RuleML' 14

Geosocial SPLIS: A Rule-Based Service for context-aware point of interest exploration

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GeoSocial SPLIS
Geosocial Semantic Personalized Location Information System

- ## What?

  - A personalized LBSNS which connects user defined preferences (regarding POIs) with those of their nearby friends and POI owners' group targeted offers

- ## Why?

  - To provide proactive, customized and contextualized information

- ## How?

  - Combining semantics with LBSNSs

Design and General idea

- Human mobility behavior is not completely random
- Regular users have preferences/daily patterns
  - If it is Saturday noon I would like some restaurants that serve Italian cuisine
- POIs adopt a rule-based policy to deploy their specific marketing strategy
  - A museum offers 15% discount to students on Fridays
- The service collects user's context
- Combines all the above and presents personalized offers on Google Maps

Geosocial SPLIS's Features (1/2)

- Collects data from external sources

  - Google+, Google Places API, POI websites

- Regular users add contextualized rule based preferences via a web editor

- POI owners add group targeted offering policies via a web editor

- Data from editor → RuleML → Jess →Sesame

- Executes and evaluates data and rules on the fly

- Uses Google Maps for visualization

Geosocial SPLIS's Features (2/2)

- Rule conditions
  - LBS context
    - Location (e.g. within 800m)
    - Weather (e.g. sunny, rainy etc.)
    - Time (e.g. between 13:00-17:00)
    - Day (e.g. Monday)
  - Every existing property of a POI
    - E.g. cuisine currently serves

- Rule consequences
  - Add a place in a recommendation list

Geosocial SPLIS's Architecture

- Client
  - PC browser-based
    - Html, JavaScript, Css
    - Google Maps
- Server
  - Java Server Pages (JSP)
- RDF data management
  - Sesame
- Rules
  - Reaction RuleML $\rightarrow$ XSLT $\rightarrow$ Jess