

MYCELIA COMMUNICATIONS V2V/V2I



PITCH DECK BY :



SPIDER
V2X,LLC



MYCELIA V2V/V2I

Backstory:

Sometimes moving into the future means you have to look into the past. When we considered the concepts of communication and how it will be necessary to move forward we looked to what already had already created a communication network for over 700 million years; Mycelia. The mycelia network is the oldest existing communication network on the planet. At Spider we merge science and technology in ways no other's have before.

PROBLEM



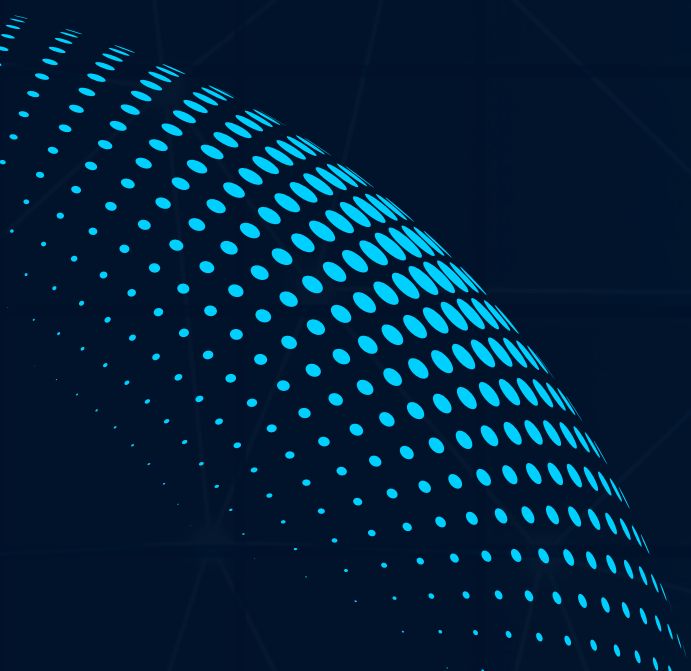
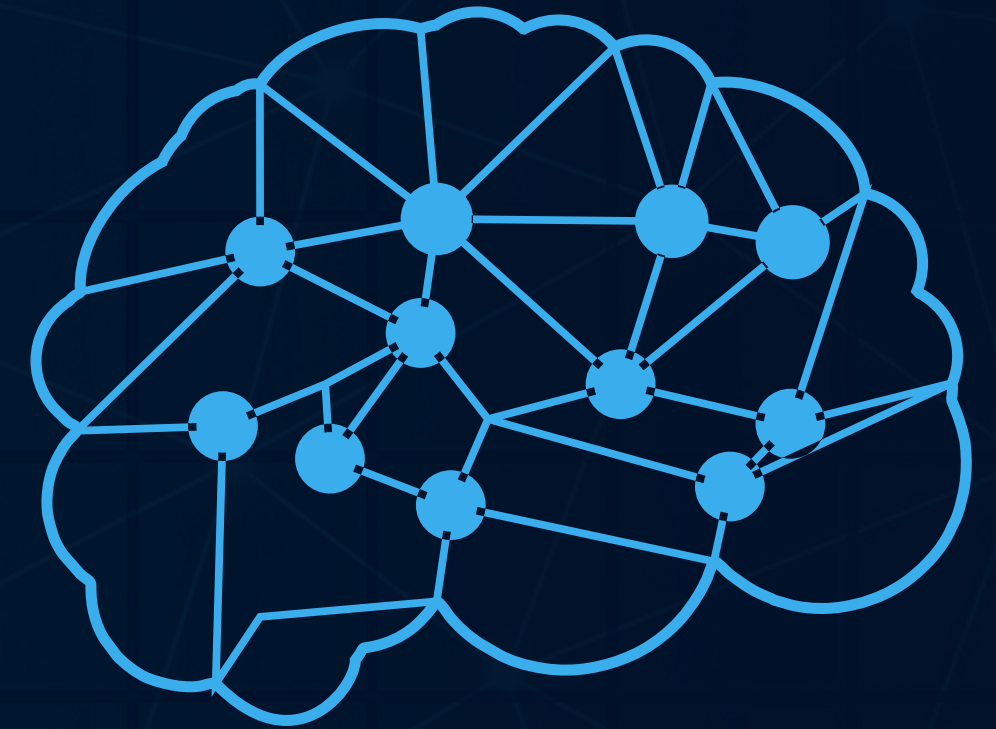
Currently today autonomous vehicles or driverless vehicles operate on sensors. Lighting, weather, environment, road construction, even simple bumps in the road can bring the vehicles to a complete stop and render them unusable.

- These vehicles can only see and sense things under fairly optimal conditions and they can only perceive things within a relatively short range around them.
- They cannot detect objects past a certain distance (see use case) and they cannot perceive objects or vehicles under a wide range of conditions.
- And once they perceive an object AVs cannot talk to each other to let each other know what they're doing next.
- Further constantly needing to be taken over by a human operator means they are not truly autonomous.



