

# THE USE OF TWITTER DURING THE 2014 CRISIS IN UKRAINE: A TALE OF THREE LANGUAGES

---

ANATOLIY GRUZD (@GRUZD)

Associate Professor, Ted Rogers School of Management  
Director of the Social Media Lab  
Ryerson University

## **2015 Summer Specialist Meeting**

Hosted by the Center for Human Dynamics in the Mobile Age (HDMA)  
NSF-CDI and NSF-IBSS Project

San Diego, CA, August 11-12, 2015

# Social Media Lab, Ryerson University (Toronto, Canada)





In the Social Media Lab,  
we're interested in  
studying how social  
media ....

## Social Media Support Social Activism and Political Engagement

# From this...



#OccupyGezi Supporters in Victoria, BC

@gruzd

2014 EuroMaidan Revolution

Photo credit: Anatoliy Gruz



In the Social Media Lab,  
we're interested in  
studying how social  
media ....

## Social Media Help to Organize Social Movements

... to this



**#OccupyGezi: Gezi Parki Protest, Turkey (2013)**

@gruzd

2014 EuroMaidan Revolution

Photo credit: Karl Schönswetter



# Today's focus:

## 2014 EuroMaidan Revolution | Revolution of Dignity



# Outline

- **Background**
- Review of Social Media Platforms
- Twitter Use
- Conclusions

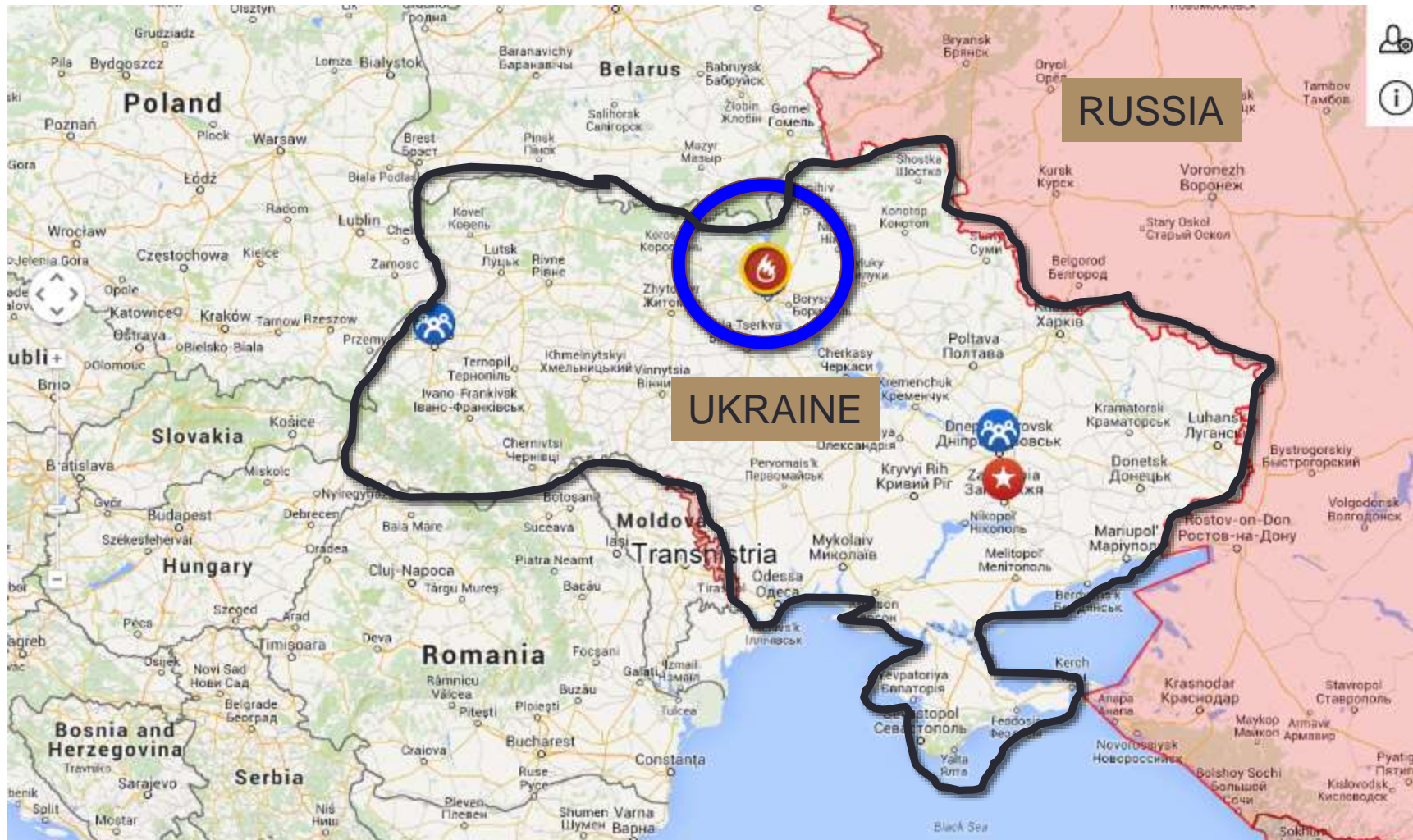


# Today's focus: 2014 EuroMaidan Revolution | Revolution of Dignity





# February 18-19, 2014: Protests in Kyiv (capital) Turned Deadly



source

tell friends



1 year ago Comments

Protesters set Kyiv office of Party of regions on fire



source

tell friends

source: <http://liveuamap.com>



## February 18-19, 2014: Protests in Kyiv Turned Deadly



"Barricade line separating interior troops and protesters. Clashes in Kyiv, Ukraine. Events of February 18, 2014-2" by Mstyslav Chernov/Unframe/<http://www.unframe.com/> - Licensed under CC BY-SA 3.0 via Wikimedia Commons



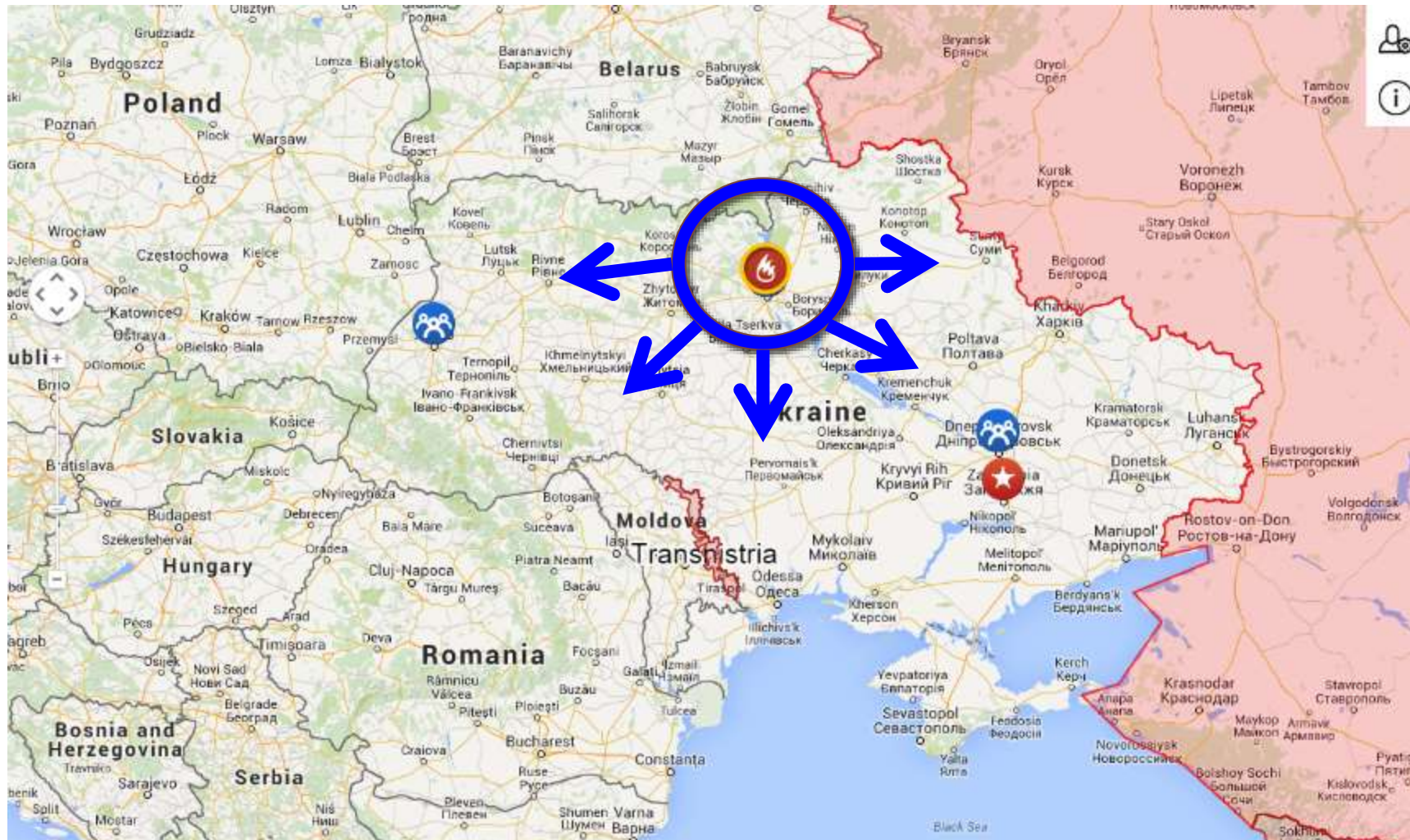
## February 18-19, 2014: Protests in Kyiv Turned Deadly



"Euromaidan in Kiev 2014-02-19 12-06" by Amakuha. Licensed under CC BY-SA 3.0 via Wikimedia Commons



# February-March, 2014: Pro & Anti-Maidan Protests Spread Across Ukraine



source tell friends



1 year ago Comments

Protesters set Kyiv office of Party of regions on fire



source tell friends

source: <http://liveuamap.com>



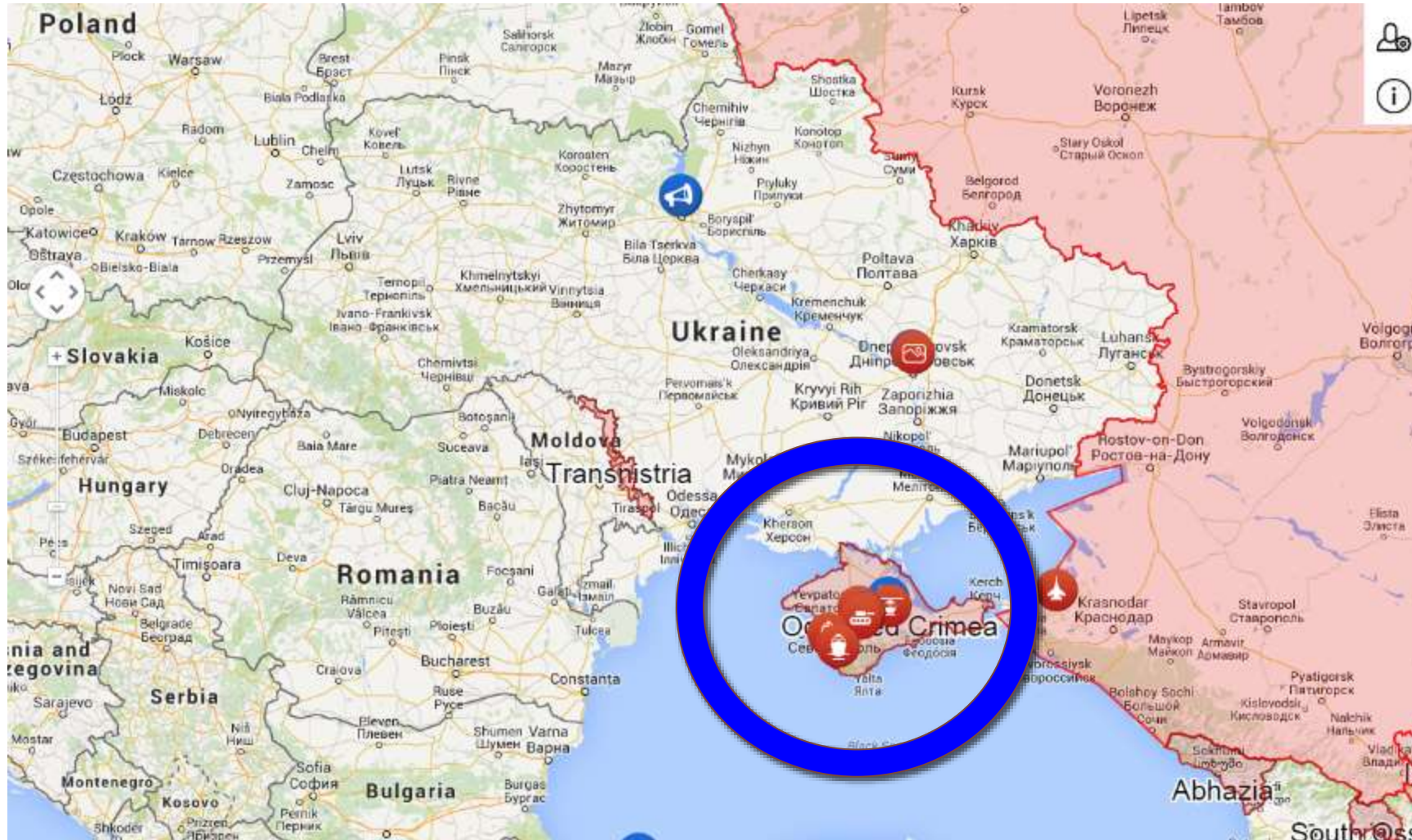
## February-April 2014: A wave of Anti-Maidan protests in South-East



Photo credit: Andriy Makukha. Licensed under CC BY-SA 3.0 via Wikimedia Commons



# March 2014: Annexation of Crimea by Russia



masked gunmen in hotel in #Simferopol, where mainly int #journalists are staying



source

tell friends



1 year ago Comments

Crimea will print 22% extra ballots for illegal referendum

source

tell friends



1 year ago Comments

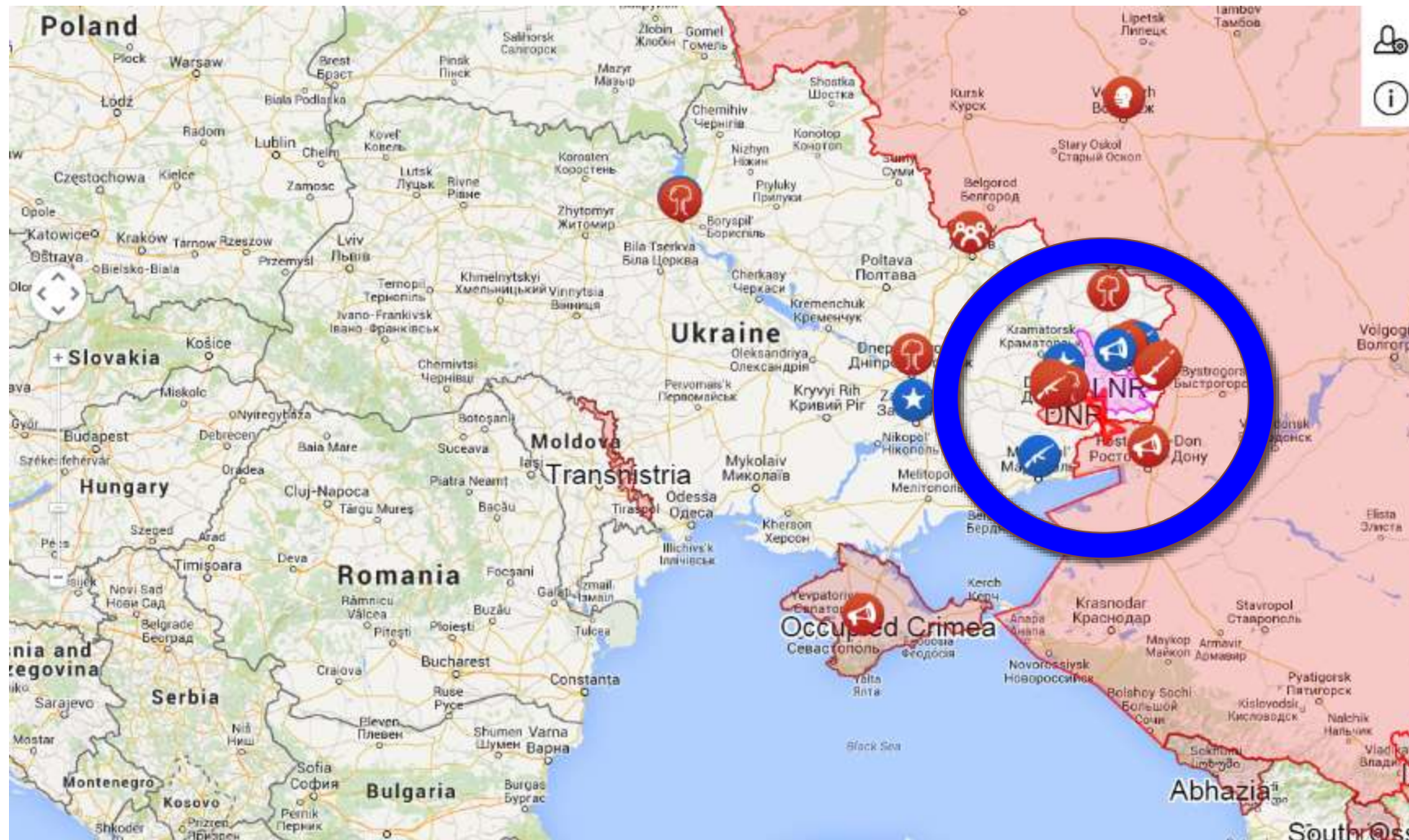
Rally in St-Petersburg "No to war"



