WHAT’S DRIVING EUROPE’S STRATEGY ON CONNECTED CARS?

SPECIAL REPORT
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Throughout its four years in office, the Juncker Commission has promoted connected and automated cars and encouraged industry groups to invest more in developing the technologies. EURACTIV looks at what it has achieved.

President Jean-Claude Juncker even referred to connected cars in his famous “five scenarios” on the future of Europe last year.

The issue spans different parts of the Commission, and officials in charge of the EU’s transport and technology policies have been crafting strategies on how to accelerate work on connected cars.

Later this year, the Commission will propose new legislation on what technological solutions can be used to underpin connected cars that are brought onto the market in Europe. Car companies and telecoms operators are concerned that the decision will give preference to either Wifi or next generation 5G networks. The Commission insists it won’t take a side, but will remain “technologically neutral”.

The debate over which technology would be better fit has heated up, with different industry groups arguing that the Commission’s decision in the autumn could be a make-or-break moment for the future of connected and driverless cars.
Automakers and telecoms firms bicker over EU connected vehicle proposal

MEP on connected car fight: ‘Commission should focus on safety standards, not technology’

EU connected cars plan sparks national backlash

Pressure on Commission ahead of decision on connected car technology

EC should not rush connected car proposals
A battle between car manufacturers and telecoms operators is heating up as the European Commission prepares to announce legislation later this year that could determine whether automakers will need to rely on Wifi or wireless 5G technology to build internet-connected vehicles.

It’s a technical Brussels debate that has largely flown under the radar, and has attracted surprisingly little attention even from members of the European Parliament and observers of EU-level technology policies.

But pressure is mounting on the European Commission to weigh in on the debate. Violeta Bulc, the EU’s transport Commissioner, made it a goal to have internet-connected vehicles on roads by next year – when the current administration leaves office.

Car and telecoms firms are on their toes as they wait for a decision about what technology the EU executive may back to promote connected vehicles. A legal proposal that is expected in the autumn to accelerate connected car technologies has driven a wedge between the car and telecoms industries. Some car manufacturers want the Commission to throw its weight behind satellite vehicle-to-vehicle communication, or V2V, which is based on short-range Wifi.

Car companies that are pushing for the Commission to support the use of Wifi networks argue that it is already available, so there will be no delay in introducing new vehicles with connected entertainment or safety features that rely on the technology.

In the 5G camp, the telecoms industry argues that Wifi is too out-of-date for the fast developing new features in connected cars. Telecoms operators are clinging to C-V2X, the longer-range vehicle-to-infrastructure technology that is considered a stepping stone towards next generation 5G networks. The fast 5G technology is still in test phase and the Commission’s top officials in charge of the bloc’s technology policies have pledged to make the networks available for commercial use around Europe by 2025.

Officials drawing up the Commission strategy have insisted that it will not favour one technology over the other but will remain “technology neutral” by requiring

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manufacturers to build systems that work with both Wifi and 5G.

But the telecoms industry is still worried that the bill will give preference to Wifi. They argue that would take away some of their incentive to invest the billions of euros needed into building 5G networks that cover the entire EU.

Andy Hudson, head of policy at mobile industry group GSMA, said that the proposal should be technology neutral by only identifying what connected car services the Commission wants manufacturers to offer, but it should leave out any “regulatory bias” and not pick one technology.

GSMA has argued in favour of 5G as the basis for connected cars. Hudson said the car industry needs years to adopt new technologies across its entire stock, and that development of new internet-based services could be slowed down if the Commission decides to favour Wifi.

“It is more important to consider the sustainability of a solution as opposed to its time to market,” he said.

A recent draft of the legislation, obtained by EURACTIV, says that “the regulation shall be reviewed at the latest 3 years after its entry into force to take into account technological progress”. Some industry groups close to the file want the review time to be far shorter and include clear criteria for what technological changes could prompt another legal overhaul.

One concern shared by supporters of 5G is that a decision from the Commission to side with Wifi could result in car manufacturers rejecting the wireless C-V2X technology, meaning that new cars will continue to rely on Wifi for years.

German car manufacturer Volkswagen has committed to using Wifi systems in new cars that come out through next year.

“We have to focus not too much on today but on what we want in 2030,” said Maxime Flament, chief technology officer at 5GAA, an association made up of carmakers and telecoms operators that back an approach to connected vehicles based on 5G. Volkswagen is a member of the group.

