

Deliverable D3.3

Package of generic sensor models for the sensor platform

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1 Summary

For automotive sensors a wide range of physical models are known and used by sensor manufacturers to develop and validate their sensor systems including signal processing functions. Those class of models are based on a detailed modelling of the physical properties of the sensor electronics, the wave propagation and the physical properties of the target objects as shown for example for a Radar sensor in Figure 1.1. This implies a high effort for simulation even of single sensor measurements.

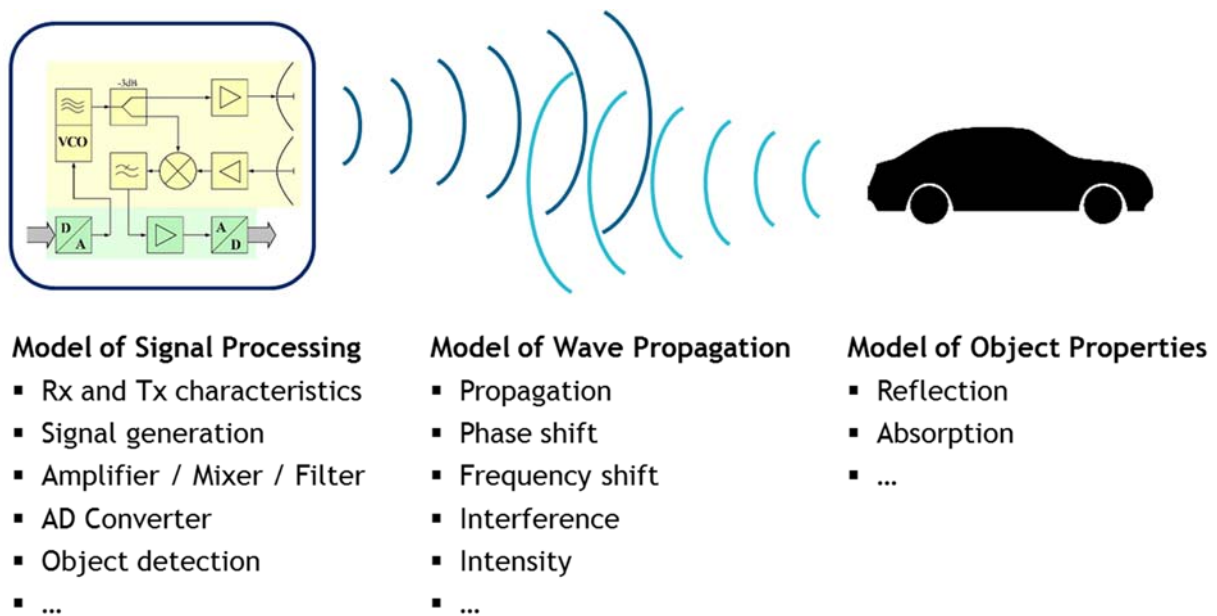


Figure 1.1: Physical sensor models

The deliverable D3.3 *Package of generic sensor models for the sensor platform* describes the application of generic sensor models as basis of proposed test systems for RobustSENSE platforms as shown in Figure 1.2.

The notation of augmented sensor models is introduced to describe generic sensor models combined with low-level performance indication functions based on environmental condition assessment (ECA) as depicted in Figure 1.3.

The presented approach shall result in a relative low effort for simulation of sensor behaviour at different environmental conditions and therefore enabling the efficient validation of high-level functions of the RobustSENSE architecture.

