



**Activity of ISO/TC204/WG14  
Vehicle/Roadway Warning and Control Systems**

**EU–Japan Cooperative ITS Workshop  
Tuesday, May 15th, 2012  
13:00–17:00**

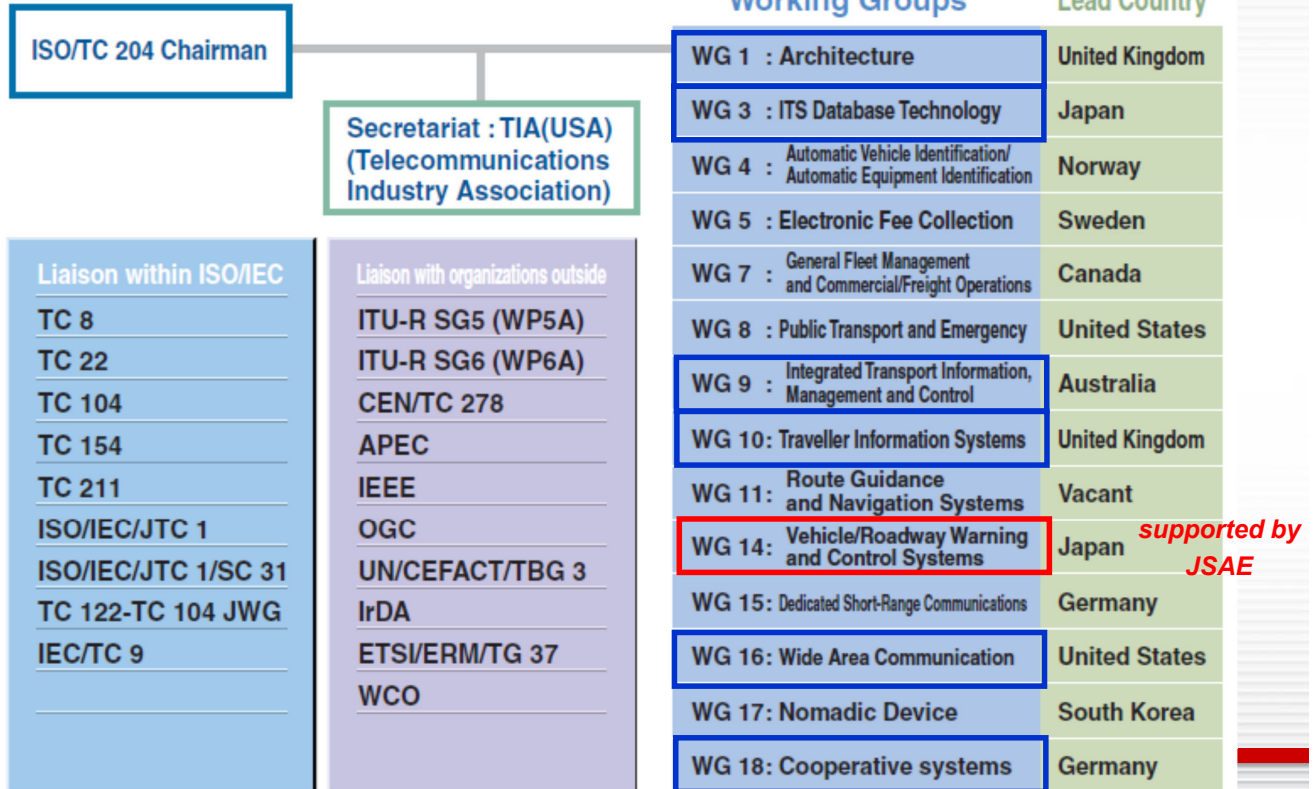
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WG14 Convener  
(Nissan Motor Co. LTD.)**

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# Introduction of WG14 in ISO TC204

