

The Case for Courtroom Technology Competence as an Ethical Duty for Litigators

Amy Salyzyn

Introduction

Courtroom technology has become a common feature of many litigators' practices. To be sure, the available technological tools vary greatly among courtrooms, ranging from relatively simple devices like audio-recording equipment or video screens on which evidence can be displayed to fully outfitted "e-courtrooms" that feature cutting-edge technology to assist in all aspects of trial proceedings. Notwithstanding this variability, there is now a strong case that lawyers need to understand and use an increasing number of technologies in order to effectively represent their clients in court.

This chapter considers whether the emerging ubiquity of courtroom technology translates into an *ethical duty* for litigators to have appropriate competence in relation to courtroom technology.¹ The position ultimately taken here is that courtroom technology competence is properly understood as an ethical obligation for litigators and should be of concern to lawyer regulators.² However, it is also argued that this ethical obligation should not be primarily addressed under the conventional rules-based system whereby lawyers' behaviour is reactively evaluated against minimum standards within a "quasi-criminal" lawyer disciplinary regime.³ Instead, and for reasons discussed further below, it is argued that lawyer regulators ought to adopt policy approaches that focus on facilitating and encouraging best practices when it comes to lawyers' competence in courtroom technology.

This chapter unfolds in four parts. It starts off by making the case that lawyers need to understand and use an increasing number of technologies in order to effectively represent their clients in court (see Lawyer Competence in Courtroom Technology and Effective Client Representation below). Then, it sets out why appropriate competence in courtroom technology is properly seen as an ethical obligation for litigators and, therefore, falls within the mandate of lawyer regulators (see Technological Competence as an Ethical Duty, see page 220). The third part argues that lawyer regulators need to act more aggressively to monitor and ensure lawyer courtroom-technology competence given the absence of evidence that lawyers possess adequate competence in this area (see Why Lawyer Regulators Should Care about Courtroom-Technology Competence, see page 222). Finally, the chapter concludes by exploring policy options for lawyer regulators that could allow them to become more involved in facilitating increased lawyer competence in courtroom technology (see What Might Lawyer Regulators Do?, see page 224).

Lawyer Competence in Courtroom Technology and Effective Client Representation

This part outlines three interrelated reasons why it is appropriate to treat lawyer courtroom technology competence as an important aspect of effective client representation in contemporary litigation practices: (1) although courtroom technology is not uniformly used across courtroom settings, its presence has significantly increased in recent decades; (2) as a result, in a growing number of cases, lawyers must be able to appropriately use courtroom technology in order to optimally advance their clients' interests; and (3) additionally, understanding courtroom technology and its associated risks is sometimes necessary for lawyers to adequately protect their clients from technological misfeasance by others.

What Is "Courtroom Technology"?

Before proceeding with the analysis, it is necessary to first define how the phrase "courtroom technology" is being used in this chapter. The term "courtroom technology" has been defined in a variety of different ways by those who study the phenomenon.⁴ Given that the particular technologies in use can easily change over time and from one setting to another, there are a number of advantages to using a

more functional or categorical definition rather than attempting to enumerate all of the specific technological tools that courtrooms are currently using. For example, Fredric Lederer has observed, “modern trial courtroom technology can be roughly divided into information (evidence) presentation, remote appearances, court record, ‘counsel communications,’ (for example, internet access from counsel table), assistive technology (including interpretation), jury deliberations, and appellate matters.”⁵ This chapter borrows from Lederer’s definition with a focus on technology used with respect to (1) information presentation, (2) remote appearances, (3) court record, and (4) jury deliberations (including jury use of social media). In addition, the chapter includes a fifth category: (5) information collection (including conducting online legal research).

The Increased Presence of Courtroom Technology

Anecdotally, there is widespread recognition of a significant increase in the presence of courtroom technologies in North America over the past several decades. To start with Canadian examples, the description for a 2010 continuing legal education program organized by the Canadian Bar Association on the topic of “Technology in the Courtroom” states that “[f]rom digital still cameras to electronic document displays to laptops equipped with presentation software, new technologies are making headway in Canadian courtrooms, and firm size need not be a limitation as software and services proliferate.”⁶ Similarly, the home page of the Canadian Centre for Court Technology, a not-for-profit corporation with a mandate to promote the use of technological solutions to modernize court services, observes that “[t]echnology is increasingly used in court processes, both in civil and criminal cases.”⁷ Similar observations can be found in relation to American courts. For example, in 2010, Lederer observed that “[c]ourtroom technology now is a fundamental aspect of trial practice for many lawyers...[and that] an ever increasing number of courtrooms are being equipped with at least the ability to electronically display evidentiary and other images to judge and jury.”⁸ A law review article written a year earlier similarly notes, “[t]echnology has infiltrated the lawyer’s practice in nearly every area... [including] courtroom presentation and trial practice.”⁹

Supporting these types of descriptive statements are several empirical studies. For example, the results of a 2014 survey of 12,500 private attorneys conducted by the American Bar Association (ABA)

suggest that there is significant use of courtroom technologies in the United States. Among other things, the survey reports that 27.6% of surveyed lawyers who practice in a courtroom used a laptop with presentation software to present evidence and that 24.9% of those who used laptops in the courtroom used them to conduct online research (additionally, 23.3% and 21.7% indicated, respectively, that they used smartphones and tablets to conduct online research in the courtroom).¹⁰ A 2003 Federal Judicial Center Survey on Technology also found widespread use of court technology.¹¹ For example, of the 90 district courts that responded to this survey,

Ninety-four percent ha[d] access to an evidence camera and 66% to a digital projector and projection screen; 93% to wiring to connect laptop computers; 57% to monitors built into the jury box; 77% to monitors outside the jury box; 89% to a monitor at the bench; 88% to a monitor at the witness stand; 88% to monitors at counsel table or lectern; 77% to monitors or screens targeted at the audience; 80% to a color video printer; 91% to annotation equipment; 95% to a sound reinforcement system; 92% to a telephone or infrared interpreting system; 92% to a kill switch and control system; 81% to an integrated lectern; 93% to audio-conferencing equipment; 85% to videoconferencing equipment; 81% to real-time software for use by court reporter; 74% to a real-time transcript viewer annotation system; and 66% to digital audio recording.¹²

In Canada, a 2012 comprehensive report on the Digitization of Court Processes in Canada, authored by Jane Bailey, notes that “[d]ocument storage, viewing, manipulation and e-exhibit systems are available in a number of courts (e.g., Alberta, BC, Ontario, Nova Scotia), as are video display screens, and network connections for counsel.”¹³ In addition, the report observed that both audio-conferencing and video-conferencing are available “in courts across Canada for a wide variety of purposes.”¹⁴ Another 2012 report, authored by the Action Committee on Access to Justice In Civil and Family Matters, observed “teleconferencing and videoconferencing is generally available throughout Canada (by phone, video, Skype, etc).”¹⁵

Although courtroom technologies of all types are not available in all courtrooms,¹⁶ these anecdotal and statistical reports confirm a significant presence of various kinds of technology in courtrooms across North America.

Courtroom Technology and the Optimal Advancement of Client Interests

As a growing number of courtroom technologies come to be used, it will become increasingly difficult for lawyers who are hostile to, or unfamiliar with, such technologies to refuse to use them (or use them poorly) and still be able to claim that they are providing optimal client representation.¹⁷

Indeed, in certain circumstances, opting out may no longer be an option—there are a number of situations in which use of courtroom technology by lawyers is mandatory.¹⁸ A prosecutor, for example, may have little choice but to conduct a bail review hearing using videoconferencing equipment if that happens to be the practice in the jurisdiction in which she practices.¹⁹ On the civil side, lawyers participating in complex commercial cases may find themselves subject to court orders requiring them to conduct an “e-trial,” which calls for all evidence to be filed and presented electronically.²⁰ In both of these examples, it is not open to the lawyers involved to opt-out of using technology—in order to represent their client, they must “play ball,” so to speak.

