



## COMET

### COMPETITIVE, AUTONOMOUS SUBSEA ROBOTS THAT OPERATE IN GROUPS

AUVs (Autonomous Underwater Vehicles) have proven their ability in numerous fields, such as hydrography, homeland security, military applications, energy (offshore oil and gas), scientific research and the environment. The vehicles currently on the market are, however, cumbersome and expensive.

The COMET project sought to demonstrate the innovative concept of small, low-cost load-carrying AUVs, designed to operate as a group, accept a range of useful loadings and offer extremely flexible configurations for carrying out subsea operations.

The work undertaken as part of the COMET project led to development of a compact subsea robot with unique capabilities in terms of speed, endurance and accurate positioning, all at a low cost.

A demonstrator capable of autonomous decision-making and of coordinating a group of AUVs was developed and tested at sea. The advantages of deploying a group of AUVs was thus proven: reduced costs, accurate navigation over the long term, user friendly solution and flexible mission reconfiguration, particularly in the event of an AUV being lost.

A users' forum has now been set up as an effective way of gathering information about the needs in new fields and of sharing feedback both on how the equipment performs as well as on its deployment.

#### Spin offs and future developments

- 3 permanent posts created plus 1 temporary one
- 1 patent registered by RTsys
- 5 scientific publications (Telecom Bretagne)
- 4 symposium presentations (ENSTA Bretagne)

The COMET project involved a solid industry/research partnership. It enabled RTsys to acquire and master technologies associated with designing undersea drones and to perfect the technology required to coordinate groups of AUVs.

An initial application directed at deep mining is in progress,

#### Partners

##### Companies

RTSys, Caudan [Project Developer]  
Williamson Électronique, Sainte-Luce  
ZTI, Lannion

##### Research centers

ENSTA Bretagne, Brest  
IMT Atlantique Bretagne-Pays de la Loire, Brest  
Lab-STICC, Brest

#### Funders

- Fonds Unique Interministériel
- Bpifrance
- Région Bretagne
- Région Pays de la Loire
- Conseil départemental des Côtes d'Armor
- Conseil départemental du Morbihan
- Lorient Agglomération
- Lannion-Trégor Communauté

#### Labelisation

30/04/2010

#### Overall budget

2 860 K€

with other potential future developments in the area of mine warfare. There are many possible applications and the technology developed offers RTsys a technological and competitive advantage in the field of undersea drones.