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Social Analytics

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Areas of Research & Key Projects

Social and Organisational Network Analysis

- *Key Influencer Identification using Social Network Analysis*

Social Movements

- *Interplay between social movements and social media and their organisational implications*

Social Network Analysis

Key Influencer Identification among Customers using Social Network Analysis

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Organisational Implications

- Role of social networks in groundswell movements
- Information flows in social networks
- Identify communities & groups in social networks
- Analyse real time social networks data for better decision support
- Leverage organisation networks for analysing performance
- Predictive analytics for better forecasting
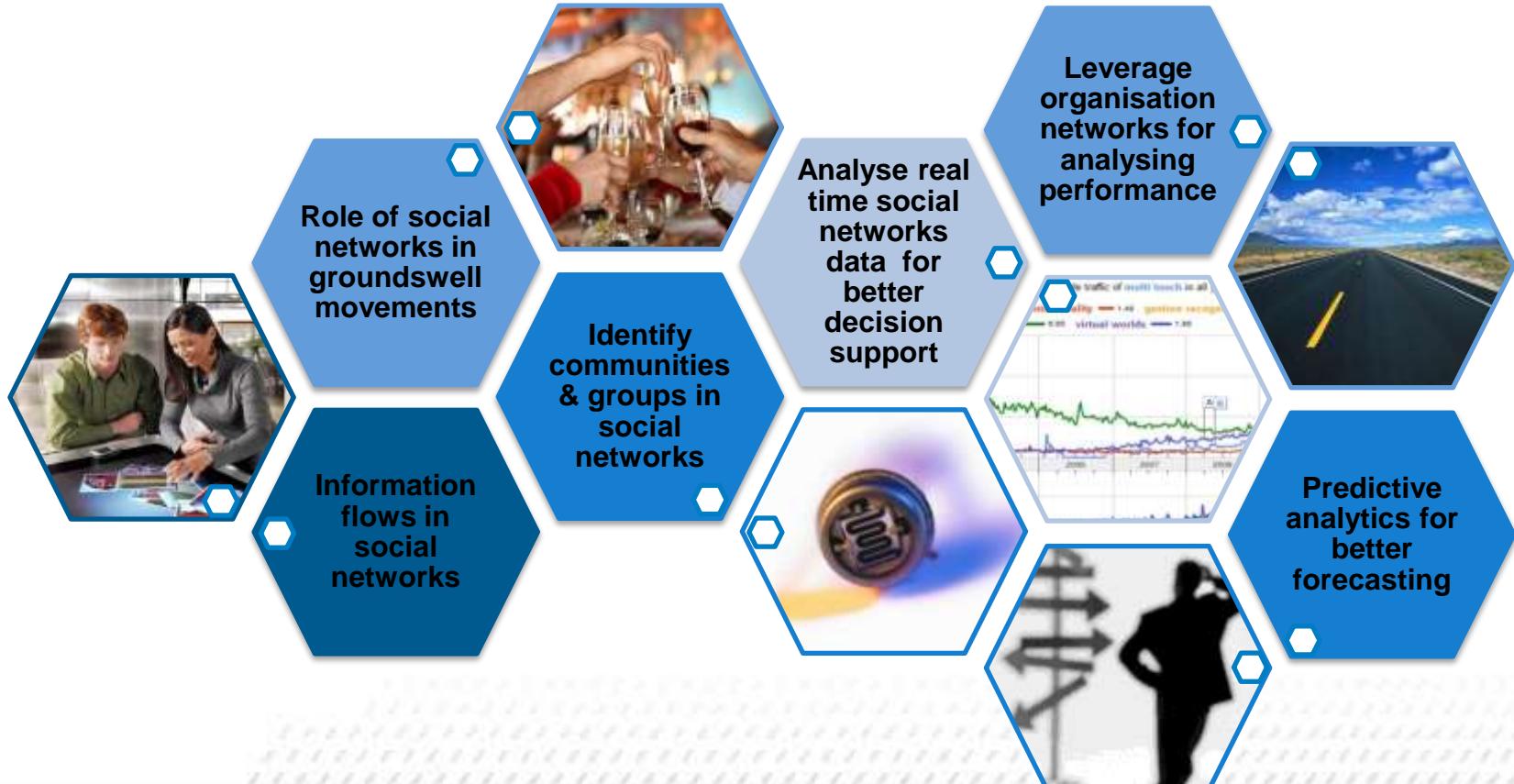
Social, Organisational Network Analysis

- Objectives

  - Conduct research and develop solutions so that enterprises can at real-time monitor end user networks and thereby enhance their decision making ability.

  - We leverage Social Network Analysis to draw inferences and critical insights about customer preferences and engage with them

  - Enable enterprise decision makers by providing them with the right social media metrics that will influence their strategy, products, services, brand etc.

  - Real time analysis of data from social networks

  - Support real-time decision making

Social, Organisational Network Analysis

- Research Overview

    - Identify key influencers in organisational and social networks using techniques such as Social Network Analysis and Organisational network Analysis

- Research Problems

    - Who are the key influencers in a social network? What are their attributes?

    - How does the role of a key influencer evolve in a social network?

    - What are the variables using which we can identify and measure key influencers in a social network?

    - How do network structures and positions change over time?

Enterprise challenges governing the Research Agenda

Need for enterprises to understand social media networks

Enterprises need to identify key influencers in their network as well as identify their role

User/customer generated information could provide key insights which will aid decision making

Need for an Informal listening board

Key Contributions

- Real time identification of key influencers

  - Enterprise users need real-time identification of influencers to complement their online social media strategy.

  - The research satisfies this important requirement of end users.

- Context based identification of key influencers

  - The user and message context is key and forms the basis of the algorithm

  - This presents the end user with targeted results and recommendations.

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Key Contributions

- Ability for end users to modify the weightage of context factors

  - The end user can allocate and modify weightages to multiple related contexts to fine tune the end results and thereby identify related influencers.

- Extensibility

  - We can mine and analyzes different participative spaces such as Twitter and Facebook

  - This allows users to customize and extend for new social networking destinations.

  - Different spaces have different models of user participation and interaction and hence require a unique method of analysis.

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Social Movements

Interplay between social media and traditional media in shaping Social Movements: Analysis of Social Movements in India, Egypt & the US

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Social Movements

- Research Overview
  - Identify key entities in groundswell social movements
- Research Problems
  - Who are the key entities in social movements? What are their attributes?
  - How does the role of a key entity evolve in a social movement?
  - What are the variables using which we can identify and measure key entities in social movements
  - How do network structures and positions change over time?
  - How can we leverage information diffusion to percolate information about our products into the market?
- Objectives
  - Real time analysis of data from social movement networks
  - Understand the emergence of groundswell support for products
  - Monitoring viral campaigns

Representation

Tweeter	Tweet
@A	@B *I think you are right* *#hashTag*
@A	@D *You are not correct, I think* *#hashTag*
@B	Whoa!, I agree too RT @E *yes, it is true!* *#hashTag*
@C	I think *#hashTag* is attributed to @D
@D	*Man* @E *what a thought!* *#hashTag*
@E	*Dude* @D. *Chill!* RT@D *Man* @E *what a thought!* *#hashTag*

Source	Destination
A	B
A	D
B	E
C	D
D	E
E	D
E	D
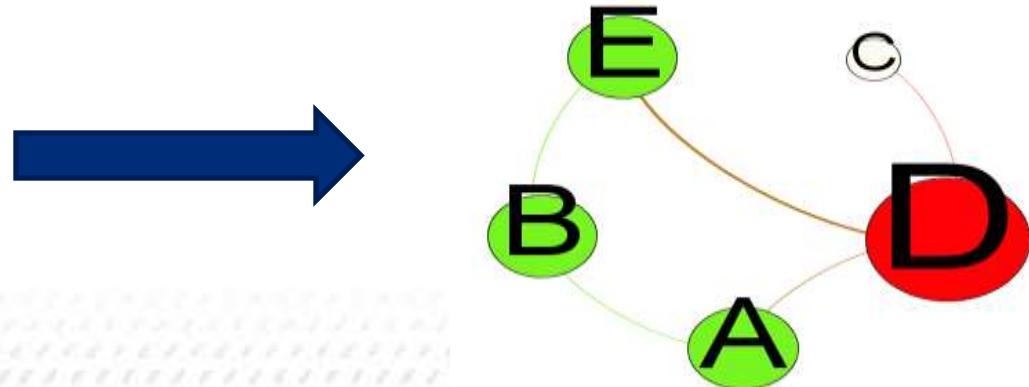
Overview

- The Anna Hazare movement was Tweeted with two prominent hashtags #annahazare and #janlokpal

- The data used for our Social Network Analysis included Tweets with the hashtag #annahazare

- We analysed about 25,000 tweets between Aug 24 2011 and Oct 08 2011.

- The final data used for analysis had 7365 nodes and 14,666 edges

- The network analysis and visualization program Gephi, the open-source graph visualization and manipulation software was used for the analysis.

