Fire Fighter Virtual Reality Simulation

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Abstract  
Virtual reality software has become huge in the last decade, initially having its target market aimed at gaming enthusiasts but now it has been shown the VR can provide more professional services to people. An example of this professional use is in the emergency services has started to become more prevalent, especially in training simulations, allowing the users to train in a less dangerous but still very real environment. The proposed project would allow firefighters to train in a much safer environment and provide them with instant feedback.

Overview  
A Virtual Reality simulation for the training of firefighters using either the HTC Vive or Oculus Rift programmed in Unity or Unreal Engine 4. The simulation will consist of 3 levels (subject to change) which will place the user in different scenarios. They will have a timer and multiple obstacles they will have to complete to finish the simulation. Dependent on the order they overcome the obstacles, the time they do them in and how they overcome them will give them a rating based from a scoring algorithm as well as advice on what to do next time. The applications for such a simulation are huge, ranging from new recruitment opportunities for the firefighting service, ensuring that they are hiring the best possible person for the job. Furthermore, it will also provide an environment in which current firefighters can practice without possible injury and reducing the cost of their training; it has a clear market.

Moreover, I do have contacts with the Reading fire department thus, I can ensure that the product that I will be making will be tailor made to the target market.

Specification details  
*Equipment*-HTC Vive/Oculus rift/Other VR headset  
 -A computer capable of running a VR simulation (details will follow)  
Start date-18th September 2017  
End date-To be confirmed (Spring 2018)  
  
I would require Thales to provide the equipment for me as well as possibly holding a meeting on the first Monday of every month to give the company an update on my progress and ensure that it is moving in the right direction.

At the end of the project, I am required to produce a report detailing the work and research outcome. I will also write a research note for Thales which details the process, results and conclusion of the work.