

# Intelligent & Adaptive Systems Research Group





### Problem

- **Discovering new topics & trends within the political field for** different time frames.
- Discovering new people of interest within the field.
- Tracking developing topics.
- Monitoring the quality and intensity of the information being processed.

# **Real World Applications**

- Monitoring the evolution of topics and issues throughout their lifetime.
- Monitoring of elections and events running up to elections.
- Tracking trends in topics that the OMID system is aware of.
- Discovering of topics or trends in issues that users were unaware were important to their systems.

**Intensity & Quality** 

## **Person-Person Relations**

Stephen Harper Show 10 + entries

y and Quality	
Durr Intensity	Puez Quality

Demonstrates the ranks of different politicians

Demonstrates links between various politicians

Size and Color are indicators of how linked different politicians are.

This can be used to discover links between people that are not evident in every day life.

•Uses large amounts of data to create correlations that normal human observation may miss.

ID.7Stephen Harper.7Barack Obama.0George Bush.8Michael Ignatieff.8Hillary Clinton.9Bill Clinton.1Jack Layton.9Jim Flaherty.0Peter MacKay.2Dick Cheney.4howing 1 to 10 of 27.5F	10705 9047 4589 3406 2027 1856 1480 986 908 832 832
<ul> <li>Barack Obama</li> <li>George Bush</li> <li>Michael Ignatieff</li> <li>Hillary Clinton</li> <li>Bill Clinton</li> <li>Jack Layton</li> <li>Jim Flaherty</li> <li>Peter MacKay</li> <li>Dick Cheney</li> </ul>	4589 3406 2027 1856 1480 986 908 832
<ul> <li>Michael Ignatieff</li> <li>Hillary Clinton</li> <li>Bill Clinton</li> <li>Jack Layton</li> <li>Jim Flaherty</li> <li>Peter MacKay</li> <li>Dick Cheney</li> <li>howing 1 to 10 of 27 ntries</li> </ul>	3406 2027 1856 1480 986 908 832
<ul> <li>Hillary Clinton</li> <li>Bill Clinton</li> <li>Jack Layton</li> <li>Jim Flaherty</li> <li>Peter MacKay</li> <li>Dick Cheney</li> <li>howing 1 to 10 of 27 ntries</li> </ul>	2027 1856 1480 986 908 832
<ul> <li>Bill Clinton</li> <li>Jack Layton</li> <li>Jim Flaherty</li> <li>Peter MacKay</li> <li>Dick Cheney</li> <li>howing 1 to 10 of 27 ntries</li> </ul>	1856 1480 986 908 832
IJack LaytonJim FlahertyPeter MacKayDick CheneyDick Cheneyhowing 1 to 10 of 27htries	1480 986 908 832
9 Jim Flaherty 9 Peter MacKay 2 Dick Cheney howing 1 to 10 of 27 ntries	986 908 832
2 Peter MacKay 2 Dick Cheney 2 howing 1 to 10 of 27 2 ntries	908 832
2 Dick Cheney howing 1 to 10 of 27 ntries	832
howing 1 to 10 of 27 ntries	
ntries	
l <u>im Flaherty Peter</u> Day <mark>Gilles Duc</mark>	r MacKay Jack Layton Ralpl Ceppe Bob Rae Frank
a <u>Hillary Clinton</u>	Bill Clinton George Bush Jim Abbott Diane Ablonczy
	and Automaty
[	Day <u>Gilles Duc</u> <u>Hillary Clinton</u>



A fuzzy evaluation of the Intensity and Quality of all the posts within the OMID system.

Each post is ranked as having one of the following levels of Quality/Intensity: **High** ♦ Medium **Low** 

Trends The OMID system tracks developing intensity trend trends in both intensity & Quality. 5000 4000 The trends can be identified for different time frames as chosen by the end user. In the near future the OMID system will be able to track tends in topics in the form of the number of posts about

# **Person-Topic Relations**



Demonstrates links between various politicians and the topics



(More Info	Show			2 3 Next Last
4/10	32	Dick Cheney	832	
1 1 10th	20	Peter MacKay	908	
	19	Jim Flaherty	986	
	21	Jack Layton	1480	
	29	Bill Clinton	1856	
	28	Hillary Clinton	2027	
	18	Michael Ignatieff	3406	
1 B	30	George Bush	4589	
a 60 5	27	Barack Obama	9047	

Related Topic

#### Select Topics

terrorism Crime technology national security Iraq war academic death sentence religion Oil weather **GOVERNMENT** industry Pollution drug games news afghanistan economy sport movie Facebook ealth election traveling abortion Global warming media

that they talk about.

Size and Color are indicators of how often that posts are found to be referring to the politician and that topic.

This can be used to find links between different politicians and the varying topics that they discuss.



## **Topic Discovery**

said topics.

Provides a general overview of all the topics within the OMID system.

The OMID system is designed to recognize new topics that were not listed before.

These new topics are added to the list of topics so that they can be tracked as those topics develop.

# 2011 Research Expo, Fredericton, NB, April 8, 2011