

A PROPOSAL:

**AN OPEN LICENSING SCHEME
FOR TRADITIONAL KNOWLEDGE**

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Carleton
UNIVERSITY

Geomatics and Cartographic
Research Centre



Canadian Internet Policy and Public Interest Clinic
Clinique d'intérêt public et de politique d'internet du Canada

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The following individuals have contributed to this document:

The Editorial Team:

- Lead, David Fewer, Director CIPPIC (<https://cippic.ca/about-us#staff>)
- Tracey P. Lauriault, Assistant Professor School of Journalism and Communication and Associate Researcher to the Geomatics and Cartographic Research Centre (GCRC) (<http://carleton.ca/sjc/profile/lauriault-tracey/>)
- Teresa Scassa, Canada Research Chair in Information Law, Centre for Law Technology and Society (CLTS) (<https://commonlaw.uottawa.ca/en/people/scassa-teresa>)

Content Advisors:

- Amos Hayes, Technical Manager and Atlas Developer, GCRC
- Gita Ljubicic, Associate Professor and lead researcher on the SIKU Atlas (<https://carleton.ca/geography/people/ljubicic-gita-j/>)
- Kent Mewhort, Contractor, CIPPIC (<https://cippic.ca/about-us#staff>)
- Scot Nickels, Senior Science Advisor and Director, Inuit Qaujisarvingat: Inuit Knowledge Centre Inuit Tapiriit Kanatami (www.ITK.ca)
- Chidi Oguamanam, Associate Professor, CLTS (<https://commonlaw.uottawa.ca/en/people/oguamanam-chidi>)
- Peter Pulsifer, Postdoctoral Research Associate National Snow and Ice Data Centre and GCRC Research Associate (<http://nsidc.org/research/bios/pulsifer.html>)
- D. R. Fraser Taylor, Distinguished Research Professor and Director, GCRC (<https://gcrc.carleton.ca/confluence/display/GCRCWEB/Overview>)

Research contributions from students:

- Jasmine Attfield, former CIPPIC Intern, JD Candidate, University of Ottawa Faculty of Law
- Laura Crestohl, former CIPPIC Summer Intern, BCL/LLB, McGill University
- Jordan Fine, CIPPIC Summer Intern, JD Candidate, York University, Osgoode Hall Law School
- Lex Gill, CIPPIC Google Policy Fellow, BA, and LLB/BCL candidate, McGill University
- Sean Grassie, CIPPIC Summer Intern, JD Candidate, University of Ottawa Faculty of Law
- Paul Holden, former CIPPIC Summer Intern, BSc and LLB/BCL, McGill University
- Jovana Orabovic, CIPPIC Summer Intern, JD Candidate, University of Ottawa Faculty of Law
- Alexandra Ormond, CIPPIC Summer Intern, JD Candidate, University of Ottawa Faculty of Law
- Adam Saunders, former Research Assistant for Teresa Scassa, JD, University of Ottawa Faculty of Law

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Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

For more information contact:

Samuelson-Glushko Canadian Internet Policy and Public Interest Clinic University of Ottawa, Faculty of Law 57 Louis Pasteur St. Ottawa, ON K1N 6N5 Canada Tel: 613-562-5800 x.2553 Fax: 613-562-5417 Email: cippic@uottawa.ca	Geomatics and Cartographic Research Centre Department of Geography, Carleton University 1125 Colonel By Drive Ottawa, ON K1S 5B6 Canada Tel: 613-520-2600 x.8232 Email: fraser_taylor@carleton.ca
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INTRODUCTION

The University of Ottawa’s Centre for Law, Technology and Society (CLTS), Samuelson-Glushko Canadian Internet Policy & Public Interest Clinic (CIPPIC)¹, and Carleton University’s Geomatics and Cartographic Research Centre (GCRC)² propose a licensing scheme available to traditional knowledge holders. The scheme aims to assist traditional knowledge holders communicate their expectations for appropriate use of their knowledge to all end users.

GCRC researchers have worked with northern communities and other indigenous stakeholders as part of their work in building online interactive atlases.³ In their data management research required to build the atlases, GCRC researchers have witnessed the emergence of numerous issues regarding the collection, dissemination, and management of data based on “Traditional Knowledge” (TK).

The World Intellectual Property Organization report, *Traditional Knowledge*, characterizes TK as “the intellectual and intangible cultural heritage, practices and knowledge systems of

¹ CIPPIC is Canada’s only public interest technology law clinic. CIPPIC is based at the Centre for Law, Technology & Society at the University of Ottawa’s Faculty of Law in Canada. CIPPIC’s mandate is to advocate in the public interest on diverse issues arising at the intersection of law and technology. For more information, see <https://cippic.ca/en/about-us>.

² The Geomatics and Cartographic Research Centre (GCRC) is an official research centre in the Department of Geography and Environmental Studies at Carleton University, Ottawa, Canada. GCRC’s research focuses on the application of geographic information processing and management to the analysis of socio-economic issues of interest to society on both a local and international scale. For more information, see: <https://gcr.ccarleton.ca/confluence/display/GCRCWEB/Overview>.

³ Geomatics and Cartographic Research Centre, “Atlases”, online: GCRC <<https://www.gcrc.carleton.ca>>.

traditional communities, including indigenous and local communities.”⁴ TK includes traditional agriculture, folklore, and biodiversity and medicinal knowledge that “often [transmits] the history, beliefs, aesthetics, ethics, and traditions of a particular people.”⁵ Unlike the Western method of disseminating knowledge through publication, TK exists in the form of songs, proverbs, stories, community laws, common or collective property, and inventions, practices and rituals. TK may be shared orally and through practice across generations. Often, this knowledge is considered collective to the community and is not exclusive to any individual.⁶

THE PROBLEM

Several issues arise concerning the use and licensing of TK within the framework of existing intellectual property (IP) laws, specifically copyright law. Most of these issues concern incompatibility between existing IP laws and TK, as well as the unique needs of indigenous communities when it comes to protecting their knowledge.

