

A TALE OF
CYBERJUSTICE

A TALE OF CYBERJUSTICE

A MODERN APPROACH TO TECHNOLOGY
IN THE CANADIAN JUSTICE SYSTEM

CYBERJUSTICE LABORATORY



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

10

A TALE OF
CYBERJUSTICE

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The broadening of the Internet to the general public and to commercial initiatives has made original experiments possible, including those in online dispute resolution (ODR), which have deeply changed our ways of doing things and how we see the world. The justice system has not evolved very much since the nineteenth century, when many rituals and practices were enshrined in our judicial institutions. They still shape those institutions and we should not reject them on the basis of poorly understood modernity. They have met and still meet many of the needs of justice system stakeholders, including litigants and defendants. Finality of judgment is a principle that derives part of its efficiency from those rituals and practices, but information and communications technologies (ICTs) provide us with a fresh way of seeing them, along with the justice system as a whole, challenging us to question the object, nature, usefulness, purpose, cause and consequences of those artefacts.

This is, in particular, what the researchers devoted themselves to in the Towards Cyberjustice project, which was funded by the Social Sciences and Humanities Research Council of Canada. Over a seven-year period (2011–2018), the Towards Cyberjustice team engaged in the detailed study of different experiments in computerization and networking of justice systems that have been carried out in Canada, the United States, Europe and elsewhere in the world. It examined the many rituals, practices and procedural and evidentiary requirements that can be obstacles to modernizing courts. It also performed simulations of software applications developed by the Cyberjustice Laboratory

information technology team to ensure that socio-legal considerations were being taken into account. Substantial added value flowed from the Towards Cyberjustice team's cross-fertilization of the techno-legal and socio-legal dimensions of computerizing and networking the justice system. In particular, the team's work made it possible to design and develop software tools specifically for the justice system instead of adapting commercial software intended for other purposes (for example, client management).

In light of these results, the team came up with new procedural approaches, that is, new ways of resolving certain types of conflicts. For example, ODR platforms designed for disputes arising on the Internet can be tailored to prevent and resolve low-intensity disputes (concerning consumer issues, housing, labour, petty crime, etc.). ODR platforms are ways of meeting the need for access to justice by allowing litigants and defendants to find resolutions for low-intensity disputes quickly and economically. The pilot project that has been ongoing with Québec's consumer protection office since October 2016 is a very concrete illustration of this. The PARLe ODR platform (Platform to Aid in the Resolution of Litigation electronically¹) has made it possible to reduce the time required to resolve consumer disputes down to 27 days, on average, from what used to take up to 12 months when dealt with through the courts. Moreover, the platform has freed up courts to give them time to deal with more complex cases that truly need to be heard. It is easy to imagine an ODR platform intervening prior to the judicial or quasi-judicial process to facilitate dispute processing and resolution. That type of platform can then be linked to a court of justice or administrative tribunal to create a continuum: from negotiation to mediation, and

from mediation to adjudication. Ontario's Condominium Authority Tribunal² is an illustration of a continuum through which litigants seek first to negotiate an agreement with the adverse party. If that fails, they move on to mediation, and then, if necessary, to adjudication; that is, a judge takes the case in hand. Depending on the circumstances, the judge may continue the dispute resolution process online or summon the parties to appear. These new procedural models are now being complemented by work on artificial intelligence tools for use in ODR platforms to assist in finding solutions.

This summary describes the different stages in the Towards Cyberjustice project and provides a survey of forthcoming work that is the logical continuation of what was done from 2011 to 2018. It contains new information and references for future research and to learn more about the field. I invite you to follow the activities of the Cyberjustice Laboratory and the new work being done by the Autonomy through Cyberjustice Technologies³ (ACT) Project, which began in June 2018 and will continue over the next six years.

I hope you will enjoy the read!

Prof. Karim Benyekhlef
Director
Cyberjustice Lab
Towards Cyberjustice
ACT Project

¹ The Cyberjustice Laboratory. "PARLe", online: <https://www.cyberjustice.ca/en/parle-3/nos-solutions-logicielles/parle-2/>.

² "The Condominium Authority Tribunal (CAT)" developed by the Cyberjustice Laboratory, online: <https://www.condoauthorityontario.ca/en-US/tribunal/>.

³ The Cyberjustice Laboratory, "ACT: Autonomy Through Cyberjustice Technologies", online: <https://www.ajcact.org/en/>.

A TALE OF CYBERJUSTICE



When the Cyberjustice Laboratory launched its Towards Cyberjustice project, the idea sounded otherworldly to many individuals within the legal community who saw this endeavour as futile or, worse, as a threat to their livelihood. Questions abounded: How could technology possibly improve the justice system without adversely affecting some of its main tenets? How could technology be used to reduce both costs and delays where most other endeavours to make the system more accessible have failed to do so? How could we bridge the divide between technology and Justice while simultaneously improving practices, approaches, and processes? But, most importantly to many in the legal community, how will forthcoming technological changes affect my bottom line?

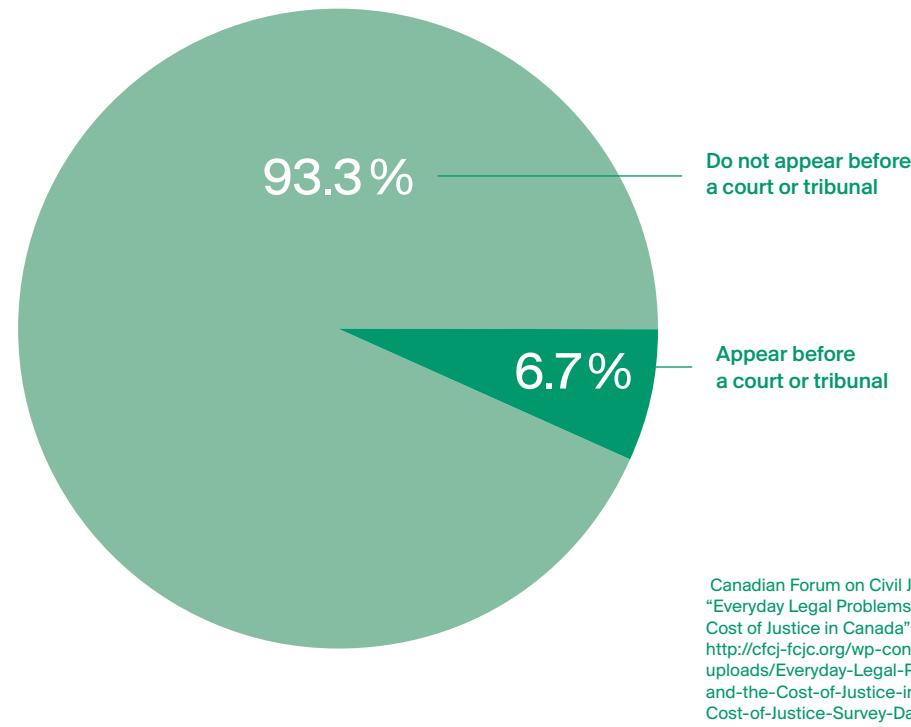
Of course, although some cynics might argue that the legal system's main goal is to make lawyers wealthy, this obviously isn't the case. Therefore, while the fate of those within the legal community with the rise of technological innovations was and remains a valid question, our focus was steered towards how technology could increase access to Justice and not how it could adversely affect lawyer's antiquated income models.

While its recent overuse in stump speeches, press releases and other political publications has transformed "access to justice" into what can be perceived as a simple buzzword, it remains a fundamental principle at the core of our modern and democratic society. Without laws, democratic societies cannot function; and without access to Justice, these laws have no true meaning or purpose.

That being said, it is universally acknowledged that the Canadian justice system—like that of most modern nations—suffers from severe shortcomings, from its

USE OF THE FORMAL JUSTICE SYSTEM

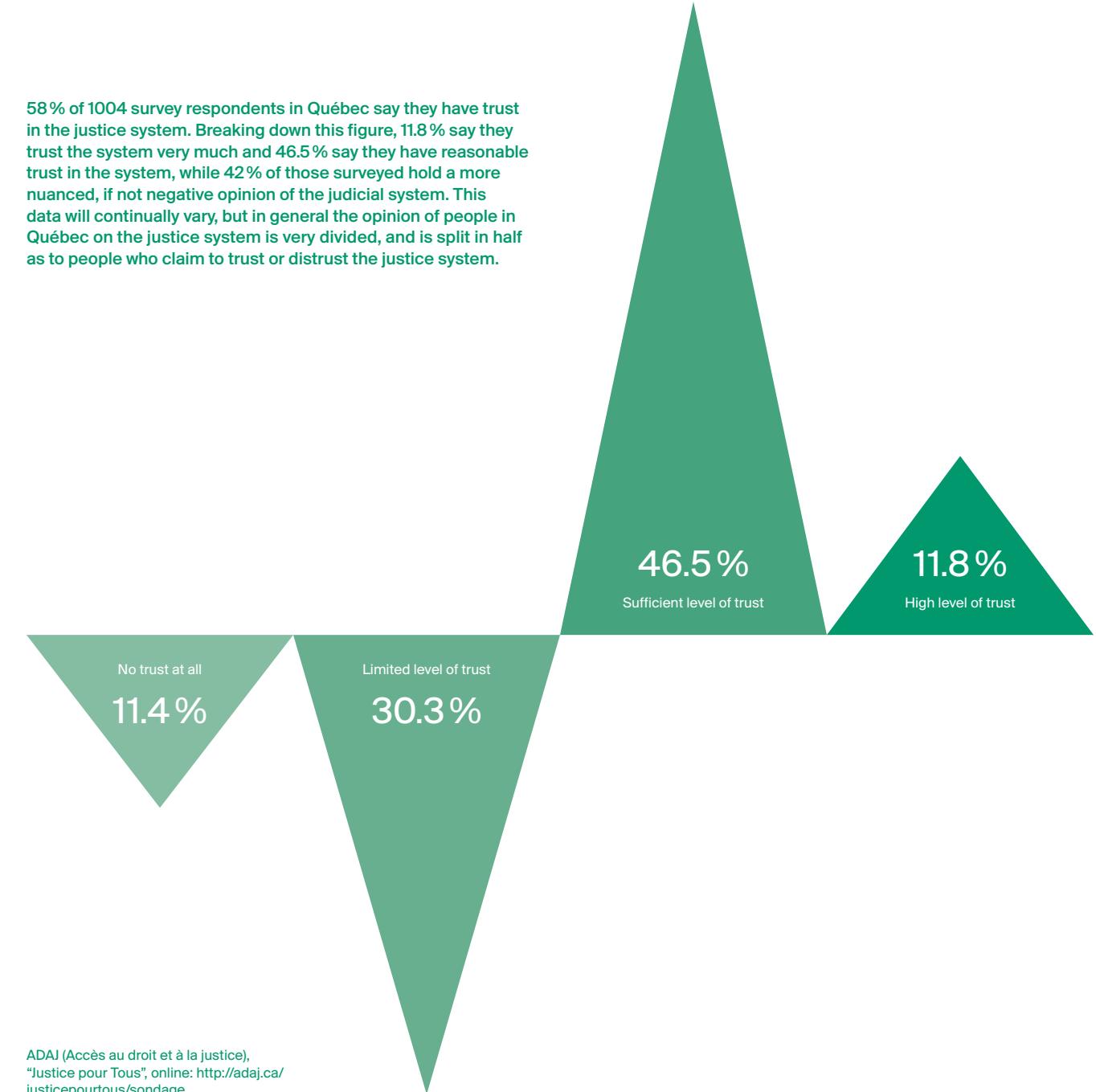
Only 6.7% of Canadians, who experience at least one and up to seven civil or family justice problems in a given three-year period appear before a court or tribunal to try to resolve their problems.



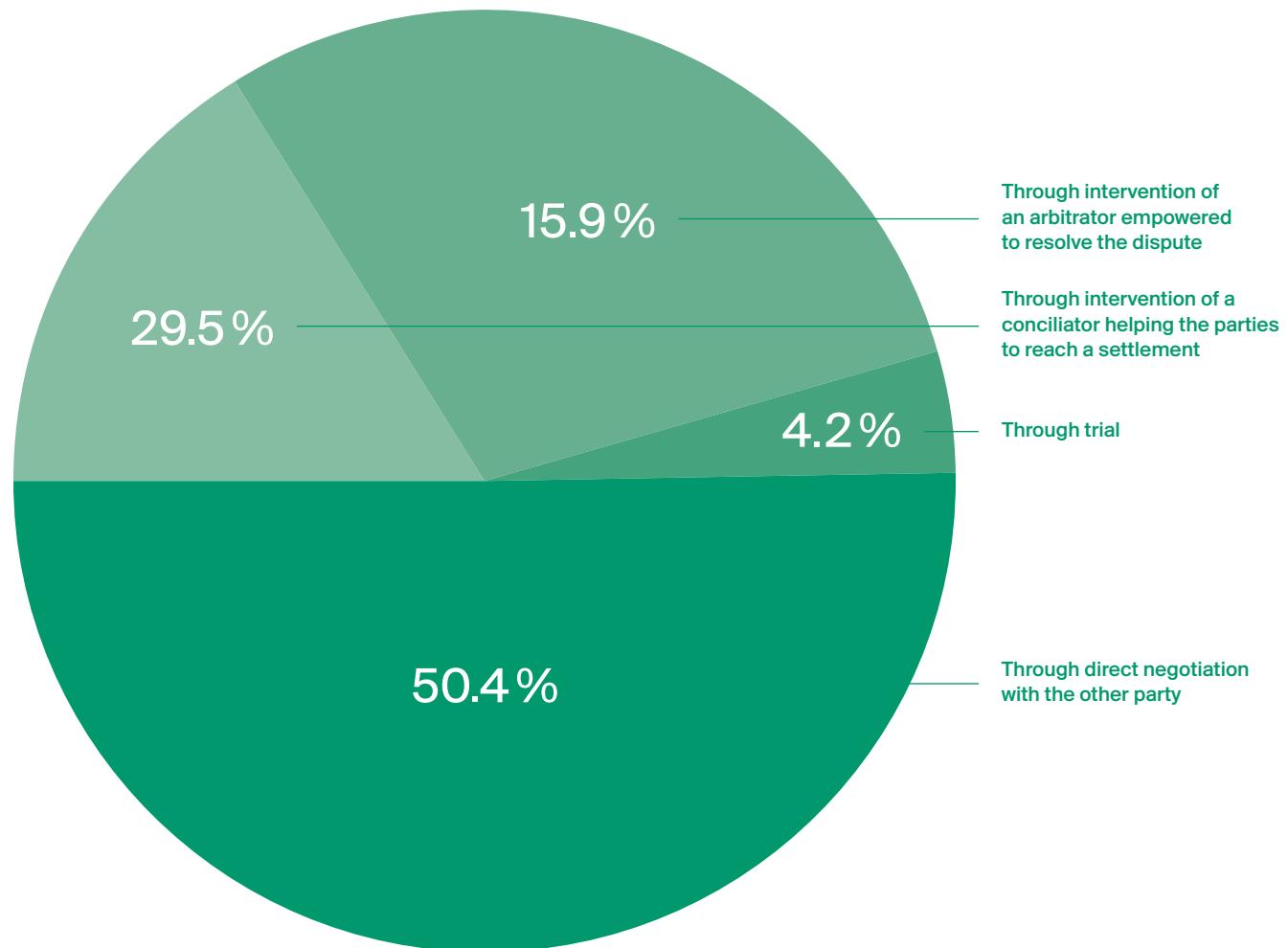
significant costs and lengthy delays to its rituals and practices that make it bewildering and perplexing to onlookers. The justice system is suffocating and leaves behind many individuals who would often rather give up their rights than be subject to the complexities associated with going to trial. Even more worrisome, however, than the idea that certain individuals decide not to pursue their day in court, is the fact that some may not be granted such a choice to begin with because of their social, physical, or financial status.

GENERALLY SPEAKING, WOULD YOU SAY THAT YOU HAVE TRUST IN THE QUÉBEC JUSTICE SYSTEM?

58 % of 1004 survey respondents in Québec say they have trust in the justice system. Breaking down this figure, 11.8 % say they trust the system very much and 46.5 % say they have reasonable trust in the system, while 42 % of those surveyed hold a more nuanced, if not negative opinion of the judicial system. This data will continually vary, but in general the opinion of people in Québec on the justice system is very divided, and is split in half as to people who claim to trust or distrust the justice system.



FROM A PERSONAL STANDPOINT, IF YOU HAD A SERIOUS ISSUE WITH ANOTHER PERSON, HOW WOULD CONSIDER RESOLVING IT?



When confronted with a major problem involving another person, just over 50% of people in Québec would prefer to negotiate a settlement directly with this person, while nearly 30% would like to be helped by a third party acting as mediator. Only 4.2% of respondents would choose the path of a trial. This data tends to confirm respondents' desire to settle their disputes outside the courts, as currently provided in the Code of Civil Procedure.

ADAJ (Accès au droit et à la justice), "Justice pour Tous", online: <http://adaj.ca/justicepourtous/sondage>.

Surely, in a world where computers, cellular phone technology and the Internet have revolutionized almost every aspect of society, this *status quo* could not stand. Yet, despite the significant technological advances of the digital age, the use of information and communication technologies within the justice system is severely lagging—a reality that is evidenced by courts' persistent attachment to physical documents despite the possibility of using electronic ones.

It is against this backdrop that the neologism that is “cyberjustice” emerged and was crafted. Although others have since made the word their own, “cyberjustice”, as we chose to define it, refers to the integration of information and communication technologies (ICT) into judicial or extrajudicial dispute resolution processes. In its broadest acceptance, it implies the networking of all stakeholders in the informational chain for judicial cases. In this sense, the creation of the Cyberjustice Laboratory and, subsequently, the launch of the Towards Cyberjustice project aimed to conduct and promote research building towards the creation of a more accessible justice system through the integration of technology.

However, to better understand the intricacies of the Towards Cyberjustice project and the vision behind the creation of what would become the Cyberjustice Laboratory, one needs to take a journey through the past, present and future of Cyberjustice, and discover the who, what, how, when, and why of this innovative and groundbreaking movement.

An Idea was Born

After studying software modelization and networking of mediation and arbitration processes for more than ten years, it seemed only natural to turn my attention towards the “classic” legal system. Nothing justified neglecting the judicial system from a technological standpoint... It has suffered from the same ailments for centuries: a slow and costly process. I believed—and still do—that technology constitutes a remedy to these ailments. This belief is what encouraged me to launch this endeavour.

Karim Benyekhlef
Director of the Cyberjustice Laboratory

Beyond a mere concept, cyberjustice is first and foremost a unique idea. It represents a forward-thinking ideology according to which the justice system, as conceptualized centuries ago, has arrived at a crucial crossroads where it must opt between modernization and mummification. In its current form, the justice system suffers from a severe lack of efficiency that often leads to extreme costs and lengthy delays. These drawbacks—we successfully posited—can often be improved using technological tools. Technology can, for example, help increase the speed of judicial proceedings by eliminating certain delays (messengers, data entry, etc.). It can also reduce the costs imposed on individuals by allowing them to pursue their rights from the comfort of their own homes, or make it simpler for individuals with disabilities to exercise their right to be heard.

IMPACT OF TECHNOLOGY ON JUSTICE



Speeds judicial proceedings



Reduces costs for individuals



Remodels the Justice system



Makes it simpler to exercise one's rights

Technology, however, can do more than simply allow for the digitalization of processes, the increase of efficiency through automation, or the networking of stakeholders (what we would refer to as the first age of cyberjustice). It can also be used to optimize and remodel the justice system in ways that seemed previously inconceivable—to create new procedural models. Thus, although cyberjustice is a technology-oriented term, it is not solely about the integration of technology into the justice system. Rather, cyberjustice aims to redefine the very idea of justice, and discover how it can and should be provided in our modern society. To achieve this feat, it takes a meeting of minds, creativity, openness and the will to change; it requires a place, a team and a community gathered around a single unique and innovative vision that leads us towards cyberjustice.

