SEER EYE
Shaping the Future of Autonomous Vehicles
A product of Solutions Rexys Inc.

Autonomous Vehicle Industry

The autonomous vehicle (AV) industry is growing at double digit growth rates driven by several factors such as a growing emphasis toward road safety, favorable government policies to develop infrastructures for AVs, increasing road congestion as well as energy and transit time reduction for commercial fleets.

The AV Industry Challenges

To achieve Level 3 and beyond autonomy the biggest challenge will be to reassure regulating authorities and the public that commercial and private AVs are safe and reliable. Achieving this goal will require from the industry to test on simulators an infinite number of traffic edge cases based on past or potential occurrences in many environmental conditions.

Levels of Autonomy

Level 0: No Automation.
Level 1: Driver Assistance.
Level 2: Partial Automation.
Level 3: Conditional Automation.
Level 4: High Automation.
Level 5: Full Automation.

The AV Industry Trends

The increased demand for simulation of AV is accelerated by several trends:

Societal:
Demand for reliable transportation systems and road safety push authorities to constantly increase mandates to uses ADAS systems and thus the demand for ADAS simulation.

Infrastructure:
Increasing governments initiatives toward connected and autonomous infrastructure (Testbeds for AVs, road marking, parking, emergency vehicle notification …) which increases V2X and V2V data streams that need to be processed by AVs.

Technological:
The accelerating roll out of 5G is multiplying the opportunities of connected infrastructure, digital in real time maps, intelligent navigation and especially an increasing number of connect vehicles will increase the number of V2X and V2V data sources that will feed and be fed by the simulated AV. It will also increase the need for very tight synchronous requirements that cellular V2X needs.

Business:
Logistic industry is willing to shift toward autonomous trucks to increase fuel efficiency (Platooning = - 15% fuel) will also require an increased amount of ADAS testing simulation by OEM's and their respective Tier 1 and 2 suppliers.
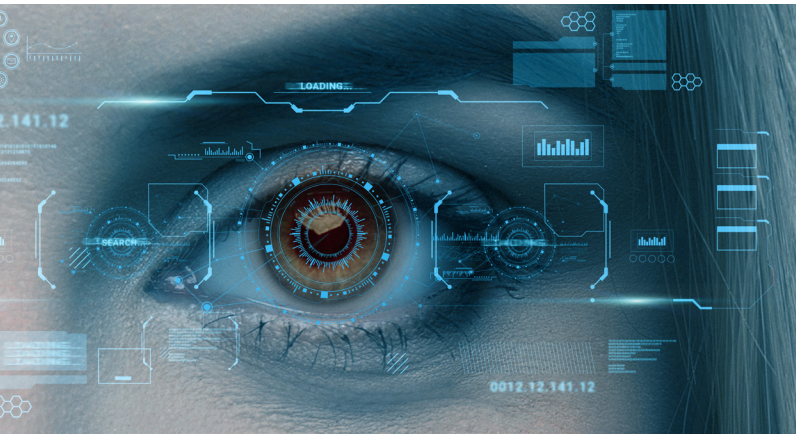
All the above trends will boost the demand for AV simulation software which is expected to add up to a market of 1 Bio USD by 2022 growing at more than 20 % per year.

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REXYS

SEER EYE
The AV Simulation Solution

Currently available simulation softwares achieve at best up 2 or 3 sensors data processing before loosing in quality and thus becoming less relevant for accurate AV algorithm testing. To achieve the safety and reliability goal, SEER EYE offers:
- A highly scalable simulation environment able to simulate quickly and efficiently millions of edge case scenarios
- Fully synchronous simulation capable to process in real time an increasing number of data streams without loss of image quality or increase in latency.

Business model

SEER EYE will target OEM and Tier 1, Tier 2 suppliers in need of highly scalable, high fidelity synchronous multi data stream simulations.

Appreciating the varying needs of simulation complexity and simulation time needed by the different profile of customers, SeerEye opted for a Simulation as a Service (SimaaS) business model.

Customers will only pay for the services of simulation they need, the complexity they require and the time and amount of simulation they intend to run. High complexity and volume customer will be offered subscription models instead of a pay per use model to give them visibility on their budgeting needs and providing Rexys with a steady and predictable revenue stream.

Beachhead market

Rexys Inc. has already acquired several customers in the academic market, generating revenue by selling simulation time on SEER EYE and getting customer feedback to improve features and user experience.
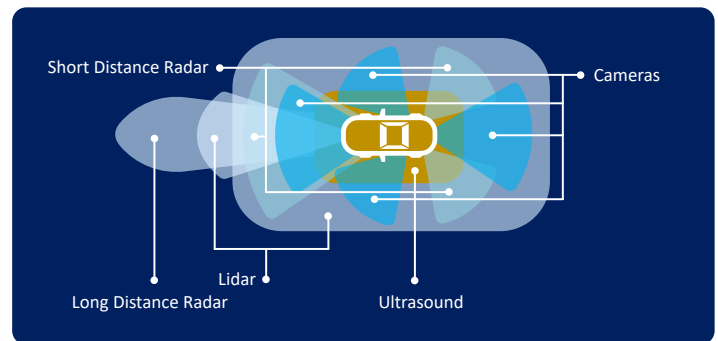
SEER EYE SimaaS solution is tackling the market's main pain point. This simulation software solution is highly scalable and can accommodate an almost infinite number of data streams without any loss of quality.

Addressable Markets for SEER EYE

- OEM using AV simulation to develop AV algorithms.
- Tier 1 and Tier 2 suppliers to AV OEMs.
- Regulating Authorities using simulation to test autonomous infrastructure roll out.
- Academic Research using simulation to further develop AV algorithm computing.