

# Ontario Professional Surveyor



*on the cover ...*

**Sergeant-at-Arms Alec Mantha  
presided over the 129<sup>th</sup> AGM**

**also in this issue ...**

**Know your History – Part 8  
Introduction to the AOLS Land  
Registration Research Cybrary  
Want to Build Your Resilience?  
Put Your Phone Down**

**plus our regular features**

**Educational Foundation  
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# ONTARIO PROFESSIONAL SURVEYOR



VOLUME 64, No. 2

Spring 2021

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## ON THE COVER ...

Sergeant-at-Arms Alec Mantha chose to portray “The Mandalorian”. During his presentation at the AGM, Alec said, “The Mandalorian is a character from the Star Wars universe who tries to uphold the law in a time of chaos, much like surveyors. He also represents all the Netflix and Disney+ we’ve been bingeing on during the pandemic.”

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# President's Page

By Gavin Lawrence, O.L.S., C.L.S., MBA



After serving the Association as a Council member for the past four years, it is an honour, and my distinct privilege, to accept the president's chain of office from Andy. In addition,

I look forward to serving as your 130th president in 2021. Due to the pandemic, I had the dubious distinction of being the first president sworn in during a virtual ceremony, which I found clinical. I hope the next president has a joyous celebration. Regardless, I remain humbled and proud to serve as the president of such a prestigious community of professionals. I am eager to serve and already rolled up my sleeves before the AGM and got to work by giving input into our preliminary Council schedule for the upcoming year.

To my fellow members, thank you for your support. I am especially grateful to Past President Andrew Mantha and Executive Director Brian Maloney for sharing their wisdom and keeping the Association moving forward. They made my journey through Council more pleasant and educational. I also appreciate my employer, which has supported my journey through Council.

Most importantly, I would not be President without the encouragement and support of my family, who are always in my corner loudly cheering me on.

This past year will definitely go down as an extraordinary period in history with a pandemic forcing the entire AGM to go virtual. The circumstances surrounding COVID-19 resulted in ever-changing public health care announcements. These updates forced the AGM Planning Committee to make some defining decisions in short order. Kudos to the committee members, as they continued to adjust their plans to adhere to health care guidelines while keeping the AGM on track.

When it came to the implementation, logistics and behind the scenes heavy lifting, the Association staff deserve a special mention as they seamlessly pivoted from organizing the usual in-person AGM to a successful virtual one. Staff conquered steep learning curves as new software, registration and payment processes lay before them, let alone the online streaming service processes and teaching the not so tech-savvy end users. We can all be proud of the work done by the staff at 1043. Booyah! That's how it's done.

At our meeting both the Deputy Minister and the Minister, Ministry of Natural Resources and Forestry, offered a fitting

tribute to Susan McGregor, our Surveyor General who plans to retire in the near future. On behalf of the membership and Council, I thank you Susan for serving the association with distinction. At Council, she is quick to accurately identify, analyze and share her take on deliberations. Susan always holds public protection at the heart of everything she does. Her dedication to our profession, enthusiasm, and team spirit makes Susan easy to work with. We wish her all the best as she tackles new adventures.

As a community, please join me in warmly welcoming our newly minted surveyors. With hard work and tenacity, they reached this wonderful initial milestone in their land surveying careers. Remarkably, they represented the largest cohort of new surveyors at an AGM Convocation Lunch in recent years. Congratulations!

Immediately following the AGM, Council met to welcome our newest councillor and to say our final farewells to those who so graciously served the association. We also took care of some housekeeping items and did a cursory review of the virtual AGM.

Rest assured, for all of the years that I have served on Council, the Open Forum questions received due consideration and this year is no different.

Now that the AGM week is done and dusted, let us assess the current situation. Our strategic plan, that was last fine-tuned during the spring of 2020, will continue to drive the overall direction of our association. By fall of this year, we hope to have a better understanding of the possible future impacts of COVID-19. Therefore, it will be fitting to consider updating our plan at that time.

During my time on Council, we tackled many issues. For good reason, only a few really stood out and lingered on our plates. Others continue to draw regular consideration as part of normal Council considerations, like the transparency policy, risk management and the Memorandum of Understanding with our fellow associations. Furthermore, Council will regularly track our performance using the dashboard spreadsheet. This handy tool is convenient and allows us to keep an eye on critical metrics. In short, it helps Council make informed decisions in a timely manner.

Here are some of the ongoing topics that require attention:

- *Expanded Profession* - after the positive vote at the AGM I expect this item to make meaningful progress in the coming months as the association moves towards a

*cont'd on page 5*

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# Executive Director's Notes

By Brian Maloney



Last year we were successful in having some minor updates made to the *Surveyors Act* and *Surveys Act* with the cooperation of the Ministry of Natural Resources and Forestry. This work pointed out some of the weaknesses in our current legislation and has given us the confidence to seek legislative reforms. On February 26<sup>th</sup> Council agreed in principle to move forward to consider changes to the *Surveyors Act*.

With the evolution of the expectations on regulators, changes to professional regulation are taking place across Canada. Some of the most notable changes have been the

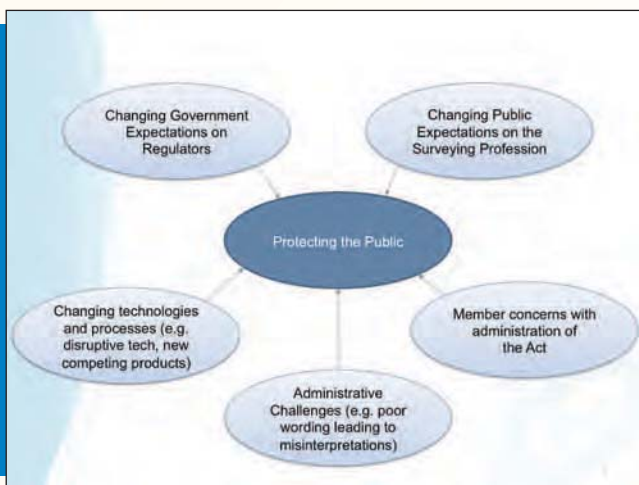
addressing risk management in regulation that we are progressing on. While this was a start, there are certainly other changes that should be considered. Many issues could be contemplated ranging from governance changes (the makeup and appointment of Council), doing away with two-tiered memberships and moving to a one-licence model, and modernizing the definition of surveying to adequately protect the public with respect to changing technology and services. This is certainly not a comprehensive list of potential changes.

There are several factors that are impacting the need to consider other changes beyond the changes noted above. The diagram on the left represents a high-level view.

The Legislation and Regulations Task Force is considering a project plan that will include several phases including:

- Upgrading their own and Council's knowledge on regulatory change,
- Determining the evolving public expectations of surveyors,
- Determining the future technological and societal impacts on the profession,
- Determining the administrative challenges of the current Act,
- Determining member concerns with the current Act,
- Performing a Jurisdictional Scan to understand the state of regulation of surveyors in Canada and with some international leaders,
- Analysis and Recommendations,
- Communications and support building, and
- Implementation.

This is a significant project that will take some time to complete but I believe the time has come. It will involve much effort and debate before moving forward and undoubtedly will take several years to come to fruition. I am optimistic that we will find the right level of regulation that will enable the profession to provide innovative cost-effective solutions that meet the needs of the public. By taking a proactive approach we should be able to guide our future and ensure that the public is appropriately protected. As this evolves, I encourage all members to engage in the process and consider their future.



creation of the Professional Governance Act that replaced the Engineers and Geoscientists Act in British Columbia, the changes to the governance requirements for regulators in Quebec and the takeover of regulators by governments such as with the realtors in Alberta. Regulators have responded across Canada by undertaking their own reviews (e.g., The Cayton Review of Professional Engineers Ontario) and adopting changes. While we have not received any pressure from the Ontario government for change, it only makes sense that we should ensure our own house is in order and to seek any necessary proactive changes.

When I joined the Association two years ago, I compared the existing standards published by the Professional Standards Authority (PSA) in the UK against our own practices. The PSA is internationally known as a leader in professional regulation. It resulted in our revised approach to

# Thank you

# to all of the AGM Sponsors and Exhibitors!

# NEWS FROM 1043

## Changes to the Register

### MEMBERS DECEASED

William A. Beninger	873	Mar. 14, 2021
Walter P. Tarasick	923	Feb. 5, 2021

### RETIREMENT

Shawn Jemmett	1648	Dec. 31, 2020
Alvin Clarke	912	Dec. 31, 2020
Pasquale Suppa	1659	Dec. 31, 2020
David Henrickson	CR135	Dec. 31, 2020
Lawrence Biason	1606	Dec. 31, 2020
Sophie-Rose Côté	1987	Dec. 31, 2020
Trevor Carnegie	CR109	Dec. 31, 2020
George Lo	1664	Dec. 31, 2020
David Green	1945	Jan. 1, 2021
Daniel Kreze	1622	Jan. 29, 2021

### LICENCE RELINQUISHED

Mark Girin	2011	Dec. 31, 2020
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### REINSTATEMENT

Sophie-Rose Côté	1987	Mar. 1, 2021
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### COFAS APPROVED

McIntosh Perry Surveying Incorporated  
Perth, Ontario  
February 5, 2021

### COFAS RELINQUISHED

D.P. Quinlan, O.L.S.  
Brighton, Ontario, January 1, 2021

### COFAS REVISED

Relinquished: Meldrum Surveying Limited  
Approved: Meldrum-Jason Surveyors (a Division of Ivan  
B. Wallace Ontario Land Surveyor Ltd.)  
Long Sault, Ontario, December 31, 2020

Relinquished: Ron M. Jason Surveying Limited  
Approved: Meldrum-Jason Surveyors (a Division of Ivan  
B. Wallace Ontario Land Surveyor Ltd.)  
Prescott, Ontario, March 1, 2021

Relinquished: Kirkup Mascoe Ure Surveying Ltd.  
Approved: Kirkup Mascoe Ure Surveying (a Division of  
J.D. Barnes Limited)  
St. Catharines, Ontario, February 1, 2021

## Surveyors in Transit

**David Hawley** is no longer with **Land Survey Group (LSG)**.

**Jack Gauthier** is now the managing OLS at **McIntosh Perry Surveying Incorporated** in Perth, ON.

**Cole Raikes** is now the managing OLS of the Bracebridge Branch Office of **Raikes Geomatics Inc.** located at 8A Ontario St., Bracebridge, ON.

**Dan Cormier** is now the managing OLS of the Kingston Branch Office of **Ivan B. Wallace Ontario Land Surveyor Limited** located at Unit 1, 637 Norris Court, Kingston, ON, K7P 2R9.

**Julia Meldrum Smith** is now the managing OLS of the Long Sault Branch Office of **Meldrum-Jason Surveyors (a Division of Ivan B. Wallace Ontario Land Surveyor Ltd.)** located at Unit 4, 17171 Cornwall Center Road, Long Sault, ON, L0C 1P0.

**Ron M. Jason** is now the managing OLS of the Prescott Branch Office of **Meldrum-Jason Surveyors (a Division of Ivan B. Wallace Ontario Land Surveyor Ltd.)** located at Suite 205, 197 Water Street, Prescott, ON, K0E 1T0. Ron is also the contact for the Alexandria Consultation Office located at 39 Main Street North, Alexandria, ON, K0C 1A0.

**Paul Benedict** is now with the **City of Brantford**.

**Martin Baya** is now the managing OLS at the **Ministry of Transportation of Ontario** in London, ON.

**Maryna Hanna** is now the managing OLS at **Coe, Fisher, Cameron Surveying (A Division of J.D. Barnes Limited)** in Lindsay, ON.

**Hugh Coutts** is no longer with **Adam Kasprzak Surveying Ltd.**

**Brian Campbell** is now with **J.D. Barnes Limited** in Kitchener, ON.

## President's Page (cont'd from page 2)

- one licence model with an emphasis on ethics;
- *Sketches* - as a surveying product this continues to be discussed, and judging by the comments at the AGM, it still requires additional consideration;
- *Fair Fees for Field Notes* - now that some time has passed since the creation of AOLS Bulletin 2020-01, it may be timely to review its efficacy;
- *Deferred Monumentation* - given the current technological climate and mindset, there is a need to revisit this topic if we want to remain current; and

- *Opening Legislation* - to ensure it reflects reality, remains current and is future proof.

Let me leave you with one of my favourite quotes: "If you don't like something, change it, if you can't change it, change your attitude." - Maya Angelou

The longer days signal the pending arrival of spring, which breeds excitement at the prospect of warmer and cheery times. Even though we had a wonderful virtual AGM, I look forward to seeing all of you in person. In the meanwhile, please stay safe and healthy.