First Age The Digitalization of Existing Court Processes

"Justice practices inspired by digital technology have a reasonable chance of taking hold only if they involve a simple transposition of the established forms of socialization." *

The first cyberjustice endeavours, although sometimes quite ambitious from a technological standpoint, showed little innovation as far as processes. Prevalent practices were not replaced, they were copied and transposed in a digital environment. The same documents were drafted by the same entities and filed with the same courts and tribunals. Paper was replaced by bits, but the filing process followed the exact same steps.

This type of approach ensures that legal stakeholders (mainly lawyers), will be comforted by the fact that processes remain familiar even if the technology evolves.

Advantages associated with first age endeavours are usually linked to the progressive disappearance of paper:

Faster communication of documents, automatic filing capacities, diminishing printing and storing costs, etc. However, this approach does not exploit information technology tools and processes at their fullest.

* Pierre Noreau, "The Old... and the New? Elements for a General Theory of Institutional Change: The Case of Paperless Justice" in Karim Benyeklef et al, eds, *eAccess Justice* (Ottawa: University of Ottawa Press/Presses de l'Université d'Ottawa, 2016) 263 at 291.

Second Age

The Creation of New Procedural Models

“Rethink judicial and extrajudicial practices by developing new procedural models based on the integration of information and communication technologies, all the while ensuring that this profound change will properly respect fundamental rights and freedoms.” *

While First age solutions are often justified by actuarial arguments (costs and delays), a Second age approach is more concerned with the rationale behind existing processes. At this stage, technology is seen as a catalyst for legal reform rather than a simple tool to increase efficiency. The major flaw of First age solutions is that, by simply transposing existing processes online, they often carry their flaws and inefficiencies into the digital environment. Superfluous and redundant practices are therefore grandfathered in and remain a hurdle to true access to justice.

A Second age approach aims to remove these hurdles by reimagining processes in a way that exploits the potential of informational technologies (IT) to create asynchronous,

automated, and accessible legal platforms and environments. Online courts and tribunals that have forgone traditional processes to incorporate online dispute resolution tools, such as the Condominium Authority Tribunal in Ontario or the Civil Resolution Tribunal in British Columbia, are examples of a Second age approach.

* Karim Benyekhlef, “Introduction” in Karim Benyekhlef et al, eds, *eAccess Justice* (Ottawa: University of Ottawa Press/Presses de l’Université d’Ottawa, 2016) 1 at 7.

Third Age

Leveraging Artificial Intelligence (AI) to Prevent & Resolve Conflict

“Should we come to master those tools and obtain a sufficient quantity of exploitable data, meaning data labelled in a way that can be analyzed by a machine, legal and judicial sciences may have to thoroughly readjust their modes of operation.” *

The Third age of cyberjustice remains in an embryonic stage and time will tell if it will ever truly materialize itself. With the advent of new and more reliable deep learning algorithms and other forms of artificial intelligence, we could see a shift in how legal information is communicated and consumed. To be clear, this Third age does not imply replacing judicial review with algorithms or forgoing due process by nominating “robot judges.” Rather, we predict that these algorithms could be used to offer assistance to parties, lawyers and judges.

Therefore, the Third age revolves around AI offering assistance in navigating legal processes rather than predictive or decision-making algorithms.

* Karim Benyekhlef, “Introduction” in Karim Benyekhlef et al, eds, *eAccess Justice* (Ottawa: University of Ottawa Press/Presses de l’Université d’Ottawa, 2016) 1 at 17.

When we started meeting with stakeholders to gather support for the creation of the Cyberjustice Laboratory, many had trouble understanding what we aimed to accomplish. From the creation of an online court where we would seize jurisdiction of all disputes emerging from cyberspace, to holographic courtrooms, it was fascinating to hear what the term “cyberjustice” awoke within people’s psyches.

Nicolas Vermeyns
Associate director of the Cyberjustice Laboratory

The Creation of the Cyberjustice Laboratory

The Cyberjustice Laboratory was launched in 2010 after five years of careful planning, meetings with stakeholders, and gathering support from decisionmakers. It was the brainchild of Université de Montréal Professor Karim Benyekhlef and McGill University Professor Fabien Gélinas, who had previously collaborated on the successful launch of several online dispute resolution (ODR) projects.

However, the seed that would develop into the Cyberjustice Laboratory was actually planted years prior, in 1996, when Professor Benyekhlef spearheaded the very first research project on ODR: the CyberTribunal, a platform that helped settle dozens of online consumer disputes. This project essentially marked the beginning of the Université de Montréal’s experiments in what would become the field of cyberjustice.

The work conducted throughout this project allowed for the creation of eResolution, which was accredited as a Uniform Domain Name Dispute Resolution Provider by the Internet Corporation for Assigned Names and Numbers (ICANN) and successfully resolved over 500 disputes throughout more than 50 countries. In 2001, eResolution built the ECODIR (Electronic Consumer ~~Dispute~~ Resolution) platform aimed at providing European consumers with an option to resolve their disputes electronically. Sponsored by the European Union and executed by the Université de Montréal’s Centre de recherche en droit public (Centre for Research in Public Law) in collaboration with the Université de Namur’s Centre de Recherches Informatique et Droit (Research Center in Law and Computer Science), and the Centre National de la Recherche Scientifique (National

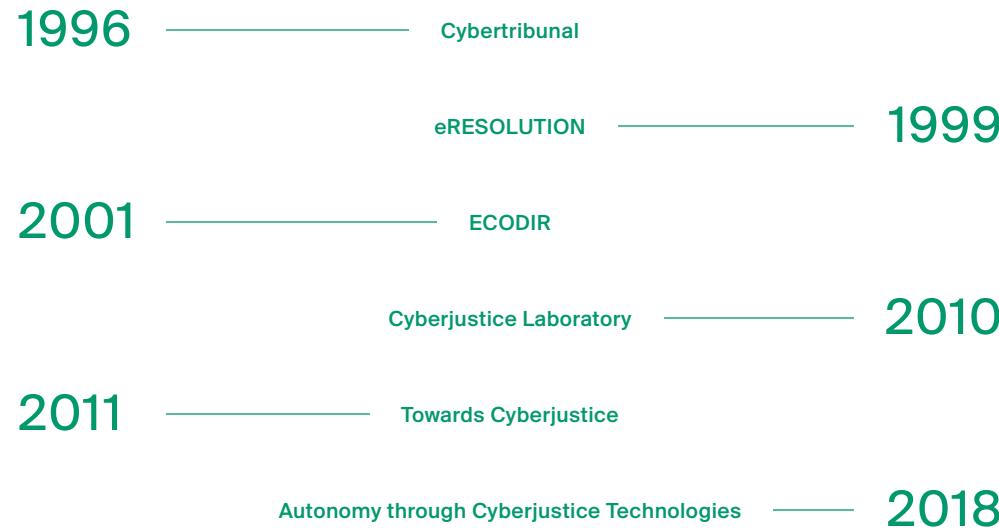


Prof. Karim Benyekhlef
and Prof. Fabien Gélinas



Published in 2003, *Le règlement en ligne des conflits – enjeux de la cyberjustice*, would constitute a reflection on previous projects, and one of the first building blocks of the Towards Cyberjustice project.

TIMELINE OF THE PROJECTS PRECEDING
& SUCCEEDING TOWARDS CYBERJUSTICE



Scientific Research Centre), ECODIR was a pioneering endeavour that would later influence the work of the United Nations Commission on International Trade Law, as well as the drafting and adoption of Europe's current regulation on online dispute resolution for consumer disputes.

These projects or, to be more precise, their successful outcomes, demonstrated that technology could be used to facilitate the settlement of disputes outside of the judicial system. A question remained, however, as to whether the lessons learned from the CyberTribunal, eResolution and ECODIR projects could be applied to the courts. Since it has been well established that technology is not neutral, bringing more technology into the courtroom could have unforeseen negative effects. It therefore became obvious that the next step towards a better grasp of what cyberjustice

TECHNOLOGY IS NOT NEUTRAL



It distorts perception



It authorizes or forbids certain actions



It encompasses the biases & prejudices of its developers



It can affect the arrangements of societal power structures

could represent was to create a research infrastructure to study how to best implement technological change while respecting the immutable pillars of our justice system.

Of course, designing this research infrastructure became a journey onto itself. The obvious first step was to create a technologically advanced courtroom, but this had already been done successfully by our colleagues at the Center for Legal Court Technology (CLCT). If we wanted to truly be innovative, we needed to go further. Moreover, building a technologically advanced courtroom implied numerous technological choices that would impact procedure, information flows, transparency, etc.

"Technology is not neutral. Each technology has properties—affordances—that make it easier to do some activities, harder to do others." *

* Donald A. Norman, *Things That Make Us Smart: Defending Human Attributes in the Age of the Machine*, (Boston: Addison-Wesley Longman, 1993).

We therefore chose to base our design on what would become our mantra: a dual approach that would combine socio-legal and techno-legal research. The socio-legal research would try to answer the “why”: why aren’t the courts using more technology? Our hypothesis was that certain legal rituals simply made it difficult to abandon current practices in favour of new digital models. Of these rituals, two seemed particularly daunting to overhaul: our dependency on paper, and the perceived need for all parties to be physically present inside the courtroom. This dictated the creation of two of the main components of our infrastructure: First, the aforementioned technologically advanced courtroom would have to be designed around the digitalization of all forms of documents. This would allow us to study how the courts can wean themselves away from their reliance on paper. Second, we would need to build a satellite courtroom that would allow for distance hearings to be held, therefore studying the effects of distance and telepresence on proceedings.

These rooms would allow us to run simulations that would not only deal with the “why”, but also the “how”: how can technology be adapted to be incorporated into courtrooms and court processes without negatively impacting a party’s rights or the general fairness of proceedings?

As for the techno-legal research, it would try to answer the “what”. What types of technological tools will succeed in making the legal system more accessible? Since these tools weren’t freely accessible at the time, answering this question implied the creation of a space where we could develop software aimed at modernizing the justice system. This would become the third main component of the Cyberjustice Laboratory.

CYBERJUSTICE LABORATORY'S DUAL APPROACH



Hence, the conceptualization and construction of the Cyberjustice Laboratory began in 2009 at the Université de Montréal (where the technologically advanced courtroom, the computer laboratory, and the main server room would be situated), and at McGill University (where the satellite courtroom would be housed). Inaugurated in 2010, the Lab is now recognized across the country and around the world as a creative think tank that aims to remodel and reimagine judicial processes by analyzing the impact of technology on justice and developing concrete technological tools that are adapted to the reality of justice systems. Its two courtrooms are used to hold trials and simulations using state of the art audio-visual technology, which allows for multi-videoconferencing as well as the presentation of digital evidence in a manner that enables the live annotation of evidentiary documents while they are being presented.

The Genesis of the Towards Cyberjustice Project

With the rising interest and expectations from those within the legal community towards the Cyberjustice Laboratory's research and objectives, it became clear that the handful of researchers and staff that constituted the Lab's nucleus could not perform the work and achieve the goals set forth on their own. First, because they were too numerous and time-consuming, second because they required expertise beyond that of legal scholars and computer programmers. In order to truly identify how to put forth concrete solutions for problems affecting the administration of justice—such as high costs, lengthy delays and procedural complexities—we needed to surround ourselves with experts from social science, information science, and obviously, computer science.

This is what led us to structure and submit a Research Initiative Grant proposal to the Social Science and Humanities Research Council for what would become *Towards Cyberjustice*. Funded in 2011, and directed by professor Karim Benyekhlef, the Towards Cyberjustice project revolved around the reimagining and remodeling of judicial procedures using information and communication technologies. Achieving this feat was, however, no trivial task and required completely reworking legal traditions that have been predominant in society for hundreds of years. As such, the Towards Cyberjustice team pursued its ambitious aims under the auspices of three working groups:

- 1 The digitalization of justice
- 2 The limits of digitalization
- 3 New procedural models

THE LABORATORY'S THREE MAIN INFRASTRUCTURAL COMPONENTS



1 High-tech courtroom



2 Computer laboratory



3 Satellite courtroom

These three working groups would embody the three steps deemed necessary to achieve our goal of improving access to justice through the use of technology:

- Determine the extent to which incorporating technology into the justice system might increase access to justice;
- Identify the obstacles surrounding the networking of judicial procedures; and
- Facilitate the integration of technologies into the justice system while ensuring respect for today's traditions and professional practices.

Modernizing the Justice System Through a Multidisciplinary Approach

As previously alluded to, the Towards Cyberjustice project was not the work of one person, or even a handful of individuals. It was a collaborative effort that relied on the contribution of 37 researchers stemming from over 20 universities and research centres from around the world, as well as nine partners. This elite group of researchers, which included specialists from a number of different disciplines including computer science, law, anthropology, sociology and psychology, approached the computerization of the judicial system not as a simple technological installation –these types of approaches had proven unsuccessful in most jurisdictions where they were implemented—but rather as a complex multi-faceted and multidisciplinary issue.

This multidisciplinary approach enables the project to consider the socio-political context surrounding the justice system and to ensure that the solutions developed would take all possible perspectives into account. In addition to benefiting from this multi-faceted approach, the Laboratory's

TOWARDS CYBERJUSTICE CONTRIBUTORS

Anthropology (1) Karine Bates	History (1) Michel Morin	Philosophy (1) Daniel Weinstock
Psychology (1) Tara Burke	Information Sciences (2) Yves Marcoux Marie Demoulin	Media Studies (2) Jacquelyn Burkell Darin Barney
Computer Sciences (4) Daniel Amyot Benoit A. Aubert Gilbert Babin Joost Breuker	Law (22) Carl Baar Jane Bailey Immaculada Barral Viñals Karim Benyekhlef Rosario Duaso Calés Harold Épineuse Marco Fabri Xuhui Michael Fang Vincent Gautrais Fabien Gélinas Antoine Garapon	Sociology (3) Christian Licoppe David Tait Karine Gentelet Gregory Hagen Ethan Katsh Fredric I. Lederer Bertrand Du Marais Catherine Piché Yves Poulet Graham J. Reynolds Jean-François Roberge Meredith Rossner Pierre Trudel Nicolas Vermeyen



Published in 2016, *eAccess to Justice*, constitutes an overview of the Towards Cyberjustice Team's many projects and reflections.

researchers and affiliates also collaborated with legal actors and judicial systems to further increase the likelihood that those solutions developed throughout their research were more likely to be accepted within the legal community.

As stated earlier, team separated into three distinct but interconnected working groups, each of which concentrating on a different aspect of the project.

The Digitalization of Justice

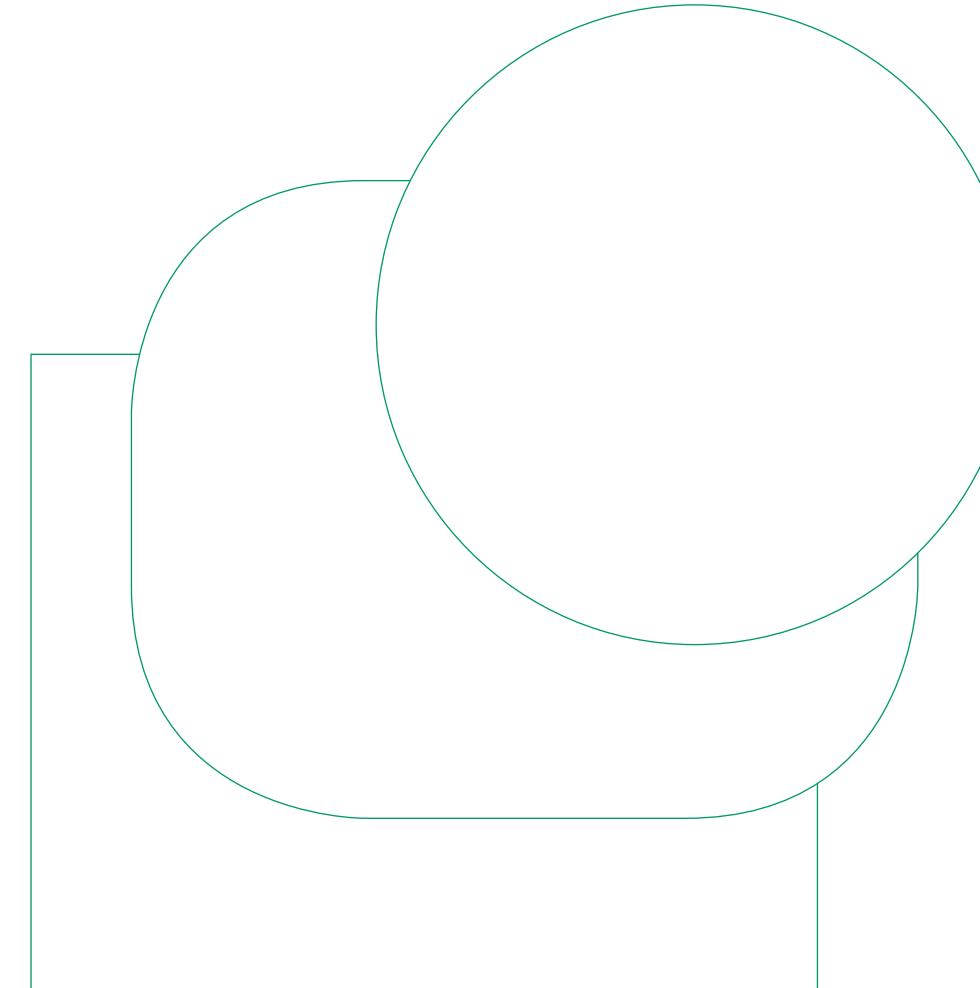


LEADER
Professor Jane Bailey, University of Ottawa

MEMBERS
Graham J. Reynolds, Benoit A. Aubert, Gilbert Babin,
Joost Breuker, Marie Demoulin, Marco Fabri, Vincent Gautrais,
Fredric I. Lederer, Yves Marcoux and Pierre Trudel

Identify the degree to which the digitalization of justice could increase its efficiency and facilitate access.

The aim of the first working group was to identify the extent to which the incorporation of technology into the justice system could in fact increase access to justice. This information was obtained through the analysis of international examples of cyberjustice technologies, such as electronic case filing and management and electronic evidence management, in order to learn from foreign experiences and extract those elements that would best fit the Canadian context.