source: <http://liveuamap.com>



## April 2014: Anti-Terrorist Operation (ATO) against pro-Russian Self-proclaimed republics: Donetsk People's Republic (DPR) & Lugansk People's Republic (LPR)



source tell friends



6 month ago Comments

Explode near the 'DNR' headquarters in Horlivka. One dead

source tell friends



6 month ago Comments

Obama and Cameron discussed further sanctions against Russia



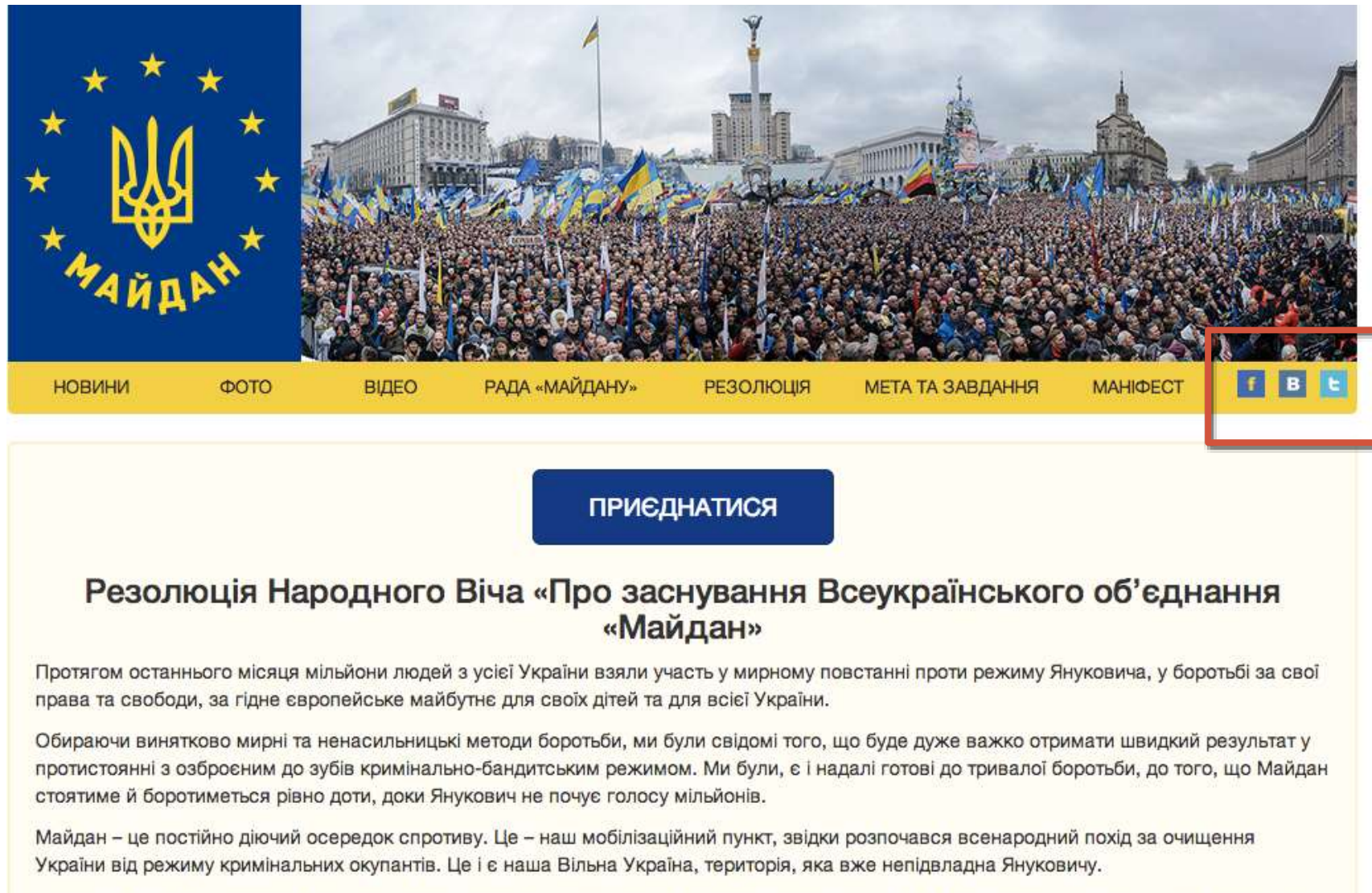
source: <http://liveuamap.com>

# Outline

- Background
- **Review of Social Media Platforms**
- Twitter Use
- Conclusions



## Review of Social Media Platforms: Websites – still important, linking to social media accounts



МАЙДАН

НОВИНИ ФОТО ВІДЕО РАДА «МАЙДАНУ» РЕЗОЛЮЦІЯ МЕТА ТА ЗАВДАННЯ МАНІФЕСТ

Facebook VK Twitter

**ПРИЄДНАТИСЯ**

### Резолюція Народного Віча «Про заснування Всеукраїнського об'єднання «Майдан»

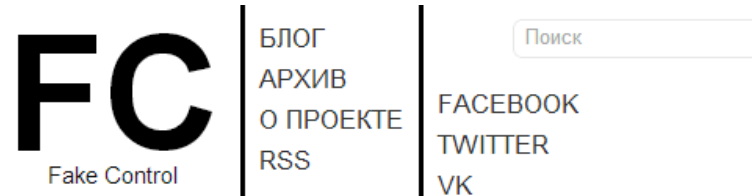
Протягом останнього місяця мільйони людей з усієї України взяли участь у мирному повстанні проти режиму Януковича, у боротьбі за свої права та свободи, за гідне європейське майбутнє для своїх дітей та для всієї України.

Обираючи винятково мирні та ненасильницькі методи боротьби, ми були свідомі того, що буде дуже важко отримати швидкий результат у протистоянні з озброєним до зубів кримінально-бандитським режимом. Ми були, є і надалі готові до тривалої боротьби, до того, що Майдан стоятиме й боротиметься рівно доти, доки Янукович не почує голосу мільйонів.

Майдан – це постійно діючий осередок спротиву. Це – наш мобілізаційний пункт, звідки розпочався всенародний похід за очищення України від режиму кримінальних окупантів. Це і є наша Вільна Україна, територія, яка вже непідвладна Януковичу.



# Review of Social Media Platforms: Blogs



## Авианосец, который не смог.

ВТОРНИК, 4 МАРТА 2014 | [КОММЕНТАРИИ](#)

Возможно вы слышали что авианосец США USS George H.W. Bush направили в сторону Украины, возможно вы даже прочитали об этом у [ICTV вот тут](#)

**США отправили по направлению к Черному морю авианосец USS George H.W. Bush из-за вторжения российской армии в Крым.**

*“В ответ на российское вторжение США отправили ударную группу на авианосце в направлении Черного моря, чтобы иметь возможность реагировать на развитие событий на Крымском полуострове в Украине”, – сообщают [Украинские новости](#) со ссылкой на сайт [Turner Radio Network RSS Feed](#).*

Джерело: [fakty.ictv.ua](#)

## Комментарии

40 Комментариев

Фейк Контроль

Войти ▾

Лучшее вначале ▾

Поделиться Избранный ★



Присоединиться к обсуждению...

Показать один новый комментарий



**Yuriy Burda** • 3 часа назад

Так йому в Чорне море й не треба. Ефективний радіус дії достатній навіть для того щоб з Греції весь рос. флот затопити.

45 • Ответить • Поделиться >



роман → Yuriy Burda • 3 часа назад

1 корабль весь флот России ? а губа не треснет у америкосов??

1 • Ответить • Поделиться >



123фыв → роман • 3 часа назад

Если речь о черноморском, то думаю, увы или к счастью, не треснет.

36 • Ответить • Поделиться >



Вадим → роман • 2 часа назад

А это не просто корабль, это ядерный авианосец, сопровождаемый 17 военными кораблями и тремя ядерными подводными лодками!

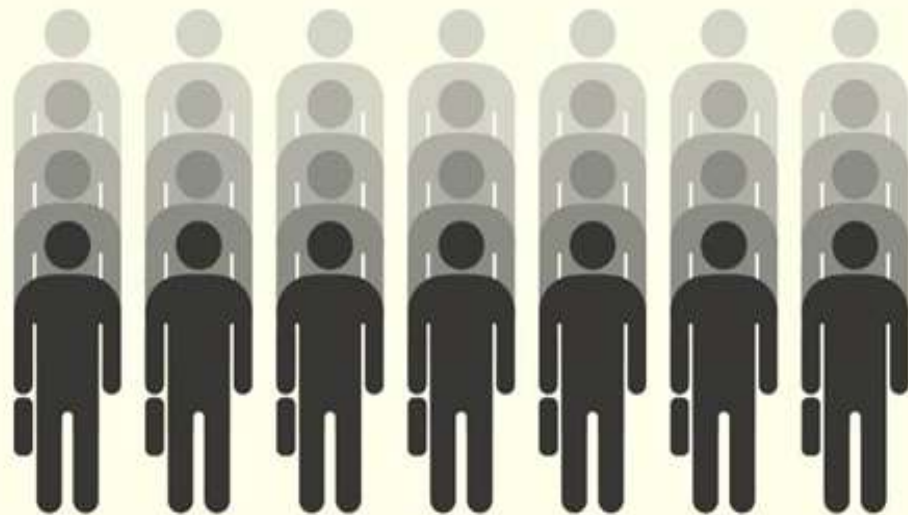
<http://fakecontrol.org/blog/2014/03/04/george-bush/>



# Review of Social Media Platforms: Blogs

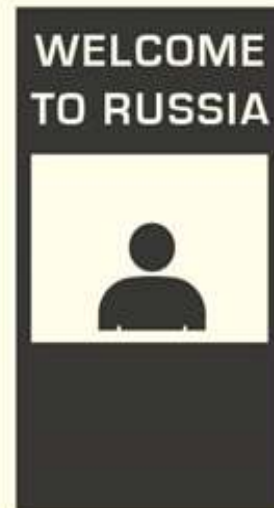
Example: Combating Misinformation

## UKRAINIANS SEEKING REFUGE IN RUSSIA



**675,000**

Ukrainians sought refuge  
in the Russian Federation



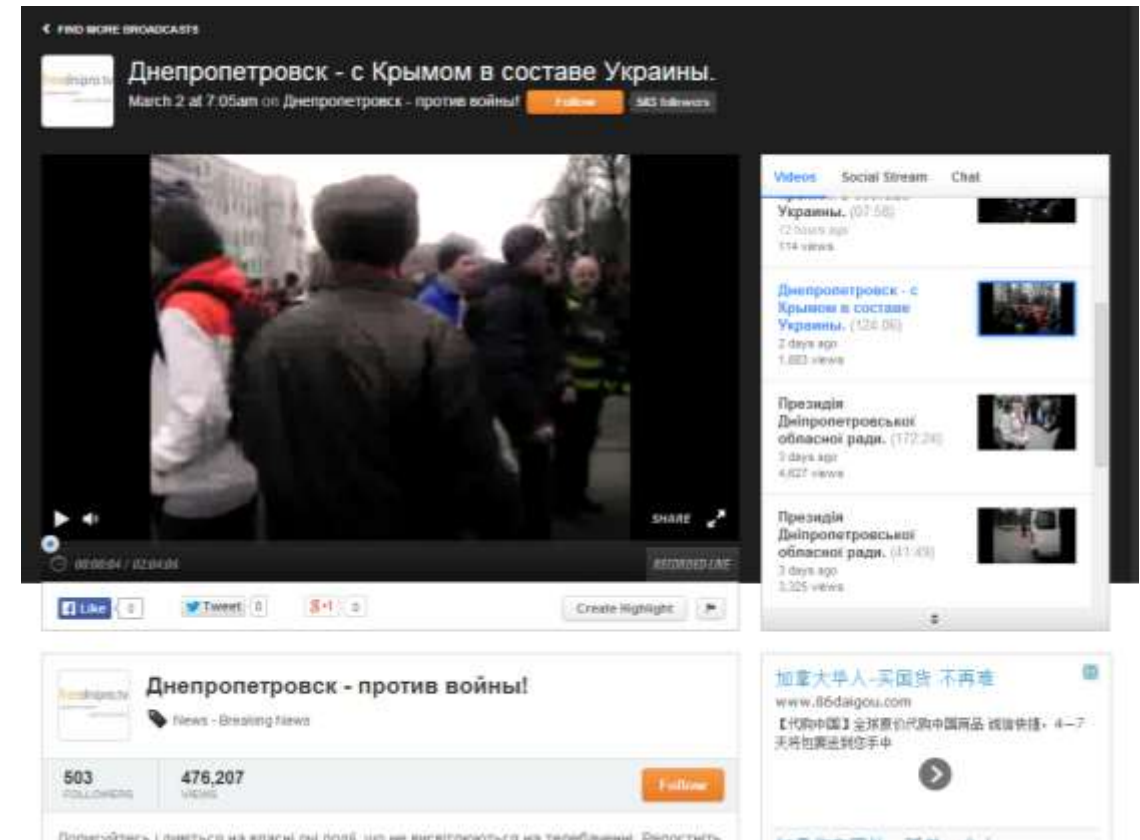
**16**



Only 16 Ukrainians  
have officially applied  
to the Migration  
Service of Russian  
Federation

## Review of Social Media Platforms

### Youtube & ustream.tv: Activists, News agencies, Gov.officials



[https://www.youtube.com/watch?v=l\\_cNDGU7k98](https://www.youtube.com/watch?v=l_cNDGU7k98)

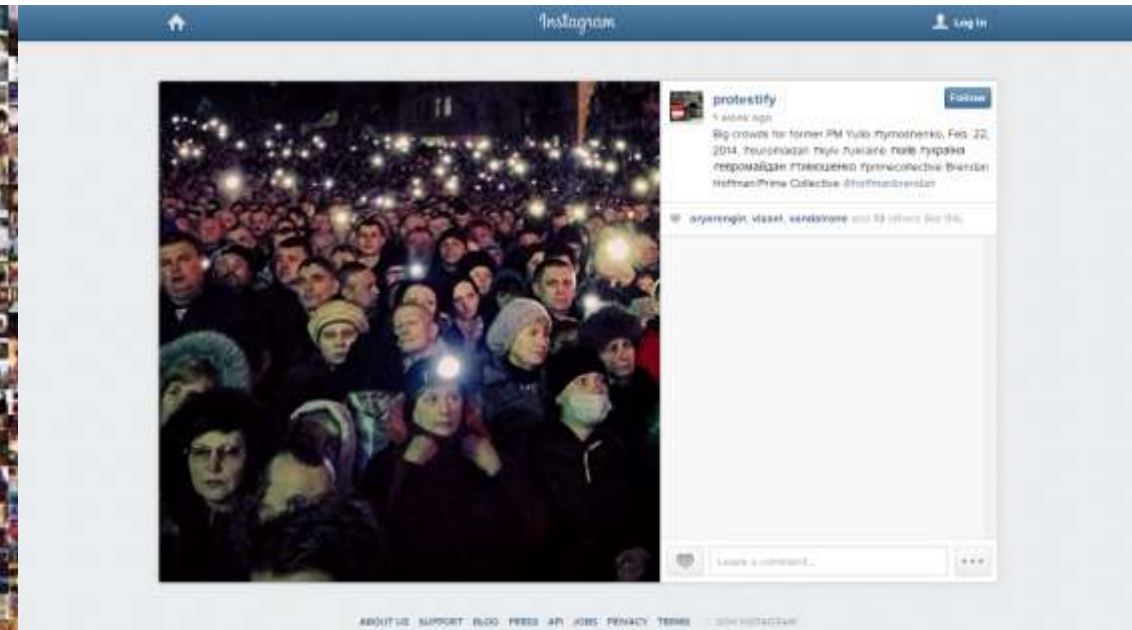
<http://www.ustream.tv/recorded/44404145>

## Future unrests: Twitter's Periscope?



# Review of Social Media Platforms

## Instagram: Photo Sharing during Rallies



13,208 images  
6,165 Instagram users  
2.14 average number of images per user  
5,845 unique tags  
21,465 total tags

<http://www.the-everyday.net>



00:06 | Feb 18

05:59 | Feb 18

Large demonstrations start in the morning. Clashes with police begin around 10am and continue throughout the day.