# Want to Build Your Resilience? Put Your Phone Down



By Amelia Valenti

**“A good half of the art of living is resilience.”**

Alain de Botton

When my clients complete a ‘Life Design Assessment’ in an initial meeting, one of the questions they are asked to complete is a self-rating on the following four areas: Love, Work, Play, and Health. Later, we examine what their typical day looks like and then identify how the time was spent, using the same four categories. Clients often ask questions about whether or not working out can be considered play, or if work can be categorized as love, but without exception, I am asked:

“What category would my time on social media or time on my phone be?”

To which I reply: “None of the above.”

Mobile devices are the best stress delivery mechanism ever invented.<sup>1</sup> It is like having a stress I.V. that goes directly into your prefrontal cortex (the area of our brain that helps focus our attention, plan, reason, control impulses and manage emotional reactions). Modern technology has gained such a presence in our lives that it’s easy to become addicted to social media and smartphone use to the point it starts impacting our relaxation and sleep. In turn, this causes even more stress to build up through the day, resulting in a cycle of stress accumulation.<sup>2</sup>

Stress related to technology may not be new information for you. However, if the key to resilience is experiencing stress, then stopping the stress, recovering from it, and trying again, then **the issue with technology is that we are not giving our brains adequate time to recover from stress.**

Excessive attention and uncontrolled dedication to our cell phones is harming our physical, mental, social, and work well-being. This conclusion is based on biology. Homeostasis is a fundamental biological concept describing the ability of the brain to continuously restore and sustain well-being.”<sup>3</sup>

Finding this ‘homeostasis’ (often ‘misdiagnosed’ as work/life balance) is a billion dollar industry. I have had numerous clients seek out my services claiming their most urgent need is to ‘find a better balance’. And while the ‘presenting symptoms’ might seem to be caused by a lack of work/life balance, we work together to reveal that the REAL problem is the lack of homeostasis in the body.

The inability to feel balanced is often because most of the

day is spent inundated with technology. Excessive stress stems from a lack of recovery time. By recovery time I don’t necessarily mean vacation time, I mean short, **mindful**, uninterrupted time that allows the brain to ‘bounce back’ from stress. (Think of it like needing interval training for the brain - instead of sprinting non-stop for hours).

A mindfulness expert, Dr. Stanley, outlines a very simple formula to build resilience using a variety of mindful tools in her book: *Widen the Window: Training Your Brain and Body to Thrive During Stress and Recover.*

## **Stress + Effective Recovery = Increased Resilience<sup>4</sup>**

You’ll notice **stress is part of the equation. It is supposed to exist.** Stress is not all bad. Stress related to technology is almost inevitable in today’s age, the ‘bad’ part or ‘the missing part’ in the equation is usually the effective recovery.

So, how do we recover? It’s pretty straightforward. We learn how to be mindful. Mindfulness suggests that the mind is fully attending to what’s happening, to what you’re doing, to the space you’re moving through.<sup>5</sup>

Mindfulness means we need to push ourselves outside of our comfort zones and allow ourselves to be with our thoughts. Sometimes being mindful means to be bored. And while meditation is one way to achieve mindfulness, there are many others that support the recovery time we need.

“My mind wanders too much.”

“I work remotely so I can’t disconnect technology.”

These statements are equivalent to saying you can’t exercise because you’re out of shape.

Mindfulness builds resilience, and both mindfulness and resilience skills can be learned and both can be integrated into a workday without adding additional time to your day. In fact, investing in mindfulness will give you more productive time in return.

Your mindful actions do not need to include a complete digital detox (though there are tremendous benefits), but I would suggest you try, what I like to call: 1% Goals. The strategies are simple enough and time efficient, making them practical and achievable. They also lead to high-impact resilience-building results.

## **1% Goals for Mindful, Resilience-Building Recovery:**

**Taking micro-breaks:** Try a few deep breaths or step outside every hour. (Every 30 minutes is ideal, but we are starting small). This recovery time will not only build your resilience, but it will also increase your productivity. The



small amount of time invested will give you more focused attention in return. (Did you know that the average time on selected sustained attention is 20 minutes?)<sup>6</sup>

**Practice Listening** - Not only is this a great way to practice mindfulness, it also fosters compassion, which is another key to building resilience. See if you can let someone else speak for two or three minutes without interrupting them. Ask them to do the same for you. Try this strategy daily.

**Schedule Device Usage Times** - I'll admit, this one is a bit more difficult than the first two. However, if you want fast results, select three times during the day to use your device. This will disrupt the automaticity of constantly checking it - and it is a great boundary-setting exercise.

**Family Time Without Technology** - Create a family rule that nobody is able to check email or a device for a certain period of time each evening. (We started by setting aside 30 minutes at dinner time, which was a manageable amount of time to start with a house full of teens). Notice how much more you talk when everyone is focused on being present.

**Play** - When was the last time you did something playful just for the pure sake of playing? Do you even remember what play is? Making the time to play, whether that means tossing a football, painting a picture, building a snowman, or playing fetch with your dog, is recovery time that relieves stress, also boosts compassion and creativity, and keeps you feeling young and energetic.<sup>7</sup> Try to play for at least half an hour each week.

There are certainly many benefits to technology that range from connection with loved ones, to productivity, to making learning more equitable. Again, the benefits of stress from technology are expected, this stress can be good, and this stress is, for many, a necessary part of life. Stress is also a key ingredient for resilience. However, in order to be resilient, we have to learn to be mindful of how we use technology. We have to be mindful of the recovery time we allow ourselves, and mindful of the many other important aspects of life such as: play, giving someone our undivided attention, the great outdoors, or the dog that needs a cuddle.

During one of our recent 'tech-free' family dinner discussions, I mentioned I was going to be writing an article about the effects of technology on resilience. It went something like this:

Teenage child: "Oh, you mean you're going to tell people how you think technology is the root of all evil?"

Me: "No, I am going to talk about how it is important to build in brain breaks so that people aren't drained."

Teenage child: "Yah, but it (technology) is also social for us, like video games are the only way I got to talk to my friends the entire time we couldn't go to school."

Me: "I promise I am not writing that technology is all bad. Any source of constant stress is not good for you. Remember the other day we talked about the purpose of an

opinion article is arguing one side? Well, I am discussing how technology can hurt our resilience and shorten our attention span if we don't have breaks from it."

Teenage child: "Is there ice cream for dessert?"



**Amelia Valenti**, who was a presenter at this year's AGM, is an international public-speaker, author, and coach. She is currently working as the Director of Education, Training & Organizational Wellness at The Loomex Group. For more information on Amelia's services, please visit: <https://life-bydesign-coaching.com>



- <sup>1</sup> "Creating Mindful Leaders - Whil." <https://get.whil.com/cmlbook>. Accessed 14 Mar. 2021.
- <sup>2</sup> "How Technology Can Increase Stress Levels - Strategic Psychology." 9 Feb. 2017, <https://strategicpsychology.com.au/why-are-we-so-stressed-the-tech-factor/>. Accessed 14 Mar. 2021.
- <sup>3</sup> "Resilience Is About How You Recharge, Not How You Endure | HBR." 24 Jun. 2016, <https://hbr.org/2016/06/resilience-is-about-how-you-recharge-not-how-you-endure>. Accessed 14 Mar. 2021.
- <sup>4</sup> "Elizabeth A. Stanley, PhD: Home." <https://elizabeth-stanley.com/>. Accessed 14 Mar. 2021.
- <sup>5</sup> "What is Mindfulness? - Mindful.org." 8 Jul. 2020, <https://www.mindful.org/what-is-mindfulness/>. Accessed 14 Mar. 2021.
- <sup>6</sup> "A Short Attention Span + Mindfulness = Success at Work? - CRM.org." 15 Nov. 2019, <https://crm.org/articles/a-short-attention-span-mindfulness-success-at-work>. Accessed 14 Mar. 2021.
- <sup>7</sup> "The Benefits of Play for Adults - HelpGuide.org." <https://www.helpguide.org/articles/mental-health/benefits-of-play-for-adults.htm>. Accessed 14 Mar. 2021.

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# Convocation Address Charge to the New Surveyors



By Amar Loai, B.Eng., O.L.S., O.L.I.P.

It is an honour to have this opportunity to deliver this address. I want to thank Andrew Mantha and Brian Maloney for entrusting me with this.

I feel privileged to be here at our 129<sup>th</sup> Annual General Meeting, and fortunate to address our new professionals. What an accomplishment!

Despite an incredibly challenging past year, it's inspiring to see that we have 34 newly commissioned surveyors who will begin their professional careers in the province.

Your hard work, energy, and dedication have brought you here today, this is your moment. As newly commissioned surveyors, you will be joining one of the oldest and most respected professions of our time. You have also been entrusted to take on a very sacred role in the work that we do.

I would like to share with you a quote from the English poet John Donne that I often reflect on when doing my work as a professional surveyor "No Man is an Island". The work you will complete as professional surveyors is not always easy, nor is it meant to be. There are many moving parts involved in every survey project, each requiring specific attention and detail. You will work with a number of staff in order to produce a professional opinion about the location of a property line or corner.

As you begin your professional careers, you will not be expected to know everything; in fact, you have just begun a long journey of continuous learning, and we are here to support you all the way. Do not hesitate to ask for help when the path is not clear or when the deed of your subject parcel makes absolutely no sense with what you find on site.

True professionals practice the fundamentals; and develop their skills by learning from their experiences on a daily basis. Do not underestimate the value of the senior staff you work with; even though the technology has changed, the principles which they have taught you remain at the core of your professional designation.

As professional surveyors, the duty of care in the work you carry on is not exclusive to the company you practice for or yourself; it is to the public. Your designation as an Ontario Land Surveyor represents the professional capability, skill set, and most importantly the trust that has been granted to you as an unbiased and impartial professional.

Well, without further delay, here are some tips and practices I want to share with

you which will hopefully make your lives a *bit easier* and avoid problems:

- 1) Communicate, communicate, and communicate! Whether you are running behind on a deadline or experience difficulty on a certain project, inform your clients, and get ahead of the problem before it finds you. Nobody likes surprises, especially in this line of work!
- 2) Research is key, a great mentor of mine who is the Chief Surveyor at the Toronto Transit Commission once said, "A survey is like a pair of underwear, you don't want to be caught with your pants down without one". I cannot stress how important it is to make sure that you have all your research in place before you sign off on that plan. Research will make or break your professional opinion. While there is nothing wrong with disagreeing with another professional surveyor, make sure you know what their answer was before you call it out.
- 3) Have patience, and then go for a walk, and get some more patience. There will be many times where you will be frustrated with certain projects, staff, and most importantly clients; should you have a particularly off day, avoid the phone line, and any difficult emails!
- 4) CPD! Do not undervalue the importance of Continuing Professional Development. The webinars, seminars, and workshops the AOLS hosts give you great insight to what is happening around you. By the time you know it, your CPD cycle will be due, do not leave it to the last minute like some of us!
- 5) Trust but verify; at first, it will be no different than drinking out of a hose, you will be exposed to a lot of information and data, take your time to check, and then double check. Always ask yourself the same question: what was the original intent? Once you know it, the answer will be clear.



In closing, I want to congratulate each and every single one of you. The past members who can no longer attend our meetings or see our work have left their mark on history; it is now time for you to create your legacy.





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# Introduction to the AOLS Land Registration Research Cybrary

By J. Anne Cole, O.L.S., C.L.S. and Izaak de Rijcke, L.L.M., O.L.S.

An introduction to the new AOLS Land Registration Research Cybrary was made at the 2021 Annual General Meeting (AGM) of the Association of Ontario Land Surveyors (AOLS) – the first virtual AGM ever! For the last number of years, surveyors have been increasingly challenged with the difficulty and complexity in conducting boundary research in the electronic land registration system. Some of the challenges were alluded to in the presentation made at the AGM in February 2020, under the name, *Risk Management in Conducting Boundary Research in the Land Registration System*.<sup>1</sup>

This year's presentation is a continuation of the theme, which began last year in identifying risk factors which land surveyors faced when conducting boundary research in land registry records and, with a view to locating relevant evidence of the first deed, transfer, or other boundary creating event. The AOLS has supported the work of Four Point Learning, Anne Cole and Izaak de Rijcke and many other contributors<sup>2</sup> in creating and compiling a wealth of resources that will assist surveyors in better understanding how records were initially created, how records were indexed or abstracted, and ultimately, converted into an electronic environment under the *Land Registration Reform Act*.<sup>3</sup> Those changes have made title searching more efficient and predictable for the real estate conveyancing Bar but, have definitely added challenges for land surveyors looking for evidence of a boundary.