The Limits of Digitalization

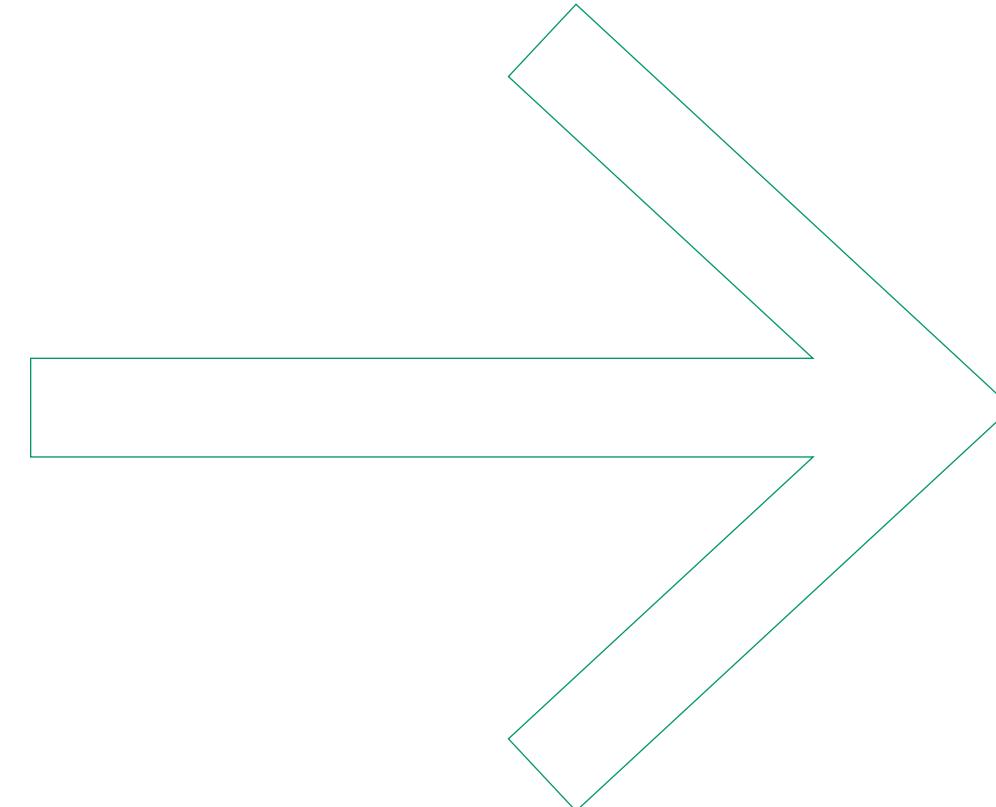


LEADER
Professor Jacquelyn Burkell, Western University

MEMBERS
Michel Morin, Tara Burke, Bertrand du Marais,
Christian Licoppe, and Daniel Weinstock

COLLABORATORS
Darin Barney, Antoine Garapon, David Tait,
and Meredith Rossner

The second working group aimed to examine barriers to the digitalization of the traditions, practices and rituals that the judiciary, as well as the justice system as a whole, relies on to ensure order. This analysis was accompanied by both a psychological and sociological study that examined the behaviour, attitudes and perceptions of the stakeholders involved in the justice system, and how they would each be affected based on the incorporation of information and communication technologies within the justice system. The main aim of this analysis was to ultimately identify the factors contributing to stakeholders' resistance to technological change and to determine how to overcome these issues.



**Identify the constraints and limits on the digitalization
of justice with respect to the traditions, practices
and rituals in the justice setting.**

New Procedural Models

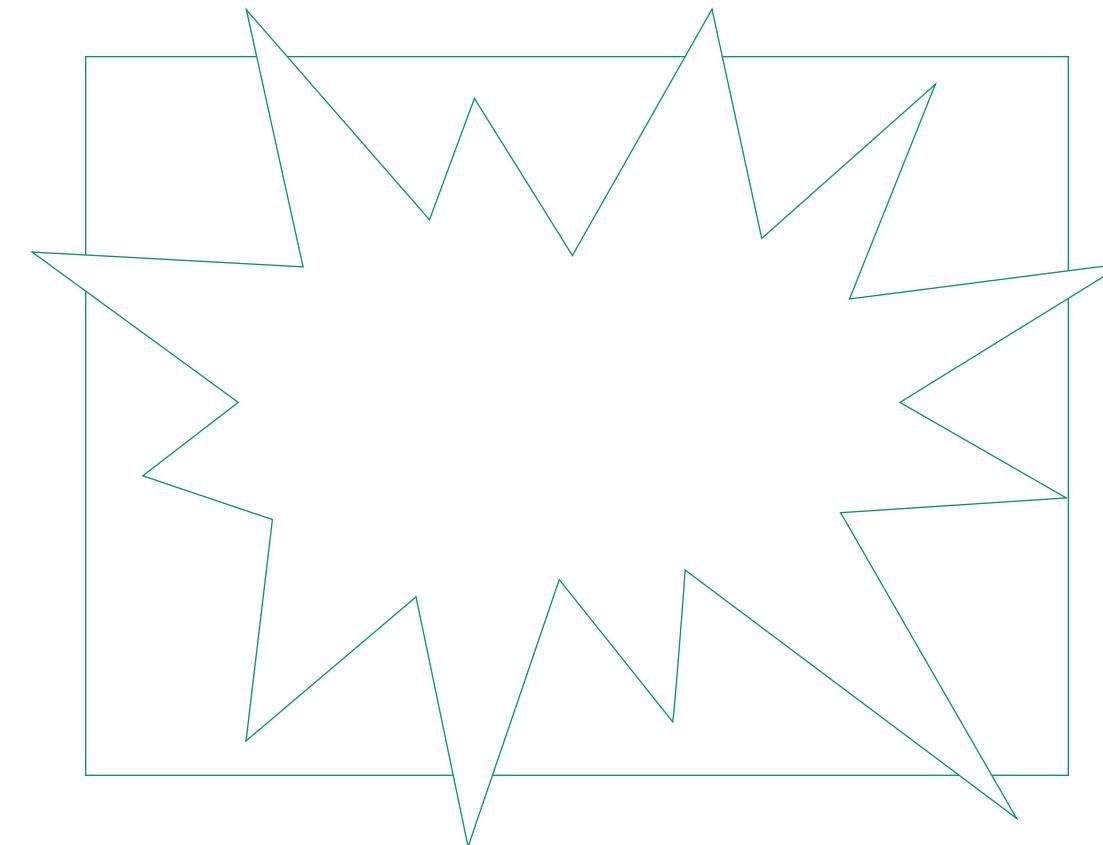


LEADER
Professor Fabien Gélinas, McGill University

MEMBERS
Harold Épineuse, Karine Bates, Carl Baar, Gregory Hagen,
Ethan Katsh, Catherine Piché, Nicolas Vermeys,
Karim Benyekhlef, and Jean-François Roberge

Rethink judicial and extrajudicial practices by developing new procedural models based on the integration of information and communication technologies while ensuring respect for fundamental rights.

Finally, the aim of the third working group was to develop new procedural models to allow for the integration based on the information and communication technologies while simultaneously ensuring that fundamental rights are duly respected. This was achieved by examining existing models in judicial and extrajudicial environments as well as by working on the governance of information systems. The research performed led to the identification of a number of fundamental principles that can guide decision-makers in their development of new procedural models.



37

Researchers

9

Disciplines

30

Software applications

20

Universities and research centers

9

Partners

Argentina

Belgium

Canada

China

England

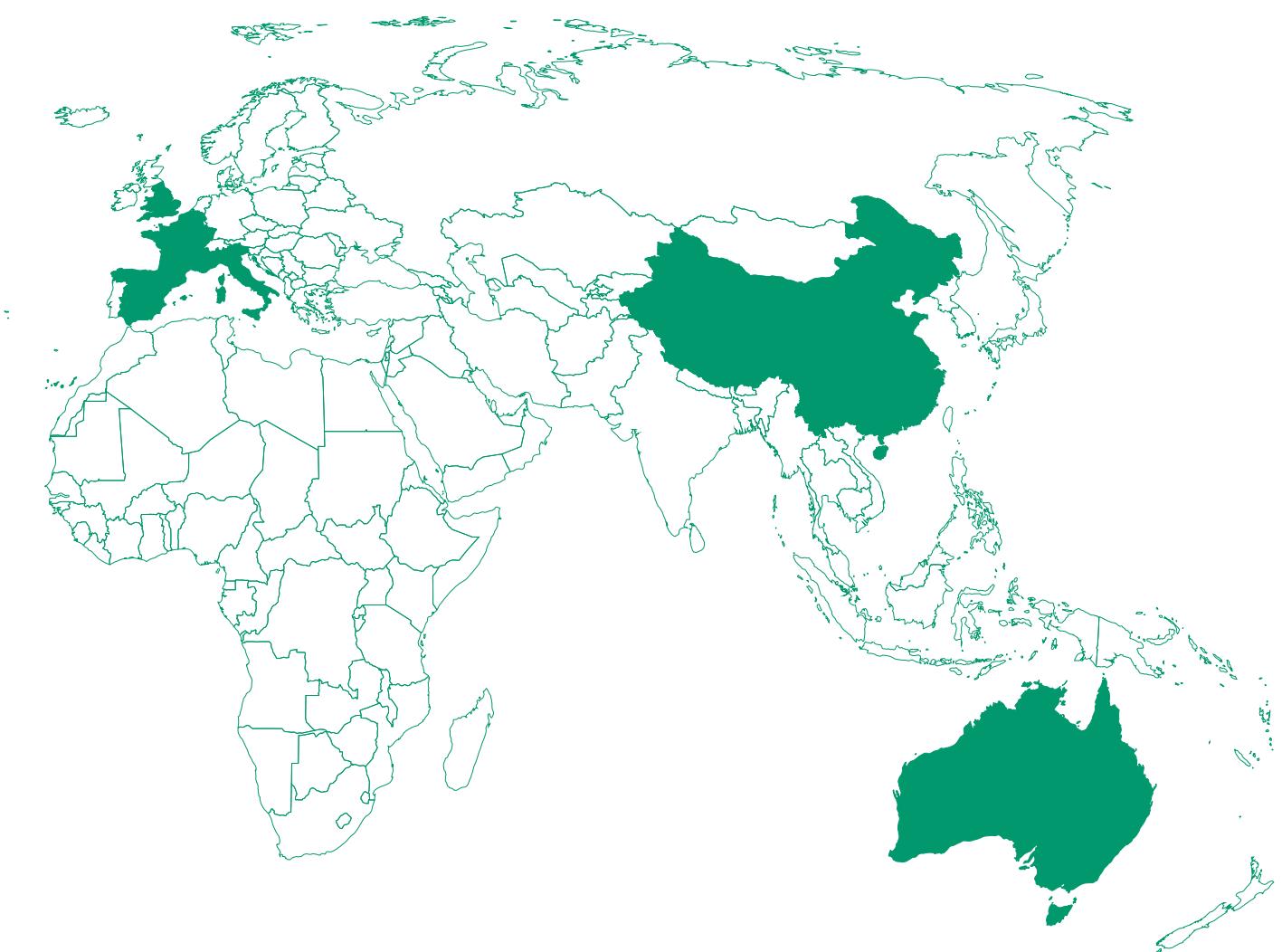
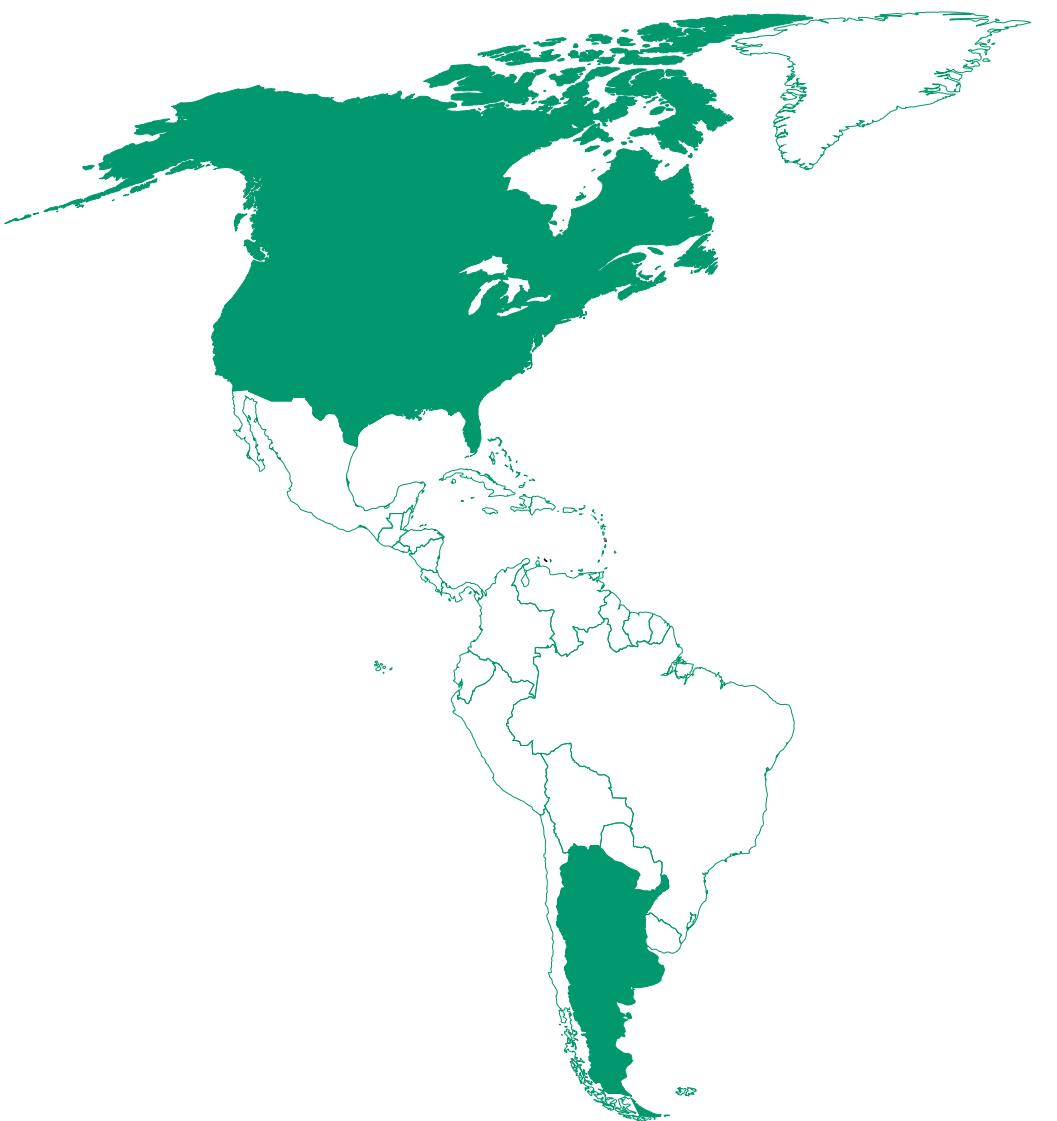
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Italy

Spain

USA

Australia

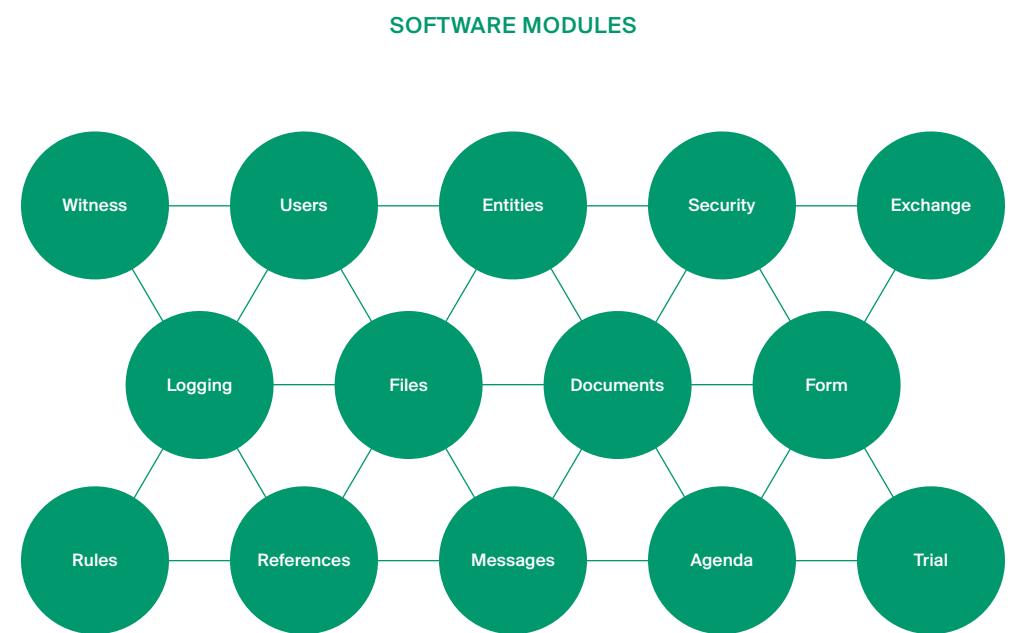


A Community was Gathered

As previously stated, in parallel to the social-legal research done under the umbrella of the Towards Cyberjustice project, Cyberjustice Laboratory researchers also had the ambition to work on techno-legal tools, i.e. software applications that could improve access to justice. This work actually started before breaking ground on what would become the most technologically advanced courtroom in Canada when professors Karim Benyekhlef and Nicolas Vermeyen approached both André Saintonge, now the Cyberjustice Laboratory's Chief Information Officer, as well as a team of programmers to help conceptualize and develop a software nucleus that would permit exchanges of information



André Saintonge,
Cyberjustice Laboratory's CIO



while simultaneously improving case and trial management. Summarily described as a library of services, this software nucleus would allow for the development of modular applications that could be arranged in any configuration to adapt to the needs of a given court or tribunal much in the same way as children would choose to rearrange their Lego bricks.

The true appeal of these applications, however, would reside in the decision to make their code available under an open source software licence. Having witnessed court administrators be at the mercy of private developers and their licencing fees, and considering that the Lab's applications would be built using publicly funded research and government grants, a choice was made to make the source code for all applications developed by the Laboratory's researchers and programmers available to its partners, thus creating the Cyberjustice Community.

Envisioned as an open software community built on openness and sharing, the Cyberjustice Community assembles users (courts, tribunals, and other public bodies), computer scientists, and service providers worldwide whose aim is to develop open source software geared towards increasing access to justice, both online and within the judicial world in general. The Cyberjustice Community is

Who are The Cyberjustice
Community's members?

- Ministries of Justice
- Public institutions
- Courts
- Research centers

who integrate or use the software developed by the Cyberjustice Lab and who contribute to its development or encourage its use by providing related services.

CYBERJUSTICE COMMUNITY'S MAIN GOALS



based on three main principles: equality of each community member, transparency of all information and resources, and meritocracy to allow all members the opportunity to influence the community. The diligence of these principles essentially allows the Cyberjustice Community to achieve its five main goals, namely:

- To encourage research and scientific development;
- To promote access to justice through adapted software;
- To decrease judiciary costs;
- To improve the quality of legal open source software; and
- To advocate for interoperability in the judiciary through the use of open source standards.

Among the projects developed by Laboratory researchers and their partners within the community are several software applications that have been successful in increasing access to justice, such as PARLe, a platform for assisting online dispute resolution as well as ISA, a tool to help present evidence during court proceedings. These applications, along with the studies conducted by Towards Cyberjustice researchers, have helped create a path towards access to justice through the use of technology.

Let us now see how that path could be taken by individuals across the country; a path that, in some cases, has already been paved by our partners' vision and our researchers' hard work.

Professor Karim Benyekhlef



In 2010, Université de Montréal Professor Karim Benyekhlef created the Cyberjustice Laboratory along with Professor Fabien Gélinas (McGill University). Since the Cyberjustice Laboratory played a fundamental role in the success of the *Towards Cyberjustice* project, we asked Prof. Benyekhlef a few questions in order to understand the process that led to the creation of the Cyberjustice Laboratory.

