Cyber Intelligence Lab

Wingyan Chung, Ph.D.
Institute for Simulation and Training
Email: wchung@ucf.edu; Tel.: (407) 882-1435
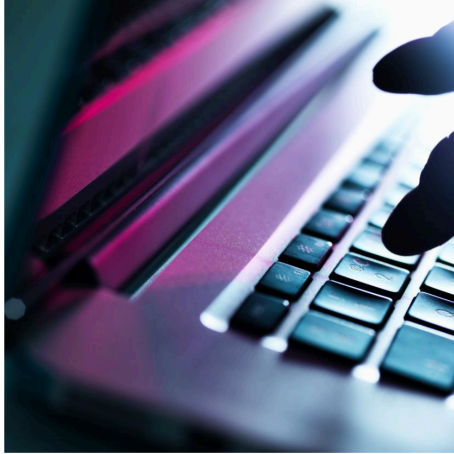
The U.S. Is Losing the Social Media War

Rand Waltzman | Oct. 12, 2015

IDEAS

Rand Waltzman is a former Defense Advanced Research Projects Agency program manager.

Our adversaries are using our own technology against us— while we're not allowed to use it to defend ourselves

Cyber or information-environment security is often in the news, yet most of our focus has been on theft of intellectual property, denial of service attacks, and assaults on personal privacy. Far less attention has been paid to the ways social media have facilitated a level of propaganda and falsehoods, which is far more pernicious than anything previously experienced. The continuous assault on objective, truthful information threatens to undermine democratic institutions, including a free press.
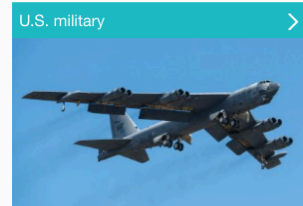
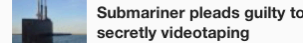## FLETC Cybercrime Conference

July 15, 2016
11:42 am

Connie Patrick
Director, Federal Law
Enforcement Training
Center

In the 21st century, technology is ingrained into the fabric a technology plays in our lives, the more opportunities unscr acting in bad faith have to commit cyber-related crimes.

Given this threat, our law enforcement professionals are fa where technology is constantly changing. Consequently, th become quickly perishable.

Air Force intel uses ISIS 'moron' post to track fighters

By Walbert Castillo, CNN | Updated 5:15 PM ET, Fri June 5, 2015 | Video Source: CNN

Baghdad
10:08 PM

Palmyra   SYRIA   IRAQ
Damascus
Ramadi
Baghdad

WAR AGAINST ISIS
ISIS HEADQUARTERS EXPOSED IN ONLINE SELFIE
Air Force general says U.S. missiles destroyed compound

CNN   DOW ▼ -42.41

NEWSROOM

U.S. military

Complete coverage of the U.S. Military

ISIS 'moron' guides U.S. bombers

Submariner pleads guilty to secretly videotaping

U.S. bombs ISIS using social media intel - CNNPolitics.com

Washington (CNN) Although ISIS is known for using social media for recruitment purposes, U.S. Air Force intelligence has been using it to track down Islamic State militants, according to Gen. Hawk Carlisle, commander of Air Combat Command.

"These guys that are working down at Hurlburt (Florida), they're combing

2

CI Lab Research Streams

1. Social-Media-based Cyber-Situational Understanding
2. Modeling the Human in Cybersecurity
3. Cyber-Intelligence Informatics, Modeling, and Simulation
4. CPS Vulnerability Assessment and Threat Mitigation
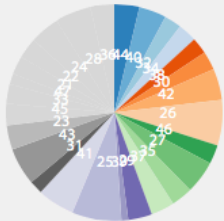5. Educational developments for cybersecurity

iMood

Discovering U.S. Immigration Reform Sentiment

Tweet Summary: May - now, 2013

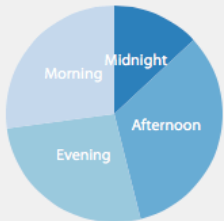| User	305,029
Link	867,181
Message	928,527

Tweet Count By Weekday
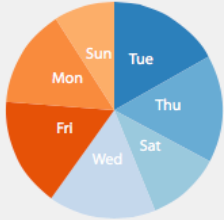
Tweet Count By Week

