Seems like a lot of existing transponder positioning systems are designed for boats/subs.

Existing vehicle systems:

<http://www.goetting-agv.com/components/autonomous/introduction>

<http://www.freepatentsonline.com/y2007/0143006.html>

We need a gyroscope if they don’t already have one, that way we can know the position of the vehicle and thus the position of the antenna and transponders.

<http://www.livescience.com/40103-accelerometer-vs-gyroscope.html>

Most existing systems seem to keep the transponder position on the transponder.

Where are we going to set the 0,0 coordinate, what units is the car expecting?

Closest thing I could find done by a campus:

<https://slice.mit.edu/2013/10/03/skycall-drones-to-lead-mit-campus-tours/>

Would an inertial navigation system work better?

<http://www.microstrain.com/applications/unmanned-vehicles/microstrain-inertial-sensors-guide-unmanned-ground-vehicles>

<https://www.sbg-systems.com/products/overview>

<http://www.gladiatortechnologies.com/Products/LMRK/LandMark-Systems.html>

This is just cool:

<https://oshkoshdefense.com/technology-1/unmanned-ground-vehicle/#vid>

Would a combination GPS/transponder system be better? If so, how to combine?

<https://www.xsens.com/3-steps-to-embed-autonomous-navigation-in-unmanned-vehicles-and-1-shortcut/>

Need to make sure that the lines aren’t parallel or antiparallel before finding the intersection and deal with odd angles resulting from the inverse tangent function.