INTERVIEW

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- CL Hello Prof. Benyekhlef! What did you aim to achieve by creating the Cyberjustice Lab?
- KB I wanted to create a space for reflection and experimentation where lawyers could interact with programmers, information science specialists, experts from other social sciences and judicial actors (judges, lawyers, administrators, etc.). These exchanges are the only way to ensure that there is a match between the needs of parties and technological developments. Since the Laboratory develops its own applications, the dialogue is fruitful because it leads to technical progress that can be tested or simulated at the Lab.
- CL What role does the notion of access to justice play in the Laboratory's mission?
- KB Access to justice is the primary and essential objective of the Lab's mission.
- CL How are cyberjustice and technology offering solutions to this problem?
- KB Technologies will not solve all the problems of justice but can help to mitigate them: costs, delays and simple accessibility. Technologies are also an excuse to rethink judicial and quasi-judicial processes and to imagine new ways of settling disputes (the online dispute resolution adapted to consumer disputes or conflicts of co-ownership is a good example).
- CL What did you learn through the Lab's first projects (CyberTribunal, eResolution, ECODIR) and how did they influence the future?
- KB I learned about the importance of bringing together judicial actors and civil society upstream (before any development) in a neutral place (the university) to identify the problems to be corrected, the obstacles to overcome, the experiments conducted here and elsewhere, the rights to guarantee, and to develop the software applications in collaboration with these actors.
- CL In your opinion, what was the impact of the construction of a high-tech virtual hearing room (Université Montréal) and a portable hearing room (McGill University)?
- KB It was a major impact because, for the first time, jurists took charge of their digital destiny. They gave themselves the means to really influence the development and adaptation of software solutions for the world of justice. The Laboratory is cited all over the world as an experiment to replicate.
- CL What difficulties did you face in the development or implementation of software and applications in the legal system?
- KB The difficulties are not the ones we believe: judges and lawyers are very receptive because according to the Lab's philosophy (as described above), they are stakeholders in the development. The difficulties come from our model, the open code and the Cyberjustice Community, which is disrupting the internal management of administrations where IT managers use external subcontractors (IT integrators, consultants, etc.) who take charge of the developed applications. In our model, internal IT managers need to do their part by maintaining and refreshing the code. They are the owners and it is no longer simply a license (payable each year) that frees them from these tasks.
- CL Thank you Prof. Benyekhlef for your answers!

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Guidelines on How to Drive Change Towards Cyberjustice

Inspired by Harold Épineuse's Work (2016), in Collaboration with the Cyberjustice Laboratory

CASE STUDY

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The introduction of digital tools in the justice system is seen as a way to modernize justice. The overall impact of the incorporation of cyberjustice tools in the legal system has rarely been examined, even though the ramifications may be crucial for the populations that such a decision would affect. However, one document that seeks to shed some light on introduction of cyberjustice tools was adopted at the 28th meeting of the European Commission for the Efficiency of Justice (CEPEJ), and is the subject of this case analysis. The *Guidelines on How to Drive Change Towards Cyberjustice (Guidelines)* sought to (1) compile an inventory of existing practices exercised in the member states while maintaining an objective and critical approach on those practices, and (2) help policymakers and legal professionals around the globe through the digital transition to come.

1 Cyberjustice tools already deployed in European judicial systems

In order to compile an inventory of existing practices, different tools were analyzed and organized in the *Guidelines* according to the objective pursued by their promoter. The objectives of these cyberjustice tools organized into four subparts. The first goal, access to justice—which includes both access to legislation and dispute settlement procedures—focuses on improving the quality of public service, while keeping in mind the financial challenges faced by justice systems. The second objective pertains to communication between courts and professionals, and on achieving a more efficient and transparent judicial system through fluid communications. Third, the development of IT systems seeks to enhance assistance for judges

and prosecutors. Last but not least, implementing digital tools improves the overall administration of the court system. The “ever-increasing quantity of information”¹ on all decisions made by various actors within the court system offers unprecedented insight into court administration and is increasingly becoming a backbone of judicial work. For each subpart, the document contains a graphic overview that summarizes the identified benefits, points to note, possible developments and potential risks (see example on next page).

¹ European Commission for the Efficiency of Justice (CEPEJ), *Guidelines on How to Drive Change Towards Cyberjustice*, (2017), online: <https://edoc.coe.int/en/effectiveness-of-justice/7501-guidelines-on-how-to-drive-change-towards-cyberjustice-stock-taking-of-tools-deployed-and-summary-of-good-practices.html> at para 53.

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2 From a hardware approach to a strategic approach: developing information systems capable of improving the quality of the service provided by courts

The second section of the *Guidelines* offers seven good practices for any IT project that aims to improve the quality of the justice system, defined as maintaining ongoing compliance with the fundamental principles of justice and attaining high-quality service in the judiciary. To mention only two of these seven practices, the fifth encourages close involvement of future court visitors in the development of the tools throughout the life of the project and the last suggests a transition from a project management culture to a truly hands-on approach to innovation. The content of the *Guidelines* is then summarized with a helpful checklist, which may be used either by litigants or policymakers to ensure that cyberjustice projects reach the dual objectives of efficiency and offering high quality.

- Benefits identified**
- Cost reductions, speed of processing
 - Organizational simplification
- Points to note**
- Technical compatibility and reliability of the system between different entities
 - Change management policy to be rigorously determined
 - Effects of blocking the communication chain in case of failure
- Possible developments**
- Definition of common communication patterns (starting from court services and continuing to all the services involved in the operation of the judicial system)
- Potential risks**
- Considerable loss of time in the event of an uncontrolled technical failure

Communication between courts and with professionals, *Guidelines*, at 30.



MEDICYS

CENTRE DE MÉDIATION ET DE RÉGLEMENT HUISSIER DES HAUTS DE JUSTICE

Médicys (France)

Online mediation platform for consumer disputes provided by the Chambre Nationale des Huissiers de Justice de France. As listed in the *Guidelines*, at 23.



Project's cover page

Rethinking the Use of Technology in Traditional Courtrooms



The First Fictitious Commission to be Held in Three Locations Simultaneously



PREVIOUS
Lieutenant Kristen Byers testifying

ABOVE
A document from the fictitious case synopsis

Left: Williamsburg, VA,
Right: Montréal, Below: Vancouver

Professor Nicolas Vermeyen, Assistant Director of the Cyberjustice Laboratory, in association with Professor Frederic I. Lederer, Director of the Center for Legal & Court Technology (CLCT), collaborated in organizing the first judicial experiment that used state-of-the-art technology to conduct a distributed hearing with panels working concurrently in Canada (Montréal and Vancouver) and in the United States (Williamsburg, VA). The experimental hearing took place on March 22, 2013. It examined the potential benefits of implementing technologies into courtrooms to improve international disputes systems that must cope with issues concerning distance and length and complexity of the procedures.

The fictitious case synopsis: in January 2013, the Pacifica Marine Life Preservation Foundation released iron filings from a boat into the Pacific Ocean west of Washington state and Vancouver Island to remediate the effects of global warming. During the release, the foundation's vessel was intercepted by the United States Coast Guard. Some geoengineering techniques, such as the release of iron filings, are controversial because they can have harmful side effects and are unlawful in some jurisdictions. Following this incident, the US and Canada created a joint commission to recommend executive or legislative actions to govern iron filings release, also known as ocean iron fertilization. The Commission did not make recommendations or draw final conclusions about the 2013 incident. The experimental investigation was designed to initiate further study of innovative distributed courtrooms.

To recreate a realistic environment, professors with subject matter expertise prepared a legal

analysis of ocean iron fertilization in American, Canadian and international law. A fictional Charter of the 2013 Bilateral Commission on Oceanic Geoengineering (see previous page) was also used as the basis for their theoretical investigation into ocean iron fertilization in a distributed courtroom setting. Only expert witnesses participated in the investigation, which put aside credibility concerns –the subject of David Tait's study (see p.110).

Except for minor technical obstacles, the experiment was a great success. Its success can be attributed to the technological advancements employed by both the William & Mary Law School's McGlothlin Courtroom and the Université de Montréal's Cyberjustice Laboratory where the experiment took place. The simulation was an important first step in the implementation and use of modern technology to enhance efficiency and transparency in legislative hearings and to address distance concerns in international disputes.

Analysis of Technological Court Document Formats

As part of its partnership agreement with the City of Québec, the Université de Montréal's Cyberjustice Laboratory conducted an analysis of the different formats of technological court documents.

The Laboratory sought to identify the types of files that should be accepted by the Municipal Court of the City of Québec, having regard to the copies of reports of offences and other documents filed in court, in the context of the digital shift undertaken by the Municipal Court.

CASE STUDY

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As there are currently thousands of technological formats available, the task of implementing the Municipal Court's registry was undeniably complex when it came to archiving technological documents. The purpose of this analysis was therefore to identify, on the one hand, the impact of the technological filing of documents on the Municipal Court's conservation obligations and, on the other hand, the technological formats that could meet the conservation requirements of the Municipal Court.

Impact of technological filing of documents on the Municipal Court's conservation obligations

The registry of the Municipal Court of the City of Québec is subject to a two-level document retention obligation. On the one hand, active files must be available at the registry for consultation and, on the other hand, certain documents must be archived for the longer term, or even permanently.

Fortunately, this conservation requirement can be satisfied by the technological filing of documents. Indeed, the archived document can be on a medium "based on information technology, whether electronic, magnetic, optical, wireless or other, or based on a combination of technologies" within the meaning of the *Act to establish a legal framework for information technology*.

However, the archiving of technological documents is laborious because of the wide range of document formats currently used. Similarly, reading these different documents requires access to hundreds or even thousands of different software tools.

In this regard, the *Act respecting municipal courts* provides that Québec City's Municipal Court must not only keep the court's archives, but must also ensure the accessibility of the registry. Indeed, anyone can request to consult a file or a document that was produced¹ and even obtain a copy. Insofar as the implementation of this right assumes that the document is intelligible, it follows that it is up to the registry of the Municipal Court and, more broadly, to the City of Québec to acquire the necessary software to allow the consultation of all technological documents filed at the registry of the Municipal Court, regardless of the format of the file.

"However, the archiving of technological documents is laborious because of the wide range of document formats currently used."

¹ *Rules of the municipal courts*, RLRQ, c. C-72.01, r. 1, art. 5.

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Technological formats that meet the conservation requirements of the Municipal Court

Fortunately, the registry, like those in some US courts, can limit the scope of these onerous obligations, both financially and administratively, by requiring parties to file documents according to a list of pre-established formats that can be read through free and accessible software.

In this regard, the *Bibliothèque et Archives nationales du Québec* (“BAnQ”), which, among other tasks, advises municipalities on their policies for managing active and semi-active documents, recommends three file formats for the long-term preservation of scanned documents, i.e. TIFF format, PDF/A format and XML format. The Cyberjustice Laboratory therefore examined these three formats in order to assess the relevance of their use by the Municipal Court of the City of Québec.

After having identified the best practices in terms of preservation formats of judicial documents, as identified by the legal community as well as the field of archival science, the Cyberjustice Laboratory concluded that the PDF/A preservation format received the support of a majority of experts and stakeholders. Indeed, according to BAnQ, this format preserves layout, fonts and formatting, and is open and royalty-free.

As for the TIFF and XML formats, even if not appropriated as widely by the judiciary, they remain the preferred choice of BAnQ for the long-term preservation of digital files.

With respect to the TIFF format, while its use is widespread in the field of digital imaging and in heritage preservation organizations, its popularity does not seem to be reflected as much among the general population. Indeed, a litigant appearing in court is statistically more inclined to file images generated in JPEG format. Therefore, even if TIFF files have certain archival qualities, this archival criterion should not be the only one to guide the choice of a court.

Thus, the Laboratory concluded its analysis with advice addressed to the courts regarding the drafting of any technological archiving policy and the choice of licences and software to be procured, in order to allow the reading of archived files. The Laboratory submits that the imposition of a document format for archiving should in no way result in the exclusion of otherwise admissible evidence. As a result, openness to the most common file formats must be demonstrated, even if they are not the most suitable for long-term preservation.

Professor Karine Gentelet



Karine Gentelet holds dual degrees in anthropology (M.A, Université Laval, Canada) and in sociology (Ph.D, Université de Montréal). Since getting her post-doctorate with Professor Guy Rocher at the Centre de recherche en droit public, she has been an associate professor of Indigenous studies at Université du Québec en Outaouais (Canada). Prof. Gentelet worked as a scientific coordinator for the Cyberjustice Laboratory for 6 years, during the Towards Cyberjustice project. Now, her research projects and publications focus mainly on the sociology and anthropology of law, including in particular the recognition of human rights for Indigenous Peoples in Canada. Prof. Gentelet also works on knowledge mobilization issues and research ethics in the Indigenous contexts. Since 2014, she has been the Chair of Amnistie internationale Canada francophone.

- CL Hello Prof. Gentelet! As a sociologist, what is your point of view on cyberjustice?
- KG At a time when there is a massive decommissioning of the courts and a loss of confidence in the traditional justice system, cyberjustice is an extremely relevant avenue.

Justice appears costly and imposes delays that discourage citizens from turning to the courts. Additionally, seeking justice means having to rely entirely on professionals whose codes and procedures are unknown and complex. In this era of human empowerment, individualizing practices and the ubiquity of digital technologies in social interactions, justice appears disconnected from everyday life.

The use of digital technologies and artificial intelligence will make it possible, under certain conditions of course, to provide citizens with some autonomy, to be able to better control the issues related to their participation in the justice system. Technology thus represents a facilitator of interactions and empowerment, as well as a medium related to everyday practices.

- CL Do you have any comments (positive or negative) on the multidisciplinary approach of such a research project in law?
- KG At the scientific level, the trend is towards a multidisciplinary approach. Research projects are thus defined based on an issue's dimensions as opposed to based on a particular discipline.

In my opinion, this is really the best approach because it captures the complexity of an issue and integrates it into the heart of the analysis rather than treating it on the periphery. In addition, this multidisciplinary approach for projects dealing with societal issues related to technology makes it possible to avoid being limited by a single theoretical framework and to rather develop a conceptual apparatus more adapted to an emerging reality. In the long term, this also makes it possible to change the disciplinary apprehension of an issue.

- CL What was your experience as a coordinator of a project of this size? What were the highlights? And the difficulties encountered?

KG My experience as a coordinator has been very rewarding. It has certainly allowed me to evolve as a researcher and to broaden my research perspectives. Although I was already working from a multidisciplinary approach, my work was mostly dominated by the social sciences. Working with researchers in computer science or information science, for example, has literally exploded my level of knowledge regarding issues surrounding technology, as well as my own thematic partitions. I certainly would not be where I am now if I had not been so involved in this project.

The highlights are definitely the team meetings. Not only is there a great deal of respect among the researchers, but it is during these meetings that we see the gradual convergence of the various projects. What I remember from these meetings is that, each time, I experience fireworks of ideas in my head. I make connections between ideas and between themes.

The difficulties are those related to the collaboration between several researchers over a long period of time. It can be difficult to maintain a certain level of synergy within such a large team. It can also be difficult to maintain synergy at the scientific level and ensure that all projects converge towards the same goal in a timely fashion.

Hannes Westermann



HackJustice: A Hackathon to Make Justice More Accessible

"In my opinion, this is really the best approach because it captures the complexity of an issue and integrates it into the heart of the analysis rather than treating it on the periphery. In addition, this multidisciplinary approach for projects dealing with societal issues related to technology makes it possible to avoid being limited by a single theoretical framework and to rather develop a conceptual apparatus more adapted to an emerging reality. In the long term, this also makes it possible to change the disciplinary apprehension of an issue."

CL What was your experience as a coordinator of a project of this size? What were the highlights? And the difficulties encountered?

On February 3rd and 4th 2017, the Winkler Institute for Dispute Resolution and the Cyberjustice Laboratory held HackJustice, a hackathon that took place simultaneously in Toronto and Montréal. This two-day hackathon brought together legal professionals, computer programmers, students, computer scientists, software developers, members of the public, and professionals of various disciplines.

Ten teams entered the competition with the objective to code and create technology applications to make justice more accessible. To do so, they undertook one of three different, but interrelated challenges. First, they could develop ways to use social media tools to provide easy access to proposed public policies, and the ability to interact and engage with other civic-minded participants. Second, they could develop technology solutions that address the roadblocks that keep consumers from seeking and getting justice. Third, they had the option to develop technological tools that help people develop the confidence and capabilities they need to deal with everyday legal problems.

The participants worked in teams to create and code either a mobile phone or software app, a website, or another technological solution that would improve access to justice. Each team then competed for monetary prizes as they had the opportunity to present their tech solution to a panel of judges. The hackathon projects were evaluated on the originality and usefulness of the technology developed.

After two days of hard work, two winning teams (one in Montréal and one in Toronto) and two 2nd places were chosen. In Montréal, the first place was awarded to democrati.ca, a team composed of Sabrina Vigneux and Hannes Westermann. In order to understand the whole process of HackJustice, we asked Mr. Westermann a few questions.

CL Hello Hannes! Could you start by briefly describing the competition and what you did during those two days?

HW I came to the competition not knowing anyone. Once I arrived, I met Sabrina Vigneux, and we decided to create a team. We focused on the challenge of trying to create a stronger connection between city policymakers and citizens. Over the next two days, we spent many hours discussing the challenge, conceptualizing and developing a potential solution, figuring out the details of how such a solution would work and preparing a pitch to explain our idea to the judges. This resulted in a concept for "democrati.ca", a platform that would allow citizens a voice in city policy planning. On the final day, we presented our idea to the panel of judges and managed to win the first prize.

CL What was the biggest challenge that you faced during the hackathon?

HW I believe the biggest challenge we faced was the limited time available to create a solution. In a hackathon, you do not have the luxury of spending hours trying out different approaches to see what works. Instead, we had to quickly decide on an idea that we thought could work and then focus on conveying our thoughts in a good way. In the end, the limited time can often be helpful—it forces you to focus your thoughts and efforts and arrive at something

you can show, without spending days or weeks thinking about it. A hackathon can be a very rewarding experience in that way.

CL During the two days of work, what technological solution did you create?

HW We created the concept for a platform called "democrati.ca". It allows citizens and politicians to submit proposals for new legislation. This proposal can then be commented on by other citizens. If enough citizens agree with the proposal, the submission will open for signatures, and if enough signatures are obtained, the proposal is forwarded to the government, where it can potentially be turned into legislation.

CL What inspired this idea?

HW We were inspired by a growing feeling of disconnection between citizens and policy makers. Often, people feel like they have no say in what gets decided and little understanding of the process. This is unfortunate, since politicians are meant to represent the people. Through the creation of a platform such as democrati.ca, I believe people could gain a greater voice in city policy as well as a greater understanding of the process involved. It would also give the legislator a direct link to the citizens and their thoughts and feedback on pending legislation.

CL How did this technological solution match the originality and usefulness criteria?

HW Sabrina and I were the only team to focus on the issue of citizen involvement in the legislative process. I believe we managed to capture the imagination of the judges by presenting a mock-up that clearly showed how our solution would handle a proposal to ban plastic bags, and the different stages such a proposal would go through. This way, we tried to make the usefulness concrete by using a specific example. I also think our project was quite original by presenting a novel solution to a well-known problem.

CL On a personal level, what was the impact of your participation in HackJustice?

HW The personal impact of my participation in HackJustice has been huge. Not only did I make many close friends, such as my teammate Sabrina, but I also got in touch with the people at the Cyberjustice Laboratory and was offered the opportunity to work at the lab as a research intern. After this, I applied to do a doctorate in Law and Artificial Intelligence at the Laboratory. Next year, I will therefore move to Canada from my native Sweden to pursue a doctorate at the Université de Montréal. This incredibly exciting step is a direct consequence of my participation at HackJustice.