PROBLEM

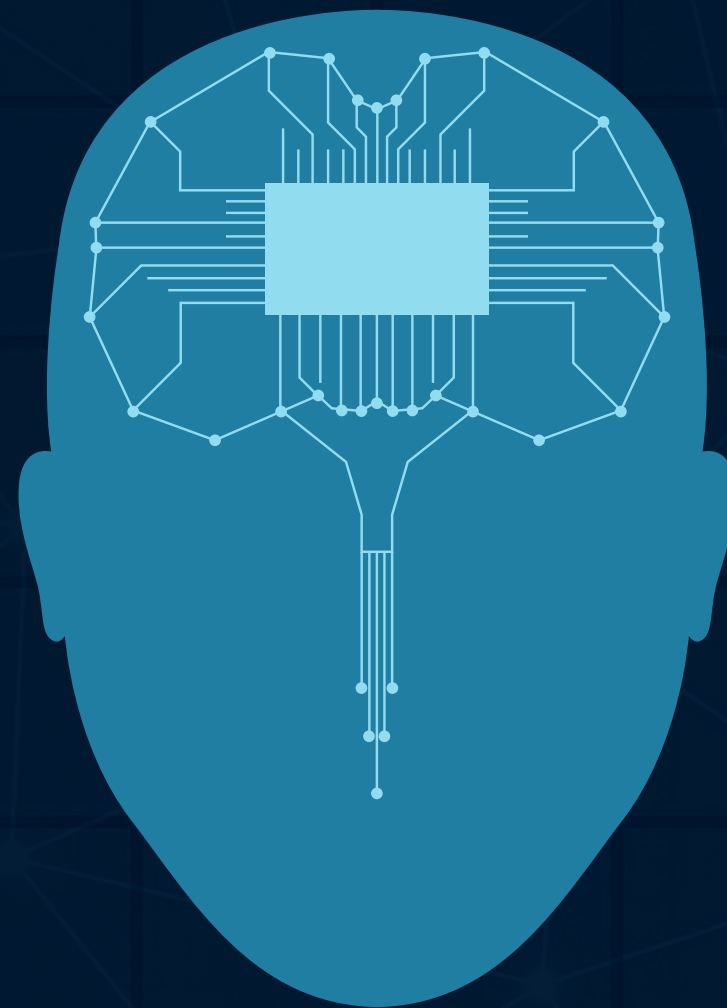
The current approach to solving V2V has been to explore cellular and WiFi (5g) based communication. There are hurdles and barriers that have prevented this approach from being successful. Available bandwidth of the spectrum, among several other issues has prevented these approaches from working.