## ISO/TC 204 Organization



## Scope of ISO WG14



## Vehicle/Roadway Warning and Control Systems

## Examples of WG14 activities

Provide the following functions using information on driving environments

avoiding crashes



warn the driver of hazardous situations



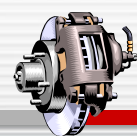
monitor the driving situation



advise for corrective actions



driving assist partially or fully automated



## Active Work Items of ISO WG14

- 4 of 7 items have already formed a liaison with other SDOs
- 1 of 7 is a candidate for forming a liaison

Work Items	Status	Name of Work Items	Liaison Status
<b>FVCWS</b>	<b>DIS 15623</b>	Forward Vehicle Collision Warning System	<b>ETSI WG1</b>
<b>FVCMS</b>	<b>CD 22839</b>	Forward Vehicle Collision Warning System	<b>ETSI WG1</b>
<b>LKAS</b>	<b>CD 11270</b>	Lake Keep Assist System	
<b>PAS</b>	<b>PWI 16787</b>	Parking Assist System	
<b>CIWS</b>	<b>CD 26684</b>	Cooperative Intersection Warning System	<b>ETSI WG1</b> <b>ISO WG9, (SAE)</b>
<b>CSWS</b>	<b>NP 11067</b>	Curve Speed Warning System	
<b>CAS</b>	<b>PWI</b>	Cooperative Awareness Application System	<b>Possible to form a liaison</b>



TC204 WG14  
TC204 WG18

# Liaison between ISO TC204 WG14 & ETSI TC ITS WG1



ETSI TC ITS WG1



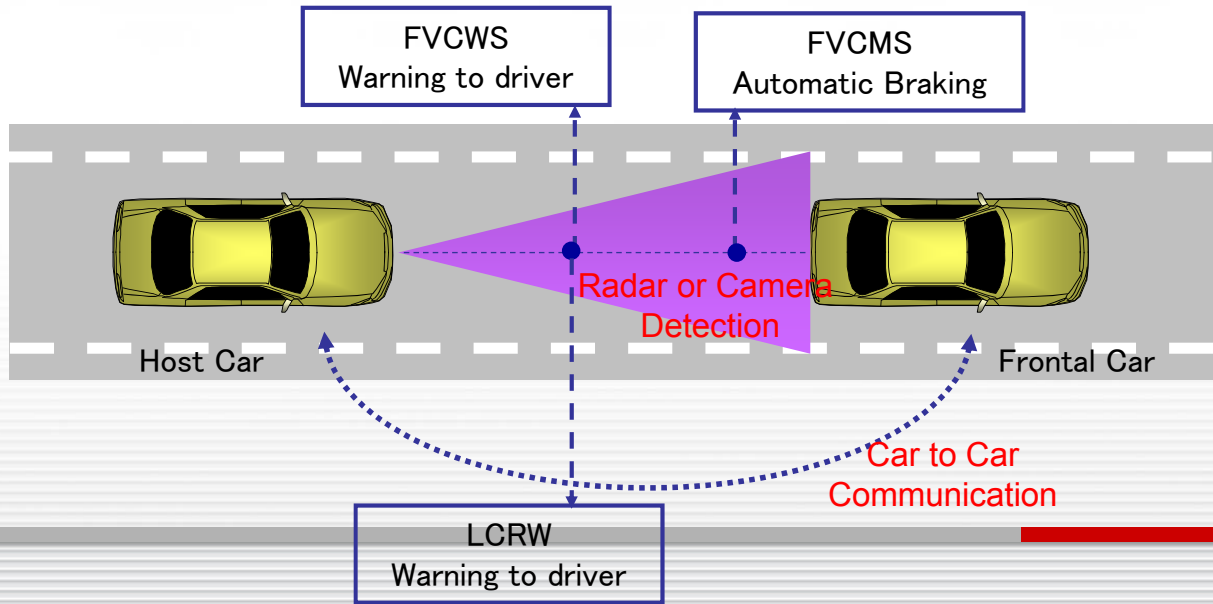
CEN TC 278 WG16

## Activities of Harmonization and coordination of CS on Standards



# Comparison of Each Forward Collision Warning Systems

- ISO WG14
  - FVCMS: Forward Vehicle Collision Mitigation System
  - FVCWS: Forward Vehicle Collision Warning System
- ETSI WG1
  - LCRW: Longitudinal Collision Risk Warning