Even in situations where the use of courtroom technology is permissive rather than mandatory,²¹ there may be reasons why using such technology is necessary for effective and efficient client representation. One such reason is cost. With respect to evidence presentation technology, for example, Lederer reports in a 2003 article: “Based on anecdotal evidence, our usual assumption is that evidence presentation technology saves a minimum of 1/4 to 1/3 of the otherwise traditional amount of time necessary to present a case. Courtroom 21 experimentation suggests a minimum time savings of about 10% even in a short one hour case, with only a few documents.”²²

By way of another example, one might imagine a civil trial in which a party could save several thousand dollars by having its overseas expert testify using videoconferencing rather than travel to attend the local court in person.²³ To the extent that a lawyer declines to present evidence electronically or to arrange for witness testimony via videoconferencing due to personal discomfort or unfamiliarity with the technology (as opposed to, for example, good-faith concerns about whether using such technology is in his or her client’s best interests),²⁴ the client will end up paying more for legal representation than if he or she had retained a lawyer who was comfortable and familiar with the relevant technology and therefore willing to use it.

Beyond cost, issues relating to access and quality of service can also arise where lawyers refrain from using courtroom technologies or fail to use such technologies appropriately. For example, as Jane Bailey, Jacquelyn Burkell, and Graham Reynolds observe, videoconferencing can operate as a tool to “improve equity with respect to access to court proceedings” by, for example, “provid[ing] timely access to court proceedings for those living in remote communities otherwise served by relatively infrequently convened circuit courts” or “provid[ing] improved access to interpreters for members of linguistic minority groups, as well as low cost access to legal services and lawyers, which may be especially important for those living in or incarcerated in remote locations.”²⁵ Given these phenomena, lawyers who refuse to use videoconferencing technology or who are unable to use it effectively may be undercutting meaningful access to the courts for some of the most vulnerable members of the public.

A connection can also be drawn between quality of service and the use of online legal research technologies. If an unexpected legal issue comes up during a courtroom hearing, the lawyer who is using a laptop or other mobile device to conduct online legal research in the courtroom is surely at an advantage over the lawyer who is unable to conduct contemporaneous research because he or she does not use such devices or does not know how to use them to carry out research. Likewise, the client of a lawyer who can receive and review real-time court transcripts, where available, also enjoys an advantage over the client whose lawyer does not have this ability.

Furthermore, there is reason to believe that lawyers who use technology to present evidence—like, for example, electronic whiteboards, digital projectors, or individual monitors for trial participants²⁶—may enjoy a strategic advantage in certain circumstances. Although now somewhat dated, a 1998 study by the Judicial Conference Committee on Automation and Technology reported that 87% of the judges responding to the survey thought that video evidence presentation technologies helped them to understand the witness better, 81% thought it helped them understand testimony better, 72% thought it improved their abilities to question witnesses, and 83% found the technologies helped them to manage the proceeding.²⁷ Jurors were also surveyed, most of them reporting that they “believed that they were able to remain more focused on testimony and evidence” when evidence-presentation technologies were employed.²⁸

The above study is limited in that it only measured subjective impressions. There are, however, empirical studies on the effects of visual technology on juror decision-making that suggest that such technologies can help jurors better understand and be persuaded by information presented by lawyers. For example, a 2012 article reporting the results of two controlled experimental studies on the effects of lawyers' use of PowerPoint presentations on liability judgments indicates, among other things, that "using PowerPoint enabled attorneys on either side of the case to persuade by helping decision makers to understand trial information better...[and that] [w]hen a lawyer used PowerPoint, participants thought better of his performance."²⁹ To be sure, as the authors of this article and other scholars have cautioned, the precise ways in which judges and jurors interact with electronically presented evidence is complex and the subject of ongoing empirical study.³⁰ However, this chapter proceeds on the basis of an uncontroversial premise in light of the studies to date: at least in certain circumstances, using technology to visually present evidence can lead to better comprehension and retention and can be more persuasive than evidence presented without the aid of such visuals.³¹ The lawyer who refuses to use electronic methods of presentation or who cannot use these methods competently can, therefore, be said to be putting his or her client at a disadvantage.

Identifying and Responding to Technological Misfeasance by Others

In addition to the affirmative reasons in favour of using courtroom technology to ensure effective and efficient client representation, there is also a negative case for technological competence: in certain circumstances, understanding courtroom technology and its associated risks may be necessary to adequately identify and respond to technological misfeasance by others.

One major area in which misfeasance arises relates to social media. In an extensive study, Marilyn Krawitz observes that the inappropriate use of social media by jurors has emerged as a significant problem that courts now have to contend with.³² As Krawitz notes, inappropriate juror use of social media can impact the fair trial rights of the accused in a criminal case in a number of ways. For example, she argues that social media "can affect a juror's conscious or subconscious mind" and potentially introduce jurors to information (not presented in court) that may be inaccurate or wrong.³³ A lawyer who

does not have a basic understanding of how social media works is compromised in detecting juror misuse of social media. Moreover, in cases where a juror is caught misusing social media, the court has a variety of remedies available, ranging from simply questioning the juror to removing the juror or declaring a mistrial.³⁴ The lawyer who does not understand social media—for example, what it means to post something on Twitter or Facebook—will have a difficult time identifying and advocating for a remedy that best protects his or her client's interests in view of such juror misconduct.

Another area where misuse of technology can arise relates to evidence presentation. In the United States, for example, there has been significant coverage of prosecutorial misuse of PowerPoint presentations and computer animations. It has been reported that “[a]t least 10 times in the last two years, US courts have reversed a criminal conviction because prosecutors violated the rules of fair argument with PowerPoint.”³⁵ There are additional examples of American courts finding prosecutorial use of computer animation to be misleading.³⁶ The South Carolina Supreme Court in *Clark v. Cantrell* observed: “[A] computer animation can mislead a jury just as easily as it can educate them. An animation is only as good as the underlying testimony, physical data, and engineering assumptions that drive its images. The computer maxim ‘garbage in, garbage out’ applies to computer animations.”³⁷

Although in some cases misuse of evidence presentation technology is obvious—take, for example, cases where the prosecution displayed a bloody butcher knife on a five-foot-by-five-foot screen or depicted the defendant as the devil³⁸—the prejudicial effect in other cases can be subtler. As Neal Feigenson and Christina Spiesel observe in their comprehensive study of how visual and multimedia digital technologies are transforming the practice of law:

Possibly the most fundamental concern about the new media displays is that they expand the role of implicit processes in legal argument and judgment and thereby increase the likelihood that factors other than the law and the evidence will improperly influence verdicts....[V]isual and especially multimedia displays make it easier for advocates to communicate arguably inappropriate messages without saying them explicitly.³⁹

In light of this concern, and other potential risks with using evidence presentation technology, Feigenson and Spiesel argue that lawyers

can “help to educate jurors about the possible meanings of visual displays, but they themselves need to be sufficiently educated about the uses and effects of digital visuals and multimedia.”⁴⁰ In order to adequately detect and respond to misuse of evidence presentation technologies, lawyers must have some familiarity with these technologies and their attendant risks.

