

16:10 Cloud-based ESRI collaboration tools for researchers

Various forms of Cloud-based ESRI collaboration tools for researchers: ArcGIS Online, ArcGIS Explorer Online, ArcGIS Online for Organizations, and Portal for ArcGIS (premise based). Time permitting: Demographic Analysis tools with Business Analyst for Canada and GeoDesign.

*This once competitive National whitewater kayaker, **Mr. Parry** started his professional life as an exploration geologist and drill camp manager in 1987, while completing his B.Sc. with Specialization in Geology from U of A. He spent 4 years in northern BC and central Yukon searching for base and precious metals while fighting off bears and mosquitoes. He returned to Alberta to build and manage a consulting practice specializing in IT system design for staff/HR performance monitoring, software technical writing, training, and custom software development. For the last 15 years, David's career has focused on consulting & implementing geographic information systems for clients of TELUS Geomatics and ESRI Canada focusing on web delivered geospatial applications for business intelligence and web/mobile solutions across most sectors of the Canadian economy, including: Energy, Utilities, Environmental, Forestry, Mining, Government and Public Safety.*

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UofA GIS Day

Friday, November 18, 2011

*A Showcase of GIS Applications
at the
University of Alberta*



AGENDA

14:00	Free refreshments on the first floor 'west atrium' Centennial Centre for Interdisciplinary Sciences	
14:20	Welcome	<i>Presentations in CCIS 1-160</i>
14:30	Edmonton Pipelines	Maureen Engel <i>Humanities Computing</i>
14:50	Cumulative effects of wolves and industrial activities on habitat effectiveness for elk in the Rocky Mountains of Alberta, Canada	Evelyn Merrill <i>Biological Sciences</i>
15:10	Spatial analysis of NPRI carcinogen air emissions in Alberta, Canada	Tali Neta <i>Earth and Atmospheric Sciences</i>
15:30	Break	
15:40	Where's the coffee? A new look at University maps	Jennifer Chesney, Veronica Krawcewicz, and Dean Vigoren <i>Web Strategy</i>
16:10	Cloud-based ESRI collaboration tools for researchers	David Parry <i>ESRI Canada</i>
16:40	Closing remarks and door prizes	

14:30 Edmonton Pipelines

“Edmonton Pipelines” is a research cell based at the University of Alberta that is interested in bringing together urban theory, digital technologies, and creative mapping techniques in order to narrate the city of Edmonton. “Pipelines” is not a single installation but rather, as the name might suggest, a collection of multiple granular projects – something like the plethora of pipelines you might see at a refinery. This reflects our belief that a city is not ever a single thing, but rather a ragged collection of meanings that cross each other, sometimes without meeting. At its core, Pipelines is a project of the Humanities; it is an attempt to tell new city stories through new narrative means. While GIS technologies are most suited to the articulation of data in relation to space, we are interested in deploying them in the service of place: that is, the rich, contradictory, layered and historical connotations that inhere in the urban nexus we call Edmonton. We ask what it would look like for the Humanities to analyze all of the ways that the human endeavours (of culture, of art, of affect) are always already occurring in situ, and to take the rich notion of “place” as the starting point for humanistic inquiry.

Dr. Engel is the Graduate Coordinator, Humanities Computing, and member of the Pipelines group, composed of: Heather Zwicker, Vice Dean, Faculty of Arts, Daniel Laforest, Assistant Professor, MLCS, and Russell Cobb, Assistant Professor, MLCS.

14:50 Cumulative effects of wolves and industrial activities on habitat effectiveness for elk in the Rocky Mountains of Alberta, Canada

