Drone Lanes

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Description

We're about to have overhead congestion—which means soon, you can expect invisible drone lanes overhead. Amateur drone pilots continue to cause trouble for commercial and private airline pilots. Drone adoption will push development of "air lanes" for both crewed and uncrewed aircraft where different types of aerial vehicles are grouped into categories and traffic lanes.

Examples

Currently, the FAA does not allow drones to fly near the airspace of airports—but while there are no-fly zones, there aren't no-fly circumstances. In Singapore, researchers are considering the viability of different options including "air-lanes," the development of "air-blocks" and "air-fences" to manage traffic. NASA has developed a traffic management system for Unmanned Aerial Systems (UASs) to maintain safe and efficient UAS operations. This novel technology enables the growth in civilian applications of UAS operations at lower altitudes by developing a UAS Traffic Management (UTM) system.

What's Next

Congestion management systems are infrastructure initiatives that look to redistribute street space by reducing car traffic, increasing bicycle and pedestrian use with the ultimate goal of improving overall safety and efficiency of the network.

Proactively constructing aerial infrastructure will allow regulators the opportunity to preempt congestion, ensure safety, and incorporate learnings from both road and air travel. The development of regulation will be made at a city/state level as interoperability at a federal and global level will be less necessary than for drone travel.

Another significant barrier to adoption will be customer sentiment about having drones flying through their neighborhoods. The drones would likely be near overhead or above existing road structures which will significantly increase the noise pollution from the roadways. Current drones and airplanes make very identifiable noise that people may take offense to. For example noise pollution near airports and highways has caused a decrease in property values. Additionally, it will be much harder to block sound from aerial craft vs. terrestrial craft since sound insulating barriers can be built around terrestrial highways

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