12:15 | Feb 18

Fights in a few areas of the city.



# Review of Social Media Platforms

## Wikipedia: Editors' Debate about the Status of Crimea

Should we change the name to Republic of Crimea yet? [\[edit\]](#)

It is clear that Crimea is now going to declare independence from ukraine and join russia. The vote just passed. --

**Cheesenibbles** (talk) 22:05, 16 March 2014 (UTC) And it is shame that Wikipedia suffers from proposers of propaganda from both sides. Wikipedia should remain the biggest free encyclopedia, not the fight-scene between different views and tensions. The biggest dissapointment would be to let this article use for propaganda purposes of involded sides, USA, EU and Russia... However, the residents of Crimea choosed to join Russia, so it should be mentioned. It should also be mentioned how many turned out to vote and the exact result of the vote. — Preceding unsigned comment added by [85.10.37.112](#) (talk) 00:15, 17 March 2014 (UTC)

Such a designation has not been officially recognized yet by any major government or the United Nations. It is not in Wikipedia's charter to recognize the existence of nations. The views may be presented if they done so objectively, are relevant, and notable. Wikipedia should remain neutral. *That is* in Wikipedia's charter. [Daydreamer302000](#) (talk) 10:31, 17 March 2014 (UTC)

As of now it has been recognized by Russia. It is a free state and should be treated as such.--**Cheesenibbles** (talk) 02:17, 18 March 2014 (UTC)

Yes, it has, and by no one but Russia. So, no, international law leaves it under Ukraine. [71.171.89.90](#) (talk) 14:14, 18 March 2014 (UTC)

Yes and no. IMO this article is/ should be about the geographical area considered the Crimea, not the political lines in the sand (in the same way that the article on Kosovo is separate to the article on the Republic of Kosovo. We should however change the map to reflect that political it's no longer part of Ukraine and update the description accordingly. --[Richardeast](#) (talk) 19:49, 17 March 2014 (UTC)



# Review of Social Media Platforms

## Facebook Groups & Pages: Activists

**Акція на Майдані "ПРАВИЙ СЕКТОР"** Members Events Photos Files Join Group + Create Group

**PINNED POSTS**

**Sergiy Borysenko**  
ПРАВИЙ СЕКТОР (<http://vk.com/public62043361>)  
Якщо номеру координатора Вашої області немає в списку нижче, чекайте коли він з'явиться. Також самі організуйте ініціативні групи.  
-----  
Координаційний номер Правого Сектору КИЇВСЬКОЇ ОБЛАСТІ +38 (093) 675-64-89  
Контакти областей:....  
See More  
Like · Share · 149 98 15 · February 24 at 10:26am · Edited

**RECENT POSTS**

**Sergiy Borysenko**  
Звернення Головнокомандувача «Правого сектору» Дмитра Яроша  
«Правий сектор» розцінює дії Російської Федерації як безпосереднє військове втручання. Відповідно, нині українці мають усі права на збройну протидію агресорам, хоча при цьому ми маємо сторонитися зайвої ескалації конфлікту і уникати цивільних жертв. У зв'язку з поточною політичною, геополітичною та військовою ситуацією, командування «Правого сектору» був створений

**About** 27,591 members

**Open Group**  
Маючи на меті переломити хід подій на «Майдані» на користь українського народу і нарешті допомогти... **See More**

**Friend Requests** See All

- Shameem Ahmed**  
8 mutual friends  
Confirm Friend
- Brandi Loveday**  
1 mutual friend  
Confirm Friend
- Olessia Koltsova**  
1 mutual friend  
Confirm Friend
- Jenny Korn**  
8 mutual friends  
Confirm Friend

**People You May Know** See All

**Євромайдан SOS**  
89,706 likes · 85,265 talking about this

Like Follow Message

**Community**  
Гаряча лінія Євромайдан SOS  
(068) 548 124 1; (066) 68 498 30; (063) 33 795 73  
Львів: 063-90-33-155, 093-43-66-593

About – Suggest an Edit

Photos Likes Events Videos

**Highlights**

**Post** **Photo / Video**

Write something on Євромайдан SOS's Page...

**Євромайдан SOS** shared a link.  
6 hours ago

Українские дети просят военных Путина уходить домой к своим детям

**Invite Your Friends to Like This Page** See All

Type a friend's name...

**Invite**

- Jun Wang** Invite
- J. Stephen Downie** Invite
- Marina Pluzhenskaia** Invite

<https://www.facebook.com/groups/223479324489867>

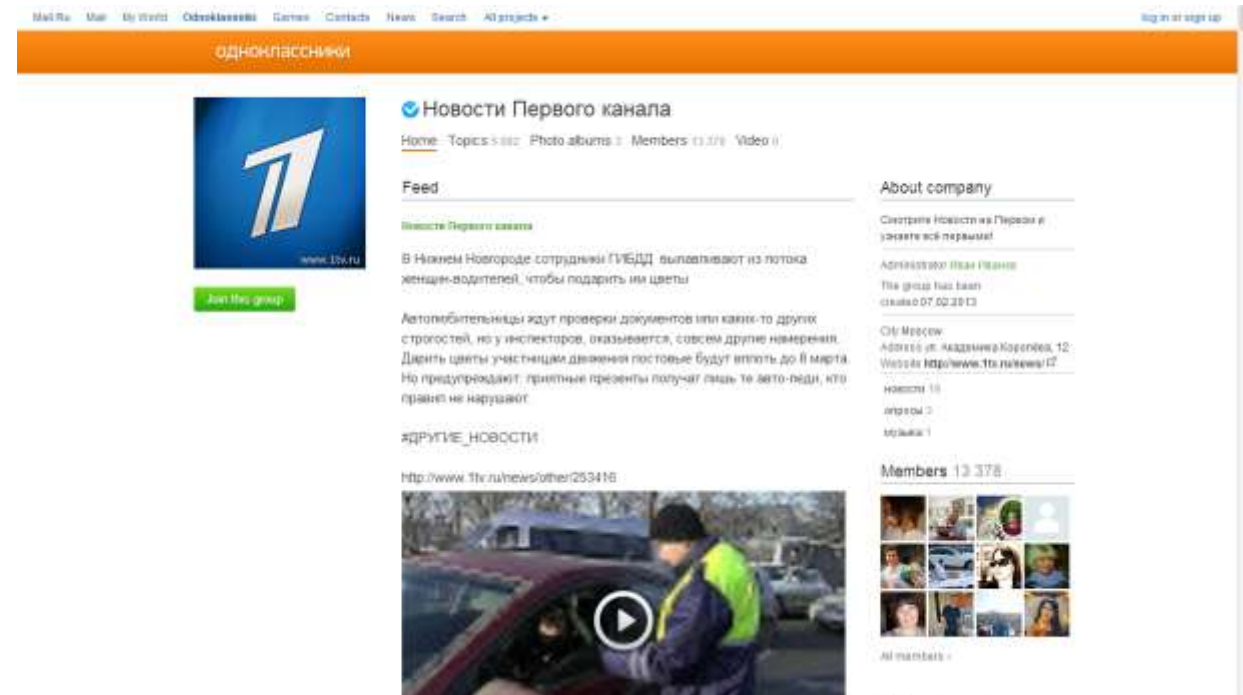
<https://www.facebook.com/EvromaidanSOS>

# Review of Social Media Platforms

## Vkontakte & Odnoklassniki.ru (Facebook alike)



The screenshot shows the VKontakte interface. On the left is a login box with fields for 'Phone or email' and 'Password', and buttons for 'Log in' and 'Sign up'. The main content area is a public page for 'Гражданская Самооборона Украины' (Civilian Self-Defense of Ukraine) with the tagline 'Русский, вставай!' (Russian, stand up!). The page text describes a campaign to support Ukraine by performing three tasks: A) Registering in the national militia, B) Working in social networks and on the internet, and V) Financial support. It lists various bank accounts (Sberbank, Yandex, Webmoney) and states that the collected funds will be sent to the Ukrainian East. At the bottom, there are two posters: one with the text 'РОДИНА-МАТЬ ЗОВЕТ!' (Motherland calls!) and another with 'ВСТУПАЙТЕ В РАДЫ НАРОДНОГО ОПОЛЧЕНИЯ!' (Join the People's Militia Councils!). A 'Followers' section shows 8,254 followers with profile pictures of Dan, Alexander, and Styopa.



The screenshot shows the Odnoklassniki.ru website. The top navigation bar includes links for Mail, Mail, My World, Odnoklassniki, Games, Contacts, News, Search, and All projects. The main content area features a group titled 'Новости Первого канала' (News of the First Channel) with a blue and white logo. The group has 13,378 members. The feed shows a post about a traffic accident in Novosibirsk, where a car driver was hit by a truck. The post includes a video player showing a car accident. On the right, there is an 'About company' section and a 'Members' section showing a grid of member profile pictures.

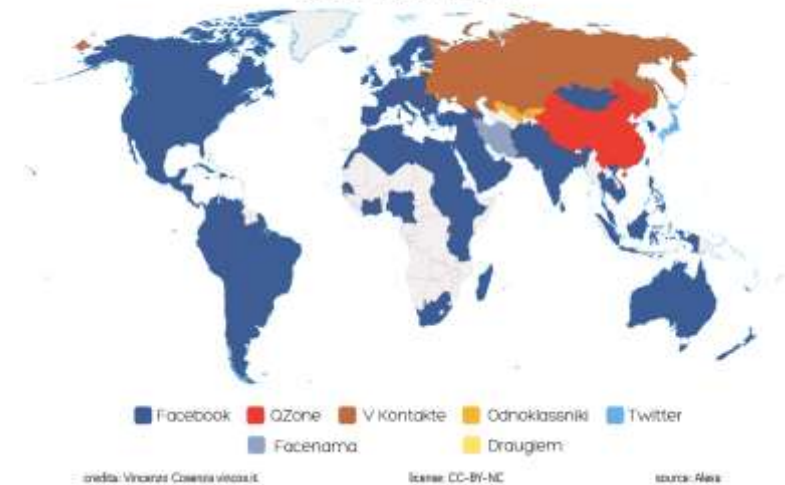


# Recent papers on Pro- and Anti-Maidan VK groups

Gruzd, A. & Tsyganova, K. (2015). **Information Wars and Online Activism During the 2013/2014 Crisis in Ukraine: Examining the Social Structures of Pro- and Anti-Maidan Groups.** *Policy & Internet* 2(7): 121-158.  
<http://onlinelibrary.wiley.com/doi/10.1002/poi3.91/abstract>

Gruzd, A. & Tsyganova, K. (2014). **Politically Polarized Online Groups and their Social Structures formed around the 2013-2014 crisis in Ukraine.** *Internet, Politics, Policy 2014: Crowdsourcing for Politics and Policy.* September 25–26, 2014, University of Oxford, Oxford, UK

WORLD MAP OF SOCIAL NETWORKS  
December 2014



VK	
	
Web address	<a href="http://www.vk.com">www.vk.com</a>
Type of site	Social Networks
Registration	Required
Available in	76 languages
Users	290+ million <sup>(1)</sup>
Owner	Mail.Ru Group
Created by	Pavel Durov
Launched	10 October 2006

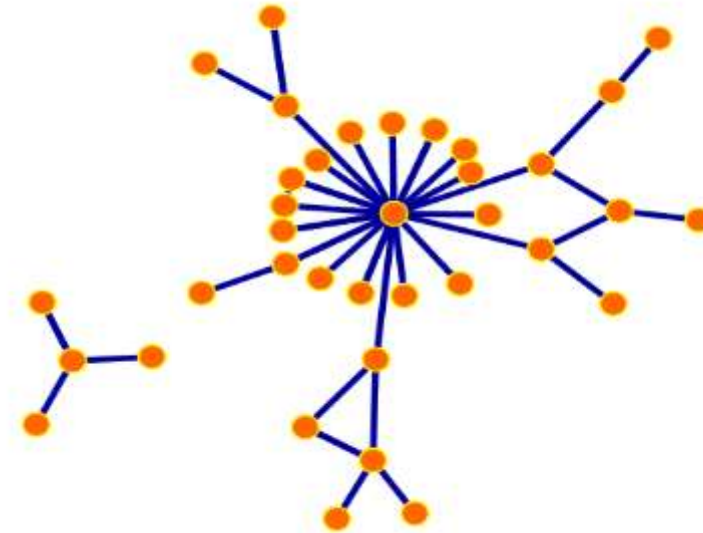
source: <http://en.wikipedia.org>

# Outline

- Background
- Review of Social Media Platforms
- **Twitter Use**
- Conclusions



# We Study Online Groups from a Network Perspective



## 1) Represent data as a network

Nodes = People

Edges /Ties = Relations (ex. Who is a friend with whom, Who replies to whom, etc.)

## 2) Apply Social Network Analysis (SNA)

# Advantages of Using Social Network Analysis

- Reduce the large quantity of data into a more concise representation
- Makes it easier to understand what is going on in a group

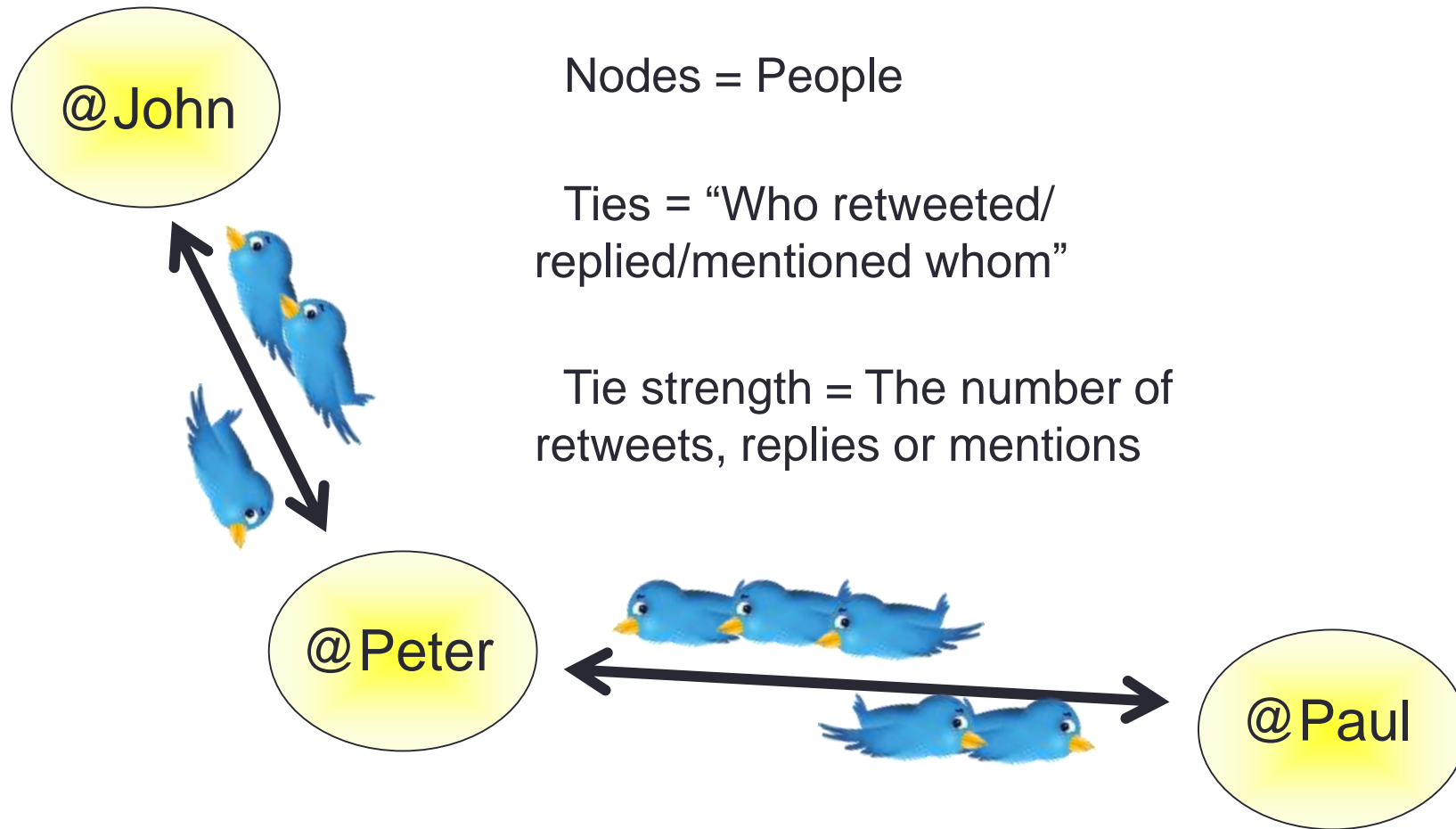
Once the network is discovered, we can find out:

- How do people interact with each other,
- Who are the most/least active members of a group,
- Who is influential in a group,
- Who is susceptible to being influenced, etc...





