

CURRICULUM VITAE: **Bob Janowicz**

President of: **GIS Innovations Ltd.**
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<http://www.gis-innovations.bc.ca/>

The GIS Innovations Mission Statement Bob Janowicz started GIS Innovations in 1993 with a simple mission, “*to help clients succeed with GIS Technology.*” Over a decade later, this has grown from a one person start-up into a respected and established GIS firm with a small stable dedicated team, working with loyal clients who trust us with some of their most critical needs, year after year.

The Road Atlas of BC

- **Designer-creator-systems architect-programmer/analyst and project manager of the Digital Road Atlas of BC (*the Atlas*) project.** *The Atlas* is an ambitious program to create and maintain a fully verified, highly accurate Roads GIS database of the full Province of BC. The primary technique is to have field GIS technicians drive every road in BC with on board GPS positioning systems, integrated with feature data capture (of map objects like speed zones, road naming and addressing). The data captured is loaded into GIS systems within the support office and turned into a full feature single line Road Database. In addition to the managing the many man years of field and GIS office work, the project also involved co-operating with numerous other parties, such as the Province of BC, many local and regional governments, key clients, emergency services, and many smaller private clients. The entire project, from conception in February of 1997 to the completion of phase 1 in July of 2000, has created among the best roads database in the world, done with exceptional technical and financial innovation. *The Atlas* is now in maintenance mode. This is the Roads Database of choice in BC, and is the only Roads GIS in use by 9-1-1 in BC. (1997-present)

Selected GIS Project Involvement

Over the nearly 20 year career there have been many projects of all sizes, some of the most interesting are:

- GIS Consultant for several very large public safety initiatives (Emergency Dispatch) projects on behalf Intergraph Public Safety. This role included the source data review, data conversion, data modeling, data conflation and normalization, topological integration of street, address, response zone, rail, hydrography and more, and the final conversion into the formats defined for CAD. All the projects had very aggressive project timelines, very large data sets, and the GIS was absolutely critical path to very large emergency response initiatives and/or organizational restructuring. Recognizing the *life & limb* issues, all projects included extensive Quality Assurance documentation maps and/or reports of a wide variety of factors including invalid data structure and/or topology, apparent missing data, contradictory data (typically between streets and addresses), and more. These QA reports became part of the overall project documentation of due diligence, and were copied onto the source data providers. The projects were:
 - New Zealand Police Service: for the entire country of New Zealand (1996-1997)
 - Melbourne Ambulance Service (MAS), Melbourne, Australia (1993-1995) and
 - Bureau of Emergency Services (BEST), State of Victoria, Australia (1994-1995).
 - Edmonton Police, Edmonton Alberta, Canada (1993-1995).
- Designed, developed and implemented the integrated GIS environments for the geographic data component of both the Edmonton Police Service (1990-1995) and the Lethbridge City Police (1993-1994) Computer Aided Dispatch projects, both in partnership with Intergraph Canada Ltd. As with Australia/New Zealand, these projects assembled, and integrated a wide collection of data to support 9-1-1. In addition to the above services, a variety of programs, procedures and documentation were developed and installed into the city to enable each city to maintain the GIS requirements for their Police Services. This also positioned each city to utilize the value of these GIS layers and techniques for other civic purposes. For example, Edmonton has leveraged the Single Line Street Network (SLSN) system initially provided for Police into programs like the SLSN being the glue for the coordination of sewer/water replacement with long range street resurfacing plans.

- Roadless Area Study of BC. Designed, developed and executed all the GIS components of the study. This included building a 1km UTM grid covering all of BC (>1M sq km), scanning all TRIM roads and coding up their impact parameters (surface, lanes, length, etc), overlaying roads to the grid, integrating environmental maps, zones and major hydrography to the grid, analyzing the impacts (including models factoring in surrounding cells combined with modeling the impact of each road to habitat) and generating the final roaded and roadless impact analysis maps for an area of over 1,000,000 km grid squares covering all of BC. The sheer volume of data required innovative techniques and custom solutions combined with COTS GIS/RDBMS software. (2001-2)
- Project Manager- Data Model Designer-Developer, "Address Identification & Development of the Regional District's GIS system", for one of the RD's in BC. This included the development of interactive tools to touch-touch CAD map labels of lot-block-plan to build up the intelligence of each legal label. These were post-processing with the tax assessment records thereby creating smart objects which formed the basis of the GIS. Secondly a creative yet practical address design was done for the rural areas using the GIS. (1996)
- Designed and developed a proto GIS demonstration to showcase the emerging capabilities of GIS for the Province of BC, as part of the multi-vendor exercise for the advancement of GIS (circa 1988). The demonstration showed the potential for a user within a fully interactive session to overlap aerial photography on top of a map display, heads-up digitize a "permit". Then invoking an "automatic background test" topologically overlay that new permit with other layers defined as per a schema using preset rules to determine and report if there were any conflicts with the permit request. (in 1988)
- Designed, developed, and implemented the petrophysical subsystem of the Canadian Occidental "Exploration Computer System", essentially their GIS for exploration. Co-designed and programmed several sub-systems for the conversion, creation and utilization of various surface and sub-surface data types. (1985-1987)