Many aspects of TK are generally incapable of enjoying IP protection. This is because IP laws do not contemplate the protection of pre-existing knowledge; rather, they provide economic incentives for novelty, distinctiveness and creativity.⁷ Indigenous peoples attempting to protect

⁴ World Intellectual Property Organization, “Traditional Knowledge” Glossary, online: <www.wipo.int/tk/en/resources/glossary.html>.

⁵ Daniel Gervais, “Trips, Doha and Traditional Knowledge” (2005) 6:3 J World Intell Prop 403.

⁶ Tonina Simeone, “Indigenous Traditional Knowledge and Intellectual Property Rights”, Parliament of Canada, Political and Social Affairs Division, March 17, 2004, online: <http://www.parl.gc.ca/content/lop/researchpublications/prb0338-e.htm> [Simeone].

⁷ Thomas Cottier, “The Protection of Genetic Resources and Traditional Knowledge: Towards More Specific Rights and Obligations in World Trade Law” (1998) 1:4 J Int Economic Law at 569, online: <<http://jiel.oxfordjournals.org/content/1/4/555.full.pdf+html>>.

existing knowledge, some of which may already form a part of the public domain, may find themselves unable to satisfy requirements for IP protection due to the nature of the knowledge.

Concerning copyright, TK often fails to overcome two significant obstacles to protection: (1) meeting substantive requirements of subject matter eligible for copyright protection, and (2) ownership disputes. First, for subject matter to hold copyright it must be a “work” (e.g. literary, musical, dramatic, art, or other work as described in section 3(1) of the *Copyright Act* [Act]).⁸ Further, the work must be fixed (e.g. recorded on paper/canvas or visual media), and the expression of the work must be original.⁹ For a work to be original, it must comprise some exercise of skill and judgment on the part of the author that is not so mechanical as to be trivial.¹⁰

Moreover, copyright protects original *expression*, not original *ideas*. For example, an author of a book about yoga in the park has copyright in *her* expression of her idea of yoga in the park, but does not have copyright in the idea of yoga in the park. Others can practice the yoga the author of the book described and illustrated therein, and are free to express—in writing or illustration or both—their own views of outdoor yoga in new books.

Different forms of TK will face challenges meeting these substantive requirements of copyright law. TK passed on through oral traditions, unfixed in literary form, will not enjoy copyright. If fixed in some tangible form, copyright protection will extend only to the specific literary expression of that knowledge, and not to the knowledge itself. Further, knowledge shared within a community through non-literary traditions may not qualify as a “work” at all. Copyright’s

⁸ RSC 1985 c C-42 [Act] at s 3(1).

⁹ *Cinar v Robinson*, 2013 SCC 73, [2013] 3 SCR 1168 at [23]-[28].

¹⁰ *CCH Canadian Ltd v Law Society of Upper Canada*, 2004 SCC 13, [2004] 1 SCR 339 at [25].

strictly construed subject matter requirements are a poor fit for many forms of TK.

Concerning ownership, works protected by the *Act* generally originate from an individual or known quantity of contributing joint authors and these first authors are typically granted first ownership.¹¹ The author must be a “natural person”, while anonymity is not a bar to protection.¹² The *Act* does not explicitly define “author,” but section 6 states that the “term for which copyright shall subsist shall... be the life of the author, the remainder of the calendar year in which the author dies, and a period of fifty years following the end of that calendar year.” Only a natural person can have a life and death by which a copyright term is calculated.

TK, in contrast, often comprises knowledge that originates within and “belongs” to the community and not any one individual. The dynamic and evolutionary nature of TK makes it difficult to attribute knowledge to any particular owner(s). Determining ownership of TK is difficult because knowledge often changes over time and is passed down through generations. TK’s malleability over time may render a community, as a whole, the “author.” This communal characteristic of much TK is again a poor fit with copyright law’s focus on the romantic author.¹³

TK faces similar difficulties in enjoying IP protection through patent law and trade secrets, since they, too, place limitations on protectable subject matter. Under patent law in Canada, patentable subject matter includes “any new and useful art, process, machine, manufacture, or

¹¹ *Act*, *supra* note 8 at ss 2, 3(1), 6, 9 and 13(1) stating: “the author of a work shall be the first owner of the copyright therein.”

¹² *Ibid* at ss 6.1 & 6.2; *Setana Sport Ltd v 2049630 Ontario Inc (cob Verde Minho Tapas & Lounge)*, [2007] FCJ No 1167, 2007 FC 899 (FC).

¹³ Kimberly Christen, “Tribal Archives, Traditional Knowledge, and Local Contexts: Why the “s” Matters” (2015) 6:1 *Journal of Western Archives* 3 at p 2, online: <<http://digitalcommons.usu.edu/westernarchives/vol6/iss1/3>>.

composition of matter, or any new and useful improvement” of the aforementioned.¹⁴ Patent examiners may refuse to consider patent applications for traditional medicines, for example, because the medicines are not considered “new”. And, similar to copyright, patent law looks for a definitive origin of the patentable ideas: the inventor(s). TK, in contrast, is rooted in the community¹⁵ and is developed using a group’s identity. Again, the communal aspect of TK makes for a poor fit with western notions of IP.

Similarly, Canadian trade secret law provides only passing protection for traditional knowledge. Courts have found that, to enjoy legal protection, information must have a “necessary character” of confidence and have been communicated in circumstances which import an obligation of confidence.¹⁶ TK, in contrast, is often shared freely within a community without any explicit or implicit obligation of confidence. TK is infrequently “confidential” in the legal sense of the word; rather, it is sometimes simply not well known outside of its originating community.