Issues of misfeasance may also arise in relation to e-discovery. Indeed, four years ago, Dan Willoughby, Rose Jones and Gregory Antine concluded, “e-discovery sanctions are at an all-time high.”⁴¹ In many, if not most, cases, problematic conduct in e-discovery relates to conduct that takes place prior to a court hearing.⁴² However, e-discovery issues can also relate to conduct that takes place after a court hearing is underway. For example, in *United States v Johnson*,⁴³ charges of conspiracy to commit securities fraud, securities fraud, and witness tampering were brought against the defendant in relation to his activities with an internet company that he had founded and directed as chief executive officer.⁴⁴ The defendant’s first trial “ended abruptly” when his counsel withdrew from the record after realizing that the client had provided them with a falsified email to use as an exhibit in cross-examining a government witness.⁴⁵ A mistrial was declared and, in the context of a subsequent retrial, the defendant was convicted of attempting to obstruct an official proceeding.⁴⁶

A lawyer who does not have the requisite competence in relation to e-discovery is at a disadvantage when representing a client. In order to adequately protect a client’s interest, a lawyer must be able to identify e-discovery misfeasance. Moreover, once misfeasance is uncovered, an adequate understanding of e-discovery is necessary in order for a lawyer to effectively make arguments as to appropriate sanctions. As Willoughby, Jones, and Antine point out in their survey of case law on e-discovery violations, courts have ordered a wide variety of sanctions for e-discovery violations ranging from dismissing claims, adverse jury instructions, and monetary awards for more serious violations to “evidence preclusion, witness preclusion, disallowance of certain defenses, reduced burden of proof, removal of jury challenges, limiting closing statements, supplemental discovery, and additional access to computer systems” for less serious violations.⁴⁷ The authors also note that “more creative courts have imposed non-traditional sanctions, such as payments to bar associations to fund educational programs, participation in court-created ethics programs, referrals to the state bar, payments to the clerk of court, and barring the sanctioned party from taking additional depositions

prior to compliance with the court's discovery."⁴⁸ The client who is the victim of e-discovery misfeasance needs a lawyer with sufficient understanding of e-discovery such that he or she can effectively argue for appropriate sanctions before the court.

Technological Competence as an Ethical Duty

The analysis above makes the case that lawyer courtroom technology competence is an important aspect of effective client representation in contemporary litigation practices. In short, it was argued that the use of courtroom technology is increasing and that litigators must be able to use and understand this technology in order to optimally advance their clients' cases and protect their clients from the technological misfeasance of others. Building on this practical context, this part makes the case that courtroom technology competence can be properly understood as an *ethical duty* of lawyers.

To be sure, the issue of lawyer competence in courtroom technology may be conceptualized from a variety of perspectives. The need for competence in this area can, for example, be seen as a private duty that lawyers owe to their clients.⁴⁹ One might also conceive of lawyer competence in courtroom technology as a public duty that lawyers owe to the courts in which they appear.⁵⁰ Alternatively, competence in courtroom technologies could be viewed as an essential professional skill that law schools ought to teach, along with legal research and writing, for example.⁵¹ The focus of this chapter, however, is whether lawyer competence in courtroom technology is an *ethical duty* that falls under the jurisdiction of lawyer regulators.

It is also recognized that the issue of the appropriate use of courtroom technology engages important issues, beyond the question of lawyer competence, such as ensuring adequate funding of courts and proper judicial education. There is also the worrisome issue of how the use of courtroom technology may impact access to justice. To take a simple example, if a technology such as a computer animation can lead to a more persuasive presentation of one's case, the client who is able to afford such animation is in a better position than a client who cannot.⁵² These are important matters that warrant further consideration. For the purposes of the analysis here, however, the focus is on the discrete issue of lawyer technological competence and the role of lawyer regulators in ensuring this competence.

So, returning to the focus of this chapter: what might justify the recognition of an ethical duty to have courtroom technology competence? The idea that there is an ethical duty for lawyers to be competent, as a general matter, is already well reflected in lawyer professional codes of conduct. The American Bar Association (ABA) *Model Rules of Professional Conduct* state, for example, in their first substantive rule that “A lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.”⁵³

The Federation of Law Societies of Canada *Model Code of Professional Conduct* similarly declares that “A lawyer must perform all legal services undertaken on a client’s behalf to the standard of a competent lawyer” and defines a “competent lawyer” as “a lawyer who has and applies relevant knowledge, skills and attributes in a manner appropriate to each matter undertaken on behalf of a client and the nature and terms of the lawyer’s engagement.”⁵⁴

In recent years, several commentators have argued that this generalized ethical duty to be competent includes a duty to be competent in using technology.⁵⁵ The ABA has gone even further and, in 2012, amended the Commentary to its rule on competence to refer explicitly to technology. Comment 8 to Rule 1.1 on Competence now reads as follows:

To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, *including the benefits and risks associated with relevant technology*, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.⁵⁶
(Emphasis added)

A number of states have adopted the above commentary regarding a lawyer’s obligation to “keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology,” bringing it into effect in those jurisdictions.⁵⁷

Although a few commentators have posited the existence of an ethical duty for lawyers to have competence specifically in relation to courtroom technology,⁵⁸ the existence of such a duty remains a relatively novel proposition in the area of legal ethics and, thus, is

worthy of some extended analysis. The premise that a lawyer's ethical duty of competence includes competencies in using and understanding courtroom technology is well supported when one looks at current professional rules. The 2012 amendment to the ABA *Model Code of Professional Conduct* underscores this fact, but even in jurisdictions that do not specifically mention technology in their professional conduct rules, a reasonable reading of general provisions on competence strongly suggests that this ethical duty exists. As noted above, a client may be seriously disadvantaged in a court case if his or her lawyer declines to use helpful technological tools due to incompetence or is unable to detect technological malfeasance as a result of a lack of knowledge or understanding of relevant technologies. As the use of court technology is fast becoming "the norm"⁵⁹ rather than the exception, competence in using these technologies can be reasonably seen as falling within the language of general competence rules, namely, "relevant knowledge, skills and attributes" or "skill[s]... reasonably necessary for the representation."⁶⁰

Why Lawyer Regulators Should Care about Courtroom Technology Competence

The beginning of this chapter makes the case that litigators, as a general rule, need competence with respect to courtroom technology to effectively represent their clients, and that this competence can properly be seen as an ethical duty of litigators. This argument, however, does not necessarily lead to the conclusion that law societies should be more actively involved in this area. An additional piece of the puzzle needs to be explored: do today's lawyers have sufficient technological competence? If the relevant skill set already exists among lawyers, then there would be little reason for lawyer regulators to devote their limited resources to becoming involved in the issue. This part argues lawyer regulators need to act more aggressively to monitor and ensure lawyer courtroom technology competence given the absence of evidence that lawyers generally possess adequate competence in this area.

A quick review of commentary online and in legal trade journals suggests a general consensus that lawyers, as a professional class, do not possess the requisite level of competence when it comes to using technology. An internet search of the terms "lawyer" and "Luddite," for example, yields close to 50,000 results,⁶¹ including articles or blog

posts with the titles: “Luddite Lawyers are Ethical Violations Waiting to Happen,”⁶² “Don’t be that Luddite Lawyer,”⁶³ “Can Lawyers Be Luddites?,”⁶⁴ and “Helping Law Firm Luddites Cross the Digital Divide.”⁶⁵ One study that has received considerable attention is a “technology competence audit” conducted by Casey Flaherty.⁶⁶ In his former capacity as corporate counsel for Kia Motors Inc., Flaherty prepared and conducted an audit on the technology skills possessed by outside counsel retained by Kia. Among other things, the audit involved simple tasks like formatting a motion in Microsoft Word and creating an arbitration exhibit index in Excel.⁶⁷ The performance of outside counsel was not impressive. In Flaherty’s words, “As far as I am concerned, all the firms failed—some more spectacularly than others.”⁶⁸

With respect to technology in the courtroom, there are a number of reported examples of lawyer incompetence. In his article “A Picture is Worth 999 Words: The Importance and Effectiveness of Courtroom Visual Presentations,” Daniel W. Dugan details an incident during a 2007 breach-of-contract trial in California in which a lawyer caused a commotion in the courtroom when he repeatedly asked a witness to read a portion of a document to a jury that was being projected onto the lawyer’s pants rather than the projection screen. This situation eventually caused one juror to become frustrated and intervene, asking, “Have you ever heard of PowerPoint?”⁶⁹ More recently, in 2013, a video of a prosecutor appearing to ineptly question a witness about her social media accounts in a high-profile murder trial went viral.⁷⁰

The above examples, of course, only reflect the experiences of two lawyers who appear to lack adequate understanding of courtroom technology. A broader snapshot of how the profession is faring can be found in the 2014 ABA Litigation Technology Survey Report. Only 27.4% of the lawyers who responded to the survey and who practiced in a courtroom reported that they had received training in courtroom technology.⁷¹ A variety of reasons were given by the remaining 72.6% as to why they did not receive training. For example, 32.6% of these lawyers indicated that they did not receive training because “courtrooms utilized do not have technology capabilities.”⁷² However, 32% indicated that “training is not available,” giving rise to concerns that lawyers are not being given adequate opportunities to develop competence with relevant technology.⁷³ Even more troubling are the 5.7% who responded that they did not receive training because they were “not comfortable with technology.”⁷⁴

We do not have a comprehensive account of the exact type and level of skills that North American lawyers possess with respect to courtroom technology. The partial information that exists, based on both anecdotal accounts and empirical studies, suggests that there may be a problem with respect to current level of lawyer courtroom technology competence that demands attention from lawyer regulators. Indeed, the very fact that there is uncertainty about the level of competence in this area is itself a reason for lawyer regulators to become involved—rather than reactively waiting for lawyers to incompetently represent clients and the resultant complaints, regulators should be acting positively to ensure that the public is protected.