Flament said the current draft of the Commission’s plan addresses how vehicles will communicate with each other, but does not consider what technology will be needed to help cars talk to road infrastructure that is located further away than other vehicles driving nearby. Chips using 5G can be installed into cars and infrastructure along roads like traffic lights to speed up traffic or prevent collisions.

Steve Phillips, secretary general of the Conference of European Directors of Roads, an association that represents public authorities, questioned whether 5G should be the basis for connected cars when significant stretches of European roads still have poor wireless service.

“There are not many services we

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think need it. Most of the services are working very well with 4G and if we look at the lack of coverage on parts of the network of 3G, that’s where the focus needs to be. We don’t even have full coverage yet of 3G on the European road network,” Phillips said, referring to today’s mobile networks.

“We’re not interested in just a few trial sites to say, ‘look we’ve done it’. We’re interested in bringing out a meaningful service to achieve the safety and environmental and congestion benefits across the whole network,” he added.

Supporters of the two different technologies are still bickering over whether 5G or Wifi systems are safer, cheaper and easier and quicker to set up. They have a few more months to make their case before the Commission presents its proposal.

The EU executive insists that the legislation will focus on making sure the two systems are “interoperable”, meaning that manufacturers that build cars relying on 5G will need to allow the vehicles to also communicate using Wifi.

A 2016 strategy paper from the Commission declared that “initial deployment for short range vehicle-to-vehicle and vehicle-to-infrastructure communication will be based on technologies already available”, meaning Wifi-based systems, which “where appropriate will operate in seamless coexistence with 5G, under a complementarity principle”.

The proposal will come out of the EU executive’s transport arm, DG Move, this autumn. The directorate is responsible for recent initiatives like the eCall legislation that requires automated safety devices in all new vehicles. It has also promoted truck platooning trials, when partially automated lorries communicate while driving close to each other, allowing them to save fuel.

There’s an added layer of Brussels policy drama heating up the connected car squabble: the legislation is drafted as a so-called “delegated act”, a fast-tracked procedure where the Commission legislates with a committee of “experts” from member states. The process is notoriously secretive and often receives little public attention because it does not go through the typical, drawn-out negotiating processes with MEPs and national governments. Instead, the European Parliament and government diplomats can approve or reject the bill, but cannot propose changes to it.
The European Commission wants future connected vehicles to be able to run both on 5G and Wifi networks, claiming its upcoming legal proposal will remain “technology neutral”. But a leading lawmaker warns this will in effect give preference to one technology over another.

Deirdre Clune is an Irish centre-right MEP in the European Parliament’s Transport Committee. She spoke to EURACTIV in an interview.

The European Commission is going to make a decision later this year on what technology – Wifi or 5G – it will support to help connected vehicles communicate with each other. What’s at stake in that decision?

If the law makes it impossible, or unnecessarily burdensome, for an emerging technology to enter the market, then that law in itself brings...
into question the principles of fair competition.

The law should not give preference to one technology over another, which is what is meant by remaining 'technology neutral'. Aside from being principally questionable, we need to bear in mind that this is also not just any market, but a market of safety.

The legislation should create a framework in that vein. It should demand a certain level of safety requirements be met, not technological requirements. Only then can we allow all competitors on the market prove that their technology can best suit the safety requirements outlined by the Commission, not the other way around.

**Do you have a preference for what technology would be better for improving the quality of connected vehicles or making sure they are available to consumers sooner?**

No, the competing technologies are not yet fully developed or tested enough to be preferred, which is exactly why the Commission should stay technology neutral.

The Commission can remain technologically neutral by bringing forth a proposal that does not inherently favour the use of one technology over another in an emerging market. The market needs to be open to anybody who is active in the supply chain, be that chip-set builders, telecommunication infrastructure providers or car manufacturers.

The priorities of the Commission should be those safety standards it believes need be met, and to allow the market to produce the technology that can best achieve those standards, while remaining competitively priced.

**What criteria should the Commission consider when deciding what technology to favour? Do you see indications that there are differences between these technologies regarding their cost or safety benefits?**

Well this is why we need to have an open market, so that the products can have the space to prove their cost and safety benefits. That is how competition works.

By creating a framework whereby one technology can thrive and others cannot, we block any potential progress of the other technologies. No developer is going to try to exist in a market where the law creates so many barriers to entry.

