

Project proposal on eLEV

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R. John and W. Dettmann (IFAG), R. Groppo (I&M),
A. Sorniotti (University of Surrey)



Project Details

Project Acronym	tbd
Project Title	Project proposal on eLEV
Work Programme, Challenge, Objective, Call	GV.5-2014. Electric two-wheelers and new light vehicle concepts
Scope	Development of a flexible, scalable, modular E/E architecture (<60 V) for a new generation of eLEVs with superior vehicle dynamics behaviour
Type of Action	CP
Project Consortium	In definition phase.... University of Surrey (UK), IFAG (G), Fraunhofer ENAS (G), I&M (I), BRC(I), Elaphe (Slovenia), Braking system manufacturer, SINTEF, ...
Project Budget	6-8 MEuro
Project Duration	3 yrs

Project proposal on eLEV: rationale (1/2)

■ The key project's objectives are:

- development of a fully flexible, scalable, modular E/E architecture based on 14/48 V platform
- the basic building blocks (e-motors and power electronics) will allow the implementation of a fully modular drivetrain architecture (central e-drive, 2 WD, 4 WD)
- near wheel e-motor with integrated power electronics
- modular e-traction for improved dynamic behaviour (e-motor activation and quasi-torque vectoring according to the driving conditions)
- innovative solutions for “local power management” and “background energy management” of the battery pack for improved life-time
- range extender option available through an innovative 2-cyl IC engine based on alternative fuel
- Demonstration and proof

Project proposal on eLEV: rationale (2/2)

- The project will develop a new and cost effective E/E architecture and building blocks (e-motors, electronic systems) in order to build **a complete family** of L category vehicles
 - 20% powertrain efficiency improvement and weight and volume reduction
- The complete value chain is involved:
 - major Universities (vehicles dynamics, reliability analysis and robustness validation)
 - silicon maker providing the full chip set
 - electronic systems design, development and realization (AC/DC, battery pack)
 - eLEV assembly and production
 - e-motor design and production
 - braking system design and production
- The project will develop a family of eLEVs and will make them available to the market as true products



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