Our onboard technologies bring easier mobility and better safety to everyone

SafetyNex the Driving Force of Nexyad Onboard Products

NEXYAD Automotive & Transportation Newsletter #11, August the 24th, 2016

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- Future Events

- Accident fatalities in Tesla car : NEXYAD modules might prevent accident.

- White paper "Vehicle Telematics, Measurement of Risk in Driving, Respect of Individual Privacy" (Auto Insurance and ADAS applications)

- A scale model car to test ADAS (ADAS validation)

- SafetyNex available on App Store and Google Play Store end of october

Future Events

NEXYAD at the Mondial de l'Automobile 2016, october 5th.

NEXYAD will be on Mondial de l'Automobile 2016 at Paris, october 5th invited by BMW on BMW booth.
After have been choosen as one of the three winners of BMW Techdate Challenge 2016.

Reminder : BMW Techdate wished to push ahead the french innovative high tech and identify new partners for technology matters. After a picky skimming, 20 startups were selected to present their project in front of a professional panel of Automotive, mobility, and connected car experts.

The quality of SafetyNex impressed the jury and the 9th june, BMW France announced Nexyad as part of the 3 winners of the first Techdate Challenge with Oridao and Sentryo.

Gérard Yahiaoui, Nexyad CEO

Reporter **Stephane Soumier** invited **Serge Naudin** CEO of BMW Group France and **Gerard Yahiaoui** CEO of Nexyad at « Good Morning Business » on the major french TV Channel BFM Business.

From left to right : Serge Naudin, Stéphane Soumier, Gérard Yahiaoui

NEXYAD will visit Automotive major companies in Germany in november 2016

Four french competitive clusters, Mov'eo, ID4CAR, LUBT and Véhicule du futur organized a new mission for their members : The International Partnership Approach. NEXYAD will take part of it.

Onboard Systems for the Connected and Smart Car - 28th november / 1st december 2016

The delegation will visit BMW, AUDI, CONTINENTAL, DAIMLER, BOSCH, PORSCHE, and the University of Nuremberg... in the cities of Munich, Regensburg, Nuremberg and Stuttgart.

More information here

NEXYAD at the next [CES](#) in Las Vegas 5-8 January, 2O17

All lights are green for SafetyNex App on Smartphone
Four french Insurance companies are currently testing SafetyNex.

Since end of june 2016, it is possible to ask NEXYAD for a test (30 days) of SafetyNex App on Android Smartphone.
Do not hesitate to request.

TRY IT !
SafetyNex for IOS (Iphone) will be available at the end of september.

Accident fatalities in Tesla car : NEXYAD modules might prevent accident.

Accident fatalities in a TESLA car might have been avoided by using software modules of NEXYAD : the time for monitoring circuit has come.
By NEXYAD

Processing circuit, informing auto-pilot systems, control, etc ... from perception, data fusion, decision-making, and automatic control of actuators, are usually very well designed, and based on high-performance modules. But unfortunately, this is not enough to void the risk of accidents. Indeed, for the treatment of this risk, it lacks a parallel circuit (parallel and independent) called "monitoring" circuit.
To understand this need for a monitoring circuit, one must first understand the level of complexity of a road scene viewed from a camera.

The variability of road scenes is actually much more than what a normal person comes to imagine. Indeed, a color image, which has eight bits for each colors (then, 24-bit, as there are 3 colors) may encode 2^{24} different color levels per pixel (more than 65,000 different possible values). HD video has more than 2 million pixels.
This means that the matrix of HD 8-bit color image may encode more than $65\,000^{2\,000\,000}$ images !
This huge number is simply unimaginable.

[Read the entire paper](#)

http://www.nextinpact.com/news/100804-accident-mortel-tesla-model-s-roulait-trop-vite-enquete-se-poursuit.htm

White paper "Vehicle Telematics, Measurement of Risk in Driving, Respect of Individual Privacy" (Auto Insurance and ADAS applications)

"Vehicle Telematics, measurement of risk in driving, respect of individual Privacy" is the new white paper from Nexyad, which explains important points to check on a vehicle telematics application to assess the risk taken by the driver about his driving task.

The calculation of risk requires having contextualized data that are inherently confidential, personal, and therefore which must in no case be recorded on computer servers in a cloud as they contain, directly or indirectly, information about offenses (in France it is forbidden: by respect of the criminal code and rules CNIL).

Onboard-measurement-of-risk-of-accident-with-SafetyNet-real-time-risk-assessment.pdf

A scale model car to test ADAS (ADAS validation)

NEXYAD will use a scale model car for ADAS and driverless software modules testing & validation.