What Might Lawyer Regulators Do?

If competence in using courtroom technologies is an ethical obligation for litigators and should attract greater attention from lawyer regulators, how should lawyer regulators respond? This part evaluates three potential regulatory options: conducting surveys and/or audits; changing the rules of professional conduct for lawyers; and engaging in proactive educational initiatives such as developing best practices and facilitating mentoring opportunities.

Surveys and/or Audits to Develop a Clearer Sense of Current State of Competence

As a preliminary matter, the fact that we do not yet have a clear picture of lawyer competence when it comes to courtroom technology should make it a priority for regulators to devote resources to studying current levels of competence. One way to do this is to develop surveys similar to the ABA 2014 Legal Technology Survey Report that ask various questions of practicing lawyers, but focus more on assessing competence in relation to courtroom technology rather than on general use of technology (the latter being the primary focus of the ABA survey).

A limitation of a survey approach is, of course, that it would rely on the subjective self-assessment of lawyers as to their level of competence. As a result, a survey approach is likely to be skewed. There would seem, for example, to be a real risk that surveyed lawyers would over-estimate their abilities given that “[p]sychological studies of human decision-making processes in a wide variety of contexts have revealed that overconfidence is a ubiquitous phenomenon.”⁷⁵

Notwithstanding this limitation, a well-designed survey is likely to provide us with more (if not perfect) information about lawyer courtroom technology competence. Moreover, there is some promise that the simple fact of having lawyers participate in a survey of this type will yield positive results. An Australian study of lawyers who had participated in a self-assessment of various management practices found that having lawyers engage in self-reflection can, in and of itself, lead to improved ethical outcomes.⁷⁶

A more aggressive approach to assessing lawyer courtroom technology competence could involve lawyer regulators conducting audits similar to the audit described above that Casey Flaherty used to assess the technology skills possessed by outside counsel. The advantage of this approach is that it would provide a more objective measure of actual skills than self-assessments. Moreover, there is precedent for this type of measure. A number of Canadian law societies, for example, conduct proactive practice-review programs whereby the practices of certain groups of lawyers (including new solo practitioners and new calls) are assessed on a variety of criteria.⁷⁷ Using these programs as templates, an audit could be developed to evaluate the courtroom technology competence of litigators. One challenge, of course, in developing such an audit would be to choose which skills to assess; as noted above, although the presence of courtroom technology is increasing as a general matter, its use varies across courtrooms. There is unlikely to be one set of technologies with respect to which lawyers in a certain jurisdiction can be assessed. Another major challenge is that lawyers—who, as a professional class, have been found to have “an especially strong desire for autonomy”⁷⁸—are likely to be resistant to attempts to add another layer of external oversight and involvement concerning how they conduct their practices. For this reason, an audit may not be politically appealing to lawyer regulators—which are, of course, ultimately governed by lawyers given the profession’s self-regulating status in North America.

Changing the Rules

Aside from surveys and audits, lawyer regulators may want to consider the possibility of adding a rule to professional codes of conduct that specifically mentions courtroom technology competence. A precedent exists with the ABA’s 2012 addition of general technological competence in commentary to its *Model Rules of Professional Conduct*, above. Although the ABA amendment does not appear to have to

date resulted in any specific disciplinary proceedings, it has attracted significant attention and inspired numerous articles and blog posts emphasizing the need for American lawyers to improve their technological competence.⁷⁹ In other words, it has increased the profile of technological competence as an ethical issue. As a possible starting point for discussion of a rule that specifically mentions courtroom technology competence, lawyer regulators could look to the following language suggested by Michelle Quigley in a 2010 article:

Maintaining the requisite knowledge and skill necessary for competent representation includes a duty to keep abreast of technological advances that significantly affect the practice of law. For example, in certain circumstances, lawyers may have an ethical obligation to use courtroom technology in advocating for their clients and to be competent in the use of technology when doing so.⁸⁰

Ultimately, however, beyond the signaling value of a rule mentioning courtroom technology competence, there are a number of reasons why a rule change would have only limited regulatory value.

As a number of legal ethics scholars have noted, conventional code and complaints-based disciplinary systems tend to deal with lawyer behavior in a very narrow manner by focusing on whether individuals are complying with minimum standards, and only reacting after problems have occurred in the first place.⁸¹ Indeed, there are a number of reasons why the issue of courtroom technology competence may be particularly difficult to address through minimum standards. First, as noted above, different jurisdictions are likely to have different technologies available to lawyers, making it challenging to identify a single set of baseline skills that all litigators need.

Second, even if courtroom technologies were uniformly available across Canada, the identification of a set of baseline skills is likely to be frustrated by the reality that different types of courtroom practice will require different skills. It is also not possible to straightforwardly classify the use of courtroom technology as a good in all circumstances. For example, in the case of video-conferencing, although the use of technology can lead to potentially greater access, it is also important to note, as Jane Bailey, Jacquelyn Burkell, and Graham Reynolds have, that

It is difficult, if not impossible, to predict the effect of videoconferencing on court processes and outcomes, and indeed any effect is likely to be multifaceted. In the courtroom context, scholars have raised concerns about the use of videoconferencing, noting that it could have a negative impact on the perception of the witness by the court, the representation received by a defendant, the outcome of the court proceeding, or the experience of the justice system by a defendant.⁸²

In the case of videoconferencing, then, there may be complicated and potentially subtle reasons why a lawyer might opt to use or not use this technology in a given scenario. This reality means that a rule stipulating, for example, that videoconferencing has to be used in every case in which it is available could be potentially detrimental to client interests.

Third, to the extent that lawyer regulators attempt to circumvent these types of problems by relying on general terms like “relevant,” “appropriate,” or “ordinary” to describe minimum competence standards, there are additional complications. As I have noted previously, “[w]hile tethering competence to ‘relevant,’ ‘appropriate’ or ‘ordinary’ practice might make sense when it comes to well-worn techniques or behaviours within a professional community, it doesn’t easily extend to technological competence where the average level of knowledge and skill among lawyers is variable.”⁸³

Fourth, in a number of cases, it may be unfair to assess lawyers against minimum standards given that lawyers may be reliant on court infrastructure and court staff in order to use technology effectively.⁸⁴

Finally, assessing lawyers against minimum standards may give rise to unfairness in cases where the use of a courtroom technology has financial costs that a client is unwilling or unable to bear. To reiterate an example discussed above, although it might be true in a particular case that a computer animation will lead to a more persuasive presentation of a client’s case, not every client will be willing or able to pay between \$5,000 and \$150,000 for an appropriate animation to be prepared by experts.⁸⁵ Where the client is not willing or able to pay for a particular technology, it would be unfair to hold the lawyer accountable for failing to use that technology.

Pro-active Educational Measures

The reactive nature of disciplinary rules is also a major limitation to the involvement of lawyer regulators in ensuring lawyer technological competence. As noted above, rather than waiting for a complaint that a lawyer violated an ethical rule and then evaluating whether that lawyer should be sanctioned, it would be better for regulators to try to avoid the problem in the first place.⁸⁶ Instead of reacting to complaints, a more productive policy choice might be for lawyer regulators to pursue proactive educational measures to assist litigators in using best practices when it comes to courtroom technologies. Best practices are also advantageous in that they can be tailored to different practice contexts and can be revised as the technological, legal, and social context evolves.

