



**INFORMATICS
INSTITUTE OF
TECHNOLOGY**

**UNIVERSITY OF
WESTMINSTER**

**INFORMATICS INSTITUTE OF TECHNOLOGY in
collaboration with the
University of Westminster, UK**

BEng/BSc (Hons) DEGREE PROGRAMME in Software Engineering

INTERIM PROGRESS REPORT

FOR

**DYNAMIC APPLICATION OF VINYL WRAP ON VEHICLES USING AUGMENTED
REALITY**

BY

**ATULUGAMAGE DILSHAN IMESH NANAYAKKARA
2015027 | W1583005**

SUPERVISED BY

MR. HELERUWAN ATHUKORALE

ABSTRACT

The Vinyl Wrap industry is in its growth stage and the application of vinyl wraps on vehicle is ever rising with the rise in the car industry. The most common problem that arise in this area is the fact that customers cannot see the end result of a vinyl wrap job, unless it's applied in real. However, this could be costly to go through, therefore customers tend to be in hesitation when it comes to the selection of the perfect vinyl wrap. The best way to achieve this would be the use of a mobile phone application which facilitates the solution to the problem that exists. Since there has been no proper implementation to test out the vinyl wrap on vehicle through the use of the android mobile phone's rear camera, this research portrays the technique in which that objective is attempted to be achieved. Based on real-time image processing technologies used to infuse color-based vinyl wraps on to the body of the vehicle dynamically with the use of an android mobile device's rear camera. Augmented reality is another hot trend with the rising popularity of smartphones, the use of AR implementations through mobile applications has never slowed down. AR has shown up on both Android and iOS platforms which are the top most mobile platforms in the industry today. The prototype of the research will be developed based on android platform. Therefore, to accomplish the goal of this research real-time image processing algorithms and techniques will be used to accurately detect the object in focus which in the case of this problem domain is a vehicle, accurately neglect the background to improve better application of the vinyl on a car.

Keywords: Real-time image processing, Vinyl Wrap, Mobile Android, Edge Detection