# Building Twitter Communication Network



# Example: Twitter Communication Network about Ukraine

**theguardian**

News Sport Comment Culture Business Money Life & style Travel

News World news Ukraine

## Ukraine police storm Kiev protest camp – live updates

**LIVE**

At least 18 killed and more than 200 seriously injured in clashes in Ukrainian capital

In pictures: violent clashes in Kiev

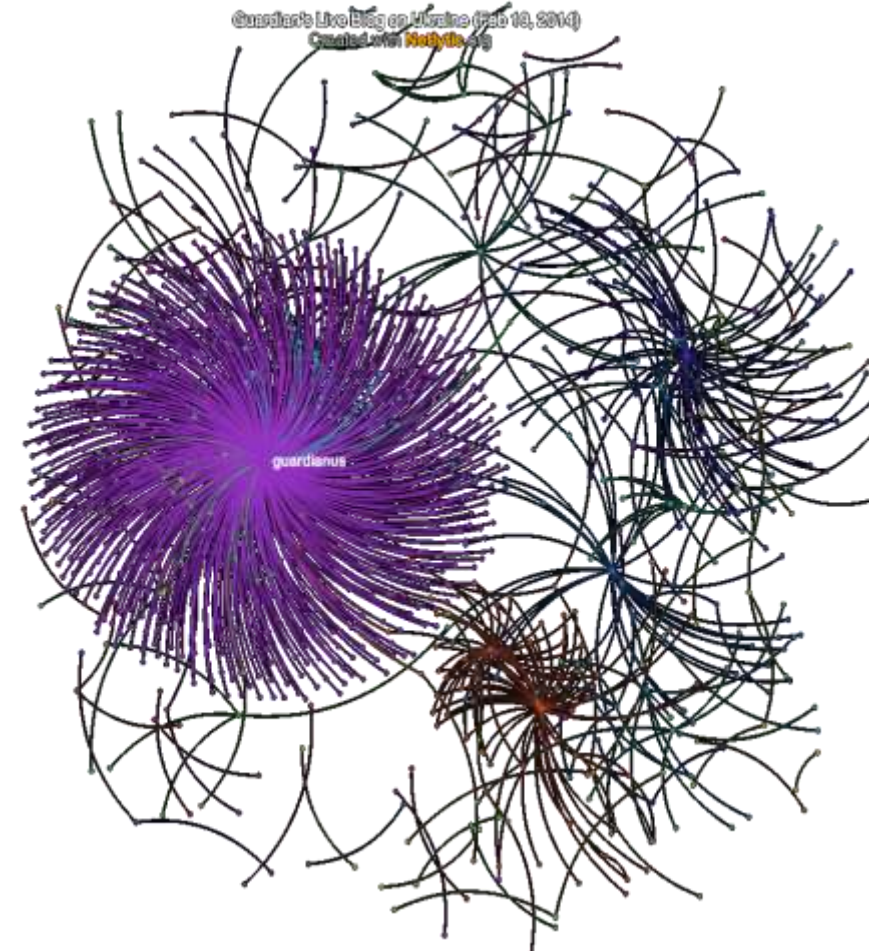
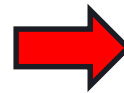
Ben Quinn and Kayla Epstein  
theguardian.com, Tuesday 18 February 2014 23:45 GMT

Jump to comments (498)



Protesters gather in Independence Square in Kiev. Photograph: EPA/Igor Kovalenko

Tweets about



<http://www.theguardian.com/world/2014/feb/18/ukraine-police-storm-kiev-protest-camp-live-updates#start-of-comments>



# Tweeting about Ukraine in 3 languages

**Source:** Twitter Search API

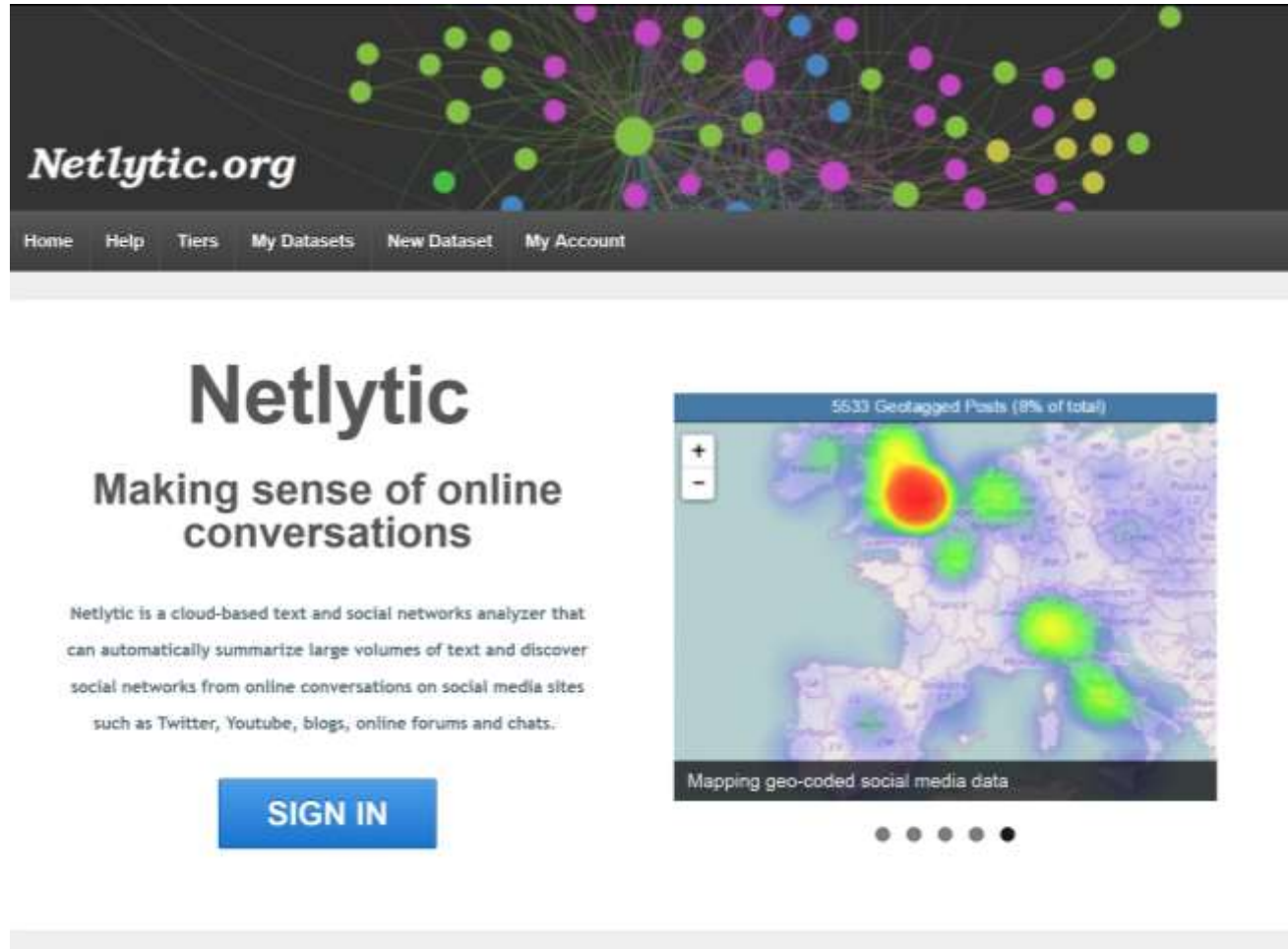
**Request Rate:** Hourly, up to 1000 tweets

**Time frame:** Feb 18, 2014 – March 14, 2014

	Україна	Украина	Ukraine
Presumed Language	Ukrainian	Russian	English
# Tweets	200,956	527,112	591,394
# Unique Users	46,641	141,541	246,113

# Netlytic – Data collection and analysis tool

<http://netlytic.org>



The screenshot shows the Netlytic.org website. At the top is a dark header with a network graph visualization of colored nodes and connecting lines. The text "Netlytic.org" is on the left, and a navigation menu with "Home", "Help", "Tiers", "My Datasets", "New Dataset", and "My Account" is on the right. The main content area has the "Netlytic" logo and the tagline "Making sense of online conversations". Below this is a descriptive paragraph about the tool's capabilities. A blue "SIGN IN" button is positioned below the text. To the right is a map of Europe with a heatmap overlay showing data density, with a legend indicating "5633 Geotagged Posts (8% of total)". The map is titled "Mapping geo-coded social media data".

**Netlytic.org**

Home Help Tiers My Datasets New Dataset My Account

## Netlytic

**Making sense of online conversations**

Netlytic is a cloud-based text and social networks analyzer that can automatically summarize large volumes of text and discover social networks from online conversations on social media sites such as Twitter, Youtube, blogs, online forums and chats.

**SIGN IN**

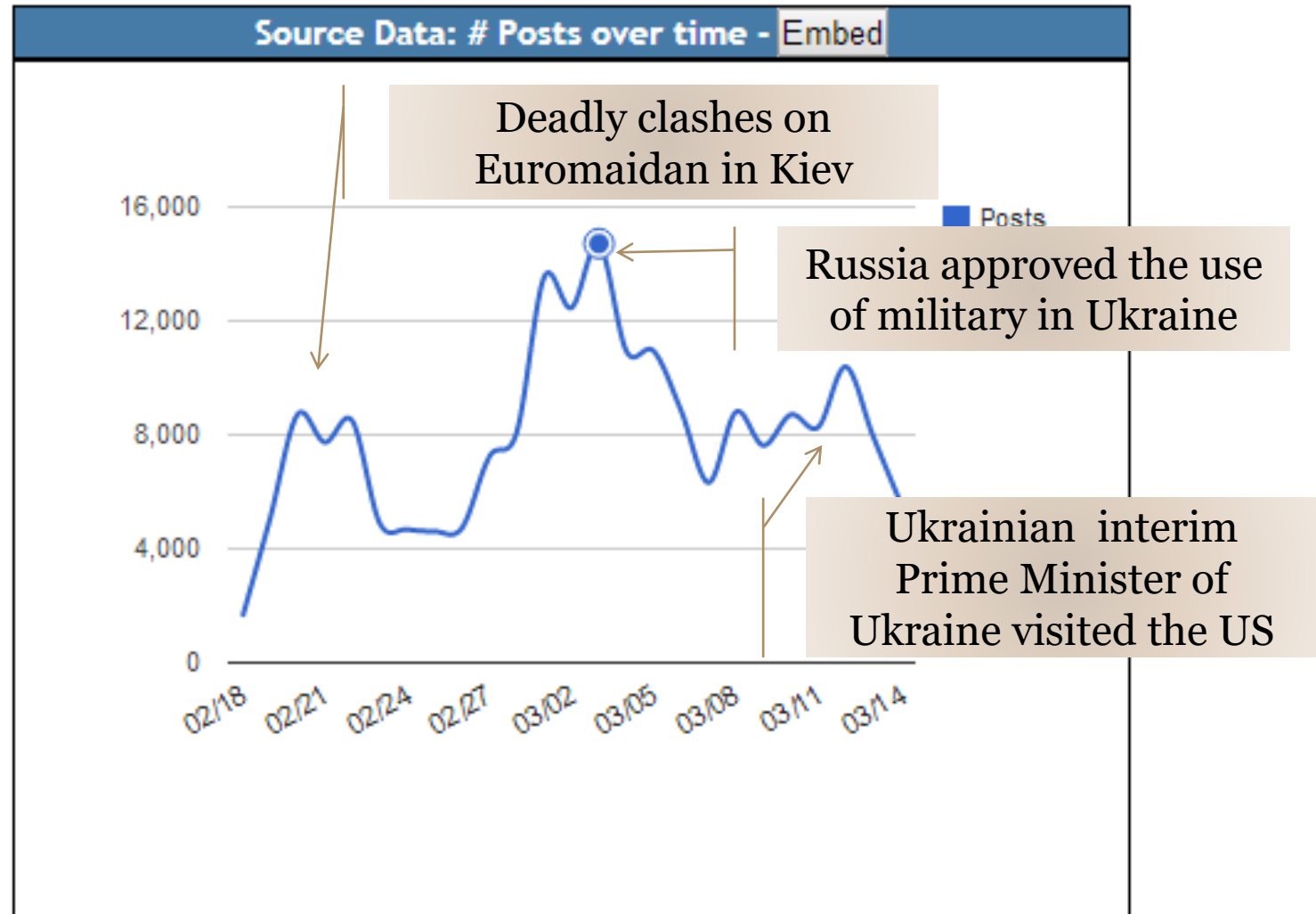
5633 Geotagged Posts (8% of total)

Mapping geo-coded social media data



# Україна 2014-02-18 - 2014-03-14

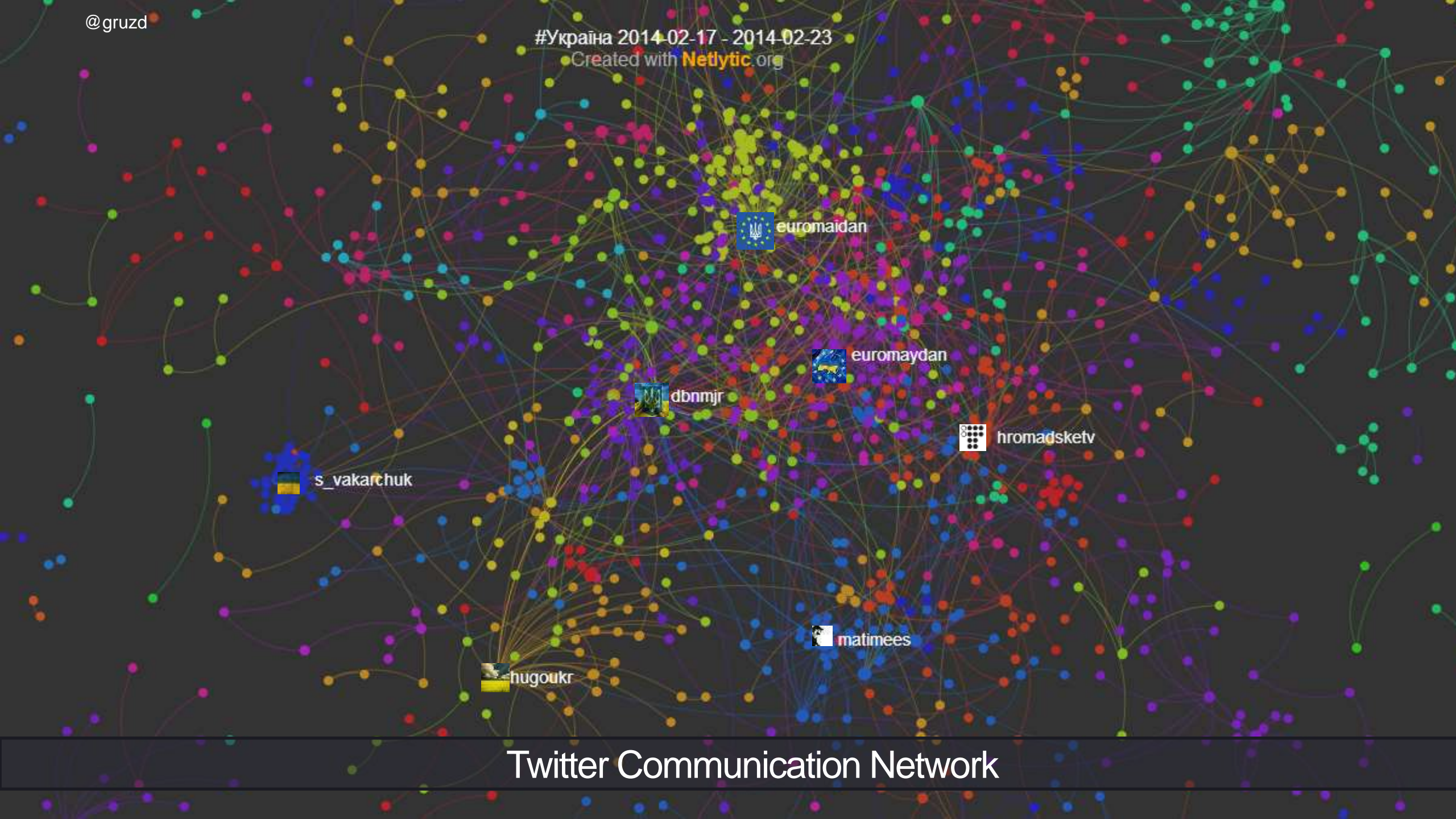
- Dataset Name: Україна
- Total Messages: 200,956
- Unique Posters : 46,641