## Analysis of Each Forward Collision Warning

### Comparison between FVCWS and LCRW

	Functionality Operatinality	Sensing Method
ISO WG14 FVCMS FVCWS	<ul style="list-style-type: none"> <li>Warn the driver of the risk of collision to frontal car</li> <li>Longitudinal alignment of vehicles to issue false positive warnings</li> </ul>	Radar Camera
ETSI WG1 LCRW	<p style="color: red; text-align: center;"><b>Functional &amp; Operational Requirement</b></p> <p style="text-align: center;">Timing for warning False Alarm</p>	C2C Communication

Functional & Operational Requirement are same between 2 systems and has been established under standardization in ISO WG14

## Status Report

Inconsistency regarding requirement of warning modality.

FVCWS : ● Visual information is always necessary

LCRW : ● Audible information is always necessary



	Visual	Audible	Haptic
ISO WG14 FVCWS	●	●	●
ETSI WG1 LCRW	●	●	●

## Status Report

Change the requirement in order to avoid inconsistency regarding requirement of warning modality.

FVCWS : ● Visual information is always necessary

LCRW : ● Audible and Visual information are always necessary



	Visual	Audible	Haptic
ISO WG14 FVCWS	●	●	●
ETSI WG1 LCRW	●	●	Option

## Decision

ETSI discussed the inconsistency on warning modality requirement and changed the requirement in accordance with that of ISO WG14 FVCW.

## (2) Liaison with ETSI WG1 on CIWS & ICRW

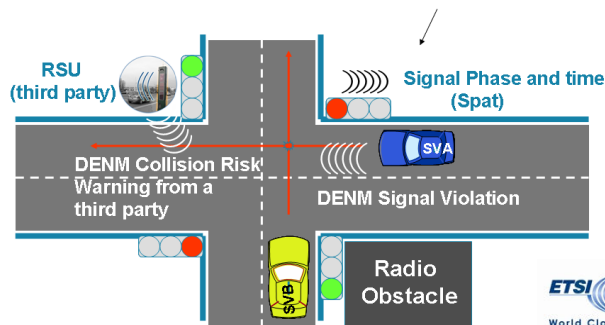
ETSI WG1 and ISO WG14 decide to form a liaison between CIWS & LCRW.

The scope of ICRW involves the scope of CIWS, because

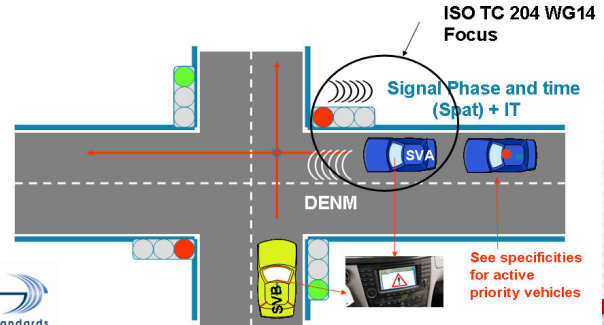
- 1: ICRW considers the lateral collision warning using V2V communications.
- 2: ICRW transfers the information of subject vehicle to other vehicles

ISO WG14 and ETSI WG1 will start to collaborate each other to avoid the inconsistency of functional and operational requirements in each draft.

### Collision Risk Warning from a third party:



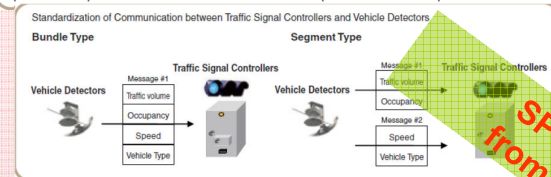
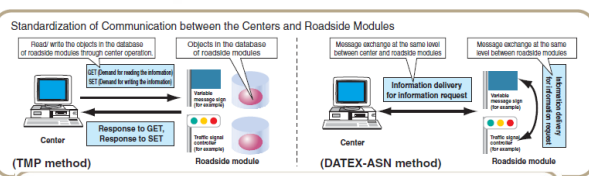
### Signal Violation:



## (3) Liaison with ISO TC204 WG9 on CIWS

WG14 started to collaborate with WG9 on CIWS

WG14 invites WG9 expert to contribute to the CIWS draft about the information of traffic signal requirement (SPaT).



