



Centre for International
Governance Innovation

Conference Report – Toronto, Canada, March 30, 2017

Thinking Through Intellectual Property Issues: Charting a Path Forward

Oonagh Fitzgerald, Bassem Awad, Marsha Cadogan
and Sam Anissimov

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About CIGI

We are the Centre for International Governance Innovation: an independent, non-partisan think tank with an objective and uniquely global perspective. Our research, opinions and public voice make a difference in today's world by bringing clarity and innovative thinking to global policy making. By working across disciplines and in partnership with the best peers and experts, we are the benchmark for influential research and trusted analysis.

Our research programs focus on governance of the global economy, global security and politics, and international law in collaboration with a range of strategic partners and support from the Government of Canada, the Government of Ontario, as well as founder Jim Balsillie.

À propos du CIGI

Au Centre pour l'innovation dans la gouvernance internationale (CIGI), nous formons un groupe de réflexion indépendant et non partisan qui formule des points de vue objectifs dont la portée est notamment mondiale. Nos recherches, nos avis et l'opinion publique ont des effets réels sur le monde d'aujourd'hui en apportant autant de la clarté qu'une réflexion novatrice dans l'élaboration des politiques à l'échelle internationale. En raison des travaux accomplis en collaboration et en partenariat avec des pairs et des spécialistes interdisciplinaires des plus compétents, nous sommes devenus une référence grâce à l'influence de nos recherches et à la fiabilité de nos analyses.

Nos programmes de recherche ont trait à la gouvernance dans les domaines suivants : l'économie mondiale, la sécurité et les politiques mondiales, et le droit international, et nous les exécutons avec la collaboration de nombreux partenaires stratégiques et le soutien des gouvernements du Canada et de l'Ontario ainsi que du fondateur du CIGI, Jim Balsillie.

About the International Law Research Program

The International Law Research Program (ILRP) at CIGI is an integrated multidisciplinary research program that provides leading academics, government and private sector legal experts, as well as students from Canada and abroad, with the opportunity to contribute to advancements in international law. The ILRP strives to be the world's leading international law research program, with recognized impact on how international law is brought to bear on significant global issues. The program's mission is to connect knowledge, policy and practice to build the international law framework — the globalized rule of law — to support international governance of the future. Its founding belief is that better international governance, including a strengthened international law framework, can improve the lives of people everywhere, increase prosperity, ensure global sustainability, address inequality, safeguard human rights and promote a more secure world. The ILRP focuses on the areas of international law that are most important to global innovation, prosperity and sustainability: international economic law, international intellectual property law and international environmental law. In its research, the ILRP is attentive to the emerging interactions between international and transnational law, Indigenous law and constitutional law.

About the Authors

Oonagh Fitzgerald is director of CIGI's ILRP, where she oversees its international economic law, environmental law, intellectual property law and innovation, and new Indigenous law research agenda. She has extensive experience as a senior executive providing legal policy, advisory and litigation services and strategic leadership in international law, national security, public law, human rights and governance to several federal departments, including Justice Canada, National Defence and the Canadian Forces, and the Privy Council Office.

Oonagh has taught at the University of Ottawa, as well as Carleton University, l'Institut international du droit de l'homme in Strasbourg and the International Institute of Humanitarian Law in San Remo. She has a B.A. (honours) in fine arts from York University, an LL.B. from Osgoode Hall Law School and was called to the Bar of Ontario in 1983. She holds an LL.M. from the University of Ottawa, an S.J.D. (Doctor of Juridical Science) from the University of Toronto and an M.B.A. from Queen's University.

Bassem Awad is deputy director of international intellectual property law and innovation with CIGI's ILRP. In this role, Bassem provides strategic guidance and operations coordination and management of the thematic area.

Bassem, a specialist in intellectual property (IP) law, has served as a judge at the Appeal Court in Egypt. He also works as a head tutor for the Academy of the World Intellectual Property Organization and an instructor with the Institute for Training and Technical Co-operation at the World Trade Organization. He teaches advanced courses on IP rights at the Faculty of Law, Western University. He has also been working for several years as a consultant for the African Union and as a counselor at the Judicial Department of Abu Dhabi in the United Arab Emirates on IP topics.

Bassem holds Ph.D. and LL.M. degrees in IP from the University of Montpellier in France, and an LL.M. in international business law from l'Université Paris 1 Panthéon-Sorbonne. His research interests include copyright law, patent law, comparative IP and IP governance. He has published several papers on copyright and access to knowledge, patents and green energy technology innovation, biotechnology and IP, patents and access to

medicines, IP and consumer protection, IP in the digital environment and enforcement of IP rights.

