left positive feedback and are keen to do more.

Staff Response

Teaching staff who have accessed the rig have expressed interest in how this can be utilised further in taught modules and for simulation. Staff outwith the department have been keen to discuss how this type of environment might be arranged to suit their needs.
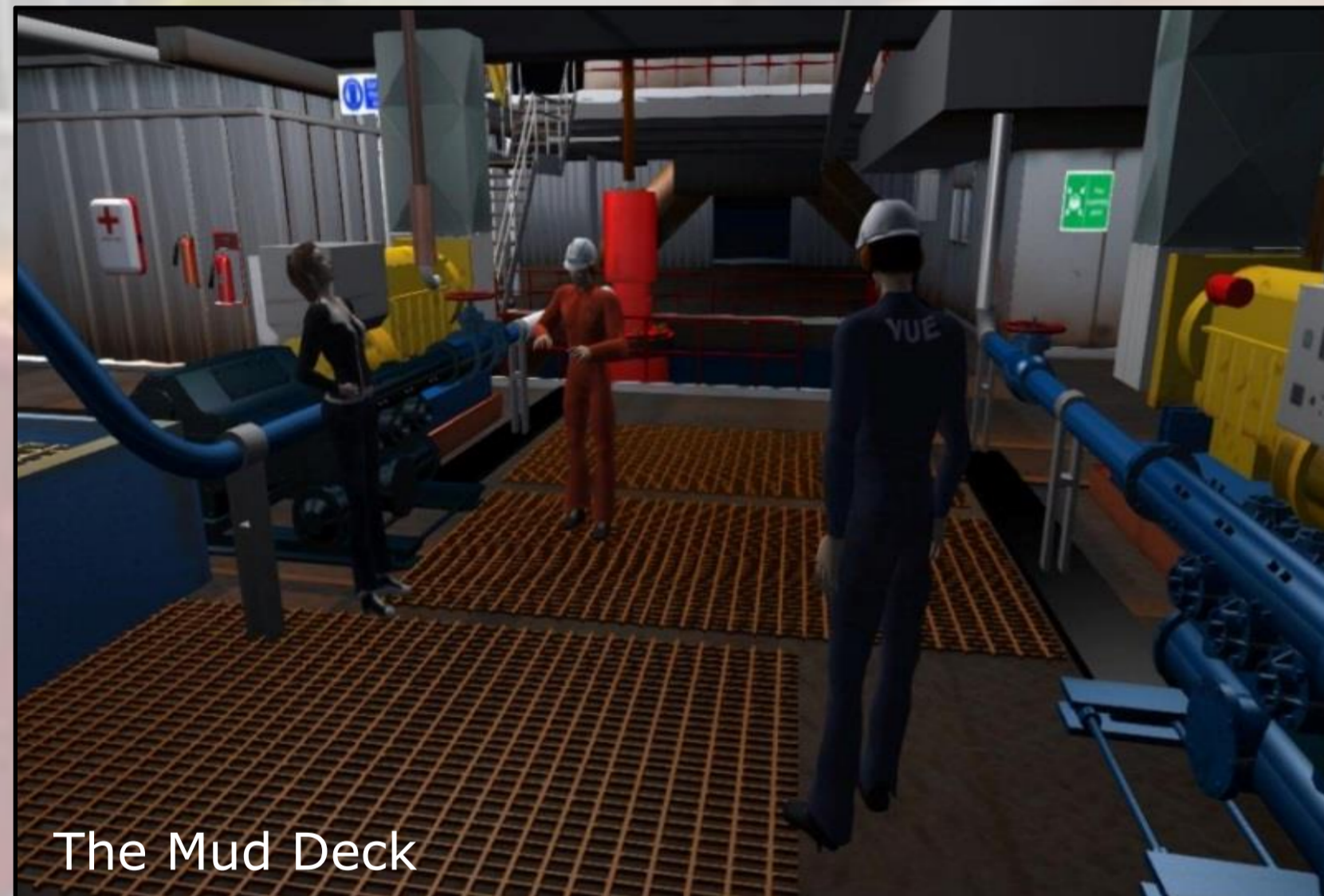
The Rig, and Surrounds

The main elements of a semi-submersible rig were put together and set in an ocean environment. Additionally subsea elements such as a Christmas tree and ROV were placed underwater. The environment includes some sea life, and the rig contains moving parts and sound. Visitors may click on particular objects for information and videos are linked to in some areas. In the Campus section there are social areas for staff and students, which include a beach area and other settings. There are a number of buildings that can be used to display posters or other information and also a lecture hall which may be used for live streaming of events.

The Mud Deck

Lecture Theatre

Aerial View of Campus Area

Planning and Implementation

The Virtual Rig and surrounding area was built in OpenSimulator (OpenSim) using a mixture of mesh models and native design tools in OpenSim. The Rig itself was a task that ran for 8-9 months and the campus and general social areas were built alongside the rig, in order to provide social spaces for students.

Next Steps

- Live teaching sessions
- Live tutorials
- Use of Artificial Intelligence to enhance specific areas of interest
- Automated Tours
- Simulations of processes and real life scenarios

Contacts

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View to Moonpool

Subsea Christmas Tree and ROV

Crane Driver

The Bridge