

# FACT vs. ~~FICTION~~

As the FCC closes in on a regulatory decision on Ligado's proposal, the Satellite Safety Alliance – an AstroTurf shell group created by a handful of fearful competitors and those who have fought for nearly a decade to preserve the status quo – has launched a new website to try and scare the public and policymakers from making sound, fact-based, and engineering-driven rulings that are in the best interests of America and the country's 5G future. #FactsMatter

 **FACT**

Ligado's proposal was agreed to by GPS equipment manufacturers and ensures GPS is protected. Leading GPS manufacturers including [Deere](#), [Garmin](#), [Trimble](#), [NovAtel](#), [Topcon Positioning](#), [Septentrio](#), and [Hexagon](#) have all publicly stated that Ligado's proposal will not harm their devices.

More than 1,500 hours of expert analysis and [government testing](#) at the National Advanced Spectrum and Communications Test Network (NASCTN) lab run by the DoD and NIST in Boulder, Colorado confirmed that Ligado's plan would not negatively impact GPS and that legacy equipment can be upgraded if necessary. This is consistent with the recent Executive Order issued by President Trump, instructing federal agencies to make receivers more resilient.

**Garmin:**

"[Ligado's] agreement to cut out-of-band emissions and power levels in the spectrum band closest to the GPS signal protects the interests of GPS users, and the company doesn't anticipate any performance-degradation issues for those using GPS technologies."

**Hexagon:**

"In partnership with Ligado Networks, we have demonstrated delivery of TerraStar X technology over both satellite and cellular networks to position vehicles with 5-centimetre (2-inch) accuracy in under a minute ... When combined with automotive-grade GNSS receivers available through Hexagon Positioning Intelligence, this technology allows automotive customers to evaluate positioning performance in real-time using data delivered over the cellular network or the L-band frequency using Ligado's SkyTerra satellite in North America."

**John Deere:**

"Deere herein confirms that it does not oppose grant of the Modification Application, as proposed, that would incorporate the full set of technical parameters and licensing conditions..."

**NovAtel:**

"We are pleased to report that after considerable discussion and analysis [NovAtel and Ligado] have reached a co-existence agreement which calls for future coordination ... On the basis of this understanding, NovAtel supports Commission granting of the modification applications."

**Septentrio:**

"Septentrio hardware and Ligado services are complementary. Septentrio has worked with Ligado to refine certain of Ligado's high-precision offerings. We are aware of Ligado's proposed operating parameters and have reviewed them against our existing and continuously evolving technology to protect GNSS receivers against a variety of disturbances. Ligado's proposed operating parameters fall within the type of interference GNSS receivers can be immune to by design."

**TopCon:**

"Over the past many months, we've worked closely with Ligado to conduct a thorough analysis. We've agreed that the parties will cooperate in the future if their proposal impacts TopCon's operations in any way. Our agreement is a positive step forward for both companies, and we look forward to coordinating with Ligado over the coming years as it deploys a ground network."

**Trimble:**

"Trimble continues to support the adoption of the Agreed License Conditions ... Taken as a whole, the Agreed License Conditions represent a compromise which balances the competing public policy interests raised by Ligado's proposed use of its licensed spectrum."

In fact, adoption of Ligado's proposal will help ensure GPS equipment is utilizing gold-standards of technology creating more resilient and robust GPS, which benefits all Americans.

## ~~FICTION~~

Aviation navigation equipment are being threatened by Ligado's proposal because it is sure to cause substantial interference.

### **FACT**

Ligado's proposal includes the [Federal Aviation Administration](#) recommended power level of 10 watts to ensure safe co-existence with certified aviation receivers.

In 2015, Ligado committed to working with the FAA to ensure that Ligado's operations are compatible with existing and future FAA safety standards. Ligado spent nearly a year engaged with the FAA on this issue and that process concluded that a power limit of 9.8 dBW for the lower downlink band will protect certified aviation receivers even under "the most restrictive of the certified aviation scenarios examined."

Accordingly, Ligado amended its applications in May 2018 to lower its proposed power limits, to the FAA recommended level of 10 watts, [a reduction of 99% from what industry said was necessary to protect GPS.](#)

The operating parameters Ligado proposed in its Amendment thus reflect the extensive analysis that the DOT and the FAA undertook with regard to the protection of aviation devices—an analytical process that the aviation interests were fully aware of and participated in extensively.