Marsha Cadogan is a post-doctoral fellow with CIGI's ILRP. Her research at CIGI is focused on the interrelationship between geographical indications and trademark laws, as well as the global implications of geographical indications in preferential trade agreements.

Marsha's broader research interests are in IP rights and trade, and IP rights and development implications for emerging and developed economies. Marsha's research expertise is multi-jurisdictional and includes the IP jurisdictions of the European Union, the United States, Switzerland, Japan, Canada and the Caribbean.

Prior to becoming a post-doctoral fellow, Marsha contributed to CIGI's ILRP as a research assistant, co-planning workshops and writing her forthcoming paper on influencing the global state of play through geographical indications. Marsha has a bachelor of science, economics and management from the University of the West Indies (Jamaica), an LL.B. from King's College at the University of London (England) and an LL.M. and a Ph.D. in law from Osgoode Hall Law School at York University. She is a member of the board for Canada's International Law Association and is also a barrister and solicitor with the Law Society of Upper Canada.

Sam Anissimov is junior counsel at CIGI, providing assistance to CIGI's chief of staff and general counsel on a range of legal matters. He also provides support for the ILRP's research programs through the provision of independent research, research assistance, event planning and execution. Sam was an articling student with CIGI, as well as a summer law student in the inaugural Intellectual Property Law Clinic, a collaborative partnership between CIGI, Communitel and three leading Canadian intellectual property law firms. Sam has also worked as a technology licensing and commercialization intern at WORLDdiscoveries at the University of Western Ontario. Sam received his law degree from the University of Western Ontario and was called to the Bar of Ontario in September 2016. He previously graduated from the University of Toronto with an Honours Bachelor of Science.

Executive Summary

The third round table was organized by the International Law Research Program (ILRP) of the Centre for International Governance Innovation (CIGI) in collaboration with the Ontario Ministry of Research, Innovation and Science (MRIS) and the Ministry of Economic Development and Growth (MEDG). Solutions-oriented, its objective was to identify and formulate workable approaches to Ontario's intellectual property (IP) strategy. Against this background, the round table brought together experts in the field of IP management, the practice of IP law, policy makers, leading academics and IP entrepreneurs from Ontario's universities, government and business sectors. The round table examined the essential building blocks of a domestic IP strategy and the possible mechanisms to support a strong knowledge-based economy tailored to Ontario's and Canada's socio-economic, legal and political infrastructure. Four essential pillars of an IP strategy were identified, and several mechanisms aimed at addressing these key challenges were discussed and evaluated:

- IP commercialization strategy;
- technology transfer at universities;
- IP awareness and outreach; and
- access to IP legal services.

The round table was conducted under the Chatham House Rule to encourage open discussion among stakeholders.¹

Introduction

The third round table was held on March 30, 2017, in Toronto and brought together IP experts, policy makers and entrepreneurs to constructively engage in how best to formulate an Ontario IP strategy in the globally complex age of innovation. The first round table, held on September 8, 2016, critically discussed four key challenges in Ontario's and Canada's IP system: weak IP literacy among

Canadians; lack of access to affordable legal services; weak collaboration between universities and businesses to leverage university-generated IP; and absence of a national IP strategy and coordinated governmental action. The second round table, held on December 12, 2016, focused on two topics: the challenges and uncertainties in sovereign patent funds as a potential tool to support national innovation capacity; and ways of improving IP awareness and training to meet the needs of Canadian entrepreneurs in specialized IP fields.

Canada's sluggish participation in the global IP system signals that our strategic engagement with IP needs to be overhauled. Recent statistics produced by the World Intellectual Property Organization depict lacklustre performance in Canada's patent filing. While endogenous and exogenous variables are responsible for an economy's innovation performance, the vast difference in patent filings between China and Canada, or Canada and the United States, is striking. This presents policy makers, academics and IP entrepreneurs with the task of understanding the strengths and weaknesses of Canada's domestic IP ecosystem and identifying strategic responses that are targeted to local conditions, but nevertheless supportive of global engagement by Ontario and Canadian innovators and entrepreneurs.

The third IP round table focused on issues that were left outstanding from the two previously held sessions. The round table commenced with a brief overview of the four essential pillars needed in Ontario's IP strategy. Getting the right mix of stakeholders (federal and provincial government, universities, industry, and professional associations) involved in IP strategizing is essential, as is a clear articulation of what needs to be done and using the right metrics to achieve effective outcomes. A move toward government partnership with key sectoral stakeholders was recommended as the most dynamic and effective approach in innovation strategy. Quantitative and qualitative data are essential to develop and then measure effective IP strategies. Without data, it is impossible to frame priorities on targeted IP clusters. IP commercialization and scale-up were key challenges highlighted throughout the discussion. The main points from the round table are noted below.