This year's Continuing Professional Development (CPD) presentation by (the authors) Anne and Izaak pointed to an original publication written by Izaak de Rijcke in 1978 for

AOLS called, *Land Registry Office Title Searching for the Land Surveyor*. Some copies may still remain on your bookshelf. A second edition was produced in 1988 and, since it captured the state of paper records as they existed in 1988, continues to serve to this day as a “snapshot” of the types of records that were in existence at that time. This is important because one of the most insightful aspects of the presentation at this year's AGM is that no matter how far we progress from paper to electronic transformation, and conversion from registry to land titles, surveyors will always need to look backwards in time to the creation of the boundary which, more often than not, will exist in a paper context and environment at the date of creation.

The importance of an electronic library (or “cybrary”) as a singular source for information that helps the land surveyor in performing the research task for a cadastral survey was explained. The presentation used slides to illustrate the breadth of the cybrary and pointed to examples that could be viewed as the kind of document or instrument that can be encountered. For example, paper Registry abstract pages, deeds, Land Titles paper registers, and different types of survey plans were all produced and discussed for the benefit of the audience. A useful part of this presentation included the “real-time” navigation through the cybrary looking for specific resources that respond when conducting a search using keywords. Different configurations and selections of keyword terms were demonstrated as producing different results and, with mixed success. This, of course, is not only to be expected but, through added use and experience, a surveyor can expect more confidence and

## Sites to See

### AOLS publishes an Article in the ORCGA 2020 DIRT Report

<https://orcgga.com/publications/dirt-report/>

This year, as a member of the Ontario Regional Common Ground Alliance (ORCGA), the AOLS was asked to submit an article for the **Damage Information Reporting Tool (DIRT) Report**. The objective of the DIRT Report is to provide a resource to capture damage event information and to identify the root causes, with the purpose of reducing the number of events through public education, focused damage prevention programs and improved industry practices.

*Protection of Ontario's Land Survey Monuments*, submitted by the AOLS Monument Protection Task Force, can be found on page 34 in the report.

familiarity in using the cybrary to locate resources which respond to a particular question or problem with which the surveyor is faced.

The cybrary is an excellent resource for CPD self study, however its use by AOLS members is enhanced when one begins to appreciate the tremendous potential for additional CPD that can be created from the content of the cybrary. The cybrary allows for quick and efficient access to relevant resources on which to build in-house training for staff working in both the public and private sectors. In fact, the cybrary represents a repository of many decades of care and diligence on the part of government staff in land registry offices across the Province and diligence in accurate and complete record keeping. This legacy for land surveyors will now be more easily understood and used for conducting cadastral surveys and fulfilling the mandate of the surveyor to conduct documentary research.

The importance of the role of thorough research in boundary surveying is the reason the cybrary was created to be used by AOLS members free of charge. The reference material in the cybrary will support a land surveyor's need for knowledge and skill in the complex and sophisticated task of researching for current and historical information in

the electronic land registration system.

A program of continuous improvement to maintain, update and add further relevant resources to the cybrary is, of course, also an essential component of the value of this asset for members. Access to the cybrary through Four Point Learning is free for AOLS members with an enrolment code made available by completing the form available on the AOLS members portion of the website at <https://members.aols.org/splash/my-membership/my-cpd/external-training>. AOLS members are encouraged to participate by using, reporting errors/omissions, submitting material and building new CPD and training opportunities from the material.



If you have any questions for the authors, please contact Izaak de Rijcke at [izaak@4pointlearning.ca](mailto:izaak@4pointlearning.ca)

<sup>1</sup> For more information, visit: [https://4pointlearning.ca/4PL/CPD-Research\\_RiskMgt.pdf](https://4pointlearning.ca/4PL/CPD-Research_RiskMgt.pdf)

<sup>2</sup> Not only have many others contributed to the content, including Michael Marlatt and staff in the Ontario Public Service, but the content and structure of the cybrary was also reviewed by members at the AOLS office, and MNRF, MENDM and ServiceOntario. Their contributions and suggestions are all gratefully acknowledged.

<sup>3</sup> *Land Registration Reform Act*, R.S.O. 1990, c. L.4

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# Know your History — Part 8

By Tom Bunker, O.L.S., C.L.S., P.Eng., C.P.A. (Ret)

The following article is Part 8 in a series of historical articles by Tom Bunker.

## Policy for Provincial Highways

The original “public highways” in North America were the interconnecting lakes and rivers that were joined when necessary by foot travel on portages. The large Great Lakes and St. Lawrence River system as well major rivers flowing north, south and west provided access to the entire continent.

Until the 1700’s Upper Canada (now Ontario) was a wilderness of scattered colonial outposts, generally along the shores of the Great Lakes and the St. Lawrence River, occupied by soldiers and licensed traders that bartered with the nearby First Nations. In the 1760’s the British began to purchase land from First Nations starting with the Seneca to control the portage at Niagara<sup>i</sup>. The first survey for settlement was at Niagara in 1782 by Allan McDonell, one of the settlers<sup>ii</sup>.

British interests in Canada sought to provide shelter to both loyalist British citizens and their French and First Nation allies after losing the American War of Independence (1775 – 1783).

The first townships surveyed to settle Loyalists near Kingston were to be 6 miles square with 25 lots of 120 acres in 7 concessions, with relevant roads for distribution (see Kingston Township, Single Front style, 1783).

From 1788, Upper Canada was divided into four districts administered under the authority of justices of the peace sitting in Quarter Sessions<sup>iii</sup>. It was anticipated that settlers would provide manual labour to create and maintain township roads by the imposition of Statute Labour overseen by pathmasters<sup>iv</sup>. For statute labour to be applied to any particular road, a settler had to establish a petition, have it signed by neighbours and present it to the Magistrates in Quarter Sessions<sup>v</sup> or District Road Commissioner<sup>vi</sup> who would decide on which roads to act. This process was formalized under *The Highway Act*, 1810 and then amended to make it a municipal requirement under the *Municipal Institutions Act* of 1849<sup>vii</sup>.

A specific term of settlement duties required settlers to “cut down all timber in front of and the whole width of the lot....33 feet of which must be cleared smooth and left for half the public road”.<sup>viii</sup> A problem with a Single Front Township was that the settlers were far apart with no neighbours’ homes, especially across the road, to help with the construction and the statute labour was insufficient to have viable roads. Townships in the Front and Rear style were started in the Niagara peninsula (see Niagara 1787).

Although a Township named Toronto was laid out in 1788<sup>ix</sup>, it was not utilized and land division in the area

started with York (1793), spreading north along Yonge Street and along the shore of Lake Ontario. By the 1840’s township divisions had reached as far north as the Severn River.

Several schemes were undertaken to encourage settlement: Governor Haldimand offered “official” free grants to Loyalists (1784)<sup>x</sup>; Berczy<sup>xi</sup> (1794) undertook to bring settlers from Pennsylvania, via New York, to Markham; Willcocks<sup>xii</sup> (1792) tried to recruit Irish settlers to Pickering and Whitby; Comte de Piusaye<sup>xiii</sup> (1798) proposed expelled French Royalists settle at Windham (now Oak Ridges) and in Uxbridge, Part of Whitchurch and Gwillimbury; Danforth had a settlement proposal in Northumberland County<sup>xiv</sup>. Most schemes did not achieve planned settlement while some proponents and military officers were granted 1000 acres or more. Many schemes were cancelled resulting in litigation by the proponents<sup>xv</sup>. Later schemes involved the Canada Company (incorp. 1824) and the Canada Land and Emigration Company (incorp. 1860’s).

Even when settlers did arrive, land speculation and sale rather than farming was rampant. My 3<sup>rd</sup> Great Grandfather Abijah Jones arrived at York from New York in the fall of 1805. After pledging allegiance to the King in March 1806, he petitioned<sup>xvi</sup> for and was granted a free Patent to 200 acres in Uxbridge Township<sup>xvii</sup>. He immediately registered the Patent and sold the lot the very same day for £50.

## “Highway” Development

When France declared war on Britain (again) in February 1793 the newly created United States was in sympathy with France<sup>xviii</sup>. “It was originally intended that the road duties of the settlers would be used to build all the main highways, but with settlement growing so slowly, the threat of war with the United States made it necessary to construct military roads between main centres of population and military installations.”<sup>xix</sup>

The first major road was Dundas Street built by the Queen’s Rangers, running westerly from York in 1793 to the Thames River<sup>xx</sup>. After investigating the route to Lake Simcoe and then to Georgian Bay that year, Governor Simcoe ordered the survey of Vaughan and Markham Townships to form Yonge Street north from York<sup>xxi</sup>. When Berczy failed to have the road built, construction fell to the government who completed it to Lake Simcoe by February 1796<sup>xxii</sup>. In 1799, it was decided that a contract should be let to a private contractor, Asa Danforth, for the clearing of a highway between York and Kingston<sup>xxiii</sup>. This Danforth Road

was not suitable for year-round commercial traffic until the mid-1820's and after route alterations became part of Kingston Road.

One of the few schemes that created significant settlement was by Thomas Talbot at Dunwich and Aldborough Townships in 1803. He arranged for the Talbot Road East in 1809 to connect the settlement easterly towards the Niagara Peninsula, with the road to be constructed by the settlers that fronted on it. By the 1820's the Talbot Road extended 483 km<sup>xxiv</sup>.

Interconnecting waterways were still important for commerce and the military and roads were built to access these waterways.

1828 saw the opening of Simcoe Street north from Oshawa and "Brock Road" north from Whitby Harbour to reach Lake Scugog and the Trent - Lake Simcoe connections. Simcoe Street was not much more than a blazed trail through the woods when my ancestors Thomas and Rachael Kerr arrived from Scotland in 1833<sup>xxv</sup>;

### "Colonization" Roads

These roads were reported in Commissioner of Crown Lands Reports and were opened by the Province to facilitate the movement of settlers to areas as they were opened by survey. The first, in 1848, was from Toronto to Sydenham, followed by others in the good farming areas west of Yonge Street.



This sketch of the Muskoka Road, perhaps "the Severn Bridge", noted as High Road to Gravenhurst, Morrison Township was drawn Sept. 14, 1873 by George Harlow White (source: Toronto Reference Library, Baldwin Room).

In order to investigate land settlement in the Canadian Shield, surveyor William Hawkins was instructed in 1835 to run an exploration line from Rama Township to Lake Nipissing, followed by a line run west from the Madawaska River in 1847/48 by surveyor Robert Bell. The intersection of these two lines formed the starting point for Muskoka townships in 1857, but no access roads had yet been built.

*cont'd on page 14*

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When the logging potential and mineral possibilities were identified in the southern portion of the Canadian Shield, a number of new access roads were developed, running both north/south (eg. Addington Road, Bobcaygeon Road, etc) and east/west (eg. Monck Road, Peterson Road constructed generally in the vicinity of Bell's line)<sup>xxvi</sup>. Some followed surveyed road allowances, while others did not.

Charles Unwin was instructed in 1856 to investigate possible road locations from Lake Simcoe to Muskoka Falls and he ran two location lines, one from Orillia and a second from Atherley. Neither was adopted as David Gibson selected a route beginning at Washago Mills in 1858. A bridge was constructed over the Severn River and Charles Rankin was instructed in 1858 to survey the Severn and Muskoka Road starting at the new bridge with free grant lots of 100 acres each laid out on either side of the road<sup>xxvii</sup>.

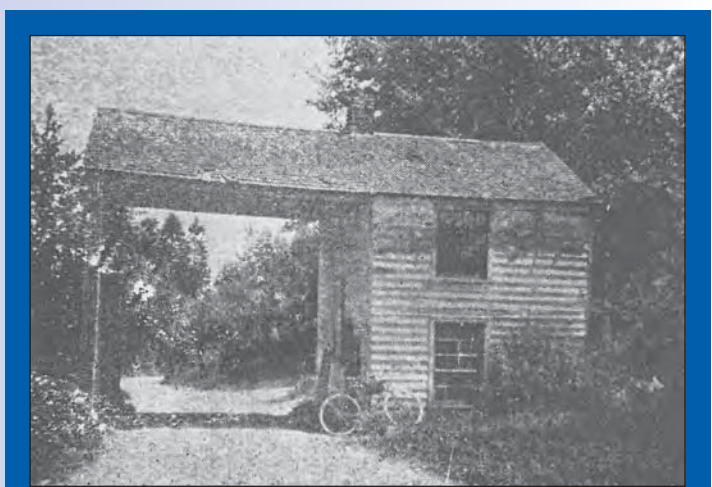
Routes of Colonization Roads were often altered after opening to overcome physical obstacles. Portions of the routes later became absorbed into the Provincial Highway system or the municipal road system or were simply abandoned.