@gruzd

#Україна 2014-02-17 - 2014-02-23

Created with [Netlytic.org](http://netlytic.org)

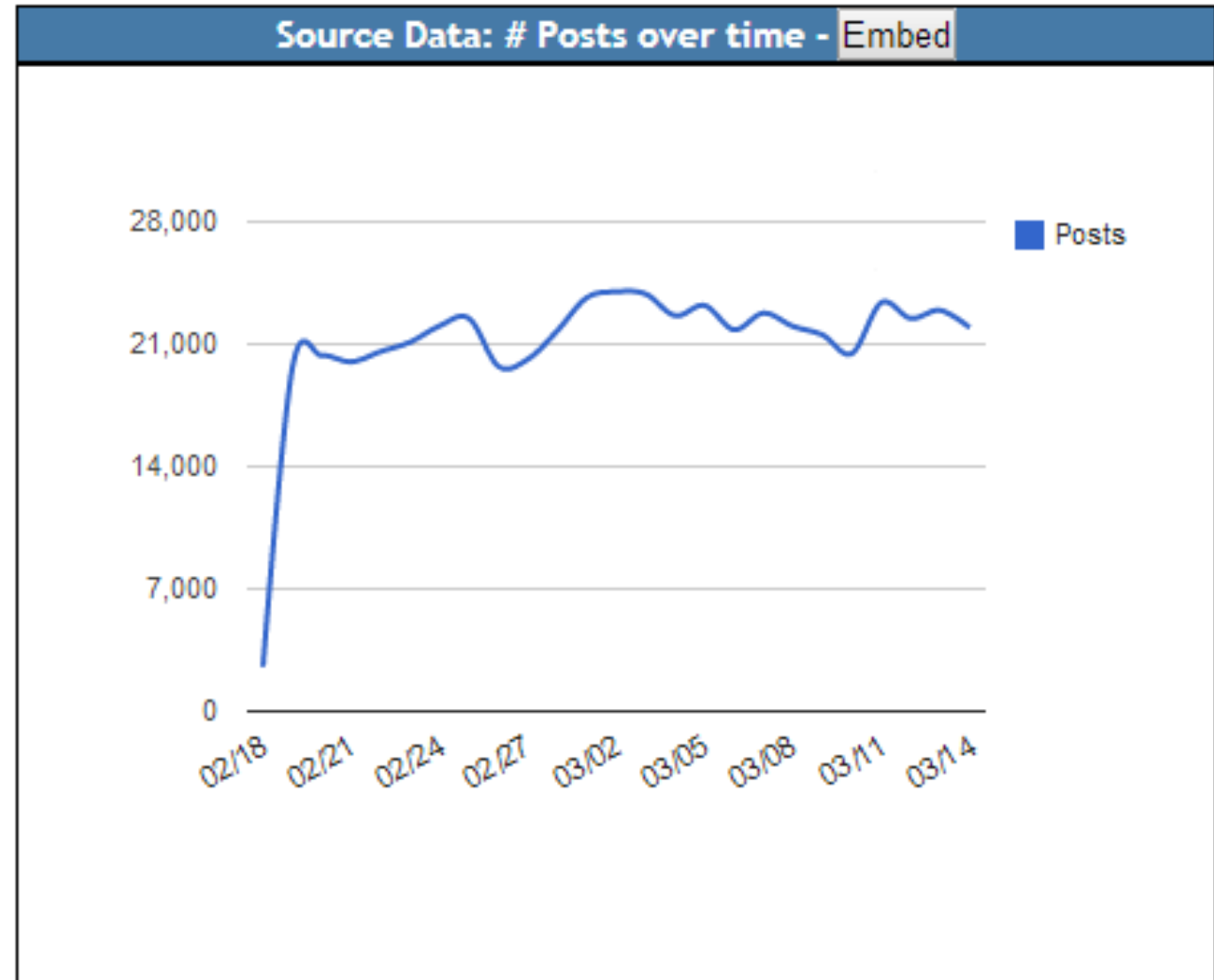


Twitter Communication Network



# Украина 2014-02-18 - 2014-03-14

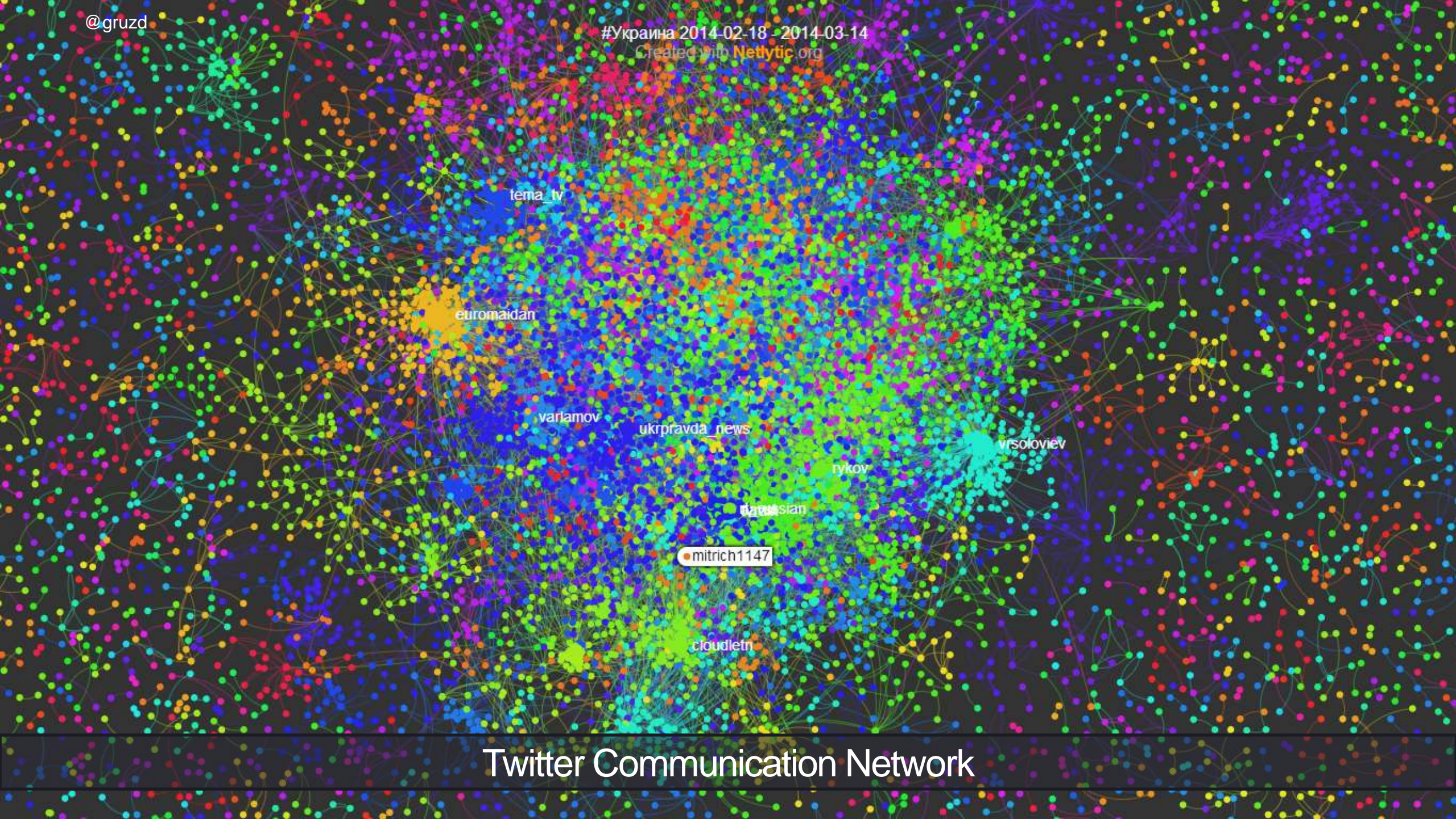
- Dataset Name: Украина
- Total Messages: 527,112
- Unique Posters : 141,541





@gruzd

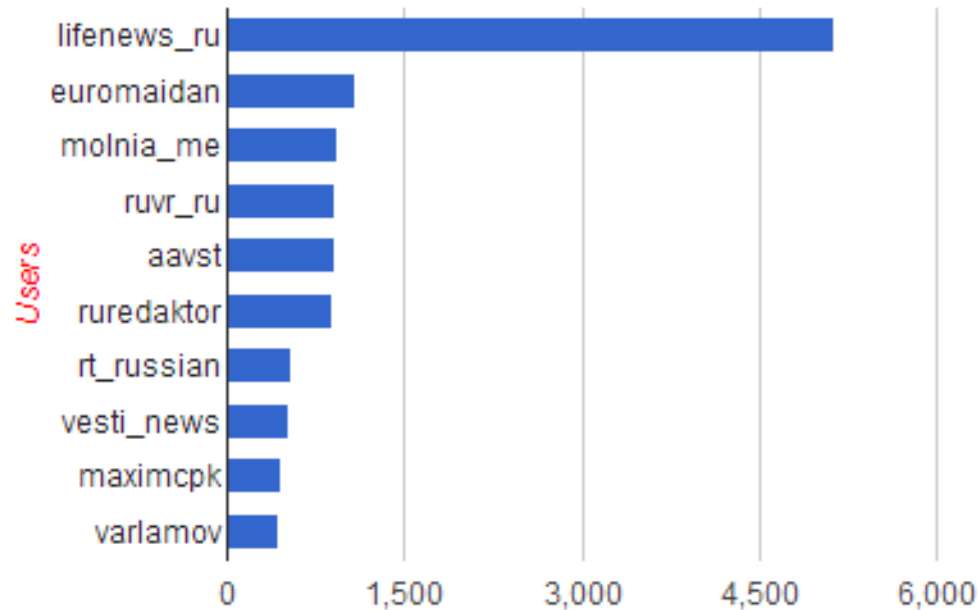
#Украина 2014-02-18 - 2014-03-14  
Created with [Netlytic.org](http://Netlytic.org)



Twitter Communication Network



## Top 10 Mentioned Users (mostly Russian news agencies & journalists)



### **LIFENEWS** - @lifenevs\_ru

Informatsionnyy kanal LIFENEWS – pervyy po srochnym novostyam! Eksklyuzivnyye video po samym glavnym temam dnya lifenevs.ru

### **ЄВРОМАЙДАН** - @euromaidan

#Євромайдан #Евромайдан #Euromaidan Ukrainian Revolution

### **СРОЧНЫЕ НОВОСТИ (“Breaking News”)**

- @molnia\_me

First to know! Subscribe to the major topics of the day, photos, videos from the event!

### **Голос России (“Golos Rossii”) -**

@ruvr\_ru

The official account radio "Voice of Russia" - exclusive interviews, analysis and expert commentary, Russia

### **Alexey Venediktov** - @aavst

Chief editor of Ekho Moskvyy radio station

### **Fedor Shchepetov** - @ruredaktor

Freelance journalist, Moscow

### **RT in Russian** Verified account -

@RT\_russian

RT news, Moscow

### **Вести.ru** Verified account - @vesti\_news

News TV program and television channels

"Russia 1" and "Russia 24", Russia

### **Maxim Ponomarev** - @maximcpk

ⓂⓐⓧⓂⓐⓧ ⓂⓐⓧⓂⓐⓧ ⓂⓐⓧⓂⓐⓧ

### **Ilya Varlamov** Verified account -

@varlamov

Journalist, architect, photographer, founder of Urban Projects. Moscow



@gruzd

Украина (2014-02-18 - 2014-03-14) Cluster #1  
Created with [Netlytic.org](http://Netlytic.org)



ukrpravda news



Go to back

Name:

ukrpravda\_news

Visibility:

Show node

Node color:



Centrality values:

page rank: 0.001  
closeness centrality: 0.0  
betweenness: 0.0  
indegree: 148  
outdegree: 0  
total degree: 148

Connection between  
ukrpravda\_news and:

0667003064

6dik9

8koi8

abckzn

acc100500

adikalon

airvolkus

alexandradehtya

Украина (2014-02-18 - 2014-03-14) Cluster #1

Created with **Netlytic.org**

УКРАЇНСЬКА ПРАВДА

www.pravda.com.ua



Українська правда

@ukrpravda\_news

Офіційний твіттер УП

pravda.com.ua

TWEETS

93.4K

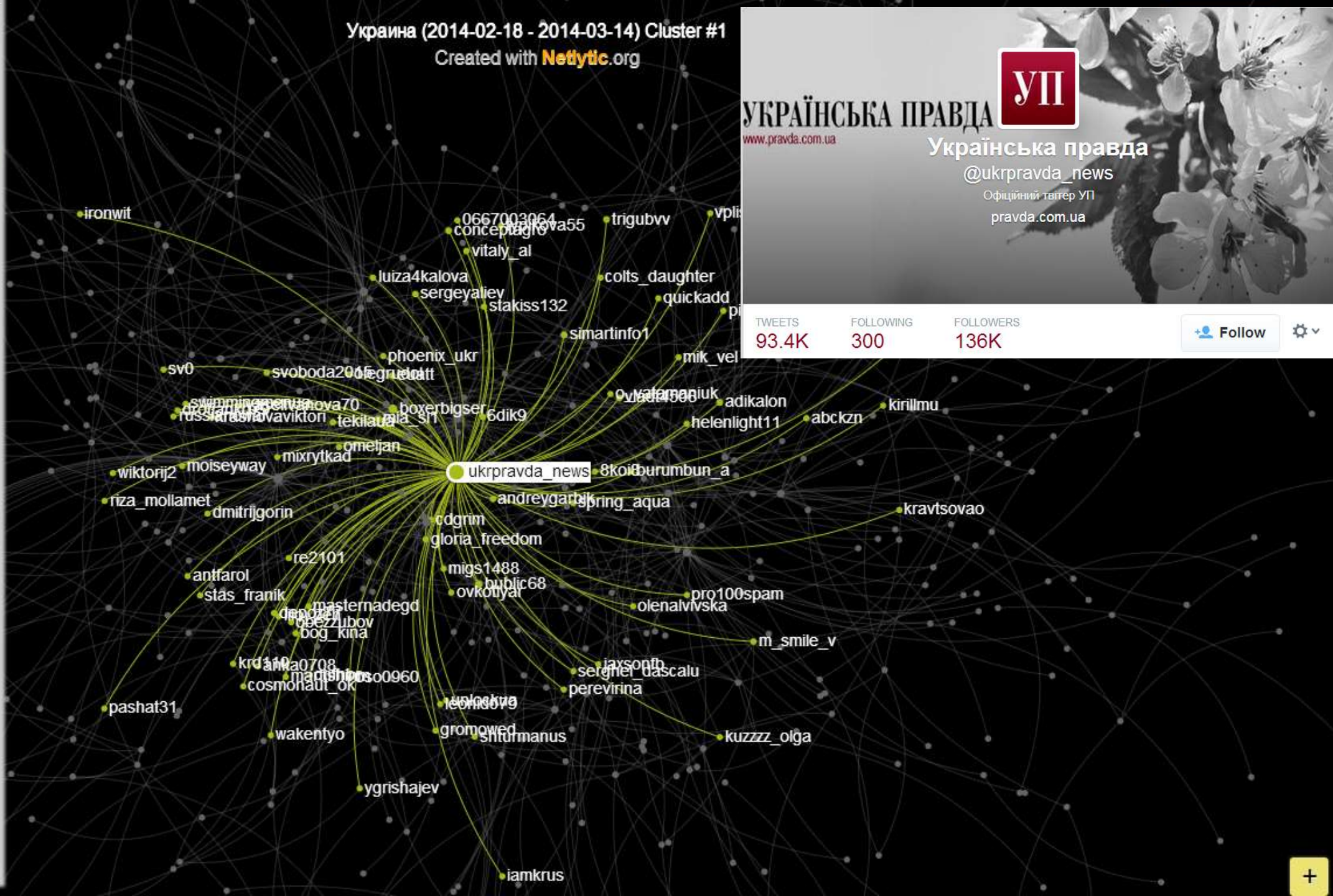
FOLLOWING

300

FOLLOWERS

136K

Follow





Go Back

Name:

euromaydan

Visibility:

Show node

Node color:



Centrality values:

page rank: 8.781  
closeness centrality: 0.0  
betweenness: 0.0  
indegree: 59  
outdegree: 0  
total degree: 59

Connection between  
euromaydan and:

10slides

acckijlusuj

adikalon

aldayanid

alex196422

alexis54b

almattureev

amalteyaalb

Україна (2014-02-18 - 2014-03-14) CI

Created with [Netlytic.org](#)



ЄвроМайдан

@EuroMaydan

Офіційний twitter ЄвроМайдану. Все тільки починається і залежить тільки від нас!