¹ Under this protocol, those present, including media, "are free to use information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed." For a full explanation of the Chatham House Rule, see www.chathamhouse.org/about-us/chathamhouserule.

Toward a Functional Approach to IP Commercialization Strategies – Improving IP Management Skills to Build a Strong Economy

The discussion started by highlighting a number of potential mechanisms that can be used to improve IP management skills of Canadian innovators and help in building a strong IP ecosystem for Ontario. The potential mechanisms include:

- offering tax incentives to encourage IP investment and commercialization;
- using open and collaborative innovation as an additional tool to advance research and development;
- establishing a provincial focal point for IP and innovation to coordinate IP services;
- supporting the private sector initiatives in creating Canadian patent pledges for specific sectors, such as clean technology, medical devices, fintech, blockchain, etc.; and
- creating an internet-based marketplace that connects technology and service providers with companies and countries seeking innovative solutions.

Participants gained insight into an innovation incentive program offered by MRIS and MEDG that offers a \$28.8-million voucher program for start-ups and small and medium-sized enterprises (SMEs) in Ontario. The program provides coaching and indirect mentoring by advisers to SMEs to assist in IP commercialization and development. The initiative is focused on supporting SMEs that earn a maximum revenue of \$50 million annually, and provides assistance to 30 companies per year. Six companies will be selected as voucher recipients in the program after a successful pitch of their ideas and prospective collaborations.

The round table then considered the concept of open and collaborative innovation. Open innovation

is a firm-level strategy that presupposes the firm already has a strong IP strategy. The practice of innovators contributing their research work for free — such as Tesla, Toyota and Microsoft Azure — is gaining momentum internationally. Through collaborative initiatives with users and others, open innovation has resulted in the creation of improvements on innovations. The health technology sector has benefited from open innovation. For example, Night Scout emerged as a “parent-hack” of an existing glucose level monitoring device for Type 1 diabetes. Open user collaboration also occurs in the information technology industry. The Apache Operating System was designed by and given to users, free of charge. Tesla’s practice of making its patents available to any developer of cars is another example of open innovation. Open collaboration also strengthened the firm’s corporate social responsibility image. Tesla’s approach to open innovation has not stifled their research and development initiatives because the company reserves the right to pull back patents from open user platforms. Open innovation presents an opportunity for Ontario and Canada to increase creativity and innovation.

The discussion about open and collaborative innovation included the concept of patent pledges as a potential framework for cooperative innovation. Patent pledges are covenants made by developers and patent owners that allow others to use their patents without the threat of patent infringement, if the patents are used under specified terms and conditions. Their structure is diverse, and can take the form of partnerships between and among government, businesses and universities. Patent pledges may be open or semi-open innovation mechanisms. The main difference between patent pledges and sovereign patent funds is that the state plays a direct and substantial role in the governance of sovereign patent funds, whereas the state is not necessarily a party to patent pledges. However, the state might contribute to a patent pledge by allocating patents owned by a publicly funded research institute.

The governance and structure of patent pledges impacts its performance. If patent pledges are well designed and executed, they hold tremendous potential as successful IP tools in innovation. They tend to be failed instruments of innovation in jurisdictions or markets where collusion and public relations tactics dominate the industry.

The discussion on IP commercialization generated several questions, indicating the need for further and more intense dialogue on the topic.

- How do we ensure that the innovation remains in Canada if it is available for free to users?
- How do we ensure that the IP produced from open and collaborative innovation remains valuable?
- What is the strategic role of Canada's Competition Bureau in facilitating fair competition in IP markets, including where patent pledges are deployed?

Toward Effective Technology Transfer at Universities and IP Awareness

Round table participants then discussed Ontario universities' technology transfer function and the role it plays in driving innovation in the province. Participants considered how traditional conceptions of what a technology transfer office (TTO) does have evolved over time, and identified opportunities for university TTOs to help achieve the goals of a provincial innovation strategy going forward. Technology transfer can take many forms, but its success depends on strong inter-institutional and cross-departmental collaboration. Participants noted promising synergies, at the same time as citing funding, measurement and literacy hurdles to productive stewardship of university-based innovation.

