UNIVERSITY of York

MEng UG Year 4

DEPARTMENT OF COMPUTER SCIENCE

Group Project (Integrated Masters) (GPIG)

Open Group Assessment 1 (Initial Group Report)

Issued: Friday, 22nd April, 2016

Submission due: 12 noon, Friday 6th May, 2016

Feedback and marks due: Friday, 13th May 2015

Each team** should submit their report as a PDF document, using the electronic submission system:
http://www.cs.york.ac.uk/student/assessment/submit/

by **12:00 noon, Friday 6th May, 2016**.

A report (or part of a report) submitted after this deadline will be marked initially as if it had been handed in on time, but the Board of Examiners will normally apply a lateness penalty to the whole assessment.

**Team lists are on the module webpage: http://www-module.cs.york.ac.uk/gpig/ - if you cannot see your name please email: john.mcdermid@york.ac.uk immediately.

Your attention is drawn to the Guidelines on Mutual Assistance and Collaboration in the Departmental Statement on Assessment:
http://www.cs.york.ac.uk/student/assessment/policies/#AcademicMisconduct
As this is a team assessment, you may freely assist and collaborate with other members of your team.

Feedback and Marks: Feedback will be presented at the session on 13th May; additional feedback may be provided by email, prior to the session on 13th May to inform a Q&A session. The feedback and marks date is guided by departmental policy but, in exceptional cases, there may be a delay. In these cases, all students expecting feedback will be emailed by the module owner with a revised feedback date.

Assessment Queries: Any queries on this assessment should be addressed to john.mcdermid@york.ac.uk Answers that apply to all students will be posted on the GPIG webpage.

Rubric

The Initial Group Report is worth 30% of the GPIG module mark. The context of the report is given directly below – the content required for the report is given on following page.

A word count and a note of how it was obtained should also be given on the front page of the report. Reports must not exceed 4,000 words or 12 pages, excluding the cover sheet and references. Reports exceeding these limits may not be marked.

Both the team name and the names of all team members should also appear on the front cover of your report. Do not include examination numbers as these are private to individuals.

The marking scheme for the assessment is at the end of the document following the content required for each report.

Context of the Report

This assessment is the first required for the GPIG team project.

The project is an open-ended activity, intended to identify, prototype, demonstrate and test (in order to validate) an autonomous system for the Customer.

The broad context of the project, and the expected learning outcomes, will be presented on 22nd April, together with some background information on specific issues to be addressed in the assessments. This will be sufficient to allow the teams to do some initial preparation for the first assessment, which needs to be completed in the first two weeks of the project.

The customer will give a presentation to set the scene for the project on 22nd April. In broad terms, the project aims is as follows:

> *Identify, prototype and demonstrate an autonomous system and command and control system for a flood management application. The system is to be developed to operate in a "swarm" controlled remotely and collaborating with other autonomous systems.*

Each team can contact the Customer for clarification, copying to the course leader. Contact details are: anthony.harrison@uk.thalesgroup.com and mark.thomas@thalesgroup.com
In each email, include the subject line: GPIG-X YYY, where X is the group identifier and YYY the issue you wish to discuss. The Customer will normally reply within 48 hours, but please indicate clearly if a more urgent reply would be valuable.

1. Content of the Report

The initial report should set out the team's decision about the autonomous system that they intend to develop, including a rationale for their choice. In doing this they should consider the need to produce a mixed simulated-real system using Raspberry Pis as the "intelligence" of the autonomous elements (movement will still need to be simulated). The report should also address the way in which the team intend to work. More specifically, the report should contain:

I. An initial assessment of the type of system or systems they would develop

II. A definition of the system capability, outlining the primary functions, the level of autonomy, and the issues that will be addressed in the project

III. An outline of the proposed technical solution, saying how the team will use the capability of the Raspberry Pis, including communications, and how the command and control will be realised

IV. An indication of which aspects of the system the team intends to develop and demonstrate

V. A summary of the team structure, roles and core processes, including metrics for assessing progress and product maturity

VI. A summary of the team's communications with the Customer

VII. A risk register for the project

Note that, in presenting rationale, the team may find it helpful to discuss options that they have considered and discarded, as well as the final choice.

Marking Scheme

Marks will be awarded under four headings, as follows:

1. **Technical Proposition (50%):** Does the report demonstrate an understanding of the possibilities, and propose an effective system? Is it innovative, and does it exploit the capabilities of the Raspberry Pis effectively?
2. **Team Planning (20%):** Are the plan and risk register sound? Are the team members and other resources being used effectively?
3. **Customer Interaction (10%):** Has the team made effective use of the Customer to clarify the scope and aims of the project?
4. **Presentation Quality (20%):** Is the report well written, clearly and concisely communicating the team's intent? Are figures, tables, diagrams, etc., used effectively? Is the report structured in helpful way (to ease comprehension) and consistently formatted.

Normally the mark awarded to a team will also be the mark awarded to each member of that team. However, the Board of Examiners may approve an uneven distribution of marks to team members if there is evidence of an uneven contribution of effort by them.