Challenges of Defining Ownership and Consent in Copyright of TK

The nature of TK “ownership” is also at odds with IP’s scope of protection. Copyright’s inability to reach beyond expression—and control dissemination of underlying ideas—deprives owners of the ability to control unwanted use of their knowledge.¹⁷ So, even where a particular iteration of TK fits into copyright’s protection, for example a book containing TK, its author cannot

¹⁴ *Patent Act*, RSC 1985 c P-4, at s2 “invention”.

¹⁵ Simeone, *supra* note 6.

¹⁶ *Lac Minerals Ltd v International Corona Resources Ltd*. 1989 CanLII 34, [1989] 2 SCR 574.

¹⁷ World Intellectual Property Organization (WIPO), “Background Brief Number 9 – Documentation of Traditional Knowledge and Traditional Cultural Expressions”, online: <http://www.wipo.int/export/sites/www/tk/en/resources/pdf/tk_brief9.pdf>.

use copyright to control what happens to the information, which may be then used against the interests of the community to which it relates.

Similarly, uncertainty about the comparative rights of the “author” and his or her community raises difficult legal and ethical problems relating to authorization and consent. The inability to determine ownership of existing TK, as defined by current IP laws, makes it difficult even for good faith users of that TK to obtain appropriate consent for use. TK that is already in the public domain under conventional IP law may have an unlimited number of users making use of the knowledge without the consent of the community to which the TK relates.

Ethical TK Licensing

TK poses ethical challenges to researchers independent of the IP-related issues identified above. Timothy Di Leo Browne’s report on consent and ethics issues in dealing with TK, “Consent and Ethics on Local and Traditional Knowledge in the Internet Era: Some Key Questions,” outlines many of these issues.¹⁸ His research shows that the process of obtaining consent greatly affects the ways in which researchers subsequently use and license research based on TK. In particular, challenges arise when the communities offering the knowledge have expectations that are unenforceable under Canadian law. Further, knowledge is difficult to control once it is shared online with an indeterminate audience who may not share the same ethical guidelines as academic researchers. Thus, the diverse range of users who access knowledge online likely includes those

¹⁸ At 30 (archived at Ottawa: Carleton University, 2012) [Di Leo Browne]. Di Leo Browne gathered information through interviews with indigenous stakeholders, as well as from input by First Nations Ownership Control and Possession (OCAP) policies. Tri-Council Policy Statements, Inuit Tapiriit Kanatami (ITK), and the Nunavut Research Institute (NRI) Guide for Researchers also provided valuable information.

with little awareness of TK or the ethical issues it raises.

Many of the issues identified by Di Leo Browne were also discussed in the Makivik Corporation's 2008 report, *Geospatial Data Needs Assessment and Data Identification and Analysis report of ten Aboriginal Community Land and Resource Management Processes in Canada*.¹⁹ The Makivik Corporation has been working since 1975 to develop the Nunavik region and establish a distinct place and identity for the Inuit.²⁰ Their report identified four general areas of research that involve the acquisition of TK: (1) Traditional Ecological Knowledge (TEK), Use and Occupancy Research, (2) Traditional Use Studies, (3) TK studies, and (4) Inuit Qaujimagatuqangit (IQ).²¹ The report also raised pragmatic issues, such as the "gulf" that exists between communities' expectations of their TK use and what uses external researchers and policymakers desire. There is often an expectation that "raw digital cultural data are never copied, made public or leave the community. [This] creates a quandary in public planning processes where cultural values must be shared and weighted equally with economic and environmental interests."²²

The Makivik report recommended sharing confidentiality agreements and IP rights agreements between communities, governments, and other third parties.²³ These agreements help

¹⁹ See e.g. Makivik Corporation, "Aboriginal Community Land and Resource Management: Geospatial Data Needs Assessment and Data Identification and Analysis"; "Aboriginal Mapping and Information Needs: Experiences from Ten Land Use Planning Processes Across Canada", vol 1; "Data Identification and Analysis", vol 2, Ottawa: Ministry of Natural Resources Canada, 2008.

²⁰ Makivik Corporation, "History," online: Makivik Corporation <<http://www.makivik.org>>.

²¹ *Ibid.*

²² *Ibid* at 22-23.

²³ The Centre for Indigenous Environmental Resources also identified the need for confidentiality and data sharing agreements. See Centre for Indigenous Environmental Resources, "Good Practices Guide: Success in Building and Keeping an Aboriginal Mapping Program" (2010), Natural Resources Canada, at

with TK management and are of significant importance in treaty negotiations, land claims, negotiations related to consultations, and/or accommodations and operational planning by Aboriginal governments. Further, the report argued that “data strategies should be tied to self-governance” because these types of agreements provide communities with tools to inform the management of their own data.²⁴

There is a crucial distinction between a third party obtaining (a) legal permission to use a work protected by some form of IP protection, and (b) ethical consent from the community to use a work. Legal permission may not be equivalent to ethical consent, and vice versa.

A CONTRIBUTION

Overview of the proposed licensing scheme

The proposed licensing system emerged as a response to the various gaps that exist when IP laws are applied to TK. To fill these gaps, and to establish a specialized licensing scheme that more comprehensively addresses the unique nature of TK and the needs of its holders, we looked to the Creative Commons for guidance.

In response to First Nations OCAP²⁵ (ownership, control, access, and possession) policies, this license project aims to give indigenous communities new tools to exert control over their TK. The project also provides a means to clarify expectations in any exchange of TK with those seeking

22, 24, online:

<geoscan.ess.nrcan.gc.ca/starweb/geoscan/servlet.starweb?path=geoscan/geoscanfastlink_e.web&search1=R=288859>.