Nexyad built their own intelligent scale model of car integrating a camera and telecommunications to a PC running the RT-MAPS framework (by INTEMPORA).
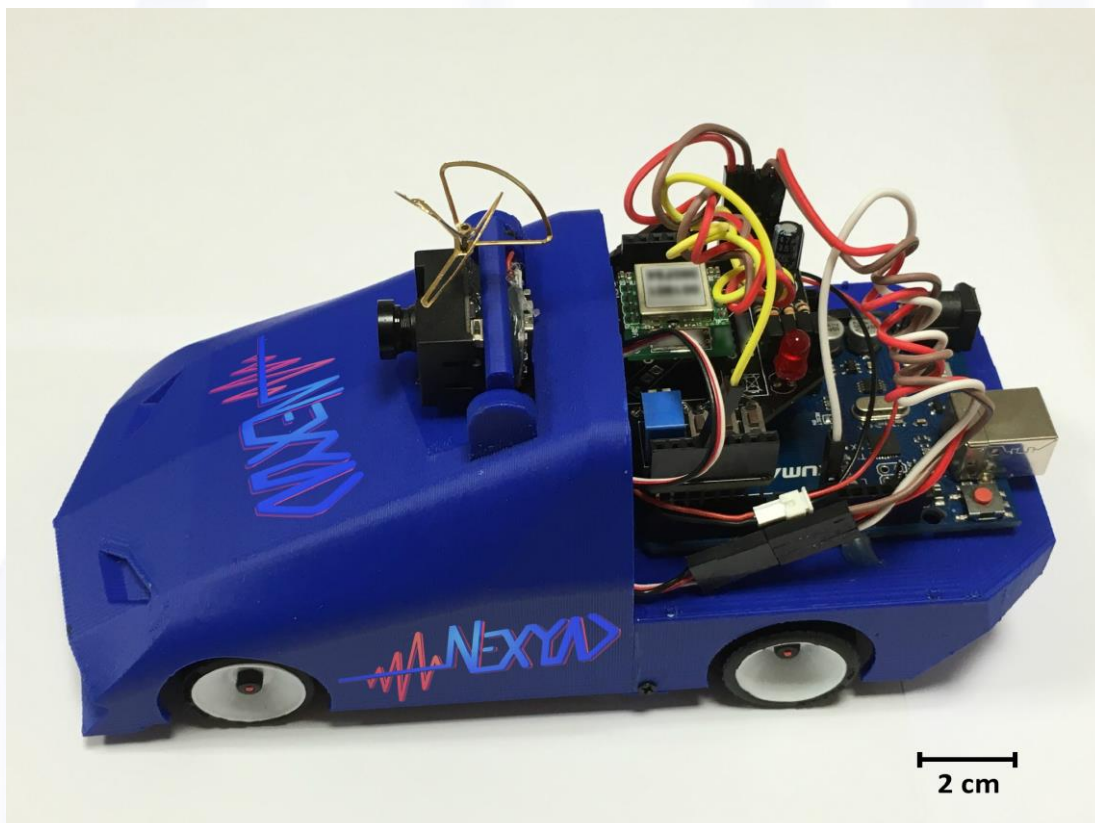
The PC runs real world detection software modules of NEXYAD into the framework RT-MAPS. Then the scale model car can evoluate on a scale model landscape where it is easy to generate complex use cases such as sun rising and other perturbations that are not easy to record in the real world and that are not that easy to simulate.

Beside, Nexyad built a testing and validation database that will represent thousands of million km of natural driving with the fewest number of vids as possible.
NB : this **NEXYAD validation database** will be available for free to every research and development team in the world on the NEXYAD web site.

This database will be used by NEXYAD of course to test and validate their own software modules for ADAS and Driverless cars :
. RoadNex for road detection
. ObstaNex for obstacles detection
. ObstaNex BiCam for obstacles detection using 2 cams
. VisiNex for visibility measurement
. SafetyNex for real time onboard risk assessment

This database is the result of a advanced methodology published in the 90's by Nexyad Founder. The methodology "AGENDA" allows to build and validate camera-based complex detection and recognition systems (for ADAS and driverless cars).
This methodology was recently re-published and presented in different symposiums in Europe to show exactly how it may be used by car manufacturers and their OEMs.

SafetyNex available on App Store and Google Play Store end of october

Interest for the driver :
. SafetyNex warns you when there is a danger ahead in function of your car speed (save your health or your life)
. SafetyNex warns you when your speed is over legal limitation (save your money and your driving licence)

Interest for Insurance Companies :
. SafetyNex provides qualified data as histogram of risk taken by the driver, eco driving score, statistics of usages, contingency tables, etc.

Interests for car manufacturers :
. SafetyNex can be used as ADAS for customers
. SafetyNex gives the risk taken by the robot driver of future Autonomous Car

AVAILABLE END OF OCTOBER ON :

More information

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Previous Newsletter : NEXYAD Products : Spreading the World !

NEXYAD is a High-Tech SME member of the science and innovation French cluster Mo'veo
http://pole-moveo.org/en/

NEXYAD is member of the "Groupement ADAS"
http://groupementadas.canalblog.com/

To read more, go the NEXYAD Automotive & Transportation page
http://nexyad.net/Automotive-Transportation/

French Ministry of Research approved NEXYAD with CIR Label, again, for years 2015, 2016 and 2017.

Please feel free to ask questions : sales@nexyad.net

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