- Each node in the graph represents a Twitter id and the edges or the connections represent the interaction pattern across these nodes

#AnnaHazare Analysis - Network
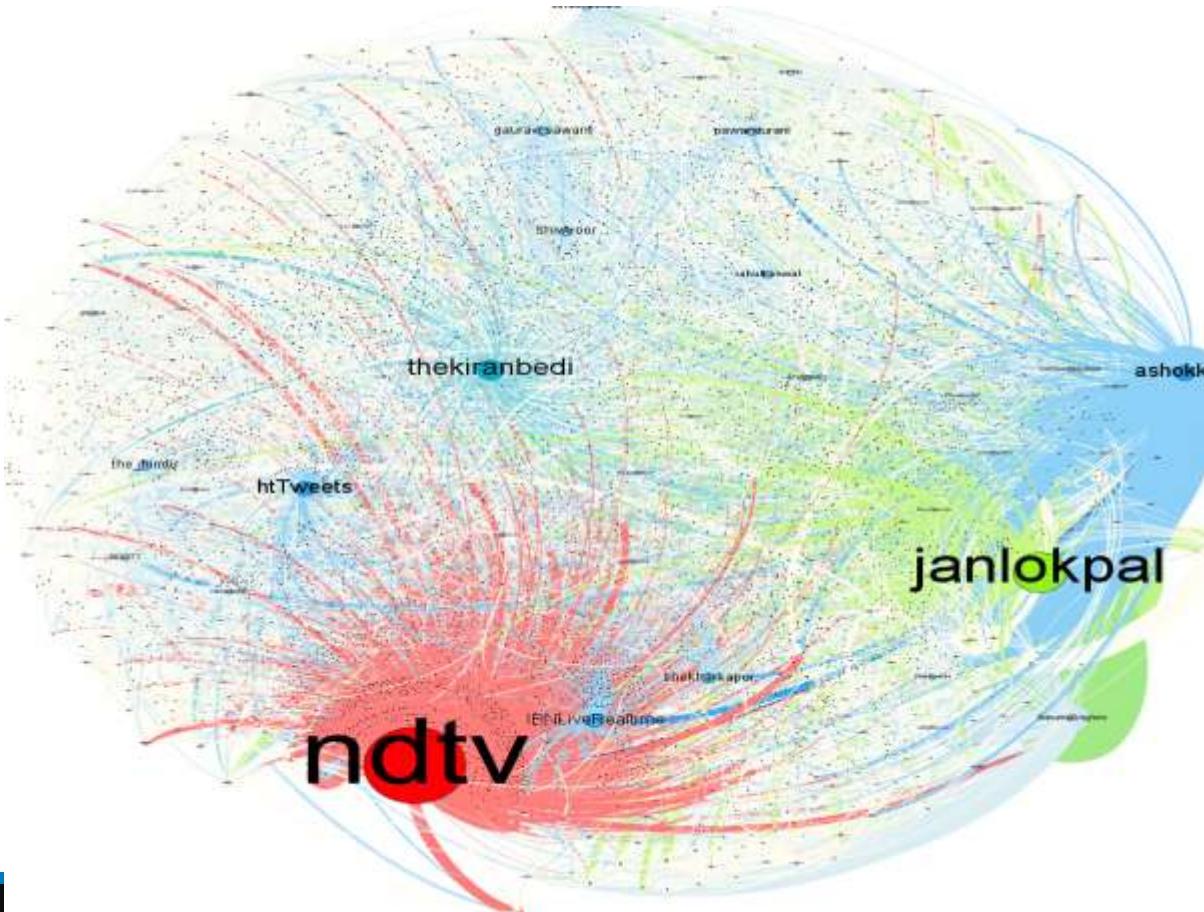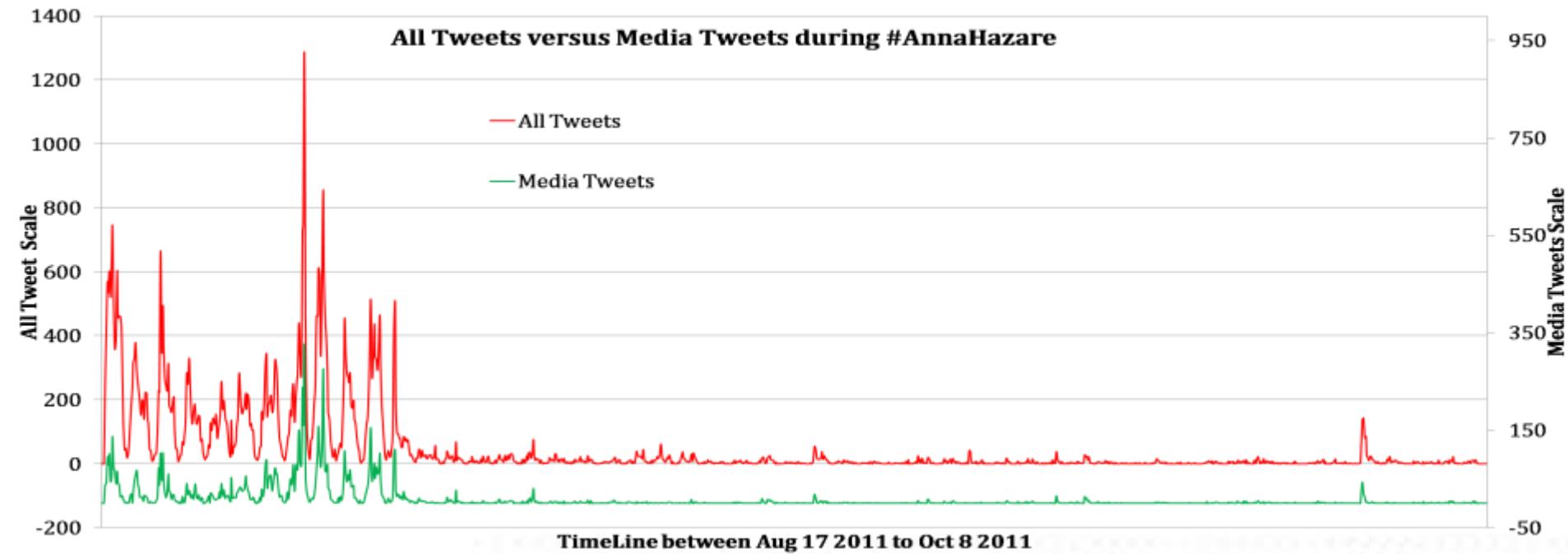
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#AnnaHazare Analysis – All vs Media

All Tweets versus Media Tweets during #AnnaHazare

All Tweets

Media Tweets

TimeLine between Aug 17 2011 to Oct 8 2011

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#iSupportAnnaHazare Analysis - Network

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#iSupportAnnaHazare Analysis – All vs Media

