



Automating Operational Response Planning and Execution based on Business Situational Awareness on Social (and Other) Media

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Media frenzy and surviving it

- Situational awareness (SA)
 - Traditionally related to physical objects and measurements
 - Concept applicable to media- and information management
 - Business SA
- Response time
 - Businesses need to react
 - Tools for assisting and automating response planning and execution



Goals: Automate

- Automate (as) early (as possible) detection of business relevant anomalies in media data
- Automate harvesting relevant decision making supporting information
- Automate identification of relevant nodes and communities in the (social) graph
- Automate action planning and in some cases execution on the underlying graph

Informal problem definition

- Three basic concepts
 - Entity of Interest (EI), e.g. brand, company etc.,
 - information about the EI and
 - a graph in which the information spreads.
- SA viewed as the state of graph given EIs
 - This is a great simplification to the traditional SA
 - All the operations are always about the connectivity of the graph
 - SA within organizations is not in the scope of this work



Our approach

- Data driven
 - Organizations exist only as nodes and communities in the (social) graph, e.g. key personnel, official company blog, etc.
 - SA is always about entities of interest, which is manifested through the information that spreads in the graph
 - Data is modeled using state of the art probabilistic models
- Multilingual and multimodal setting



Our approach

- Business SA is modeled in a simple but powerful graph theoretic framework
- We build heavily on the results of the CVDI project
Holistic Approach to Meme Evolution in Social Graphs
- Utilize and further develop recently introduced probabilistic graph analysis methods

Key points/differences

- Simplified setting as SA is only about the state of the graph given Els
 - Opens doors for more sophisticated modeling techniques
 - Very flexible as there are only three basic primitives
- Main point is acting on the Business SA by automating
 - Detection of anomalies or interesting events in the data
 - Gathering relevant information for decision making support
 - Finding best actions on the underlying graph and in some cases automatically executing them