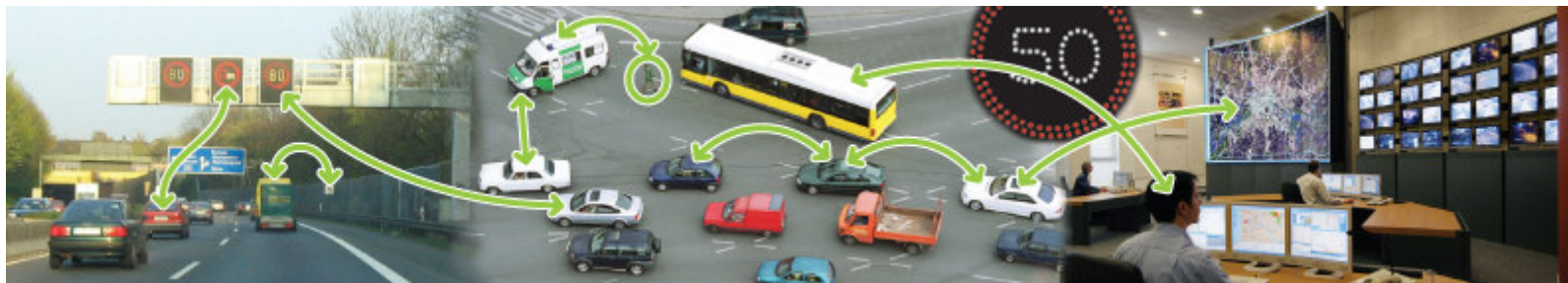




# Positioning, Mapping and Location Referencing

Boudewijn Schokker





# POMA in short (I)

- One of the 3 technology sub-projects (COMM – FOAM – POMA)
- **Aim:** develop specifications and prototypes for positioning, mapping and location referencing modules that enable new and improved capability for cooperative applications.



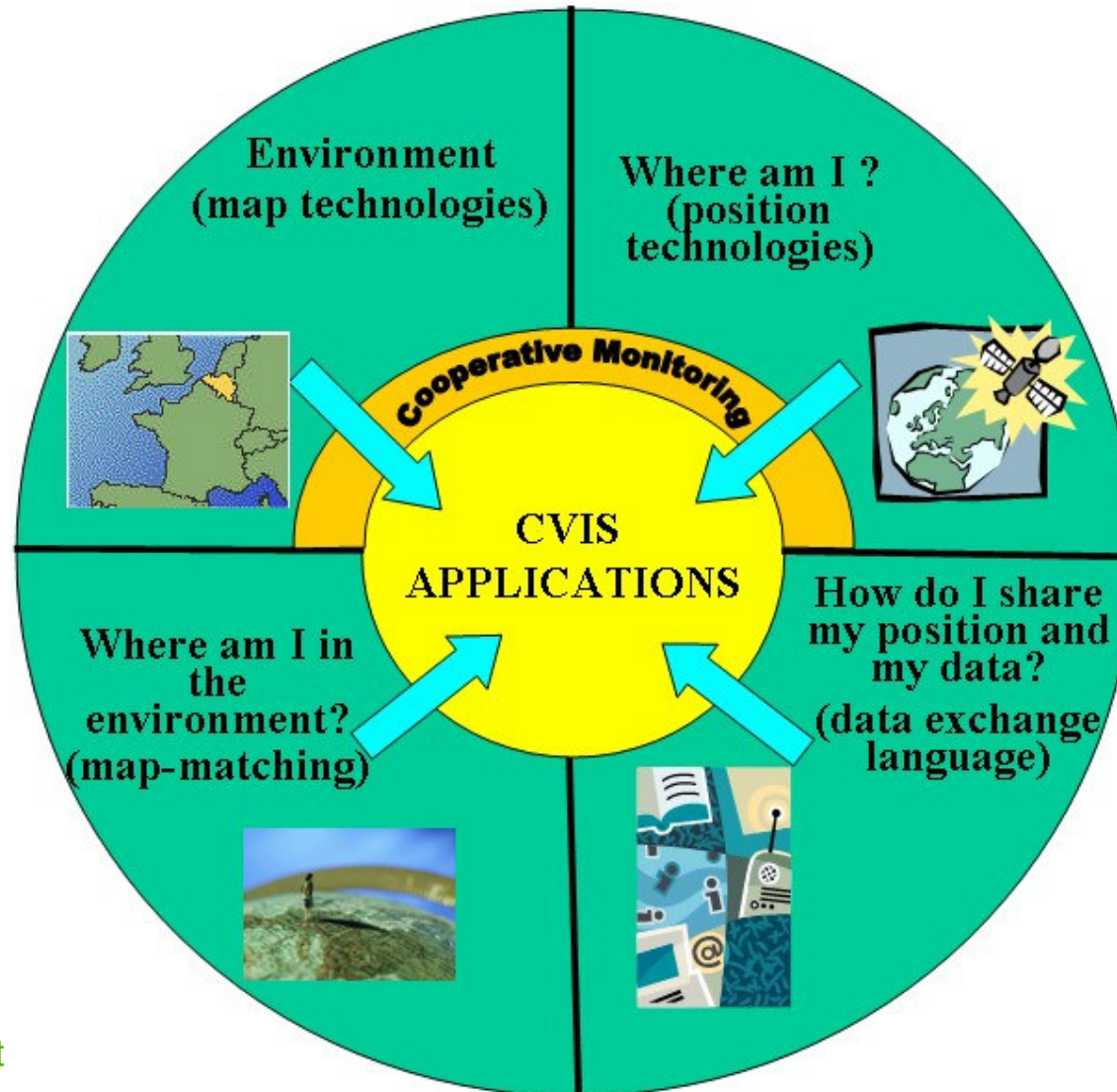


# POMA in short (II)





# CVIS POMA Overview





# State of the Art



- Positioning by:  
GPS  
dead reckoning, inertial
- Maps:  
2D representation  
accuracy: ~ 5-8 m
- Map matching  
position



# Innovations (I)



- Positioning by:  
GPS, EGNOS, Galileo  
wireless based, dead reckoning, inertial
- Maps:  
2D representation  
accuracy: lane localisation  
map update process, new map content
- Map matching  
position, accuracy  
time validity, reliability/integrity



# Innovations (II)



- Geo Reference Language  
common format geo information exchange  
exchange static and dynamic information  
geo data manipulation  
enable data fusion
- Location referencing  
AGORA-C standard
- Geo Spatial Platform  
decoupling applications and geotools knowledge  
API of geo related operations  
distributed platform



# Features



- Vehicle based Positioning
- Infrastructure based Positioning
- Update Map / New map content
- Location Referencing
- Map Matching
- Geospatial Platform
- Geo Referencing Language



# Requirements



- Lane level localisation
- Integrity provision on position data
- Standardisation of location referencing
- Wireless sensors for positioning
- Map-matching with accuracy and integrity
- Standardised map update process
- New map content (lorry parking zones, lane information, etc. )
- Data exchange language (mostly XML)
- Prepared for SafeSpot
- Next step other projects, e.g. C2C, Coopers, etc



Thanks for your attention...

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