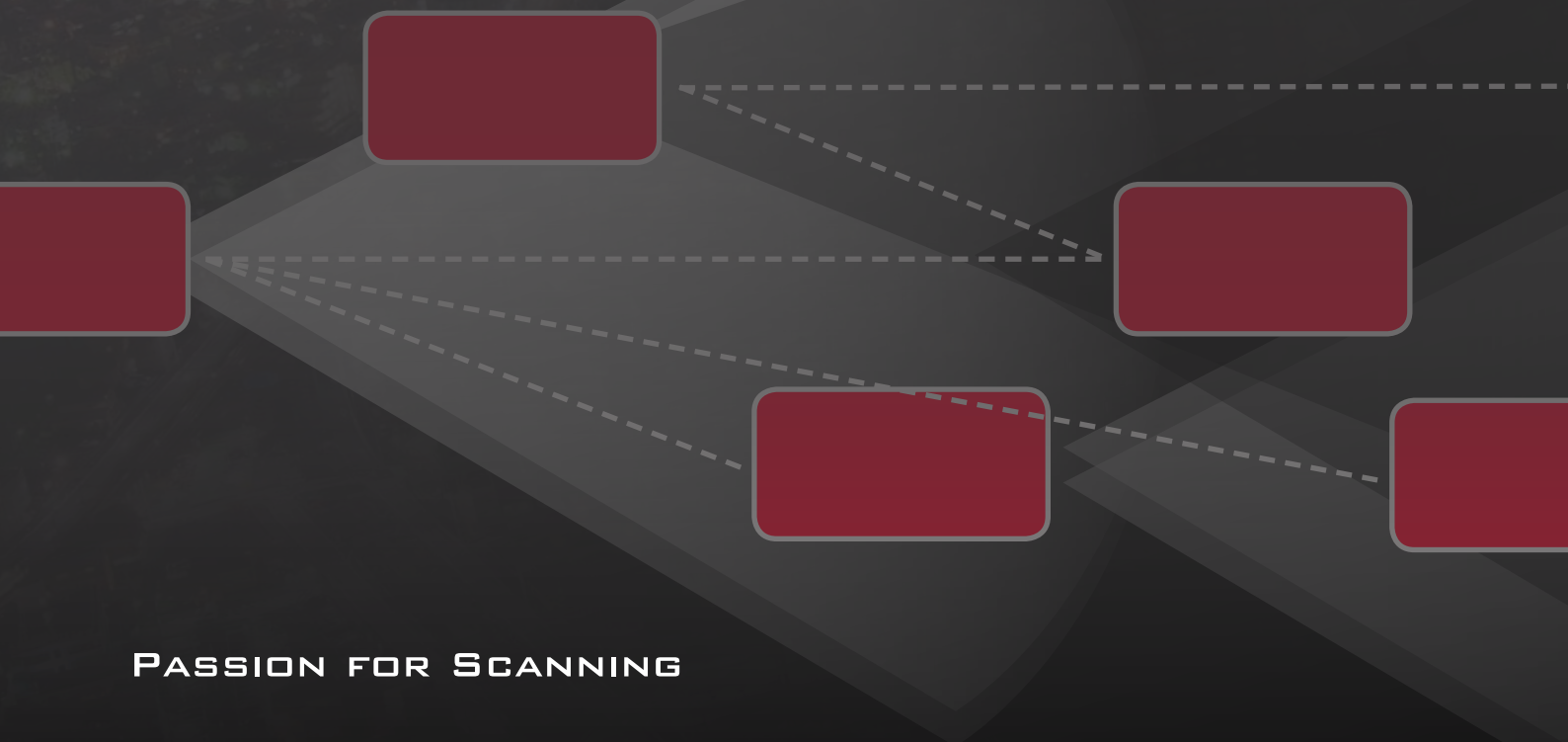




## ADAS Reference-System from OxTS and Ibeo Automotive Systems

- GPS/Inertial and laser scanner measurement system for validation during ADAS tests
- Real world testing in road traffic
- Interpretation of traffic scenarios

Ibeo Automotive Systems, the market leader in the development of hightech laser scanners for environment perception and interpretation in the automobile industry, and OxTS, an expert in the development of GPS-based inertial measurement systems, have entered a collaboration for validation of Devices under Test (DuT) and development of reference systems for ADAS development.



