**13COP507 – Marking guide**

Consideration will be given to the fact that this coursework will result in the students using algorithms, implementation strategies and explanations that will significantly vary between each other. Hence this guide to marking only provides an outline of how the marks will be allocated within each sub-section rather than providing a model answer.

The coursework assignment will be marked out of 100 and will contribute to 70% of the module mark.

The part mark allocations for each section are as follows:

1. The pre-processing stage for each scenario will be marked out of 10 giving a total of 20 marks for this section.

The main difference between the two application scenarios is that the outdoor system (i.e. motorway) will be subjected to a number of external factors that will be difficult to control hence needing extra processing in order to make sure that the images are ready for input to the VMMR system. Some conditions include, varying illumination/lighting, difficult of setting the camera close enough or at an angle that will aid in processing, CCTV video footage that can result in motion-blur, problems with focus, exposure and shaking cameras, etc. Therefore pre=processing stages such as colour constancy, colour correction, de-blurring, skew, camera shake removal etc., will be beneficial to remove these effects.

On the other hand processing the indoor car park images will be much easier as external factors will have less impact on both the quality and angle of view/capture. However standard pre-processing stages such as colour correction, noise removal etc., could still benefit this scenario.

Award marks as appropriate knowing that answer could deviate significantly.

1. Total – 20 marks. These will be distributed as follows:

High level, System Block diagram – 5 marks

Explanation of the functionality of each block – 5 marks

Design details of the system to be implemented – 5 marks

Explaining the operation of the proposed system including the assumptions made – 5 marks

It may be possible that students may make use of the detail design of the system they are hoping to implement to explain at a high-level the system design. In this case combine the above marks and award appropriately.

1. Total – 30 marks for implementation.

Award part-marks for implementing each module depending on the design adopted. Deduct up to 10 marks if the code has not been commented. Deduct up to 10 marks for not acknowledging the code used from standard libraries or other implementations for straightforward image processing tasks such as (feature detection, support vector machines etc). Deduct 5 marks if the code is not provided in soft copy format.

1. Total – 25 marks for experiments, results and analysis.

Award part marks as follows:

Experiment design and gathering/presenting results – 10 marks

Analysis of results including assumptions and justification – 10 marks

Conclusions – 5 marks

1. Total – 5 marks for discussing alternative, hardware implementation.

Award marks according to the understanding demonstrated of the challenges faced and advantages of the alternative hardware implementation.

Prepared – Eran Edirisinghe, January 2014.