**Private - Public Investment**

The North West Company subsidized repairs on Yonge Street in 1799<sup>xxviii</sup> and lobbied for the construction of the Penetanguishene Road from Barrie to avoid American interests at Detroit. The road was surveyed in 1812 with military construction completed in 1814 during the war with the United States.

Toll Roads, Bridges, Canals and Harbours were authorized by both specific and general statutes beginning as early as 1829<sup>xxix</sup>. Toll booths were erected on the three public roads approaching the town of York (Toronto), i.e., Dundas Street, Yonge Street and Kingston Road in order to collect money to improve them. These and other York toll roads were abolished in 1896<sup>xxx</sup>.

The Whitby – Scugog (also Centre Line) Road, running northerly from Whitby Harbour through Winchester (Brooklin) and Myrtle until Manchester (now part of



Centre Line toll booth, Photo Archives of Ontario, Page 93, History of the County of Ontario, 1615 – 1875, Leo A. Johnson, 1973

Highway 12), then east to the lake began as a Home District<sup>xxxi</sup> toll road in 1828<sup>xxxii</sup>, was transferred to Provincial jurisdiction in 1845 and then sold to local businessman and former legislative member, Peter Perry<sup>xxxiii</sup>. It remained a private toll road until 1876<sup>xxxiv</sup>.

Specific legislation permitted the private construction of a toll bridge (The Cataraqui Bridge Company – 1827) at Kingston. The legislation set out bridge dimensional and load criteria, ownership of roads and approaches, nature of tolls and payments required<sup>xxxv</sup>. Private toll roads existed at Niagara, Waterloo and other places in the Province.

In 1849 new leadership (Francis Hincks and Robert Baldwin) at the Provincial Legislation emphasised “economy” and road improvements were downloaded to local municipalities<sup>xxxvi</sup>, who were now permitted to raise taxes and enter into debt instruments. By 1853 it was clear that private toll roads were unprofitable, and owners of various road companies petitioned the County Council of the United Counties of York, Peel and Ontario to “invest” in their enterprises, a proposal that was narrowly defeated<sup>xxxvii</sup>.

**Development of Towns and Hindrance to Roads**

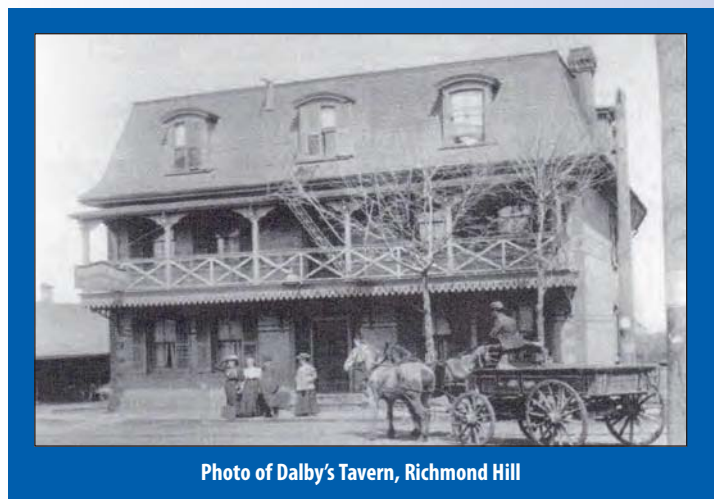


Photo of Dalby's Tavern, Richmond Hill

Since settlement traffic was funnelled along the main roads, taverns<sup>xxxviii</sup>, hotels and liveries often sprung up to accommodate travellers and their animals<sup>xxxix</sup>.

If there was an economic advantage to a location, such as a water power or major waterway landing, a village or town would grow (e.g. Orillia, Lindsay, Gravenhurst, Penetanguishene). Many of these communities grew with the “main street” being the Provincial Highway. Between the 1850’s and late 1870’s the growth of railways brought competition for the long-haul traveller, but economic growth continued for those settlements where the combination of water power and access was combined with good roads and railway connections.

With the advent of automobiles and more road traffic, the slowdown in hamlets and towns and multiple railway crossings began to exasperate long distance travellers. I recall in the 1960’s that south bound holiday traffic was at a standstill

*cont'd on page 16*



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on Highway 11 north of Gravenhurst because of the two railway crossings in the town.

Provincial strategies were developed to create new roads allowing long distance travellers to avoid these slowdowns and to by-pass the main street. Some of the road alterations were minor, to avoid bottlenecks but to stay close to Town, e.g., Bethune Drive in Gravenhurst and Cedar Lane in Bracebridge. Later, roads were built well outside urban development (Routes # 1, 2 & 3 at Bracebridge).



survey experience on the “Toronto By-pass”, i.e., Highway 401, where he had to take his lunch because it was “way out in the country”. By the time road construction was completed some urban growth had crossed it.

As the number of cars and trucks increased, the demand for faster transit times and safety was met with re-aligned four-laned, controlled-access highways. Even severances along secondary provincial highways were discouraged by limiting the location and number of entrance permits. The current Section 35 of the *Municipal Act* now permits a municipality to deny the common law right of access to the highway by an abutting landowner.

### Road Flips

Sections 320 through 325 of the *Municipal Institutions Act* of 1858 dealt with ownership and jurisdiction of roads (Provincial, County, Municipal) but to resolve confusing wording, amendments in 1913 brought about the Great Road Flip<sup>xi</sup> with both jurisdiction AND ownership of local roads falling to the municipality.

Provincial Roads do not fall under the *Municipal Act*<sup>xii</sup> but can be transferred to the relevant municipality. In the 1990’s several secondary highways were transferred to upper tier municipalities (e.g., Part of Highway 12/169 to Simcoe County and Part of Highway 169 to District of Muskoka).

From time to time a municipality might require substantial resources to improve a road. Rather than a direct grant, the Ministry of Transportation has occasionally assumed a local road, made the improvements, and then transferred it back to municipal jurisdiction.

From time to time a municipality might require substantial resources to improve a road. Rather than a direct grant, the Ministry of Transportation has occasionally assumed a local road, made the improvements, and then transferred it back to municipal jurisdiction.

### Policy Moves

From the inception of the Province, the government preferred that local settlers build the roads, but when military requirements arose the Government had to take action. Even trying private funding for roads using tolls was



A new subdivision has jumped across Hwy. 401 at Harwood Ave., Ajax, into farmland.

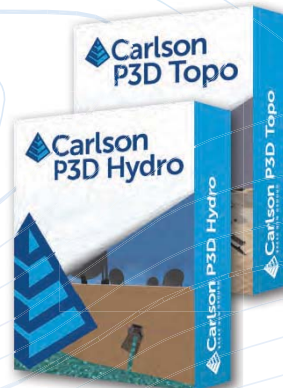
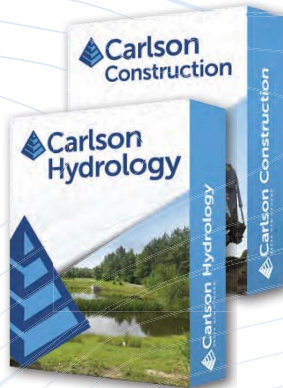
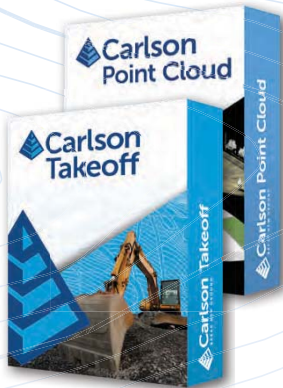
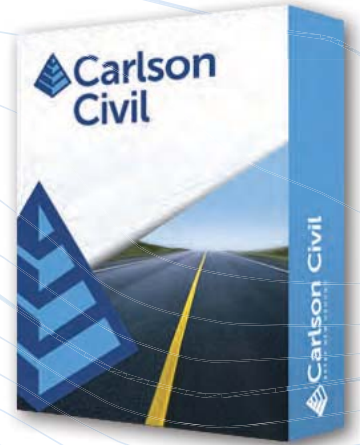
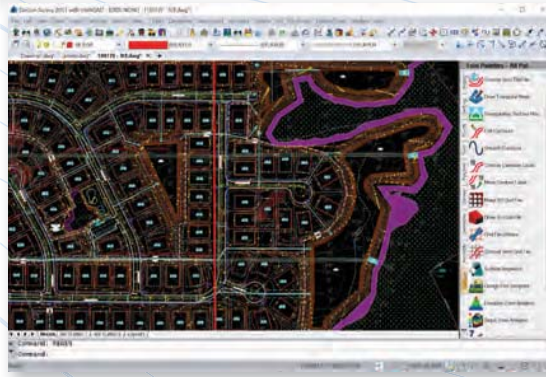


GREETINGS FROM GOLDEN MILE MOTEL, UTTERSON, MUSKOKA PHOTO BY LYNN HEAD

In many instances the by-pass reduced the economic advantage to many communities, while allowing new development of travel related commercial activities along these new highways. As automobiles evolved to be more comfortable and fuel efficient, travellers needed fewer stops and many rural motels and gasoline stations fell onto hard times, many going out of business.

cont'd on page 18

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seldom satisfactory. Provincial roads were developed, first to spur settlement with settlers along them often required to construct and/or maintain the roads, then to improve long-haul transportation by avoiding urban areas.

The policies of the Province to support overall economic activities are often at odds with local population objectives of local development. Controlled-Access Highways and recent enactments under the *Municipal Act* allow for strict control over the common law right of access to public highways.



i Page 59 – They Left Their Mark, John Ladell, Dundurn Press, 1993  
 ii ibid  
 iii Page 24, Russell on Roads, 3<sup>RD</sup> Edition, Carswell, 2015  
 iv Pathmasters were assigned in 1793; page 268, Russell on Roads, 3<sup>RD</sup> Edition, Carswell, 2015  
 v 1793 Statute 33, Geo III, ch. 4; page 1, Highways in Ontario, Ministry of Consumer and Commercial Relations, 1978  
 vi page 268, Russell on Roads, 3<sup>RD</sup> Edition, Carswell, 2015  
 vii ibid  
 viii Page 43, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 ix Page 79, They Left Their Mark, John Ladell, Dundurn Press, 1993  
 x Page 38, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xi Pages 11 – 16, Markham 1793 – 1900, The Markham District Historical Society, 2<sup>ND</sup> Edition, 1989  
 xii Page 39, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xiii Page 41, ibid  
 xiv Page 102 They Left Their Mark, John Ladell, Dundurn Press, 1993  
 xv ibid  
 xvi Canada Land Petitions, “J” Bundle 8, 1806 – 1808, R.G. 1, L3, Vol 255, Library & Archives Canada  
 xvii Lot 22, Concession 2, Uxbridge, LRO abstract

xviii page 99, They Left Their Mark, John Ladell, Dundurn Press, 1993  
 xix Page 83, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xx page 99, They Left Their Mark, John Ladell, Dundurn Press, 1993  
 xxi Page 100, ibid  
 xxii ibid  
 xxiii Page 83, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xxiv Page 112, They Left Their Mark, John Ladell, Dundurn Press, 1993  
 xxv Family history as part of 90<sup>th</sup> Birthday celebration for Elizabeth Kerr Garfett in Whitby Newspaper, Jan 1930  
 xxvi See map page 148, They Left Their Mark, John Ladell, Dundurn Press, 1993  
 xxvii Pages 189 – 192, Muskoka and Haliburton, 1615 – 1875, Florence B, Murray, The Champlain Society, 1963  
 xxviii Page 108, They Left Their Mark, John Ladell, Dundurn Press, 1993  
 xxix Page 6, Highways in Ontario, Ministry of Consumer and Commercial Relations, 1978  
 xxx Remembering the Abolition of the Toll Gates of York County: December 31: Snapshots in History - Local History & Genealogy; Toronto Public Library, typepad.com, accessed Nov 9, 2020  
 xxxi Pages 144-146, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xxxii Page 85, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xxxiii ibid  
 xxxiv Page 43, Cultural Heritage Resource Survey, Brooklin Secondary Plan Area, Town of Whitby, Ontario: Wayne Morgan, December 2014  
 xxxv Pages 7 – 9, Highways in Ontario, Ministry of Consumer and Commercial Relations, 1978  
 xxxvi Page 146, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xxxvii Pages 147 - 148, History of the County of Ontario, 1615 – 1875, Leo A Johnson, 1973  
 xxxviii For example see records of tavern owners Ely Plater and Abner Miles  
 xxxix Whiskey and Wickedness, Yonge Street, 100 Taverns in 100 miles, Larry D. Cotton, Orillia, 2014  
 xl page 74, Russell on Roads, 3<sup>RD</sup> Edition, Carswell, 2015  
 xli S. 258(2). Municipal Act, RSO 1990

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# 129<sup>th</sup> Annual General Meeting



Rhonda Scharf, author of *Alexa is Stealing your Job - The Impact of Artificial Intelligence on your Future* was the Keynote Speaker. Her book is featured on page 35.

