

**Add-On Hybrid Electric Vehicle**  
(<http://MyOwnHybrid.wordpress.com>)

**Electric and Electronic Control System  
Architectural Requirements**

**v1, Feb 2008  
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**Development plan**

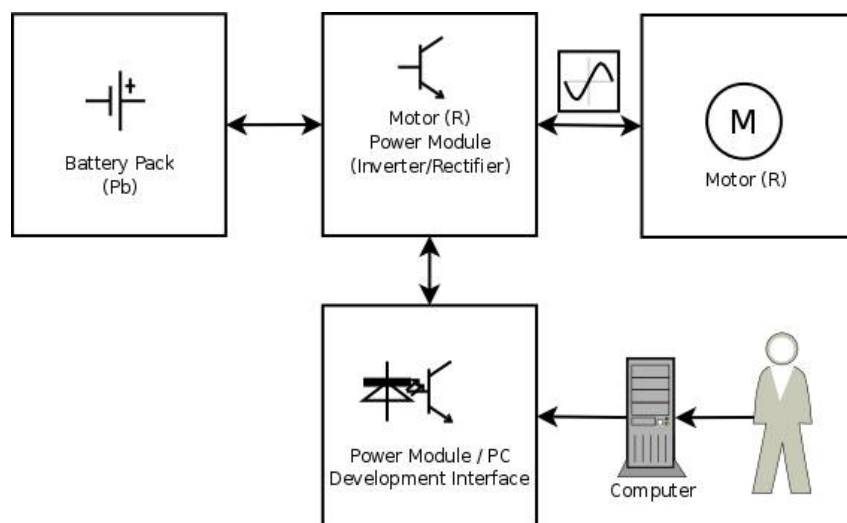
For financial and operating reasons, the architecture will have 3 phases with increasing complexity and size:

- Phase 0: (Experimental) One motor workbench;
- Phase 1: (Cheap Parallel HEV) Two motors, direct motor-battery-generator coupling;
- Phase 2: (Optimized Serial HEV) Capacitor banks, regulated motor-battery coupling, high-power generator.

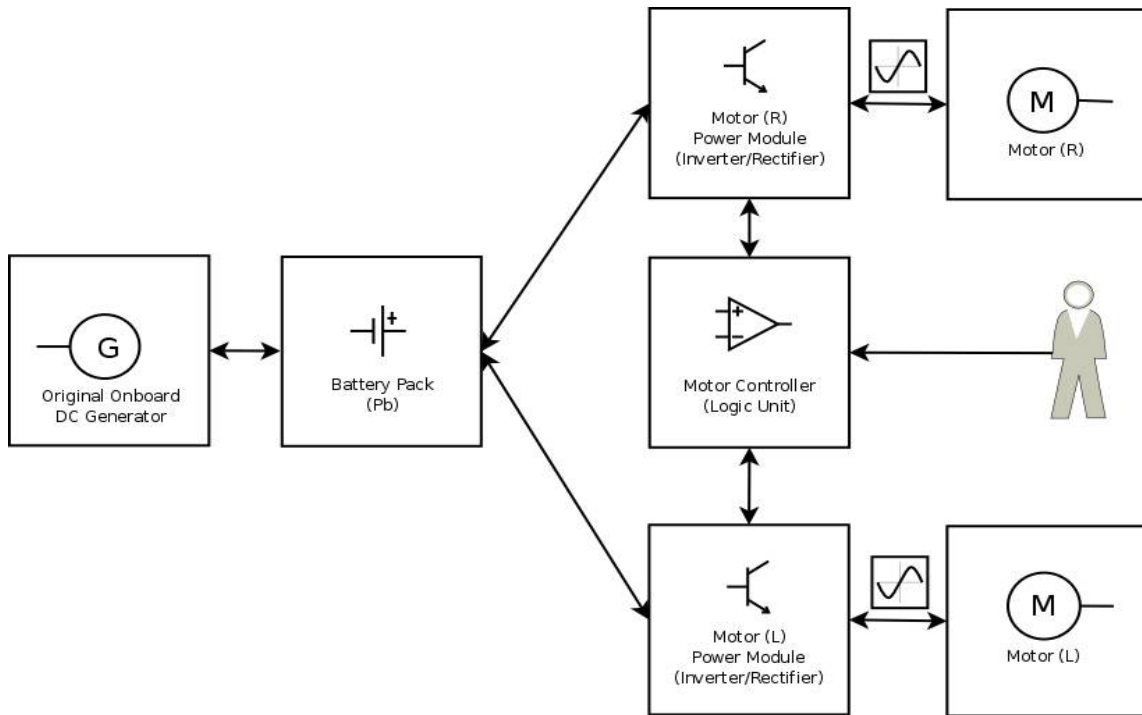
Project required modules:

