Università Ca'Foscari Venezia

TITOLO PROGETTO:

SEEK - Semantic Enrichment of Trajectory Knowledge Discovery Process

PROGRAMMA DI FINANZIAMENTO: 7 FP – PEOPLE
BANDO: FP7-PEOPLE-2011-IRSES (INTERNATIONAL RESEARCH STAFF EXCHANGE SCHEME)

RESPONSABILE SCIENTIFICO : Prof.ssa Alessandra Raffaetà
STRUTTURA (Dipartimento/Centro) : DIPARTIMENTO DI SCIENZE AMBIENTALI, INFORMATICA E STATISTICA

DATI FINANZIARI:

Costo Complessivo del Progetto	Finanziamento Europeo Complessivo Assegnato
€ 365 400	€ 352 800

SINTESI PROGETTO:

A flood of data pertinent to moving objects is available today, and will be more in the near future, particularly due to the automated collection of data from personal devices such as mobile phones and other location-aware devices. Such wealth of data, referenced both in space and time, may enable novel classes of applications of high societal and economic impact, provided that the discovery of consumable and concise knowledge out of these raw data is made possible. The fundamental hypothesis is that it is possible, in principle, to aid citizens in their mobile activities by analysing the traces of their past activities by means of data mining techniques. For instance, behavioural patterns derived from mobile trajectories may allow inducing traffic flow information, capable to help people travelling efficiently, to help public administrations in traffic-related decision making for sustainable mobility and security management. Behavioural patterns can be extracted through a knowledge discovery process where positioning data collected from mobile devices are first transformed in semantically enriched trajectory data stored in a database. Then, these data are loaded in a data warehouse and analysed with OLAP operations that allow summarization of the trajectories features. Mobility patterns, the most common movements emerging from data, are computed with suitable spatiotemporal data mining algorithms. A further semantic enrichment step is needed to give context-dependent meaning to the discovered patterns. The goal of the project is to investigate methods to extract meaningful knowledge from large amount of movement data by defining techniques for an advanced semantic-rich knowledge discovery process.

Inizio Attività (previsione)	Fine Attività (previsione)
01/03/2012	28/02/2015

PARTENARIATO

1	CONSIGLIO NAZIONALE DELLE RICERCHE	Italia	Coordinatore
2	UNIVERSITY OF PIRAEUS RESEARCH CENTER	Grecia	Partner
3	UNIVERSITA CA' FOSCARI VENEZIA	Italia	Partner
4	UNIVERSITY OF NEW BRUNSWICK CHARITABLE ORGANIZATION	Canada	Partner
5	UNIVERSIDADE FEDERAL DO CEARA	Brasile	Partner
6	UNIVERSIDADE DEDERLA DE SANTA CATARINA	Brasile	Partner
7	PONTIFICIA UNIVERSIDADE CATOLICA DO RIO DE JANEIRO	Brasile	Partner
8	UNIVERSIDADE FEDERAL DE PERNAMBUCO	Brasile	