



Advanced Big Data Value Chain for Public Safety and Personal Security

Newsletter / April 2019

Welcome to the Latest News Alert of the AEGIS project

In this newsletter

- [Evaluation of Demonstrators - Automotive](#)

 - [Evaluation of Demonstrators - Insurance](#)

 - [Evaluation of Demonstrators - Smart Home and Assisted Living](#)

 - [VIF organizes Knowledge Exchange Workshop on Vehicle Data Service Ecosystems](#)

 - [About Us](#)

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Evaluation of Demonstrators - Automotive

As the Aegis project progresses and the functionalities offered by the data and analytics platform are implemented, the three demonstrators were called upon to evaluate the usefulness and usability of it in concrete scenarios from various business sectors. An early evaluation was also performed during June 2018, while the final one will take place at the finishing stages of the project. The results of the intermediate demonstrators' evaluation, which took place

during the closing months of 2018 are summarised here.

The aim of the Automotive Demonstrator V2 – Safe Driving Indicator is to detect unsafe driving behavior such as hard braking, hard acceleration, and hard cornering, considering also environmental information, and then quantify this unsafe driving behavior within a risk score.

There are two relevant data sources for this demonstrator: vehicle driving data and historical weather data. Vehicle driving data is collected by using a data logger developed at VIRTUAL VEHICLE, based on a BeagleBone Black single plate computer connected to a vehicle's on-board diagnostics interface. The data logger turns on at the vehicle's start and then automatically starts recording data.

The information generated by demonstrator version 2 is intended to be used for driver coaching. To detect unsafe driving behavior, a data-analysis pipeline is executed on the AEGIS platform. Trip-specific safety-relevant events (harsh acceleration, harsh braking, harsh cornering) are visualized by using markers on a geographic map. The emergence of events is furthermore captured within a driving risk score. This risk score ('safe driving score') is provided as a % value in a table for all trips of a driver as well as a total score for this driver as the average value of the last 50 trip's risk scores.

More information can be found [here](#).

Evaluation of Demonstrators - Insurance

The second Scenario of the Insurance Demonstrator is mostly related to the detection of a foreseen event of interest by the Event Detection Tool, differently from the previous one, in which the focus was on contacting the interested customers after a related event was just happened (anticipating their potential request). Through the AEGIS platform, the HDI Data Scientists can evaluate the risk exposure of the company by identifying the customers that could be affected by the events and the type of the policy/-ies held by them. Through the analysis of some features, for instance the number of accidents and the number of previous injuries, for each customer a priority value is assigned. The list of customers is then sent to the Web App for further processing by the HDI operators that will contact the customers.

The HDI Data Scientist may also send a push notification to the customers that have installed the HDI Mobile App, hence to those that had signed an AEGIS-

specific terms and conditions agreement.

The notification received by the HDI customers, includes details of the event as well as information about further policy/-ies they could subscribe (type of policy, price, duration, restrictions) and contact references of the HDI agent that can support them. For this reason, every time a notification is sent to a customer, a mirroring notification is sent to the HDI Web App workspace of the responsible agent.

More information can be found [here](#).

Evaluation of Demonstrators - Smart Home and Assisted Living

The evaluation of the SHAL demonstrator pertained the two medium stage scenarios and the test cases examined to verify their completion.

Scenario 3 – Notifications and alerts for (at-risk) individuals

Scenario 3 includes the steps that have to be performed in order to onboard an individual and a carer to the system, which results in the acquisition of personal data that are used to classify (at-risk) individuals into specific profiles. The accumulated data is then used (in an anonymous manner) by the Care Service Providers (CSPs), in conjunction with external data, for further analysis and for issuing simple notifications. In parallel, cares are registered to the platform and are connected to the (at-risk) individuals.

Scenario 4 – Smart home comfort profiling and notifications

Scenario 4 pertains the comfort profile model fitting framework and associated notifications to the end users, and constitutes the intermediate level of the Smart Home service of the demonstrator. The profiling process concentrates on the identification of personalised preferences for an at-risk person, based on the monitored environmental conditions and operational status, when he/she is at his/her living premises. Such comfort profiles are subsequently enriched by limits regarding VOC conditions, extracted from respective standards and directives. Given these models, the real-time data are continuously examined, and notifications/alerts, shown to the mobile app of the individual and/or informal carer, are generated, when conditions are recognised as not comfortable or potential detrimental to the person's health.

More information can be found [here](#).

VIF organizes Knowledge Exchange Workshop on Vehicle Data Service Ecosystems

A 2-day knowledge exchange workshop was conducted between VIF and ATB – Institute for Applied Systems Technology Bremen GmbH – in Bremen at 28.1 and 29.1.2019. VIF and ATB have met before in the Workshop Big Vehicle Data to Digital Services organized by VIF, where some common ground in research topics has been identified.

ATB is the coordinator of the H2020 Big Data project CROSS-CPP funded in the same call as AEGIS, namely ICT-14-2016-2017. CROSS-CPP aims at ‘establishing an IT environment offering data streams coming from mass products, such as vehicles and smart building automation systems’. CROSS-CPP is the successor project of AutoMat, which aimed at forming a ‘cross-border Vehicle Big Data Marketplace that leverages currently unused information gathered from connected vehicles’.

To facilitate knowledge exchange, VIF presented results of the AEGIS project to ATB and more specifically introduced the results from the automotive demonstrator with respect to inferring broken roads and safe driving. Many commonalities could be identified between AEGIS and CROSS-CPP. ATB has shown interest into the business applications developed by VIF in AEGIS, as similar ideas have been discussed by ATB in the AutoMat and CROSS-CPP projects with car manufacturers. ATB introduced the vehicle information model as a brand independent data model to make vehicle data available to cross-sectorial industries allowing cross-domain use cases, which will be extended in CROSS-CPP.

During this fruitful workshop many topics were aligned, and future cooperation activities were discussed.



About Us

AEGIS is a 30-month project, co-funded by the European Commission that aims that aims to bring together the network, data and technologies in a big data platform, utilising the latest advancements in the linked and big data landscape.

The AEGIS project, through its Big Data Platform, offers:

- Big data processing, enrichment, storage, analysis and sharing.
- Cross-domain batch and streaming data integration and harmonisation
- DCAT-AP conformed metadata.
- Data anonymization and semantic enrichment procedures.

You can find out more on the AEGIS project by visiting our website at <https://www.aegis-bigdata.eu/>.



The AEGIS project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 732189.