[facebook.com/EuroMaydan](#)

TWEETS

21.3K

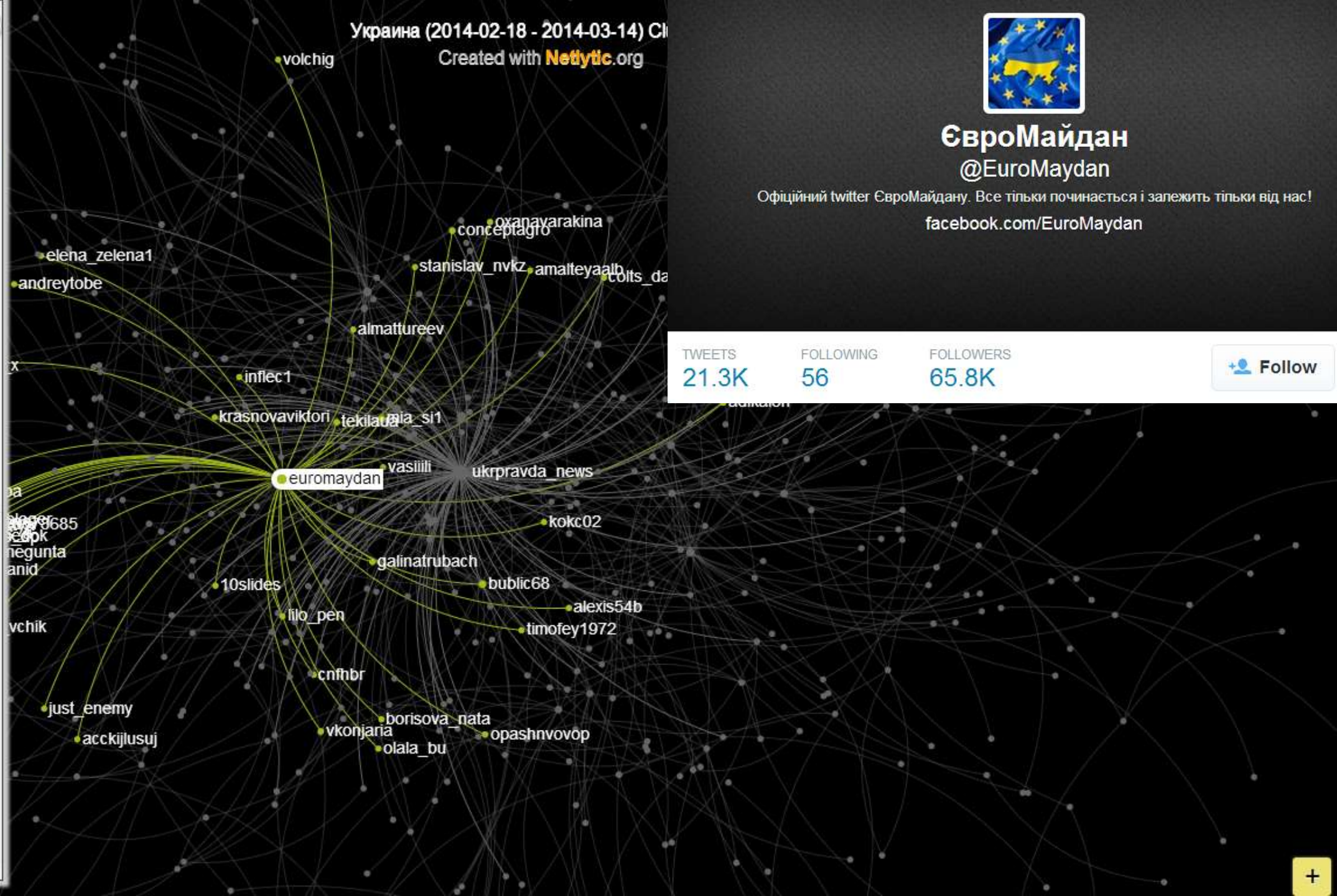
FOLLOWING

56

FOLLOWERS

65.8K

[Follow](#)





← Cio track

Name:

radiosvoboda

Visibility:

Show node

Node color:



### Centrality values:

page rank: 5.452  
closeness centrality: 0.0  
betweenness: 0.0  
indegree: 43  
outdegree: 0  
total degree: 43

### Connection between radiosvoboda and:

84tarka

akref75

andrey\_sobotayk

annaverbickaite

antiteroristua

artyomarykov

boxerbigser

cisven

Україна (2014-02-18 - 2014-03-14) Cluster #1

Created with **Netlytic.org**



Радіо Свобода

@radiosvoboda

Авторська сторінка Радіо Свобода. Новини/Аналітика/Фото/Відео  
Kyiv · radiosvoboda.org

TWEETS

55K

FOLLOWING

171

FOLLOWERS

76.8K

Follow

mm\_shu1

mirinda723

kvitkasvit

antiteroristua

fuckusa5

boxerbigser

enterobiuz

tekilaua

omeljan

artyomarykov

mixrytkad

vasiili

gannusia

elena888888888

ukrpravda\_news

qq939

radiosvoboda

zamanyha

masternadegd

vanin\_1996

mihaello1

vladiv\_1948

miss72

zinkovskalex

dendyden

juri254jg

oleksandr004





← back

Name:

tsnua

Visibility:

Show node

Node color:



### Centrality values:

page rank: 5.748  
closeness centrality: 0.0  
betweenness: 0.0  
indegree: 34  
outdegree: 0  
total degree: 34

### Connection between tsnua and:

abramchuk\_a

allaannaleb

andreygarbik

annie\_pritzker

basset\_dg

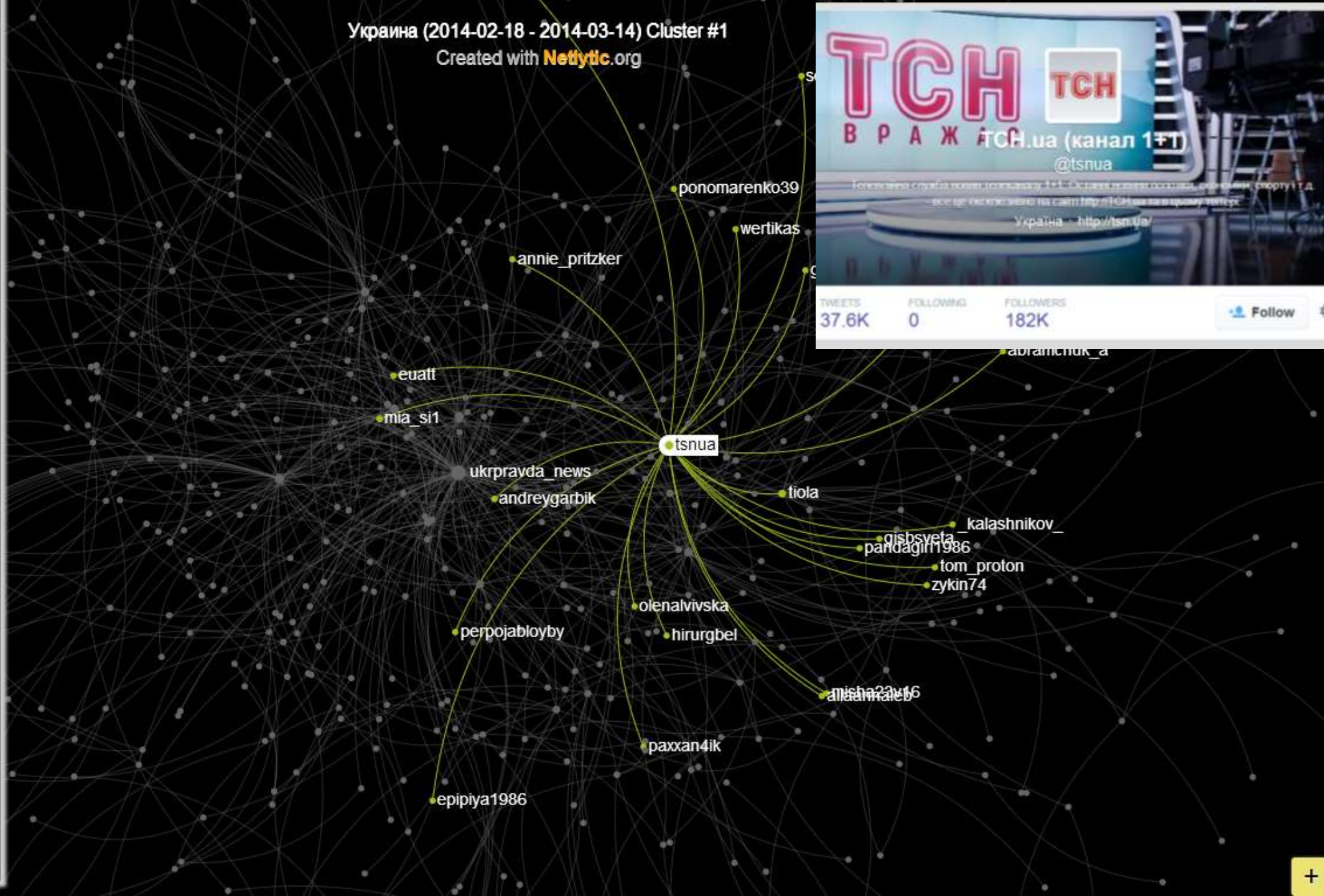
bogdanov\_marat

cat6407

cisven

Украина (2014-02-18 - 2014-03-14) Cluster #1

Created with [Nettytic.org](http://Nettytic.org)

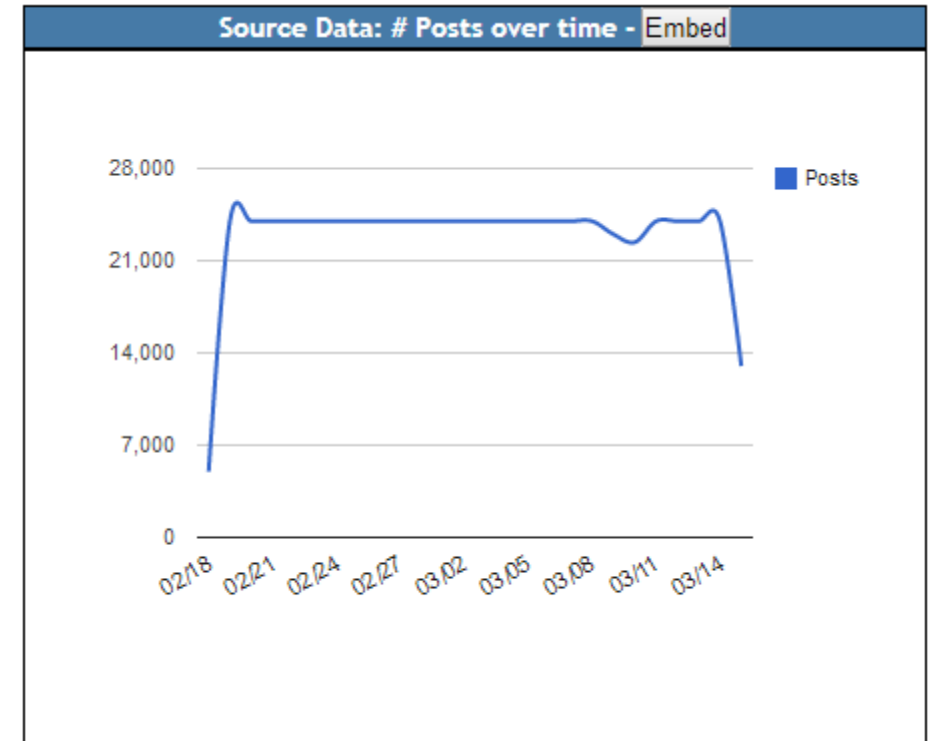


+



# Ukraine 2014-02-18 - 2014-03-14

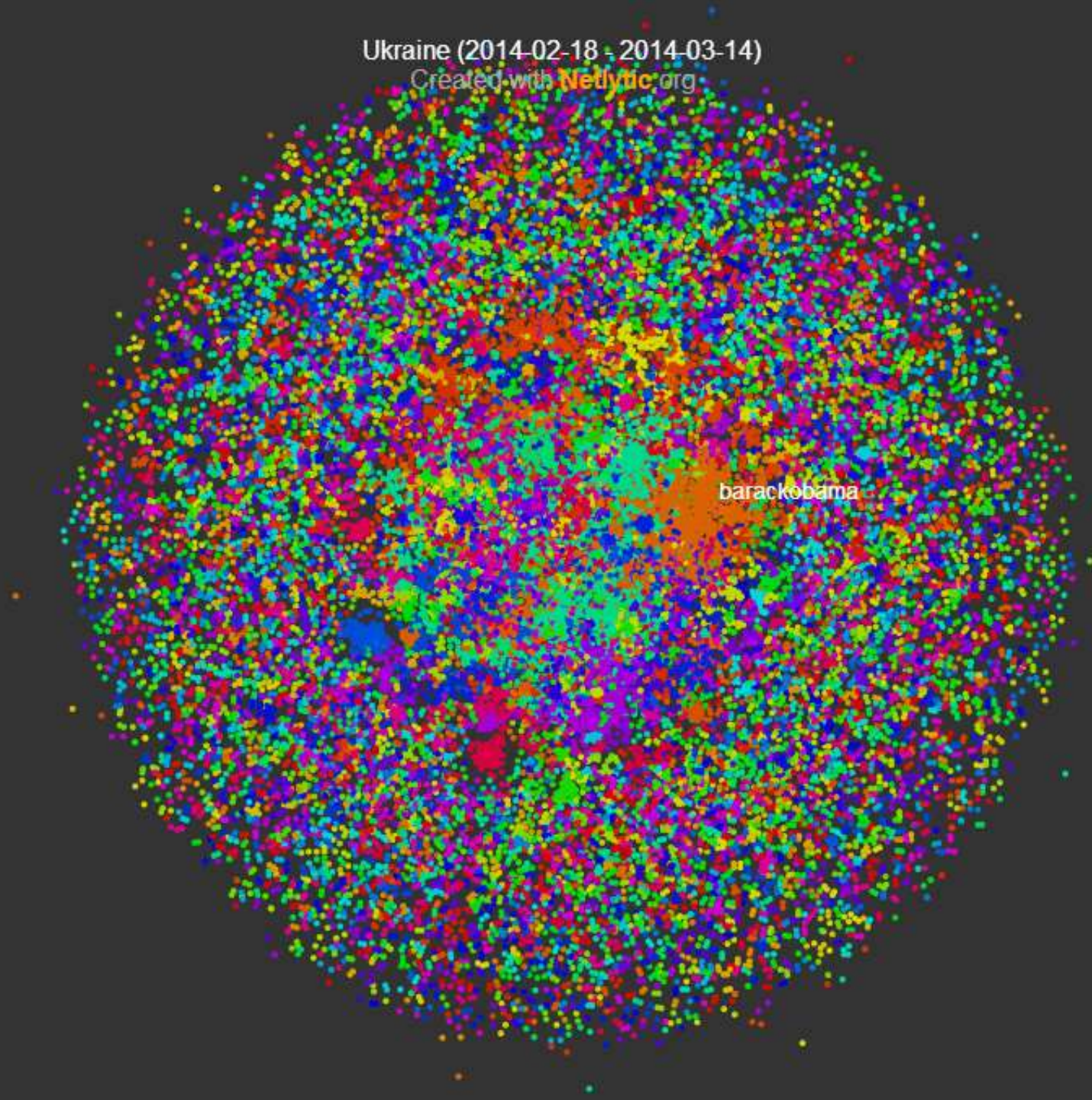
- Dataset Name: Ukraine
- Total Messages: 591,394
- Unique Posters : 246,113



@gruzd

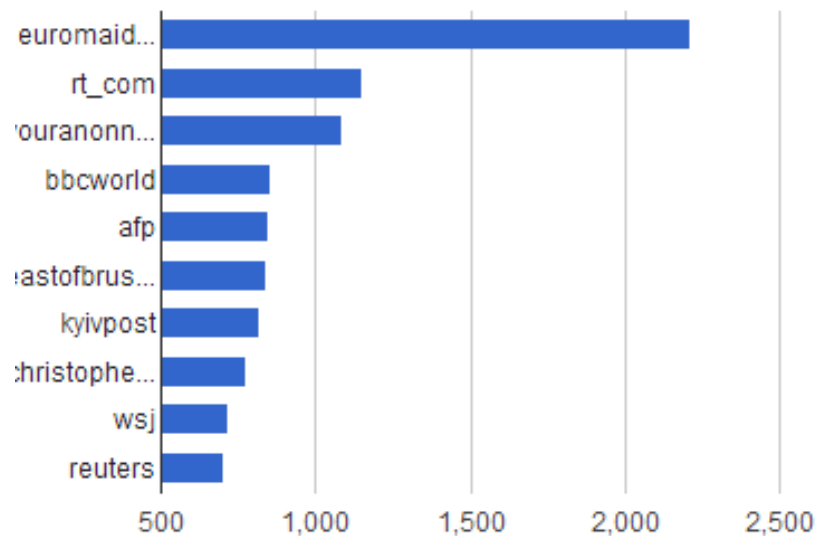
Ukraine (2014-02-18 - 2014-03-14)

Created with **Netlytic**.org





## Top 10 Mentioned Users (mostly news accounts)



**Euromaidan PR - @EuromaidanPR**  
Official International Public Relations Secretariat for the Headquarters of National Resistance of the EuroMaidan, Kyiv, Ukraine

**RT - @RT\_com**  
RT (Russia Today) is a global news channel broadcasting from Moscow and Washington studios to over 100 countries around the globe.