The discussion highlighted that university TTOs face increasingly demanding industrial stakeholders who expect them to bear the cost of a more sophisticated approach to the protection of IP. However, in many cases, not enough is being done to ensure TTOs are sufficiently resourced to operate at this level of sophistication and scale. Among those being educated at Ontario's universities, lack of capability in handling intangible assets poses an obstacle to the successful commercialization of university-generated IP. There needs to be continued effort to equip future innovators and

business leaders with the requisite IP literacy. The province and Ontario's university TTOs should agree on performance measurement indicators that align the TTOs to optimize their contribution to Ontario's innovation agenda.

The operational model of university TTOs, which is similar to many other models in the technology space, has been the subject of much refinement and iteration over the last several decades. The TTOs' starting position, or "TTO 1.0" as one participant dubbed it, takes a linear view of innovation. In it, the role of the office is to solicit invention disclosures from research faculty at its home institution, protect the IP in those inventions, typically through patenting, and monetize that IP by working with a partner capable of leveraging it commercially. The TTO of today, "TTO 4.0," is a more sophisticated entity, occupying a prominent seat in its university's industry engagement efforts and working with researchers who have also become more commercially savvy and well connected over time.

The modern TTO is much more than a matchmaker between university patents and industry. One participant recounted a TTO's recent capacity-building efforts, many of which aim to bridge traditionally siloed university functions. Those efforts, which often seek to raise awareness of the importance of IP among their objectives, include, for example, placements for post-doctoral fellows of research-intensive faculties, prior art training for business students and IP licensing practicums for law students. Prominent also is the TTOs' role in the establishment of various funds and sponsorship competitions with the intention of helping promising early-stage ideas get off the ground. Patent commercializations are still a principal output of any TTO's work, but this now constitutes only one element in an array of activities.

These encouraging developments are driven by necessity. One participant explained that whereas the TTOs' industry partners might have been willing to assume the burden of securing IP protection for innovations in the 1980s, present-day partnership discussions start only once the TTO has implemented its own IP protection measures. Unless there is some IP expertise at every step in the innovation pipeline, the commercialization of university-generated IP inevitably suffers. It is therefore essential that Ontario university TTOs be appropriately equipped to operate with the capacity and scale to commercialize university-generated IP.

The issue of scale is, at least in part, already being addressed by Ontario's universities. Some of these universities have recognized that Ontario's future entrepreneurs, business leaders and innovators are not being adequately trained to deal with intangible assets upfront, which undermines later efforts to commercialize. To this end, TTOs' capacity-building efforts help innovators, and those who support them, approach invention with commercialization challenges in mind. Other related initiatives at some universities include unique courses and seminars as well as research into new modes of providing IP-related services to start-ups. This work is not without its challenges, however. One participant pointed out that there is no one-size-fits-all solution to the shortfall in IP literacy: many initiatives fail to reach the appropriate audience and many resources go underutilized. Because different participants in the innovation ecosystem gravitate toward different offerings, the province and its schools must remain creative and persistent in their efforts to make IP knowledge a foundational part of every Ontario entrepreneur's tool kit.

The obstacles to effective technology transfer are not purely educational, however. Operational dimensions can also impose limitations on how close the product of TTOs' work comes to fulfilling the goals of Ontario's innovation strategy. Understanding how to measure desired outcomes is thus crucial. For example, many participants questioned whether university TTOs are evaluated on the quality as well as the quantity of patents they secure for university-based inventions. As one participant explained, the difference between obtaining a patent to protect research outcomes, rather than the potential commercial value, can mean the difference between retaining valuable innovation in Canada or losing it to foreign partners who are willing to make up the gap. If the province wishes to encourage TTOs to contribute effectively to Ontario's IP and innovation ecosystem, it should invest in their development of more robust IP protection practices.

Further Work

The participants concluded that further meetings would be necessary to find practical solutions to many of the discussion points raised in the round table. Therefore, it was agreed that another round table will be held to provide a space for constructive dialogue on how best to take Ontario and Canada forward in building a sound and effective IP strategy.

Agenda

March 30, 2017

8:30 a.m. – 12:00 noon

Ontario Investment and Trade Centre, 250 Yonge Street, 35th floor, Toronto

8:30–9:00 a.m.	Coffee/networking
9:00–9:15 a.m.	Opening Remarks
9:15–9:30 a.m.	Setting the Stage: Addressing IP Issues
9:30–10:10 a.m.	Pillar #1: IP Commercialization Strategy
10:10–10:50 a.m.	Pillar #2: Technology Transfer at Universities
10:50–11:00 a.m.	Break
11:00–11:25 a.m.	Pillar #3: IP Awareness and Outreach
11:25–11:50 a.m.	Pillar #4: Access to IP Legal Services
11:50 a.m.–12:00 noon	Next Steps and Closing Remarks

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