**Should the delegated act proposal require car manufacturers to build vehicles that are interoperable and can work with both 5G and Wifi technologies? Could that potentially be too complicated or expensive for companies?**

Imposing interoperability on the market warrants the same response as imposing one single technology: it stifles competition. When you constrain the market and force it to comply with technological requirements, you're still changing the dynamics of competition.

If the Commission's proposal does not create any technological barriers or obligations, we would not need to worry about making these technologies function alongside each other; the most effective and cost-saving technology would eventually take over the market.

The Commission's job is to focus on the safety standards it wants met, not the technological standards.
A niche policy fight over the technical groundwork for internet-connected cars has pitted car companies against telecoms operators and also set off alarm bells in a handful of EU capitals.

The European Commission is expected to present a legislative proposal this autumn that could determine what technology is used to power new vehicles with internet-based functions like automatic braking or smart entertainment systems.

Lobbyists from the car and telecoms industries have been lining up to promote their sides in the debate before the EU executive decides whether it will support the short-range Wifi-based vehicle-to-vehicle technology known as V2V, or cellular networks that are longer-range and will rely on fast 5G connections when those become available several years from now.

So far, the Commission’s plan to legislate on standards for what is built into cars has ignited fierce debate between companies that have a stake in the technologies, but it has not drawn much public attention.

But a handful of EU countries have stepped up their opposition to the legislation just a few months before it is scheduled to come out.

Finland and Spain have issued especially detailed criticism of the plan and questioned the Commission’s legal basis for the new regulation, according to documents that the two countries’ transport ministries submitted to the EU executive, which EURACTIV has obtained.

Their opposition is important because the legal overhaul will go through a secretive, fast-tracked Commission procedure for proposing laws, known as a so-called delegated act. The EU executive drafts delegated legislation with input from experts that are appointed by each EU country. National governments and the European Parliament can then accept or reject the legislation, but they cannot propose changes to the proposal after it is presented.

The Commission has insisted that its connected car proposal will be “technology neutral”, meaning that it will not side with one option over the other. It has also committed to requiring cars to be able to communicate with both Wifi-based and cellular systems. One Commission official said that it is “not possible to be 100% interoperable and 100% technologically neutral”, but that new services, in a reference to 5G, must be “interoperable or complementary” to the V2V Wifi technology that will be built into cars.

But the Commission is now facing...
criticism for measures in the current draft of the legislation that would require car companies to build systems that are compatible with V2V Wifi but do not give support to the cellular system.

Finland’s transport ministry complained to the Commission last month that the legislation would “lock in” the Wifi-based V2V as “the default and only option”.

A spokeswoman for the ministry told EURACTIV that “although the possibilities for cellular technologies and 5G for connected and automated driving are globally acknowledged, the principle of technological neutrality is not reflected” in recent Commission drafts.

Some countries including Finland are unhappy with the Commission’s plan to refer to the standard for the V2V technology in its regulation, and keep the door open for future technological changes without a clear reference to 5G, which is not yet recognised by standard bodies.

Instead, Finland wants cellular technology, eventually 5G, to be used to introduce connected car services more quickly. “Exclusion of cellular technologies in the delegated act would mean giving up these expectations and enhanced safety which cellular technologies would enable,” the transport ministry spokeswoman said.

**NORDIC COUNTRIES KEEN ON 5G**

Nordic countries are especially keen to make the case for picking up the pace on building 5G networks.

Finland, Sweden, Denmark, Iceland and Norway’s prime ministers signed a letter of intent in May promising to “be at the forefront” of 5G development globally. The letter singled out “transport systems and connected vehicles” as one of four sectors where they want to particularly encourage the use of 5G.

A spokesman for the Swedish representation to the EU in Brussels told EURACTIV the country does not want the regulation to pick one technology as the favoured option for connected vehicles. “In particular, we would not want to see C-V2X excluded as a technology for 5.9 GHz ITS applications,” he said, referring to the cellular system’s use for connected car services.

National telecoms ministers from EU countries signed onto a declaration last year committing to making 5G networks available for commercial use by 2025. The Commission has rallied telecoms companies to start investing billions of euros into building the fast new mobile networks.

