

Fact Sheet on the “Segway”

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What is the Segway?

The Segway Human Transporter (SHT) is described as “the first self-balancing, electric-powered transportation device.” The rider stands on a small platform supported 6 to 8 inches off the ground by two parallel wheels; holds onto handlebars that are used to steer the device; when the rider leans forward the SHT moves forward and when the rider leans back the SHT moves back or stops.



How big is the Segway?

The SHT comes in three models. The personal transport model is 16 inches long, 21 inches wide, and weighs 69 pounds. Slightly larger models are available for commercial/industrial use; they are 19 inches long, 25 inches wide and weigh up to 95 pounds.

How fast is the Segway?

The Segway is capable of speeds up to **20** miles per hour according to information posted early on the manufacturer's web site. A speed-governing key is said to limit the speed of the personal transport model to 10 miles per hour. The commercial/industrial models are set with a top speed of 12.5 miles per hour. Key limitations can be defeated.

How far can the Segway go?

The personal transport model will go between 9 and 14 miles on single charge; the commercial/industrial model will go up to 17 miles per charge.

How much weight can the Segway carry?

The SHT is designed to carry a person up to 250 pounds. The cargo version has an additional capacity to carry 75 pounds and a trailer is under development that will have a further capacity of 300 pounds or more. (Visualize this on a sidewalk you are walking on!)

When will the SHT be available?

Demonstration models are currently being tested and shown at trade shows and other indoor venues. The personal transport model is expected to be available in late 2002. Some industrial models are in test use by the US Postal Service and the City of Atlanta, Georgia.

Where can I get more information?

www.segway.com has additional promotional and technical information. You can also check the America Walks website, www.americanwalks.org, or pednet, the pedestrian mail list server at www.flora.org/pednet/

Why has the Segway become a legislative/public policy issue?

The manufacturers of the Segway have launched an aggressive lobbying campaign to amend state and Federal law to ensure that the device is not regulated as a motorized vehicle and that it is able to operate on sidewalks and trails rather than the road. Legislation to achieve these goals has been introduced in both houses of the US Congress and most states.

What is being proposed at the Federal level?

Senate Bill 2024, introduced by Senator Bob Smith (R-NH), would allow the use of the Segway on federally funded sidewalks and trails, when state or local regulations permit. House Bill 1426, introduced by Rep Charles F. Bass (R-NH), would put the Segway under the authority of the Consumer Product Safety Commission taking it away from regulation as a vehicle.

What is being proposed at the state level?

In Pennsylvania, HB2202 passed the House in 8 days in December 2001, coming out of the Aging and Older Adult Services Committee. In the Senate, SB1225 passed the Transportation Committee in the same period and as of June 4 was awaiting action by the full Senate. The bills, with some differences, declare that the Segway is not a vehicle as defined in the motor vehicle code and allow its use on sidewalks within the state. Municipalities are allowed to restrict the use in their jurisdictions in the Senate version. In the House version they can restrict public riders but not government users. The House bill allows those with disabilities and those whose movement would be improved to use the devices. (This means, in effect, anyone who

wants to go faster.) The Senate bill, as amended, restricts use to those with disabilities. The state advisory committee on pedestrians and bicycles was not even made aware of these bills until March of 2002 and has not had time to consider the issues involved.

The March 8 issue of Urban Transportation Monitor reported that “the [Segway] company has provided model bills and testified before 45 state legislatures...Of those 45, 21 states have legislation pending and 5 states (NH, NJ, NM, NC, and SD) have passed legislation regarding how and where the EPAMD can be used.”

What are the concerns/objections to the Segway being treated as a pedestrian?

- The impact of collisions between segways weighing up to 250 lbs (with rider) and pedestrians
- The impact of collisions between segway users (especially operating in limited space)
- The threat and discomfort felt by pedestrians which will discourage walking and use of sidewalks
- The threat and discomfort felt by disabled walking on the sidewalk, particularly those with vision and hearing impairments.
- Degradation of the sidewalk as a place to window shop, play, talk, wait, and other typical pedestrian activities.
- Competition for already limited space on the sidewalk
- Likelihood of crashes between Segway users and motorists (the two most common causes of bicycle/motor vehicle crashes are wrong-way riding and riding on the sidewalk, both of which the Segway would presumably be doing)
- This sets a precedent for other motorized vehicles such as scooters which are equally inappropriate for use on sidewalks
- There is no way to enforce speed limits set by state/Federal law if it is not a vehicle
- The speed governing mechanism on the Segway **will be over-ridden**
- Lack of any research or experience on the operating characteristics of the vehicle or the rider
- Operation of the device requires immobilizing the lower body as it uses weight shifts to control speed and direction of movement. Extensive or extended use of the device appears to run counter to existing knowledge of human ergonomic requirements and may have negative effects on the circulatory system and balance of users.
- The social justice impacts of allowing an expensive device available to a limited population to dominate public space
- Sidewalks have been designed for use at walking speeds, not “three times faster than normal walking speed”
- What happens where sidewalks don’t exist or come to a stop and the road has speeds in excess of 25mph?

What are some other concerns about the Segway

- Promotes a more sedentary lifestyle when we should be promoting walking as healthy physical activity
- Promotion of the Segway has been disingenuous:
 - it is a motorized device even if the phrase “electric personal assistive mobility device” seems designed to disguise this
 - we don’t know if it can be safely integrated into the pedestrian environment as the makers claim
 - use of the phrase “assistive mobility device” may incorrectly suggest that it serves people with disabilities in the same way a wheelchair does, which it does not. A manufacturer’s representative has stated it is not intended for the disabled. As the device enforces the immobility of the lower body it is not going to be useful for the vast majority of older adults either.
- Promotion of the Segway legislative campaign has not considered or included those most affected: pedestrians and bicyclists
- Promotion of the Segway distracts from serious issues of bicycle and pedestrian safety and access
- The current crop of legislative proposals will result in inconsistent and confusing treatment of the device from one state to another and from one community to another
- The legal status of the user is unclear or is inappropriate: should a Segway user follow the rules of the road? Does a pedestrian or a Segway user have priority on sidewalks?
- The current legislative campaign usurps local control over the use of the device and places the onus on localities to prohibit use of the device
- Operation of the Segway in the roadway may be problematic with the speed differential between motor vehicles and the Segway but no more than between bicycles and motor vehicles
- There are unanswered questions about the licensing, training, liability, and regulation of Segway users, and regulation of the equipment that should be required for the operation of the device (e.g. helmets, lights and reflectors, DUI)

What are the positive aspects of the Segway?

- The Segway will provide mobility assistance to a limited segment of persons unable to walk or walk very far or fast
- There may be practical and valuable commercial uses for the device
- If the Segway is used on streets it may help make more use of bike lanes and reclaim space from motor vehicles
- Any car trip that is replaced by another less harmful mode benefits bicyclists and pedestrians
- Segway users and the manufacturer could become an ally in the quest for better bicycling and walking conditions
- Anything that gets people outside and into the fresh air is positive
- It is an emerging and fascinating technology that should be supported where appropriate