PART II

FIRST STOP ON THE ROAD
TOWARDS CYBERJUSTICE

USING TECHNOLOGY TO SETTLE DISPUTES BEFORE GOING TO COURT

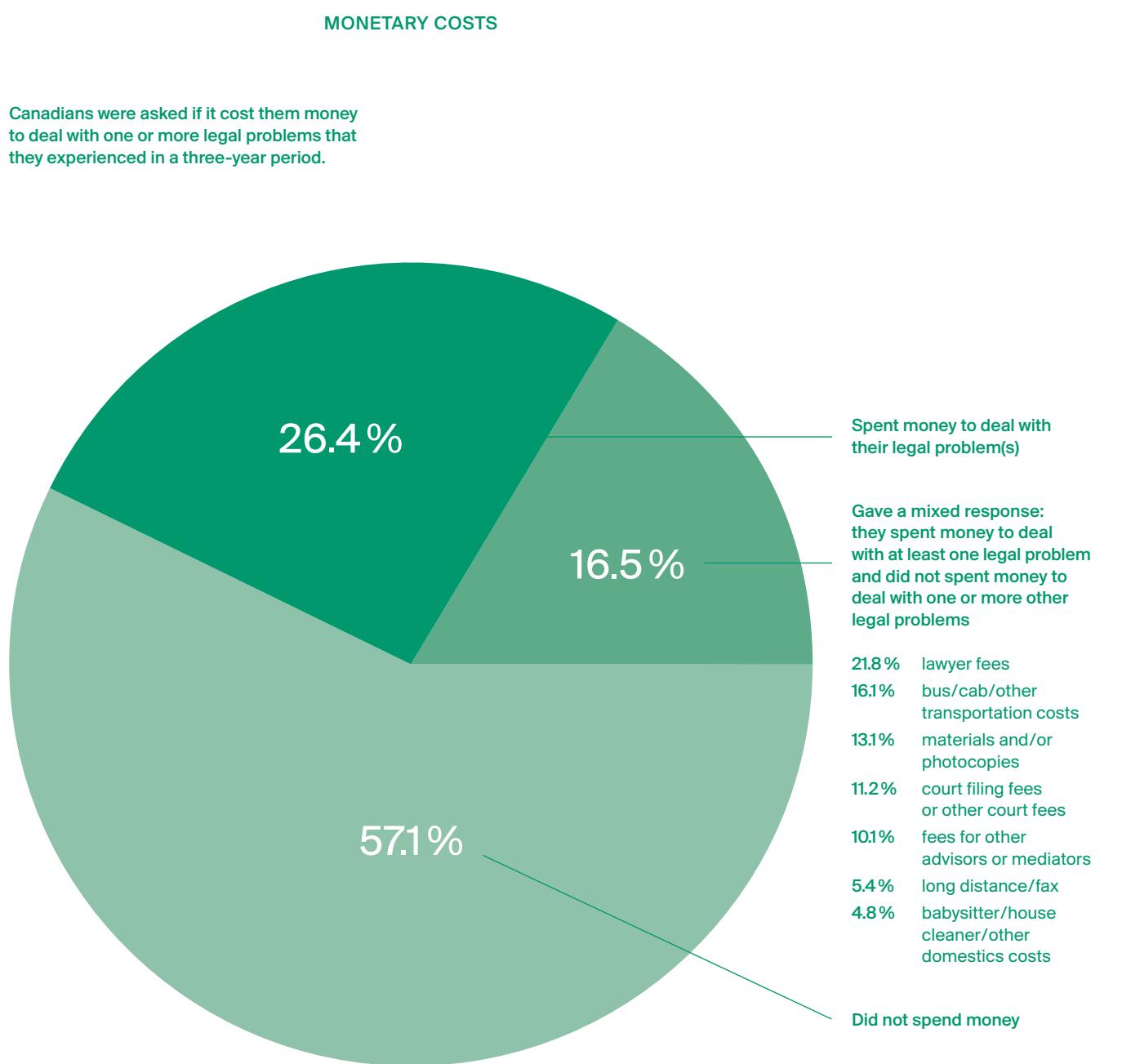
*“Traditional justice appears too sophisticated and complex to treat these low-intensity disputes, even though they must be resolved and whose importance, in the eyes of those directly concerned, should not be minimized.” **

Over the years and through multiple judicial reforms, the quest to improve access to justice has been plagued by a lack of imagination. The remedy to delays and costs seems to have inevitably been seen as building more courtrooms and hiring more judges. The process itself, although it has been tweaked from time to time, remained unchanged. Yet, it is this process that is “broken” or, at the very least, in need of an overhaul. Most costs are incurred before the parties ever set foot inside a courtroom, so building more of them will not resolve the issue, nor will it have any impact on the stress and awe felt by those who are not accustomed to going to court. Hence, making trials more accessible isn’t the solution. This is especially true in cases involving low-intensity disputes, i.e. common quarrels such as consumer disputes that represent issues or amounts that can seem inconsequential to government officials, but are highly important to the parties themselves. Filing costs and court fees will often outweigh the amounts attached to these types of claims. This finding led us to an important conclusion: there needs to be a way to allow for parties to settle their disputes before reaching the courthouse steps.

Obviously, mediation and pre-hearing conferences are already being offered in certain types of disputes, but they require parties to take a day off from work, travel to an agreed upon location and sit across a table from someone they are predisposed to distrust. There had to be a better way; a way that exploited the technological advances of the last decades.

It was and remains our belief that, through the use of technology, parties can simply interact in a controlled environment that allows them to settle their argument among themselves with or without the help of a third party.

* Karim Benyekhlef, “Online Consumer Dispute Resolution: a narrative around (and an example of) postmodern law”, 21 (2016) *Lex Electronica* 57 at page 81. Online: <https://www.lex-electronica.org/s/1507>.



Canadian Forum on Civil Justice,
"Everyday Legal Problems and the Cost of Justice in Canada", online:
<http://cfcj-fcjc.org/wp-content/uploads/Everyday-Legal-Problems-and-the-Cost-of-Justice-in-Canada-Cost-of-Justice-Survey-Data.pdf>.

This very idea is the conceptual basis of what is commonly referred to as online dispute resolution or ODR.

As a general concept, ODR was created in the mid 90s by Towards Cyberjustice researchers Karim Benyekhlef and Ethan Katsh to help settle ecommerce disputes. As was obvious to them at the time, no efficiency was to be found in ordinary courts for the kinds of low intensity long-distance claims that would necessarily follow the launch of online platforms such as eBay and Amazon. The idea was therefore to use alternative dispute resolution mechanisms such as negotiation, mediation and arbitration to settle these disputes, but rather than make the parties take part in face-to-face meetings, they sought instead to create an online environment where dispute mechanism tools would be offered to the parties.

From the early 2000s and on, eBay would adopt this model and become a forerunner in the use of ODR. However, while the eBay model flourished and allowed for the resolution of over 60 million cases annually, ODR—as a concept—struggled to take hold in most other legal disputes. The flaws of the nascent ODR model were two-fold:

- 1 It relied on voluntary participation in the conflict resolution process despite a lack of incentives to do so (especially with regard to consumer contracts); and
- 2 It required funding that the parties could or would not provide, which opened the door for outside benefactors thereby triggering potential conflict of interest claims.

The first issue could only be settled through the emergence of legal constraints: if refusal to take part in an online dispute resolution process can be penalized (for

STEPS LEADING TO THE CREATION OF ODR

Internet

e-Commerce

Disputes

No efficiency in ordinary courts

Creation of online platforms for dispute resolution

example by allowing the other party to collect costs), it may incentivize parties not only to try to reach a settlement, but to do so in good faith. Since the state apparatus remains the main bearer of legal authority—an authority gained through time across the evolution of institutions such as the Church—logic would dictate that its handling of the ODR process would grant it much needed legitimacy. As for funding; the financing of conflict resolution mechanisms has historically fallen onto the Crown and, later, government. Therefore, state-funded ODR mechanisms seem to be the logical extension of the state's role. This would also eliminate any appearance of conflict of interest.

To summarize, ODR needs to somehow be incorporated into the legal process in order to thrive. At the same time, ODR mechanisms present themselves as an effective remedy to some of the issues plaguing our legal system. When properly implemented, ODR procedures allow parties to cross most of the barriers to access to justice since they remain more accessible and flexible than traditional, physical justice processes. Getting online has

Nothing is Perfect The Downsides of ODR

"We know ODR is convenient, fast, and cheap. What we do not know is whether it can be fair, caring, and just, and to paraphrase Harry Callahan: 'A software program's got to know its limitations.'" *

* Condin, Robert J., Online Dispute Resolution: Stinky, Repugnant, or Drab (December 27, 2016). U of Maryland Legal Studies Research Paper No. 2016-40, p. 33. Available at SSRN: <https://ssrn.com/abstract=2873918>

Why promote an ICT-based extrajudicial dispute resolution initiative for justice reform? Because traditional justice systems imply:

- High costs
- Complex procedures
- Long delays
- Lost time
- Stressful situations
- Etc.

What are the advantages of ICT-based extrajudicial dispute resolution initiatives for justice reform?

- Savings for parties and states
- Simpler procedures
- Shorter delays
- Lack of physical presence
- 24/7 asynchronous access
- Etc.

never been easier and remains a far more suitable way of accessing conflict resolution mechanisms than traditional justice offerings. ODR can be adapted to personal lifestyles, professional workflows and institutional procedures, making it an extremely versatile channel when compared to other justice offerings.

Therefore, incorporating ODR into the legal process constitutes a win-win scenario for the courts, the state and the parties, since successful ODR processes will free up court time, making the system more efficient and accessible without needing to increase funding.

This is the backdrop that inspired Towards Cyberjustice Working Group 3 researchers to propose a new procedural model to courts across the country. Instead of parties drafting and filing expensive motions before the courts and then trying to settle the case out of court, why not start with the settlement process? This would save time and money for both the parties and the court, as well as allow for cases that would otherwise be abandoned to finally be heard. We successfully tested this idea during an ongoing pilot project launched in partnership with the Québec *Office de la protection du consommateur* (consumer protection office) leading to the creation of the Platform to Aid in the Resolution of Litigation electronically (or PARLe).

Learning from the PARLe project and pulling from earlier "private" ODR experiences, we developed a three-prong model using online forms to help parties settle their issues using negotiation, mediation and, should all else fail, adjudication. This model, left at the discretion of the platform operator (in the case of the pilot project, no adjudicative stage was offered), would give greater access to justice to consumers who would otherwise not be able to be heard.

PARLe



Negotiation

First, the claimant would log on to a state-sanctioned ODR platform and expose their grievance, as well as the desired remedy. The platform would then advise the opposing party of this grievance and invite them to log on and either accept the initial proposal or make a counter-proposal. Proposals and counter-proposals could therefore be made until an agreement is reached or, in a statistically low number of cases, the parties come to the conclusion that they cannot settle the dispute on their own, driving one of them to request the intervention of a mediator.

Mediation

Should negotiation fail, a court or government sanctioned mediator would log onto the platform and try to help bring the parties to an agreement using forms, online forums, videoconferencing or even, in rare cases, using tools outside the platform (such as speaking by telephone). Should the mediator find that the parties are simply too far apart, a third stage is possible: adjudication.

Adjudication

Should mediation prove unfruitful, an adjudicator (a judge or other state appointed person of authority) would be assigned to the file and log onto the platform. This adjudicator would then take notice of documents and facts related to the case, hear witnesses, and render a decision, all from a remote office.

This three-prong approach, which we successfully helped implement in Ontario thanks to the vision of the Condominium Authority Tribunal, serves to address some of the main issues plaguing the conventional legal process.

First, the Condominium Authority Tribunal's use of PARLe facilitates settlement during the pre-trial process, therefore contributing to the removal of economic barriers through the reduction of costs, as well as making conflict resolution simpler, more efficient, and more expedient. Second, the asynchronous approach of ODR platforms implies that they can adapt to a party's schedule without impacting the process itself, or the agenda or other parties. Third, since an increasing number of cases are resolved either at the negotiation or mediation stage, this frees up judges to concentrate on other cases that require their legal knowledge and expertise. It's safe to say that ODR platforms—no matter how powerful and sophisticated—won't and shouldn't replace judges and courtrooms. They will simply offer citizens another means of access to justice.

ODR mechanisms are therefore well-positioned to be the future of justice. The extent of this revolution, however, remains uncertain and is being debated within the legal community. For some, the quest for efficiency runs the risk of diminishing the quality of justice. To these individuals, notions such as costs, delays, and backlogs should not be considered when establishing procedure, which should be devoted solely to the principles of fundamental justice.

To others, fundamental justice principles are important, but if attaining them means forgoing access to justice, as is currently the case in many jurisdictions, they serve little purpose. ODR platforms, although imperfect, increase access to justice and, more importantly, satisfaction with

Advantages



MORE ACCESSIBLE

Can be adapted to the parties' schedule without impacting the process



FREE UP COURT TIME

Let judges concentrate on high intensity cases



MORE EFFICIENT

Facilitates settlement during pre-trial process

Flaws



Relies on voluntary participation



Requires funding from third parties

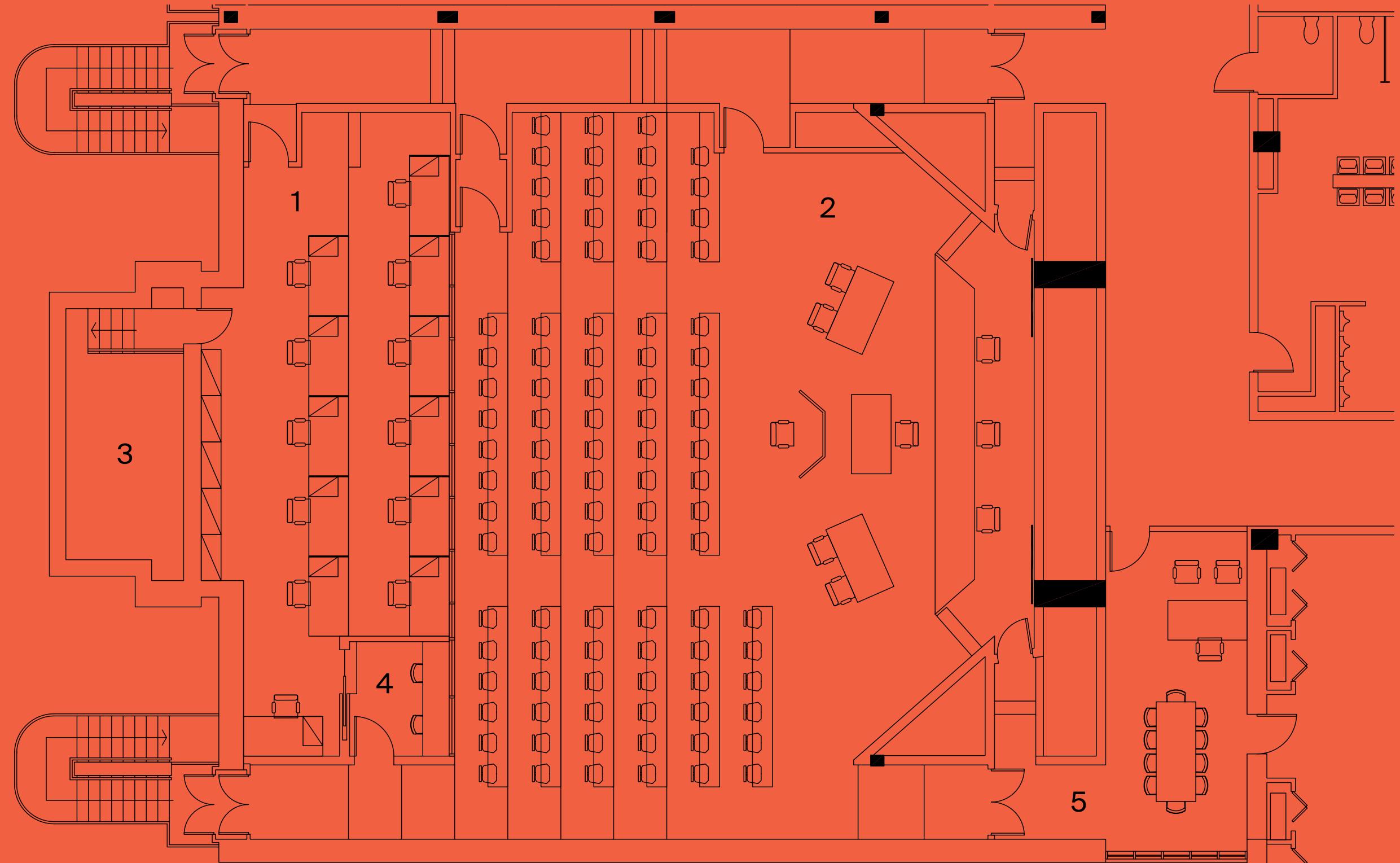
POSSIBLE SOLUTION
Emergence of legal constraints

and reliance on the legal system. This in itself should be a sufficient argument to the implementation of more ODR solutions within court and tribunal processes.

Furthermore, the increased reliance on ODR platforms will help increase access to justice even for those who cannot or will not settle their disputes online since it will free up judges and courtrooms. In this sense, ODR should not be seen as a *de facto* alternative to the courts, but rather as the first step in a new judicial process. Should this step fail for any reason, or should it be deemed impractical for a given type of trial, then the parties should be able to pursue their case in front of an adjudicator as has been the case for the last few centuries. Of course, just because the general process remains the same doesn't mean that courts shouldn't try to benefit from such technological advances in order for legal proceedings to be streamlined, made more accessible, and less Kafkaesque. This brings us to the next step on the road towards cyberjustice.