*"Metro firmly believes that Ligado's proposal will not affect the safe operation of helicopters and rejects any suggestions otherwise. To the contrary, Ligado's proposed operations will assist the aviation industry – specifically, helicopters - by providing much-needed specialized services that facilitate aviation operations."*

## ~~FICTION~~

Essential weather and other environmental data are being are being threatened by Ligado's proposal because it is sure to cause substantial interference.

### **FACT**

Ligado's application to modify its existing spectrum licenses are for different frequencies than those used by essential weather and other environmental data services. Some special interest groups are trying to artificially inflate their membership by conflating two different proceedings and issues.

The policy to repurpose and auction 1675-1680 MHz for shared commercial use with federal users, including NOAA, is based on long-standing, bipartisan administration policy dating back to 2014 and will raise hundreds of millions of dollars for the U.S. Treasury.

The FCC recently issued an NPRM. NOAA has received millions of taxpayer dollars to study how to enable the shared use and look at alternate ways to distribute its data more efficiently. And those studies have shown that weather data can and will be fully protected.

*"[W]e were up and running within minutes of our data servers being placed into operation. This contrasts with a satellite GRB receive station which would have taken many months to procure and install (if such funding had been available)."*

## ~~FICTION~~

Satellite communications services are being threatened by Ligado's proposal because it is sure to cause substantial interference.

## **FACT**

Iridium is the only satellite company making these allegations. It is a competitor and fears a new entrant. Analysis from the DoD (Iridium's longest customer) and its outside consultant Alion Science and Technology Corporation assessed concerns and concluded that Ligado's proposed operations would not negatively impact the relevant Iridium

satellite communications services. Today, Ligado operates its satellite phones at 1600 Watts. If its license modifications applications are approved, that power will decrease to 0.2 Watts – meaning its new devices will transmit significantly less than devices in use today.

## ~~FICTION~~

The Alliance seeks to protect critical satellite communications services whose operations are under threat.

## **FACT**

The Alliance is an astroturf shell group created by a fearful competitor, Washington lobby groups, and those who have fought for nearly a decade to maintain the status quo. It has nothing to do with protecting critical satellite communications

services because those services are not at risk. This is Washington at its worst, and policymakers and the public are smart enough to see through this.

## ~~FICTION~~

Multiple studies have shown that Ligado's plan will cause massive interference to Ligado's satellite neighbors.

## **FACT**

Facts and figures should trump fear tactics when deciding public policy.

After four plus years of expert analysis and review, there are no studies demonstrating that Ligado's plan will cause "massive interference" to anyone. The Alliance website has yet to post a new study or technical analysis backing up its misleading claims.

## ~~FICTION~~

Ligado's plan threatens to interfere with critical services provided by the SATCOM, aviation and real-time environmental satellite data communities, which depend upon interference-free operations in spectrum next door.

## FACT

Ligado's plan does not threaten to interfere with critical services. Ligado is a SATCOM provider currently operating a satellite network that supports mission critical applications, providing mobile connectivity to enterprise, public safety, and industrial end users throughout North America. Our partners in government and industry, such as public safety and transportation, use our network for emergency response, remote monitoring and numerous other mission-critical applications.

Ligado's plan is a public-private effort by industry and government to find a path forward.

What the Alliance neglects to note is that the "spectrum next door" to which they refer is actually Ligado's licensed spectrum.

Instead of supporting forward-looking policies that advance our country, infrastructure, and systems into the next-decade, the Alliance simply wants to secure competitive business advantages for its members by keeping things the way they've always been, and in doing so, prevent Ligado from using its licensed spectrum.

## ~~FICTION~~

That's why the Alliance has formed: to keep the public safe and productive by assuring Ligado's proposed plans do not hurt consumers and businesses.

## FACT

The Alliance was formed to stifle competition under the guise of protecting the public from nonexistent threats.

Ligado will utilize 35 MHz of licensed, mid-band spectrum to serve critical infrastructure sectors and facilitate the deployment of 5G in the United States. Ligado's combined approach to technology and network deployment will transform key industries such as manufacturing, agriculture, commercial transportation, utilities, and many more.

Ligado's proposed plans will accelerate communications systems for consumers and businesses across this country. We are the only company that would have the ability to operate both a satellite and terrestrial wireless network in the U.S. That type of service is a one-of-its-kind offering that critical industries—desperate for advanced connectivity—have been in need of for the last decade.