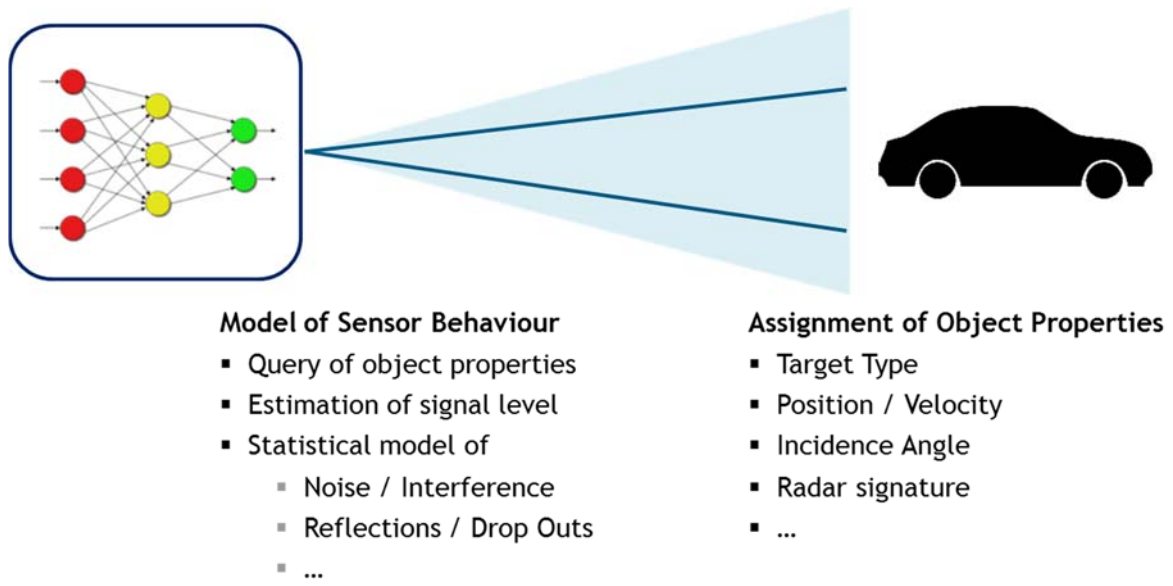


Figure 1.2: Generic sensor models

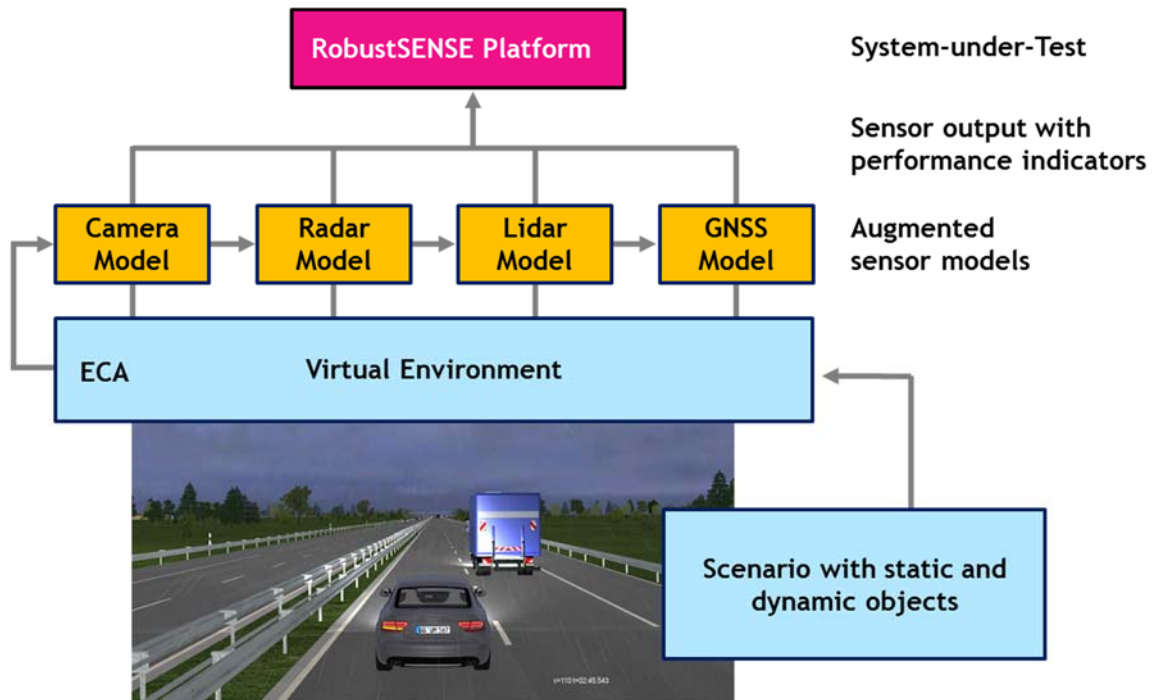


Figure 1.3: Proposed test system for high-level functions of RobustSENSE