

Using SUMO and Unity 3D to analyse the effect of roadside obstacles on the safety and performance of bicycles in Dublin

The aim of this project is to analyse the impact of obstacles such as roadside bus stops and parked cars on the safety and efficiency of bicycle operations in the Dublin Docklands area. Cycling is becoming more popular as an alternative method of transport in Dublin, however, it is becoming increasingly dangerous. According to an Irish Times article, as recently as 2013 Dublin ranked in a list of the top 20 bike-friendly cities yet it hasn't been seen on the list since this time. Several campaigns have and continue to protest roadside obstacles such as those mentioned above. This project will investigate what impact, if any, these obstacles have on the safety of cyclists.

Whilst there are several examples of work being done analysing the impact of items on road-flow etc this project addresses the specific area of cycling that's been neglected and also the problems unique to the Dublin city centre. Creating a network using the SUMO software suite and connecting it to the DCC model has never been done before and is a unique approach to planning for the future and taking into account the needs of cyclists