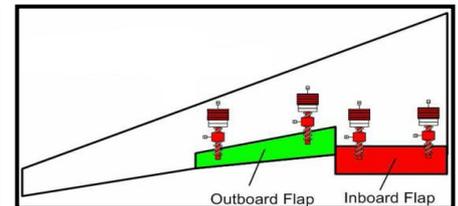
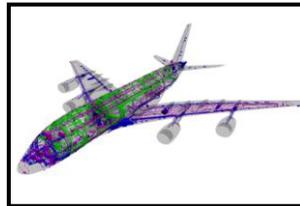


	<b>PROJECTS</b>	Author	MCIA Center	
		Code / Rev.	1	
	<b>MCIA CENTER <i>INNOVATIONS ELECTRONICS</i></b>		Date	2011
			Type	PUBLIC
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## MOET, EU 6th Framework programme (2007 – 2009).

In line with the vision 2020, MOET aims to establish the new industrial standard for commercial aircraft electrical system design, which will directly contribute to strengthening the competitiveness of the aeronautical industry. MOET will also contribute to reduce aircraft emissions and improve operational aircraft capacity.

Recent National and European research activities and state of the art commercial aircraft developments have launched more advanced approaches for on-board energy power management systems. These benefits have also been recognized in North America where this has been given special consideration. A step change is necessary to remove current air and hydraulic engine off-takes and further increase the electrical power generation capability. This in itself will require significant changes to current electrical generation and network techniques. After Fly by wire, the Power by wire concept (PbW) will enhance aircraft design and use by power source rationalization and electrical power flexibility. This will be achieved by developing the necessary design principles, technologies and standards.



Over a 3-year period, MOET has allowed to:

- Validate scalable electrical networks up to 1MW considering new voltages and advanced concepts including system transformation of future air, actuation and electrical systems into all electrical solutions.
- Assess the PbW concept integration at aircraft level considering a more composite environment and the interfaces with the avionics world.
- Build a design environment aiming to design and validate standard solutions and a coherent set of platforms open to the full supply chain, in order to develop an optimized high performance PbW concept.

One of the work package aims to develop Electro-Mechanical Actuation concept which is the new technology objective to answer to PbW as regards aircraft Primary Flight Controls. Furthermore, this innovative EMA will be based on a Direct Drive architecture which presents benefits in terms of overall dimensions / weight optimization. This technology has been up today developed for train and launchers applications. MCIA developed the diagnostic software and their validation of the motor of the actuator of the aircraft Primary Flight Controls.