1. Phase 0:
  1. Electric motor (1 wheel);
  2. Motor power module (1 motor);
  3. Basic Battery Pack (1 per vehicle);
  4. Power module / PC interface (1, experimental only).
2. Phase 1:
  1. Second Motor and Power Module;
  2. Motor controller (1 per vehicle).
3. Phase 2:
  1. Advanced Battery Pack (1 per vehicle);
  2. Battery Pack controller (1 per vehicle);
  3. Capacitor Banks (1 per motor).
  4. High Power Generator (1 per vehicle);

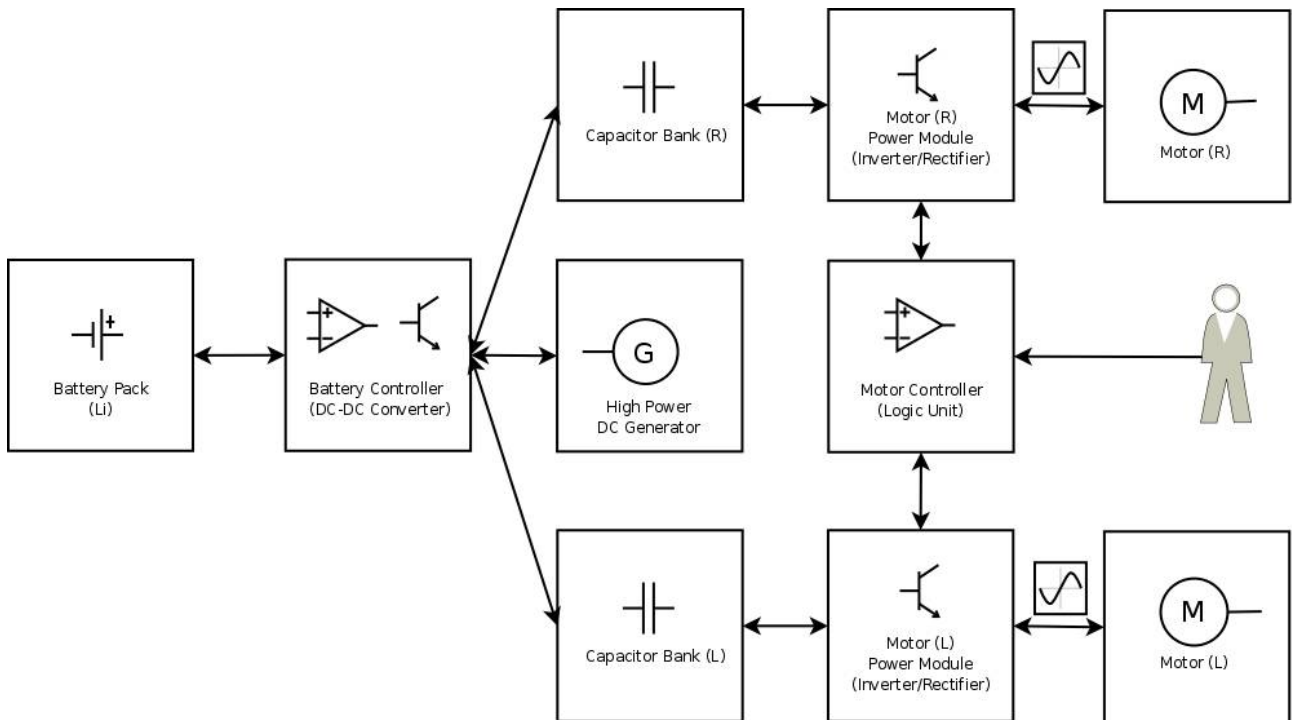
**Architectural diagrams**



*Phase 0 (Development Set-up)*



*Phase 1 (for Parallel HEV)*



*Phase 2 (for Serial HEV)*