Citizense – A generic user-oriented participatory sensing framework

Ngo Manh Khoi, Luis E. Rodríguez-Pupo, Sven Casteleyn

Geospatial technologies research group (Geotec) Institute of New Imaging Technologies (INIT) Universitat Jaume I Email: {mngo, luis.rodriguez, sven.casteleyn} @uji.es

Overall goals

- To investigate the common characteristics and requirements of participatory sensing applications
- To design and develop a framework that can efficiently and effortlessly deploy participatory sensing applications



How Citizense facilitates a participatory data collecting process?

Step 1: Author creates a campaign



The campaign manager

- Publicly available at www.citizense.uji.es
- Users can intuitively create a contextsensitive campaign with different parameters
- Campaigns can be edited later



A campaign object is created

- Supporting various types of sensing task
- Conditional links between sensing task



Step 2 and 3: Participants get campaigns, send results and receive incentives

The mobile app

participants

- Get and displays the campaign
- Encrypt the results before sending
- Work in offline mode

The campaign server

- Process requests from participants, serve them with context-relevant campaigns
- Handling different types of incentives to



GET IT ON

Goodle Play

Step 4: Participants view results

- Results are available on mobile app and web browser, in real time

Step 5: Author views campaign results



The campaign manager

- Display both the aggregated and detailed results in real time
- Preserve the privacy of participants

Acknowledgments

The authors gratefully acknowledge the funding from the European Union through the Geo-C project (H2020-MSCA-ITN-2014, Grant Agreement Number



