

## **STAR-CITY: Semantic Traffic Analytics and Reasoning for CITY**

### Reference:

F.Lecue, S. Tallevi-Diotallevi, J. Hayes, R. Tucker, V. Bicer, M. Svodio, P. Tommasi, "Star-City: Semantic Traffic Analytics and Reasoning for CITY (accepted for publication)" in ACM International Conference on Intelligent user Interface (IUI 2014). Haifa, Israel, 2014, pages NN-NN.

### Abstract:

This paper presents STAR-CITY, a system supporting semantic traffic analytics and reasoning for city. STAR-CITY, which integrates (human and machine-based) sensor data using variety of formats, velocities and volumes, has been designed to provide insight on historical and real-time traffic conditions, all supporting efficient urban planning. Our system demonstrates how the severity of road traffic congestion can be smoothly analyzed, diagnosed, explored and predicted

using semantic web technologies. We present how semantic diagnosis and predictive reasoning, both using and interpreting semantics of data to deliver useful, accurate and consistent inferences, have been exploited and adapted systematized in an intelligent user interface. Our prototype of semantics-aware traffic analytics and reasoning, experimented in Dublin City Ireland, works and scales efficiently with historical together with real live and heterogeneous stream data.