



3<sup>rd</sup> International Conference on Digital Disease Detection

Riccardo Scalco

Zadig

# TELL ME project

was a 7th Framework EU funded project, ended on 2015, January 31st, aimed to develop evidence-based models for improved risk communication during infectious disease outbreaks.



Private area



Transparent communication in Epidemics: Learning Lessons from experience, delivering effective Messages, providing Evidence

home project ▼ people documents ▼ human rights media centre ▼ flu a to z search

## Ebola crisis can only be solved in Africa

Karl Ekdahl interview at the TELL ME Conference in Venice, 4-5 December 2014.



Primary Care Online Course

Online Ebola Course for Primary Care Staff

New Framework Model

Practical Guide for Health Risk Communication

SHARE AND MOVE  
ASSET TO FACE NASTY BUGS

TELL ME Conference  
Bridging theory and practice for effective communications during infectious disease crises



# ASSET

(Action plan on Science in Society related issues in Epidemics and Total pandemics) is a four-year Mobilization and Mutual Learning Action Plan (MMLAP) project funded by the European Commission.

Action plan on Science in Society related issues in Epidemics and Total pandemics



HOME THE PROJECT ▾ RESOURCES ▾ OUTPUTS ▾ MEDIA ▾ VIDEO ACTION PLAN CALENDAR NEWS AND COMMENTS ▾ CONT



## Involving local communities: the Ebola case

The [report](#) published in March 2015 by *Medecins sans frontières* speaks out clearly against the “global coalition of inaction” and the “vacuum of leadership” in the Ebola crisis in West Africa.

[READ MORE](#)



ASSET SUMMER SCHOOL

Science in Society (SiS)  
1<sup>st</sup> Edition related issues in Pandemics

Rome  
21-24 September 2015

Social Sciences  
Science Communication  
Public Health  
Vaccinology  
Bioethics  
Gender Issues  
Clinical Ethics  
Political Science

For information <http://asset-scienceinsociety.eu/>

FOLLOW US ON:

Social media play a major role in any kind of communication, including health communication. ASSET aims to exploit their potentiality in order to pursue its own objectives.

[READ MORE](#)

# MOTIVATIONS

- 1) Rapidly recognize and evaluate relevant data streams in the field of Health.**
- 2) Discover new trends and most influential users on the short period.**