Tweet Count By Time of Day

Most Targeted Users

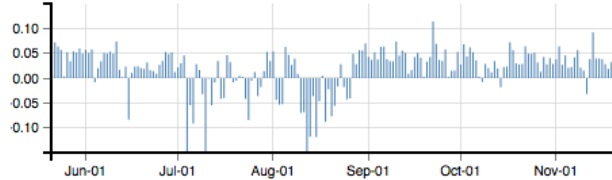| Most Targeted Users	Targeted Tweet

Daily Tweet Count
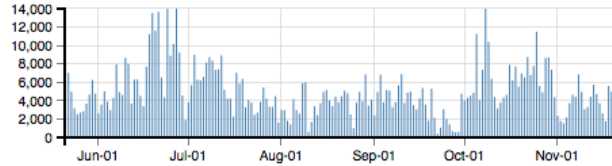
Sentiment Polarity

Anger
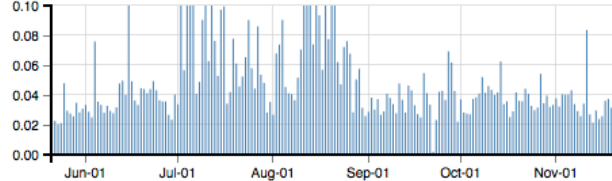
Anticipation
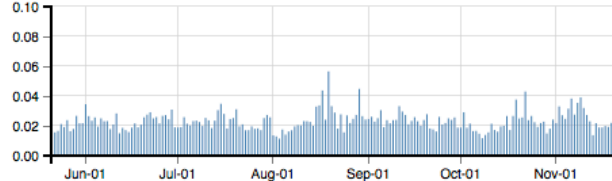
Most Influential Users

Top Tweet Leader	Influence Score
Justin Sink	59,203,695.28
The Hill	59,108,373.75
Nat Assoc of Mfg	56,685,502.99
U.S. Chamber	56,515,685.97
Juan Torres	56,340,275.42
Geneva Sands	39,685,689.45
JORGE RAMOS	22,474,450.31
Ted Hesson	16,914,719.43
Mark Krikorian	14,674,176.60
Roy Beck	11,504,908.30

Most Retweeted Users

Most Retweeted User	Retweet Count
Barack Obama	31,558
Charles Garcia	16,965
Speaker John Boehner	9,943
FWD.us	7,151
Michelle Malkin	4,955
The New York Times	4,537
americasvoice	4,256
Senator Ted Cruz	4,049
GOP	3,682

4

Influence Prediction and Network Visualization

Table 1. Selected Tweets Used in Analyzing Message Propagation

User	Date/time	Content
BarackObama	4/2/14 17:38	The #CostOfInaction on immigration is having a real affect on local communities. Read these letters to the editor: http://t.co/TWjz2c6H2M
Reuters	3/29/14 18:06	Mexico finds 370 abandoned immigrant children http://t.co/IA4bqgyVMo
stephenmengland	6/23/13 4:19	We must stop #Go8 and instead secure the border, stop illegal immigration & improve legal immigration: http://t.co/R6AJJypvGC #NoAmnesty
Hamstertweet93	6/27/13 13:26	Immigration reform bill that includes first steps towards citizenship for illegal immigrants is passed by US Senate

Marchers urge Congress to pass immigration reform; several congressmen arrested

- BarackObama, 2014-04-02
- Reuters, 2014-03-29
- stephenmengland, 2013-06-23
- Hamstertweet93, 2013-06-27
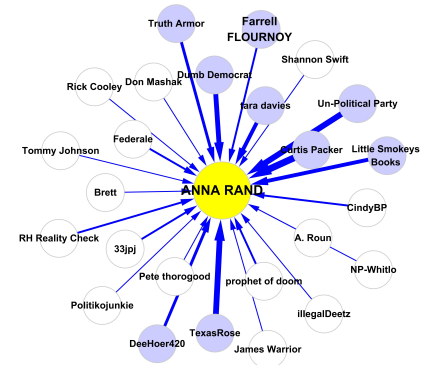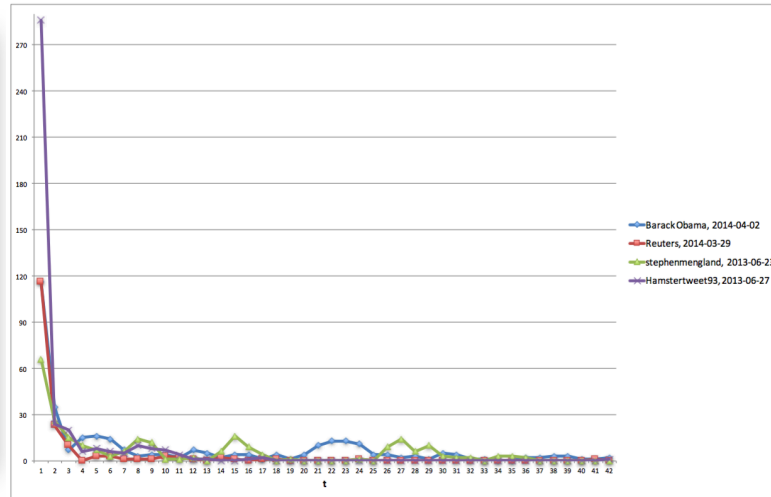
Collaborative Opportunities

- Social-media-based Cybersecurity

- Cybercrime network analyses

- Big data analytics and visualization

- Cybersecurity and intelligence informatics

- Educational developments: Curriculum, training, materials, systems, case studies, etc.

Cyber Intelligence Lab

Wingyan Chung, Ph.D.
Institute for Simulation and Training
Email: wchung@ucf.edu; Tel.: (407) 882-1435