Telecoms companies that are lobbying for the Commission to give preference to a cellular system have argued that they may be less motivated to invest so much money into building 5G networks if the regulation creates an advantage for Wifi-based services. Car companies in favour of the V2V Wifi option argue that it is available for them to build compatible systems into vehicles now, while 5G is still years away.

A small group of other member states have also weighed in on the debate, while some have remained on the sidelines, according to sources close to the discussions.

Spain’s transport ministry sent the Commission a seven-page letter with a blistering critique of a recent draft of the legislation that was circulated to member states. The document suggests that the proposal is not neutral, and “might seem to be clearly favouring one type of technology (ITS-G5) over others”, in a reference to the V2V technology, while “other technologies” already provide the basis for connected car services.

The Spanish ministry wants there to be soft guidelines on connected cars instead of binding legislation. The document also suggests that a Commission study oversold the impact of V2V technology on road safety figures. According to the ministry, connected safety features that run on V2V-based Wifi might reduce the number of road deaths in Spain by 0.058%, which “significantly contrasts” with the Commission suggestion that the technology could lower the rate of fatalities by 2.7%.

Car manufacturers have argued that the Wifi-based option is safer because cars do not need to connect to telecoms networks in order for internet-connected braking to function quickly.

Joost Vantomme, director of smart mobility at the European Automobile Manufacturers’ Association, said that “some, if not most, C-ITS use cases do not require an instant millisecond communication technology approach”, using the acronym for connected and automated driving.

He named a list of car services that require internet connection, ranging from safety functions to insurance information, and traffic and parking assistance.

The association does not have a position on whether the Commission should side with a cellular 5G system or Wifi-based technology, since its members include car companies that have invested in different systems. Volkswagen, for example, has announced that it will continue to build cars designed to work with the V2V Wifi system through 2019.

Vantomme said that the telecoms industry is banking on the surge in internet-connected cars as a way to finance their investments in building expensive 5G networks.

“Telecoms companies really want to invest into 5G but they need to have clients and they see us, connected cars, as one of the first users. The question is, who will pay that? The jury is still out on this one,” he said.
Pressure on Commission ahead of decision on connected car technology

Pressure is mounting on the European Commission ahead of a decision it is expected to announce this autumn that will affect how internet-connected cars are built in Europe.

Car companies, telecoms operators, tech manufacturers and European national governments are nervous about the action and argue it could leave a lasting mark on what kind of technology is built into new cars, which will be outfitted with an increasing amount of internet-based functions in the coming years.

At the heart of the disagreement is whether a technical policy decision within the Commission could lend support to a short-range, Wifi-based system that is already available for use—or to the cellular, longer-range technology known as C-V2X, which is seen as a precursor to 5G networks.

European governments have pledged to make the fast next-generation mobile technology ready for commercial use by 2025.

What has largely remained a niche policy squabble over technical standards in recent months seems to have reached a boiling point now, just before Brussels quiets down for summer recess.

Supporters of the cellular technology argue that a Commission announcement favouring the Wifi-based vehicle-to-vehicle option could be a barrier to the EU’s goals to introduce 5G within a few years.

“We believe it will have an impact on the rollout of 5G in Europe and it will be not a positive one. It will be negative,” Uwe Puetzschler, the head of Nokia’s digital-focused programme Car2x told a Brussels gathering of industry groups and EU officials last week.

Lobbyists have lined up to warn the Commission that the decision could

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chill companies’ investment plans to build the expensive infrastructure needed to support 5G.

Those networks will cost around €500 billion to build, according to Commission estimates, but telecoms companies argue the figure is actually much higher. They have warned officials in Brussels that they may be less likely to open their pockets to invest in new infrastructure without strong business cases—like the possibility of having cars across Europe run on cellular technology.

So far, the Commission has insisted it will not side with either C-V2X or the Wifi-based V2V option. But early drafts of the legislative proposal expected out later this year, which EURACTIV has obtained, include details indicating how a radio spectrum band will be used by V2V—but the document contains no reference to the cellular technology.

The debate has pitted some carmakers against telecoms companies. A handful of car manufacturers have announced plans to invest more money into building vehicles with the Wifi-based technology. They argue that the V2V option is an easier choice because it is already available, and because it will make safety features more precise.

But the lobby in favour of cellular technology is becoming increasingly concerned as the Commission announcement comes closer. An alliance of CEOs from 15 tech companies, telecoms operators and car manufacturers warned Commission President Jean-Claude Juncker earlier this month that the planned legislation will hamper Europe’s goals to roll out 5G networks within the next few years.

