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Relevant Experience

Internews

Washington, DC USA

2/2015– **Senior Technologist and Risk Advisor.**

Present Provides the Internet & Communications Technology (ICT) Programs Team and partners with technical support and guidance to expand the use and improve the quality of digital security software products, platforms, and practices. In addition works closely with the Internews' Operational Security program, IT department, and organization-wide program teams to develop processes for digital security risk assessment, security controls and audits, information classification and mitigating risk through digital security risk analysis.

- Design and develop CoPilot; a wireless hotspot for digital security trainers that provides an easy to use web interface for simulating custom censorship environments during trainings. CoPilot lets participants experience and successfully circumventing censorship in the safety of an interactive training environment.
- Work with departments, regional programs, and operational security teams to develop and implement a process for creating, maintaining, and updating audit-able risk analysis summaries that accurately reflect current, more comprehensive risk assessments of the risks our programs, personnel, partners, and beneficiaries face.
- Build processes for gathering, processing, and distributing threat intelligence to program, operations, and corporate teams.
- Identify key information security and internet freedom topics, design experiments for evaluating and/or measuring them, and analyze technical data for use in investigations of emerging, critical, and unknown technologies using web crawlers & scrapers, network anomaly measurement, data analysis and visualization.
- Serve as a senior expert and consultant to top management officials and partners on technology-related business practices and developments.

5/2014– **Technical Adviser.**

2/2015 Provided ICT Programs Team and partners with technical support and guidance to expand the use and improve the quality of digital security software products and platforms, working closely with technical and program teams in the field of international development and global human rights.

- Chief architect of the SAFETAG digital security risk assessment framework which adapts traditional risk assessment and penetration testing methodologies to provide information security assessments for under resourced, at-risk civil society groups and human rights organizations.
- Utilize state-of-the-art technology to identify new approaches to cyber-security, censorship circumvention, and data analytics and leverage technology and provide technology oversight in Internews' programming.
- Conduct international trainings for fledgling digital security experts on the SAFETAG framework and methodology as well as on a variety of penetration testing and forensic skills.

The Open Technology Institute at the New America Foundation

Washington, DC USA

01/2013– **Associate Technologist.**

- 5/2014 Developer and project coordinator for the Commotion Wireless project; assisted with development and research in the areas of interface design, usability, outreach & education, technical analysis, and threat-modeling.
- Lead the design and implementation of the Commotion Setup Wizard and administrative configuration interfaces for Commotion Wireless mesh-network nodes.
 - Quickly become competent with new programming languages, code-bases, and data-formats in order to integrate outside open-source projects with existing code base.
 - Conducted an extensive usability review that contributed to a complete overhaul of the Commotion user interface, resulting in user interfaces that were easier to use, more powerful, and more closely integrated with the rest of the software.
 - Led security architecture and threat model overview for Commotion Wireless which included managing security contractors, researching local and architectural threats, identifying research and development tasks, and documenting the outputs.
 - Designed test suite to evaluate mesh networks which were used to construct an internal test network, evaluate pop-up demonstration networks, and assist community network maintenance and outreach needs.

03/2012– **Technical Program Associate.**

- 01/2013 Developer for the Commotion Wireless project; researched and evaluated technical solutions, documented those solutions for broader use, and identified key outreach opportunities.
- Customized user-facing aspects of Commotion OpenWRT embedded router software to create a unified user interface, a first-run configuration wizard, and branded network visualizer.
 - Develop comprehensive results frameworks, performance indicators, deliverables, time frames, and monitoring frameworks for impact assessment for communications technology projects where protecting user privacy and anonymity was essential.
 - Conducted presentations, website redesign, and warning label development to inform the public of the misconceived security of the Commotion platform.
 - Designed, scripted, and presented mesh networking demonstrations for individuals, small groups, and conferences.
 - Served as a resource for technical knowledge, research, and assistance to OTI's public policy staff with a special focus on privacy, security, and network infrastructure issues.
 - Created high quality instructional presentations and lectures to articulate the technical capabilities and human implications of various technologies.

Education and Training

2006–2008 **M.S. Conflict Analysis and Resolution**, *George Mason University*, VA USA.

2002–2006 **B.A. Communications**, *San Francisco State University*, CA USA.

Relevant Computer Skills

Languages.

Python, Java-Script, Unix Shell, Lua, Emacs-Lisp, SQL

Frameworks.

- **Research & Analysis:** Scrapy, BeautifulSoup, NLTK, recon-ng, Pandas, Twisted, Scapy, OONI-probe & OONI-backend, Tilemill
- **User-Interface & Design:** D3, Flask, Jekyll, Leaflet.js, Angular.js, LuCI, PyQt, Pandoc, Sozi, Inkscape