

Intern Requirement

Preferred Discipline	Computer/Electrical Engineering, or Computer Science
Prerequisites/ Skills Required:	Programming skills Using and integrating open source libraries Debugging and testing software Understanding of cryptography
No. of students required	Individual or team of 2

Project Details

Title	Homebrew for Portable Security
Overview/Background	Modern portable gaming platforms such as the Nintendo DS and the Sony Playstation Portable have significant computational power, multimedia and WiFi capabilities. A growing community of enthusiasts are developing homebrew software for these devices. We would like to explore the possibilities for using the game devices as an inexpensive alternative for secure communications.
Aims/Objectives/Deliverables	<ol style="list-style-type: none">1. Study of cryptographic algorithms with a focus on minimising computational power requirements.2. Study of open source tools available for homebrew software development on gaming devices, and the low-level functions that the tools allow on them.3. Design and develop a proof-of-concept software for secure communications on the device to make use of the interface features that the devices have to offer.
Scope	<ul style="list-style-type: none">• Cryptography• Software development on embedded platforms• User interface design
Project Duration	<ul style="list-style-type: none">• 2-3 months for two persons, 6 months for 1 person