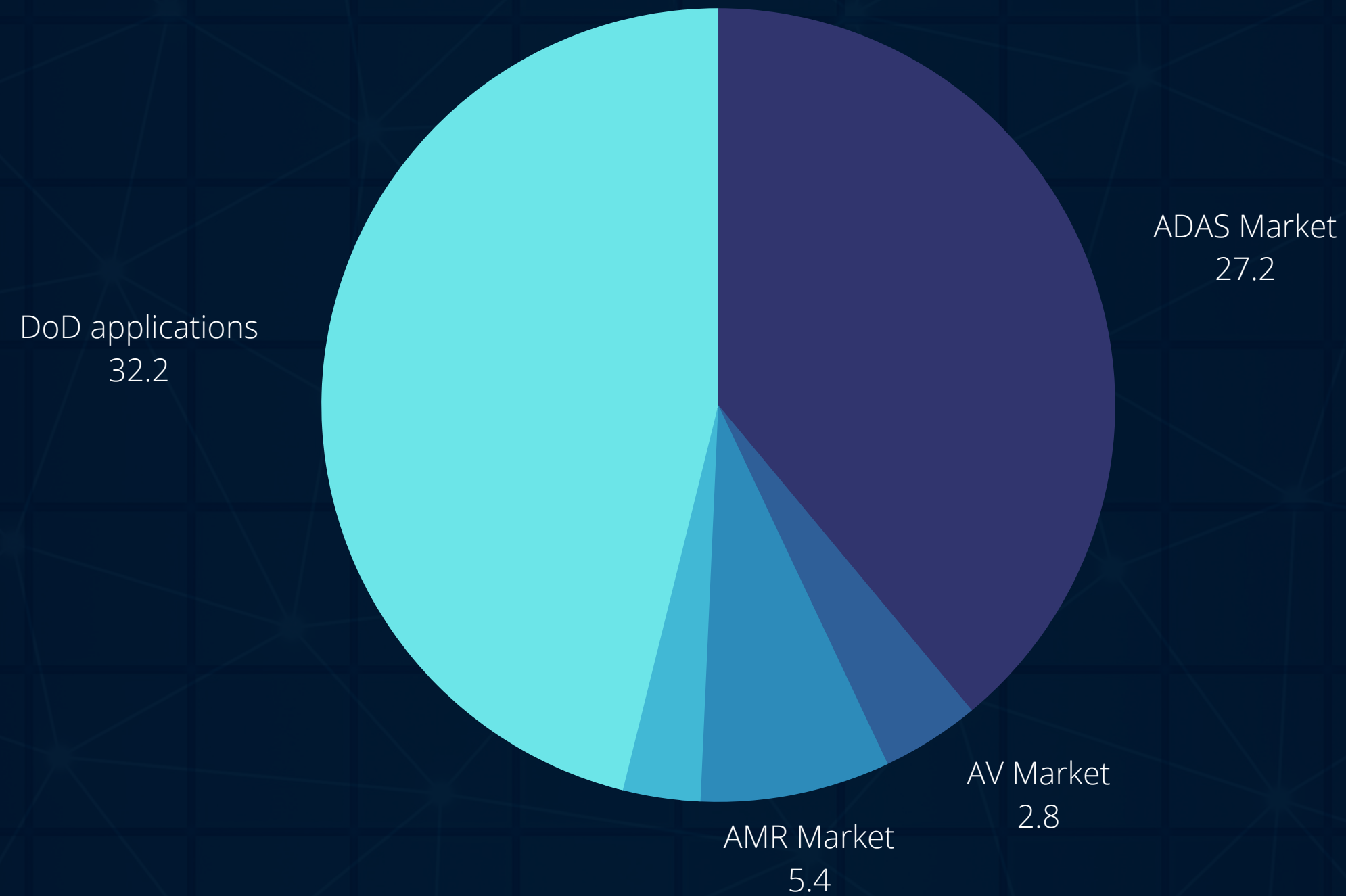
PROBLEM



There are significant privacy concerns in an AV world where vehicles carry a unique identifier and communicate location and intended actions. Current solutions do not address this issue at all. In certain nations (e.g. Germany) current privacy laws would render every other solution a non-starter.



MARKET SIZE (BILLIONS)



Current V2V market projections are wrong. Any V2V solution should be included even in cars with ADAS. This allows for AVs to communicate to and from even human operated vehicles which makes the V2V market significantly larger than market projections

SOLUTIONS



Use low latency communication technologies combined with a small data packet allows for high speed and rapid communication and processing of inbound signals. The small data packet also allows for a wide range of infrastructure (even construction pylons) to communicate needed behaviors preventing AVs from becoming "confused" or weather from shutting them down.



Leverage already proven technologies to solve the main issue of getting cars to communicate. Other issues (e.g. infotainment) can be solved in other ways relevant to that need. V2V and V2I is a separate issue. We solve the problems everyone else is having because our solution focuses.



While the vehicle will have its own globally unique identifier, that ID should not be transmitted out during communications. Further, all data about other vehicles must be irrevocably purged from memory as soon as it is no longer needed. (such as within 10 minutes after a vehicle has moved out of range or communicated behaviors have taken it off the same roadway).



STRENGTH

Small team of developers with a wide base of experience dedicated to solving this problem, not trying to solve every problem (such as how to get infotainment features into the vehicle)

WEAKNESS

Small company operating on a small budget means people aren't aware of who we are, what we are doing, or get people other relevant players to take us seriously

SWOT

OPPORTUNITIES

We are the only company to have solved the problem and have completed and functioning technology in this space. We have the answers that the entire industry has been searching for. This is so much the case that we are very near to having working X2X solutions in place.

THREATS

Our small budget means a legal challenge (which we have not encountered but this is a litigious industry) would be difficult to combat.



OUR PRODUCT



THE FUTURE

All vehicles and AMRs communicate with each other all relevant information and only the needed information for them to operate safely.



FEATURES

Rapid two-way communication between all vehicles, AMRs, and infrastructure of all types (including construction)

- Small data packet
- High degree of privacy by design

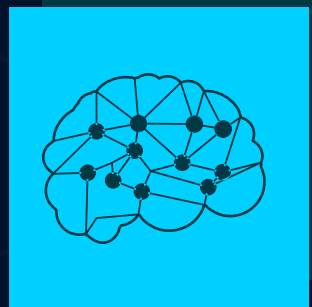


OBJECTIVE

It is our goal for someone to acquire the IP for this solution, including patenting rights. We would like to remain as anonymous as possible throughout the process without jeopardizing the value the solution deserves.

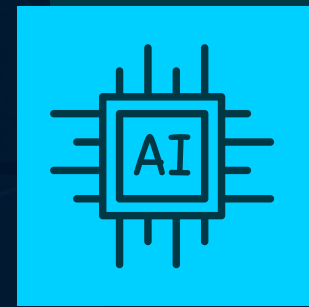


4 INNOVATIONS



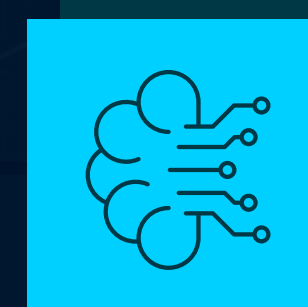
V2V/V2I

High speed, low latency, small data packet, and two way communication between Vehicles/AMRs and equipped infrastructure.



V2X

Our next generation project, allows for communication between the vehicle and almost everything around it (including cell phones)



X2X

Coming quickly on the heels of our V2X solution will be a working X2X that will allow everything to communicate with everything else. Even sensors will be able to plug into power and communicate with all relevant objects around it.