Original blueprint of the Cyberjustice Laboratory's main installations

- 1 Computer Laboratory
(12 places)
- 2 Main courtroom
(95 places)
- 3 Server room
- 4 Control room
- 5 Judge's office





DOCUMENTATION

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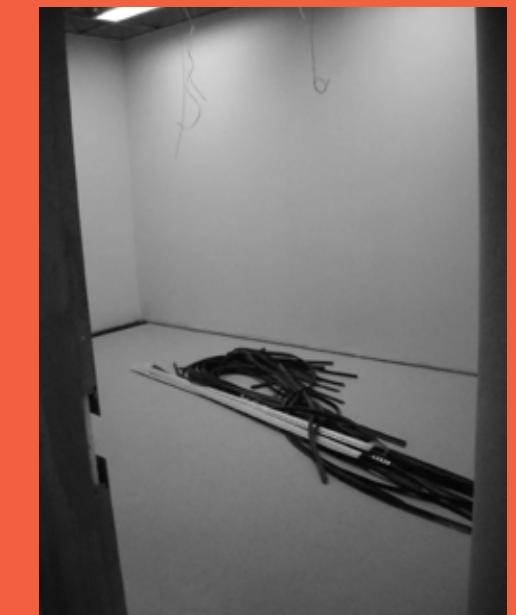
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PREVIOUS
The Cyberjustice Laboratory's
main courtroom

LEFT
Concept art for the main courtroom

RIGHT
Building the server room
and main courtroom

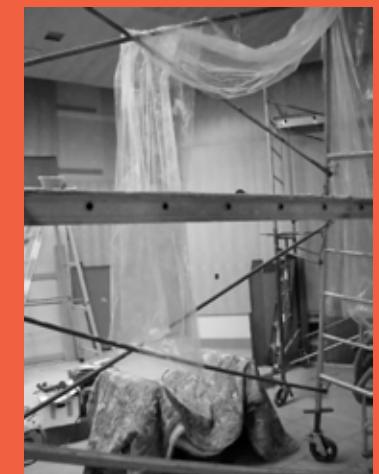




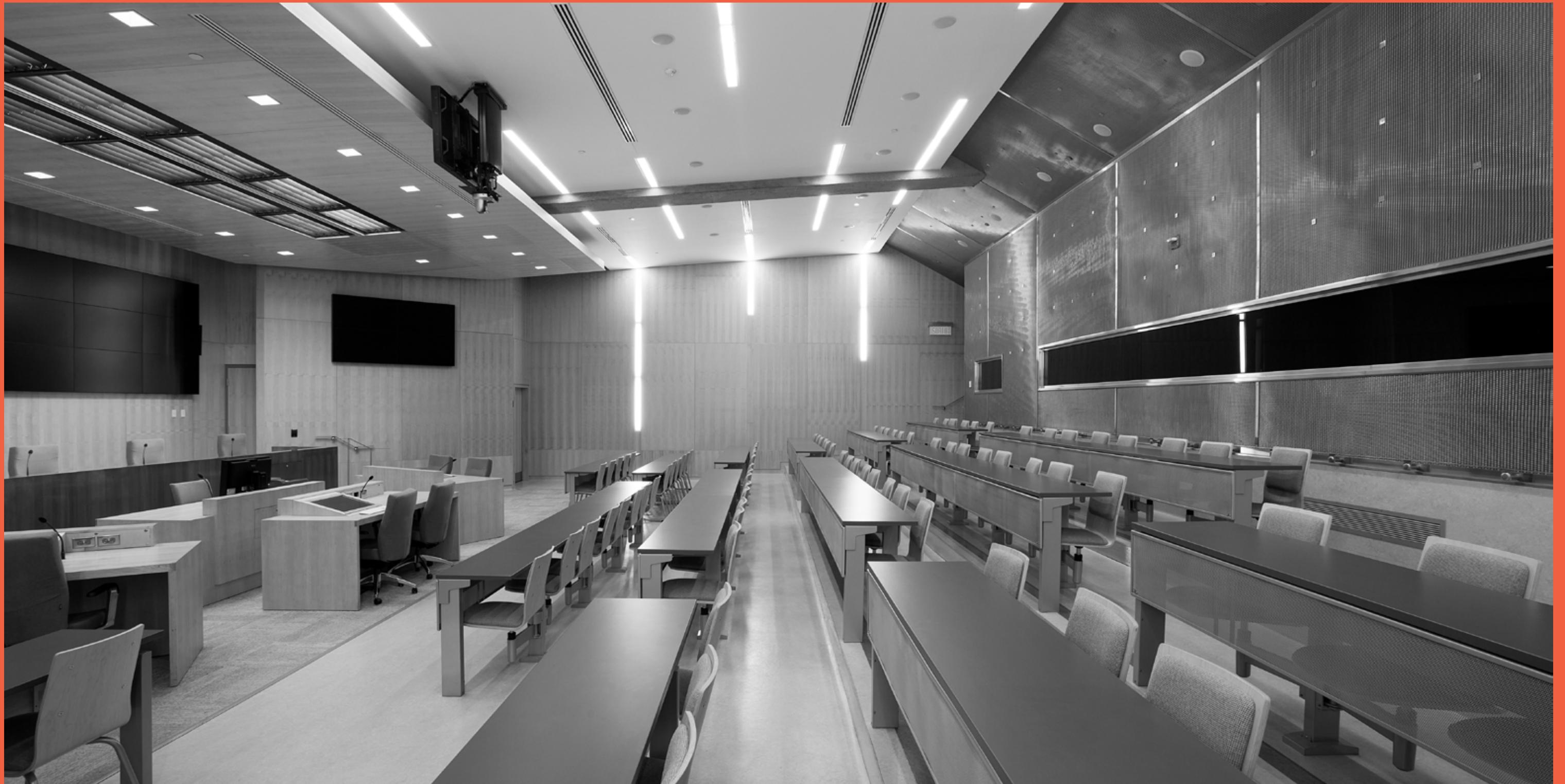
DOCUMENTATION

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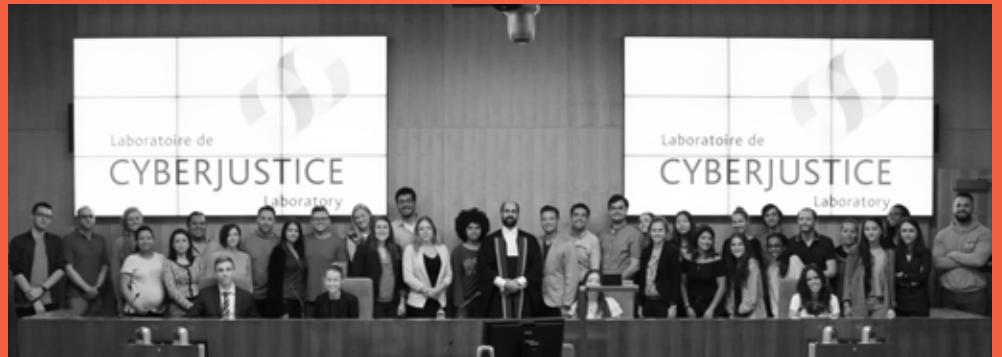
Building the Cyberjustice
Laboratory's main courtroom



DOCUMENTATION

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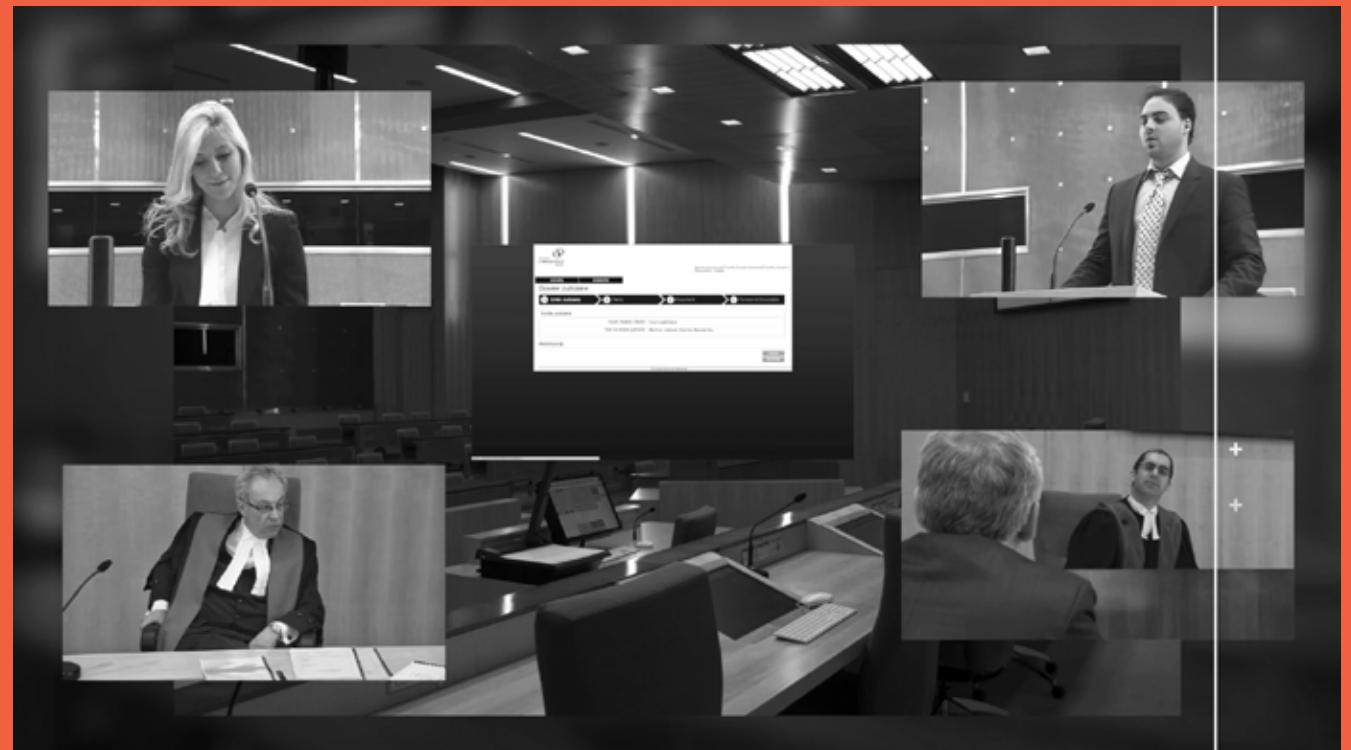
ABOVE
The 2017 edition of the Cyberjustice
Laboratory's Summer Program
The 2018 Cyberjustice
Laboratory's team

RIGHT
The audience listens attentively
to inaugural speeches.
Daniel Jutras, then Dean of McGill
University's Faculty of Law addresses
the audience during the Cyberjustice
Laboratory's inauguration.
Gilles Trudeau, then Dean of
the Université de Montréal's Faculty
of Law, addresses the audience
during the Cyberjustice Laboratory's
inauguration.





A simulation being held in
the Cyberjustice Laboratory's
main courtroom.





DOCUMENTATION

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PART III

SECOND STOP ON THE ROAD
TOWARDS CYBERJUSTICE

BRINGING TECHNOLOGY INSIDE THE COURTHOUSE

*“The relationship between access to justice and technology is neither necessary nor necessarily positive... technological initiatives characterized as facilitators of access to justice are not necessarily animated by a single consistent approach to what it means to deliver access to justice, nor do they benefit from explicit recognition of the ways in which a single technological response can differentially affect citizens.” **

When the Towards Cyberjustice project was launched, in most jurisdictions, the use of technology by legal stakeholders ended at the courthouse doors. Today, although courtrooms are increasingly being equipped with modern technology for use at all stages of the judicial process, this isn't always done with the foresight necessary to ensure that said technology will increase access to justice, as well as facilitate the circulation of legal documents. Our goal when addressing courtroom technology was therefore twofold:

- 1 Identify the technologies that can and should be used during the legal process, and
- 2 Identify the negative externalities associated to these technologies in order to correct them.

As in our mission statement, the main reason for employing technology within the court system should be to increase access to justice. Of course, installing computers in a courtroom will not as such have any positive impact on a trial's efficiency unless their placement, configuration, and availability are carefully analyzed and thought out. In other words, adopting technology for technology's sake is not useful, nor is it desirable. That being said, there are some undeniable benefits to the thoughtful introduction of technology into the court system. For example:

- Individuals who are unable to physically appear in the courtroom can now appear remotely.
- Technology can facilitate proceedings for those who are vision or hearing impaired.
- Judges can use modern databases and information systems to ensure the accuracy of fact finding.
- Lawyers can enhance their presentation of the case through the use of evidence presentation technology.

* Giampiero Lupo and Jane Bailey, “Designing and Implementing e-Justice Systems: Some Lessons Learned from EU and Canadian Examples”, (2014) 3 *Laws* 353 at 354.

The first task of Working Group 1 on the Digitalization of Justice was to establish an inventory of the technologies available for cyberjustice purposes, and to establish a typology of the use of these technologies by the different stakeholders in the justice community.

To summarize their findings, current courthouse technology encompasses both electronic services offered by the justice system in general, as well as trial courtroom technology in particular. The first category includes services such as electronic filing and electronic case management systems. These tools further facilitate electronic discovery as well as electronic access to court decisions and records. Courtroom technology, on the other hand, encompasses:

- Technology that allows for the presentation of evidence electronically rather than using paper;
- Tools that allow for the real-time transcription of the court record, which can be beneficial;
- Technology that can make it possible for the public and media to follow court proceedings;
- Technology that allows jurors to review the judge's directives or the evidence during deliberations; and
- Tele-immersion tools that facilitate remote appearances for witness—be they experts, everyday or vulnerable people—interpreters, lawyers, plaintiffs and defendants. Tele-immersion technologies are particularly useful to ensure the availability and quality of services for those in remote regions, including aboriginal communities, as well as linguistic minorities.

"The continuing move to evidence presentation technology at trial suggests that lawyers find courtroom technology to be useful and anecdotal evidence confirms that some lawyers find it to be of great value." *

* Frederic Lederer, "Some Thoughts on Technology and the Practice of Law", *The Bencher* (February 2014) at 2.

"The goal of the research underlying this report was to better understand the state of digitalization of court processes in Canada, including wherever possible to determine where we are, where we've been and what has already been planned for the future. Our research was limited to an examination of the public online record that was initially performed by an amazing, dedicated group of University

of Ottawa law student volunteers for the Centre for Internet Policy and Public Interest Clinic (CIPPIC) who scoured for information online in relation to their assigned jurisdiction. The research and this draft report focused on technologies being implemented in or by courts, rather than looking specifically for information about electronic/digital issues as between parties to litigation." *

* "Digitization of Court Processes in Canada", Report presented by Jane Bailey in front of the Cyberjustice Laboratory, 2012, online: <https://www.cyberjustice.ca/en/publication/digitization-of-court-processes-in-canada/>.

Obstacles Were Discovered

Of course, although the technologies identified above show great promise if incorporated thoughtfully within the legal process, it would be naive for us to believe that their implementation would be effortless. As discovered by Working Group 2 on the Limits of Digitalization, there are numerous constraints and limits associated with the digitalization of courtroom documents and processes with respect to the traditions, practices, and rituals of those taking part in the legal system. Among these constraints, four seemed particularly challenging to overcome:

Privacy Concerns

As stated in the previous section, one of the benefits of cyberjustice is to facilitate the consultation of documents by making them available through the Internet or, at the very least, through a private network. However, while moving court records and other documents online is an important step towards improving public access to legal information, it may also have the negative effect of exposing personal information and other sensitive data to the public. Of course, this increased access could simply be seen as an application of the open court principle which demands that almost all aspects of court cases be public, whether it be personal information about parties and witnesses, information decisions, or documents filed in court. Access to these records has, however, always been presumptive, meaning that most people would not go through the trouble of going to the courthouse to review said records. Making court documents available online would therefore favour transparency and access to justice. It would also, unfortunately, raise privacy concerns. This could have dire outcomes since witnesses and victims may choose to remain silent rather than take part in a trial and see their lives exposed online. Thankfully, redacting tools that implement need-to-know rules as well as limited search functions can help alleviate privacy concerns. As we will see later on, most concerns regarding technology can be addressed through a thoughtful analysis of perceived risks and the adoption of countermeasures that consider the intricacies of modern legal systems.

Security Concerns

The modern-day interconnected systems that host information are often riddled with security flaws. Even when the most sophisticated security measures are used, vulnerabilities can be found and exploited by malicious users. As such, by going digital, the judicial system risks exposing its information to data theft, loss or corruption. These threats are exacerbated in cases where the servers on which the information is harboured is not under the direct control of the judiciary itself since security measures cannot easily be verified, tested and updated.

While cybersecurity breaches constitute a real issue and a true concern, they shouldn't be overemphasised, nor should the security flaws associated with a paper-based system be underestimated. There is a tendency, within the legal community, to hold technology to a standard that paper records were never held to. We expect perfect security online yet remain content with increasingly imperfect security in the physical world. Just like buildings, computers will ultimately be secure or insecure depending on the quality of the security protocols and tools adopted to keep their content safe.

Courtroom Rooted Rituals

By definition, law is an abstract intellectual creation. It relies on an enforcement apparatus that operates through ritual practices and procedures, and that is symbolized by courthouses and their distinct architecture. Courthouse architecture sets the boundaries between the outside world, where the law produces social effects, and the justice system, where these effects are validated or quashed. For this reason, judicial architecture is often meant to convey the court system's values, which are themselves a translation of society's values.

In the same vein, legal rituals serve to impose order and predictability, which are much sought after and expected within the legal system. These rituals, and the procedural formalism they maintain, aim—among other things—to safeguard the impartial decision-making process, and to ensure that all parties possess equal opportunity to seek justice through an impartial superseding power.

This is why technological solutions cannot be implemented haphazardly. As is well documented, the technological revolution carries with it a graphic revolution (i.e. the writing of numbers). This slow shift from letters to numbers will have undeniable and considerable impacts on law and justice; temporal concepts historically based on the written word. Furthermore, our perception of time and space are profoundly altered by digital environments. Although undeniable, this is particularly troubling to those within the legal community since time and space are at the core of judicial interactions.

In other words, technology is often seen as a way to break with ritual and cyberjustice technologies such as online dispute resolution mechanisms and

videoconferencing tools also have the effect of transporting the justice system outside the courthouse walls and away from the symbolism contained therein.

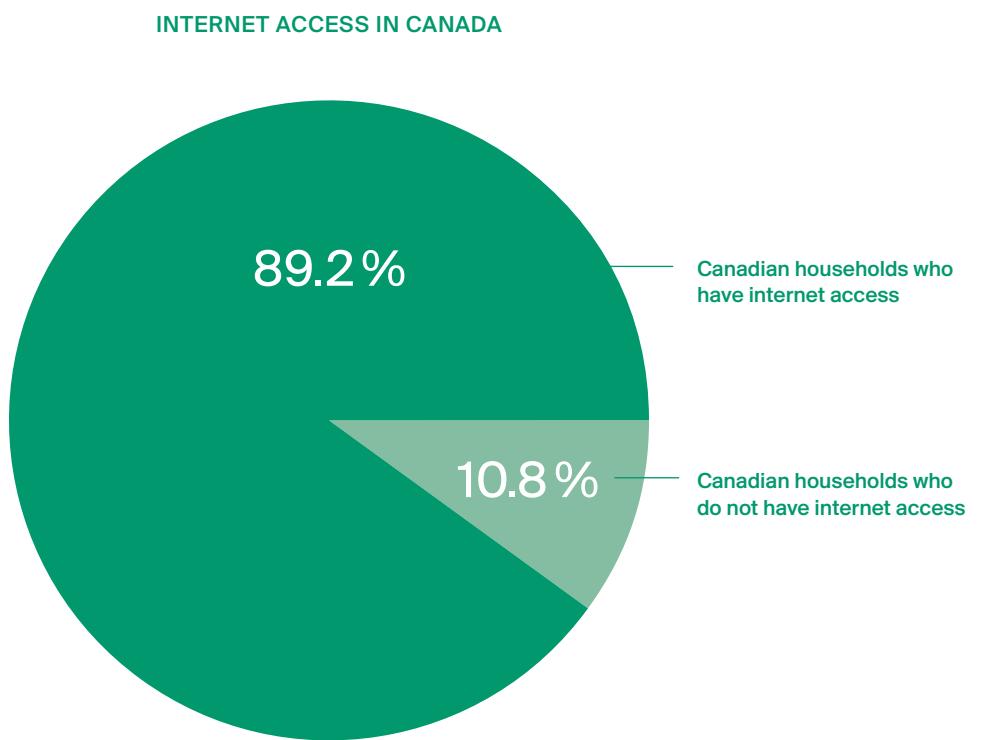
Therefore, when implementing technology within the justice system, it is essential to consider the impact that these tools might have on well-established legal rituals and symbols. For example, video conferencing tools, if used in a manner that neglects rituals and symbols, could negatively impact the truth-seeking process. Moreover, while these technological tools aim to increase access to justice, measures that disrupt physical geography and fluid interactions could have the opposite effect if their thoughtless implementation comes to undermine the perception of stability and order of court processes. Technology can therefore have both positive and negative effects on legal processes depending on the decision to take legal rituals and symbols into account during the implementation process. In the same vein, technology can also be used by a number of actors in divergent, and perhaps even contradictory, ways; implemented correctly, it can serve to level the playing field; implemented incorrectly, it can increase existing disparities between parties.

Inaccessibility of Technology

Finally, the increasing reliance on technology within the judicial system is often seen as a detriment to access to justice for citizens and lawyers which reside on the wrong side of the digital divide. Although this argument does hold some truth with regards to certain litigants, legal professionals that claim to be insufficiently familiar with technology (who are thankfully becoming less numerous as time goes by) will simply need to adapt to the times. In

fact, numerous bar associations in North America have adapted their rules to impose an obligation of “technological competency” onto their members.

As for litigants, while it is true that about 10% of Canadians do not have Internet access, these statistics pale in comparison to the number of individuals who are illiterate, cannot travel to the courthouse because of lack of transport, have disabilities, or cannot afford legal representation. In other words, as with security, the fact that technology is imperfect shouldn't be used as an argument against its use, when it can demonstrably improve the lives of a majority of citizens by making justice more accessible.



International Telecommunications Union “ICT Development Index (IDI 2017 Rank)”, online: https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2017/MISR2017_Volume1.pdf at 152.