All Tweets versus Media Tweets for #iSupportAnnaHazare

All Tweets Scale (left axis): -100, 0, 100, 200, 300, 400, 500, 600, 700

Media Tweets Scale (right axis): -10, 40, 90, 140, 190, 240

— All Tweets
— Media Tweets

TimeLine of the tweets between 17 Aug 2011 and 4 Oct 2011

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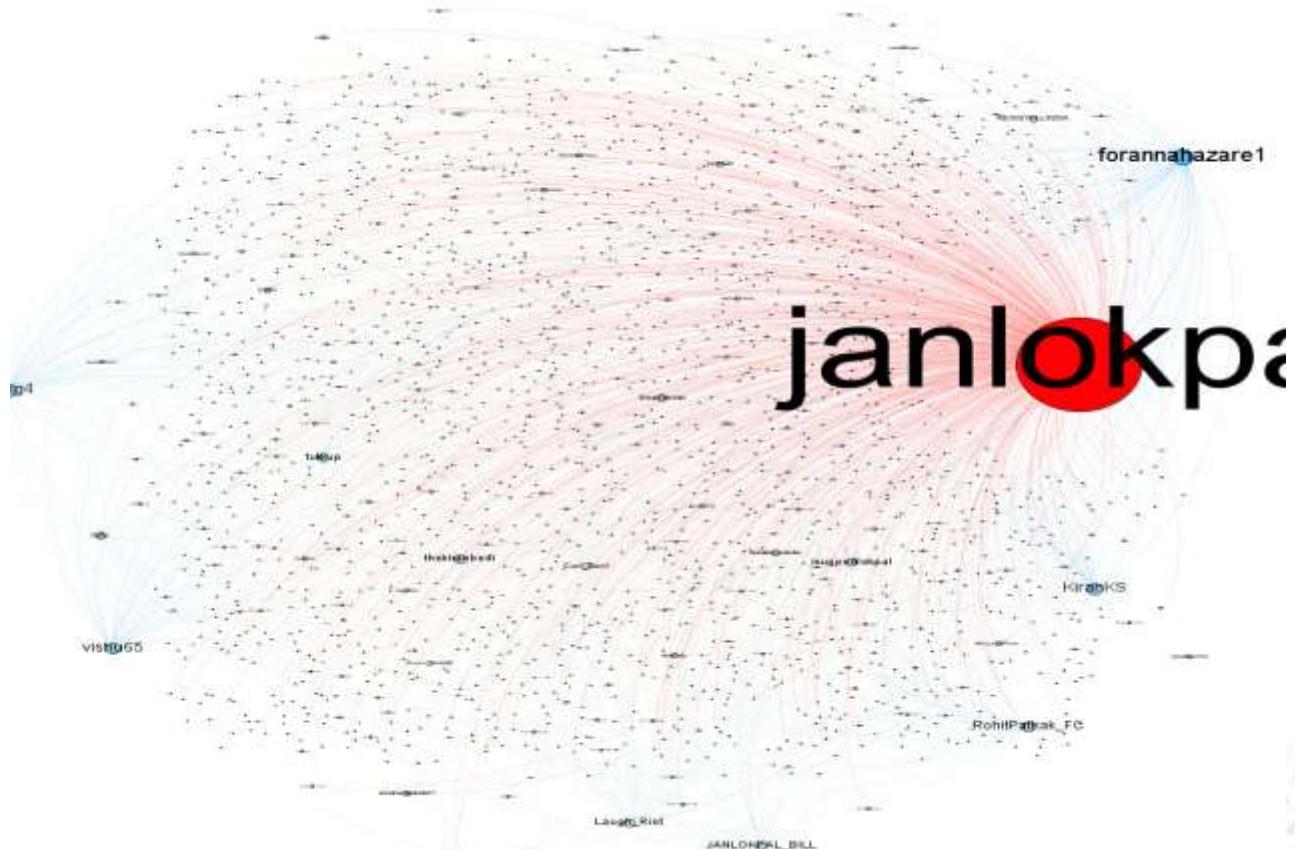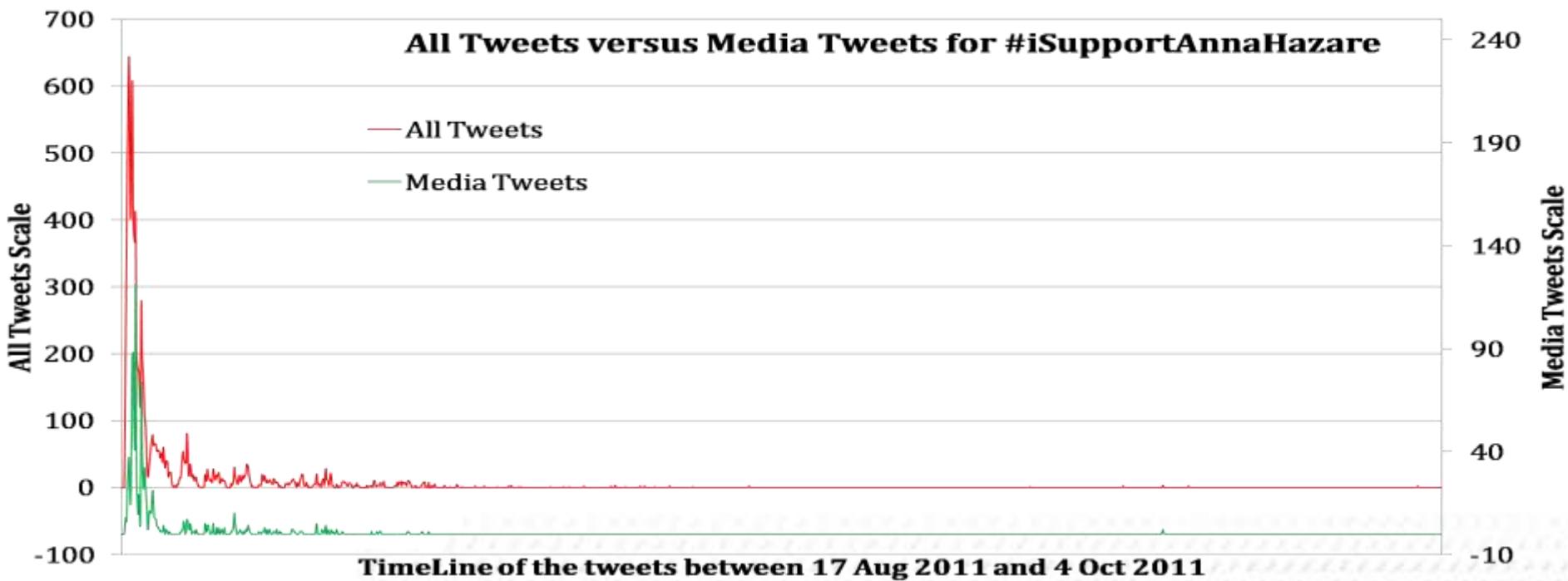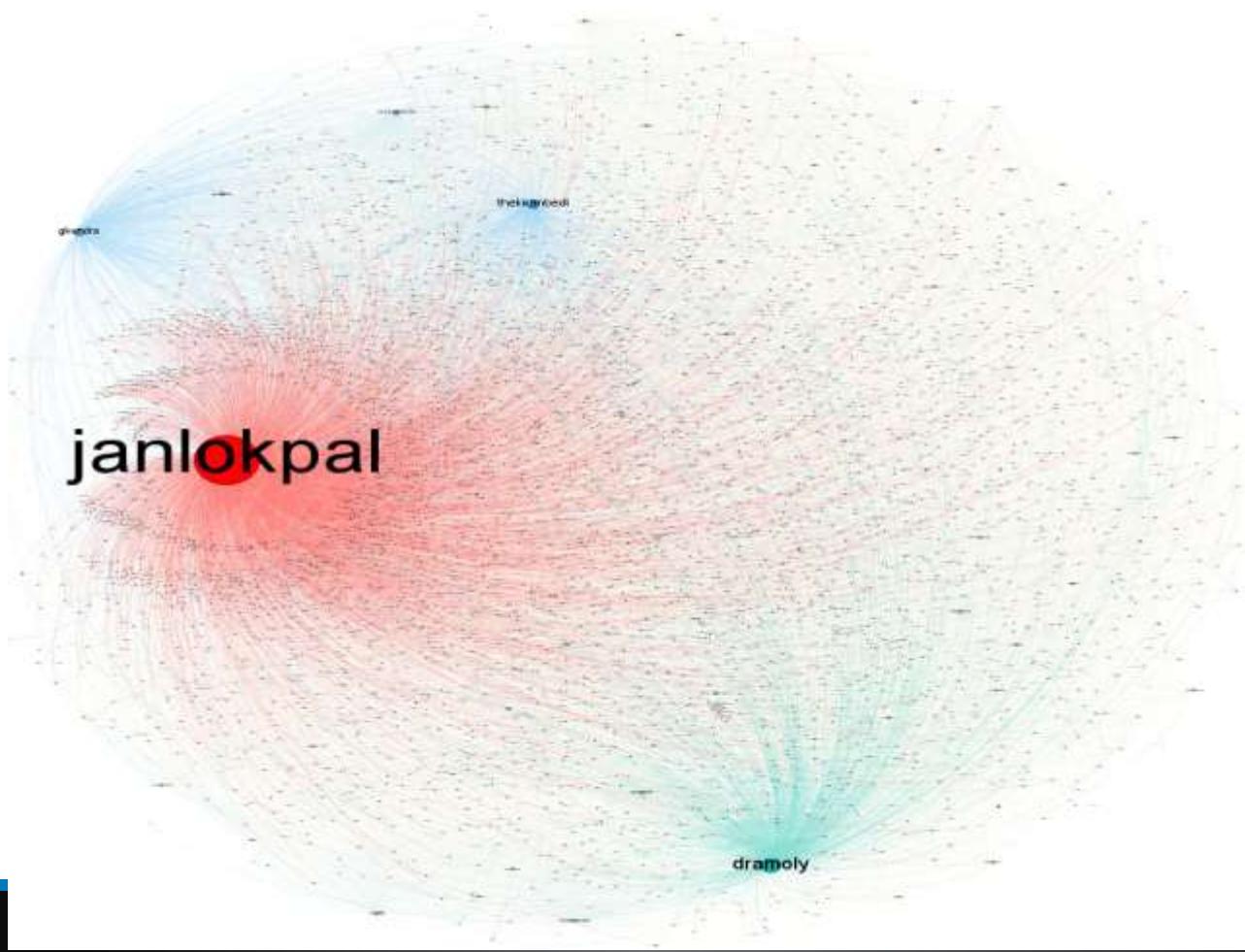
#janLokPal Analysis – All vs Media

