

Press release

Toulouse - February 6th, 2017

Launch of tests on a railway line in the Occitanie / Pyrénées-Méditerranée Region. An opportunity for the Region's innovative companies to mobilize their technologies for mobility.

As organizing authorities for transport, French Regions are working with SNCF (the French National Railway Company) to foster the emergence of new solutions for the operation and control of regional trains and railway infrastructures. On September 1st, the Occitanie / Pyrénées-Méditerranée Region and GUIDE (GNSS Testing Laboratory) signed, with the support of the CNES and the Aerospace Valley Center, an agreement to open a railway line to field tests for companies seeking to perform assessments aboard trains. The GEOFER project, managed by GUIDE, offers the advantage to test in operational situations applications based on radionavigation and telecommunication data which were initially predestined to other business sectors.

Through this project, the Occitanie / Pyrénées-Méditerranée Region pursues two strategic stakes on its network : the first aims to strengthen mobility within the Region by better control of operating costs and, the second, to locally diversify industrial activities to rail.

Following the General States of Rail and Intermodality 2016, the Region, in coordination with the SNCF (Network & Mobilities), adopted the Tessonnières-Rodez line (Tarn/Aveyron) as a platform for experimentations. It crosses a mountainous area conducive to tests in constrained environments.

Calls for Expression of Interest, issued by the Region, will be expected to, on the one hand, bring out the space technologies likely of modernizing the secondary lines of the national railway network and, on the other hand, innovate and reduce the total costs of owning terrestrial infrastructures by embedding, for example, some functions of railway signaling. Companies will thus have the opportunity to experiment their solutions in the railway field, which is usually very selective.

As leader of the project, GUIDE is already working on the project to geo-reference the line and to instrument a train which will calibrate the future embedded applications. The collected data will then be re-used/replayed on test benches to support solution developers to tune their embedded systems more easily.

Co-financer of Geofer with the Region, the CNES is actively involved in the tests. A last generation receiver, implementing an algorithm (PPP-WIZARD) developed by its engineers, will be tested on-board. This software will exploit, on an experimental basis, future satellite services to achieve decimetric accuracy. This technology has the ambition to make possible many applications dedicated to the trains driving, such as precise dock stops or a better prediction of maintenance operations.

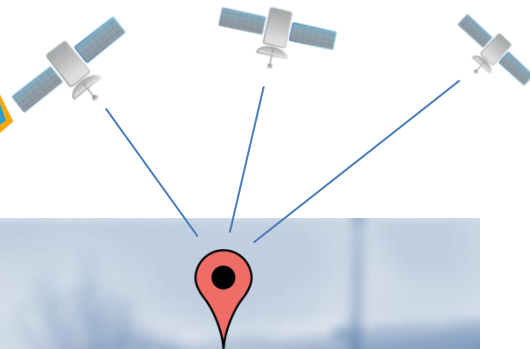
M3 Systems will supply the mission-receiver responsible for dispatching accurate and real-time data about the positioning and speed of the train to embedded applications. This device merges the satellite measurements with those of other sensors used to ensure the quality of the geolocation messages.

By way of example, devices such as shock sensors to detect unusual efforts of the pantograph against the overhead cable, speed control systems for eco-driving, roaming systems for telecommunication means, etc., will be developed, implemented and evaluated on the line and on simulation benches.



Let's meet
during the SIFER !

- Guide's stand : n°2/430 - Mipirail Innovation area.
- CNES – Guide Conference : Thursday March 23th – 2.30 pm.



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Context:

On 21th April 2016, the Occitanie / Pyrénées-Méditerranée Region launched the General States of Rail and Intermodality and validated the implementation of a testing line on the rail network between Rodez and Tessonnières.

Geofer is part of the 11th plan of the States-General: innovation.

More information: <http://www.laregion.fr/rail-> aurianne.perie@laregion.fr

In addition, the CNES and SNCF are working together to find innovative solutions for rail. These innovations lead to a partnership agreement which should facilitate the lives of travelers and citizens.

About GUIDE-GNSS:

Stemming from the partnership of the French space industry main players, GUIDE aims to provide Solutions Developers with the instrumentation, skills and approvals needed to tackle the most demanding markets for satellite radio navigation. Its contribution is particularly expected for the certification of geolocation solutions.

GUIDE has specific means to test the most advanced GNSS solutions (Components, Algorithms, Receivers, Systems), whether in the laboratory by simulation or on real sites, in urban, road, maritime zones, on circuit, rails and in the air. GUIDE relies on its members to provide the finest expertise in relation to the customer's need. The founding members are all recognized specialists in the GNSS' field.

www.guide-gnss.com

About the CNES:

Public institution with an industrial and commercial character (EPIC), the CNES proposes to the public authorities the French space policy and implements in five main strategic areas: Ariane, Science, Observation, Telecommunications and Defense.

The CNES engineers are also in charge of helping to develop the use of spatial data for the benefit of all. The emergence of a downstream ecosystem exploiting space technologies and infrastructures is an important axis of development for the CNES's action. It is essentially based on a network of SMEs and medium-sized companies, adapted to the evolutions of the market, supported by actions implemented with existing players (CoSpace, competitiveness clusters, incubators and accelerators and Bpifrance, etc.).

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About SNCF :

The SNCF Group is engaged in an extensive program of digital transformation in the service of performance to propose a better service for travelers. The digital transformation of SNCF is deployed through numerous projects and thanks to the expertise and passion of many employees. In 2016, SNCF invested more than 300 million euros in the Internet of objects to initiate the enrichment and optimization of its production tools.

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About Aerospace Valley:

Since its creation, the cluster has labeled 921 R & D projects. On the South-West of France, Aerospace Valley brings together companies, research laboratories and training institutions in order to develop synergies and cooperations.

The growing number of members (Aerospace Valley has 808 members, of which 473 are SMEs) from large companies, SMEs, research laboratories, universities and colleges, communities, economic development structures, testifies to the unanimous support for this formidable dynamic.

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