Solutions Were Found

Identifying and understanding the obstacles to the integration of technology within legal processes allows us to establish a series of measures and best practices designed to help alleviate the social and historical pressures that prevented a shift towards cyberjustice within the courthouse. These measures build upon the fact that, when it comes to cyberjustice, it is important to keep in mind that the manner in which technology is designed can significantly affect not only its effectiveness as a justice solution, but also the perception of the public towards it. Although they share traits with business and accounting processes, legal systems have unique characteristics that make their design difficult for those who do not have a fair grasp of legal processes and practices. Too often, software aimed at the legal community are simply rebranded accounting or management tools or one-size-fits-all offerings that do not take into consideration the intricacies of particular courts and tribunals.

This implies, and it goes without saying, that better design and engineering—or rather design and engineering that addresses legal stakeholders' needs—can only be ensured if all relevant actors are included in the development and implementation process using language and procedures that speak to the diversity of their interests. The failure of numerous cyberjustice initiatives across the world can almost always be brought back to two underlying issues: a lack of consultation, and a monolithic approach that offers no learning curve to these same stakeholders all while asking them to accustom themselves instantaneously to complete systems overhauls.

Mia Godet



Mia Godet is a 26-year-old web developer at the Cyberjustice Laboratory. As such, she brings the laboratory's projects to life using a variety of programming languages and tools. By being part of a small developer team, she performs a variety of different tasks, from fine-tuning the internal working of the apps to improving their visual appearance. We asked her a few questions to get a sense of what it is like to be part of the Cyberjustice Laboratory's software development team.

INTERVIEW

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- CL Hello Mia! First of all, could you start by describing your professional journey?
- MG I studied software engineering at Montréal's École Polytechnique. I did my first internship at the Cyberjustice Laboratory and I really enjoyed it. For my second internship, I worked for Pratt & Whitney Canada, but didn't quite enjoy the big corporate work environment. When I finished my baccalaureate, I applied at the Cyberjustice Laboratory. I've been working here for a little more than a year.
- CL Why did you choose to work for the Cyberjustice Laboratory?
- MG When choosing my first internship, I thought that the mission of the Cyberjustice Laboratory really stood out from the rest, with their goal of bringing technology to the judicial system and thus making it more accessible. I really enjoyed the internship I did here, the university environment and the small team. I also felt like the work I was doing here had a real impact.
- CL What are some of the most important projects you've worked on in the past with the Laboratory?
- MG During my first year at the Laboratory, I worked on the CAT (i.e. Condominium Authority Tribunal, Ontario's first online tribunal). The tasks were diverse and I did a little bit of everything. I worked on the front-end development, which is the visual aspect, as well as the back-end development or how the application works, its functionalities, fixing bugs, and managing how the information is stored in datasets.
- CL Are you currently involved in any big project?
- MG Yes, I'm currently working on a project called Virtual Tribunal. Our goal is to create a modular application that can easily be adapted to the needs of future partners, by plugging modules of functionality to it. From my understanding, there are similar functionalities from one virtual tribunal to another. In most applications, there is negotiation, mediation, etc. Sometimes, additional steps are necessary. For example, in the CAT, we added an adjudication module. Even inside these modules, we can add different submodules.
- CL How do you envision the future of the Laboratory five (or ten) years from now?
- MG I think the Laboratory will have more and more partners as we become more known. Ever since I started working here, I have witnessed the Laboratory getting more interest from outside parties. What I noticed is that the Lab operates in a niche market. There are not many people in North America or in the world that do what we do. Also, we have had many successful projects and experiences over the years where the Lab proved its abilities.
- CL As a programmer, what do you get out of your work for the Laboratory?
- MG I'm learning a lot! For the project I'm working on right now, I had to learn everything from scratch, since we are using a technology I have never used before. It's great because those skills are going to be really useful to my career.
- CL On a professional level, do you have any aspirations or goals?
- MG I'm really enjoying doing web development and I can see myself specializing in that. What I like with web development is that it's easy to deploy, to code and have an application ready quickly.
- CL Thank you for your time Mia and good luck with all these fascinating projects!

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Juror Prejudice, Witness Credibility & the Impact of Distributed Courtrooms

Building on previous studies like the one at the Université de Montréal and the College of William & Mary discussed in a previous section, David Tait (Western Sydney University, WSU), Blake McKimmie (University of Queensland), Rick Sarre (University of South Australia), Diane Jones (PTW Architects), Laura W. McDonald (WSU) and Karen Gelb (WSU) envisioned a study on distributed courtrooms. In their experiment, justice processes were carried out in a courtroom that connected dispersed physical sites via video, thus bringing in participants from different locations at the same time. The experiment tested for possible juror prejudice against the defendant and examined the issue of witness credibility in a criminal trial.

The researchers used a courtroom in North Sydney and two additional rooms to serve as remote locations. The courtroom was equipped with screens and loudspeakers in order to display the parties in remote locations while trying to replicate a classic courtroom setup and give each participant the impression of eye-to-eye communication. 445 participants were recruited and divided into groups to play the role of jurors. Actors were also hired to play the roles of judge, defense lawyer, prosecutor and witnesses. In *Condition 1*, all the parties were present in the courtroom and the accused was located in the dock, away from his lawyer. In *Condition 2*, all parties were present, but the accused was sitting alongside his lawyer. In *Condition 3*, all parties were present except the accused who was located in a remote location and appeared on a screen. Finally, in *Condition 4*, the judge and jury were physically present, but the accused appeared on a screen alongside his lawyer and the prosecutor appeared on a second screen with the witnesses. After each performance, the jurors returned an individual verdict and filled a survey.

The individual verdict and survey questions allowed the researchers to draw some conclusions. First of all, technology makes trials easier to see and hear. When the accused appeared by video rather than in the courtroom, audibility and visibility were better. Second, technology does not affect perceptions of the environment, but the defendant's location does. In fact, the perception of the environment and how the accused responded to it seemed affected by social criteria (e.g. the accused's location) rather than the technology used. Third, the defendant's location in the courtroom affects verdict and perceptions of the evidence. When the accused was sitting alongside his lawyer remotely, the perceived strength of the prosecution case was at its lowest. Moreover, the level of guilt was at the highest for those who saw the accused sitting physically in the dock. Fourth, technology

does not undermine the presumption of innocence, but the defendant's location does. According to the researchers, it was in the distributed courtroom (*Condition 4*) that the presumption of innocence was best protected. Fifth, technology affects the perception of prosecutors and defense lawyers in different ways. While appearing on the screen made the prosecutor look less aggressive, less well-prepared, less believable, less credible, weaker and less convincing, the experimental condition did not affect the perceived performance of the defense lawyer to the same extent. Finally, technology does not make trials seem less "real" which might reflect the influence that televised trials have had on jurors.



CONFIGURATION OF MAIN COURTROOM IN BRISBANE SUPREME AND DISTRICT COURTS

View from defence table towards judge and prosecutor (on screens)

View from audience towards judge (physically present in the room), prosecutor (on the screen on the left-hand side of the room) and defence (on the screen on the right-hand side)

The State of Cyberjustice

In the context of the integration of new technologies in many spheres of society since 2014, the Cyberjustice Laboratory has continuously monitored the legal, societal, economic, commercial, scientific, technical, and technological environments of cyberjustice at national and international levels. As part of its partnership with the *ministère de la Justice du Québec (The Ministry of Justice in Québec)*, the Cyberjustice Laboratory prepared a report that paints a picture of the state of cyberjustice around the world, which indicates ideal trends in cyberjustice observed in the context of its monitoring.

The report is divided into two main parts, "Cyberjustice and Law" and "Cyberjustice and Access to Justice", and then examines the initiatives that stood out.

The section "Cyberjustice and Law" focuses on the impact of the use of new technologies on the law and on actors within the legal system, as well as on concrete changes concerning the rituals and legal practices as well as on procedures. This first part is divided into five subsections.

The first subsection focuses on the law of evidence and how legislation has been adapted to electronic evidence. This subsection therefore mainly focuses on the legislative framework for eligibility and authenticity of electronic documents. In Québec, this framework is mainly provided by the *Canada Evidence Act* and the *Act to establish a legal framework for information technology*. This subsection testifies to the fact that in both civil and common law jurisdictions, it is generally accepted to file electronic documents in evidence.

The second subsection deals with procedural law from several angles: consultation of court files online, electronic filing of proceedings, service and electronic communication of proceedings, *e-discovery*, as well as the legislative framework for the use of electronic means in procedural law. It also deals with articles of the new *Code of Civil Procedure* pertaining to new technologies. This subsection demonstrates that to date, with the exception of certain initiatives, there are very few complete integrated justice electronic information systems. Indeed, the trend is mainly towards less ambitious but more feasible technological initiatives. The third subsection focuses on the question of the impact of new technologies within the judiciary, while the fourth subsection deals with private modes of prevention and dispute resolution and, most importantly, online dispute resolution. It includes a presentation and evaluation of several online dispute resolution initiatives. The fifth subsection deals mainly with the technological tools available to the actors of the judicial system.

The second part of this report, "Cyberjustice and Access to Justice" discusses the role of new technologies in responding to issues related to a lack of access to justice. It is divided into three subsections.

The first subsection deals with the issues of access to the justice system per se. The second subsection addresses the issues faced by different types of vulnerable people (e.g., the citizen-litigator, people with disabilities and people living in rural and/or remote areas) when it comes to cyberjustice. This subsection also discusses cyberjustice initiatives that aim to support vulnerable people. The third and last subsection covers issues. This subsection presents initiatives to improve access to justice, especially in developing countries or in transitional justice, through the use of mobile technologies in the justice system. Since these initiatives use mainly mobile technologies, they could be of interest to Québec, especially when dealing with remote areas or Aboriginal territories.

The Technological Filing of Documents

This study summarizes the results of an analysis carried out by the Cyberjustice Laboratory technological filing of documents across Canada. It also presents the theoretical and legal frameworks of this new mode of filing.

To do so, the Laboratory analyzed the constituent legislative instruments, rules of practice, court rules as well as the websites (where possible) of each of the 178 common law and administrative tribunals throughout the country.

CASE STUDY

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The first part of the study deals with identification as part of the technological filing in Canada. The main online identification mechanisms used by technological filing systems in a judicial context are presented, classified, and analyzed. In addition, certain notable technological filing systems, both in Québec and elsewhere in Canada, are also discussed.

The second part of the study examines the legal framework of the technological filing of documents in Québec and is divided in two subsections. The first subsection deals with the general legislative requirements for the technological filing, while the second part focuses on the legislative requirements related to the security of technological filing mechanisms.

Over the course of its research, the Laboratory found that nearly 39% of the 178 tribunals across Canada allow the technological filing of documents, in one form or another.

Also, in light of the data collected, the different forms of technological filing can be classified into three main types of systems:

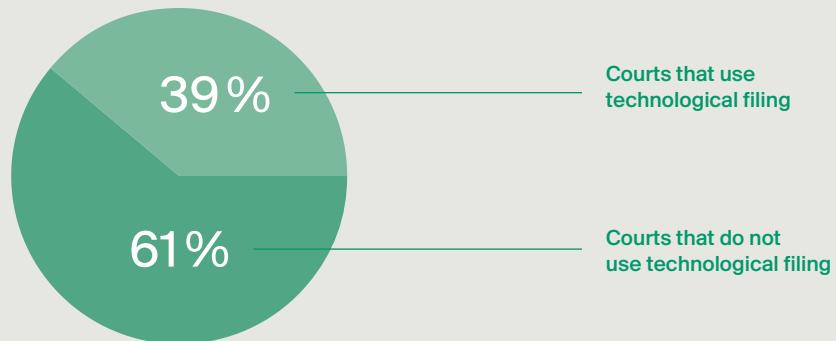
- Integrated systems of technological filing;
- Web applications that allow technological filing via an online form; and
- Documents sent by email as an attachment.

While the technological filing of documents via email is still the most widely used method (47%) –which is, in the Laboratory's view, due to its low costs and ease of implementation—it is interesting to note that technological filing via online forms seems to be gaining traction in use (42%). This demonstrates, according to the Laboratory, a trend towards the establishment of true integrated systems of technological filing, although they are not widespread at the moment.

Finally, although the technological filing of documents seems to be gaining popularity, it is rarely mandatory. Indeed, only 17% of courts require such filing. However, it is interesting to note that this percentage increases to 50% in the case of filing via an integrated system and drops to around 13% for technological filing via email or an online form. Nevertheless, some of the courts that allow technological filing prefer or explicitly encourage this method of filing (10%).

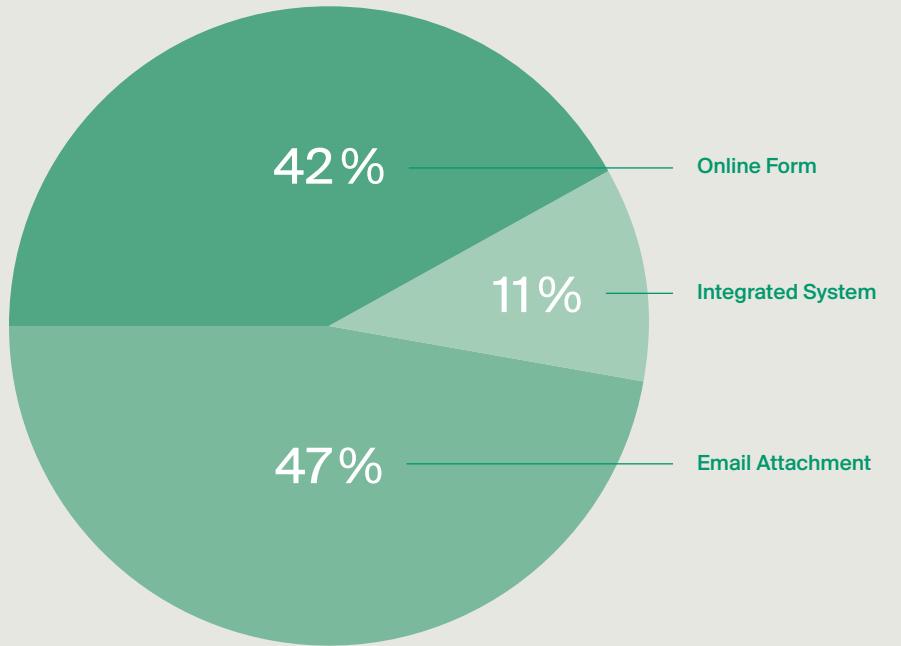
To name a few: the Canada Agricultural Review Tribunal, the Tax Court of Canada, the National Energy Board, the Canadian International Trade Tribunal, the Office of the Saskatchewan Information and Privacy Commissioner, the Prince Edward Island Regulatory and Appeals Commission, and the Federal Public Sector Labour Relations and Employment Board.

PROPORTION OF CANADIAN COURTS THAT USE TECHNOLOGICAL FILING OF DOCUMENTS

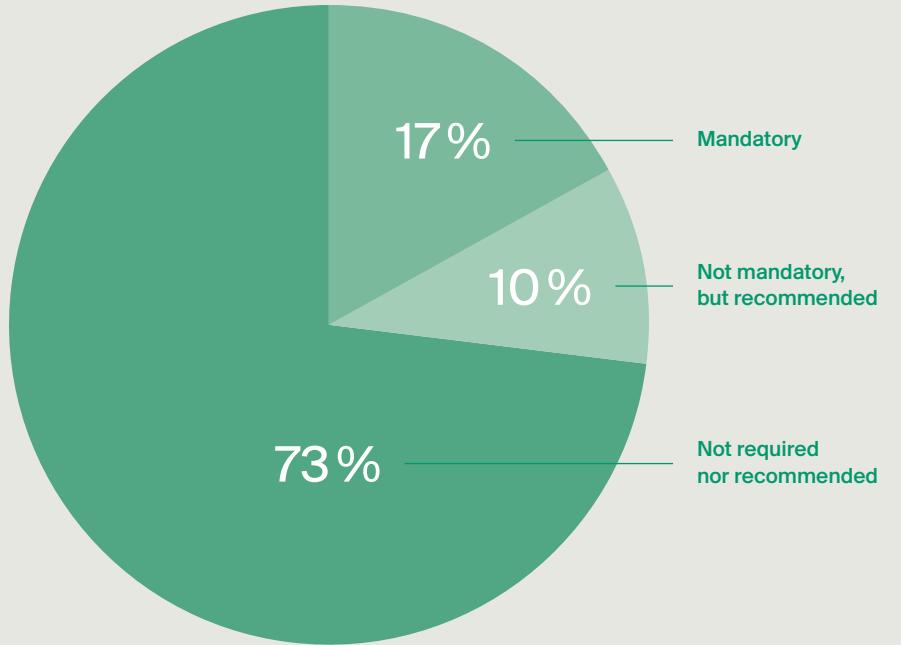


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DISTRIBUTION OF TYPES
OF TECHNOLOGICAL
FILING SYSTEMS USED
IN CANADA



PREVALENCE OF
THE REQUIREMENT TO
USE TECHNOLOGICAL
FILING IN CANADA



Can Tablets Improve Jury Deliberations?

Tablet computers have existed for a number of years. However, the launch of the iPad almost ten years ago invigorated the market for tablets. As of 2018, we can find such devices in our home, at work, in stores, etc. The rapid adoption of tablets can be explained in part by their user-friendliness, which allows for the easy access to webpages, pictures, videos, and music.

It is with this idea in mind that David Tait and Meredith Rossner decided to test the use of tablets in the jury room. The aim of this research was “to determine how use of tablets shapes the ways that juries think about and deliberate on evidence.”

They observed that younger jurors belonging to the so-called “net generation” have spent thousands of hours playing computer games, which makes them more familiar with screens than books. The experiment was based on the assumption that these devices could help jurors recall the relevant evidence and help them decide upon the guilt of the accused. Since trials can be complex and involve a quantity of conflicting evidence, Tait and Rossner posited that “[f]or individual jurors, technological aids can prompt juror memory, enhance comprehension, and increase engagement; for the jury as a whole, it may improve the thoroughness of the deliberation.”

Nonetheless, as Tait and Rossner pointed out, the information and evidence that is presented to a jury is carefully regulated by the judge in order to preserve the fairness of the trial. Regarding the presence of tablets in the jury room, there was a concern that these devices could result in an increased focus on the evidence that is detrimental to the accused given the fact that powerful or graphic images can influence people. Moreover, the researchers were cognizant of the risk that tablets could distract jurors from their task.

In order to study the impact of tablets on how jurors deliberate, Tait and Rossner assembled a group of 106 undergraduate psychology students for a period of two weeks in March 2014.

The students were then split into groups of 4 to 6 mock jurors and received a five-page scenario describing the armed robbery of a bank. The scenario was written in such a way to create some doubt in the mind of jurors, due to ambiguity in the identity of the thief and the absence of evidence that he was armed. After reading the scenario, the jurors received a pre-deliberation form to indicate their initial verdict. Then, they were assigned to one of the two conditions of deliberation: with paper or tablet (an iPad). As a group, they deliberated for 15–20 minutes while using paper or a tablet to review the evidence.

Before deliberating as groups, the individual jurors had a very similar opinion on the guilt of the accused. According to the pre-deliberation forms, 79% of the jurors in the paper condition would have convicted him, compared to 76% in the tablet condition. However, as the researchers observed in post-deliberation interviews, the form of evidence used (paper vs tablet) had a significant impact on the individual verdicts. While 56% of the individual jurors deliberating with tablets would have found the defendant guilty, only 25% of the jurors in the paper condition would have reached the same verdict. Therefore, as a result of deliberations, individual decisions on guilt decreased, but with a significant difference between the form of evidence used. The mock jurors were also asked to rate the likelihood of guilt on a scale from 1 to 7 before and after the group deliberations. In accordance with the findings on the verdict, Tait and Rossner found that jurors who used tablets were more likely to decide that the accused was, in fact, guilty compared

to the jurors in the paper condition. Moreover, the deliberations increased the likelihood of guilt for the jurors using tablets, but decreased for the jurors using paper evidence. Tait and Rossner uncovered other findings consistent with the general conclusion that tablets increase the perception of guilt. For instance, the jurors using tablets perceived the prosecutor to be more credible and the accused to be more dangerous and violent than jurors using paper. In addition, there was a significantly higher level of conflict in the tablet groups, but non-significant differences in “satisfaction with the process” and “pressure to agree.”