All Tweets versus Media Tweets for #janLokPal

TimeLine between 12th Sep 2011 and 6 Dec 2011
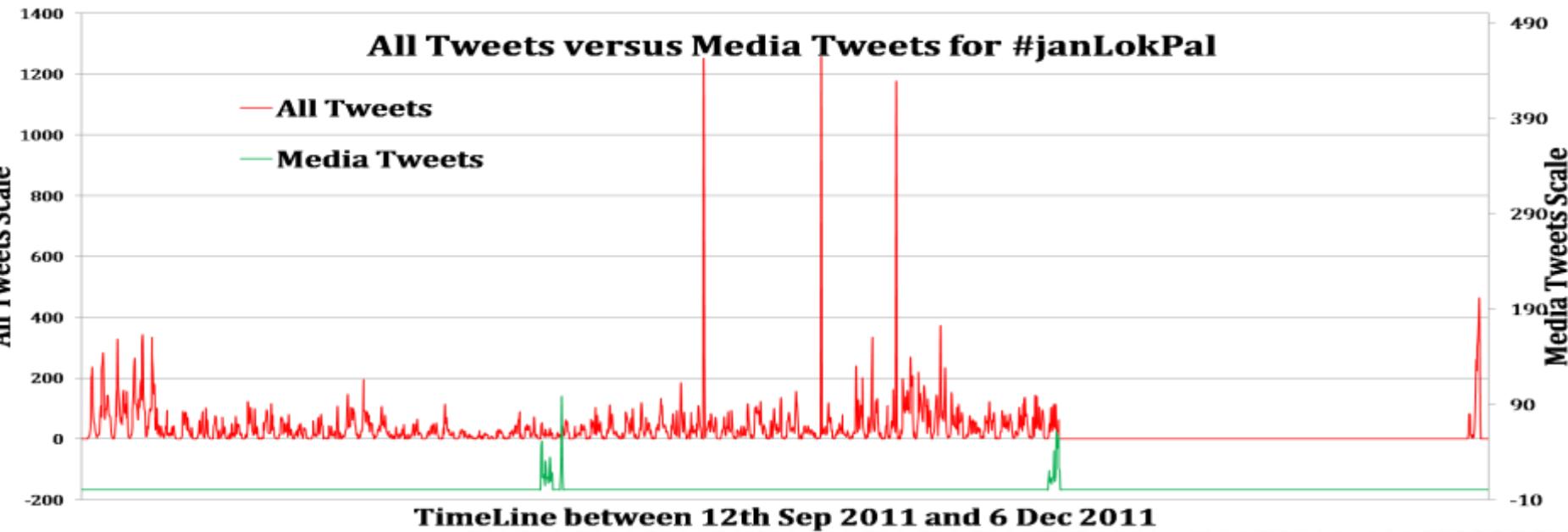
#OccupyWallStreet Analysis - Network
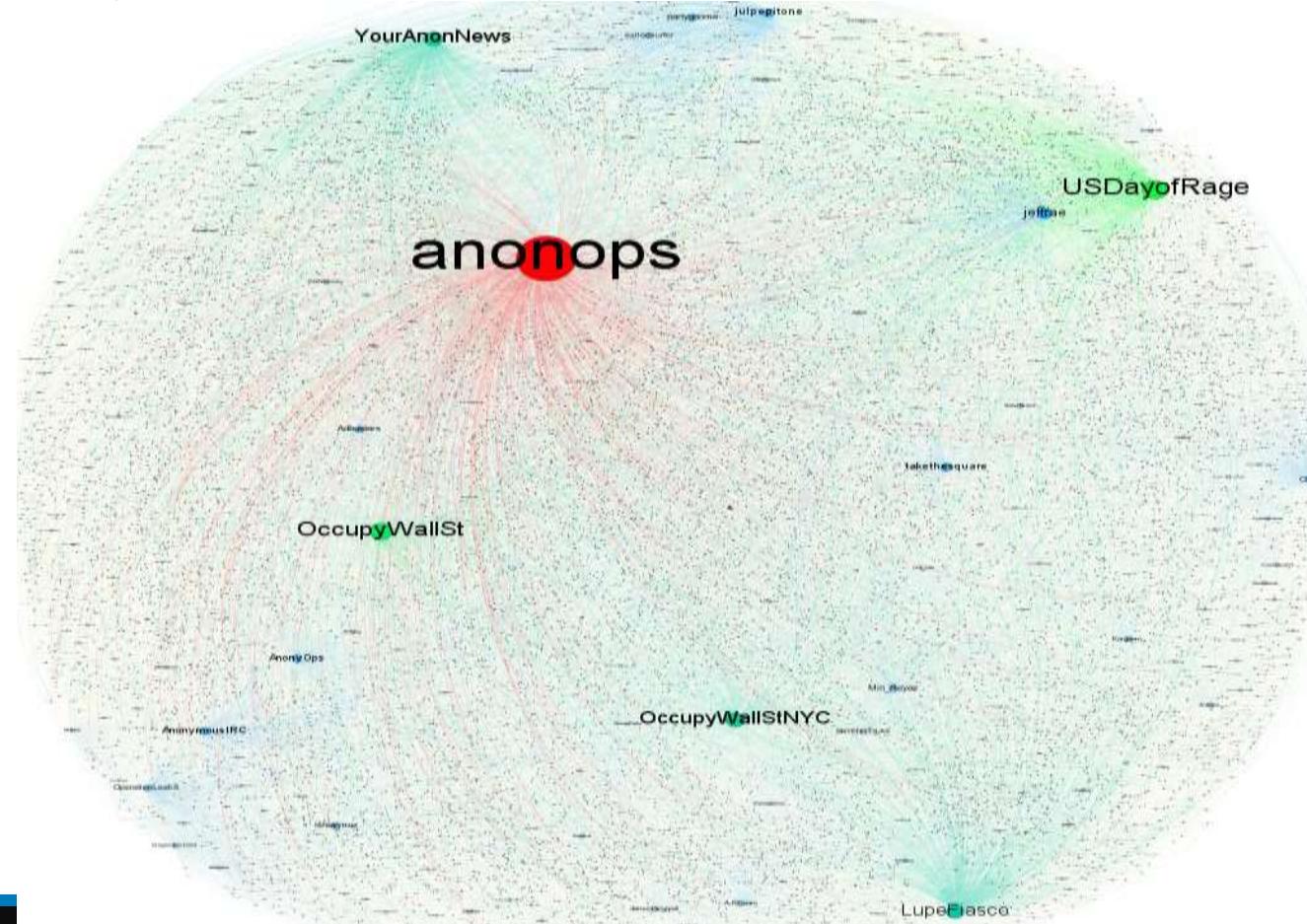
#OccupyWallStreet Analysis – All vs Media