A number of possible methods could be used to advance lawyer education on courtroom technology. One option would be for lawyer regulators to provide lawyers with guidelines, ethics opinions, or practice standards that detail best practices when it comes to using courtroom technology. To their credit, a number of law societies and bar organizations have already begun to provide these types of resources to assist lawyers in increasing their technological competence.⁸⁷ In large part, however, these resources tend to deal with practice management issues outside the courtroom, for example, how to keep law firm computer systems secure and how to avoid unintentionally disclosing confidential client information when using electronic communications.⁸⁸

In addition to guidelines, ethics opinions, or practice standards, lawyer regulators may consider developing or facilitating mentorship programs or roundtables on the topic of court technology. The Law Society of New South Wales, for example, established a Technology-based Skills Exchange Pilot Program that seeks to connect “experienced practitioners” with “tech-savvy practitioners” to facilitate “imparting knowledge about technology in practice and sharing of tips about the online and social media channels and their utilisation in a professional environment.”⁸⁹ Another model of information sharing and skills exchange can be found in the Richard K. Herrmann Technology American Inn of Court, which in 2009 was “established for the purpose of bringing together judges, lawyers and law students to study the impact of technology on business and the effect of technology on the practice of law and in particular electronic discovery.”⁹⁰ When it comes to roundtable discussions

regarding court technology specifically (as opposed to technology generally), lawyer regulators might consider partnering with courts in order to ensure that all relevant stakeholders are at the table. For example, the Delaware Supreme Court Commission on Law and Technology, established in 2013, has “broad representation including judges from a variety of Delaware courts as well as lawyers in private practice from various sized law firms, the Department of Justice, in-house corporate counsel and information technology officers.”⁹¹

To the extent that following best practices or engaging in mentorship programs are voluntary, lawyer regulators will want to consider putting in place incentives to encourage lawyers to proactively seek out ways to improve their competence in courtroom technology. Potential methods could include marketing incentives—for example, allowing lawyers to be accredited specialists in court technology—or financial incentives in the form of reduced licensing fees for lawyers who demonstrate a certain level of technological competence.⁹² Another possibility might be to require litigators to complete a minimum number of hours each year of continuing professional development courses on court technology and/or certify on an annual basis their continuing competence in the area of court technology. Mandatory continuing legal education is already in place in many Canadian and American jurisdictions. The concept of certifying competence on an annual basis is more unique, although this model has recently been adopted by the Solicitors Regulation Authority in England and Wales.⁹³

Conclusion

In order to properly represent their clients, litigators need to understand and effectively use courtroom technology. Not only can technology be important to presenting a client’s case in a time-sensitive and cost-efficient manner, it can also impact how effective a lawyer is in presenting a client’s case and convincing a judge and/or jury on its merits. Understanding technology is also important in order to identify and respond to potential technological misfeasance by others in the course of litigation. Given these realities, courtroom technology competence may be understood as part of a lawyer’s overall ethical duty to represent clients effectively.

Notwithstanding the fact that lawyer courtroom technology competence may be properly viewed as an ethical duty, it is not an

issue that has attracted much attention from lawyer regulators to date. It ought to. There is nothing to indicate that litigators currently possess the necessary competence in this area; indeed, there is reason to believe that they do not.

As a preliminary matter, lawyer regulators should improve their understanding of the current level of technological competence held by lawyers who practice in courtrooms through surveys and/or audits. In terms of enforcing a duty to have competence in relation to courtroom technology, this chapter argues that regulators should be cautious about pursuing a rule-based disciplinary approach. Not only is this approach limited insofar as it involves reacting to problems once they occur, it is also an awkward fit when it comes to courtroom technological competence given the diversity of courtroom practice and the complications in the contexts in which courtroom technology is deployed, for example, different courtroom infrastructures and varying client willingness and capacity to use technology in a given case. As such, more proactive educational approaches should be pursued, including providing guidance as to best practices or pursuing mentorship programs.

Notes

- 1 Although the term “ethical” can carry a normative connotation, its use in this chapter is descriptive and intended to signal that the issue of courtroom technology competence is a proper subject for lawyer regulators to take interest in. The use of the term “ethical duty” as opposed to, for example, the term “professional duty” is also consistent with the general discourse on lawyer competence.
- 2 This chapter focuses on North American lawyers. Accordingly, the term “lawyer regulators” refers to provincial and territorial law societies in Canada and state bar and court authorities in the United States that have professional disciplinary authority over lawyers within their jurisdictions. Even though the focus is on North American lawyers, the analysis presented here will likely resonate in other jurisdictions where there is also an increased use of technology in courtrooms.
- 3 There is a large set of literature that has generally identified and analyzed limitations with the conventional rules based system. See sources at footnote 81 for further discussion. In using the term “quasi-criminal” to describe the conventional approach, I borrow from Ted Schneyer, “The Case for Proactive Management-Based Regulation,” *Hofstra L Rev* 42 (2013) at 233.

- 4 See, e.g., Paul J De Muniz, "Oregon Courts Today and Tomorrow," *Willamette L Rev* 50 (2014):291 at 313 (citing Martin Gruen, "The World of Courtroom Technology" (2003), online: Center for Legal & Court Technology <www.legaltechcenter.net/download/whitepapers/The%20World%20Of%20Courtroom%20Technology.pdf>, for the proposition that courtroom technology includes evidence presentation systems, assistive technology for individuals with disabilities, real-time foreign-language interpretation, teleconferencing, and videoconferencing); Fredric I Lederer, "Wired: What We've Learned About Courtroom Technology," *Criminal Justice* 24 (2010) at 18 (discussing courtroom technology as including, *inter alia*, "technology-based evidence presentation, remote testimony, multimedia court records, and assistive technology"); Fredric Lederer, "Courtroom Technology: A Status Report," in *Electronic Judicial Resource Management*, ed. Kamlesh N Agarwala and Murli D Tiwari, (Delhi: Macmillan, 2005) at 183 (dividing modern trial courtroom technology into information (evidence) presentation, remote appearances, court record, "counsel communication," (e.g., internet access from counsel table), assistive technology (including interpretation), jury deliberations, and appellate matters); and Martin Gruen, "The World of Courtroom Technology" (2003) online: Center for Legal & Court Technology <www.legaltechcenter.net/download/whitepapers/The%20World%20Of%20Courtroom%20Technology.pdf> (defining "courtroom technology" as including the following basic categories: Communications; Remote-appearance systems (video-conferencing); Evidence presentation; Court record; Courtroom data; Control systems; and Infrastructure).
- 5 Lederer, "Courtroom Technology: A Status Report," *supra* note 4.
- 6 Nils Jensen, "Technology in the Courtroom" (23 February 2010), online: The Canadian Bar Association <www.cbapd.org/details_en.aspx?id=NA_ONFEB210>.
- 7 Canadian Centre for Court Technology, online: Canadian Centre for Court Technology <wiki.modern-courts.ca>.
- 8 Lederer, "Wired: What We've Learned About Courtroom Technology," *supra* note 4 at 19.
- 9 Nelson P Miller and Derek S Witte, "Helping Law Firm Luddites Cross the Digital Divide – Arguments for Mastering Law Practice Technology," *S Methodist University L Rev* 12 (2009):113 at 114.
- 10 American Bar Association, "2014 Legal Technology Survey Report: Litigation and Courtroom Technology" (2014), Vol. 3 at III-42, III-21, and III-23 [*ABA Report*].
- 11 Elizabeth C Wiggins, Meghan A Dunn and George Cort, "Federal Judicial Center Survey on Courtroom Technology" (December 2003), online: The Federal Judicial Center <[www.fjc.gov/public/pdf.nsf/lookup/CTtecho3.pdf/\\$file/CTtecho3.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/CTtecho3.pdf/$file/CTtecho3.pdf)>.