²⁴ See Sliammon First Nation, *Kla-soms Kwuth Tooqen: a Toolbox for Responding to Crown Land Referrals, Ecotrust Canada and the Aboriginal Mapping Network*, 2008, online: <nativemaps.org/taxonomy/term/186>. The toolbox also discussed language that can be inserted into agreements when it comes to negotiating data sharing related to the land referral process.

²⁵ See The First Nations Information Governance Centre, “The First Nations Principles of OCAP”, online: <<http://fnigc.ca/ocap.html>>.

licensing rights and other downstream users. Although the initial focus and impetus for the project was limited to supporting the GCRC project, the same issues are likely to apply to other knowledge holders and in other contexts of knowledge collection.

This proposal seeks to advance recommendations for a licensing scheme that is of general benefit to TK holding communities, researchers and other third parties. Through their work with communities and other stakeholders, the GCRC and CIPPIC aim to facilitate the development of a licensing scheme that has contractual, copyright and normative value to help indigenous communities better protect their TK. The GCRC and CIPPIC want to facilitate development in a way that allows indigenous communities to publicly share TK for the benefit of others and future generations, while at the same time allowing them articulate their normative expectations around re-use. Our licensing scheme is part of the three main goals which drive the GCRC cybercartography projects that involve TK: building collaborative relationships, creation without exploitation, and anticipating and mitigating potential misuse of mapped information.²⁶

The Creative Commons

This proposed licensing scheme is loosely based on the Creative Commons approach to licensing. Creative Commons copyright licenses [CC licenses] provide users with a standardized form through which they can grant copyright permissions to their creative work. Creators (or licensors) retain copyright while allowing others to copy, distribute, and make approved uses of

²⁶ Teresa Scassa et al., “Traditional Knowledge and Volunteered Geographic Information: Digital Cartography in the Canadian North (Lecture delivered at the GCRC, Carleton University, November 15, 2012), [unpublished], online: <<https://gcr.ccarleton.ca/confluence/download/attachments/9142314/1+-+TK-cybercartography.pdf?version=1.>>.

their work.²⁷

CC licenses allow licensors to decide whether to permit (a) commercial use, and/or (b) derivative works. A derivative work is a work created by the contribution of additional creative effort to an existing intellectual product, which leads to the production of a new and different intellectual product.²⁸ Canadian copyright law does not explicitly refer to derivative works, but they are implicitly referenced through provisions granting protection to translations, musical arrangements, photographs, abridgements, and condensations.²⁹ If a licensor agrees to allow derivative works, they may also include a requirement that the derivative work be available only under the same license terms.

CC licenses consist of three “layers”.³⁰ The first layer is the legal code, which represents the actual legal document that governs the license but is generally only easily understood by lawyers. Because the legal code is not written in terms easily accessible to the general public, the “gist” of the license is also made available in a format that *is* accessible to the general public.

This second layer is known as the “human-readable layer” and includes the Commons Deed and icons. The Commons Deed is a user-friendly summary that enables users to interact with the legal code. The Commons Deed is not a part of the legal code nor does it replace or expand the legal code. The icons act as a visual shorthand for the main permissions of the licenses. Together,

²⁷ Creative Commons, “Licenses”, online: Creative Commons <https://creativecommons.org> [Creative Commons].

²⁸ William J. Braithwaite, “Derivative Works in Canadian Copyright” (1982) 20 Osgoode Hall LJ 191 at 192.

²⁹ *Ibid.*

³⁰ Creative Commons, *supra* note 27.

the Commons Deed and the Creative Commons icons seek to make the content of the licenses easily understood by all potential users of licensed content. Image 1 below is an example of the human-readable layer for the “Attribution-NonCommercial-NoDerivatives” license.³¹

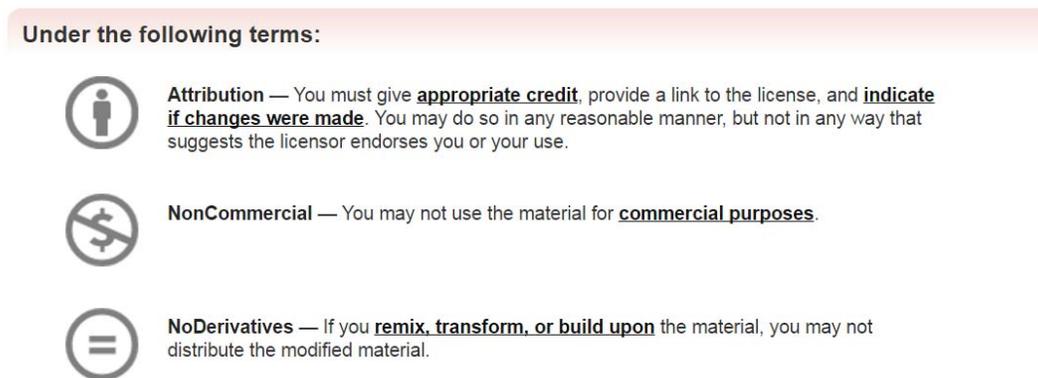


Image 1: Human Readable layer for an Attribution-NonCommercial-NoDerivatives License

The third layer of the CC license is the machine-readable layer, which makes it easier for software to identify works. This layer provides a written summary of the key freedoms and obligations of a license in a format that software applications, search engines, and other technologies can understand. Again, this machine-readable layer is not a part of the legal code nor does it replace or expand the legal code.

