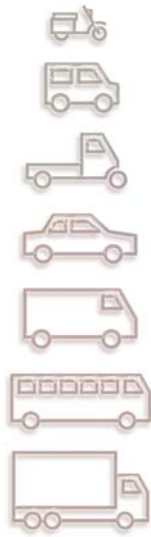




**PHEV SOLUTIONS**

GO FURTHER.  
GET THERE FASTER.

EFFICIENT DRIVE TRAINS INC.



EFFICIENT DRIVETRAINS INC.

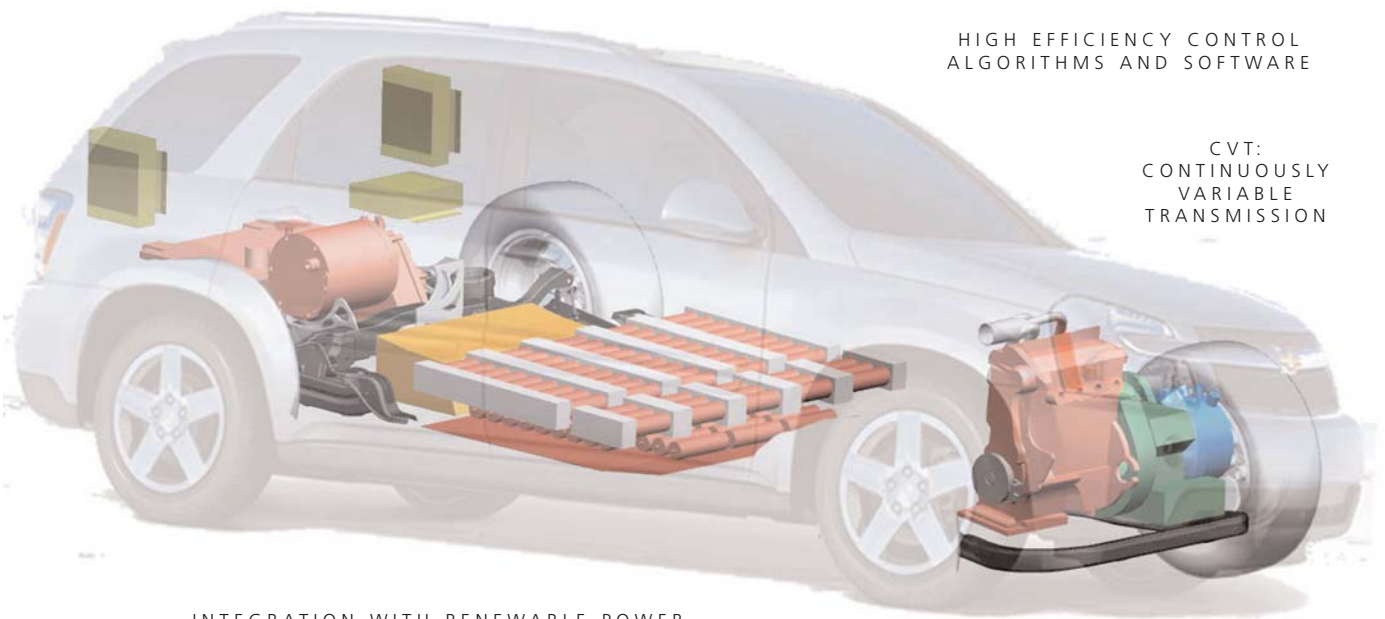
accelerates the development and adoption of PHEVs worldwide. Working with our partners and customers we're focused on proven concepts and technologies to fulfill the true potential of the PHEV via the integration with renewable energy sources and intelligent power grids. Our technology and solutions provide rapid product development and a competitive advantage for our customers and partners.

BATTERY MANAGEMENT

PHEV ARCHITECTURES

HIGH EFFICIENCY CONTROL  
ALGORITHMS AND SOFTWARE

CVT:  
CONTINUOUSLY  
VARIABLE  
TRANSMISSION



INTEGRATION WITH RENEWABLE POWER  
SOURCES AND INTELLIGENT POWER GRIDS

2 AND 4 WHEEL DRIVE SYSTEMS

**Efficient Drivetrains, Inc.** offers a variety of solutions and technologies to help you be successful in the rapidly expanding plug-in hybrid electric vehicle market. The EDI architectures, power and energy management solutions, and high efficiency transmissions, will help you get product to the

market faster. Our unique licensing approach reduces your up front costs, so you maximize your R&D budget.

