FACT SHEET

Concept Centaur

When Segway LLC developed the Segway® Human Transporter (HT), we not only became experts in Dynamic Stabilization but also in intelligent electric propulsion and the ability to meld man and machine. Concept Centaur takes all of that knowledge and combines it with the unique understanding of personal transportation that could only come from the Segway LLC Product Development Team.

Concept Centaur's unique design and control systems redefine how a four-wheeled device can operate. By using the small but powerful servomotors in the Segway HT and combining them with a minimalist aluminum chassis, the Centaur weighs only 150 pounds and retains a similar narrow track-width of its two-wheeled cousin.

What separates the Centaur from any other four-wheeled device is its ability to rise up and balance on its rear wheels. Using the same balancing technology as the Segway HT, dynamic stabilization, the Centaur can be precisely maneuvered in tight spaces, using the same lean-forward, move-forward control – even allowing the rider to steer with the front wheels off the ground.

Like all Segway products, Concept Centaur is battery powered, resulting in no emissions and quiet operation. The applications for this unique technology are virtually endless, from indoor commercial use to urban commuting to the most demanding outdoor exploring.

Specifications for Concept Centaur prototype:

Top Speed: approximately 25 mph
Weight: approximately 150 pounds
Range: 10+ miles with Saphion® Lithium-ion batteries
Payload: up to two passengers with total payload of approximately 300 pounds
Tires: 19" tubeless, puncture-resistant and made of non-marking silica compound

Intuitive user controls:

- Thumbs forward: The Centaur's forward and backward propulsion is easily controlled by pushing a thumb throttle located on the underside of the right-hand handlebar.

- Pop a wheelie: The Centaur uses dynamic stabilization technology to limit and/or maintain the angle at which the rider experiences the device. What would normally be a dangerous maneuver on a motorcycle or ATV becomes safe and controlled on the Centaur. In addition, the rider can position his/her body in three different ways, which makes for a fun ride. This technology also allows for a high-performance design with a short, compact wheelbase - a combination that traditionally can be very difficult to control.

- Lean forward, go forward: If you've haven't yet experienced the Segway HT, now is the time. If you have, you know what we mean by intuitive controls. Concept Centaur uses dynamic stabilization in a similar way. When on two wheels, the Centaur is controlled by how the rider shifts his or her weight. To go forward, lean forward. To go back, lean back.

Simultaneous mechanical and drive-by-wire steering:

- Smart steering: The front two wheels turn left and right mechanically, which is made possible by an innovative linkage system designed by Segway engineers. The Centaur's advanced controls software also allows the rear wheels to turn at different rates in response to data received from the rider's steering direction. When on two wheels, steering is accomplished in the same manner, by turning the handlebar. Sensors in the vertical portion of the steering column monitor the rider's input and sends a signal to the controller boards, which then issues a command to drive either or both of the rear wheels. Turning rate is coordinated so that even with the front wheels off the ground, Centaur follows the path defined by the front wheel angles. This allows smooth transitions between two-wheel and four-wheel operation.

Environmentally friendly:

- No exhaust: Batteries power the Centaur, which means that there are no emissions. In addition, the Centaur uses regenerative braking, which means the batteries are recharged during deceleration and hill descents.

- Quiet: Electric motors and an innovative gearbox design result in a quiet ride.

- Low-impact tires: The Centaur prototypes use the same non-marking silica-based tires as the Segway HTs. These tires are smooth, which allows the rider to perform exciting maneuvers while having little impact on the terrain.

Distinctive design, elegant suspension:

- A profile X-shape: The profile of the Centaur creates an "X." Right after the Centaur was crowned a prince by the engineers, they quickly pulled in Segway's industrial design team to integrate their vision into the product's form and function. What resulted is a concept with a sleek minimalist design that elegantly showcases the rider, leaving the simple mechanical elegance of the underlying design visible.

- Three shocks: There are three shocks on the Centaur that absorb bumps and help the wheels maintain contact with the ground. There is one in each front "arm" and one in the rear.

- Lightweight: Concept Centaur only weighs about 150 pounds and can be easily transported in the back of a large SUV or small pick-up truck. If developed, its light weight would allow for transport on the back of small cars through a hitch-mounted rack, similar to that used for carrying bicycles.

For more information, please visit www.segway.com/centaur

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