- 12 Ibid. at 2.
- 13 Jane Bailey, "Digitization of Court Processes in Canada" (23 October 2012), online: Cyberjustice Laboratory <www.cyberjustice.ca/wordpress/wp-content/uploads/webuploads/WP002_CanadaDigitizationOfCourtProcesses20121023.pdf>.
- 14 Ibid.
- 15 Action Committee on Access to Justice in Civil and Family Matters, *Report of the Court Processes Simplification Working Group* (May 2012) at 7.
- 16 See, e.g., Jane Bailey, Jacquelyn Burkell and Graham Reynolds, "Access to Justice for All: Towards an 'Expansive Vision' of Justice and Technology," *Windsor Y B Access Just* 31(2013):181 at 202 (confirming that "at the current time [videoconferencing] technology is not universally available in courtrooms across Canada, and not all prisons have the facilities for remote appearances by incarcerated defendants").
- 17 Lawyer discomfort and misuse of technology is a frequent topic of commentary. See, e.g., Miller and Witte, *supra* note 9, at 117 (stating "[a]lthough many attorneys cling to their foam-core exhibits and paper tablets, it seems problematic for an attorney to argue about his small exhibit, which he holds several feet from the jury, when it could easily be coded, digitized, and then displayed on the blank plasma-screen television screens in the jury box and around the courtroom").
- 18 The insight that "[c]ourts that supply technology may be classified as permissive or mandatory" is taken from Lederer, "Courtroom Technology: A Status Report," *supra* note 4.
- 19 For discussion of use of video-conferencing in bail proceedings, see, e.g., Molly Treadway Johnson and Elizabeth Wiggins, "Videoconferencing in Criminal Proceedings: Legal and Empirical Issues for Direction and Research," *Law & Pol'y* 28 (2006) at 211 (observing at 211 that "[s]tate and federal courts are increasingly using videoconferencing to hold proceedings"); Lindsay Porter and Donna Calverley, "Trends in the use of remand in Canada" (2011), online: Statistics Canada <www.statcan.gc.ca/pub/85-002-x/2011001/article/11440-eng.htm> (commenting that "some courts now use video conferencing for routine hearings in order to expedite bail hearings and to reduce the costs associated with transporting accused persons to and from court houses"); Erich Schellhamer, "A Technology Opportunity for Court Modernization: Remote Appearances" (January 2013), online: Canadian Centre for Court Technology <wiki.modern-courts.ca/images/1/1b/A_Technology_Opportunity_for_Court_Modernization_-_Remote_Appearances.pdf> ; and Anne Bowen Poulin, "Criminal Justice and Videoconferencing Technology: The Remote Defendant," *Tul L Rev* 78 (2004) at 1089.
- 20 For a case where this has happened, see, e.g., *Bank of Montreal v Faibish*, 2014 ONSC 2178 (CanLII).

- 21 As noted above, the insight that “[c]ourts that supply technology may be classified as permissive or mandatory” is taken from Lederer “Courtroom Technology: A Status Report,” *supra* note 4.
- 22 Lederer, “Courtroom Technology: A Status Report” *supra* note 4, footnote 11. For discussion of cost efficiencies resulting from using court technologies, see, also, Sheryl Jackson, “Court-provided Trial Technology: Efficiency and Fairness for Criminal Trials,” *C L World Rev* 39 (2010) at 236 (stating, “[t]here is now a substantial body of evidence elsewhere to support the view that the use of trial technology can generate very substantial overall costs savings, particularly flowing from a shortening of the time involved at trial and in trial preparation”) and Andrew E Taslitz, “Digital Juries Versus Digital Lawyers,” *ABA Criminal J* 19 (2004) (observing that “[d]igital systems help the lawyer to fuse the organizational clarity of the library culture with the speed and creativity of hyperlinked culture and, studies have shown, thereby dramatically to shorten the length of trials”).
- 23 See, e.g., *Wright v Wasilewski* (2001), 52 OR (3d) 410 (CanLII) (ONSC) wherein the plaintiff successfully brought a motion to have the evidence of 20 American witnesses received through video-conferencing instead of incurring approximately \$20,000 in order to have the witnesses brought to Ontario to testify.
- 24 In the case of video-conferencing, there may be, e.g., concerns about potential unintended effects of videoconferencing technology on credibility assessments. For further discussion, see, e.g., Amy Salyzyn, “A New Lens: Reframing the Conversation about the Use of Video Conferencing in Civil Trials in Ontario,” *Osgoode Hall LJ* 50 (2012) at 429.
- 25 Bailey et al., *supra* note 16 at 201.
- 26 These particular technologies are among those cited as available in American courts in the *ABA Report*, *supra* note 10.
- 27 The Third Branch, “Courtroom Technology Draws Positive Response” (August 1998), online: United States Courts <www.uscourts.gov/news/TheThirdBranch/98-08-01/Courtroom_Technology_Draws_Positive_Response.aspx>.
- 28 *Ibid.*
- 29 Jaihyun Park and Neal Feigenson, “Effects of a Visual Technology on Mock Juror Decision Making,” *Applied Cognitive Psychology* 27 (2013):235 at 244.
- 30 *Ibid.* at 243–245. See also discussion in Elizabeth Wiggins, “The Courtroom of the Future is Here: Introduction to Emerging Technologies in the Legal System,” *Law & Pol’y* 28 (2006) at 182.
- 31 Michelle Quigley, “Courtroom Technology and Legal Ethics: Considerations for the ABA Commission on Ethics 20/20” (Spring 2010), online: Michigan State University College of Law <www.law.msu.edu/king/2009-2010/Quigley.pdf>.

- 32 Marilyn Krawitz, "Guilty as Tweeted: Jurors Using Social Media Inappropriately During the Trial Process" (2012), UWA Faculty of Law Research Paper (SSRN). For a recent example of a juror misusing social media, see: "Queens NY Juror Fined \$1000 For Dishing on Facebook During Trial" *Jurors Behaving Badly* (4 November 2015), online: <jurorsbehavingbadly.blogspot.ca/>.
- 33 Ibid.
- 34 Ibid. at 10.
- 35 Ken Armstrong, "PowerPoint Justice: When prosecutors slide around the law," *The Marshall Project* (23 December 2014), online: <<https://www.themarshallproject.org/2014/12/23/powerpoint-justice#.oAAmL3AZB>>.
- 36 See, e.g., *Dunkle v Oklahoma*, 139 P (3d) 228 (Okla Ct Crim App 2006) (court finding that the prosecution's use of computerized animations was potentially misleading to the jury and that the record did not establish that the animations were fair and accurate representations of the evidence); see also *State v Stewart*, 643 NW (2d) 281 (Mo Sup Ct 2002) (court holding that a computer animation presented by the prosecution, which was heavily reliant on material based on conjecture, ought not to have been admitted).
- 37 *Clark v Cantrell*, 529 S.E.2d at 528 (South Carolina Sup Ct 2000) at 536 (approvingly quoting article in South Carolina Trial Lawyer Bulletin)
- 38 Armstrong, *supra* note 35.
- 39 Neal Feigenson and Christina Spiesel, *Law on Display* (New York, NYU Press: 2009) at 160.
- 40 Ibid. at 205.
- 41 Dan H Willoughby, Rose Hunter Jones and Gregory R Antine, "Sanctions for E-Discovery Violations by the Numbers," *Duke LJ* 60 (2010):789 at 790.
- 42 For example, one of the most well-known American e-discovery sanction cases, *Qualcomm Inc v Broadcom Corp*, 2008 US Dist Ct LEXIS 911 (SD Cal Dist CT 2008), involved a "failure to produce [a] massive number of critical documents at issue in [the] case" which, in the court's view, amounted to a "monumental and intentional discovery violation," warranting a monetary sanction of \$8,568,633.24 against Qualcomm Inc.
- 43 *United States v Johnson*, 553 F Supp (2d) 582 (ED Va 2008) [*Johnson*].
- 44 Ibid. at 1.
- 45 Ibid. at 74.
- 46 Ibid. at 106.
- 47 Willoughby et al., *supra* note 41 at 804.
- 48 Ibid. at 804–805.
- 49 Under this framing, the lawyer lacking adequate competence could be the subject of a civil claim from a dissatisfied client. See, e.g., Jan L Jacobowitz and Danielle Singer, "The Social Media Frontier: Exploring a New Mandate for Competence in the Practice of Law," *U Miami L Rev*