Media Tweets versus All Tweet in #occupyWallStreet

TimeLine between 26th July and 18th September (Occupy Wall Street Protest happened on 17th September)
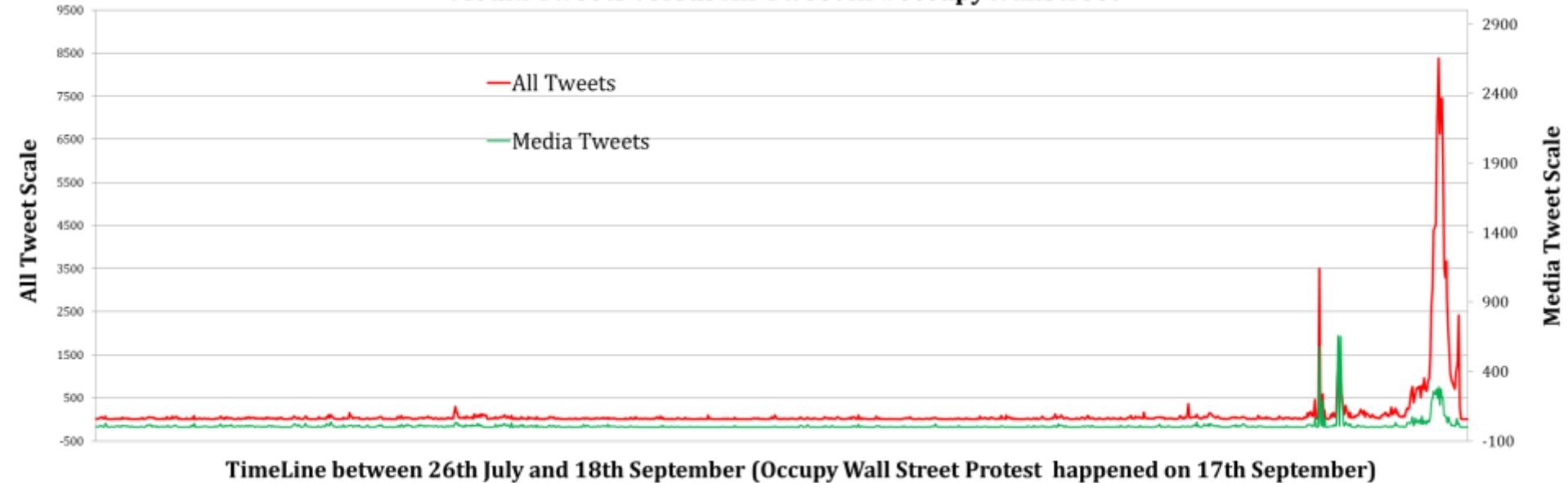
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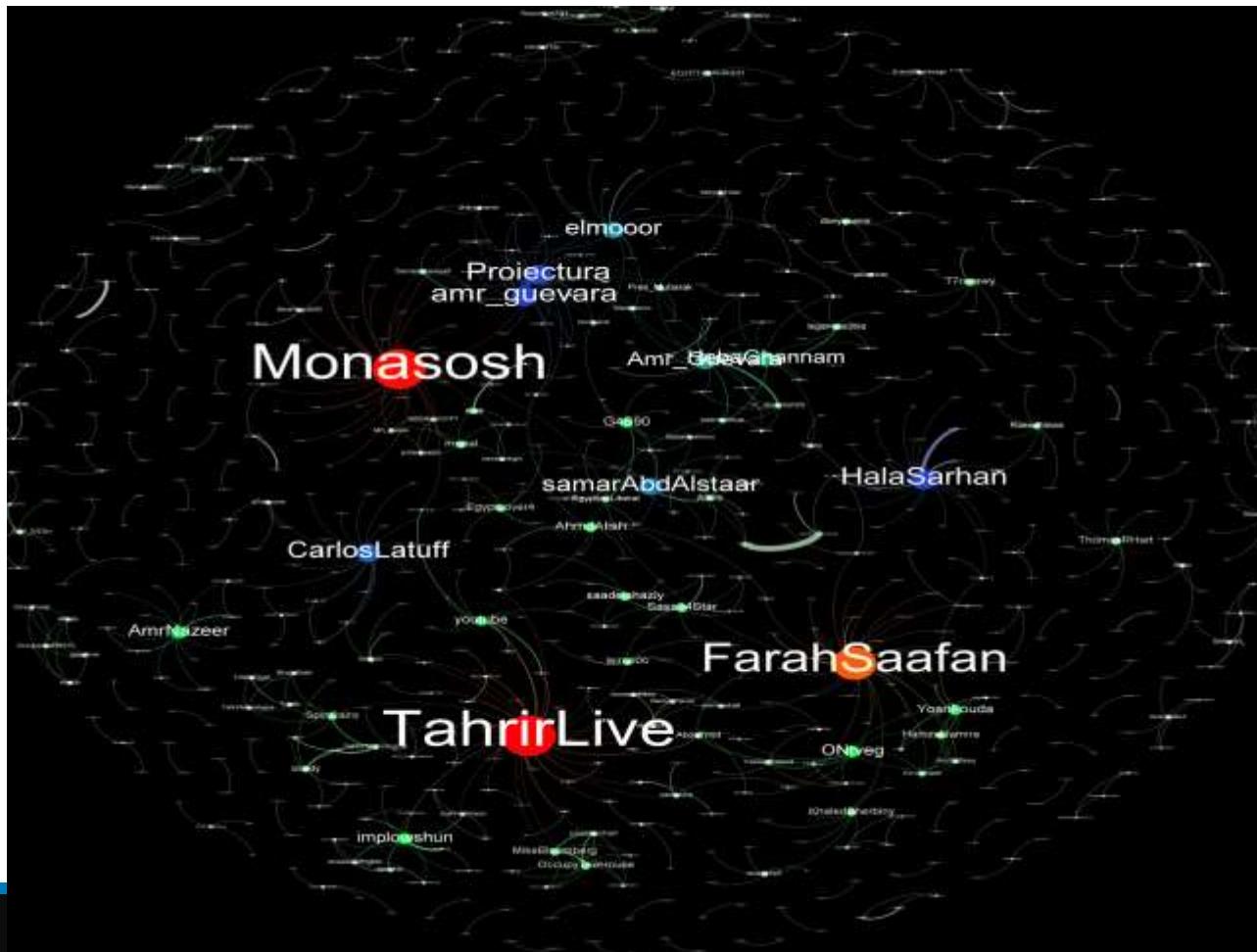
