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DELIVERABLE

SP5 – CoSSIB: Cooperative Safety Systems Infrastructure-Based

Specifications for Hazard & Incident Warning

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EXECUTIVE SUMMARY

This report provides the specifications for the 'Hazard and Incident Warning', which is one of five infrastructure-based applications to be developed by the CoSSIB subproject. The aim of the specifications is to serve as a basis for the development work and implementation of the applications in the Test Sites.

The fundamental objective of all of the SAFESPOT applications is to extend the 'perception' of drivers and hence increase their reaction time. By making an early detection of safety-critical events and by providing timely warnings to approaching vehicles, it will be possible to reduce the risk of accidents.

The road environment foreseen for this application consists of 'black spots' on motorways, inter-urban or rural roads.

European accident statistics show that the majority of serious accidents (over 60%) occur on non urban roads.

The type of location for the Hazard and Incident Warning system will be bends, tunnels and other road sections with an obstructed view as well as areas susceptible to fog, ice or bad weather conditions.

The Hazard and Incident Warnings are subdivided into three sub-applications:

- ***Obstacle on the road***: which alerts drivers to the presence of static or semi-static objects detected on the road (e.g. a vehicle involved in an accident, a queue, a slow moving vehicle, or a pedestrian on the road). Warnings will be given to approaching vehicles to allow them to reduce speed or change lane in time to avoid a collision.

- ***Wrong way driving***: this sub-application warns drivers of the potential danger caused by a vehicle travelling in the same lane as themselves but in the wrong direction, either due to an overtaking manoeuvre or 'ghost driving' (i.e. travelling against the flow on a motorway).

- ***Abnormal weather conditions***: the aim of this sub-application is to be able alert drivers to the presence of a hazard due to weather conditions (e.g. rain, ice or fog) which result in reduced friction or low visibility.

In this document will be described in detail the functional architecture of the basic application and the steps (activities) required for its execution are.

The data requirements of each sub-application are listed and also the strategy to be adopted in generating warning signals or messages is explained. In addition, the 'library' of the message output is provided.

This work will be the basis for the forthcoming stage of implementation and development of the application itself in the various SAFESPOT test sites. For this reason some first indications relating to the necessary installations of equipment for the various versions of this application have been provided.