

《China Breakthroughs: BeiDou revs up navigation for motorcycle》

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Chinese cities have been plagued with huge traffic jams for many years, while more people continue to purchase cars and use private taxis such as Didi.



(Photo/ Internet)

Perhaps the Chinese could ride motorcycles or bicycles to alleviate traffic congestion, but there are added risks. Motorcycles are not as safe as automobiles.

Drivers of vehicles can just hook-up their smartphones attached with the BeiDou Satellite Navigation System (BDS) on dashboards, which give them directions via a virtual map and AI (artificial intelligence) voice telling exact directions.

But motorcycle riders can't enjoy the same luxury, since it would be foolish to hold on to a smartphone while speeding down the road.

Motor-solutions

On July 31, 2017, 15 major motorcycle companies based in China signed an agreement to preload BDS on over 20 million motorcycles that are set for production, with over half of them expected to be delivered to customers overseas.

Motorcycle riders will not get the same positioning guidance system that a driver would, but BDS would send out a signal in cases of emergency. Motorcycle crashes frequently lead to fatalities and crippling injuries, so the sooner rescue workers arrive on the scene, the better.

Police officers and ambulances can receive the signal of a crash and respond. BDS on motorcycles can deter robberies as well, transmitting a signal when a bike gets stolen.

"BeiDou is ready for civic use," China.Org quotes Qiao Yueshan, deputy director of IT (information technology) department of China's Ministry of Industry & IT, as saying. "It will help to improve the efficiency of accident rescue and reduce loss of life."

BDS with global coverage

Currently, 23 BeiDou satellites are orbiting the Earth with 12 more prepared for lift-off in the next two years. The China Aerospace Science and Technology Corporation (CASTC) has taken charge of the BeiDou Satellite Navigation System.

From 2012, China's self-developed BeiDou system has provided navigation services, atomic time and text messaging for people in the Asia-Pacific.

In China's 13th 5-year plan (2016-2020), the Central Government is calling for BDS to provide navigation coverage worldwide by 2020. Chinese President Xi Jinping wants to start by expanding coverage for all countries participating in the Belt & Road Initiative.

Plans are already underway for CASTC to generate the most accurate atomic clock on BDS, which would measure time by tracking atomic movement in a microwave range, as reported by JiangsuNow Website.

The atomic clock would provide precise time measurements for use in deepspace exploration and satellite navigation.

Bike-sharing Beidou

BDS has also played a pivotal role in China's latest craze for bike-sharing. The top two companies - Mobike and Ofo - have both set up BeiDou locking systems.

China Daily reports that the recent popularity for bike-sharing has created a RMB17bn. (US\$2.5bn.) market for location-based service providers.

The Location-based Services Association of China (LSAC) says BeiDou accounts for 70 percent of domestic market share in chips, equipment, software, algorithms and other services connected to satellite navigation.

BDS can be used for much more than driving vehicles, or riding bikes and and motorcycles. It will become a crucial component of the entire logistics industry, including air transport and shipping.

"As BeiDou expands its overseas outreach, it will be increasing popular in the logistics industry," said Miao Qianjun, secretary-general of LSAC.

He believes more cargo shipping companies will access BDS when sailing to European countries.

Boosting crop production

Chinese farmers have also discovered the amazing capabilities that BDS can offer them, such as driving unmanned tractors for plowing seeds and flying drones to spray insecticides.

Zhang Ruifeng, head of public relations (PR) for UniStrong Science & Technology Co. spoke to China Daily to explain how the precision agriculture firm can boost crop production and cut costs for farmers.

The company developed a 'Smart Farming' system, called, "Huinang" that has utilized autonomous farming machinery since 2016. When sowing seeds or spraying fertilizers, it's maximum error margin stands at 2.5cm. in straight-line movements.

Drones fly at a steady height of 1.8-meters above farmland when in operation.

BeiDou farming applications were first used in northeast China's Heilongjiang Province and have spread nationwide. Drones and unmanned tractors make life easier for farmers, since less manual labor is required.

Better with BeiDou

BDS ranks as the world's fourth-largest satellite navigation system, behind - USA's GPS, Russia's GLonASS and European Union's Galileo. But expectations are high that Beidou will surpass its rivals by 2020.

Beijing has directed CASTC to develop location-positioning accuracy up to 10 meters in close range. By 2020, we can anticipate 35 Beidou satellites to orbit our planet.

The benefits would be enormous not only for Asians but for all global citizens. Most smartphones to be manufactured, whether from China or elsewhere, will have BDS attached to the devices.

Additionally, BDS can still serve lifesaving purposes on rescue missions. If you get lost in an isolated location and in urgent need of help, Beidou can alert rescue crews on your exact location.

That's truly groundbreaking and deserving of more recognition.