TWEETS  
1,066

FOLLOWING  
79

FOLLOWERS  
168

FAVORITES  
294

LISTS  
3

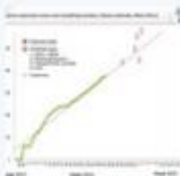
**Jane G** @janeG\_MSF

@JaneG\_MSF

Epitheliologist with MSF in London

Tweet to Jane G

Photos and videos



Tweets Tweets & replies Photos & videos

Jane G retweeted



طباء بلا حدود-اليمن

@msf\_yemen · 15h

**@msf\_yemen**

.@MSF treated 300+ injured in #Yemen since 19 March. #YemenCrisis

**@MSF**



19



9

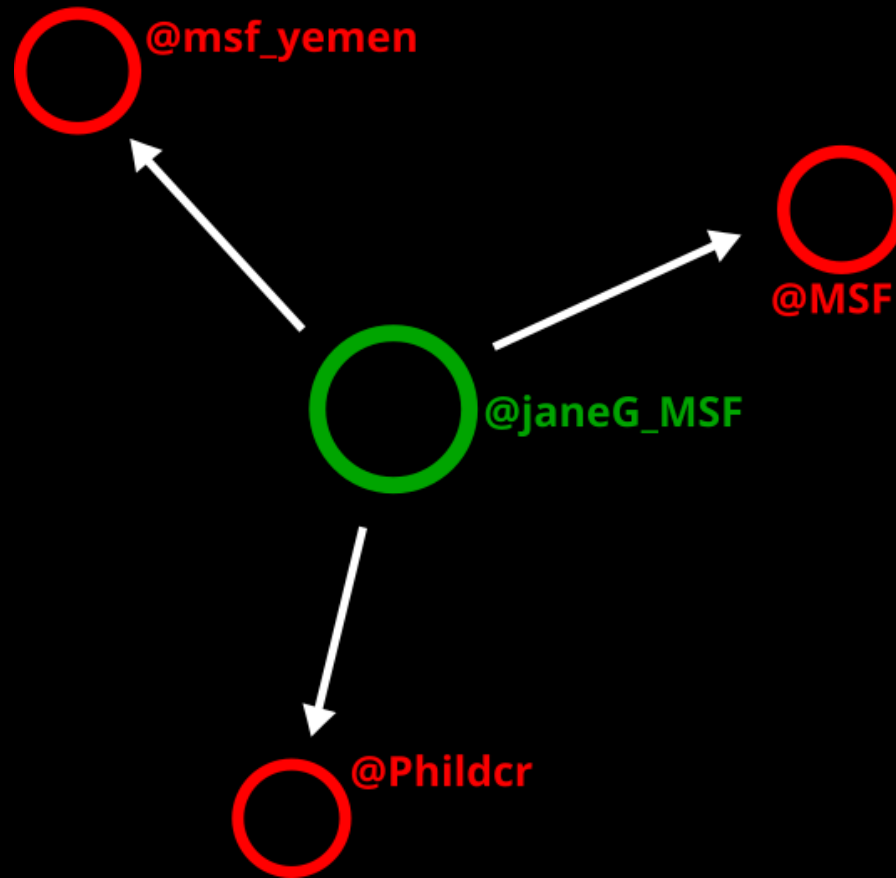


Jane G @janeG\_MSF · 15h

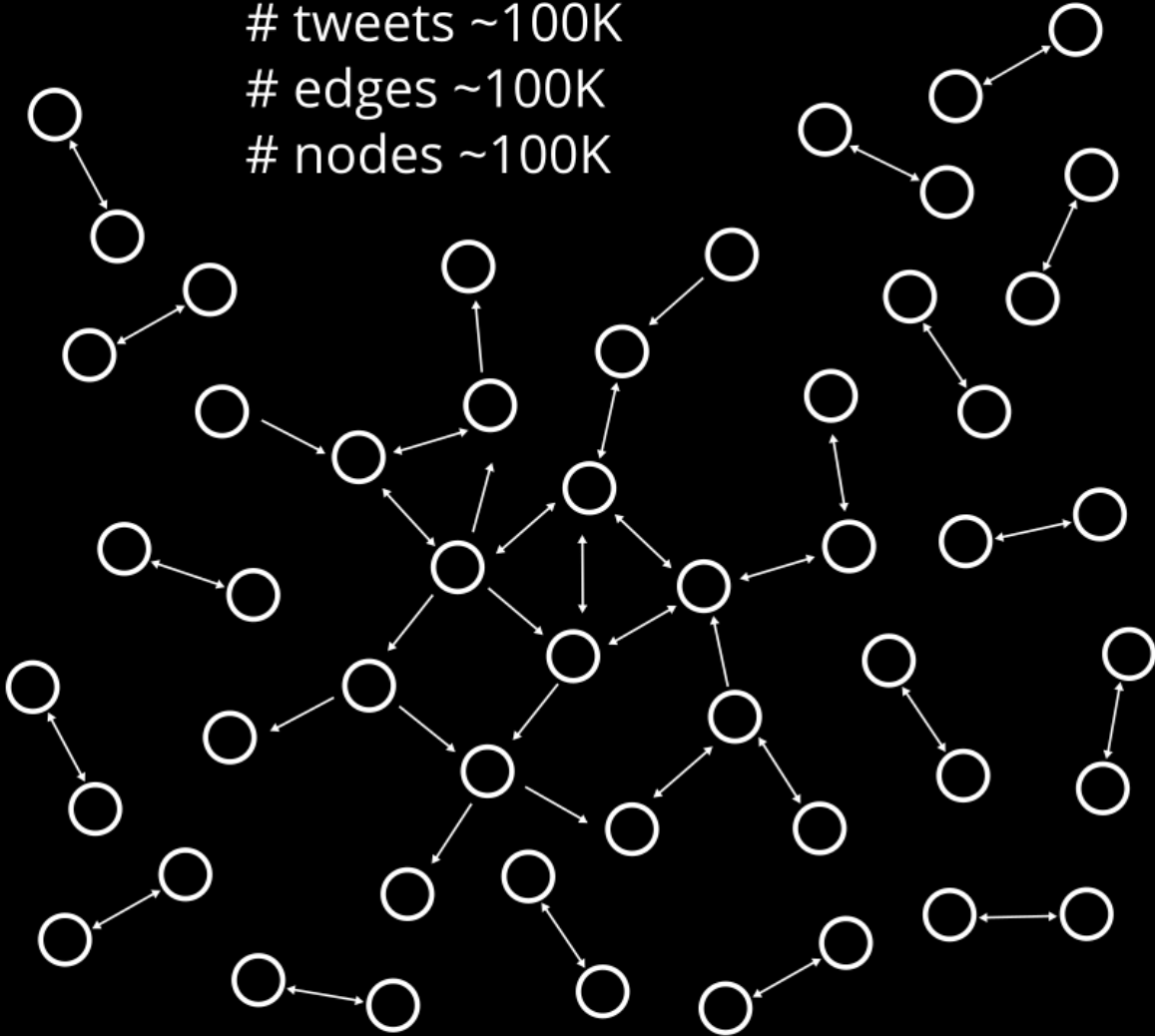
**@Phildcr**

#MSFsci It @Phildcr wrap-up ref. to Henrietta Lacks perplexed you: her cells, taken w/out her knowledge in 1951, are v. important to medicine

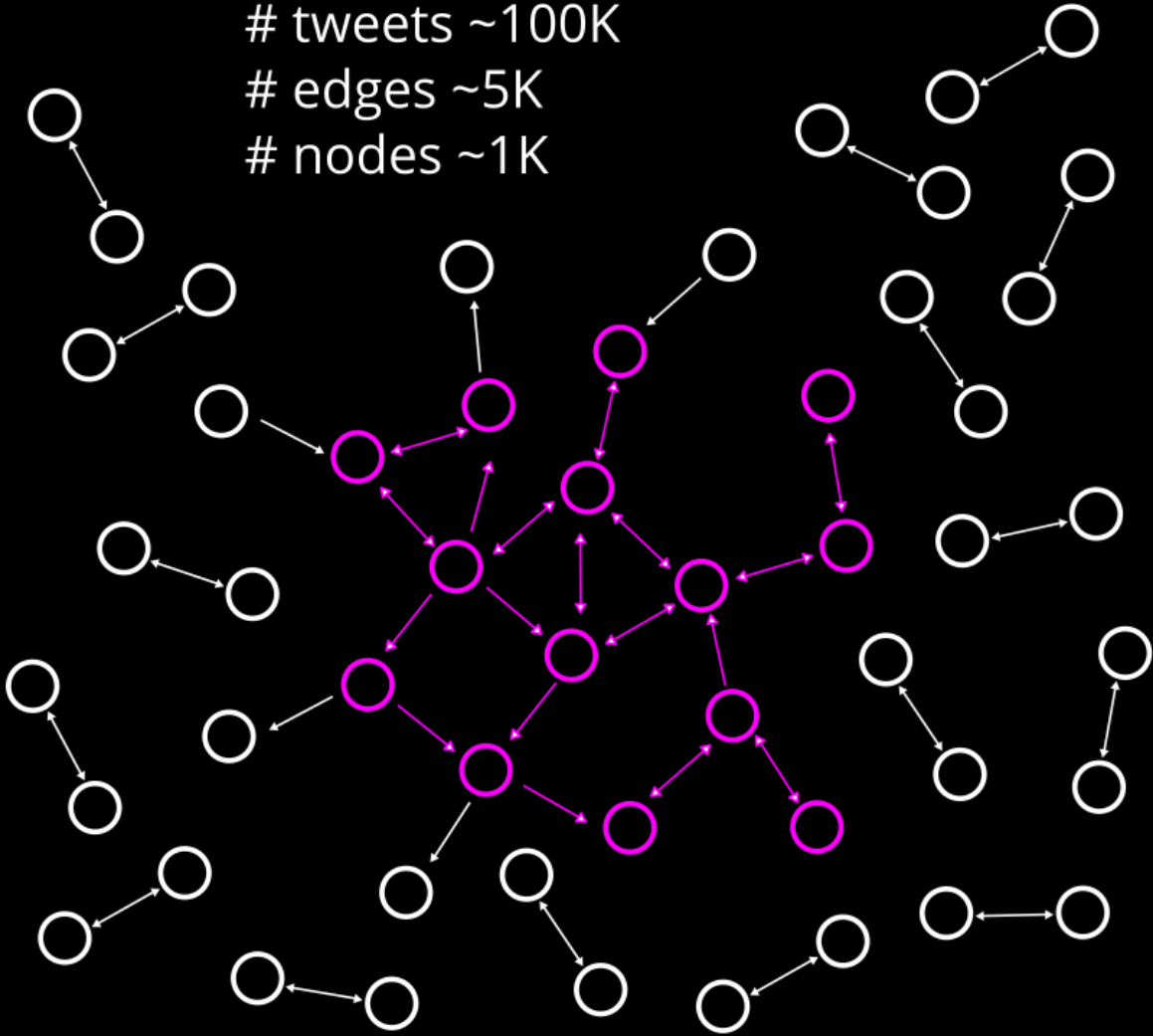
Retweets and mentions  
define links among users



