

Andrew Turner

Neogeographer

Experience

CTO - GeolQ, August 2008 - Present

Lead technology vision, development, and technical integration with partners and community. The GeolQ platform provides an easy to use geospatial data sharing and visualization platform designed for ease-of-use map making. GeolQ provides solutions for US government agencies, enterprise organizations, and the general public. GeolQ has been utilized in Afghanistan election monitoring, disaster response, and humanitarian project monitoring and assessment.

Co-Founder - Mapufacture Inc., May 2006 - August, 2008

Mikel Maron and I co-founded Mapufacture to address the missing aggregation system for the emerging GeoWeb. Multiple applications and tools were available that could publish or consume open geo-data standards, but no easily sharable mechanism for finding, mixing, and building with these multiple data sources. Mapufacture was created to provide this common binding between the various geographic pieces of the web and share the data with all users. We built partnerships with many other geospatial companies such as Platial, Skyhook Wireless; the UN utilizes Mapufacture as an underlying component in their Development Program website.

Owner - HighEarthOrbit, LLC., October 2005 - Present

I founded HighEarthOrbit as a consultancy specializing in neogeography, commonly associated with collaborative and web mapping platforms and technologies. Work has included developing geospatial applications and demos, to advising on how to involve a community with a mapping system such as the Michigan Greenways Initiative. Clients have included MapQuest, ViaMichelin, and Urban Mapping. HighEarthOrbit has supported and developed multiple open-source projects such as GeoPress, Mapstraction, and GeoRSS. In addition, I have published multiple articles on neogeography, home automation, and programming in magazines like Linux Journal, Make Magazine, and MacTech.

Systems Development Engineer - Realtime Technologies, Inc., May 2003 - May 2007

As an engineer I developed high-fidelity, realtime, multibody vehicle dynamics models for the commercial automotive industry and the U.S. military. This included working with the SimCreator graphical simulation and modeling tool. As part of simulation development, I implemented variable-resolution vehicle and terrain models into the OneSAF Testbed (OTB), integrated vehicle simulations with hardware-in-the-loop motion simulators and electronic systems. Additional responsibilities included performing customer support for software and hardware simulation systems.

Engineer, Praktikant - Astrium GmbH, May 2002 - December 2002

During a work praktikum at the aerospace firm Astrium, I implemented spacecraft flight sensor and actuator models in Matlab/Simulink for the GOCE spacecraft. This included developing and integrating C/C++ aerodynamic modeling code into real-time simulation environment and working in tandem with international partners in developing satellite

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hardware specifications. As part of the international work experience, I gained experience with European space industry and international relations.

Systems Lead and Project Manager - Virginia Tech HokieSat, May 2000 - May 2003

I led and coordinated a large team of engineers in designing and building a nanosatellite for launch on the US Space Shuttle. I also designed and implemented an attitude determination and control system for HokieSat which utilized a real-time software architecture for the spacecraft. Additional research included analyzing formation flight of satellites through various mission scenarios.

Education

Masters of Science, Aerospace Engineering - Virginia Polytechnic Institute and State University - Blacksburg, Virginia - September 2000 - August 2003.

Thesis: "An Open-Source, Extensible Spacecraft Simulation Framework"

Bachelor of Science - Aerospace Engineering - University of Virginia - Charlottesville, Virginia - September 1996 - May 2000

Minor in Computer Science, Rodman Honors Scholar

Thesis: "Development of a Semi-Autonomous Control System for the UVA Solar Airship Aztec"

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Organizations

CrisisCommons Co-Founder, OpenStreetMap Foundation, Open Source Geospatial Foundation (OSGeo) Charter Member, OpenStreetMap Foundation, Where2.0 2007-10 Organizing Committees, W3C Geospatial Incubator Group, American Association of Geographers, North American Cartographic Information Society, Open Geospatial Consortium

Publications

Reports

[Where2.0: The State of the Geospatial Web](#). An O'Reilly Radar Report. 2008.

[Introduction to Neogeography](#). O'Reilly Media, Inc. Sebastopol, CA. 2007

Selected Conference and Workshop Presentations

Where2.0, Neogeography, Mobile & Mapping. Invited Lecture, Smithsonian Institute. February, 2010.

Information Sharing at the Edge. Invited Workshop Speaker, UVA Darden School of Business. November, 2010.

Neogeography: From Tower to Town Hall. Keynote Speech, UVA Humanities Forum. February, 2010

Open Access to Multi-Domain Collaborative Analysis of Geospatial Data Through the Internet. American Geophysical Union. December, 2009

Neogeography and Geospatial Data Preservation. Library of Congress lecture. July, 2009.

GeoWeb Standards: How far they've come, How far they need to go. GeoWeb. July, 2009.

Visualization: Government 2.0. Invited Panelist. Open Government & Innovations Conference. July, 2009.

Adventures in Networked Community Journalism: How to Work With a Crowd. Personal Democracy Forum. June, 2009.

Neocartography: Web Mapping Usability Evolved. SXSW Interactive Panel. March, 2009.

Applying Lessons Learned from Neogeography to GIS. Invited Speaker, North Carolina GIS Conference. February, 2009.

Beyond GoogleMaps. Invited Speaker, Future of Web Apps London. October, 2008.

Recipes for Placemaking, Guest Lecturer, New York University's Interactive Telecommunications Program (NYU ITP). September 2008.

Beyond GPS: Neogeography Data Collection, Invited Speaker, FOSS4G2007, September 2007.

Using and Enabling the Emerging GeoStack, Where 2.0 2007, May 2007.

Adding Where to Your Web2.0 Application, Invited Speaker, Web2.0 Conference, April 2007.

Research Publications

Turner A.J., *OpenStreetMap as a Successful Model for User-Generated Geospatial Content*. Association of American Geographers Annual Meeting. March, 2009.

Turner A.J., Hall C.D., "An Open-Source, Extensible Spacecraft Simulation Framework", 2003 AAS/AIAA Astrodynamics Conference, Big Sky, MT, August 2003.

Turner A.J., Hall C.D., "Adaptive Spacecraft Attitude Control Using Neural Networks", 2002 Virginia Space Grant Consortium Student Research Conference, Hampton VA, April 2002.

Makovec K.A., Turner A.J., Hall C.D., "Development and Implementation of a Nanosatellite Attitude Determination and Control System", AAS/AIAA Astrodynamics Specialists Conference, Quebec City, Canada, Aug 2001. AAS 01-311

Turner A.J., "Development of a Semi-Autonomous Control System for the UVA Solar Airship Aztec", 3rd Annual AA/AIAA Airship Convention, Friedrichshafen, Germany, July 2000

Software and Select Projects

GeoCommons geospatial data and visualization platform. <http://geocommons.com>

GeoPress - WordPress mapping plugin. <http://georss.org/geopress>

Mapstraction mapping library. <http://mapstraction.com>

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