**School of Electronics and Computer Science**

### **Part IV Group Design Projects 2013/2014**

### **Project Proposal**

Note: The GDP is a substantial engineering design or feasibility study undertaken by a group of about four students. It carries 40 credits and, as a guideline, students should expect to spend about two thirds of their time on the GDP during the first semester in their fourth year.

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| **Project Title:** | **UEFI Utility (Unified Extensible Firmware Interface)** |
| **Proposer(s):** | Max Toti – Captec Ltd |
| **Research Group:** |  |
| **Brief Summary of Project** (150-200 words):  The project comprises writing a software application to implement a UEFI custom application to enable boot level diagnostics to take place on a PC supporting UEFI.  The constituent blocks will include:   1. Researching & understanding the implementation of a Custom Application in the UEFI. See References below. 2. Integrate an diagnostic suite, and disk imaging software into the provided system's UEFI environment, such as AMI diag. (www.ami.com), and Acronis True Image (www.acronis.co.uk) 3. Develop a basic diagnostic module that can interrogate the BIOS to display standard health conditions of the PC, as reported in the BIOS user interface e.g. Thermal Sensors, Voltage Rails, Fan Speeds, SMART disk status. 4. Development of a user interface to enable selection of the applications developed in items 2 and 3 as well as a fully automated diagnostic script. 5. Development of a Windows (x86) application to retrieve diagnostic reports generated in by the UEFI applications and send via e-mail or other internet protocol. 6. Captec will provide a UEFI compatible development system, and support requests for SDK's for commercial software used within the software. 7. Exposure to commercial Project Planning & Management techniques by engaging with a commercial organisation in producing a requirements specification and a project plan with stage gate design reviews.   http://upload.wikimedia.org/wikipedia/commons/thumb/4/4e/Efi-simple.svg/300px-Efi-simple.svg.png  http://upload.wikimedia.org/wikipedia/commons/thumb/f/ff/Efi_flowchart_extended.svg/360px-Efi_flowchart_extended.svg.png  Ref: <http://en.wikipedia.org/wiki/UEFI>  <http://www.uefi.org> | |
| If the project has an **industrial customer** (recommended), please provide the customer’s name, address,  telephone number and email:  Captec Ltd, 11 Brunel Way, Segensworth, Fareham, Hampshire, PO15 5TX  Contact:  Max Toti – Tel: 01489 866066 eMail: m.toti@captec.co.uk | |
| How many students is the project suitable for? 2-4 depending on depth & breadth of scope undertaken | |
| Will this project require laboratory space?  **Yes** | |
| What resources will be required:  **Supplies (please specify): Estimated Cost £**  1. Captec to provide development/target PC system supporting UEFI  2.  3.  4.  Is project viability dependent on additional funds or resources (e.g. provided by the customer?) …………… **N**  Additional funds/resources, if applicable, provided from (specify source):  Captec is willing to cover reasonable costs of any additional resources as well as provide a target development computer. | |

**Please return forms by email to tjk@ecs.soton.ac.uk before Thursday 31 May 2012.**