The 129<sup>th</sup> Annual General Meeting was called to order as the Sergeant-at-Arms Alec Mantha laid down the Standard Measure, which historically was used to control the accuracy of surveys in Upper Canada.



The Past President's gavel was presented virtually to Andrew Mantha.



The AOLS medallion was presented virtually to Belinda Lawrence.



Brian Ballantyne was presented with an Honorary Membership in recognition of his many years of genuine interest and concern for the betterment of the Association of Ontario Land Surveyors and its members.

## Letter of Appreciation

Dear President Gavin, Past-President Andrew & Council Association of Ontario Land Surveyors

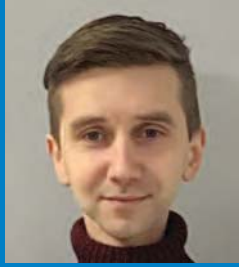
After being declared an Honorary Member of the AOLS on February 26, 2021, I briefly responded online. Let me elaborate here, after subsequently receiving a handsome framed Certificate and an elegant lapel pin: Thank-you very much. I am privileged to receive this honour, and to join a select group of Honorary Members. It has been a pleasure to assist the AOLS, Ontario Land Surveyors and articling students (and others) over the years, and I remain keen to assist further, as needed.

I do have a fundamental question, however, given that my Certificate promises that I am "entitled to all rights and privileges that this membership implies." Does this extend to a uniform? Epaulettes have been discussed, but this need not be a sticking point. Can we compromise on a cummerbund? I acknowledge that this is merely a housekeeping matter – I do not wish to be churlish.

Let me conclude with another heartfelt thanks; I am truly honoured (not least because Honorary Membership means that I can finally avoid the peskiness of articling).

Cheers,  
Brian Ballantyne, O.L.S. (Hon)

## Members Commissioned in the Last Year



Row 1 • Alborz Soltankhah-Bidkhti, Emad Alrefaai, Francis Babu, Stefan Bazar

Row 2 • Jackie Hang, Ali Hosseini, James Agyemang, Marcin Bielen, Brett Hood, Gavin Tyler

Row 3 • Shawn Hubert, Christopher Kahue, Wayne Tremblay, Trisha Snow, Jake Surgenor, Emmett Ketchum

Row 4 • Satesh Lakhan, Aloka Kumaranayake, David Krawczuk, Guannan Liu, Mayank Tandon, Jing Yao

Row 5 • Adam Paine, Andrejs Luciks, Robert McLaren, Merrill McLean, David Morgan, Stephen Olender

Row 6 • Thomas Stirling, Jon Vollebekk, Cole Raikes, Gerard Smith, Phillip Robbins, Gregory Rodger

## Summary of Mediation and Mediation Agreement

Between the Association of Ontario Land Surveyors and George Bracken, O.L.S.

In a decision dated August 20, 2020, the Complaints Committee of the Association of Ontario Land Surveyors, pursuant to Section 22.(4.3)(a) of the *Surveyors Act*, referred George Bracken, O.L.S. to Council.

The Council of the Association of Ontario Land Surveyors, under the authority of the *Surveyors Act*, R.S.O. 1990, Chapter S.29 Section 25.1 decided that the matter should be referred to mediation and passed a motion dated October 10, 2020 to appoint Kent Campbell, O.L.S. as the mediator.

The main issue, as described in the Final Decision of the Complaints Committee, was that Mr. Bracken's lack of communication regarding schedules and increasing costs and failure to provide a written estimate, may have caused the Complainant undue stress and financial burden.

Due to the COVID-19 pandemic, mediation meetings were held virtually rather than in the offices of the Association of Ontario Land Surveyors. The Mediator met separately with George Bracken, O.L.S., the Deputy Registrar, Maureen V. Mountjoy, O.L.S. representing the Association of Ontario Land Surveyors (AOLS), Peter Meerveld, the Lieutenant Governor Appointee to the AOLS Council, and the Complainant.

All parties in the mediation agreed that this issue could be settled if Mr. Bracken's outstanding invoice with the Complainant was rescinded. The mediation agreement further provides that Mr. Bracken will be assigned a monitor, appointed by the AOLS Registrar, for a period of one year. The Monitor will focus on the member's client communications and timeliness in completing his work for the public. At the end of the monitoring period, the Registrar will report the monitor's findings to Council. Mr. Bracken is to be responsible for all the monitor's fees and costs as well as the costs of the mediation and the mediator. Should Council conclude that there has been any failure on Mr. Bracken's part to comply with any of the terms of this Agreement, Council will in writing direct the Registrar to notify him that this matter will be referred back to Council.

The Agreement also requires that a summary of the mediation and agreement will be published in the AOLS Quarterly and on the AOLS website.

The agreement was signed by all parties.

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LAND SURVEYORS WERE SWORN IN:**

James Agyemang	2068	January 19, 2021	Merrill McLean	2085	January 20, 2021
Emad Alrefaai	2069	January 19, 2021	David Morgan	2086	January 20, 2021
Francis Babu	2070	January 19, 2021	Stephen Olender	2087	January 20, 2021
Stefan Bazar	2071	January 19, 2021	Adam Paine	2088	January 20, 2021
Marcin Bielen	2072	January 19, 2021	Cole Raikes	2089	January 20, 2021
Jackie Hang	2073	January 19, 2021	Gerard Smith	2090	January 21, 2021
Brett Hood	2074	January 19, 2021	Phillip Robbins	2091	January 20, 2021
Ali Hosseini	2075	January 19, 2021	Gregory Rodger	2092	January 21, 2021
Shawn Hubert	2076	January 19, 2021	Trisha Snow	2093	January 21, 2021
Christopher Kahue	2077	January 19, 2021	Alborz Soltankhah-Bidkhti	2094	January 21, 2021
Emmett Ketchum	2078	January 19, 2021	Thomas Stirling	2095	January 21, 2021
Satesh Lakhan	2079	January 20, 2021	Jake Surgenor	2096	January 21, 2021
Aloka Kumaranayake	2080	January 20, 2021	Mayank Tandon	2097	January 21, 2021
David Krawczuk	2081	January 20, 2021	Wayne Tremblay	2098	January 21, 2021
Guannan Liu	2082	January 20, 2021	Gavin Tyler	2099	January 21, 2021
Andrejs Luciks	2083	January 20, 2021	Jon Vollebekk	2100	January 21, 2021
Robert McLaren	2084	January 20, 2021	Jing Yao	2101	January 21, 2021

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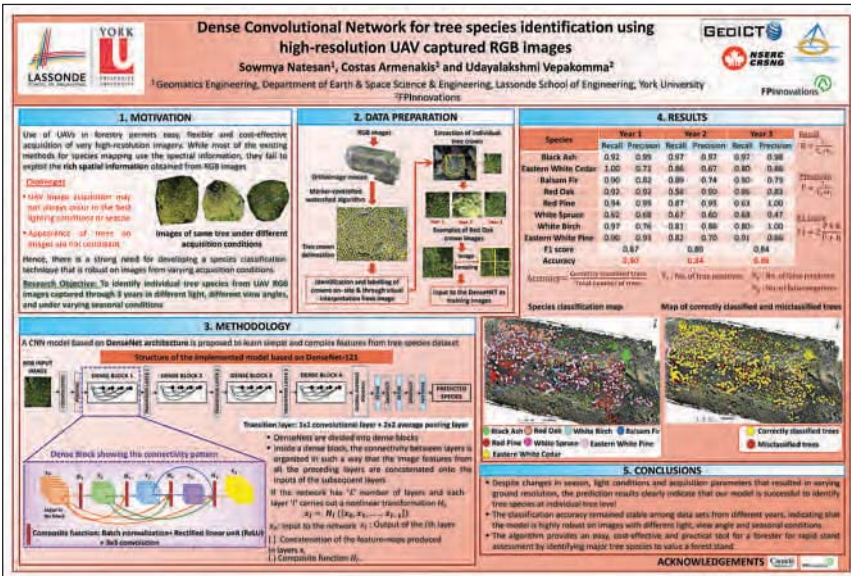
905-729-2673

# FIFTEENTH Annual AOLS Graduate Student Geomatics Poster Session Award Winners

**FIRST PLACE:** Sowmya Natesan, Ph.D. Student, Geomatics Engineering, Department of Earth and Space Science and Engineering, Lassonde School of Engineering, York University, supervised by Dr. Costas Armenakis and Udayalakshmi Vepakomma, FPInnovations.

## Dense Convolutional Network for Tree Species Identification using High-resolution UAV Captured RGB Images

**ABSTRACT** — In recent years, off-the-shelf small unmanned aerial vehicles (UAVs) have become part of the forester's toolkit for surveillance. UAVs have rapidly been incorporated into several low-altitude remote sensing applications, including forestry, because of their compact range of sensors that can provide ultra-high-resolution imagery, their suitability for photogrammetric workflows and computer vision techniques. Tree species identification at the individual tree level is crucial for forest operations and management, but complex to



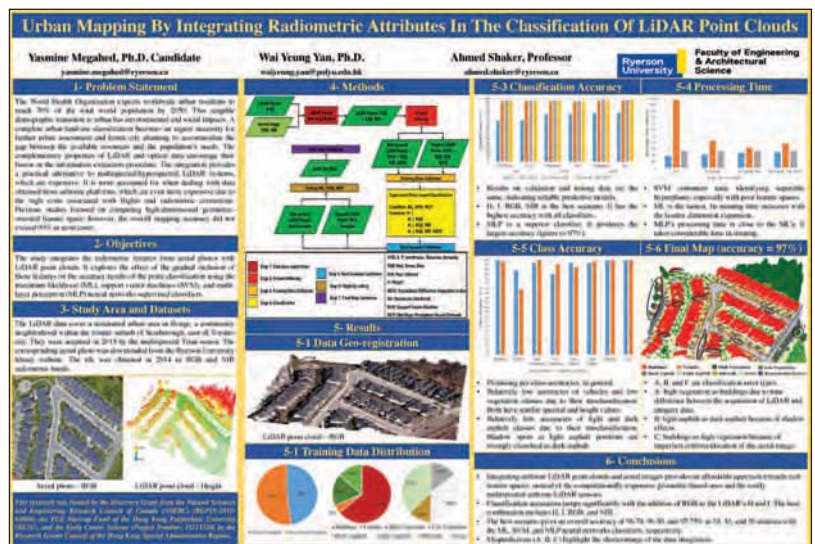
derive. To address this need, we have developed an approach based on a deep Convolutional Neural Network (CNN) to classify forest tree species at the individual tree-level that uses high-resolution RGB images acquired from a consumer-grade camera mounted on a UAV platform. This work explores the ability of the Dense Convolutional Network (DenseNet) to classify commonly available tree species in eastern Canada. DenseNets are divided into dense blocks where the dimensions of the feature maps are the same within a block, but the number of filters varies between them. The connectivity patterns between layers are organized in such a way that the feature maps from all the preceding layers are concatenated onto the inputs of the subsequent layers. The network was trained using images captured under varying acquisition parameters to include seasonal, temporal, illumination, and angular variability. Validation of this model using images of tree crowns over a mixed-wood forest in Ontario, Canada, showed up to 80% classification accuracy in distinguishing nine tree species comprising both hardwood and softwood trees. The model remains highly robust even when predicting the images taken during different seasons and times, and with varying illumination and angles. Email: Sowmy@yorku.ca

## SECOND PLACE:

**Yasmine Megahed, Ph.D. Student, Department of Civil Engineering, Ryerson University, supervised by Professor Ahmed Shaker and Wai Yeung Yan, Ph.D., The Hong Kong Polytechnic University.**

## Urban Mapping by Integrating Radiometric Attributes in the Classification of LiDAR Point Clouds

**ABSTRACT** — The World Health Organization anticipates worldwide urban residents to reach 70% of the total world population by 2050. That requires decision-makers to rely on accurate urban mapping to assess current plans and develop new ones

