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Reaction Time Measurement application: Road Safety

Aidan O'Dwyer Technological University Dublin, aidan.odwyer@tudublin.ie

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students learning with communities

Reaction time measurement Application: road safety

Application: road safetyAidan O'Dwyer, School of Electrical
Engineering Systems, DIT











Background

It is recognised that driver reaction time to unexpected events is influenced by a variety of factors including tiredness and mobile phone use. Some work has been done on this by the Transport Research Laboratory in the UK (see, for example,

http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_road_user_safety/report_conversations_in_cars_the_relative_hazar_ds_of_mobile_phones.htm).

There are a number of ways to measure a person's reaction time. One easy to use method is the 'Sheep Dash Game', at http://www.bbc.co.uk/science/humanbody/sleep/sheep/reaction_version5.swf.

Sheep Dash Game: how to play

Sheep will run across the computer screen at random intervals;

Click the tranquilliser button when a sheep is seen to leave the flock; you have five attempts;

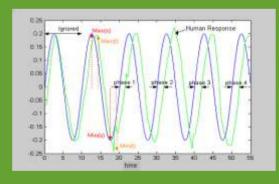
Your reaction time will be displayed at the end of the game.

Alternative measurement methods

1. Measure the length a ruler drops before a person can catch it.



2. Obtain a *Bode plot* of the brain-eye-hand co-ordination system, from which reaction time can be determined.







Your average time is: 0.2096 seconds Sheep 1: 0.172 Seconds Sheep 2: 0.219 Seconds Sheep 3: 0.256 Seconds Sheep 4: 0.172 Seconds

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You are rated → Bobbing bobcat Artifing arrestly













