



Ford used the Frankfurt Auto Show to debut its new E-Bike Concept. Electric bikes are popular in Europe but have not had much penetration in the U.S. cycling market. Ford says it has no plans to produce it, but it is studying the concept.

Ford Debuts New E-Bike At Frankfurt Auto Show

FRANKFURT, Germany — Alongside the exciting lineup of new vehicle and technology introductions on its stand at Frankfurt Motor Show, Ford is also unveiling a rather surprising addition to its range — an E-Bike.

Designed to show how the company's design language can translate to a bicycle, the Ford E-Bike Concept also demonstrates the spectrum of Ford's electric mobility competence.

Ford has no plans to produce the E-Bike but will continue studying the concept along with other future mobility solutions.

"The E-Bike market is growing very, very rapidly, with some 30 million units sold globally last year," said Axel Wilke, director, vehicle personalization, Ford Customer Service Division Europe.

"We see E-Bikes as an important element of urban electric mobility. More and more people are using E-Bikes for short distance commuting and they are becoming comfortable with the concept of electric mobility."

Developed by a Ford Design team led by Executive Design Director Martin Smith, in partnership with cyber-Wear, the German brand behind Ford's popular Lifestyle Collection products, the Ford E-Bike Concept has been created from the ground up to appeal to both men and women.

At the heart of the design is a trapezoidal frame profile. Constructed from aluminum and carbon, the frame combines outstanding strength with a weight of just 2.5kg.

The wheels, with a six-spoke V-design, appear to float around the frame, while the drive system is hidden from view, creating a clean, minimalist appearance from an exterior view.

Providing the power is a drive system consisting of a motor in the front wheel hub,

a lithium-ion battery concealed in the frame, promising a range of up to 85km on a full charge, an integrated controller and patented magnetostriiction sensor technology from the world of Formula One.

Magnetostrictive materials are used to convert magnetic energy into kinetic energy, and vice versa. In Formula One, these sensors help handle high engine revolutions in combination with intense thermal strains. They need no physical contact with other parts of the engine, are temperature-independent and are completely maintenance-free.

In the Ford E-Bike, the first application of this technology in the bicycle industry, the sensors read the revolutions in the inner bearing and relay this information to the control unit within a hundredth of a second.

The control unit then instantly activates or deactivates the electric motor, providing a seamless integration of the power of the legs with the power of the motor.

A handlebar-mounted display provides trip information and allows the rider to select from three support modes — Economy, Comfort and Sport.

The drive system is complemented by top-of-the-range bicycle components, including a Shimano Alfine 11-speed internal gear hub and a 2012 Shimano Rapidfire shifter.

In place of a traditional chain is a Carbon Belt Drive System, making for a cleaner, lighter and more immediate transfer of energy.

"With its cutting-edge design, cross-gender appeal, robust build quality and high performance drive package, we believe the Ford E-Bike Concept would be the perfect addition to the e-mobility solutions we will offer," added Wilke.

F-150 EcoBoost Challenge Winner Aids Irene Victims

F-150 EcoBoost Challenge winner Carlee Mallard, of Raleigh-Durham, NC, achieved an average of 28.3 mpg throughout her week with an F-150.

The nationwide Ford contest had a community service aspect that had drivers team up with their local communities to create a goodwill project that includes public support. Drivers used their F-150 EcoBoost trucks to carry materials to their project sites.

The F-150 EcoBoost challenge saw eight truck fans put the truck to the test in their own communities to try and average the highest miles per gallon for at least 25 miles per day.

They also were asked to create, manage and execute their own community service event.

Mallard's community service event attracted 56 volunteers to help gather water and nonperishables for the Raleigh YWCA that will be distributed to people impacted by Hurricane Irene.

Detroit was not among the Challenge cities, although Louisville, Pittsburgh, Houston, San Diego, Orlando, Denver, Kansas City and Raleigh-Durham were.

"I was definitely impressed

with how far I could stretch the gas. I didn't have to fuel up once during the whole contest," said Mallard. "To help boost the fuel economy, I never used air conditioning. I drove mostly on the highway at speeds between 50 and 55 mph because I wanted to avoid stoplights and stop signs."

The weeklong challenge garnered extensive social media coverage, with more than 1,840 tweets that mentioned the challenge reaching more than 6.6 million followers.

Additionally, 2,500 votes were cast for the contestants and more than 100 blog posts were developed.