**Anonymous - @YourAnonNews**  
YourAnonNews supports digital and AFK activism.

**BBC News (World) Verified - @BBCWorld**  
News, features and analysis from BBC News (World edition). London, UK

**Agence France-Presse Verified - @AFP**  
News - and the stories behind the news - from AFP's reporters around the world. France

**East of Brussels - @EastOfBrussels**  
Personal Blog about the European Neighbourhood/ Association Policy (ENP/EAP)

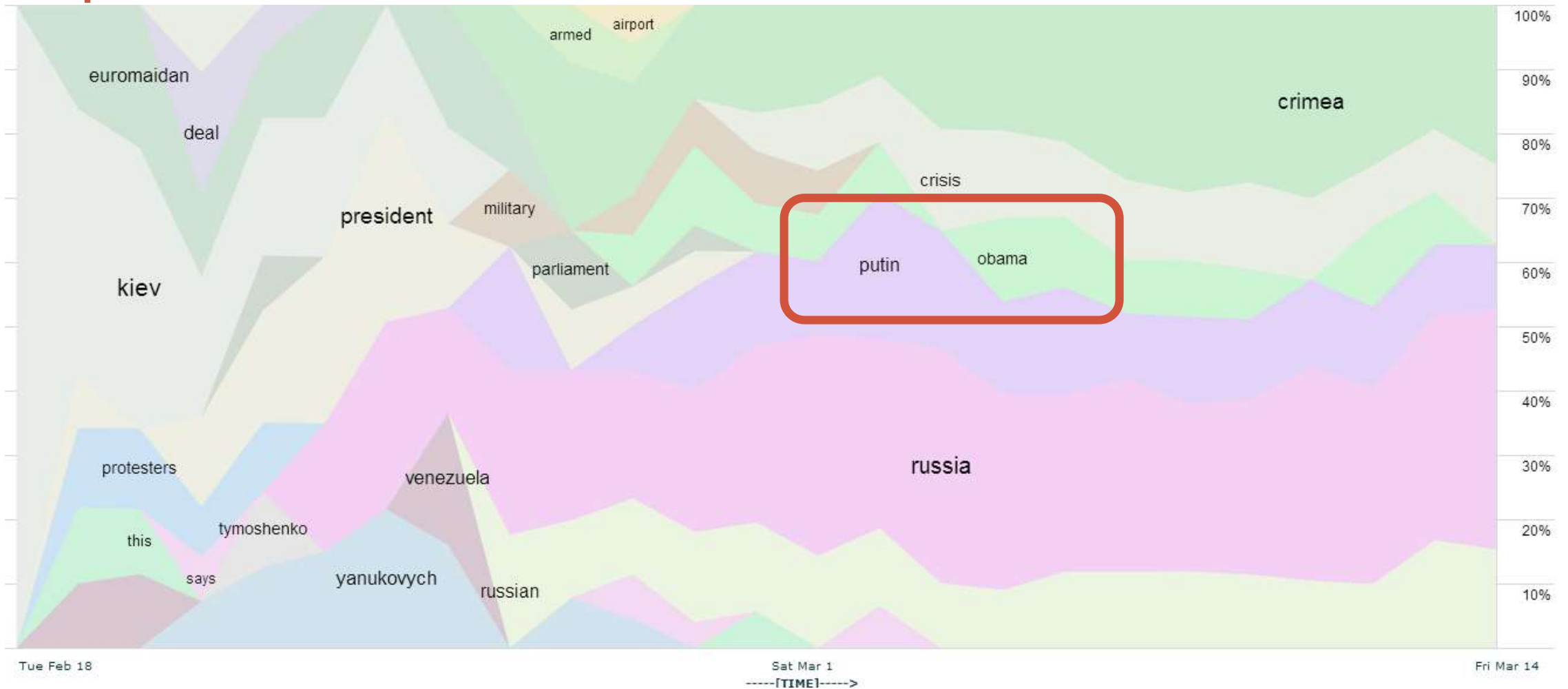
**KyivPost Verified - @KyivPost**  
The Kyiv Post is Ukraine's leading English-language newspaper. #Kyiv, #Ukraine

**Christopher Miller Verified - @ChristopherJM**  
Editor at leading English-language newspaper [@KyivPost](#). Also freelance correspondent covering Ukraine. RPCV (Ukraine). Kyiv, Ukraine

**Wall Street Journal Verified - @WSJ**  
In our 125th year, breaking news and features from the WSJ. New York, NY

**Reuters Top News Verified - @Reuters**  
Top and breaking news, pictures, and videos from Reuters. Around the world

# Topics over Time in Tweets that mentioned “Ukraine”









## Name:

washingtonpost

## Visibility:

Show node

## Node color:



## Centrality values:

page rank:	3.010
closeness centrality:	0.0
betweenness:	0.0
indegree:	32
outdegree:	0
total degree:	32

## Connection between washingtonpost and:

Relationship

atvire

betty\_leads

burkelyh

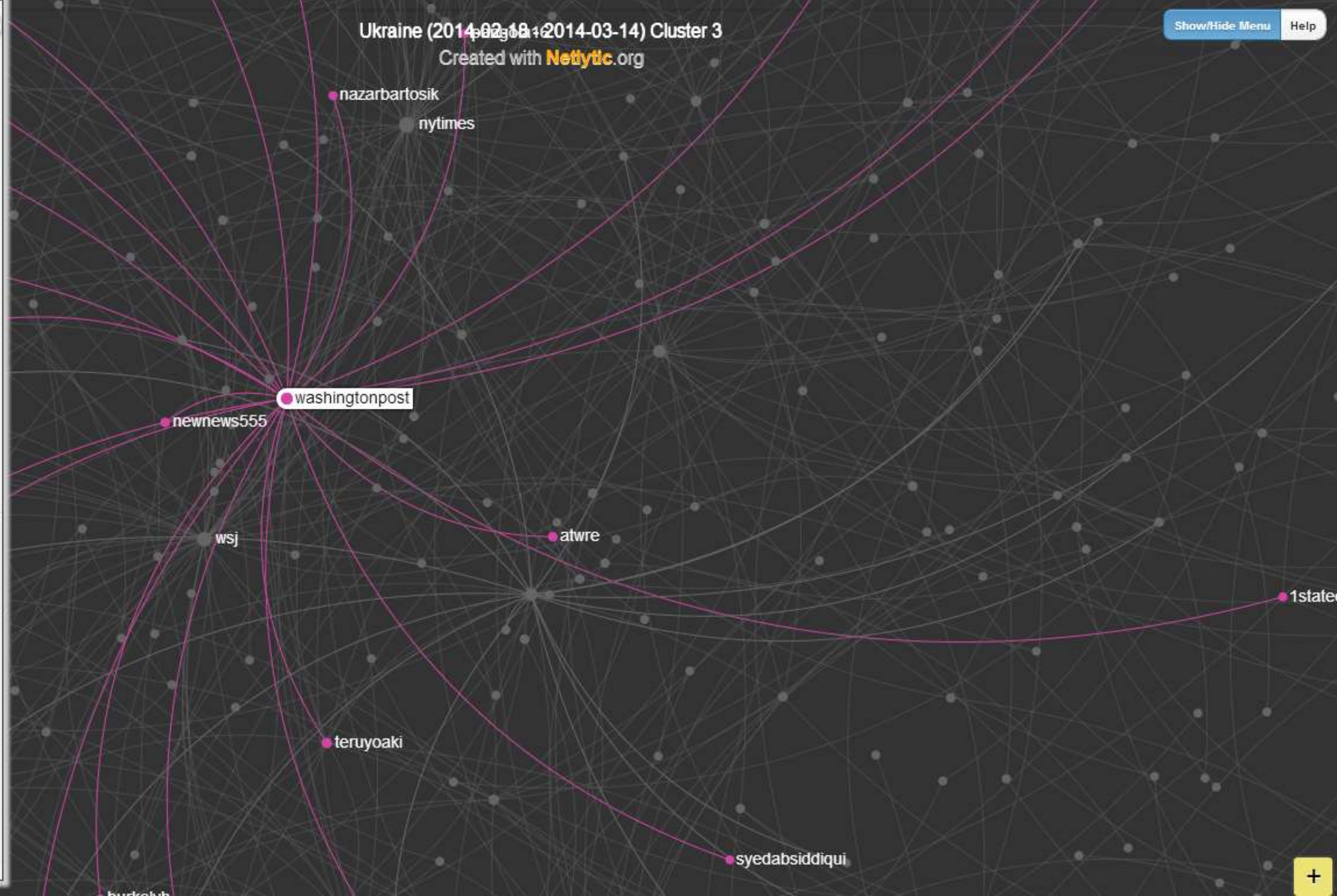
chekbi

dmroth710

emoffet

fbakobie

gbensimon1





Go to graph

Name:

kyivpost

Visibility:

Show node

Node color:



### Centrality values:

page rank:	3.266
closeness centrality:	0.0
betweenness:	0.0
indegree:	38
outdegree:	0
total degree:	38

### Connection between kyivpost and:

homosovieticus

inesitalabonita

joinordie2012

kozarspt

kveldulf5

lahnabee

larsson\_fredric

lordtiberius

martakordas

Ukraine (2014-02-18 - 2014-03-14) Cluster 3

Created with [Nettytic.org](#)

Show/Hide Menu

Help

larsson\_fredric

nytimes

inesitalabonita

barbaylive  
torstensc

ms647

xsilversheieszx

joinordie2012

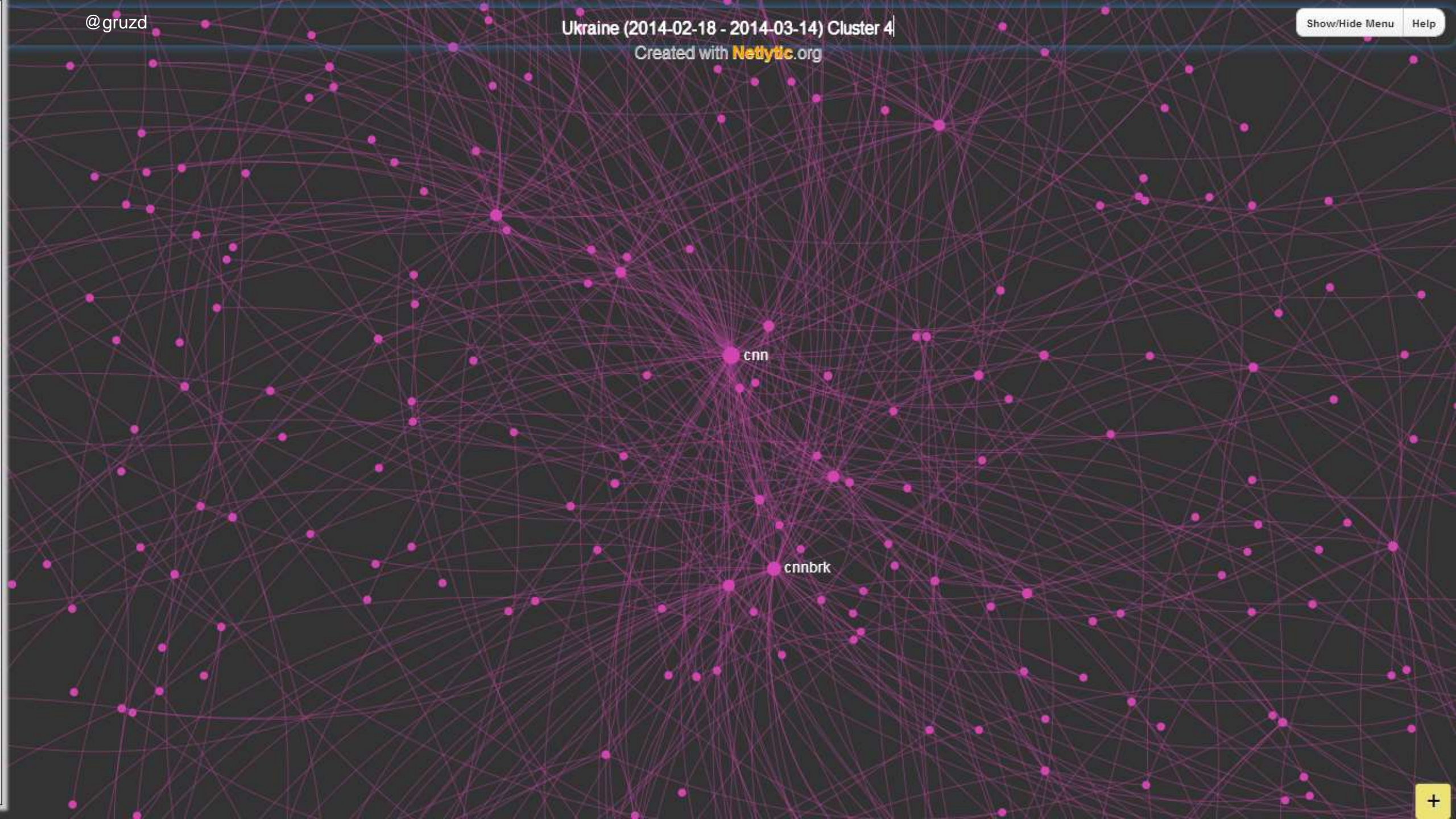
olin\_b12

wsj

homosovieticus









## Name:

fareedzakaria

## Visibility:

[Show node](#)

## Node color:

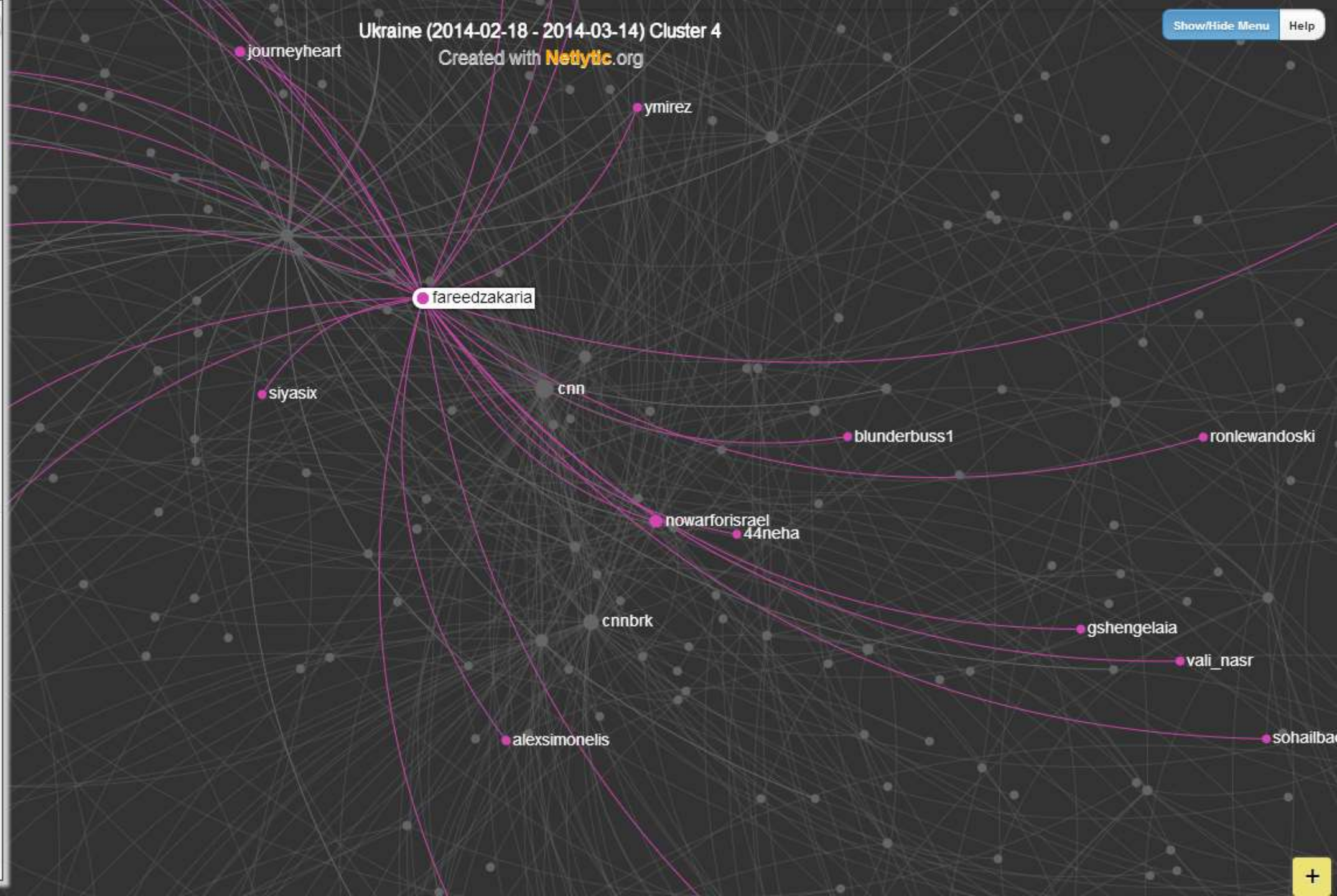


## Centrality values:

page rank:	3.564
closeness centrality:	0.0
betweenness:	0.0
indegree:	31
outdegree:	0
total degree:	31

