

<b>Student Name</b>	Kenny Fong
<b>Company</b>	BAE Systems
<b>Research University</b>	Strathclyde
<b>Academic Supervisor(s)</b>	Stuart Galloway
<b>Title</b>	Advanced Electrical Power Systems – Coping with Increasing Power Demands
<b>Abstract</b>	<p>Military fast jet aircraft have large on-board power demands due to the quantity of mechatronic and electronic equipment required to fulfil their role. The increasing demands of 21<sup>st</sup> century battlefield scenarios drive significant increases in capability, which are generally fulfilled by more on-board equipment, of increasing sophistication and power demands.</p> <p>Furthermore, cost constraints may drive power hungry solutions to problems that, given enough funding, would be solved by Class 1 software management.</p> <p>Other solutions must be investigated, including power shedding techniques, low power consumption equipment and alternative control strategies.</p> <p>This Project will aim to:</p> <ul style="list-style-type: none"> <li>• Review current and future power requirements for fast jet combat aircraft and UAV and identify: <ul style="list-style-type: none"> <li>○ The anticipated increase in power demands over time</li> <li>○ The systems that are most demanding of power</li> </ul> </li> <li>• Review current and emerging Power System technology and identify: <ul style="list-style-type: none"> <li>○ Power shedding options</li> <li>○ Low power consumption equipment</li> <li>○ Alternative Power Generation and Battery Technologies</li> <li>○ Alternative control strategies</li> <li>○ Potential methods for generating electrical power from waste energy sources on the aircraft</li> </ul> </li> <li>• Formulate recommendations for future Power System strategy and architecture</li> <li>• Recommend strategies for the reduction in use of power in aircraft equipment</li> </ul>

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