“There is essentially only two energy infrastructures: the electric power grid and gasoline service stations. The elegance of the plug-in hybrid is that it uses both.”



**Professor Andy Frank**

In addition, you will have access to the EDI Centre for Advanced Research, intellectual property (patents) and a focused team of PHEV experts.

Established in April 2006 as a Delaware corporation, EDI is commercializing the advanced, highly efficient plug-in hybrid electric vehicle (PHEV) drive trains and vehicle architectures that have been developed by the company’s co-founder and CTO, Professor Andy Frank and the University of California at Davis.

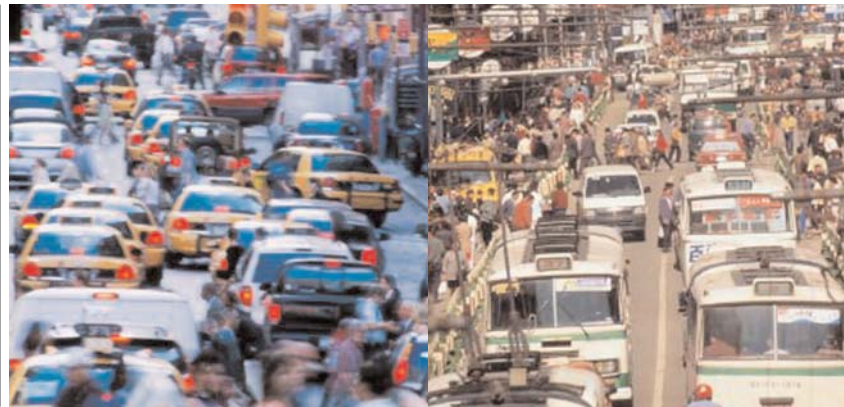
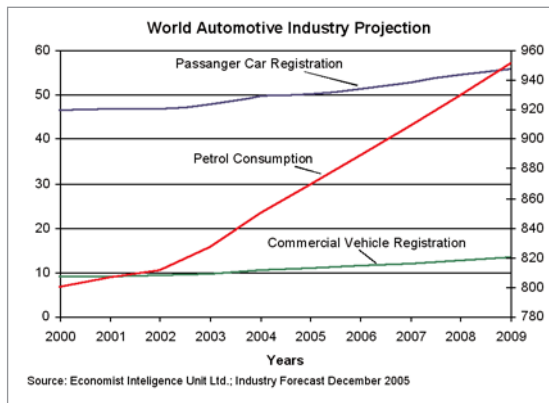
In addition to having industry pioneer Professor Frank lead the technology innovation efforts at EDI, the company has an exclusive licensing agreement to the University’s patent portfolio covering his work on fundamental PHEV concepts and advanced technologies.

EDI accelerates widespread adoption of PHEVs by providing its comprehensive solutions and intellectual property to the global automotive industry. EDI collaborates with numerous car and truck OEM, conversion, and first tier suppliers to embed its high-efficiency PHEV drive train systems. This enables them to build the most efficient and environmentally friendly vehicles in the market.

EDI has validated the market demand for its product offering, support and business models in several geographies. In the near future, EDI will apply its technologies to pure electric, integration with wind/solar, and vehicle to grid (V2G) opportunities.

The market for PHEV technologies is a very large global, multi-billion dollar opportunity poised for explosive growth due to: escalating fuel costs, decreasing oil supplies, new requirements and consumer interest in reducing greenhouse gas emissions. Most major governments have already launched support for PHEV initiatives, and many major and second tier manufacturers are already looking for PHEV technology options making the timing for entering the market ideal.

Our markets include large and small car and truck OEMs, conversion, government and military contractors, and first and second tier suppliers in all geographies. Applications for EDI's solutions include light, medium, heavy duty and two and three wheel vehicles.



North America alone, represents an enormous opportunity to transition over 200 million vehicles to PHEVs. The adoption of PHEVs will accelerate as fuel costs continue to climb and oil supplies tighten due to international demand. In preparation, EDI is already teaming with new vehicle designers and manufacturers today, to create vehicles with significant competitive advantages for those markets.

Since the current opportunity is not limited to North America, EDI is actively pursuing business opportunities in multiple geographies for all classes of vehicles.

Our customers include: vehicle design firms, manufacturers, OEM producers, system and component suppliers, conversion companies, government and military contractors. EDI supports projects for most classes of vehicles from 2 and 3 wheelers, to mainstream passenger sedans, truck and bus applications.