Particular permissions and restrictions are defined separately in CC license, in terms easily understood by non-lawyers, and can be combined to address the particular concerns of an individual or organization. For example, an individual can use the Creative Commons Attribution-NonCommercial-NoDerivatives license if they wish to retain a commercial monopoly on their work, while allowing for non-commercial use and prohibiting distribution of “derivatives” (new

³¹ *Ibid.*

works that transform the original).³² CC licenses are litigated internationally and courts consistently conclude that these licenses are valid and enforceable under copyright law.³³ We believe that our proposed licenses can be similarly enforceable.

Proposal

General Description

Our proposed TK licenses offer three forms of protection to licensors, and reflects the three license “layers” approach adopted by CC licenses.

The “legal code” of the license relies on three mechanisms of enforceability. First, the licenses assume that copyright protection will be available to licensors. Copyright grants exclusive rights to creators of original works and imposes obligations on users.

Second, to address cases where copyright is unavailable, the licenses impose the protection of unilateral contract, which is enforceable on the basis that a violation undermines the licensor’s rights under the contract. Effectively, the licensor relies on its control over access to the resource in question—the TK—to impose conditions of use of the TK on the user. Effectively, the user is forced to adhere to the terms of the agreement in order to access the TK and so to respect the interests of the licensor in the TK. Unfortunately, contract can only go so far to protect licensors. Users of TK who access the TK outside of the license—downstream users of publications, for example—may not be captured by the obligatory terms of the license.

The licenses attempt to capture this class of user through a third mechanism: normative obligations. The licenses attempt to clearly state the licensor’s expectations of use. Norms—ethical

³² *Ibid.*

³³ See: https://wiki.creativecommons.org/wiki/Category:Case_Law for examples of cases. In particular, see *Curry v Audax* (2006), Netherlands; *Chang v Virgin Mobile* (ND Tex 2009).

compulsions on behavior—can be a powerful constraint on misuse of resources. We behave in accordance with how we think we *should* behave. These licenses attempt to communicate how people should behave when encountering licensed TK, and this is so regardless of whether or not copyright protection is available or the user considers him or herself bound by contract. The licenses seek to serve as a code of conduct for all users.

In addition to the legal code, these TK licenses, like CC licenses, include a machine-readable layer, which allows the license to be identified by software, and a human-readable layer, which summarizes the license’s important terms and conditions. The human-readable layer is enhanced through use of graphic icons, similar to those used by Creative Commons. Icons help draw the user’s attention to the license and, as the user becomes more familiar with the scheme, serve as shorthand for the specific terms that apply to the TK license. By bringing the user’s attention to the license terms and explaining them in plain language, the human-readable layer increases TK awareness and the likelihood of user compliance.

The unique nature of TK coupled with the unique needs of TK holders make it particularly important that the terms of TK licenses are customizable. Therefore, as with CC licenses, we propose to develop a set of permissions and restrictions that address as diverse a range of circumstances as possible.

Proposed License Terms

“Give Back/Reciprocity” (GB) Term

The “Give Back/Reciprocity” requirement obliges all users of the knowledge to ‘give back’ the research they create to the communities, including: providing relevant communities with copies of any research articles or reports made; providing access to any projects created using the knowledge; or giving the communities a portion of remuneration received from publication or

distribution of the knowledge. The reciprocity principle used in the development and execution of the Inuit Sea Use and Occupancy Project provides an excellent example of giving back knowledge.³⁴

In many cases, remuneration and other types of “Give Back/Reciprocity” obligations raise concerns between first-instance licensees and the community. Accordingly, a separate agreement with these licensees may prove more appropriate than a broad license requirement imposing this obligation on all downstream users.

“Community Consent” (CC) Term

A “Community Consent” requirement obliges all users to obtain community consent before using any knowledge under the license. This license feature is particularly useful for parties who access the knowledge online, but do not have a research license or any direct agreement with the community itself.

The process required to obtain consent differs for each community. In some cases, the license references external documents that explain what community consent means in a particular context. Communities may decide which steps are required to gain consent.

“Use-Based” Consent (UB): Non-Commercial (NC) Term

A license may include terms that focus on the use a licensee intends to make of the licensed TK. A “Non-Commercial” license requirement restricts researchers and outsiders from using TK for commercial gain. Interested parties may still negotiate with the communities to use the

³⁴ Gita Ljubicic, “Inuit Sea Ice Use and Occupancy Project”, *Inuit Sea Ice Use and Occupancy Project*, (14 March 2011), online: <https://gcr.ccarleton.ca/confluence/display/ISIUOP/Communication+Materials>.

knowledge for commercial purposes, but additional terms, including the requirement to pay fees and royalties, may be imposed. This requirement reflects the desire prevalent in many communities that the knowledge they provide be freely available as an educational resource.³⁵

Given that definitions of “commercial” activity can differ significantly, the licensor may wish to be more specific and stipulate whether educational or research use qualifies as non-commercial. The communities may also decide whether a general commercial/non-commercial distinction is sufficient, or if they should choose specific purposes that are allowed or disallowed (e.g. consultants conducting research for resource extraction, journalism, etc.).

Examples of purposes that may have their own requirements are “educational/research only” (see below), “no hunting,” “no fishing” and “no publication” (also expanded below). Along with these purposes, it is likely also necessary to distinguish between local and external users; for example, the licenses should not place any of the aforementioned restrictions on local hunters within a community.

UB: “Education and Research Only” Term

An “Education and Research” requirement again focuses on the nature of the use a licensee intends to make of the TK, restricting use to educational or research purposes only. This requirement is much stricter than a “Non-commercial clause” because it prohibits non-commercial uses that are not for the specific purposes of education or research.

Attribution/Identification Term (BY)

An “Attribution” requirement imposes an obligation to provide appropriate credit to the original contributor of the knowledge. This must be done pursuant to any community expectations

³⁵ Di Leo Browne, *supra* note 18 at 30.

and may involve attributing credit to additional or different people than what is normally required under copyright standards.

