

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

ROY COCKRUM, SCOTT COMER,
and ERIC SCHOENBERG,

Plaintiffs,

v.

Case No. 1:17-cv-1370-ESH

DONALD J. TRUMP FOR PRESIDENT, INC.
and ROGER STONE,

Defendants.

_____ /

DECLARATION OF VIRGIL GRIFFITH

I, Virgil Griffith, hereby declare:

1. I am a cognitive computer scientist. This means I study and develop how computers think, calculate, and communicate.
2. I received my Bachelor's degree in Computer and Cognitive Science from the University of Alabama. I hold a Ph.D. in Computational and Neural Systems from the California Institute of Technology.
3. I currently am a research scientist for Ethereum Asia Pacific Limited researching cryptocurrency and blockchain designs.
4. My education and experience in the form of a curriculum vitae is attached to this declaration.
5. Part of my education and background includes the creation of WikiScanner. WikiScanner is a publicly searchable database that linked

millions of anonymous edits on Wikipedia to the organizations where those edits apparently originated by cross-referencing the edits with data on the owners of the associated block of IP addresses. WikiScanner, for example, exposed edits that Diebold Election Systems and CIA employees were making to Wikipedia pages.

6. My education, background, and experience qualify me to comment and opine on “hacking” and who, where, and when data is edited.

7. I was tasked with reviewing the lawsuit (“complaint”) in the above entitled caption and then answer two questions: 1) Are the allegations of the complaint clear enough to determine if it is possible to identify the hackers of a databased described as belonging to the Democratic National Committee; and, 2) even if adequately described can a hack be traced back to a particular individual or individuals?

8. Some lay people have misconceptions about what “hacking” is and it can be confusing unless there is a model for what it means. To begin with, it may be helpful to conceptualize the term “hacking” by changing the term to “breaking and entering” of a physical structure, such as a home.

9. In the allegations of the hacking there’s no description of the method of that hacking, or any description of any technical process to trace, connect, or identify someone or group in a particular country responsible for hacking the database belonging to the Democratic National Committee. In other words, in the allegations of the “breaking and entering”, there is

insufficient evidence to determine if Russian intelligence carried it out, beyond than Plaintiffs merely asserting such. To satisfactorily evince Main Intelligence Directorate (GRU) involvement would require sophisticated forensics and information probably only available to United States intelligence.

10. Based upon the allegations as stated, and no assumptions outside of the complaint, the allegations are not specific enough to prove or disprove. In other words, there is insufficient evidence to directly tie Russian intelligence to the hack of the Democratic National Committee.

11. Solely by technical means, it would be nearly impossible to identify which organization hacked the computer where a database was stored.


I declare under penalty of perjury that the foregoing is true and correct.
Executed in Singapore, Singapore this fifth day of September, 2017.

A handwritten signature in blue ink that reads "Virgil Griffith". The signature is written in a cursive, flowing style.

Virgil Griffith, Ph.D.

Dr. Virgil Griffith

AVANT-GARDE TECHNOLOGIST · SCIENTIST

✉ i@virgil.gr |  Virgil_Griffith |  Biography | ☎ +65 8822 1365 |  virgilgr |  virgil

Summary

I mix novel technology and social insight to solve hard problems in legal tech, blockchains, and smart-contracts.

Interests privacy enhancing technologies, data-science, Internet governance, legal tech, machine intelligence, complexity theory
Notable Work [Blackboard](#), [Maiden Names](#), [Polyworld](#), [WikiScanner](#), [Musicthatmakesyoudumb](#), [φ](#), [Tor2web](#), [Tor Roster](#), [OnionLink](#)
Proficiencies Python, R, ~~L~~TEX, C++, Haskell, Splunk, MATLAB, git, awk, Tor, dark web, Mac OSX, Linux, statistics, information theory

Education

California Institute of Technology

Pasadena, CA

PH.D. COMPUTATION AND NEURAL SYSTEMS

Sept 2007 - Dec 2013

- Information theory and high-performance C++ for quantifying neural network complexity
- Thesis: [Quantifying Synergistic Information](#) / Advisor: Christof Koch / GPA 3.4

University of Alabama

Tuscaloosa, AL

B.S. COMPUTER AND COGNITIVE SCIENCE

Sept 2002 - May 2004

- Graduated cum laude in May 2007. Studying cognitive psychology, neuroscience, biophysics. GPA 3.7

Employment

Ethereum Foundation

Singapore

RESEARCH SCIENTIST

Oct 2016 - Present

- Reviewing technical papers in game theory, distributed systems, blockchains.
- Developing decentralized VPN system to replace Tor.