- 68 (2014) at 445 (discussing potential liability in negligence for lawyers who fail to employ social media to obtain information relevant to a client's case).
- 50 This duty would relate to the inherent jurisdiction of courts to govern their own processes and sanction lawyers and parties who fail to abide by the applicable standards. See, e.g., Willoughby et al., *supra* note 41 (discussing wide range of judicial sanctions for e-discovery violations).
 - 51 Indeed, a few law schools are already taking steps to train students in courtroom technologies and other relevant law practice technologies. See, e.g., the numerous student opportunities with William & Mary Law School's Center for Legal and Court Technology (William & Mary Law School, *Center for Legal and Court Technology*, online: William & Mary Law School <law.wm.edu/academics/intellectuallife/researchcenters/clct/>); the "Technology Enhanced Trial Advocacy" course at the Michigan State University College of Law, "An Innovative Curriculum online: <www.law.msu.edu/tpi/curriculum.html>; and Suffolk Law School's Institute on Legal Practice Technology and Innovation, online: <lawpracticetechnology.blogs.law.suffolk.edu>.
 - 52 Although costs of such animation obviously vary from case to case, a sense of the potential costs can be found on the website of an American consulting firm. The estimates on this website include the following: between \$5,000 and \$15,000 for five minutes of a PowerPoint animation-style exhibit with average complexity; between \$10,000 and \$35,000 for ten minutes of animation built from drawings or schematics; and between \$40,000 and \$150,000 for a 15-minute 3-D animation of a complex subject (see Ken Lopez, "What Does Litigation Animation Cost?," online: <www.a2lc.com/blog/bid/68457/What-Does-Litigation-Animation-Cost-Includes-Animation-Examples>. For further discussion of fairness concerns, see, e.g., Fred Galves, "Where the Not-so-Wild Things Are: Computers in the Courtroom, the Federal Rules of Evidence, and the Need for Institutional Reform and More Judicial Acceptance," *Harv J of L & Tech* 13 (2000) at 165.
 - 53 The American Bar Association, *Model Rules of Professional Conduct*, Chicago: ABA, 2013, Rule 1.1.
 - 54 Federation of Law Societies of Canada, *Model Code of Professional Conduct*, Ottawa: FLSC, 2014, Rule 3.1-2 and Rule 3.1-1.
 - 55 See, e.g., Andrew Perlman, "The Twenty-First Century Lawyer's Evolving Ethical Duty of Competence," *The Professional Lawyer* 22:4 (2014) at 24; Sam Glover, "You Already Have an Ethical Obligation to be Technologically Competent," *Lawyerist.com* (31 August 2015), online: <<https://lawyerist.com/86726/already-ethical-obligation-technologically-competent/>>; Karen Dyck, "A Duty to be Tech-Savvy?," *Slaw Online* (15 November 2015), online: Slaw.ca <www.slaw.ca/2015/11/11/a-duty-to-be-tech-savvy/>;

- Amy Salyzyn, "Tackling Technology," *Slaw Online* (14 September 2014), online: Slaw.ca <www.slaw.ca/2014/09/30/tackling-technology/>.
- 56 *Model Rules of Professional Conduct*, *supra* note 52 at Rule 1.1, commentary 8 (emphasis added). This amendment was a result of the ABA Commission on Ethics 20/20, which was created in 2009 "to perform a thorough review of the ABA *Model Rules of Professional Conduct* and the U.S. system of lawyer regulation in the context of advances in technology and global legal practice developments" (American Bar Association, "ABA Commission on Ethics 20/20," online: <www.americanbar.org/groups/professional_responsibility/aba_commission_on_ethics_20_20.html>). For further discussion about the history of this commission, see, e.g., Laurel Terry, "Globalization and the ABA Commission on Ethics 20/20: Reflections on Missed Opportunities and the Road Not Taken," *Hofstra L Rev* 43 (2014) at 95.
 - 57 A November 2015 blog post reports that 17 states have now adopted this Commentary (Robert Ambrogi, "Two More States Adopt Duty of Technology Competence," www.lawsitesblog.com, November 11, 2015; online: <www.lawsitesblog.com/2015/11/two-more-states-adopt-duty-of-technology-competence.html>).
 - 58 See, e.g., Lederer, "Courtroom Technology: A Status Report," *supra* note 4; Michelle L. Quigley, "Courtroom Technology and Legal Ethics: Consideration for the ABA Commission on Ethics 20/20," *Professional Lawyer* 20 (2010) at 18.
 - 59 Lederer, "Courtroom Technology: A Status Report" *supra* note 4.
 - 60 *Ibid.* Indeed, even before the ABA rules were amended to specifically reference technology, Lederer argued that general provisions on lawyer competence should be viewed as "extend[ing] to competence in employing courtroom technology...[and thus, as] creat[ing] an affirmative duty on counsel to learn how to be at least an adequately competent high-tech trial lawyer, when attempting technology use."
 - 61 Google search February 16, 2015, "Lawyer" and "Luddite."
 - 62 Megan Zavieh, "Luddite Lawyers Are Ethical Violations Waiting To Happen" (2 December 2013), online: Lawyerist <<https://lawyerist.com/71071/luddite-lawyers-ethical-violations-waiting-happen/>>.
 - 63 Bill Latham, "Don't be that Luddite Lawyer" (18 December 2013), online: The Hytech Lawyer <hytechlawyer.com/?p=2198>.
 - 64 Jim Calloway, "Can Lawyers Be Luddites?" (18 December 2013), online: Law Practice Tips Blog <www.lawpracticetipsblog.com/2013/12/can-lawyers-be-luddites.html>.
 - 65 Miller and Witte, *supra* note 9.
 - 66 Casey Flaherty, "Could you pass this in-house counsel's tech test? If the answer is no, you may be losing business" (17 July 2013), online: American Bar Association <www.abajournal.com/legalrebels/article/could_you_pass_this_in-house_counsels_tech_test>.

- 67 Ibid.
- 68 Ibid.
- 69 Daniel W Dugan, "A Picture is Worth 999 Words: The Importance and Effectiveness of Courtroom Visual Presentations," *Reynolds Ct & Media L J* 1 (2011):503 at 503.
- 70 See discussion in Zavieh, *supra* note 61.
- 71 ABA Report, *supra* note 9 at III-50.
- 72 Ibid. at III-52.
- 73 Ibid.
- 74 Ibid.
- 75 Jane Goodman-Delahunty, Par Anders Granhag, Maria Hartwig and Elizabeth F. Loftus, "Insightful or Wishful: Lawyers' Ability to Predict Case Outcomes," *Psychology, Public Policy, and Law* 16:2 (2010):133 at 135.
- 76 Christine Parker, Tahlia Gordon, and Steve Mark, "Regulating Law Firms Ethics Management: An Empirical Assessment of an Innovation in Regulation of the Legal Profession in New South Wales," *Journal of Law in Society* 37:3 (2010):446 at 493.
- 77 These programs include Saskatchewan's Practice Review Program; see "Practice Review Program," online: Law Society of Saskatchewan <www.lawsociety.sk.ca/about-us/how-we-accomplish-our-purpose/committees/professional-standards/practice-review-program.aspx> (targeting "new sole practitioners," among other groups), and Ontario's "Practice Management Review" program (see "Practice Management Review," online: Law Society of Upper Canada <www.lsuc.on.ca/lawyer-practice-management-review/>) (targeting lawyers one to eight years from the call to the bar and in private practice). It should be noted that the Law Society of Upper Canada also conducts "Focused Practice Reviews" (targeting lawyers who have complaints history or have otherwise been flagged as requiring personal or professional assistance) and "Re-Entry Reviews" (targeting lawyers who are returning to private practice as sole practitioners, or in a firm of five or fewer lawyers, after an absence of 48 months over the past five years). See "Lawyer Practice Management Review, online: Law Society of Upper Canada <lsuc.on.ca/lawyer-practice-management-review/>.
- 78 Milton C Regan, "Nested Ethics: A Tale of Two Cultures," *Hofstra Law Review* 42 (2013):143 at 172, citing Larry Richard, "Herding Cats: The Lawyer Personality Revealed" Report to Legal Management, (August 2002), online: <www.managingpartnerforum.org/tasks/sites/mpf/assets/image/MPF%20-%20WEBSITE%20-%20ARTICLE%20-%20Herding%20Cats%20-%20Richards1.pdf>.
- 79 See, e.g., Matt Nelson, "New changes to Model Rules a wake-up call for technologically challenged lawyers" (13 March 2013), online: Inside Counsel <www.insidecounsel.com/2013/03/28/new-changes-to-model-rules-a-wake-up-call-for-tech>; Darla Jackson, "Lawyers Can't be