For example, Canadian courts have typically held a film's director as the first author, and therefore the first copyright owners, of those works. Though this legal development excludes many participants, like actors and other film subjects, it operates within a framework that prefers clearly defined authorship and ownership. TK community expectations, however, may require that proper recognition is given to all photograph or video participants. For purposes of clarity, labelling this term as "Identification", instead of "Attribution", may assist to distinguish between this TK attribution obligation and ordinary copyright attribution.

Community Attribution/Identification Term (BY)

As described above, the "Attribution" requirement generally means that attribution must credit the original contributor of the knowledge (e.g. an Inuit hunter) and not simply the compiler of the materials into a work (e.g. an academic research team). In some communities, however, individuals may not be considered the "owners" of the knowledge they share. A community "Attribution" requirement, therefore, provides attribution to communities as a whole.

"Hosted Within the Region" (HC) Term

Many northern communities want projects using their TK hosted in the North (for example, at the Inuvialuit Regional Corporation in Inuvik) and not on servers situated in southern cities, such as Ottawa.³⁶ This requirement takes into consideration technical concerns, as well as the location of the equipment that hosts knowledge.

In some cases, an agreement between a community and a licensee may alleviate these

³⁶ *Ibid.*

hosting concerns. However, in cases where knowledge is shared and hosted amongst multiple communities in the North, broader obligations set out in the license itself are appropriate to secure these expectations. It should be noted that this term could have unintended consequences for the publication and distribution of findings based on TK, and thus the subject matter of the license should be considered before this term is deployed in a license.

“No Sharing” (NS) or “Personal Use Only” Term

The “No Sharing” or “Personal Use Only” requirement prevents users from sharing the knowledge they acquire with anyone other than a specified set of communities, groups of communities, and/or groups of researchers. This license may extend beyond the initial community and initial researchers, but it does not extend to third parties who are not bound by the same or similar ethical requirements. Although this is difficult, if not impossible, to enforce in an open online forum, it reinforces the understanding that knowledge is shared only with particular groups for particular uses.

“No Publication” (NP) Term

A “No Publication” requirement obliges users to make a request to the community for any publication of documents obtained or created from the TK presented. The difference between a “No Publication” clause and a “No Sharing” clause is that a “No Publication” clause still allows a reasonably broad, but private, sharing of knowledge amongst other researchers and community members.

It is important to note that the definition of “publication” is capable of many different meanings. Thus, the license drafter needs to give careful consideration to the scope of the term, i.e. what forms of distribution are considered publications.

“Share Alike” (SA) Term

A “Share Alike” requirement requires that any derivative works created using specific knowledge be released under an identical license. Attaching this requirement ensures that future works adhere to the community’s expectations for use of the knowledge. For example, if you elaborate on a journal article using the existing TK, that would constitute a derivative work to be released under an identical license.

“Consent can be Withdrawn” (CW) Term

A “Consent can be Withdrawn” requirement allows individuals and communities to withdraw consent from the project if, for example, they find that their knowledge and/or community is misrepresented, or if the licensor fails to follow the process originally agreed upon. The license could describe a process through which a licensor could withdraw consent, including identifying the entity that has the authority to do so. Agreement to the described process would constitute an agreement to honour any revocation of consent.

It is important to include this consent condition in the license itself where TK is released throughout an ongoing research project. Although a community can almost always withdraw from an ongoing research process, the inclusion of this feature in the license text itself allows the community to revoke permissions from any third parties who have already received the knowledge under the terms of the license.

As Di Leo Browne notes in his report, withdrawing consent is fraught with difficulties in the digital age.³⁷ There is often no way to identify or contact everyone who has received the knowledge, nor any way to ensure that such recipients do not repost the knowledge at a future date.

³⁷*Ibid.*

Indeed, the recipients may do so innocently and without ever being notified of the revocation. In spite of these enforcement difficulties, a license clause to allow the revocation of consent would ensure that the licensed knowledge is removed from the most public and identifiable repositories of the knowledge. It would also highlight to data users that use of the knowledge is dependent upon ongoing respect and cooperation with the wishes and expectations of the communities.

“Mixed Use of License” Terms

TK licenses need to provide clear, easily understood examples of how permissions and restrictions can be combined to provide licensors with protections and controls that suit their needs. Likewise, it must be clear that certain license terms are not compatible with one another. For example, a “Share Alike” term cannot be combined with a “Community Consent” license term because the “Community Consent” terms require that the community consents to the use of any derivative works. By contrast, the “Share Alike” term allows derivative works to exist without community consent as long as the work falls under the same license. Similarly, licensors must appreciate that certain license terms can severely restrict or complicate the use of TK by third parties. For example, if a project were to compile knowledge from multiple sources under different licenses that each contained a “Share Alike” term, the licenses would conflict, rendering them non-interoperable, meaning that the work could not be released. This is because under a “Share Alike” term, derivative works created using specific knowledge must be released under an identical license.

Creating a License: Terms, Concerns and Compatibilities

The charts below represent the kind of information that can assist TK holders with the development of licenses that suit their needs and circumstances.