## ~~FICTION~~

The Alliance claims that everyone will benefit if it succeeds in its goal of preventing Ligado's application from being approved.

## FACT

The Alliance is threatening U.S. tech leadership at a time when America needs to win the 5G race. It is advancing the interests of its members at the expense of the country's future.

For spectrum policy, the Alliance's positions would set a dangerous precedent for measuring harmful interference in adjacent spectrum bands

and render hundreds of valuable spectrum and wireless services unusable, hampering U.S. technological leadership and opening the door to Chinese domination. In other words, the only ones who would benefit from this outcome would be Ligado's competitors, entrenched interests, and China.

## ~~FICTION~~

The Alliance will fight to ensure that the FCC puts the public's interest first.

## FACT

The public benefits when national infrastructure is better, safer, more robust and accessible to all. Protecting out-dated technologies is not in the public interest and is not how the U.S. won the 4G revolution and will hamper a 5G victory. By fighting Ligado's application, **the Alliance is not fighting to ensure that the FCC puts the public's interest first, but rather the opposite.**

Utilization of these airwaves can help accelerate 5G deployment in the United States, unlocking the 5G economy which will create 3 million new jobs, \$500 billion in economic growth, and \$275

in new investment. Upon approval, Ligado will invest \$800 million in American infrastructure industries and generate more than 8,000 American jobs across urban and rural districts in all 50 states.

Ligado's path forward supports the next generation of 5G networks for U.S. industries while accelerating the commercialization of tougher, more resilient and more sophisticated receivers worthy of our nation's military and critical infrastructure.

## ~~FICTION~~

Ligado has a new business plan every six months.

## FACT

Since 2015, Ligado has pursued the same fundamental twin goals of using satellite capability to offer customers full national coverage and building a terrestrial network to enhance that capability.

The wireless industry is a rapidly evolving industry and Ligado's capacity to provide mission-critical satellite and terrestrial networks offers infrastructure industries novel opportunities to innovate and improve their operations.

## ~~FICTION~~

Ligado's end goal is to sell the spectrum to the highest bidder once the FCC approves their terrestrial-only application.

## FACT

First, our company has had both our satellite and terrestrial licenses for over a decade. Second, Ligado has not applied for a terrestrial-only license.

Ligado aims to use both satellite services and a terrestrial component to offer secure, reliable, and ubiquitous connectivity to its customers.

## ~~FICTION~~

Ligado's proposal is to insert a terrestrial-only service in the middle of a satellite spectrum band.

## FACT

Ligado plans to use both satellite services and a terrestrial component to offer secure, reliable, and ubiquitous connectivity to its customers.

We've been authorized by the FCC to do this since 2004.

## ~~FICTION~~

Representative Greg Walden is quoted as being opposed to Ligado's applications and that there could be interference with existing users.

## FACT

The quote from Representative Greg Walden (R-OR) is taken out of context and conveniently leaves out the last part of his sentence where he indicated he is not opposed to Ligado's applications.

*"What...could be done here to get better built, better engineered receivers? Because this has been a long-time problem...I'd like to see more skin in the game on the receiver side than what we see today."*

—Representative Greg Walden

Moreover, Rep. Walden has stated [publicly](#) that "There's too much at stake, however, to allow federal users to sit inefficiently on spectrum when other countries are freeing up their mid-band resources... While some federal users may be reluctant to vacate mid-band spectrum, we must bear in mind the national security implications of winning the race on 5G."

 **FACT**

Robert McDowell testified in 2015 before a federal court that he believed the FCC would approve Ligado's application, saying: "The issues have been before the FCC for a long time. We're almost two years away from the end of 2015, and

that is more than ample time to come up with technical solutions." [Mr. McDowell conveniently changed his tune after being hired to lobby on behalf of Iridium.](#)

Industrial enterprises, consumers, and the wireless industry are excited for 35 MHz of mid-band spectrum in the L-band to come online. Nokia and Ericsson [agree](#) these frequencies can play an important role in our 5G future. Unfortunately, utilization of the spectrum for 5G is in jeopardy because a handful of legacy competitors and DC insiders continue to resist change and oppose Ligado becoming a competitive, new entrant in the rapidly growing industrial IoT market. Vague threats of impending disaster are simply fear tactics and deception, designed to achieve delay after delay for competitive gain. #FactsMatter.