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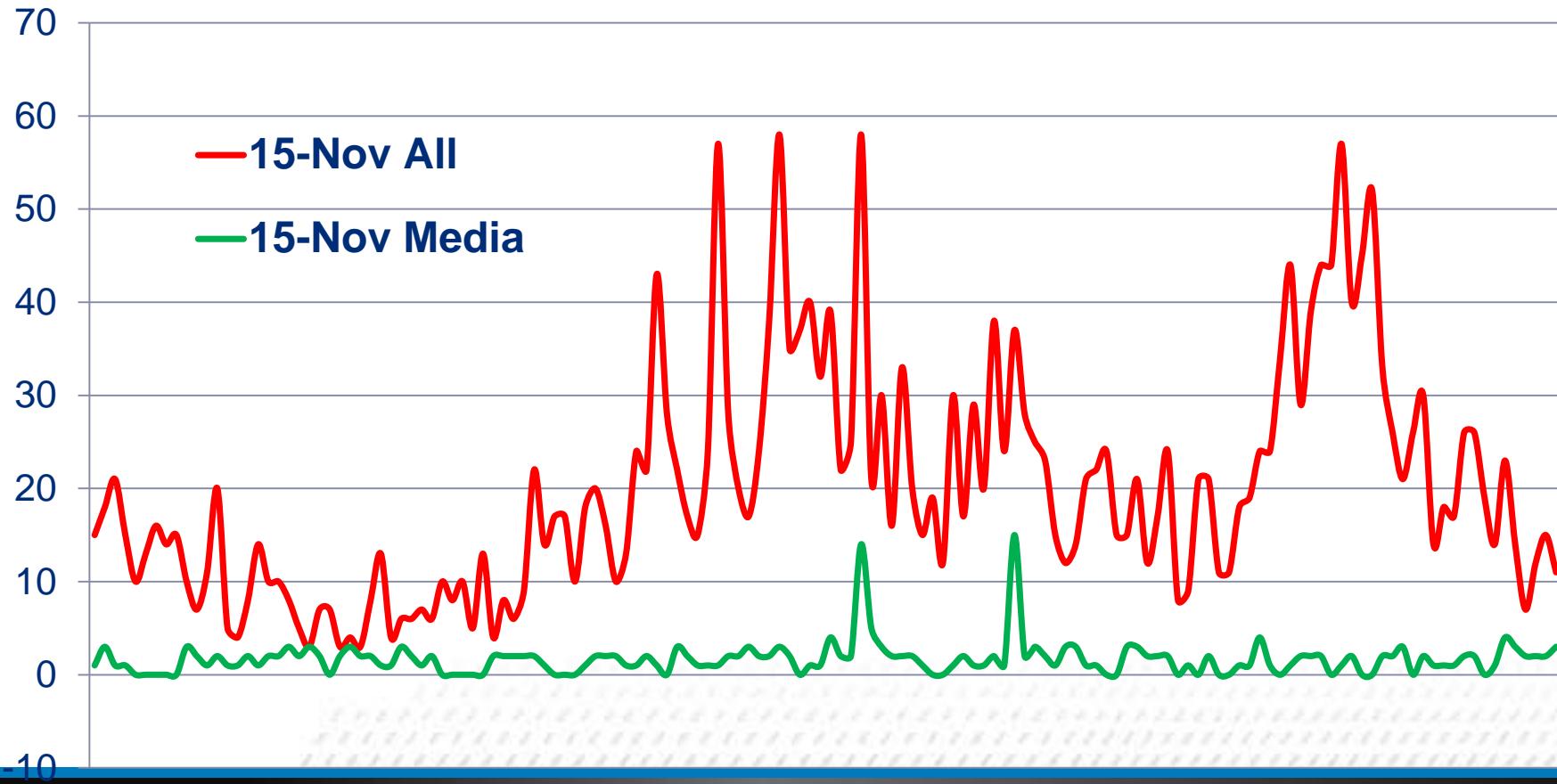
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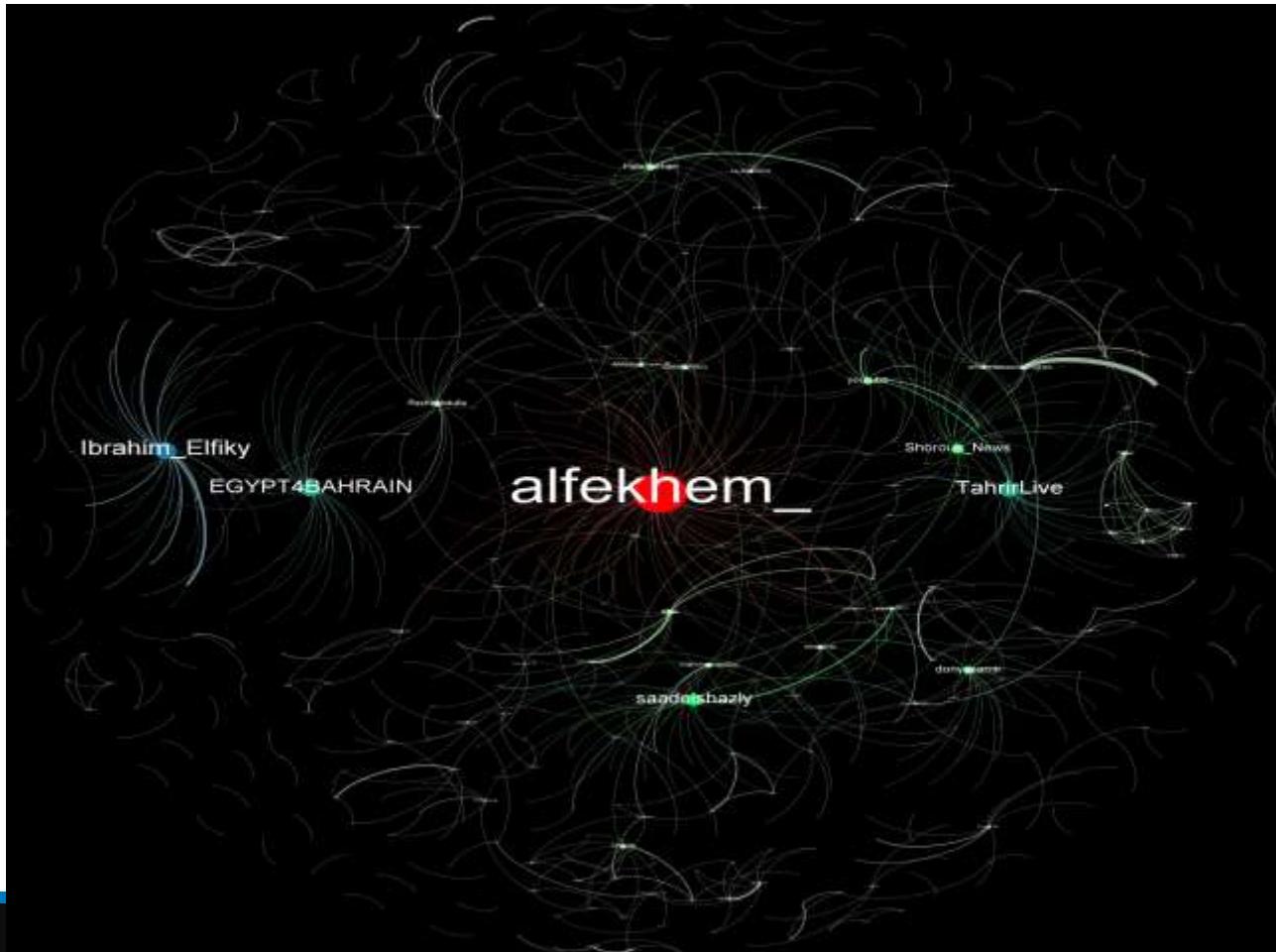
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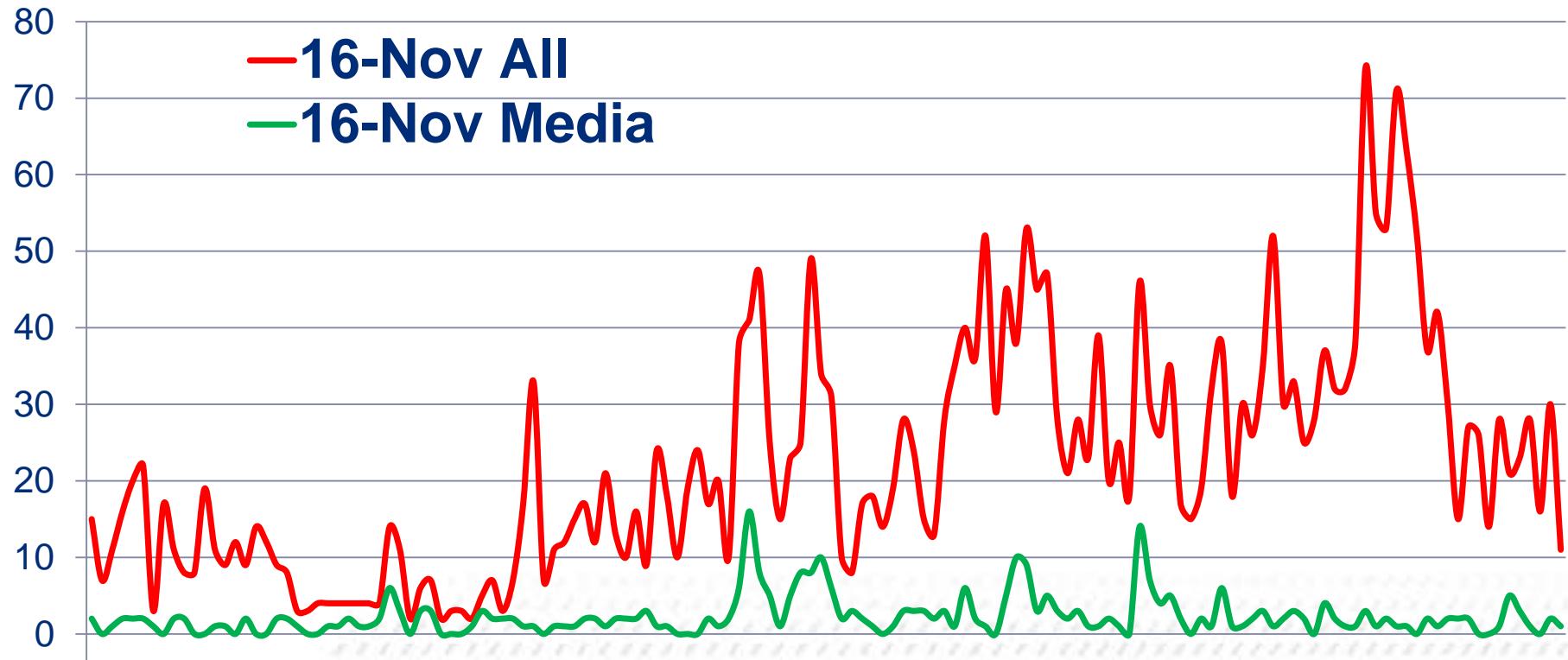
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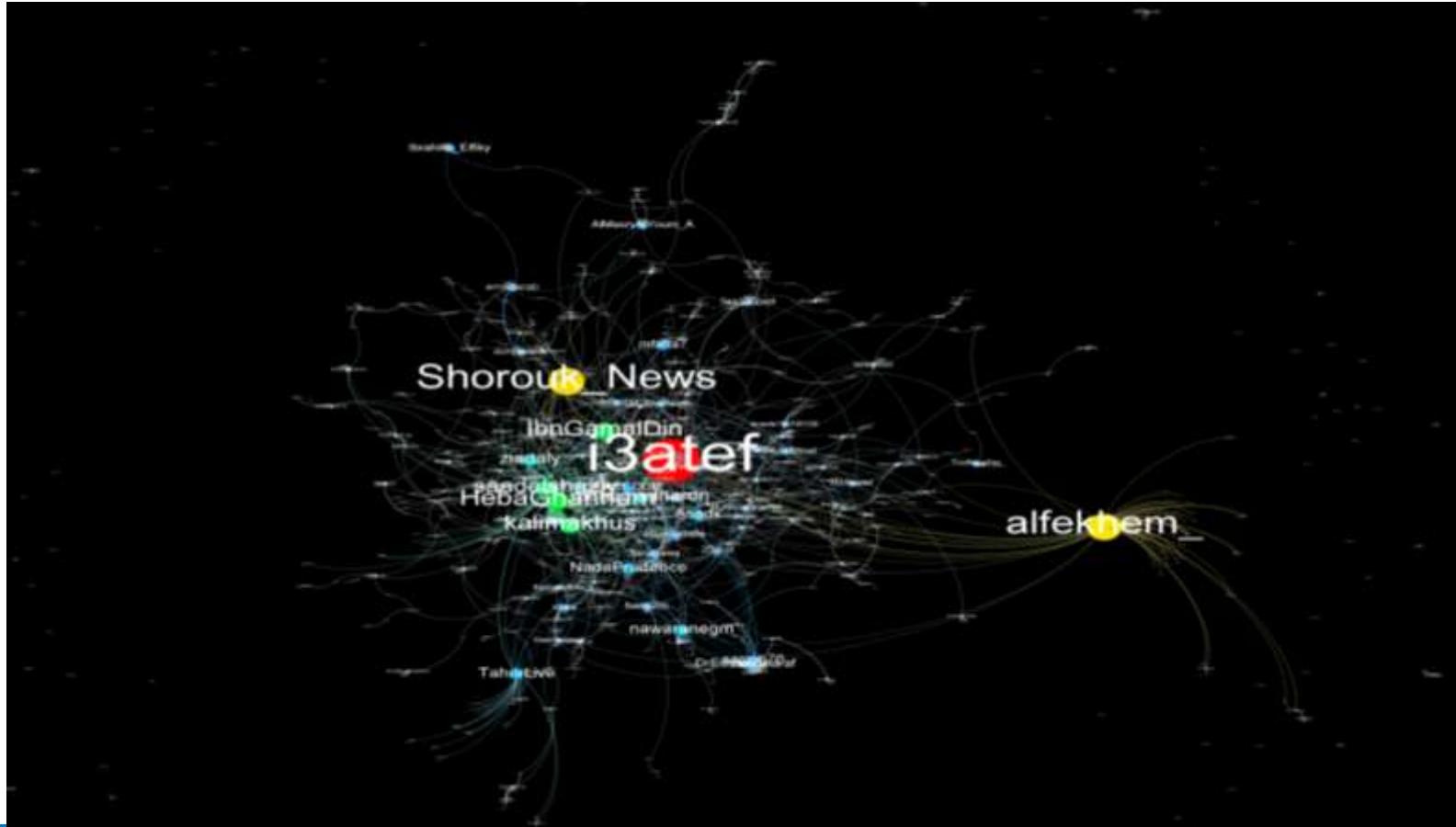