Concerns, and terms that can address them:

Expectations	Requirements that could cover this concern									
	GB	CC	UC	NC	BY	HC	NS	NP	SA	CW
“I don’t want my knowledge to be used by commercial hunters”		X	X	X			X			X
“ I don’t want my knowledge to be used by mining companies”		X	X	X			X			X
“I want to ensure that the community benefits from sharing this data”	X					X				
“I want the community to retain control over their traditional knowledge”		X				X			X	X
“I would like to retain control over how my knowledge is used”			X			X			X	X

Potentially incompatible terms:

Requirement	Compatible requirements									
	GB	CC	UC	NC	BY	HC	NP	NS	SA	CW
GB	-								X	
CC		-	X						X	
UC		X	-							
NC				-						
BY					-					
HC						-			X	
NP							-	X		
NS								-	X	
SA	X	X				X		X	-	
CW										-

X = not compatible

Abbreviation Key:

GB = Give Back
 CC = Community Consent
 UC = Use-based Consent
 NC = Non-commercial

BY = Attribution
 HC = Hosted within the
 community
 NP=No Publication

NS = No Sharing
 SA = Share Alike
 CW = Consent can be Withdraw

Limitations of the Template Licenses

Consent

It is mandatory that the person seeking a license identify the proper source(s) of consent, ensure that consent is informed, and ensure that all of the necessary consents have been obtained. It must be clear to those seeking licensing rights that obtaining a license is not a proxy for consent. For example, receiving consent from one individual is not sufficient when consent should have been obtained from a community and, likewise, receiving consent from one community does not equal consent from other relevant communities. Issues of consent are not unique to TK licensing. Rather, TK licensing compels those seeking licensing rights to confront these issues and work to find an ethical resolution.

Education

For our proposed licensing scheme to be useful and functional, care must be taken to educate all parties about the nature of TK and the nature of TK licenses.

It is important to educate the user about TK and the specific circumstances of a given TK license. Education could include the history of the protected TK, an introduction to the TK holder(s), and the significance of the TK to that community. This information could, for example, be included in a preamble to the license.

It is equally important to educate TK holders about the potential benefits and limitations of the TK licensing scheme. As previously noted, it is important that TK holders understand that different circumstances dictate the kinds of legal protection accorded to TK. The TK holder should be made aware of the inherent risk associated with licensing the TK. A central responsibility of this TK scheme is to ensure that the consent provided by the holder is informed.

The need for more input and involvement

For this project to succeed, we need to cooperate with the prospective users of this scheme. This proposal seeks to address an issue that has been raised by indigenous communities, but our understanding of the issue is limited to the GCRC's perspective understanding. We expect, however, that this proposal will change as we engage in more direct consultations with indigenous communities. Among other things, involvement of northern and indigenous communities will be imperative to developing possible license terms, identifying ethical and practical issues of the proposed scheme, establishing protocols for overcoming such issues, and trouble-shooting the scheme. Most significantly, perhaps, is the need for involvement of indigenous communities in the translation of documents, including educational materials and the licenses themselves, into as many indigenous languages as possible. This will ensure that all parties share a common understanding of the TK licenses, their terms, and their significance. This may at times be challenging, particularly when equivalent terms do not exist, which highlights the need for comprehensive cooperation.

MURKUTU AND LOCAL CONTEXTS

The Mukurtu project attempts to facilitate the digital preservation and management of indigenous heritage by developing information and media-sharing platforms based on the unique needs of the communities, which foster trust and respectful relationships.³⁸ As was the case with the GCRC project, Mukurtu's mission raised the issue of how to protect indigenous communities' interests in "cultural heritage". This question led to the creation of "Local Contexts", Mukurtu's

³⁸ "About," online: Mukurtu <<http://mukurtu.org/about/>>.

sister organization, to focus specifically on providing “legal, extra-legal, and educational strategies for navigating copyright law and the public domain status of this valuable cultural heritage.”³⁹

The Mukurtu and Local Contexts websites offer users two options for the protection of their TK, though these projects are still in a state of flux.⁴⁰ The first option under Mukurtu is the use of one of two CC licenses: the Attribution—Share-Alike (CC BY_SA) license, which allows others to “remix, tweak, and build upon [a] work even for commercial purposes as long as they credit [the original creator] and license their new creations under the identical terms”; and the AttributionNon-Commercial—No-Deriv (CC BY-NC-ND) license, which is the most restrictive CC license and only allows users to download original material and share it with others so long as the original creator is credited.⁴¹ The second option available under Local Contexts are “Traditional Knowledge Labels,” which “add existing local protocols for access and use” and:

offer an educative and informational strategy to help non-community users of this cultural heritage understand its importance and significance to the communities from where it derives and continues to have meaning. The TK Labels are useful when valuable cultural heritage is in the public domain and appears as though it can be shared and used by everyone.

There are 13 labels specified by Local Contexts:⁴²

³⁹ “About,” online: Local Contexts <<http://www.localcontexts.org/about/>>.

⁴⁰ TK Licences are referred to on the Mukurtu support page, but are not described. As well, there is a Youtube video (https://www.youtube.com/watch?v=uPzneao_3rQ) that enumerates 6 TK Licences including Community Use Only – General, Community Use – Women Restricted, Community Use – Men Restricted, Community Use Only – Men General, Community Use Only – Women General, and Attribution General, however the status of these licences is unclear. For the sake of simplicity, we will refer to the TK licensing proposals of these two related projects under the common term, the Mukurtu Project.

⁴¹ “Creative Commons Usage in Mukurtu,” online: Mukurtu <<http://support.mukurtu.org/customer/en/portal/articles/1306468-creative-commons-usage-in-mukurtu-cms>>.

⁴² “TK Labels”, online: Local Contexts < <http://www.localcontexts.org/tk-labels/>>.