Luddites Anymore: Do Law Librarians Have a Role in Helping Lawyers Adjust to New Ethics Rules Involving Technology?," *Law Libr J* 105 (2013) at 395; G.M. Filisko, "Reality Bytes: New Rules Require You to Get with Tech Program—Like It or Not" (1 April 2013), online: American Bar Association Journal <www.abajournal.com/magazine/article/new_abarules_require_you_to_get_with_tech_programlike_it_or_not/>; Ed Poll, "Beware of Technological Incompetence" (30 July 2013), online: My Case <www.mycase.com/blog/2013/07/beware-of-technology-incompetence/>; Andrew Perlman, "Delaware Creates Legal Tech Commission" (17 July 2013), online: Legal Ethics Forum <www.legalethicsforum.com/blog/2013/07/delaware-creates-legal-tech-commission-.html>; and Megan Zavieh, "Luddite Lawyers Are Ethical Violations Waiting To Happen" (2 December 2013), online: Lawyerist <<https://lawyerist.com/71071/luddite-lawyers-ethical-violations-waiting-happen/>>.

80 Quigley, *supra* note 44 at 18.

81 For further discussion, see, e.g., Amy Salyzyn, "What if We Didn't Wait? Canadian Law Societies and the Promotion of Effective Ethical Infrastructure in Canadian Legal Practices," *Can Bar Rev* 92:3 (2015); Laurel Terry, "Trends in Global and Canadian Lawyer Regulation," *Sask L Rev* 76 (2013) at 145; Ted Schneyer, "The Case for Proactive Management-Based Regulation to Improve Professional Self-Regulation for US Lawyers" *Hofstra L Rev* 42 (2013) at 233; "The Role of Ethics Audits in Improving Management Systems and Practices: An Empirical Examination of Management-Based Regulation of Law Firms," *St Mary's LJ on Legal Malpractice & Ethics* 4 (2014) at 112; Ted Schneyer, "On Further Reflection: How 'Professional Self-Regulation' Should Promote Compliance with Broad Ethical Duties of Law Firm Management," *Ariz L Rev* 53 (2011) at 577; John Briton and Scott McLean, "Incorporated Legal Practices: Dragging the Regulation of the Legal Profession into the Modern Era," *Legal Ethics* 11 (2008) at 241; Ted Schneyer, "Professional Discipline for Law Firms?," *Cornell L Rev* 77 (1991) at 1; Ted Schneyer, "A Tale of Four Systems: Reflections on How Law Influences the 'Ethical Infrastructure' of Law Firms," *S Tex L Rev* 39 (1998) at 245; Adam Dodek, "Regulating Law Firms in Canada," *Can Bar Rev* 90 (2011) at 383.

82 Bailey et al., *supra* note 16 at 202–03 (footnotes omitted).

83 Amy Salyzyn, "Technological Competence 101: Back to Basics?," *Slaw Online* (15 January 2015), online: *Slaw.ca* <www.slaw.ca/2015/01/29/technological-competence-101-back-to-basics/>.

84 See, e.g., the discussion in Fredric I Lederer, "Technology-Augmented Courtrooms: Progress Amid a Few Complications, or the Problematic Interrelationship Between Court and Counsel," *NYU Annual Survey of American Law* 60 (2004) at 675.

85 See *supra* note 51.

- 86 See, e.g., Fortney, "The Role of Ethics Audits" *supra* note 80 at 138. See also Amy Salyzyn, "What if We Didn't Wait? Promoting Ethical Infrastructure in Canadian Law Firms," *Slaw Online* (23 July 2013), online: Slaw.ca <www.slaw.ca>.
- 87 See, e.g., American Bar Association Legal Technology Resource Centre, online <www.americanbar.org/groups/departments_offices/legal_technology_resources.html>; Canadian Bar Association, *Practicing Ethically with Technology*, online <www.cba.org/CBA/activities/pdf/guidelines-eng.pdf>; and Law Society of Upper Canada, *Technology Practice Management Guideline*, online <www.lsuc.on.ca/with.aspx?id=2147491197>.
- 88 That said, there are two significant exceptions to this practice management orientation: regulatory resources dealing with (1) e-discovery and (2) social media. In 2014, the State Bar of California made waves when it released a draft ethics opinion for public comment that clarified that "attorney competence related to litigation generally requires, at a minimum, a basic understanding of, and facility with, issues relating to e-discovery" (The State Bar of California, "Proposed Formal Opinion Interim No. 11-0004" April 2014, online: <www.calbar.ca.gov/AboutUs/PublicComment/Archives/2014PublicComment/201404.aspx>). Numerous law societies and bar associations have now also offered guidance on the ethical use of social media, although such guidance generally focuses on lawyers' use of social media rather than appropriate use of social media in the courtroom (for a small sample set of existing guidance, see New York State Bar Association, Social Media Ethics Guidelines (18 March 2014), online: New York State Bar Association <www.nysba.org/Sections/Commercial_Federal_Litigation/Com_Fed_PDFs/Social_Media_Ethics_Guidelines.html>; Pennsylvania State Bar Association, Ethical Obligations for Attorneys when Using Social Media, online: Daniel J Siegel <www.danieljsiegel.com/Formal_2014-300.pdf>). One exception is the American Bar Association's formal opinion on "Lawyer Reviewing Jurors' Internet Presence," which stipulates, among other things, that "a lawyer may passively review a juror's public presence on the Internet, but may not communicate with a juror" and that "if a lawyer discovers criminal or fraudulent conduct by a juror related to the proceeding, the lawyer must take reasonable remedial measures including, if necessary, disclosure to the tribunal" (American Bar Association, Formal Opinion 466 "Lawyer Reviewing Jurors' Internet Presence," online <www.americanbar.org/content/dam/aba/administrative/professional_responsibility/formal_opinion_466_final_04_23_14.authcheckdam.pdf>).
- 89 The Law Society of New South Wales, The Technology Mentoring Program, online: The Law Society of New South Wales <www.lawsonline.com.au>.

lawsociety.com.au/ForSolicitors/professionalsupport/supportingyou/Mentoring/TechnologyMentoring/index.htm>. For further discussion, see also Amy Salyzyn, "Getting Ready: The Continuing Case for Technological Competence" (11 June 2014), online: Slaw <www.slaw.ca/2014/06/11/getting-ready-the-continuing-case-for-technological-competence/>.

- 90 The Richard K. Herrmann Technology American Inn of Court, History of the Richard K. Herrmann Technology Inn of Court, online: American Inns of Court <home.innsofcourt.org/for-members/inns/the-richard-k-herrmann-technology-american-inn-of-court.aspx>.
- 91 Delaware State Courts, Delaware Supreme Court Commission on Law & Technology, online: Delaware State Courts <courts.delaware.gov/declt/>.
- 92 Susan Fortney discusses these types of incentives in the context of considering how to encourage lawyers to engage in proactive self-assessment of their ethical practices (see Fortney, *supra* note 80).
- 93 John Hyde, "Solicitors to require mandatory 'statement of competence,'" *The Law Society Gazette* (12 March 2015), online: The Law Society Gazette <www.lawgazette.co.uk/law/solicitors-to-require-mandatory-statement-of-competence/5047474.article>.