Mallard will receive a year's supply of Shell gasoline for winning the challenge. Shell Oil Co. was a sponsor of the challenge.

The winning driver was determined through a blended score measuring the highest average miles per gallon achieved throughout the week, the most votes on the Ford Facebook page and how many volunteers participated in the community improvement project.

Each driver represented a city, driving an F-150 EcoBoost truck for one week.

The first five days of the challenge involved a real-



Carlee Mallard points volunteers to a local grocery store where they can find food items to donate to her efforts to help the YWCA in Raleigh, NC and their relief program for hurricane and tornado victims. The volunteer community service was part of Ford Motor Company's nationwide EcoBoost Challenge.

world fuel efficiency competition, with the average miles per gallon monitored via Ford's Crew Chief system installed in each truck.

Crew Chief is Ford's GPS-based telematics service that allows remote monitoring of a wide range of vehicle metrics to help enhance fleet efficiency.

Projects included creating a community garden for a community center, donating more than 1,000 pounds of pet food

to the local humane society, creating relief kits for Heart to Heart International, which improves health through humanitarian initiatives, and donating more than 2,000 pounds of nonperishables to Metro CareRing.

By 2013, Ford plans to offer EcoBoost engines in up to 90 percent of its North American nameplates, supporting global sales of 1.5 million EcoBoost-powered vehicles per year.

New York Cab Drivers Like Ford Transit Connect

NEW YORK — The first Ford Transit Connect Taxis in New York City are now in service and soon will be joined by hundreds more as orders and interest soar for the versatile vehicle.

The initial Transit Connect Taxis are part of the first order for the vehicle in New York City following the New York Taxi and Limousine Commission's approval of it for use in the Big Apple. The new units feature the iconic "NYC Taxi" painted in black on the two front doors.

More than 400 Transit Connect Taxis are destined for New York City. Total orders for Transit Connect Taxis across the United States are fast approaching 1,000 in its first year on the market. The new taxi market in the U.S. averages about 6,000 units.

"Taxi operators are realizing the Transit Connect Taxi is a great vehicle and there's a good reason — they helped us develop it," said Len Deluca, director, Ford Commercial Trucks.

"During product development, we visited cities across the U.S. speaking with taxi owners, operators, drivers and city officials on the key product attributes they wanted in a taxi."

The result is today's Ford Transit Connect Taxi, a vehicle that, according to Ford officials, has been winning over customers from coast to coast.

"I drove it personally and found it to be a lot more comfortable than any other taxi I've ever driven," said Chris

Harisopoulos, general manager, McGinness Management.

Drivers also praised the Taxis relative roominess.



Ford Transit Connect Taxis are making their debut on the streets of New York. The Transit Connect Taxi is certified to Ford Light Commercial Vehicle Durability Standards while suspension components and the underbody structure have passed requirements for potholes and curbs. The 39-foot turning diameter makes it easier to handle tight spots.

Harisopoulos, general manager, McGinness Management.

Drivers also praised the Taxis relative roominess.

Germans Seek to Perfect Idea of 'Driverless Car'

By KIRSTEN GRIESHABER Associated Press

BERLIN (AP) — It can talk, see, drive and no longer needs a human being to control it by remote. The car of the future — completely computer-controlled — is on the streets of Berlin.

All summer, researchers from the city's Free University have been testing the automobile around the German capital.

The vehicle maneuvers through traffic on its own using a sophisticated combination of devices, including a computer, electronics and a precision satellite navigation system in the trunk, a camera in the front, and laser scanners on the roof and around the front and rear bumpers.

"The vehicle can recognize other cars on the road, pedestrians, buildings and trees up to 70 meters (yards) around it and even see if the traffic lights ahead are red or green and react accordingly," Raul Rojas, the head of the university's research group for artificial intelligence, told reporters at a recent presentation.

"In fact, the car's recognition and reaction to its environment is much faster than a human being's reaction."

The scientists have worked on their research car, a Volkswagen Passat worth (euro) 400,000 (\$551,800) with lots of built-in special technology,

for four years.

Several other groups have also been working on such technology recently, notably Google, which has been testing a robotic Toyota Prius in Nevada.

"There's a big trend for completely computer-controlled cars — many companies and research centers in several countries are working on it and it is hard to say, who's got the most-developed vehicle at the moment," Ferdinand Dudenhoeffer, a professor for automotive economics at the University of Duisburg-Essen, told The Associated Press last week.