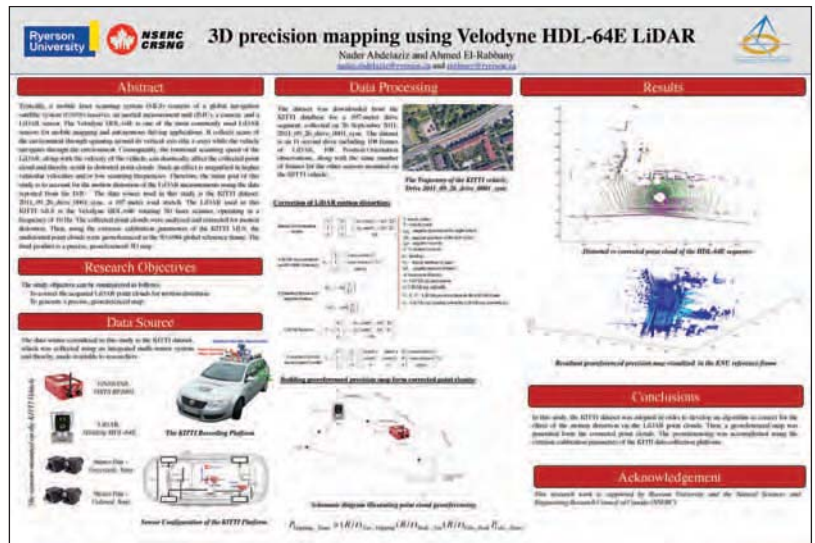


correctly. This study investigates the influence of including conventional spectral signatures acquired by different sensors on the classification of airborne LiDAR point clouds using multiple feature spaces. The proposed method applied three machine learning algorithms: maximum likelihood, support vector machines, and multilayer perceptron neural networks, to classify LiDAR point clouds of a residential urban area after being geo-registered to aerial photos. The overall classification accuracy passed 97%, with the height as the only geometric feature in the classifying space. Misclassifications occurred among different classes due to the independent acquisition of aerial and LiDAR data, as well as shadow and orthorectification problems of aerial images. Nevertheless, the outcomes are promising, as they surpass those achieved with large geometric feature spaces. However, they are encouraging since the approach is computationally reasonable and integrates radiometric properties from affordable sensors. Email: yasmine.megahed@ryerson.ca

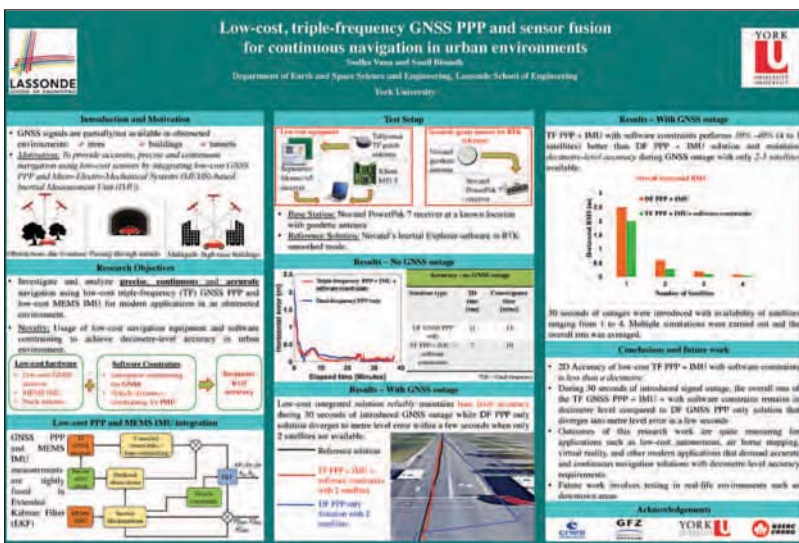
**THIRD PLACE (TIE): Nader Abdelaziz, Ph.D. Student, Department of Civil Engineering, Ryerson University, supervised by Dr. Ahmed El-Rabbany.**

### 3D Precision Mapping using Velodyne HDL-64E LiDAR

**ABSTRACT** — Typically, a mobile laser scanning system (MLS) consists of a global navigation satellite system (GNSS) receiver, an inertial measurement unit (IMU), a camera, and a LiDAR sensor. The Velodyne HDL-64E is one of the most commonly used LiDAR sensors for mobile mapping and autonomous driving applications. It collects scans of the environment through spinning around its vertical axis (the z-axis) while the vehicle navigates through the environment. Consequently, the rotational scanning speed of the LiDAR, along with the velocity of the vehicle, can drastically affect the collected point cloud and thereby result in distorted point clouds. Such an effect is magnified in higher vehicular velocities and/or low scanning frequencies. Therefore, the main goal of this study is to account for the motion distortion of the LiDAR measurements using the data reported from the IMU. The data source used in this study is the KITTI dataset, 2011\_09\_26\_drive\_0001\_sync, a 107-meter road stretch. The LiDAR used in this KITTI MLS is the Velodyne HDL-64E rotating 3D laser scanner, operating at a frequency of 10 Hz. The collected point clouds were analyzed and corrected for motion distortion. Then, using the extrinsic calibration parameters of the KITTI MLS, the undistorted point clouds were georeferenced in the WGS84 global reference frame. The final product is a precise, georeferenced 3D map. Email: nader.abdelaziz@ryerson.ca



**THIRD PLACE (TIE):**



**Sudha Vana, Ph.D. Student, Department of Earth and Space Science and Engineering, Lassonde School of Engineering, York University, supervised by Dr. Sunil Bisnath.**

### Low-cost, Triple-frequency GNSS PPP and Sensor Fusion for Continuous Navigation in Urban Environments

**ABSTRACT** — The Global Navigation Satellite System (GNSS) Precise Point positioning (PPP) technique benefits from not needing local ground infrastructure such as reference stations and accuracy attained is other modern applications that demand accurate and continuous navigation solutions with decimetre-level accuracy requirements. Future work involves testing in real-life environments such as downtown areas.

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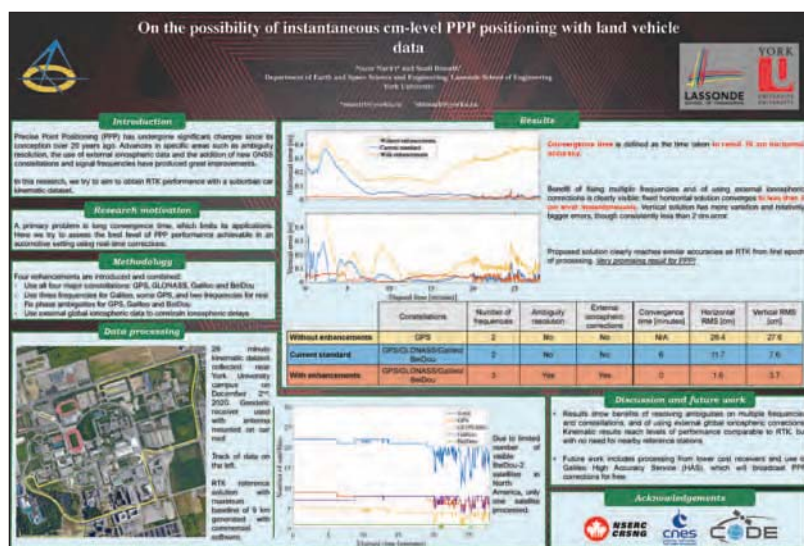
due to its long position solution initialization period and complete dependence on the receiver measurements, PPP finds limited utility in urban and obstructed areas. The emergence of low-cost, high-performance micro electromechanical sensor (MEMS) inertial measurement units (IMUs) and vehicular sensors such as odometers have prompted research in integrated navigation solutions with GNSS PPP augmentation. This sensor fusion aids in achieving continuous positioning and navigation solution availability when there are insufficient numbers of tracked navigation satellites. In the past, research has been conducted to integrate geodetic GNSS receivers with PPP processing and MEMS IMUs, or low-cost, single-frequency GNSS receivers with point positioning processing and MEMS IMUs.

The objective of this research is to investigate and analyse position solution availability, continuity, and accuracy by integrating low-cost, triple-frequency GNSS receivers using PPP processing with the low-cost, MEMS IMUs and vehicle odometer data to offer a complete, low-cost solution that will enable continuously available positioning and navigation solutions, even in urban and obstructed environments. Using the latest in low-cost, triple-frequency GNSS receiver technology and applying external ionosphere refraction models, solution accuracy greatly improves. The integrated solution offers decimetre-level accuracy in an urban environment where there is a frequent change in the number of satellites for 10s of seconds. A low-cost, triple-frequency GNSS receiver-PPP solution integrated with a MEMS IMU and odometer forms a unique combination of a total low-cost solution, that will open a significant new market window for modern-day applications such as autonomous vehicles and robotics. Email: [sudhav@yorku.ca](mailto:sudhav@yorku.ca)

**FOURTH PLACE:** **Nacer Naciri**, Ph.D. Student, Department of Earth and Space Science and Engineering, Lassonde School of Engineering, York University, supervised by Dr. Sunil Bisnath.

### On the Possibility of Instantaneous cm-level PPP Positioning with Land Vehicle Data

**ABSTRACT** — Precise Point Positioning (PPP) has been subject to much research since its conception approximately 20 years ago. The relatively recent addition and modernization of GNSS constellations have led to noticeable improvements in positioning results. Such improvements have been demonstrated by previous and on-going work on worldwide networks of static GNSS receivers. This poster assesses the current performance that can be achieved in more realistic urban environments for positioning and navigation users. A kinematic dataset is collected with a geodetic GNSS receiver by driving a car in the proximity of the York University main campus in Toronto and collecting multi-frequency, multi-constellation GNSS measurements.



The processing of these measurements on up to three frequencies, with the help of ambiguity resolution and the use of external global ionospheric maps leads to a positioning solution that converges below 1 dm horizontal error instantaneously. The achieved horizontal and vertical root mean square errors over 28 minutes are 1.5 cm and 3.8 cm, respectively. Such results indicate that PPP may soon attain Real-Time Kinematic (RTK) performance without the need for local or regional reference stations, and that continued effort should be applied in keeping such levels of performance consistent between datasets. Considering these results and thanks to it not requiring local infrastructure, PPP could be used in combination with RTK in e.g., remote areas, or it could potentially even replace RTK for applications such as surveying and precise engineering. Email: [nnaciri@yorku.ca](mailto:nnaciri@yorku.ca)

**FIFTH PLACE:** **Agata Szeremeta**, M.Sc. Student, Geomatics Engineering, Department of Earth and Space Science and Engineering, Lassonde School of Engineering, York University, supervised by Dr. Costas Armenakis.

### Simulation Based Autonomous RPAS Navigation using Reinforcement Learning

**ABSTRACT** — Remotely Piloted Aircraft Systems (RPAS, also known as UAVs) have become a popular platform to use in recreation, industry and research fields. With their versatility, high-speed, low cost, multiple sensor payloads, and ability

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## Simulation Based Autonomous RPAS Navigation Using Reinforcement Learning

Agata Szewczka (aszewcz@my.yorku.ca) | Costas Armenakis (carmenac@yorku.ca)  
Geomatics Engineering, Department of Earth & Space Science and Engineering, Lassonde School of Engineering, York University

to access regions often inaccessible by humans, they are increasingly being used in applications such as wildfire monitoring, search and rescue, and photogrammetric mapping.

One of the important aspects in photogrammetric mapping is for an RPAS to follow a specific trajectory path ensuring complete coverage of the interest area. The success in using RPAS for aerial surveys depends on the need for their pilot operator to have a strong and complete knowledge of the flight environment, and good experience with operating and the mechanics of RPAS. These requirements are emphasized when automatic flight using waypoint/flight path routing and the stability features of RPAS are unavailable due to Global Navigation Satellite System (GNSS) failures or GNSS

denied environments. In the case of pilot inexperience or sensor system failures, errors can be introduced during both the operation flight and in the final mapping product, and in some cases even deem the RPAS unsafe and unusable.

This research proposes a method of reducing or eliminating these difficulties through the integration of vision-based methods and artificial intelligence to support automation and autonomy in operations. More specifically, Reinforcement Learning (RL) is used to work towards developing an artificially intelligent, autonomous aerial mobile mapping system. Reinforcement learning (RL) is a computational approach in which an agent, such as a RPAS platform, learns the best actions to take in an environment through its own interactions with it. Our current research on the implementation of RL to enable a RPAS to identify and follow an optimal path in a simulated environment will be presented. Email: [agatasz@my.yorku.ca](mailto:agatasz@my.yorku.ca)

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# Survey Review Department Forum – Plan Checking Part 2 - The Plan



By Tom Packowski, O.L.S., Survey Review Department Manager

In the most recent issue of the *Ontario Professional Surveyor*; (Winter 2021 Vol. 64, No. 1) we looked at checking a reference plan from the perspective of the Schedule and the plan itself. The Schedule shows the correlation between the Parts on the plan and the existing parcels comprising the lands under survey (with their corresponding attributes), all in accordance with the title records and searches done for the project. The Schedule relates the Part number(s), to the applicable geographics (lot & plan or lot & concession), and to the Property Identifiers (PINs). It also refers to any easement interests affecting the title to the lands. For the specific regulations concerning the Schedule, you are directed to O. Reg 43/96 Sections 20 and 80.