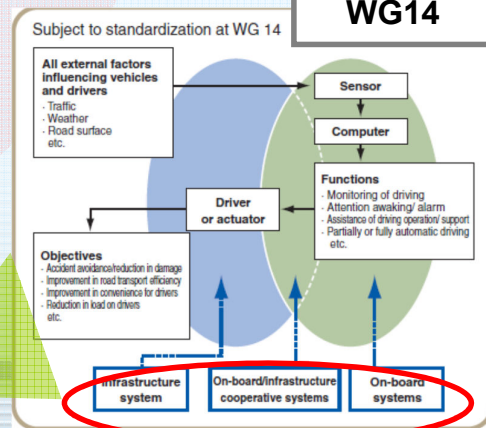
ISO TC204  
WG9

Communication between  
center and roadside unit

## Vehicle/Roadway Warning & Control System

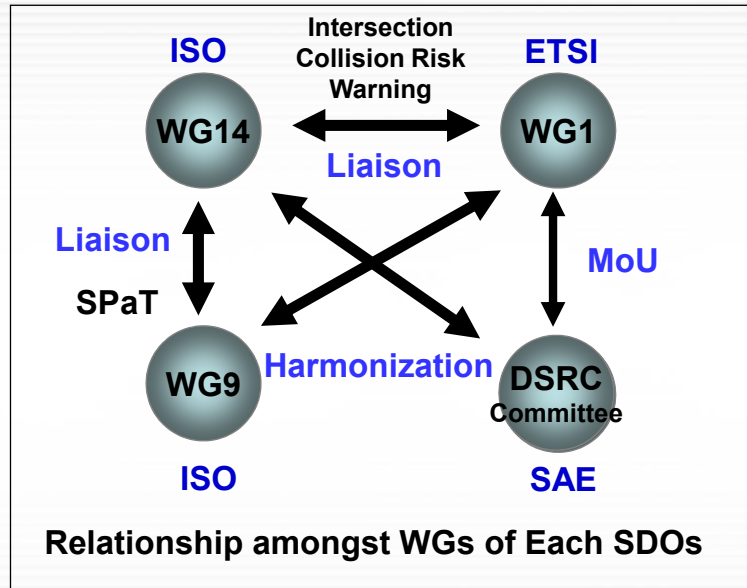
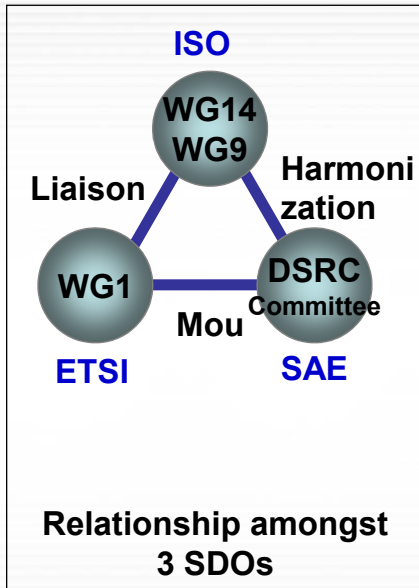
CIWS

ISO TC204  
WG14



SPaT Information  
from WG9 to WG14

## Harmonization Activity amongst ISO, ETSI and SAE



Intersection Collision Risk Warning System including SPaT specifications are now under the development targeting at DIS with the collaboration and harmonization of 3 SDOs and 4 WGs in the SDOs.

## Conclusion of ISO WG14 Activity

- ISO WG14 will harmonize with other ISO WGs and SDOs in order to develop compatible standards which enable the development of interoperable systems with the aim of achieving globally accepted standards.