EDI collaborates with vehicle design and manufacturing companies to develop PHEV drive trains for their vehicle projects, and also provides technology licensing agreements providing access to patents and other intellectual property.

Projects typically begin with vehicle and drive train specification, followed by developing a small number of functional prototypes. Once the prototype design is satisfactory, EDI supports its customers through the construction of fleet numbers and production volumes of the vehicles.

By partnering with EDI, our customers are able to get into the market faster with superior technology, less technical risk, and significantly reduced up front research and development costs.

#### **OUR SOLUTIONS INCLUDE:**

##### **PHEV drive train design and engineering:**

Specification and design of PHEV drive trains leveraging EDI's knowledge base, qualified components, intellectual property, software, and industry partnerships.

##### **Intellectual property and patent licensing:**

Licensing agreements providing access to advanced technologies and EDI's patent portfolio which includes vehicle architectures, high efficiency control algorithms, transmission designs, and other related concepts and technologies.

##### **PHEV control software:**

EDI develops and provides software to control vehicle drive train components and battery management systems providing the highest efficiency.

##### **Continuously Variable Transmissions (CVT):**

EDI is partnering with high volume transmission companies to provide advanced CVTs for PHEV, pure electrical and other hybrid applications providing increased vehicle efficiency and overall performance.





EDI leverages an existing patent portfolio to build and protect its business. Current patents include fundamental concepts for PHEV architectures, control algorithms, high efficiency transmissions, and power management. The EDI Centre for Advanced Research continues to develop innovative concepts for PHEVs, electric vehicles, and vehicle to grid (V2G) designs.

Numerous patents have been issued in the United States and several other countries.

***A partial list includes:***

U.S. Patent: 5,842,534

Charge depletion control method and apparatus for hybrid powered vehicles

U.S. Patent: 6,054,844

Control method and apparatus for internal combustion engine electric hybrid vehicles

U.S. Patent: 6,116,363

Fuel consumption control for charge depletion hybrid electric vehicles

U.S. Patent: 7,217,205

Compact Inline Longitudinal CVT

U.S. Patent: 6,809,429

Control method and apparatus for internal combustion engine electric hybrid vehicles

U.S. Patent: 6,847,189

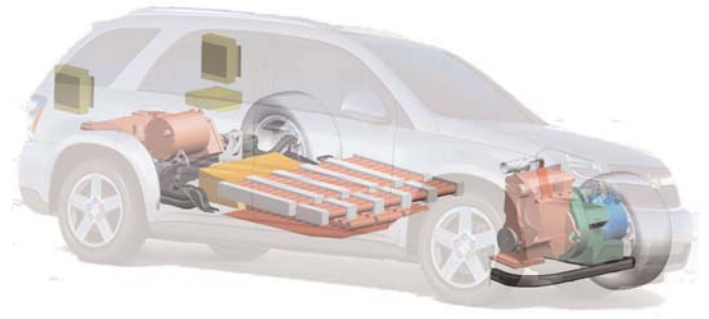
Method for controlling the operating characteristics of a hybrid electric vehicle

U.S. Patent: 6,931,850

Exhaust gas driven generation of electric power and altitude compensation in vehicles including hybrid electric vehicles

U.S. Patent: 7,261,672

Method and System for Controlling Rate of Change of Rate of CVT



Additional applications are in process in the USPTO and several other countries' patent offices.

EDI is engaged in a number of vehicle projects in multiple geographies to accelerate the development and adoption of PHEVs worldwide. The company is also actively pursuing joint venture opportunities and plans to debut the results of those partnerships beginning in 2008.

The introduction of mass volumes of PHEVs will also generate incremental business opportunities. Beyond designing and building superior PHEVs, EDI is also focused on preparing concepts and technologies to fulfill the true potential of the PHEV via the integration with renewable energy sources and intelligent power grids.

EDI provides “plug and play” PHEV designs. These new system components include:

- New PHEV architectures
- Modular PHEV control software to allow for rapid prototyping and system optimization
- Continuously variable transmissions (CVTs) to increase PHEV/electrical vehicle efficiency
- Integrated PHEV battery packs and management systems.
- Solutions for integrating renewable wind and solar power
- Solutions and support for vehicle to grid (V2G) initiatives

For further information: [info@efficientdrivetrains.com](mailto:info@efficientdrivetrains.com) or telephone: 408-624-1231





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