# tweets ~100K  
# edges ~100K  
# nodes ~100K

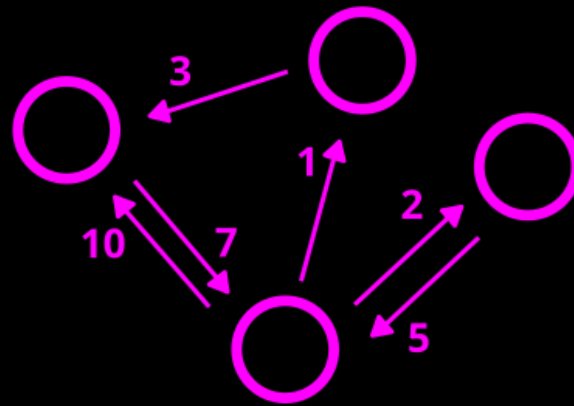


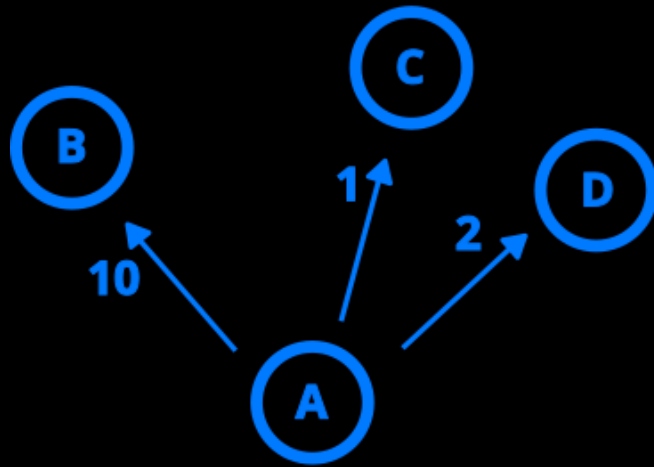
# tweets ~100K  
# edges ~5K  
# nodes ~1K





