Connected cars, data traffic jams, to challenge mobile operators

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Credit: Scott Meltzer/public domain

A press release on Thursday had bracing news about the future of cars as traveling computers on wheels. Rush hour could see data traffic double in certain cells, presenting major challenges to network planning and

optimization teams.

UK-based Machina Research completed a study that said connected cars are going to give mobile operators a network management challenge. The release said that certain cells were "set to experience a 97 per cent increase in data traffic over the next ten years. Connected cars will be the key driver of this sharp increase in network usage." Eric Auchard, editorial innovation director at Reuters News, was one of many technology watchers who picked up on the study's implications: "Traffic jams in the future could cause potentially dangerous data snarl-ups as cars packed with entertainment, safety and navigation features vie for airwaves with smartphones, tablets and networked features in other vehicles," he wrote.

Connected cars will be on the rise and mobile operators will in turn need to prepare for more machine-to-machine (M2M) connections. M2M devices, including connected cars, might not consume high volumes of data, but, plainly speaking, the report said that "Traffic growth from M2M, particularly from connected cars, will cause headaches for mobile network operators."

Auchard, also referring to a forecast from research firm Gartner, said about one in five vehicles worldwide will have some form of wireless network connection by 2020, or more than a quarter of a billion connected vehicles.

Matt Hatton, founder and CEO, Machina Research, said connected cars pose a "diverse set of challenges to operators through highly varying network traffic patterns at different times of the day."

Hatton explained further that connected cars in terms of overall data volumes don't present much of a problem. Network resource management, nonetheless, is not based on total traffic volume; it's based

on "particular cell sites during peak times of network use. If connected cars regularly cause network traffic spikes in a particular location that can't be met, there are implications for operators in meeting SLAs [service level agreements] and delivering a positive quality of experience."

The report stated that "our analysis of the connected car market shows that peak traffic in the busy hour in certain cells could double as a result of the numbers of connected cars."

Boiled down, said the study, the questions are, "could traffic jams result in a significant spike in data usage in particular cells, which might cause dropped data sessions and increased customer dissatisfaction, and will MNOs (mobile network operators) have to act to cope with those unevenly distributed abnormal additional loads?"

The report was commissioned by network assurance and analytics company TEOCO. Here's what Steve Bowker, VP Technology and Strategy, TEOCO, said about operators.

"The connected car is just one of many M2M use cases that will put new and unusual demands on network usage that mobile operators will need to resolve," said Steve Bowker, VP technology and strategy, TEOCO.

"In all cases, operators will need to identify where and when the network traffic is generated, measure the volume, and analyze the type of traffic as well. They'll need to more seriously consider how to cope with these demands for reduced latency, higher bandwidth, more signaling and higher QoS. This requires a more sophisticated and comprehensive approach to mobile network planning."

The report highlighted areas that operators should prioritize in addressing the uptake in M2M connections. One of those areas, said the

release, is that "operators will need to cope with, and manage the inter-relationship between all access networks (including Wi-Fi, LPWA networks) at their disposal. This includes the management of both licensed and unlicensed spectrum."

More information: www.teoco.com/wp-content/uploa … and-optimisation.pdf