GAC CORDILLERAN SECTION

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Tech Tool Talk!

Tuesday October 6, 2015, 12:00 noon to ~1:00 pm

Discovery Centre Geological Survey of Canada
1500 - 605 Robson Street, Vancouver, BC

Admission is free - Space is limited – seating is on a first come – first seated basis - BYOL

SAFE, FAST, INEXPENSIVE HIGH RESOLUTION DIGITAL IMAGERY AND DSM FOR MINERAL EXPLORATION.

Discussion leaders: Dirk Tempelman-Kluit, PhD. PGeo, & James Hedalen, BSc, MBA
Korpy Surveys Ltd

A high resolution digital camera carried on a remotely controlled unmanned vehicle (UAV) coupled with the most up to date image processing software allows unmatched high resolution ortho-rectified imagery and Digital Surface Model ("DSM") creation for exploration projects, work areas and geological mapping. The work can be done safely, quickly and inexpensively.

Beside exploration projects the imagery is useful for detailed monitoring of construction projects, tailings facilities, waste rock stockpiles and open pits. It is also used for accurately measuring volumes of excavations or stockpiles.

Because the survey needs the operator to be near site, but not on it, this work does not impact ongoing operations and makes it inherently safer and more convenient than on-site work.

The tool has not yet been widely adopted by the mineral sector, perhaps because its accuracy, safety and modest cost are not widely known.

High resolution images permit effective planning, targeting, management, documenting, monitoring of work and give consummate material for marketing and promotion.

The eBee UAV can cover up to 12 sq. km (4.6 sq. mi) in a single flight, and over smaller areas, flying at lower altitudes it can acquire images with pixel resolution to 3cm. For coverage of large areas multiple flights can be combined to create a single internally consistent dataset. With ground control the accuracy is to within a few cm horizontal and 5 cm vertical.

The senseFly eBee is the first fixed-wing system to be designated a **'compliant small UAV'** by Transport Canada.

The high resolution data collected this way complements traditional aerial photography, satellite imagery and lidar surveys; it does not replace it.

Case studies of how the technology has been used in mineral exploration and related fields are presented to focus discussion..