**Poster Abstract**

Given the increasing public scrutiny of the role corporations play in our society and the prevalent discussion on the environment propagated by the interconnectivity and transparency of the internet, it has arguably never been more important for organisations to operate in a way that is morally proactive. Relevant to Scotland is how oil and gas companies operate regarding safety and the environment. Pipelines that transfer crude oil in specific can be vulnerable to fracture and damage that can result in mass environmental damage, these can be brought about by acts of nature or human error. This research aims to facilitate technological progress in subsea communication by utilising optical technology in a way as to overcome the capacity pitfalls associated with the current acoustic standard. Successfully doing this will represent a technological step forward towards introducing new network applications that will manage pipelines and reduce disaster likelihood.