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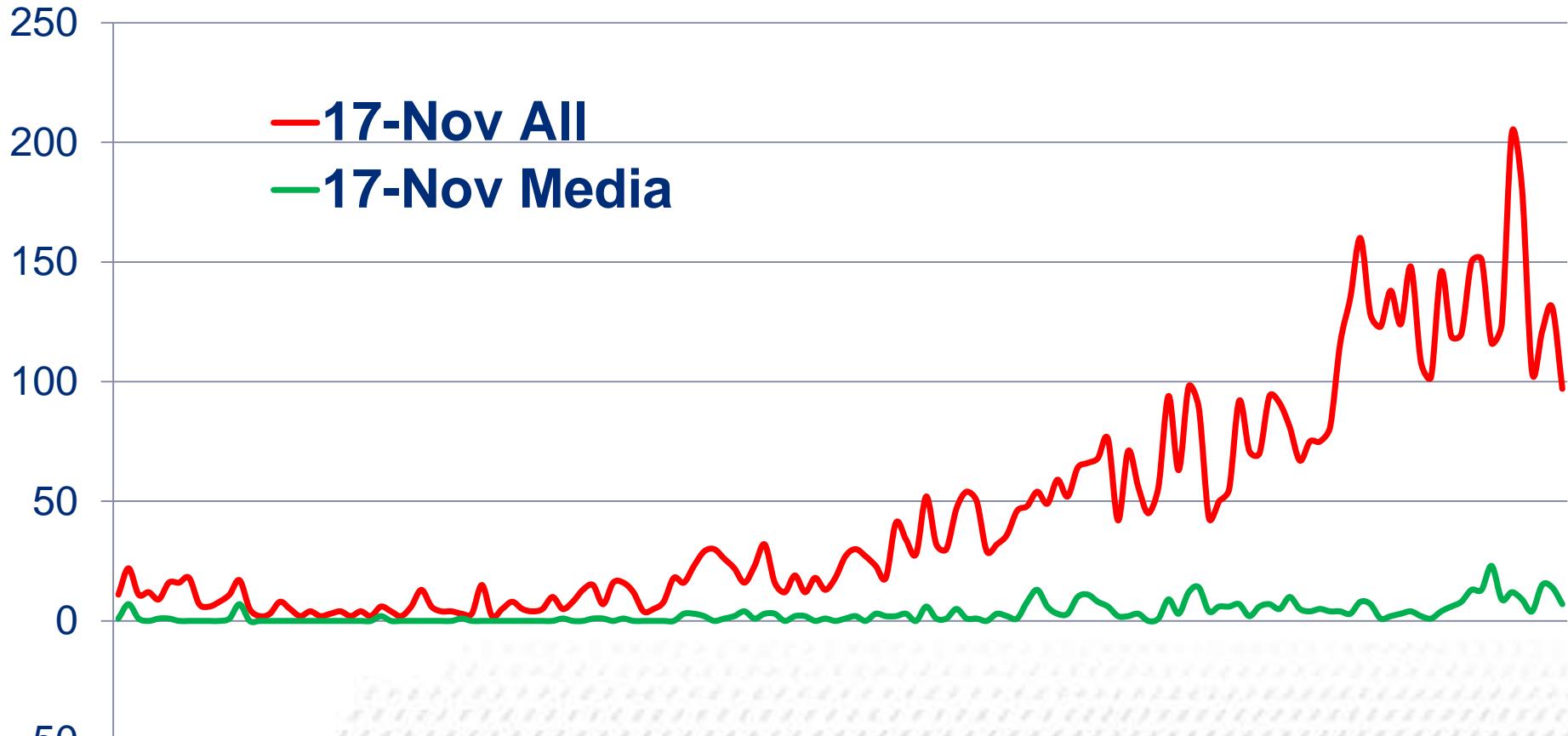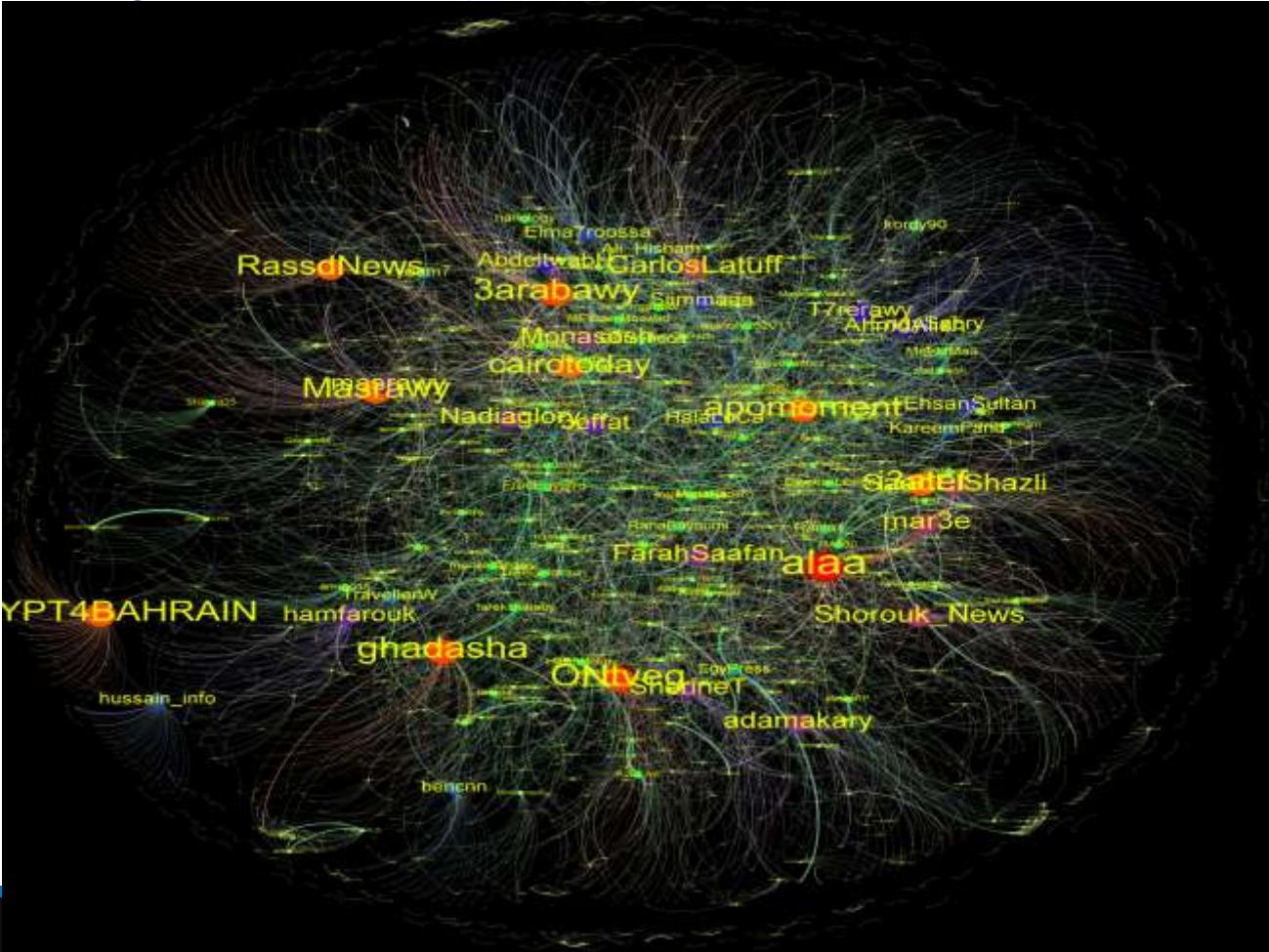
#Tahrir Longitudinal Analysis – All vs Media (18-Nov)
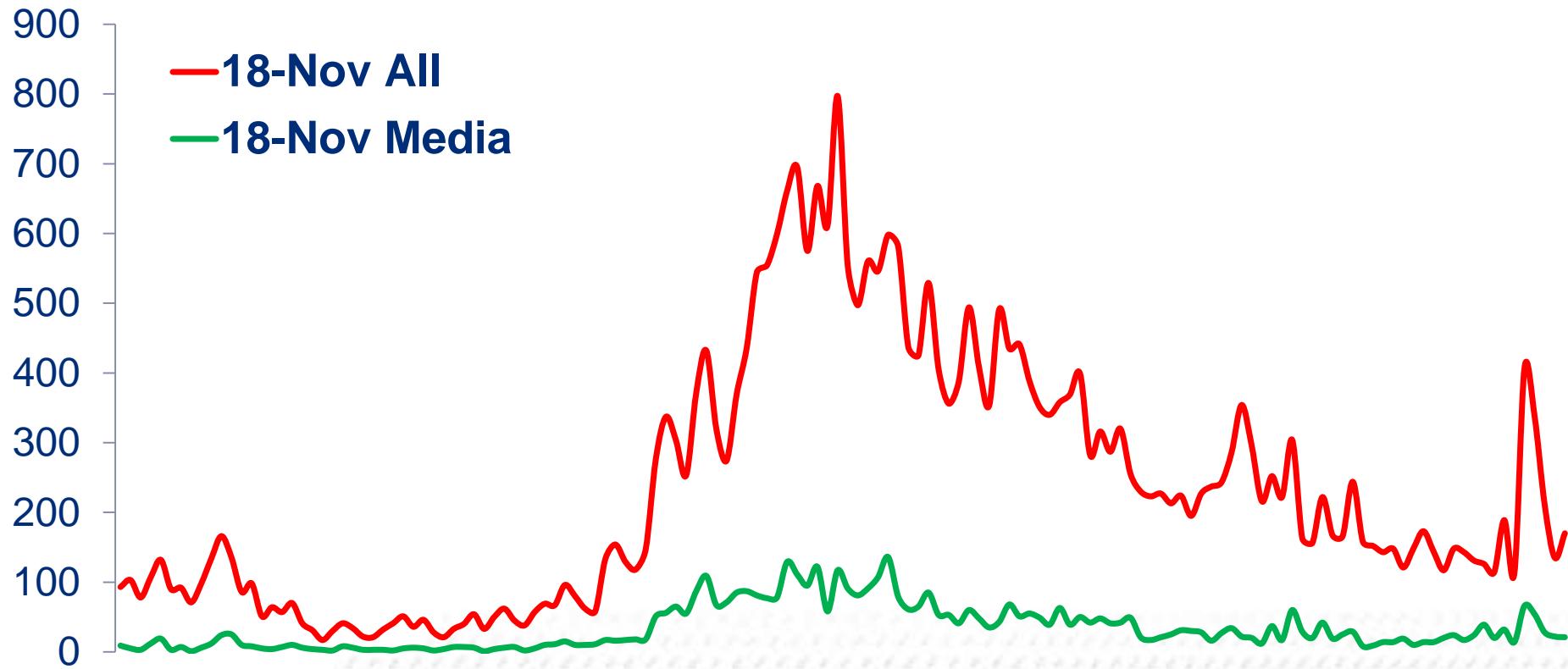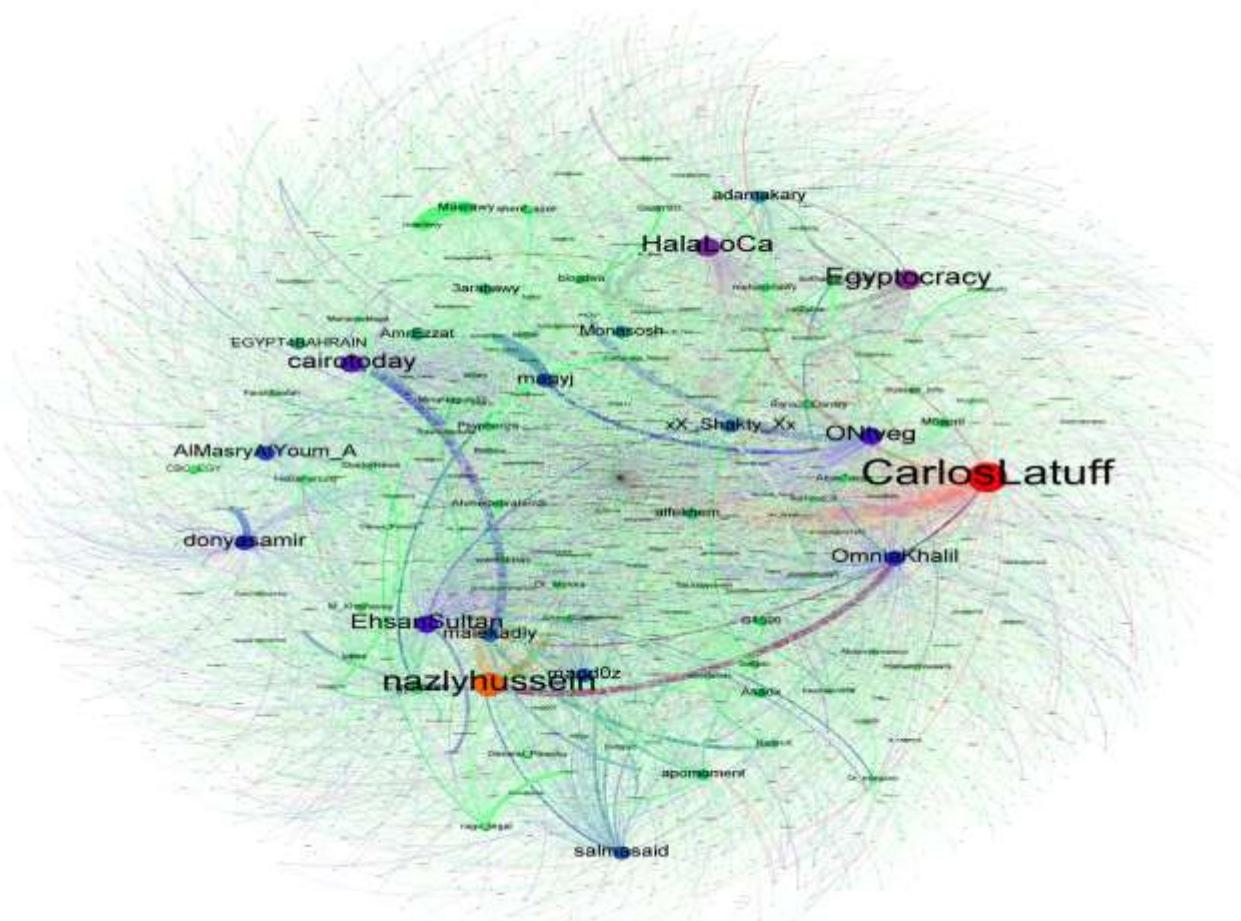
#Tahrir Longitudinal Analysis – All vs Media (19-Nov)