- (1) TK Family (TK F), which is used to indicate that the material is usually only shared between family members;
- (2) TK Seasonal (TK S), which is used to indicate that the material is intended to only be used and heard at particular times of the year and/or that the environment and land where the material derives influences and impacts its meaning and significance;
- (3) TK Outreach (TK O), which indicates that the material is not traditionally intended to be available to the public or used to develop fair and equitable reciprocal exchanges of educational resources;
- (4) TK Verified (TK V), which indicates that the originating community is satisfied with the way in which the TK materials are being represented;
- (5) TK Attribution (TK A), which is used to indicate the correct sources and holders of the material;
- (6) TK Community Use Only (TK CO), which indicates that the material was traditionally intended to be exclusively circulated within the originating community and was never intended to be free, public, or available for anyone at any time;
- (7) TK Secret/Sacred (SS), which indicates that the material contains important secret and/or sacred knowledge that was never intended to be free, public, or available to anyone at any time;
- (8) TK Women General (TK WG) and (9) TK Men General (TK MG), which conveys that access to the material is intended to be restricted to women or men, respectively, within its originating community;⁴³

⁴³ Mukurtu was developed in Australia with Aborigines and the context of sex/gender based inclusion/exclusion has its provenance there.

- (9) TK Women Restricted (TK WR) and (11) TK Men Restricted (TK MR), which conveys that the material is regarded as important secret and/or sacred ceremonial material that has community-based laws in relation to who can access it;⁴⁴
- (10) TK Non-Commercial (TK NC), which indicates that the material is available for non-commercial uses including research, study, and public presentation including non-commercial blogs and websites; and,
- (11) TK Commercial, which indicates that the material is available for future use, that the source community does not have copyright ownership of the material, but that the material may still be protected under copyright and any commercial use will need to be cleared with the copyright holder.

These Labels help readers distinguish the traditional context and significance of different materials, understand the expected terms of its use, and convey to the reader the standard of care owed to the material, ranging from “to think and act with fairness and responsibility towards” the material and its holders⁴⁵ to requesting that a person who comes across the material to not proceed to view the material.⁴⁶ The TK Labels uses “badges”—like Creative Commons icons and our own proposed TK licensing scheme icons—to prominently convey to the public easily understood instructions for use of the material. Unlike a Creative Commons or TK license, however, the TK Labels are intended to have normative influence exclusively rather than impose legally enforceable obligations. Taking advantage of their normative intent and force, these Labels taken together

⁴⁴ *Ibid.*

⁴⁵ “TK Non-Commercial”, online: Local Contexts <<http://www.localcontexts.org/tk/nc/1.0>>.

⁴⁶ “TK Secret / Sacred”, online: Local Contexts <<http://www.localcontexts.org/tk/ss/1.0>>.

encompass a much broader set of interests than those contemplated by CC licenses or our own proposed TK licenses.

The Mukurtu project is a strong effort to address the challenges of permitting use of TK while retaining control over its use. The use of pre-existing CC licenses eases the speed with which TK may be licensed under the project. Similarly, the project's reliance on normative influences reflects our own project's conclusions on the limitations of traditional western IP laws to protect TK.

Our proposed TK licensing scheme differs from the Murkutu effort by attempting to fill slightly different gaps from those addressed by the Mukurtu project. For example, our proposed TK licensing scheme requires “give back” and “reciprocity” terms and a “hosted in the region” term, which not only require all TK users to give the research they create back to the licensing communities, but also requires users to take into consideration technical requirements and where information is hosted. Murkutu does not address these issues. Similarly, our proposed TK licensing scheme offers communities the possibility of reaping the benefits of works created using their TK and to mandate community attribution, as well as individual attribution, and withdraw consent if they find that their TK is being misrepresented. Finally, our proposal of a Share Alike term ensures that future works adhere to the community's expectations for use of the knowledge. Conversely, Murkutu includes terms that we have not considered, such as a “women only” term. These differences suggest the importance of involving the communities intending to use the licenses in their development so that any licensing scheme ultimately drafted reflects the needs of the intended beneficiaries.

The Mukurtu project, like the GCRC project, seek to find ways to incorporate normative principles from indigenous law into the licenses which, therefore, provides valuable insight into

the concerns and needs of the prospective target communities of our proposed TK licensing scheme. TK Licenses could potentially fill a gap in the IP protection offered by Mukurtu and Local Contexts, providing a licensing model that complements the Local Contexts Labels and is more tailored to the needs of TK and indigenous communities than the Creative Commons licensing scheme.

CONCLUSIONS

Researchers working in cooperation with indigenous communities identified the challenge of protecting TK under existing IP laws. In response, we have outlined a proposal for a licensing scheme that seeks to partially bridge these legal gaps. The scheme utilizes copyright law, contract law, and normative considerations to protect the interests of indigenous communities that are underserved by Western IP laws. Our proposed system prioritizes the adaptability of the scheme to the needs of TK holders, as well as the usability of the scheme by non-lawyers.

Next Steps

Going forward, it is important to establish and implement an oversight authority for the licensing project. We believe that it is crucial to do this in consultation with self-governing indigenous stakeholders and communities to create tailored responses that are responsive to the needs of the communities involved. This process can be facilitated through collaboration with indigenous law clinics across the nation.

An effective TK licensing system requires legal discourse and testing. The language included in the licenses and deeds and their associated icons must be developed, assessed, and trialed. This process requires collaboration with indigenous and user community stakeholders to ensure that the

protections offered by the licenses are easily understood and selected by license users and their obligations easily understood and accepted by licensed TK users.

To succeed, the project requires considerable promotion and support. Resources need to be dedicated to the development of the scheme's content. This should be accomplished in a manner that involves the collaboration of indigenous law clinics across Canada, civil society groups, TK user stakeholders, and government bodies.

Finally, the project's limitations should be clearly communicated to and understood by all stakeholders. Our proposed TK licensing scheme does not solve the problems associated with the use of TK, nor does the use of a TK license guarantee respect for the interests of affected communities. It is a modest proposal. However, among good faith TK holders and users, it can enhance certainty of expectations among all parties and promote the interests of both sides to a transaction involving TK. To this extent, we suggest that our proposed TK licensing scheme has modest benefit and is worth pursuing.

