City’R’US

A City Reporting application used for improving Urban Services

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Introduction

- People daily move around the city but also seek for places to hang out, meet other people, exercise or get amused
- They want their city to listen to citizens’ pulse
- However, smart city solutions
  - Require large investments on infrastructure (sensors, network, big data analytics)
  - Monitor things (automobiles, buildings etc) but fail to track humans
  - One solution for all citizens
  - Citizens’ individual needs are neglected
Solution

- Use smartphones
  - Minimize cost for sensors
  - Collect location and movement data from smartphones
  - Categorize user contributions by type: routes, points of interest
  - Crowdsourcing

- Motivate citizens
  - Collective information is available for all
  - Access to open data (events & POIs)
  - Targeted missions for information collection
  - Virtual credits for contributors
  - City provided rewards

Data Repository (Categorized POIs and Routes, Events)

Sensor data collection & activity detection
Architecture overview

- Data is collected by citizens that use City’R’US smartphone app
- Data is stored and enhanced in the backend using RADICAL APIs
- Mission management and Data visualization is done in a city web site (http://city-r-us.scify.org/web/public/)
RADICAL – The heart of City’R’US

http://www.radical-project.eu/platformandservices/radicalplatform/
Service Architecture

Web Server
Municipality Dashboard

Mobile
City-R-US

CITY-R-US REST API
- Authenticate
- Register user
- Register device
- Manage awards
- Save route
- Save observation
- Retrieve events
- Retrieve pois etc.

Radical APIs
- Configuration API
- Data API
- Repository API
- Local Database
Gamification features

- **Missions**
  - Small data contribution (collection) challenges, defined by the municipality and carried out by citizens
  - Have a special cause/interest
  - They run for a predefined limited period, or they can remain open for a long time.
  - Contributed data can be location or route and is collected when the citizen is in the location or moves along the route.

- **Rewards**
  - A virtual crediting system is used as a motivation for users to participate and contribute.
  - Highly ranked citizens or citizens groups can be invited to city’s council meetings, or appoint the mayor.
  - Smaller rewards can be used to promote public transportation schemes, e.g. free tickets to the citizens that decide to leave their car and use public transport.
Missions

• They follow a top-bottom logic, and are set-up by the city authorities, that want to collect information for improving city planning and services.

• Based on collected information, city administrators can decide where to create a new facilities.

• A bottom-up approach is also supported. Citizens can suggest a mission through the smartphone app, and so can do the members of a group of special interest. When many citizens ask for a mission, the city administrators can set the mission to the public and start collecting information about places or routes.

• Users are self-motivated to contribute to a mission, or are invited to participate by fellow members of the same group of interest in the real world.
The gains

- **For the city**
  - Analyze the data to intervene when/where needed
  - Check validity of the provided content
  - Respond immediately/
    Redesign services (add ramps to ease access to places).

- **For citizens**
  - They can see what other citizens have contributed and discover new places within their city.
  - They can share their location and movement information with other citizens and work in groups in order to maximize the impact
  - They can suggest a mission
Municipality Dashboard
Create and Manage missions
Mobile application

Register - Select Mission- Contribute - Tag

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Mobile application

Invite users

Διασκεδάζετε; Προσκαλέστε τους φίλους σας...

Μήνυμα

Γράψτε το μήνυμα σας:

Θα πάθεται να σε προσκαλέσει στην εφαρμογή City’R’US.

Email

Email φίλου

Προσκάλεσε

Λήψη
Просъединение
Логин/регистрация
Future work

– Citizens
  – Include support for event suggestion
  – Support tagging of problematic points and the ability to add a picture and a description for extra functionalities to be added.
  – Provide alerts for delays and congestions

– City
  – Analytics on how citizens move around the city
  – Integrate data collected from a related mission to the existing city CRM

– NGOs/NPOs
  – They can use it as a spot-recording tool for their members only.
  – City-Reporting-as-a-Service: Citizens’ groups join, create missions and collect data of interest by motivating their own members. So they can have access and analytics to these data.
Thank you!

Questions?

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