Singapore-MIT Alliance for Research and Technology

Singapore

POSTDOCTORAL RESEARCHER

Sept 2016 - Present

- Researching graph-theoretic patterns in Darkweb and quantifying of Singapore's social segregation.

Intelllex

Singapore

SENIOR DATA SCIENTIST

March 2016 - Sept 2016

- Machine Learning for LegalTech doing document classification and search engines result prioritization.

National University Singapore: School of Computing

Singapore

RESEARCH FELLOW

Mar 2015 - Feb 2016

- Led dark web research group; advised cryptocurrency group.

Toroken

San Francisco, CA

TECHNICAL PRODUCT MANAGER

Feb 2014 - Sept 2014

- Led team to develop a blockchain-based currency for running Tor relays.
- Won 250k at 2014 Texas Bitcoin Conference.

Adruptive Industries

San Francisco, CA

CO-FOUNDER

Dec 2008 - Jan 2012

- Invented a targeted advertising method so effective browsers were patched to stop it.

Indiana University: School of Informatics

Bloomington, IN

RESEARCH ASSOCIATE

June 2004 - May 2007

- Derived mother's maiden name for ~10% of Texans.

University of Alabama: Arts and Sciences

Tuscaloosa, AL

NETWORK ADMINISTRATOR

Feb 2003 - May 2004

- Maintained department websites and over 400 servers/workstations.
- Supervised Beowulf supercomputing cluster

Hecklers Entertainment

Birmingham, AL

PHP AND PALM PILOT DEVELOPER

1999 - 2001

Notable Awards

- 2015 **ISIF.asia Fellow**, APNIC
- 2015 **OpenTechFund Emerging Technologies Senior Fellow**, The Tor Project
- 2014 **Data Science Fellow**, Insight DataScience
- 2010 **USA Patent #20100169177**, Method and System for Assessing Behavior of a Webpage Visitor
- 2010 **Demetriades-Tsafka-Kokkalis Prize in Entrepreneurship**, Caltech
- 2009 **Creativity Top 50**, Creativity Magazine
- 2009 **Computational Science Graduate Fellowship**, USA Dept. of Energy (4 years funding)
- 2009 **Interview: The Grill**, Computer World Magazine
- 2008 **Innovation in Journalism Award**, Knight-Batten Foundation (\$10,000)
- 2007 **Future Famous Alumni**, Indiana University
- 2007 **2007 Year in Ideas**, The New York Times
- 2007 **Graduate Fellowship**, USA Dept. Homeland Security (3 years funding)
- 2007 **Win Against Spin award**, Center for Media and Democracy

Research Experience

Santa Fe Institute

VISITING RESEARCHER

Santa Fe, NM

2005 - 2014

- Discovered mutational bounds for sustained machine self-reproduction.

Massachusetts Institute of Technology: Center for Collective Intelligence

VISITING FELLOW

Cambridge, MA

Winter 2013

- Quantified cooperation in neural networks and cooperate teams.

Harvard Law: Berkman Center for Internet and Society

INTERN

Cambridge, MA

Summer 2009

- Dissected Chinese censorship program “Green Dam Youth Escort.”

Stanford University: Dept. of Computer Science

HOMELAND SECURITY GRADUATE FELLOW

Stanford, CA

Summer 2008

- Analyzed Wikipedia edits to discover bad actors.

Keck Graduate Institute

RESEARCH ASSISTANT

Claremont, CA

Summer 2006

- Quantified what languages are suitable for genetic programming.

Indiana University: School of Informatics

RESEARCH ASSISTANT

Bloomington, IN

June 2004 - May 2007

- Quantified evolution of neural network complexity in the [Polyworld](#) artificial life simulator.

Writing

Complexity Theory 9 peer-reviewed papers: [arXiv link](#)

Computer Security 4 peer-reviewed papers: [Maiden Names](#), [Tor Analytics](#), [Freezing Bitcoin Assets](#), etc.

Artificial Life 2 peer-reviewed papers: [arXiv link](#)

Miscellaneous

Program Committees

[Hackers on Planet Earth](#) (2008, 2010, 2016)

[ACM AI Sec](#) (2008, 2009, 2010)

[Artificial Life](#) (2012, 2013)

Fun Facts

- Erdős number: 3 (via [Jonathan Harel](#))
- Bacon number: 3 (via [Curtis Armstrong](#))
- Owner of IPv4-block [108.198.0.0–108.198.0.255](#).
- My complete DNA can be [downloaded](#) as part of the [data-set](#) for genetic corollaries for general intelligence.
- Estonian e-resident #38303060128
- The New York Times has dubbed me the “[Internet Man of Mystery](#)”