Dudenhoeffer estimated that with the technology advances, it could only take another decade for the fully automatic cars to start becoming available for consumers.

"Even today's cars are often partially computer-controlled, for example when it comes to parking or emergency brakes."

Moreover, he said, that besides the technological issues, the legal challenges would be another issue that needed to be regulated: "Who will be responsible when there's an accident — the owner or the passenger of the computer-controlled car or the company that produced it?"

"However, all in all, one can definitely say that computer-controlled cars will be much safer than human drivers," Dudenhoeffer said.

Before Our Very Eyes, Robotics Goes from Oddity to Mainstream

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LTU President Walker continued to point out that even though robots are intrinsically fun in and of themselves, they nonetheless continue to inculcate themselves into mainstream society by performing repetitive or hard-to-access tasks in a fashion more consistent than any human could ever possibly perform.

Surgeons use the da Vinci Robot surgical tool, for example, to conduct prostate cancer surgery in a more accurate fashion than could ever be done before, while Japanese officials used robots to first assess the damage done to the Fukushima nuclear complex in Japan following the recent earthquake and tidal wave there.

Added Walker, "Robotics can address a broad range of national needs by preparing students in a wide variety of fields such as advanced manufacturing, logistics, services, transportation, homeland security, defense, medicine, health care, space exploration, environmental monitoring, agriculture and others to be sure."

"In addition, robotics can play an important role in science, technology, engineering and mathematics — which we know as STEM education, which is very important to us in this country.

"It helps there because it really encourages hands-on learning and the integration

of science, engineering and creative thinking in a project that's fun and kids love to get involved in and really like to do.

"The goals of this RoboExpo are to share knowledge and resources, to introduce and demonstrate new products and new robotics products, services and educational programs . . . and to promote R&D collaboration.

"In addition, job seekers will have the opportunity to meet with employers in the robotics field.

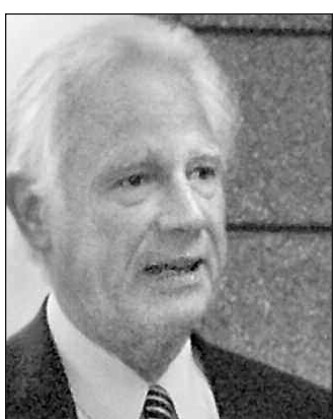
"We see robotics as becoming one of the fastest-growing and most important frontiers in American engineering now."

Robotics involves more than just a play fest or lip service at LTU. The school is reportedly only the second in the country to offer an engineering degree in robotics science for undergraduates.

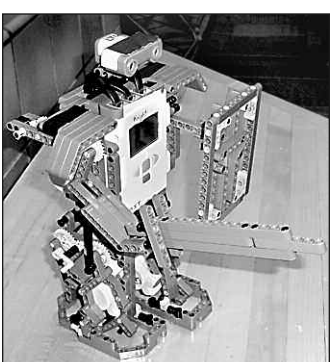
LTU student Joe Nabozny, of Belleville, said that the robotics program is what brought him to Lawrence Tech in the first place and that even as a sophomore, he's now immersed in one of the best robotics engineering programs in the country.

Note that LTU has long hosted a RoboFest that is more along competitive lines so that now the new RoboExpo offers students a broader sweep of what's available in this rapidly growing industry.

So on one hand you have typical college students who



LTU President Lewis Walker addresses the Robo Expo at the university's Southfield campus.



An LTU robot, shaped like a knight, is holding a sword in its right hand. It was one of any number of automated gizmos running around LTU last week.



Associate Professor CJ Chung of LTU's Department of Math and Computer Science, mimicks the movements of the dance by the Sony AIBO robot dogs, background, at the LTU Robo Expo.



LTU sophomore Jon Nabozny with his entry at Lawrence Tech's first-ever Robo Expo. Nabozny's robot uses an IBM Thinkpad's mounted web-cam for guidance, together with batteries, wheels and a motor for locomotion on his ground robot.

are geared to "test drive" military Pack Bots that were on display, but you also have other students like Nabozny who are now following a pure academic path where he's effectively majoring in robotics.

The future is being created right here on a local college campus that is otherwise a consistent feeder of Mechani-

cal Engineering and Electrical Engineering graduates into the resident auto industry.

Move over auto, and make way for pure robotics. That seemed to be the message as young college students and middle-aged college professors alike were collectively geeked up about putting new ground robots to work.