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## GPS Technology & Municipal Maintenance Operations

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# The Court's view of GPS data

## *Wilgosh v. Good Spirit Acres Ltd*, 2007 SKCA 43 (CanLII)

The appellant says that the trial judge erred in accepting the GPS report in that proof of the accuracy of the GPS report required expert evidence, which the respondents did not provide. Alternatively, the appellant said the judge should have treated it as inadmissible as hearsay since the witness through whom it was introduced did not give evidence as to exactly how he arrived at his figures by use of the GPS ... *Both the meters and GPS systems are now so widely used and accepted, that it was open to the trial judge to admit them as cogent evidence in this case without the support of expert witnesses [Emphasis added].*

- At trial:
  - Not open to the human element
  - Not subject to undermining by cross-examination
- At discoveries:
  - Effectively show there is no case against the municipality
- In the problematic case:
  - Quickly assess the issues and resolve where appropriate

- Implementation and operation
  - Presentation of data
  - Admission of data at court
  - Preservation of data after collection
- Institutional risks related to privacy
  - Authorized collection of data
  - Providing proper notice to employees

- Business Records
  - GPS data = Business records
  - *Evidence Act* definition:
    - “any information that is recorded or stored by means of any device” s. 35(1)
    - electronic records may be admitted in to evidence as proof that an event occurred, although the party tendering the electronic record must be able to provide evidence to satisfy the court that the “electronic record is what the person claims it to be” s. 34.1(4)

- The “electronic record is what the person claims it to be”
  - “Integrity of the electronic record” s. 34.1(5)
    - Integrity of the electronic records system or evidence that a reliable encryption system was used s. 34.1(5.1)
    - Guidance on the types of evidence to establish reliability s. 34.1(7) and (8)
- Introduction of GPS data at trial is relatively straightforward

- Problem is more practical and relates to presentation
  - GPS data in its “raw” form is simply a list of information including latitude and longitude coordinates, speed, salt application rates, and plow engagement details
  - Applications contain mapping programs that display data in an interactive map

- Best format allows counsel to show vehicle moving on a map with relevant data displayed
  - “demonstrative evidence” vs “real evidence”
  - Demonstrative aide may require third party, independent expert to create and explain
- Presentation of data is important before trial, consideration given at implementation stage



- Several considerations:
  - Standardized Data Requirements
  - Standardization Beyond Winter Maintenance Operations
  - Retention Requirements for GPS Data

- Consider data collected and reports generated at the outset
- The type of data that can be collected:

• Vehicle ID	• Direction	• Street Name
• Date	• Activity	• City
• Time	• Rate of application	• City
• Latitude	• Air temperature	• Province
• Longitude	• Road temperature	• Country
• Speed	• Street Number	• Postal Code

- Possible reports:
  - Work report
  - Patrol report
  - Weather report
  - Service notes
- Policies and procedures to direct staff
  - Who is responsible for ensuring data is collected, generating reports and maintaining hardware, including testing for accuracy and consistency
- Standardized approach to producing “demonstrative evidence”

- Standardized approach in a region or group:
  - Expectations of claims professionals and lawyers
  - Economies of scale and business benefits
  - Education for judiciary
    - “these are the programs, policies and procedures we have, they are consistent across the area municipalities and they work very well”
    - Have a hand in developing a standard of practice that is practical and achievable
    - Undermine argument that one municipality is doing it differently

- Consider whether coordination with other services and operations can be accomplished
  - Especially synchronization of time systems
  - Can effect other types of cases, including police, fire and other emergency response cases
  - Discrepancy between GPS equipment and recorded times can be over a minute but seconds are crucial

- Adopt a “standard clock” based on GPS
  - GPS time is based on “atomic clock” in satellite signals
  - Adjust and synchronize on weekly basis
- All municipal and emergency services coordinate with GPS
- Operators and staff use GPS when making notes

- Involvement of staff beyond winter maintenance operations
  - Designated staff trained to access and manipulate data for the benefit of counsel
  - Presentation of data is important not only when selecting the program but when ensuring individuals on staff have skill and ability to use the program to fullest extent

- Third party data manager might not know how to use the program to create the required visual presentation of data
  - Recent experience of counsel
  - Weeks of frustration
  - Intervention of senior risk management representative
  - Ultimately received the presentation and deflated plaintiff's case



# Missing Records –the tragic end result for a municipality

*Belanger v. The Regional Municipality of Sudbury , 2015 ONSC 7071*

**Although it is likely that R-136 was used to replace R-725 on route S10 for at least part of the day leading up to when it went out of service at 12:30 p.m., *there is no crew work card indicating precisely when and where it was in operation. I cannot find that it was unavailable for use between 7:15 and 10:15 a.m. that morning.***

[Emphasis added]

- No known statutory or regulatory requirements for retention of GPS data specifically
- Rules and practices are based on purpose of the data
- *Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56 (MFIPPA) and “personal information”*

- MFIPPA
  - Personal information must be retained for a year after it is “used
  - Significant security requirements to protect privacy
  - Recommend security anyway to protect evidence
  - Default for privacy is keep as little as possible but must balance with the purpose for which data is collected, i.e.: potential claims and litigation

- Limitation periods
  - 2 years
  - Extended by discoverability or in case of minor or mental incompetent
    - Potential need for evidence 20+ years after incident
  - Practically, unlikely claim arises without some notice to municipality
  - Cost or resource issues
  - Consider and balance competing priorities – possible tiered approach
  - 15 year ‘ultimate’ limitation period

- Third party winter maintenance contractors must have same GPS equipment
  - Ensure ongoing maintenance of equipment for functionality
- Road maintenance is non-delegable duty
  - Municipality is liable to the plaintiff, may have claim over against the contractor but risk insufficient insurance

- Requirement that third party contractors use GPS under municipality's control
  - Quality control
  - Avoids problem of not being able to locate driver or obtain evidence
- Whether employees or contractors, need policy:
  - For routine checks to ensure operational at start of every shift
  - Actions in case of failure during shift

- Underscore importance of being able to use the data once collected
  - Focus on ensuring individuals at the municipality have skill and ability to produce data in desirable form
  - Consider involvement of risk management and defence counsel when reviewing and implementing
- Benefits highly outweigh costs and potential risks
  - Requires thoughtful implementation process

Thank you for listening.  
Questions?