Mitigating anthropogenic changes in the quantity and quality of wildlife habitat remains a fundamental management challenge. Simple models of habitat use are unlikely to predict the cumulative effects of land use change on animal populations. We developed a GIS tool that merges models of resource selection and survival by elk (*Cervus elaphus*) to isolate the relative and cumulative effects of wolves (*Canis lupus*) and different resource extraction activities on the status of elk habitat in west-central Alberta, Canada. Models of elk resource selection, developed from 31 GPS-collared females, indicated that elk avoided areas used by wolves and humans except where modified by terrain conditions and died in high risk area. Patterns in high-quality habitat (high selection and survival) were tracked after virtually removing the industrial footprint and predation risk across the landscape. and building up the existing landscape one piece at a time. Clearcuts and pipelines increased high-quality habitat for elk by 270% over “pre-development” conditions, but the potential was not realized because of seismic lines, roads, and well sites. Wolves increased potential “sink” conditions for elk under heavy development primarily due to their use of linear clearings as travel corridors. We illustrate a modeling approach to assessing the relative and cumulative effects of wolves and humans on the status of elk habitat conditions and identify areas in need of protection and rehabilitation for tactical planning of future land use alternatives.

Dr. Merrill is a Professor in the Department of Biological Sciences. She earned her MSc from the University of Idaho and her PhD from the University of Washington in Seattle where she worked on the elk recolonization of the Mount St. Helens eruption zone. Her research focuses on large mammals with emphasis on foraging ecology of ungulates, trophic interactions, and now spatial epidemiology of chronic wasting disease in deer.

discovering the world through gis

15:10 Spatial analysis of NPRI carcinogen air emissions in Alberta, Canada

Cancer represents a costly multi-factor/step disease where environmental factors are major contributors to aetiology. The present research is motivated particularly by concerns of daily exposures to carcinogens released to air from industrial activities. The impact of environmental pollution on health requires assessment of emissions. The Canadian National Pollutant Release Inventory (NPRI) is a publically accessible government funded inventory that addresses pollution releases through mandatory reporting. We have generated Canada wide NPRI maps and identified potential areas of interest, where future evaluation of cancer occurrence will consider factors such as population density, ethnicity, family income, wind direction and land use; indicating that comprehensive location driven analysis is needed. The assessment of various variables will be done using detailed geospatial and geostatistical analyses in a GIS environment. Ultimately, these analyses may illuminate the processes whereby industrial activities may influence cancer.

Dr. Neta completed degree programs in the discipline of physical geography and Geomatics in Ben-Gurion University, Israel, and York University, Toronto, Ontario, Canada. The main focus was on the applications of remote sensing and geographical information systems (GIS) in biogeography, hydrology, climate change, and geomorphology. She is currently a Post-Doctoral researcher of environmental health at the Department of Earth and Atmospheric Sciences, at the University of Alberta. Her research is focused on spatial analysis of industrial air pollution and the incident of childhood cancer in Alberta, using GIS technology.

15:40 Where's the coffee? A new look at University maps

The old University of Alberta maps existed on the web environment as a cropped PDF file with a grid. Research showed there was demand in the university community for a better mapping utility. The new maps were envisioned to be usable and useful to students, faculty and staff, or anyone who needed to “know where to go” on any University of Alberta campus. This project includes a Google Maps interface incorporating new and old information layers, realistic 3-D buildings, and 360-degree panoramas. The mapping system continues to evolve as we create new layers of data and interactive tools.

Ms. Chesney (MM, Yale; BM, Indiana University) is the Executive Director of University Web Strategy, whose goal is for the University of Alberta to become one of the leading examples of an interdisciplinary online learning experience enabled by our web, mobile, social networks, and IT systems capabilities. Her previous business and technology strategy roles include creating a Customer Strategies unit and managing Retail Banking IT as Managing Director at ATB Financial, Edmonton, heading R&D and Product Development at Stockhouse, Inc. Vancouver, and managing a \$50 million+ portfolio of Institutional Marketing products as Vice President at Morgan Stanley, New York. Jennifer founded in 1998 one of the first open source virtual media companies, NewsTrolls, Inc.

Ms. Krawcewicz is a 3D mapping and graphic designer with University Web Strategy. She is a recent graduate of the university, having earned a Bachelor of Design, with distinction, in June 2011. This past summer she was one of four interns who created 3D models of more than 150 University of Alberta buildings for Google Earth.

Mr. Vigoren is a web application developer with the University of Alberta, where his first project was creating the university's new mapping system using Google Maps. His development experience also includes creating 3D estimating software and online backup systems. Dean graduated from NAIT's Computer Engineering Technologies and Bachelor of Applied Information Systems Technology programs in 2009.