Presentations

- Co-Presented "Mapping (GIS) Issues for Computer Aided Dispatch" to the Fire Chiefs Association of BC 2002 Conference, Vernon, June 2002; co-presented with Dave Hamilton of E-Comm
- Presented "A New Approach to Road Mapping" to the local URISA workshop focused on "Emergency Services and Technology", Vancouver, March 2000.
- Presented "Creation of a Road Centreline Database of BC using mobile GPS" to the GIS 99 Conference (GeoTec), Vancouver, March 1999.
- Presented "A Case Study: Building the GIS for BEST, Victoria, Australia" to APCO (Association of Police Communications Officers) Conference, Vancouver, November 1995.
- Presented "GIS Data Preparation for Computer Aided Dispatch for BEST, Victoria" to the Canadian Intergraph Users Group Conference, Vancouver, September 1995.
- Presented "Single Line Road Net & Address Data QA & Integration: Tips & Techniques" to the International Intergraph Users Group Conference, Huntsville, May 1995.
- Presented "MGE Tips & Techniques" to the Canadian Intergraph Users Group Conference, Vancouver, September 1995, the International Intergraph Users Group Conference, Huntsville, May 1994, and to the Australian Intergraph Users Group Conference, Melbourne, August 1994.
- Designed, developed and presented a custom course on "Oracle for GIS/MGE" and "MGE PC-1" in partnership with Ferihill Technologies Ltd, Victoria, October 1993.
- Presented "Dispatch Systems, Geo-Data Techniques" to the US Intergraph Users Group Conference, Las Vegas, October 1993.
- Presented "GIM, an Interactive Data Editor" to the Canadian Intergraph Users Group Conference, Vancouver, Sept. 1995, and to the US Intergraph Users Group Conference, Las Vegas, October 1993.
- Designed, developed and presented the workshop "MicroStation Version 5.0, Delta" to the Canadian Intergraph Users Group Conference, Edmonton, September 1993.
- Designed, developed and presented the workshop "GIS Using MGE" to the Canadian Intergraph Users Group Conference, Calgary, September 1991.

GIS Software Development and Marketing

- Primary control of all sales and marketing of the Road Atlas of BC GIS database.
- Continuously using and refining FME, RDBMS and related GIS tools for data analysis, integration, conversion, and Quality Assurance.
- Continuously refining, designing and developing FME, SQL, MDL and VB based tools for GIS data editing, manipulation, management, integration, and quality assurance.
- Developed a system for configurable batch processing for tasks common throughout the life of a data conversion and integration project.
- Designed, developed and demonstrated numerous custom GIS applications within project, demonstration, benchmark and pilot project environments.
- Eight years experience as a GIS Architect and Specialist for Intergraph Canada Ltd.

Technical Skills

- Expert in GIS data conversion, integration and data **Quality Assurance** techniques.
- Expert in GIS data for 9-1-1, road data, atom planning, integration with auxiliary data such as local address data, address registries, ANI/ALI, and MSAG
- Expert in GIS systems analysis and design, and GIS database design.
- Expert in GIS projects, Project Management
- Very strong understanding of GPS, its uses and limitations within data capture applications.
- Very strong understanding of and skills with all the leading GIS packages; FME; and Relational Database packages (MicroSoft).
- Strong programming skills, including FME, Visual Basic, MicroStation MDL, PERL and others.
- Strong organization, presentation and instructional skills.
- Proficient with UNIX, Windows and assorted MS Office products.

Professional Involvement & Certifications

- **Certified Project Management Professional (PMP), Project Management Institute**
- **Certified GIS-Professional (GISP), URISA**
- Active in the local URISA and MISA workshops and conferences, including some sponsorships.
- Vice Chair (past) of the MGE Steering Committee.
- Member (past) of the Bentley Systems third Party Developers Program.
- Member (past) of the Oracle Developers Program.

Positions

President	GIS Innovations Ltd.	Founded in July. 1993
GIS Systems Architect	Intergraph Canada Ltd.	Dec. 1992 - July. 1993
GIS Applications Specialist	Intergraph Canada Ltd.	July 1985 - Dec. 1992
Exploration Geologist	Byron Creek Collieries	May 1981 - Dec. 1982
Geological Assistant	various exploration companies	May-Aug. of 1977-80

Education

University of Victoria	Masters Certificate in Project Management (2005)
BC Institute of Technology	CIT. CAD/CAM Technology (1985)
University of British Columbia	B.Sc. Geology (1981)

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