# Retweets +  
# Mentions





**TRANSITION  
PROBABILITIES  
AMONG NODES**

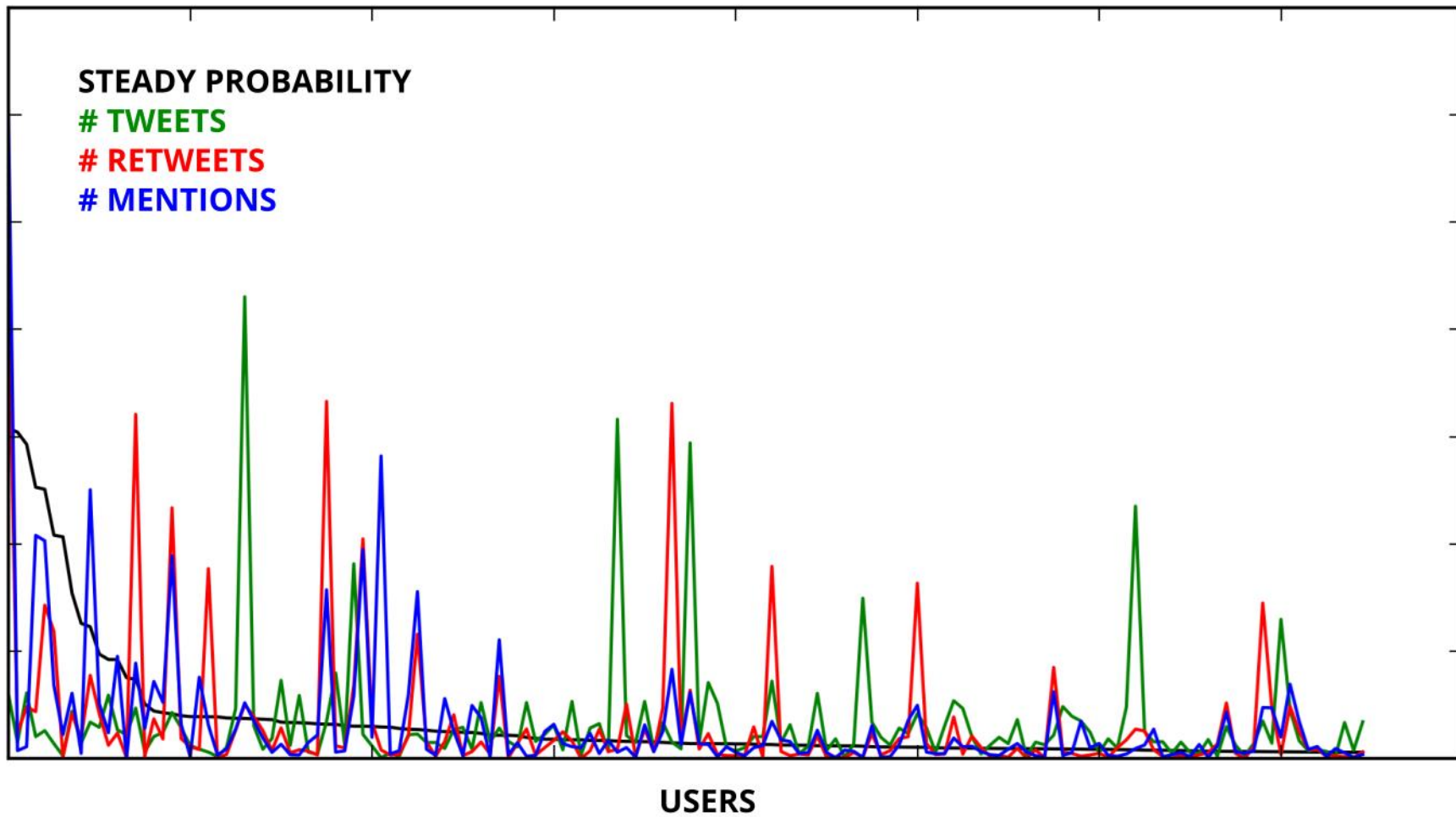
$$T_{AB} = 10 / 13$$

$$T_{AC} = 1 / 13$$

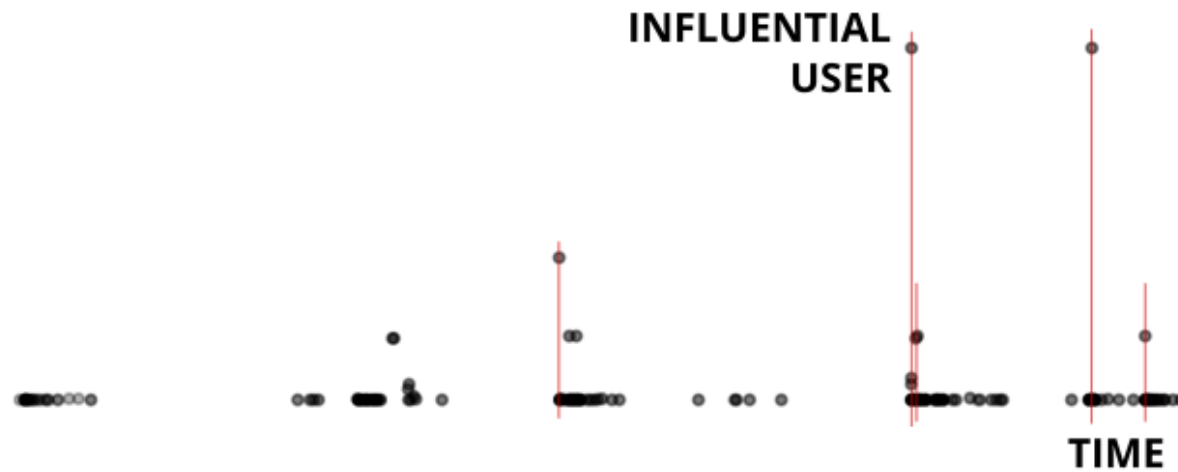
$$T_{AD} = 2 / 13$$

**STEADY STATE OF  
A FINITE ERGODIC  
MARKOV CHAIN**

$$\mathbf{p} = \mathbf{p} \mathbf{T}$$



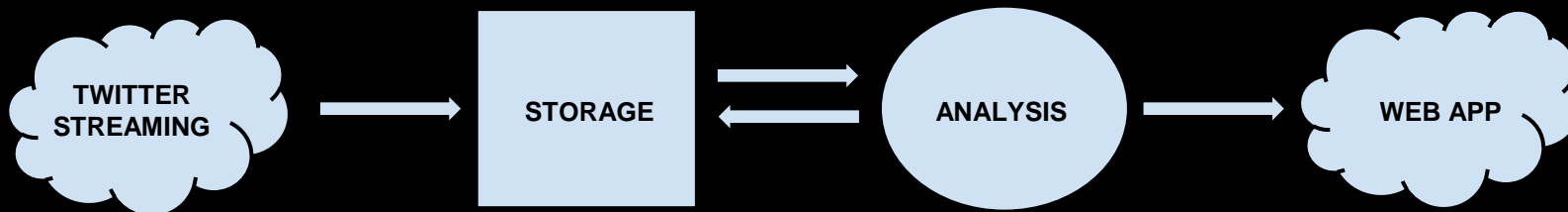
# RETWEETS AND MENTIONS ACHIEVED DURING TIME



# METHOD PROPERTIES

- focus on the **user visibility** on the discussion
- discover influential users on the **short period**
- **avoid popular** irrelevant users
- find **single person** account, like scientists or journalists







**FRONTLINE** @frontlinepbs

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<http://t.co/TpGq9ztqTp>

ENGAGEMENTS 130 FOLLOWERS 143K



**Sheri Fink** @sherifink

Author of Five Days at Memorial and War Hospital. MD. Correspondent for the New York Times. Email your story ideas: [sheri.fink@nytimes.com](mailto:sheri.fink@nytimes.com)

ENGAGEMENTS 23 FOLLOWERS 2856



**Doctors w/o Borders** @MSF\_USA

Providing medical aid where it's needed most.

ENGAGEMENTS 15 FOLLOWERS 473K



**Ebola Deeply** @Eboladeeply

Ebola Deeply is a collaborative news and information platform designed to tell the full story of the Ebola outbreak.

ENGAGEMENTS 19 FOLLOWERS 5808



**Dan Edge** @mongoosedan

Documentary Filmmaker, PBS Frontline, BBC and others

ENGAGEMENTS 7 FOLLOWERS 194



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```
# Python 3: Fibonacci series up to n
>>> def fib(n):
>>>     a, b = 0, 1
>>>     while a < n:
>>>         print(a, end=' ')
>>>         a, b = b, a+b
>>>     print()
>>> fib(1000)
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377
610 987
```

**Functions Defined**

The core of extensible programming is defining functions. Python allows mandatory and optional arguments, keyword arguments, and even arbitrary argument lists.

[More about defining functions in Python 3](#)

Python is a programming language that lets you work quickly

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Overview Examples Documentation Source

# Data-Driven Documents

Part 1 on C...

# Thanks

## ACKNOWLEDGEMENTS

Sergio Cima, Zadig

## REFERENCES

*Equilibrium distribution from distributed computing  
(simulations of protein folding)*

J Phys Chem B. 2011 May 19;115(19):6358-65

<http://riccardoscalco.github.io/>

<http://zadig.it/>