“Despite the European Commission’s stated commitment to technology neutrality, we are very concerned about the progressing Delegated Act. At the current time, it rules out the most recent technology, Cellular-V2X (C-V2X), favouring a specific and single-purpose Wifi-based technology path (known as ITS-G5), thus precluding the evolution to 5G for connected cars,” said the executives’ letter, seen by EURACTIV.

It was signed by the CEOs of BMW, Daimler, Deutsche Telekom, Ericsson, Ford, Huawei, Intel, Nokia, PSA, Telefonica, Samsung, software firm Savari, Chinese manufacturer Saic Motor, Qualcomm and Vodafone.

The executives urged Juncker to remove language from the bill that limits what technology carmakers will be able to use to build internet-connected vehicles. They also said that the current draft would make it hard for European companies to compete with US and China-based firms, where the national governments have taken actions to make way for 5G use in new internet-connected cars.

“Such a decision would stunt the overall emergence of 5G connectivity infrastructure in Europe, and run counter to the objectives of the Commission’s own 5G action plan, which aims to promote early deployment of 5G along major transport paths. A de-facto ITS-G5 mandate will mean that the transportation and telecommunication industries have much less incentive to invest in 5G for automotive and to provide 5G coverage alongside road corridors,” the letter said.

NATIONAL GOVERNMENTS ALSO DIVIDED OVER THE ISSUE

A handful of countries are hitting back against the Commission’s draft proposal. EURACTIV previously reported on blistering comments that the Finnish and Spanish transport ministries sent to the EU executive criticising its plans to lock in Wifi as the only option that carmakers could use to build vehicles with high-tech features like internet-connected automatic braking or smart entertainment systems.

Another big and important country also recently weighed in on the debate.

An official in the German economy ministry sent an 11-page position paper on 4 July backing the Wifi option. A personal letter sent with the paper was addressed to the German Association of the Automotive Industry VDA, the main lobby group for the country’s powerful auto sector.

“The upcoming implementation of V2X systems must use the technology that is available now on the market. Currently, only ITS-G5 is available. As a result, the corresponding infrastructure uses this technology,” the German paper said.

The text referred to V2X, meaning vehicles that connect to everything, including other cars and road infrastructure. ITS-G5 is the short-range Wifi technology.

However, even the German industry is divided. Two of the country’s biggest car companies, BMW and Daimler, signed the critical letter to Juncker asking for the Commission to change track and move away from its plans to side with the V2V Wifi-based option.

At the Brussels gathering of industry groups pushing for the cellular CV2-X technology last week, Eddy Hartog, the high-level official in charge of smart mobility at the Commission’s technology policy directorate DG Connect, insisted that the EU executive would stick to a neutral position and refrain from backing one option over the other. But he acknowledged that the debate had heated up.

Hartog, speaking after a lineup of industry representatives in favour of the 5G option, described their presentations as “a little bit of a beauty contest”.

DG MOVE has a very important decision to make this autumn. Under its own timetable, it is due to release fast-track proposals to define the technical solutions connected cars will be bound by for years to come.

The Commission’s forthcoming Delegated Act on Intelligent Transport Systems is of great concern to many in the auto, tech and telco sectors innovating connected car solutions – since the proposals appear to favour a specific technology above all others.

Its inclination towards vehicle-to-vehicle communication (V2V), based on short-range Wi-Fi (ITS-G5), will create barriers for the cellular vehicle-to-everything technology (C-V2X) that will exploit future 5G communications networks.

The narrow ITS-G5 option threatens to torpedo the Commission’s own target of reducing deaths and serious injuries from traffic accidents by 50% over the next decade. This is because it is C-V2X technology which will use 5G to connect with road infrastructure, improving information to drivers and thus road safety.

C-V2X is indeed the technology available today and of the future – it will also provide all sorts of media and entertainment to cars – whereas the best that can be said for ITS-G5 is that it is allegedly available. To base technical standards on an option that most regions of the world will soon be leaving behind does not bode well.

The Commission’s argument is that these two technological paths should be interoperable. Yet obliging interoperability in itself creates a huge barrier to an open market.

The Commission should stick to its promise to remain technologically neutral. It should not rush through such an important piece of legislation, but conduct transparent consultation with all stakeholders.

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