Needless to say, the Schedule is critical to the proper filing of the plan within the Land Registry system. It is the signing Surveyor's responsibility to ensure that all information in the Schedule is complete and accurately depicted.

To re-cap, the following is a partial list of potential errors that can creep into the schedule.

1. Plan and schedule do not match.
2. Attributes in the schedule do not match the attributes on the plan.
3. 'Part' or 'All' of the PIN is incorrectly stated.
4. Incorrect STE (subject to) in the schedule, particularly with multiple or cross easements.
5. Typographic errors, such as wrong PIN or wrong Block number in the schedule.
6. The Part number on the plan does not match the part in the schedule.
7. Part on the plan missing from the schedule.
8. Incorrect geographics in the schedule.

In this essay, we recognize that the Schedule shows the administrative information about the parcel(s) under survey, but it is the face of the plan that shows the Surveyor's opinion as to the extent of title and information observed regarding the boundary. It is worth repeating that the best way to avoid errors on a plan is to use a thorough and well documented checking procedure. Checking a plan requires preparation, time, and concentration. When checking a plan, it is recommended that you assemble all of the materials that were considered to support the professional opinion illustrated on the plan. Set aside sufficient time and advise your staff that you should not be interrupted. Close the door to your office, turn off your cell

phone and carefully check everything shown on the plan in a methodical and documented process. The key to properly checking a plan is attention to the details.

There are numerous sources of support material for checking plans. The first document that comes to mind is the information available from the AOLS website under the *Survey Review Department* tab under Comprehensive Review Reference Guide. The Guide may be found on the AOLS website at:> Member login> Splash Page> Member Tools> Survey Review Department. The Guide is the second document in the lists on the left. The Guide is helpful because it lists all the topics that the Consultants consider during the course of a Comprehensive Review and provides source references to the Regulations covering all the topics under review.

The second document to consider is a set of recommended checklist items found on the AOLS website at:> Member login> Splash Page> Member Tools> Practice Manual> Survey Practice> Best Practices. Select the Best Practices page, choose the link labelled Professional Standards Checklist. There you will find an excel spread sheet with a Master list. At the bottom of the Master list, you will find tabs marked 'Boundary confirmation', 'Construction layout', 'SRPR', 'RefPlan', 'MPlan' and 'Condo'. These consist of items extracted from the master list. Select the tab that is appropriate for the type of plan you are checking. These checklists are not intended to be exhaustive or cover every possible scenario, but they may be used as a starting point when you prepare your personal checklists that will be appropriately tailored to your own areas of practice.

Using your custom checklist, examine your plan in an orderly manner. It cannot be repeated often enough that many of the errors found by SRD result from not paying sufficient attention to details when checking the plan. The SRD often finds errors arising from the use of the "Copy and Paste" function in the graphics software, particularly when an enlargement is used to provide clarity. Again, these errors can be avoided by carefully checking each piece of text in the enlargement.

Some surveyors recommend that you should start by checking that the underlying lot fabric, underlying reference plans (if any), PIN limits, and easement interests are plotted to scale and labelled accurately according to the

search information. Next, you should check that found monuments and other boundary evidence are plotted and identified accurately, according to your field notes and the records of prior surveys which you collected during the research phase. Then, ensure that the plan reflects your decisions with respect to evidence evaluation and best evidence principles. The plan must show your method for retracement of existing boundary lines and corners. When retracement requires that a distance or angle be set, the authority for the set value is to be identified by instrument number, by plan number if deposited or registered, or by the surveyor's name and date of the survey if the value is taken from a prior plan. The authority may be identified by defining the corresponding document (D1 or P1 or P2) in the Legend. The plan must also show your method for establishing any new lines and Parts. Most of the text on the plan will be related to these features (bearings, distances, measured, set, comparisons, ties, calls on monuments, etc) and every piece of text has to be checked against the field notes and calculation sheets.

The *Surveys Act* requires that “a surveyor in re-establishing a lost corner, an obliterated boundary or an obliterated sideline of a lot ... shall obtain the best evidence available respecting the corner, boundary or sideline”. Implicit in this requirement is the assumption that the Surveyor has considered all available documentary and physical evidence during the course of the field retracement. Your plan checklist should include appropriately described checkboxes to indicate that you have met this requirement.

The checklist should include items related to the plan's Title. This is particularly important in instances where the parcels surveyed are many and complex. Also confirm that the Title, all text on the plan associated with geographics and all text in the Schedule are in exact agreement with each other. Be sure the geographics are consistent with the thumbnail descriptions in the PINs.

Check your integration details, including the coordinates listed in the table. Be sure that the integration points themselves are correctly identified on the face of the plan and agree with the field notes. Be sure that closure printouts include integration points as part of

closed loops. In addition to plan and traverse closures, we recommend you include closure printouts based on the field observations themselves prior to any adjustments permitted by regulation.

Ensure that the monuments on the plan are consistent with all monuments shown on the field notes, whether found, set, replaced or newly set.

After all the items above have been satisfied, use your checklist to ensure that you have not missed any of the many other required details, such as origin of roads, instrument numbers for easements and other interests, comparisons, definitions in the Legend, all text in the certificates and forms, scale bar, north arrow, lot corner tie, metric note, combined scale factor, etc, etc.

If you do not do so already, encourage your field crew to take pictures of the site and their work. Use Google Maps as a handy way of checking for fencing, overhead wires or any other evidence of occupation that may indicate an interest by others.

Be sure your plan not only complies with all applicable Acts and Regulations but also complies with the contractual agreement between you and your client.

Where there are easements and/or rights of way, be sure they are correctly illustrated as to their extent in a manner that is consistent with all the physical and documentary evidence in your file. The regulations require that where you have a portion of the land that is subject to an easement, that portion must be illustrated by its own distinct and separate Part. If there are two easements within a portion of the surveyed land, then the lands occupied by each easement must have a separate Part. If at some point the two easements cross, then the portion subject to both easements must have a separate Part.

It bears repeating that you need to set aside time to check a plan, free from the on-going distractions of running your office. It is usually your last opportunity to avoid a potentially embarrassing and costly error. Once you have checked the plan and it has been drafted, be sure that all the changes on your check print have been made to the final copy of the plan. Check the plan you are going to sign, then sign the plan you checked.



# Livin' La Vida Leica "Again"

By Bruce Baker, O.L.S., Ret.

“Everything old is new again” or “One man's junk...”

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# Registrar's Review

By Kevin Wahba, B.Eng., LL.B., O.L.S., Barrister & Solicitor



In my Registrar's Review from the Fall 2019 issue, I wrote about the frequent calls I receive from adjoining neighbours of our members' clients expressing their frustrations when a member or a member of a survey crew exercises their right to enter lands under Section 6 of the *Surveys Act*. This has been a long-standing issue that continues to occur regularly, which prompts me to discuss the application of this authority by the membership further.

Section 6 of the *Surveys Act* states as follows:

## Right to enter land, buildings

6 (1) *A surveyor or a person in the surveyor's employ while making a survey may,*

(a) *at any time enter and pass over the land of any person; or*

(b) *at any time suitable to the occupant of a building enter the building,*

*and do any act thereon or therein for any purpose of the survey, but the surveyor is liable for any damage occasioned thereby.*

## Offence for obstructing

(2) *Every person who interferes with or obstructs a surveyor or a person in the surveyor's employ in the exercise of any of the powers conferred by subsection (1) is guilty of an offence and on conviction is liable to a fine of not more than \$100.*  
*R.S.O. 1990, c. S.30, s. 6.*

In 2005, the AOLS issued a Bulletin to the membership providing guidance on the interpretation and application of Section 6. It highlighted the following elements:

1. *Section 6 should only be applied by a Licenced member in the act of performing a cadastral survey;*
2. *Section 6 does not allow right of anonymity and a Licenced member or their agent must accurately identify themselves when applying this provision;*
3. *Licenced members and their agents must conduct themselves in a professional manner when applying section 6;*
4. *Section 6 must be applied with consideration to the land-owner's right to privacy and safety of their property.*

The Bulletin goes on to discuss that the right of entry

provision should be applied with caution and should take into consideration contrasting rights under the Canadian Charter of Rights and Freedoms. In order to minimize the risk of triggering a concern from a property owner a member or their survey crew should consider implementing the considerations found in Bulletin 2005-01 by taking all reasonable steps to notify the property owner of their activities, including contacting neighbouring land owners before attending the property if it is known that access to that property is required, notifying the land owner upon their arrival. If neither option is possible, ensure that a business card or AOLS door hanger is left at the door of the property owner. In addition, clear and appropriate signage should be visible on the vehicle of the company's employees attending the property.

Surveyors and their agents should ensure that the property is left in the same condition it was prior to their attendance and confirm that permission from the property owner is properly provided to allow for temporary markers to be left on the property until the work is completed.

In the event that a property owner approaches a surveyor or their representatives on site, they should speak courteously and professionally with the owner and attempt to accurately explain the reason for their presence. There are instances when the property owner has been properly notified, and treated professionally, but still refuses to grant access to their property. In such an event, you may wish to direct the owner to the AOLS Registrar to attempt to further explain why the surveyor or their staff require access and information on their property. In the event that this is not possible or does not resolve the issue, the surveyor may be required to leave the property and return with law enforcement authorities to access the property. This is certainly an extreme approach and should only be done in the most extreme of circumstances.

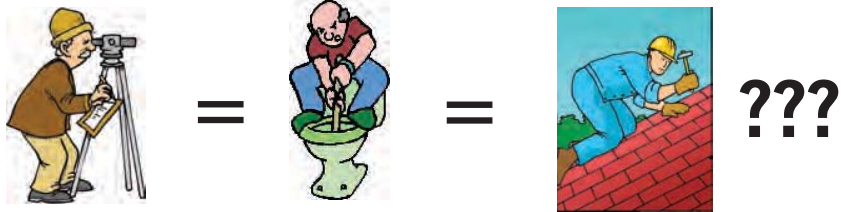
Surveyors must ensure that they, or their employees, are fully knowledgeable of the conditions attached to the right of entry provided under Section 6 and they follow the appropriate practices before they enter onto an adjacent owner's property.



## AOLS Bulletins

The AOLS issues bulletins to its members to provide clarification from Council on a variety of issues affecting their survey practices. They can be found on the AOLS website at:  
<https://www.aols.org/resources/policies-and-statements/bulletins-and-by-laws>





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# Barry's Bay – Settlement to Village to Town

By David Coombs

*This is David Coombs' 9<sup>th</sup> article for the Ontario Professional Surveyor.*

There are many themes that run through this transition including the development of the lumber industry, the influence of the Catholic Church and the coming of the railroad and the highways.

And then there is garbage.

Whether as a settlement of several hundred hardy souls prior to the First World War, as an incorporated village in 1933 comprised of 1100 folks in the village and along the concessions of three townships or today's town encompassing 4000 citizens; the inhabitants of the Madawaska Valley have dealt with garbage disposal in a variety of ways. The council for Sherwood, Jones and Burns townships decreed in May 1913 that people found dumping rubbish on road allowances would be prosecuted. And they were. In July 1915 citizens were named and fined.

Post incorporation of the village of Barry's Bay, the same township council moved in December 1936 to secure a new dumping ground for the village as the existing ground on the Paugh Lake Road had been condemned by the Barry's Bay Board of Health. Perhaps the Depression slowed the decision-making process or maybe it was a jurisdictional issue between the township council and the village council, but by 1939 nothing had been done. The Board of Health decided to take charge and in November 1939 appointed two citizens to find a site suitable for a new dump.

There is no record of their endeavours but it is unlikely that a health hazard would be allowed to fester for another decade, so it is probable that the village found a short term solution. However, it was not until May 1949 that the Barry's Bay council finally bought three acres of land for \$280 on the Paugh Lake Road. The site proved its worth for decades but not without a few jurisdictional issues.

In July 1954, the council ordered the owner of a chicken farm situated outside the village limits to stop dumping dead chickens and other refuse in the village dump as it was for village residents only. Other disposal infractions occurred in the surrounding townships. The Sherwood, Jones and Burns Councillors passed a new bylaw in November 1954 prohibiting "the throwing, placing dirt, filth, glass, handbills, paper or other rubbish or refuse or the carcasses of any animals on any highway or bridge." I suppose dodging a dead skunk or porcupine along highway 60 was one thing but a cow or pig was quite another.