Legend: 19-Nov All
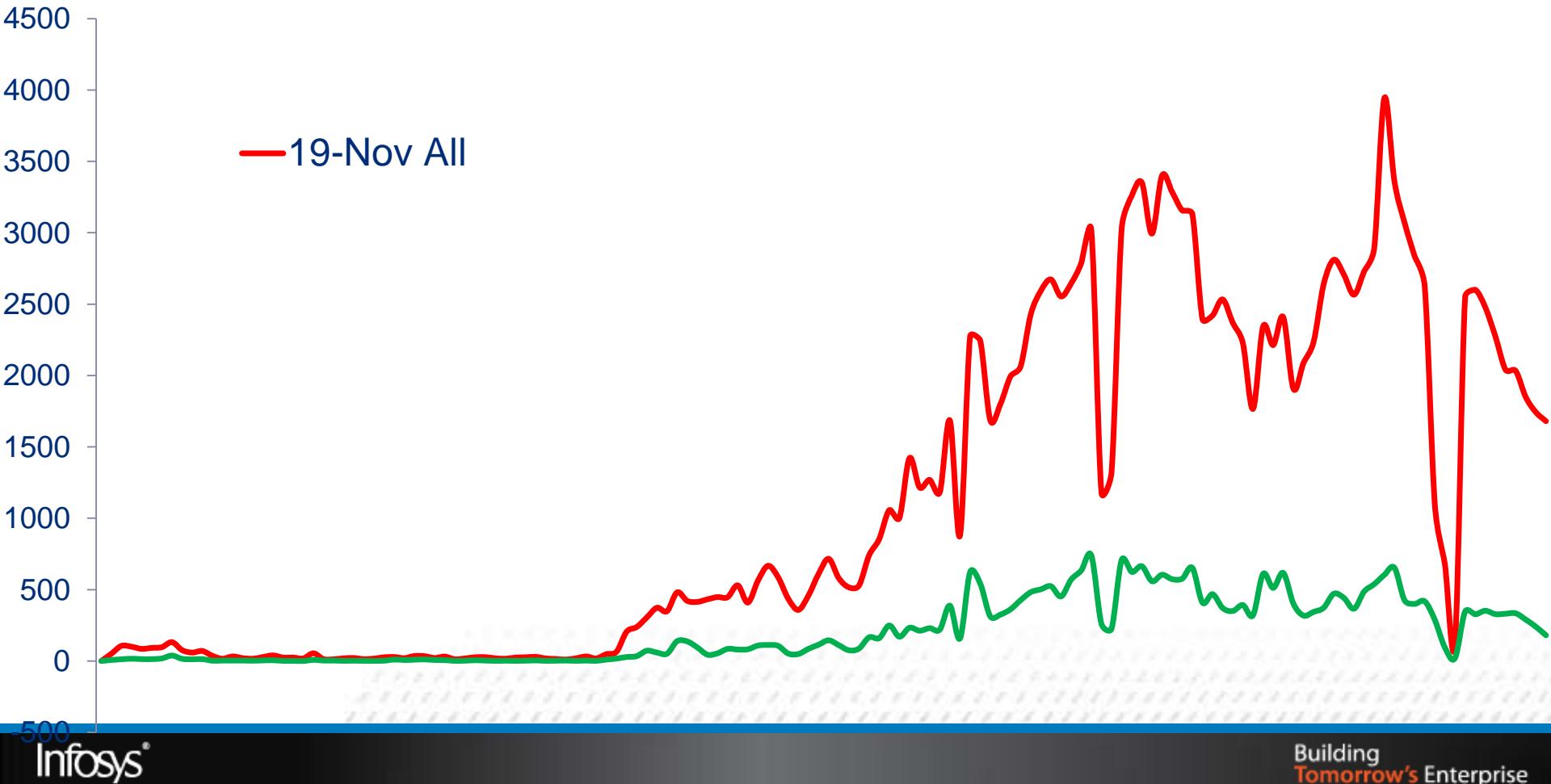
THANK YOU

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