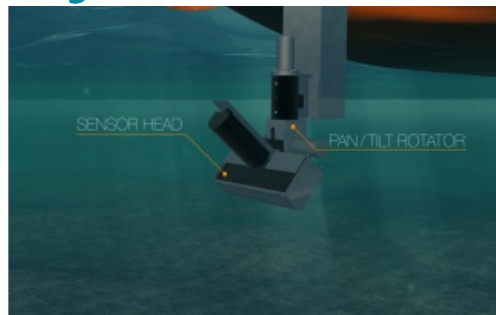


# ECE Offshore and Stema Systems Intensify Collaboration



Stema Systems and ECE Offshore sealed their corporation in November 2015, formalising their collaboration in the shape of a strategic corporation agreement. Reinier Nagtegaal of ECE Offshore and Pepijn Peter of Stema Systems signed the official corporation agreement. The corporation between ECE Offshore and Stema Systems started around one and half year ago, due to a demand for real time monitoring of the installation of the HCAC/HVDC cables, flexibles & umbilicals at sea.

This need was fed by the necessity of diminishing the risk associated with installation and thereby reducing the damage potential. This risk mitigation would in turn guarantee the increase of life and durability of the cables. ECE Offshore's clients have long been looking for an alternative for the monitoring of the cable deployment on and in the sea bed.

## Offshore Acoustic System

Stema Systems, originally a sub-bottom specialist with expertise in hydrographical and geological analysis, had already developed a cable detection system, an application making both parties ideally suited for development of the cable laying monitoring, coming at the issue from the software side and hardware side respectively. A lot of research both software and hardware lead to the birth of the OASYS (Offshore Acoustic System). OASYS is expected to become an important instrument for sub-sea construction work where project developers can, during their operations, monitor all the relevant parameters of the total operation (from the departure from the vessel to the post-burial) in UTM coordinates which can be handed over to the commissioning party and their insurers.

## Integration of Dynamic Data Processing

The hardware side of the OASYS Cable system includes an ECE Offshore developed hydraulic pan and tilt rotator system, combined with the Stema Systems-delivered acoustic sonar system with motion sensor. The ECE Offshore-developed data processing & object detection software analyses the data originating from the multi-beam and translates this into a real time location of objects within the sweep reach (500m) of the sensor. OASYS Cable monitoring makes it possible for the user to monitor continuously the geometry of the cable and provides the possibility to verify the actual cable position and compare this to the planned route. It is also possible to identify obstacles and thereby enable evasive actions if needed. The Stema Systems sub-bottom profiling system offers the possibility to locate the cables that have become submerged underneath the sea bed and to report its exact location.

## Further Developments

The signing of the corporation agreement formalised this existing working relationship and starts further developments in various and applications of the technology employed, for example OASYS Rock dumping and the OASYS Dredging monitoring systems. The two companies will also be looking to see how they can collectively strengthen their position in the market. Together time and risk can be reduced to a minimum level when working in the offshore field, thus ensuring our customers success.