

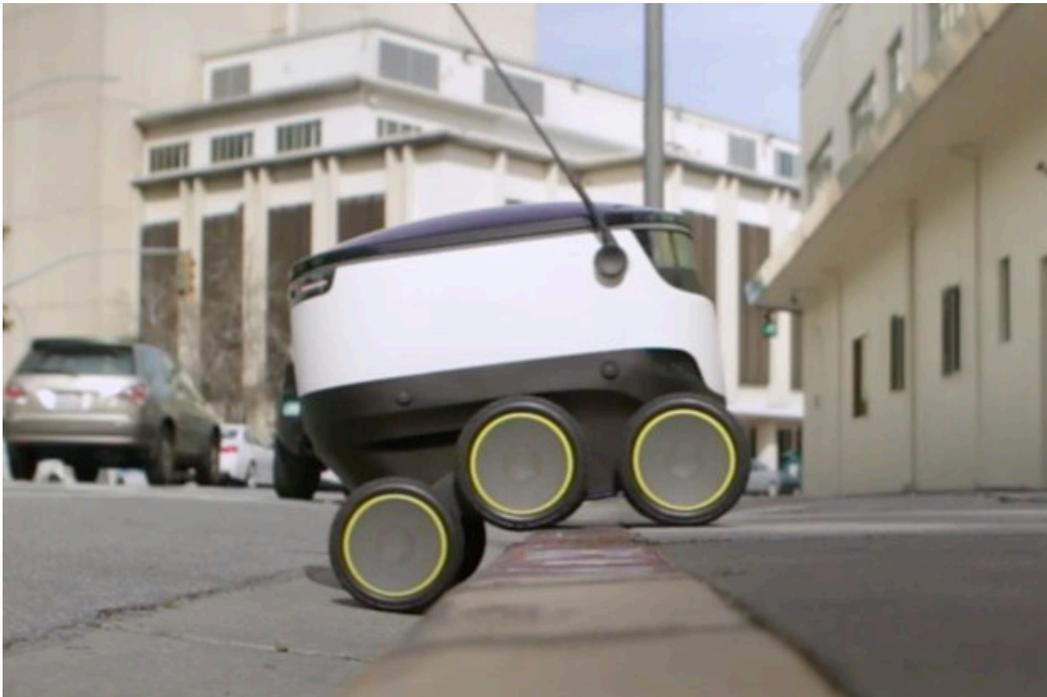
TECH 780/880
In-Class Exercise: § 102

In 2012, inventors at Starship Technologies OÜ, an Estonian company, filed a patent application. (This scenario is based on a real patent application and real products, but I have changed the facts for this exercise.)

The application, filed on November 2, 2012, described and claimed a “Obstacle traversing mobile robot.” The abstract described the invention as follows:

Disclosed is a mobile robot adapted to traverse vertical obstacles. The robot comprises a frame and at least one wheel positioned in a front section of the robot, at least two middle wheels and at least two rear wheels. The at least one middle wheel and at least one rear wheel are connected by a tilting lever that is arranged on each of the opposing sides of or to the frame, forming a pair of wheels. Each tilting lever can be turned around a lever bearing located between the respective axial centers of rotation of each pair of wheels.

The application described a way for the robot to overcome curbs and the like through the use of more than four wheels, as shown in this photo:



The patent issued on April 1, 2014, as patent no. 9,999,200 (the '200 patent) with two claims:

1. A mobile robot comprising:
 - (a) a frame with at least one front wheel, at least two middle wheels and at least two rear wheels; and
 - (b) wherein at least one middle wheel and at least one rear wheel are connected by a tilting lever that is arranged on each of the opposing sides of or to the frame, forming a pair of wheels; and
 - (c) wherein each tilting lever can be turned around a lever bearing located between the axial centers of rotation of each pair of wheels.
2. The robot of claim 1, further comprising a sensor adapted to sense the absolute and/or relative angular position of the tilting lever, said sensor being one or more of a potentiometer, an optical sensor, a magnetic sensor, and a visual camera system.

Question 1

Starship Technologies' general counsel is worried that the '200 patent might be invalid under 35 U.S.C. § 102, based on the following facts:

- ▶ In August and September 2011, Starship Technologies engineers tested prototype robots embodying the claims of the '100 invention at their offices in Estonia. In that testing, an engineer would place a paper take-out bag, holding a rock but no food, in the robot in a Starship Technologies office; the robot would then navigate to a different Starship Technologies office in a nearby building. An employee would follow alongside the robot to monitor its progress. Many of the trips ended in failure when the robot encountered obstacles or drove itself into a corner. The buildings are in an office park with offices for various companies. In this time, the robot could be seen by members of the public, though few paid attention.
- ▶ On October 15 and 16, 2011, a film crew from CNN, a cable news channel, filmed footage of the robot in action. They also conducted interviews of Starship Technologies engineers.
- ▶ From November 7 to 13, 2011, the CNN story aired on a variety of CNN networks. It showed the robot from a variety of angles, including footage of it climbing over various obstacles. It also described several specific features of how the robot worked.

- ▶ On November 15, 2011, an engineer at a competing robotics company, RoBoCo, sent a memo to RoBoCo executives summarizing the CNN report and describing all the features of the claimed invention, inferring the details from the CNN footage.

What is the risk that the '200 patent will be held invalid in view of these facts?

Question 2

After Amazon started investigating robotic delivery methods, Starship Technologies' general counsel sent Amazon's general counsel a letter advising Amazon of the '200 patent and offering to enter into licensing negotiations. After receiving the letter, Amazon directed its outside counsel to investigate the validity of the '200 patent. Amazon's counsel identified several relevant references, including an experimental remote-controlled robot with six wheels, shown above.



In the experimental robot, pairs of wheels are connected with tank-style treads, and two of the wheels are on arms that can pivot to overcome obstacles. The robot was developed by a graduate student at the University of Arizona in 2009 and described in her master's thesis, *Obstacle-Mounting Mobile Robot*. The thesis is stored in the University library and published in various searchable online databases. You can also see the robot in action in a YouTube video, posted in 2009, here: <https://www.youtube.com/watch?v=AOXGxFy4GGw>.

Amazon believes that the robot, and/or the video, is invalidating prior art under 35 U.S.C. § 102. What is the risk that the claims of the '200 patent will be held invalid in view of these facts?