

## ATSSS: An Active Traffic Safety Service System in Pudong, Shanghai, China

Hangbin WU Tongji University, China hb@tongji.edu.cn

The 14<sup>th</sup> international symposium on Location based Services, Vienna, Austria

Outlines



- 1 Background
- 2 Objectives
- 3 Data collection
- 4 Service method
- **5** Applications
- 6 Acknowledgments

### 1 Background









- 1. Most of the deaths in accidents were caused by illegal events, such as speeding, reverse driving, illegal lane etc.
- 2. Most of the accidents were occurred at the intersections and the black spots of roads.



### 2 Objectives





### 2 Objectives





### 2 Objectives





### 3 Data Collection – Traffic data



### 3 Data Collection – Users' position







In this project, four types of data were collected yet.

Туре	Time delay	Contents
Events	1-2 min	Illegal lane, Reverse driving, Illegal astern, falling objects, etc.
Accidents	5-10 min	Accident type, loation, impacted lane, current traffic status, estimated time, etc
Black Spots		Location, type, etc.
Users' position	2 - 5 s	Latitude, longitude , speed, direction, satellite number, SN

### 4 Service Method



An server were installed in order to manage the database and map services. An App was developed for Android and iOS users.





#### Visualization system of Active Transportation Safety Service System (ATSSS)





Visualization system of Active Transportation Safety Service System (ATSSS)

An automatically events detect algorithm is applied to the captured videos. The events detected will be manually confirmed in order to enhance the reliability. The events will be stored in 1-2 minute.





位置安全行App: an iOS and Android app developed for the project, the Chinese name of App means *LBS will provide safety driving*.

The functions including: positioning, navigation, POI search, Route management, Lane-level navigation, Black spot warning, traffic events warning, traffic accidents warning, etc.









#### accident warning example



Position of accident



Black spot warning. As the black spots of Pudong are updated by the end of year. Therefore all the black spots were stored in the mobile phone.





Lane level navigation.

In this project, we also tried the lane level navigation in 15 intersections.



The project is financially supported by the Ministry of Science and Technology of China through national high technology develop program, No. 2013AA12A206

# Thanks Q & A?