This study allowed Tait and Rossner to reach a few conclusions regarding how the use of tablets shapes the ways that juries think about and deliberate on evidence. Since most of the evidence is usually presented by the prosecution, the use of tablets could undermine the fairness of the trial by increasing the focus on and the response to the prosecution’s evidence. The authors posited that the vividness of the images could make the accused appear more guilty when tablets are used. Also, by uncovering a higher level of conflict, Tait and Rossner, concluded that the use of tablets may result in a more vigorous dialogue between the jurors by allowing jurors more liberty to disagree. According to the authors, it is also possible that tablets may encourage greater compromise at the expense of the accused. All things considered, Tait and Rossner concluded that if these results could be replicated in a real trial, defendants would be disadvantaged from the presence of tablets in the jury room.

“**Jurors who used tablets were more likely to decide that the accused was, in fact, guilty compared to the jurors in the paper condition.**”



ARTIFICIAL INTELLIGENCE & BEYOND

WHERE DO WE GO FROM HERE?

As Orson Welles put it, “If you want a happy ending, that depends, of course, on where you stop your story.” The seven-year story of the Towards Cyberjustice project has ended with dozens of publications, hundreds of lectures, seminars, and other knowledge transfer activities, and, more importantly, effected change within numerous courts and justice departments across the country and around the world. In this sense, we couldn’t have asked for a happier ending. However, as existing technologies continue to evolve and new tools are launched almost daily, the story of cyberjustice as a field of research is only beginning.

For example, new technological innovations, primarily in the fields of artificial intelligence (AI) and blockchain, are poised to transform legal practice, legal services, the decision-making process and, consequently, the legal system as a whole. In this sense, AI doesn’t really represent a new stop or step during the current process as much as a series of tools that could be incorporated throughout the journey to completely reshape how access to justice is perceived and granted.

A few examples of the courts, public bodies, and justice departments that have implemented Towards Cyberjustice recommendations:

- Cour municipale de la ville de Québec
- Cour municipale de la ville de Montréal
- Ministère de la justice de France
- Ministère de la justice du Québec
- Court Services (Canada)
- Ontario's Condominium Authority Tribunal
- Office de la protection du consommateur

For this reason, although the Towards Cyberjustice project has ended, a core group of its researchers have chosen to continue its story and to launch a new project that will build on past accomplishments as well as new technological innovations: Autonomy through Cyberjustice Technologies and artificial intelligence or ACT. The ACT partnership aims to benefit justice stakeholders by leveraging artificial intelligence to prevent and resolve conflicts. This project has assembled a multidisciplinary and international team of 45 researchers and 42 partners representing a number of different stakeholders including the world's leading research centres on the implementation and use of technologies in the field of justice (cyberjustice), litigants and legal professionals (justice stakeholders), as well as main users and purveyors of AI for justice in Canada.

ACT's research activities will take advantage of both the software infrastructure at the Cyberjustice Laboratory and its partners' expertise in AI and data harvesting, as well as the considerable experience acquired through the Towards Cyberjustice project.

A New Research Hypothesis Has Emerged

On the tail ends of the Towards Cyberjustice project, our researchers and partners have noted a stark proliferation of legal technology that offers justice stakeholders tech tools and leverages AI and big data to prevent and resolve conflicts. Notable examples include conversational agents, predictive algorithms for anticipating the outcomes of trials, smart contracts, and AI-assisted online dispute resolution

(or ODRAI). These tools are designed to enhance stakeholders' autonomy; to increase their ability to understand the law and put it to work. The empowerment of stakeholders through cyberjustice promises to transform conflict prevention and resolution as we know it today, while also disrupting the organization of the legal professions.

Both subjected to, and interested by, this phenomenon, justice professionals raise questions about the contours of AI and its various effects on the delicate balances reigning in the legal world. Our goal is therefore to identify the effects of deploying AI and to thereby draw lessons to develop technology that is better adapted to justice.

A Renewed Research Agenda is Taking Form

Based on the ongoing participation of its partners, and following the model of the Towards Cyberjustice project, ACT will span six years and four stages:

- 1 An inventory of situations where AI is used in justice;
- 2 Evaluation of the impact of those situations with respect to enhancing the autonomy of justice stakeholders;
- 3 Development of best practices for protecting parties' interests; and
- 4 Elaboration of a governance framework to guarantee fair use of AI for justice.

Armed with a pragmatic approach, the ACT partnership will participate in developing a framework for legal governance of AI for justice. This major project will also

foster the next generation of multidisciplinary researchers in law and computer science by contributing to the specialized training of numerous students. In terms of secondary benefits, the research sub-projects will experiment with and implement innovative technology for justice, and will also provide new opportunities for the private sector.

From Towards Cyberjustice to ACT

“The Cyberjustice Laboratory is pleased to announce the ACT (Autonomy through Cyberjustice Technologies) research partnership. Led by Professor Karim Benyekhlef, Director of the Laboratory, and funded by the Social Sciences and Humanities Research Council of Canada’s (SSHRC) Partnership Grants program, ACT aims to increase access to justice through the use of artificial intelligence (AI).”¹

Valentin Callipel



AI as a Means to Improve Access to Justice

¹ <https://www.cyberjustice.ca/en/actualites/2018/06/13/lancement-du-plus-important-projet-de-recherche-international-en-intelligence-artificielle-et-justice/>

Valentin Callipel, LL. M. (Université de Montréal), LL. M. (Université Paris 1 Panthéon-Sorbonne), has been part of the Cyberjustice Laboratory team for six years and is currently Head of Mission. Called to the Bar in both Québec and Paris, Valentin is responsible for the Lab's projects that seek to modernize the justice system, such as the online mediation platform for Québec's consumer protection office, the digital court for Ontario's Condominium Authority Tribunal and the online consumer dispute resolution platform for *Médicys*, France. As part of the research team of the Lab, Valentin actively participates in conducting research for the Autonomies Through Cyberjustice Technologies (ACT) research project. We asked him a few questions to get a sense of what it's like to be part of the Cyberjustice Laboratory and a researcher for the ACT project.

- cl Hello Valentin! First of all, could you start by describing your professional journey?
- vc I studied law in France and Québec and passed the Paris and Québec Bars. During my studies, I had the opportunity to write my master's thesis: "The efficiency and the quality of justice in France." It was a great opportunity to learn about transformation of justice systems and familiarize myself with the multidisciplinary approach research methodology (including law, sociology, philosophy, economy, and history). It was also a period where I worked at multiple law firms, and I became interested in examining barriers for access to justice and concomitant emerging solutions, such as the role that technology could play (that is, a notion of cyberjustice).
- cl Why did you choose to work for the Cyberjustice Laboratory?
- vc The work of the Cyberjustice Laboratory very much aligns with my interests: technology and

efforts to bring forth justice in our societies. I am grateful I had the opportunity to join the *Towards Cyberjustice* research project at an early stage and participate in the development of the new ACT research project.

cl Can you describe the genesis of the ACT project you are currently involved in?

vc The Lab's researchers and partners have been observing rapid growth in the field of legal technology. To name a few, these services include intelligent search engines, conversational agents (chatbots), automated contract analysis, automated document creation, predictive algorithms for anticipating outcomes of a trial or situations (e.g. crimes or repeated offences by a criminal), and automation of the effects of contracts (smart contracts) or legislation (regulation technology). We observed that such emerging implementations of artificial intelligence (AI) in the field of law were understudied, and this project seeks to fill that gap.

- cl How will AI change the field of research focused on cyberjustice or the use of technology to improve access to justice?
- vc AI has shifted the role that technology can play to increase access to justice. While previous cyberjustice research focused on improving the circulation and sharing of legal information among justice stakeholders, AI technology strives to empower justice users and stakeholders even more directly. The movement to bring AI into the justice system seeks to enhance access to justice by augmenting legal research capabilities, legal analysis, and the decision-making of everyday people, mediators, lawyers, and judges. This shift is essential for access to justice: the use of AI in law means that we have levers to improve the justice system not from its traditional centre of power but instead from its extremities.
- cl How do you envision the future of AI in the justice sector?
- vc From a practical point of view, I think that the most promising area of development of AI in the justice sector will be: Online Dispute Resolution for low intensity and high volume disputes such as consumer disputes or landlord and tenant disputes.

The use of ODR is already proving to be an excellent way of dealing with the delays and costs associated with courts. However, this technology still relies on human intervention, which poses a bottleneck in the quest to rapidly solve millions of cases. The use of AI in ODR systems can alleviate this problem by providing parties with the tools to increasingly solve more cases themselves. Low-intensity

disputes usually deal with similar fact patterns in thousands of cases. This wealth of data makes it an excellent target for the implementation of AI.

However, by becoming embedded in numerous aspects of the practices of justice stakeholders, AI also promises to transform the practice and teaching of law, all while deeply altering the organization of legal professions by redefining known boundaries through disintermediation, decentralization, *uberisation*, and automation. That's why it is essential to conduct empirical research—along with the developers and users of AI in the justice field—to empirically assess the multiple facets of this phenomenon, and support the careful development of AI tools in line with the fundamental rights protected by modern justice systems.

cl Thank you for your time Valentin and good luck with all these fascinating projects!

"The most promising area of development of AI in the justice sector will be: ODR for low intensity and high volume disputes"

Gilles Lajoie



Artificial Intelligence & its Potential to Improve Legal Services

INTERVIEW

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The Société québécoise d'information juridique (or SOQUIJ) is an organization created by the *Loi sur la Société québécoise d'information juridique*. The organization operates under the authority of the Minister of Justice of Québec. Its mission is to promote the research, treatment and development of legal information in order to improve its quality and accessibility for the benefit of the community. To do so, the SOQUIJ publishes and disseminates legal information to litigants and legal professionals. We contacted Gilles Lajoie, General Manager of the SOQUIJ, to help us understand the concrete impacts of the advancement in artificial intelligence on legal products and services.

CL Hello Mr. Lajoie. First of all, could you introduce yourself and briefly describe your role at the SOQUIJ?

GL I am the general manager of the SOQUIJ. Thus, I am the one in charge of the organization as a whole.

CL Is the SOQUIJ currently working on projects to take advantage of the opportunities offered by AI? If so, what are they?

GL Yes, over a year ago, we started to explore everything that relates to artificial intelligence. We have done so in collaboration with a local company called Element AI, one of the world leaders in artificial intelligence. First of all, we have determined what opportunities were available to optimize our processes, while exploring what we could offer to our clients in terms of product and services. What you have to understand is that we are a self-financed public organization and we receive no subsidies. Therefore, we have to offer paid products and services that will appeal to the legal community. Second of all, we have drawn

up a road map to take advantage of those opportunities. Third of all, we recently finished a pilot experience once again with Element AI, which was financed by the *Conseil du trésor du Québec*. The objective was not to develop a finished product, but rather to see what it meant to work with artificial intelligence. This experience will then be shared with all government agencies. Recently, we received the green light from the government of Québec to develop an online platform for citizens that would serve to improve access to justice. The next step will be to identify AI-based solutions that will allow us to reach this objective.

CL What motivated the SOQUIJ to understand artificial intelligence and integrate it into its expertise?

GL The reasons are relatively simple. We believe we are at a turning point in the history of SOQUIJ. The market has profoundly changed compared to what it was 20 years ago. We are well aware that artificial intelligence will revolutionize many sectors, including the

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legal sector. Finally, we are an organization that relies on data. We have a considerable amount of data and we know how to use it in order to fulfill our mission.

CL Generally speaking, do you believe that AI will lead to a reform of the legal professions (lawyer, judge, paralegal, etc.)?

GL Yes, I do. The question should be “when?” The legal sector is highly regulated so there will eventually be a shock between the benefits that citizens expect from technological improvements and what the legal framework allows. We can draw a parallel with companies such as Airbnb. Cities now have regulation about what people can do in terms of accommodation. If a tool such as Airbnb is invented and people benefit from it, the push can be so strong that it forces cities to adapt. In other words, technological evolution can be so significant that society will adapt. Many people have problems with the justice system and there is currently no real solution. At some point, those solutions will emerge and will have an impact on the legal sector. Governments rarely resist those changes.

CL Thank you for your answers Mr. Lajoie. We wish you the best of luck and we hope that you will be able to leverage AI to reach your objectives!

“We can draw a parallel with companies such as Airbnb.

Cities now have regulation about what people can do in terms of accommodation. If a tool such as Airbnb is invented and people benefit from it, the push can be so strong that it forces cities to adapt.”

Glossary

Legal action

Proceedings in court brought by an individual, or a corporate or a public entity, to seek judgment for the infringement of rights or laws.

Adjudication

The process by which a judge or arbitrator comes to a decision regarding a dispute.

Arbitration

The hearing and determining of a dispute or the settling of differences between parties by a person or persons chosen or agreed to by them.

Bibliothèque et Archives nationales du Québec

A Québec government agency that gathers, preserves and promotes published heritage materials and any material of cultural interest that pertains to Québec.

Case management system (CMS)

Software that helps with the management of cases, from creation to closure. It enables document editing and filing functionality to support preliminary hearings or pleadings. These systems facilitate document sharing and monitoring and the modification of the status of a case. CMS can also schedule hearings, search for a specific case or automate workflow to support procedure management.

Center for Legal & Court Technology

A non-profit research, education, and consulting organization that works to improve the administration of justice through the use of technology, and that is based out of the William & Mary School of Law in Williamsburg, Virginia.

Conseil du trésor du Québec (in English, Treasury Board Secretariat)

A government department part of the Executive Council of Québec, which assists the Canadian

federal Treasury Board committee of ministers on government spending on programs and services, including how the federal board is regulated and managed.

Cyberjustice

Integration of information and communication technologies into judicial or extrajudicial dispute resolution processes. In its broadest sense, it implies the networking of all stakeholders in the informational chain for judicial cases.

Digitalization

The process of transforming analogue material into binary electronic (digital) form, especially for storage and use in a computer. Digitalization of textual documents typically produces an image of the words, which must be transformed to character data through a process of optical character recognition (OCR). In some instances, the OCR process may preserve text and page formatting.

Distributed courtroom

A courtroom model and research project that makes use of immersive technology to connect otherwise dispersed geographical locations, created by the interdisciplinary research team consisting of David Tait, Blake McKimmie, Rick Sarre, Diane Jones, Laura W. McDonald, and Karen Gelb.

E-discovery

The process in which electronic data is sought, found, and searched in order to use it as evidence in a legal case.

E-filing

The electronic filing of court documents.

Electronic case management systems

A system (pioneered by the Cyberjustice Laboratory, among others) that digitally or electronically manages court processes.

E-resolution

One of the first instances of dispute resolution online, which focused on domain name disputes. One of the four organizations (with the World Intellectual Property Organization (WIPO), the National Arbitration Forum (NAF) and the International Institute for Conflict Prevention & Resolution (CPR)) approved by the Internet Corporation for Assigned Names and Numbers (ICANN) to provide domain name dispute arbitration services prior to closing in 2001.

European Commission for the Efficiency of Justice (CEPEJ)

A body created by the European Commission in 2002 that seeks to improve the quality and efficiency of the European judicial systems and strengthen court users' confidence in such systems.

Hackathon

An event originating in the field of computer science, which lasts a few days or several days in which a large number of people meet to solve a particular problem through brainstorming or the creation of solutions or tools.

Information and communication technologies (ICT)

The study or use of systems (especially computers and telecommunications) for storing, retrieving, and sending information.

Internet Corporation for Assigned Names and Numbers (ICANN)

A non-profit organization that regulates the internet's unique identifiers and naming system.

Justice system stakeholders

Individuals concerned, lawyers, judges, the government, etc., who are affected by changes to the justice system.

Low-intensity dispute

A term coined by Professors Karim Benyekhlef and Nicholas Vermeys that seeks to more clearly define what is meant by "low-value, high volume", a term that is often used by some communities of people working in online dispute resolution. Low-intensity

refers to disputes where the financial stakes are relatively low, but recognizes that determinations of the value of a dispute are inherently subjective and depend on the socio-economic status of a dispute's claimants.

Médicys (France)

Online mediation platform for consumer disputes provided by the *Chambre Nationale des Huissiers de Justice de France*.

Mediation

A non-adversarial method of dispute resolution in which a neutral third party helps resolve a dispute. The mediator does not have the power to render a decision on the matter or order an outcome. If a satisfactory resolution cannot be reached, the parties can pursue a lawsuit.

Negotiation

Describes any communication process between individuals that is intended to reach a compromise or agreement to the satisfaction of both parties. Negotiation involves examining the facts of a situation, exposing both the common and opposing interests of the parties involved, and bargaining to resolve as many issues as possible.

Office de la protection du consommateur

The consumer protection agency in Québec.

Online Dispute Resolution

Provides people with mechanisms and tools to help them settle their disputes online through the use of electronic communications and other information and communication technology, without going to court.

ODRAI

A term coined by members of the Cyberjustice Laboratory, Karim Benyekhlef, Valentin Callipel, Sarit Mizrahi and Nicolas Vermeys, which refers to the use of artificial intelligence to enhance online dispute resolution.

Open court principle

A principle that exists in some legal jurisdictions which requires court proceedings to be

automatically open and accessible to both the media and the public, in comparison to a norm where court discussions happen in secret.

Platform to Aid in the Resolution of Litigation electronically (PARLe)

A customizable platform created by the Cyberjustice Laboratory that facilitates dispute resolution before low-intensity cases go before the courts, and facilitates online dispute resolution in a timely and efficient manner using self help tools and online negotiation, mediation or adjudication.

Pre-trial

A hearing or set of hearings that precede a trial, with a purpose to come to agreement before trial or to simplify elements of the case and expedite the trial process.

Social Sciences and Humanities Research Council

Canada's federal research funding agency that promotes and supports postsecondary-based research and research training in the humanities and social sciences.

Société québécoise d'information juridique (SOQUIJ)

An organization in Québec that partners with the Québec Ministry of Justice and seeks to promote the research, treatment and development of legal information in order to improve its quality and accessibility for the benefit of the community.

Socio-legal approach

An approach in legal research that takes into account the social, psychological and historical context in which laws have been made. The legal system as we know it was not created in a vacuum; it is the product of conscious and unconscious social and even religious choices, and our rules of procedure must therefore be studied to understand the psychological, social and cultural influences that have dictated their content. This approach supports the development of software tools to facilitate the networking of legal information.

Techno-legal approach

The development of software modules to meet the legal system's needs, ideally developed in partnership with the legal system's main stakeholders (judges, lawyers, court administrators, etc.), and consisting of a series of applications created to take advantage of recent technological advances in order to make the legal system more accessible and efficient.

Trial

A formal examination of evidence and the application of law to that evidence by a judge, in order to decide guilt in a case of criminal or civil proceedings.

Videoconferencing

A tool that involves interactive and real-time communication between two or more locations, using both audio and video transmission.

Online Resources

**Canadian Forum on Civil Justice
(Forum Canadien sur la Justice Civile)**
fcjc-fcjc.org

Center for Court Innovation
courtinnovation.org

Center for Legal and Court Technology
law.wm.edu/academics/intellectuallife/researchcenters/clct/

Cyberjustice Laboratory
cyberjustice.ca

Online Dispute Resolution Europe
odreurope.com

The Hague Institute for Innovation of Law
hil.org

The Perelman Center for Legal Philosophy
philodroit.be

Winkler Institute
winklerinstitute.ca

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