The generation of reference data is an important key for ADAS development. The comprehensive combination of sensors and GPS+INS data allows for the precise and efficient evaluation of highly complex traffic scenarios as well as the production of realistic virtual scenarios from real driving situations.

## VEHICLE-TO-VEHICLE MEASUREMENTS COMBINED WITH LASER SCANNER PERCEPTION

In a test scenario, a host vehicle and a target vehicle are both equipped with a GPS-based inertial measurement system from OxTS. The target vehicle can be tracked with high precision. All other road users in the test scenario are not visible with these measurements.

In addition, the host vehicle is equipped with one or two Ibeo laser scanners with integrated object tracking. All objects ahead of the vehicle are tracked and classified. The OxTS equipped target vehicle is specifically recognised and tracked separately.

fig.1: OxTS RT-Range

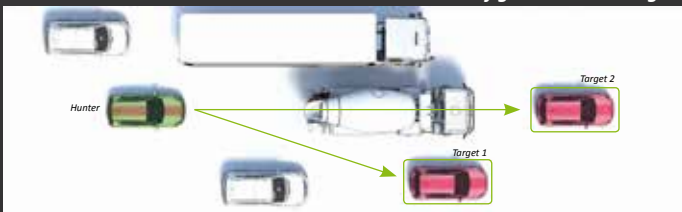


fig.2: Ibeo laser scanners

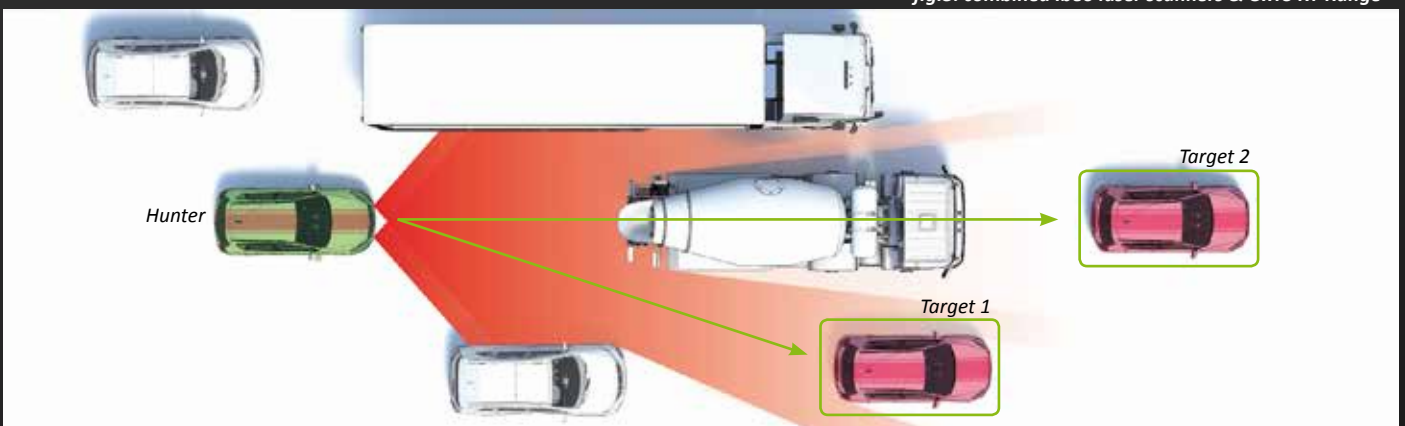


## THE RESULT – RELIABLE INTERPRETATION OF COMPLEX TRAFFIC SCENARIOS

The integration of the OxTS measurement systems with Ibeo laser scanner environment perception allows test drives in public traffic. All relevant objects are displayed in every situation. It can be automatically determined if and how well the target vehicle is visible to an onboard sensor-under-test. Incorrect measurements on vehicles other than the target vehicle can be reliably detected. Occlusion of the target vehicle, for example by pedestrians and the like, can be reliably detected and displayed.

In the next few years OxTS and Ibeo Automotive Systems will develop and deploy appropriate solutions step by step for your customers in the framework of this cooperation.

fig.3: combined Ibeo laser scanners & OxTS RT-Range



A hunter vehicle fitted with two IBEO laserscanners can detect vehicles in its line-of-sight. The system classifies and tracks vehicles that are visible to it. In this case the system can also see one of the vehicles fitted with an RT-Range Target system.

Subject to change without notice – 2014-06