The village council dealt firmly with their dump in April 1955. They directed that a gate be erected at the dump, that a caretaker be engaged and that set hours and days of operation

be posted. Realizing that the folks living outside the village required a dump and hoping to ensure the highways and bridges servicing the village remained clear, the councillors allowed rural dwellers to use the dump, as long as the township council paid the Barry's Bay council enough to cover 25 percent of the cost of the gate and the caretaker's wages. Not all rural residents concerned themselves with the village dump. The land I live on today was an operating farm from 1939 to 1969. As many of you know, I enjoy walking the beckoning land, peering into the dense bush, walking along the creeks, and perching on a stump while wistfully contemplating all before me.

Last August, while perching, the sun broke through the deciduous canopy and bounced back into my eyes. The glare made me turn, but only for a second. I leapt to my feet and approached the reflecting object. My excitement mounted as I began to carefully unearth the clear glass bottle whose neck had caught the sun. A friend, who has been in the glass industry for more than forty years, had taught me to check the base of old bottles and look for markings and a mold number which would indicate the manufacturer and approximate time of production. I assumed the bottle predated 1969 if it belonged to the farmer and resolved to consult my buddy. He later confirmed it dated from the thirties or forties.

I continued to dig and quickly uncovered several cans and two more bottles. That clinched it. This had to be the farmer's dump. I decided to take up garbage collecting. I did pause to consider my dear wife Sarah, who has put up with my paper wasp nests, 14 plus one tattered item, my antler and skull collection, 33 plus one snapping turtle shell and my burls, too many to count although the 12 in the house have been cleaned, sanded and hollowed, and are distinct from those resting upon five shelves in the garage, where in fact the aforementioned collections are on display.

I wondered whether a cleaned bottle could find a place of honour as a centrepiece for our dining room table. After a moments' reflection, I abandoned the idea. I decided to bring the best specimen into the house using my coat to protect it against possible damage due to slippage or prying eyes.

The technique might have succeeded had I kept to the one bottle scenario. Four proved cumbersome and highly suggestive of a blossoming new collection. I did not get beyond the kitchen as Sarah turned from the sink and quietly inquired as to my destination. I said I was heading to the screened in porch and was prepared to mention it was not actually in the house.

"There is no room for four bottles in that room. The two bird

nests took up the last space on the shelves.” Reading my mind, she added, “I watched you wrap the bottles in your coat after you parked the truck in front of the kitchen window.” I retreated without a word and placed the bottles under the work bench in the garage and spent much of the night thinking.

The next day I returned to the ‘dump’ armed with a rake, trowel and a wheelbarrow and soon discovered that the farmer had over the course of thirty years dug a hole and built a log retaining wall several rows high around the pit’s perimeter. I found broken dishes, a teacup, white with a lovely blue design but no handle, tins that had contained meat - likely spam but the label was difficult to read, a spray can labelled ‘Insect Killer’ and many more bottles, mostly wine and whiskey.

I loaded the wheelbarrow and returned to the truck. Driving home, I prepared my defence. The garage was not the house. There was plenty of room under the work bench and the table displaying the skulls. Tabulating and preserving our past is important in that it affirms our roots and explains much of who we are. I decided to scratch that line. Sarah understood. She acquiesced. She knows me. She is a saint.

Today our town boasts two dumps. One is 18 kilometres

south of town and the other is 12 kilometres west. There is no dump on Paugh Lake Road. Both dumps accept bagged garbage plus appliances, tires, paper, metal containers, glass bottles and plastic. There is a special bin for compostable garbage.

The dumps are gated and a caretaker is at each site. Hours and days of operation are posted and there is a lengthy list of what goes into each bin. The transition from settlement to village to town has had its disposal hiccups but on the whole, the councils have for over a century acted wisely and fairly. They have kept up with the times.

I have not. I have settled nicely into the past. I continue to putter, probe and preserve. There is only one hiccup to overcome. We need to build a second garage.



Photo credit: Sarah Coombs

**David Coombs** has a Ph.D. in Canadian history. After his retirement as a stock-broker in 2004, he began to write. His articles have appeared in The Country Connection, the Toronto Star and the Globe and Mail. He is also the author of “The Beckoning Land” which is an historical novel set in his home town of Barry’s Bay during the Depression and WWII. A copy of his book is available for purchase at [www.lulu.com](http://www.lulu.com) (<https://bit.ly/2IpjDk1>)

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# EDUCATIONAL FOUNDATION NEWS

## Congratulations to our Fall 2020 Award Winners

**Ryerson University** – Awards were recently presented to the following 2nd year Civil Engineering students who achieved academic excellence in CVL 323 - Fundamentals of Surveying: **Tess King, Jay Modi, Bhumikakumari Patel** and **Dana Scott**. The following 3rd year students received awards for academic excellence in CVL 323 and CVL 352 – Geomatics Measurement Techniques: **Malik Abamecha, Nicholas Fehlings, Abdelrahman Mahfouz** and **Ajani Thompson**. All of these students have expressed an interest in pursuing a career in land surveying. **Abdullah Takolia** received the **Fernando De Luca Memorial Award**. The very first **Genesis Land Surveying Baird and Mucklestone Award** was presented to **Abdelrahman Mahfouz** for demonstration of early professionalism and showing an interest in pursuing a career in Geomatics Engineering.

**York University – Lassonde School of Engineering – Felipe Gonzalez** and **Nathan Stachow** tied for the highest grade in LE/ESSE

4660 Cadastral Surveys and Land Registration Systems and therefore each will receive the **David W. Lambden Award**.

**Confederation College – Jonathon Fogolin** is the very first recipient of an award for a student in the 2<sup>nd</sup> year of the Civil Engineering Technician Program who demonstrates a high proficiency in Introductory Surveying and Advanced Surveying (Field School) and shows an interest in pursuing a career in the Geomatics Sector.

**The 15<sup>th</sup> Annual Graduate Student Geomatics Poster Session**, which was held remotely during the Annual General Meeting, featured 12 posters from graduate students from Ryerson and York Universities. The students expressed their thanks for the opportunity to share their research projects and compete for prizes ranging from \$2000 for 1<sup>st</sup> place to \$500 for 5<sup>th</sup> place. Thank you to our judges: **Boney Cherian, Brian Coad** and **Reuben Mc Rae**, who worked tirelessly to evaluate the posters. The winning posters can be found on page 24.

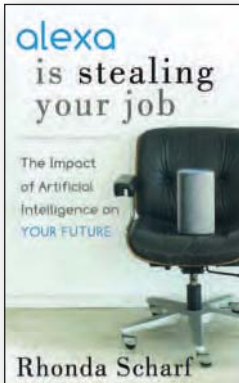
The Educational Foundation would like to recognize with thanks donations made in the memory of Michael J. Clancy, John Boyd, John Goltz and David Searles.

# BOOK REVIEWS

## Alexa is Stealing your Job

### The Impact of Artificial Intelligence on your Future

By Rhonda Scharf



Published by Morgan James Publishing

ISBN 978-1-6427-9401-4

*Alexa is Stealing Your Job* is a guided tour of where the world has been with artificial intelligence and how it affects the future of work.

Artificial intelligence is taking over. Ask Alexa to call a client or confirm your schedule for the day and she does just that immediately. Ask her a question, give her a command, or just share a joke together, and she becomes your new best employee. A conversation with Alexa can nix the need for millions of front-line workers. Today's companies must keep up with artificial intelligence to keep their customers, and today's

employees must find new ways to provide value to their companies if they want to keep their job. Author and speaker Rhonda Scharf shows readers how a willingness to adapt to the new normal keeps both businesses and their employees relevant in these changing times. *Alexa Is Stealing Your Job* reveals what the future entails by diving into the world of AI and exploring how it impacts lives, careers, and the future.

*Information taken from the publisher.*

## The Flying Mathematicians of World War 1

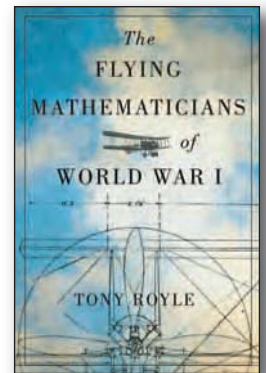
By Tony Royle

Keith Lucas was killed instantly when his BE2 biplane collided with that of a colleague over Salisbury Plain on 5 October 1916. As a captain in the Royal Flying Corps, Lucas would have known that his death was a very real risk of the work he was doing in support of Britain's war effort. But Lucas wasn't a career pilot - he was a scientist.

*The Flying Mathematicians of World War I* details the advances and sacrifices of a select group of pioneers who left the safety of their laboratories to drive aeronautics forward at a critical moment in history. These mathemati-

cians and scientists, including Lucas, took up the challenge to advance British aviation during the war and soon realized that they would need to learn how to fly themselves if they were to complete their mission. Set in the context of a new field of engineering, driven apace by conflict, the book follows Lucas and his colleagues as they endured freezing cockpits and engaged in aerial versions of Russian roulette in order to expand our understanding of aeronautics.

*Information taken from the publisher.*



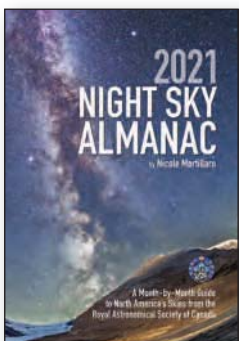
Published by McGill-Queen's University Press

ISBN 978-0-2280-0373-1

## 2021 Night Sky Almanac

### A Month-by-Month Guide to North America's Skies from the Royal Astronomical Society of Canada

By Nicole Mortillaro



Published by Firefly Books

ISBN 978-0-2281-0259-5

*2021 Night Sky Almanac* is the ideal resource for both novice and experienced sky watchers in the United States and Canada, with all of the advice, information and data that enthusiasts need to understand and enjoy the wonders of the night sky.

This in-depth guide first introduces readers to the objects in the sky — from stars, to comets, to globular clusters — and then takes them through

the cosmic events to look out for each month in 2021, with sky maps, moon phase charts and info about the planets. The book also features: methods for using your hands to measure angles in the sky; information about binoculars and telescopes; history of constellations, including Indigenous history; a glossary of terms; and much more.

*Information taken from the publisher.*

# The Last Word

## The AOLS Educational Foundation Members Vote to Expand Awards

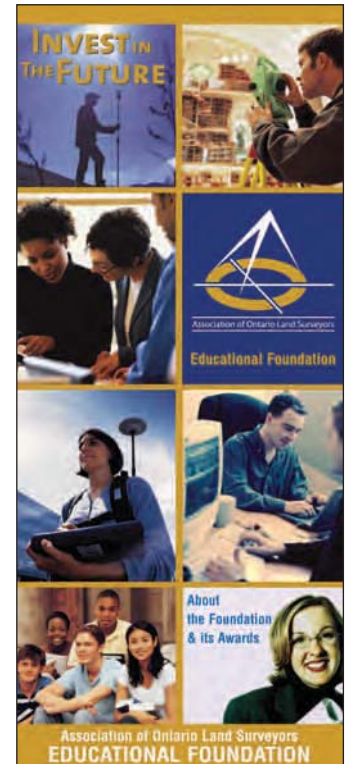
By Maureen Mountjoy, O.L.S., O.L.I.P.

The Association of Ontario Land Surveyors Educational Foundation is a registered charity (13456 8161) that was founded in 1973 to: "...receive and maintain a fund...for educational and charitable purposes within the Province of Ontario."

Since 1975, the Educational Foundation has awarded more than \$550,000 to students in post-secondary Geomatics programs across Ontario. Many of the award winners have become Ontario Land Surveyors (OLSs). In the last few years, an increasing number of graduates from the University of New Brunswick (UNB) have been hired by Ontario firms, completed their articles and have become OLSs. It was suggested by some of our members that to attract more potential surveyors to our association, the Foundation should have the ability to present

awards to students not just in Ontario, but across Canada. To make this possible, the objects of the Letters Patent had to be amended.

At the beginning of this year, a Special Resolution, which contained the amendments to the Letters Patent, was sent out to all members of the Foundation with a request to vote in favour or against the changes. At the Annual Meeting of Members in February, it was announced that 88% of the members who replied voted in favour of the Special Resolution. As a result, an application for Supplementary Letters Patent to request the changes has been filed with the provincial and federal governments. The process should take at least a year. Once approved, the Foundation will have the opportunity to expand the current list of awards to include students outside of Ontario.



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1/2 page 4 Colour	\$500	\$465
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1/4 page 4 Colour	\$410	\$385

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