Connection between  
fareedzakaria and:

44115110

[akhandchakra](#)[alan926](#)[alexsimonelis](#)[amh1980](#)[anshoogaur](#)[asalim86](#)[bluehart007](#)[blunderbuss1](#)



Name:

ac360

Visibility:

Show node

Node color:



### Centrality values:

page rank: 3.805  
 closeness centrality: 0.0  
 betweenness: 0.0  
 indegree: 42  
 outdegree: 0  
 total degree: 42

### Connection between ac360 and:

12/1/2014

58mimi

agkline

bobpcww

bradlang7

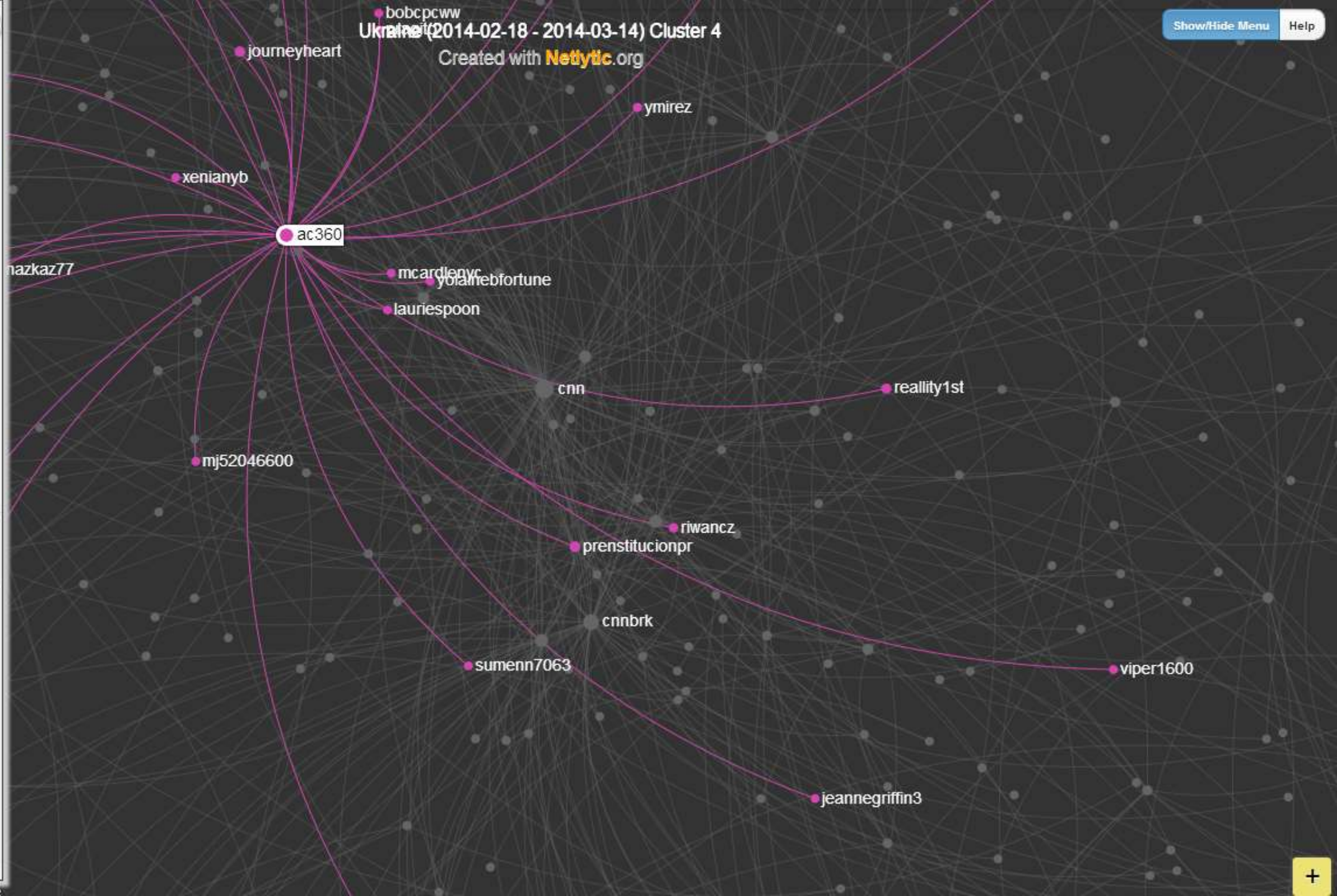
b\_vidinli

cavinframer

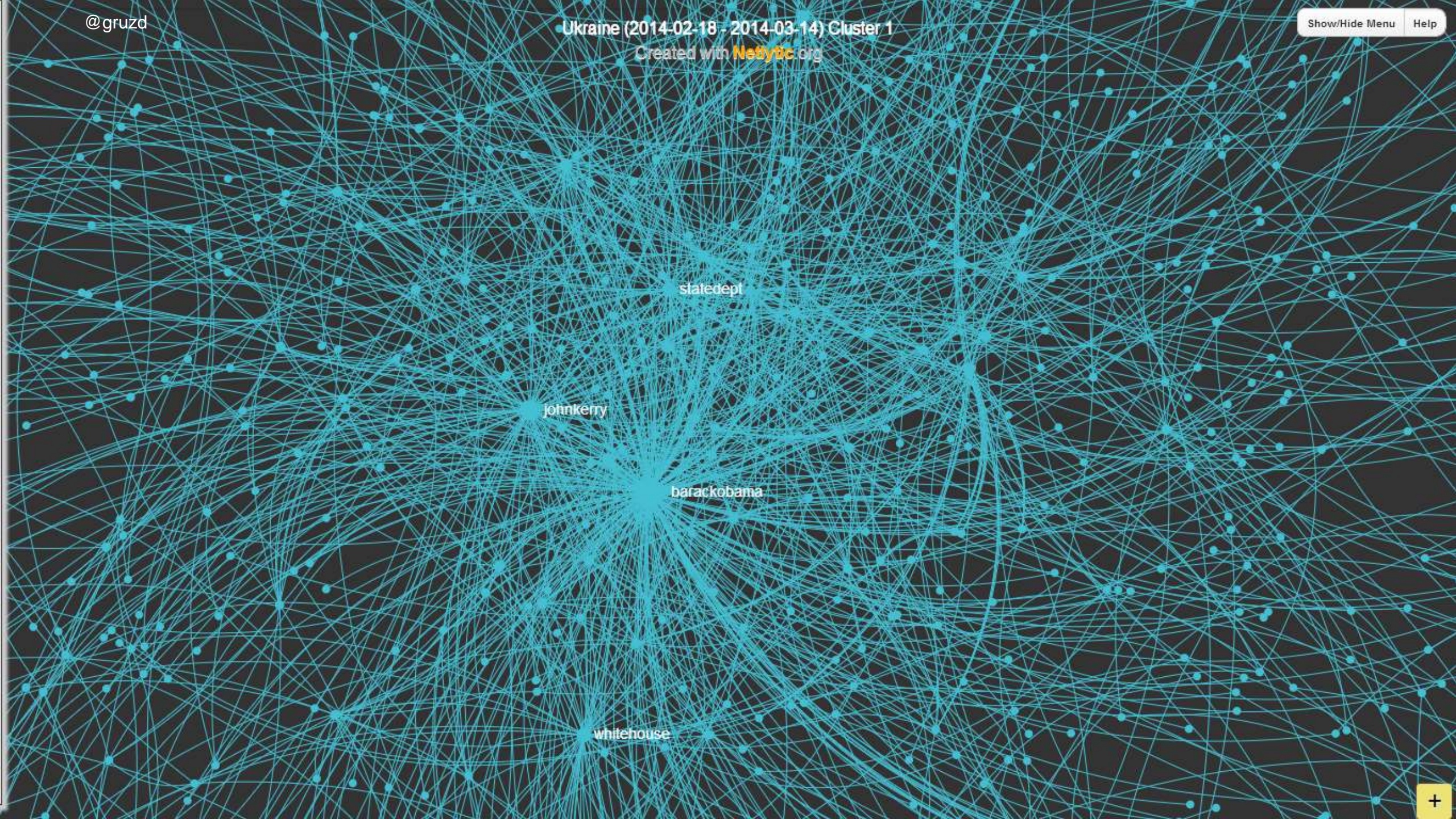
duluthlpd6

dwartelski

slater jerome









# Summary: Social Media Use during the 2014 EuroMaidan Revolution

- **First “Social Media” Revolution in Ukraine**
  - 2004 “Orange Revolution” (Pre-social media)
    - Internet penetration in Ukraine ~12% (Lysenko & Desouza, 2010)
    - Facebook was founded in 2004, Youtube-2005, Twitter-2006, Instagram-2010
- **Use of multiple social media platforms**
  - Prior social media “revolutions” primarily focused on a single platform: Facebook revolution in Tunisia (2010/2011); Twitter revolution in Iran (2009/2010)
  - Content is often duplicated across multiple platforms
- **Social media used by both Pro & Anti Maidan activists**
  - Pro-Western vs Pro-Russian groups
- **Twitter use by news agencies, activist groups, governments, elective officials and politicians**
- **Twitter use for “locals” vs. for Westerners (in English)**



# Who is Tweeting about Ukraine in 3 languages

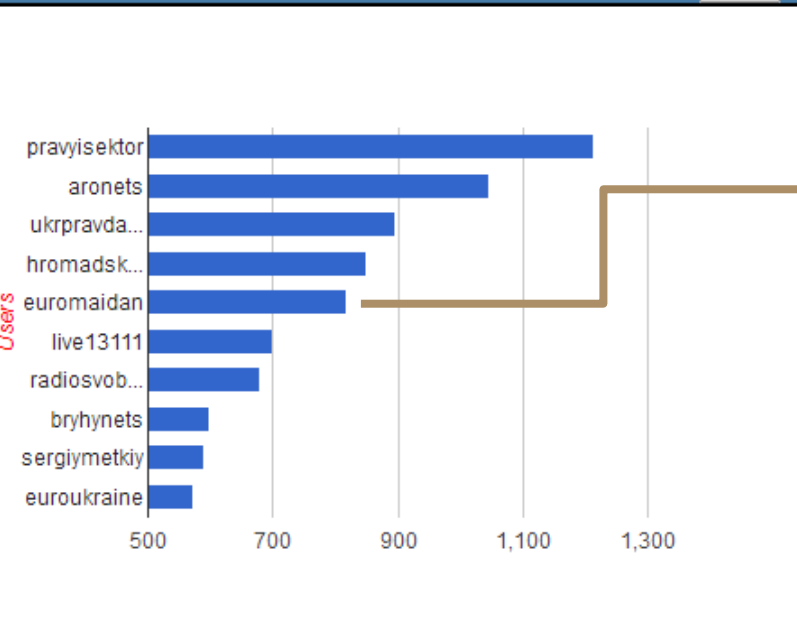
## Most mentioned Twitter Accounts in public tweets that mentioned:

Україна (in Ukrainian)

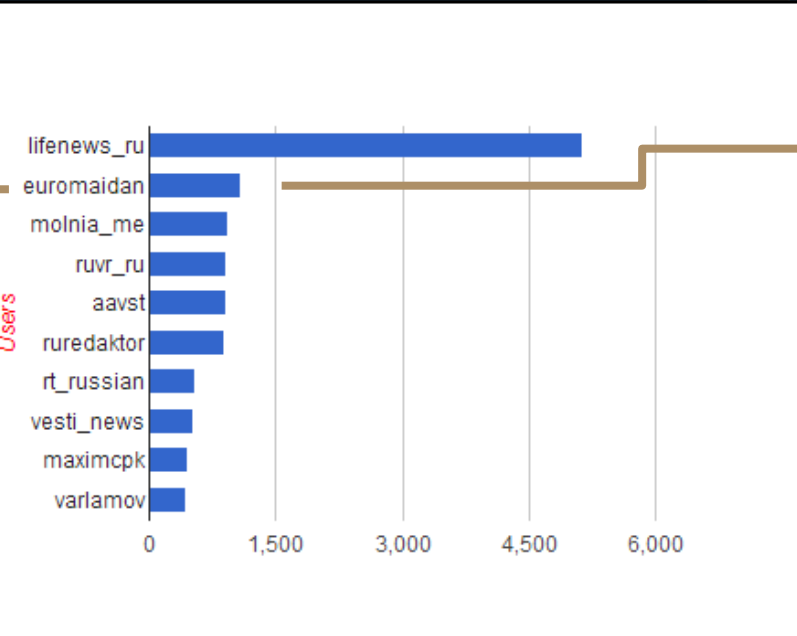
Украина (in Russian)

Ukraine (in English)

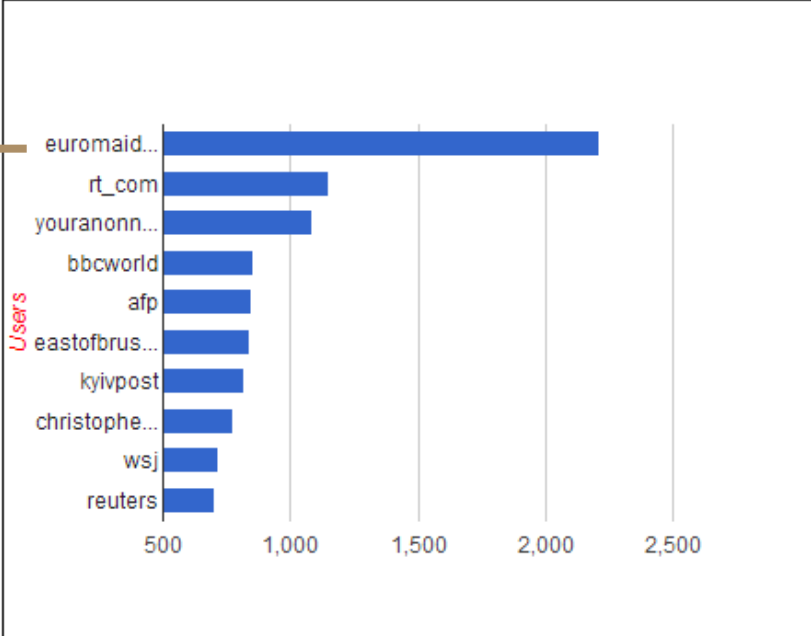
Network Analysis: Top 10 Posters Mentioned in Messages - Embed



Network Analysis: Top 10 Posters Mentioned in Messages - Embed



Network Analysis: Top 10 Posters Mentioned in Messages - Embed



**Source:** Twitter Search API

**Request Rate:** Hourly, up to 1000 tweets

**Time frame:** Feb 18, 2014 – March 14, 2014

## Study Implications:

Can we predict a successful social movement?  
Can we predict movement's longevity?



#OccupyGezi Supporters in Victoria, BC



#OccupyGezi: Gezi Parki Protest, Turkey (2013)

Photo credit: Karl Schönswetter



# Future Work

- Explore the roles of isolates
  - lurkers, spammers, trolls, or fake accounts?



# THE USE OF TWITTER DURING THE 2014 CRISIS IN UKRAINE: A TALE OF THREE LANGUAGES

---

ANATOLIY GRUZD (@GRUZD)

Associate Professor, Ted Rogers School of Management  
Director of the Social Media Lab  
Ryerson University

## **2015 Summer Specialist Meeting**

Hosted by the Center for Human Dynamics in the Mobile Age (HDMA)  
NSF-CDI and NSF-IBSS Project

San Diego, CA, August 11-12, 2015