DECIDE 2.0 – A Framework for Intelligent Processing of Citizens’ Opinion in Social Media

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1 – BACKGROUND

Government 2.0 refers to government’s adoption of Web 2.0 technologies to socialize government services, processes and data.

GOVERNMENT 2.0 – BENEFITS

- new ways of communication with citizens – i.e. social media
- new opportunities for government agencies to be informed about citizens’ needs and opinions through user-generated content

GOVERNMENT 2.0 – EXAMPLE TOOLS

Of interest to this research:

- Facebook
- Twitter
- Windows Live
- LinkedIn

GOVERNMENT 2.0 – SOME TECHNICAL CHALLENGES

The integration of data streams from social media poses challenges:

1) magnitude of information flow – i.e. Twitter disseminates 55M tweets p/day; forces to rely on text mining (TM) and opinion mining (OM) techniques to filter noise and detect topics of community discussion

2) TM and OM techniques are not common practices in government

3) social media data streams are usually incomplete or potentially inconsistent, as citizens might have different views on a certain issue

4) citizens’ arguments must be assessed and confronted by government officials in order to be used as inputs in government decision making processes

5) to build trust, some decisions made by government need to be backed by arguments when informed to citizens.

2 – PROBLEM DEFINITION

To combine context-based search and argumentation in a collaborative system for managing (retrieving and publishing) service-and policy-related information in social media tools used by governments.

3 – PROJECT AIM

To design DECIDE 2.0 – a framework for intelligent processing of citizens’ opinions in social media, based on a collaborative system operating on top of existing social networks.

4 – PROJECT GOALS

- To implement models of trust and reputation propagation – users post information on social media whose reliability has to be assessed in order to effectively use such information for decision making.
- To develop algorithms for integrating information coming from different sources – several users may post messages related to the same topic; accrual of information needs to be modeled properly.
- To design effective context representations and community identification algorithms - when analyzing citizen opinions, emerging communities have to be identified, and associated contextual information is to be obtained.
- To develop customized information models - providing targeted information to various categories of stakeholders requires having different “views” of the issues under analysis.

5 – DECIDE 2.0 FRAMEWORK

Citizens’ opinion (with details for policy-making oriented decisions)

Prepared by: UNESCO

ACKNOWLEDGEMENTS: The research is funded by LACCIR (Latin-American and Caribbean Collaborative ICT Research), Microsoft Research, CONACyT (Mexico) and Interamerican Development Bank (IDB).