Spring 2008 www.lawtechjournal.com Volume 12, Issue 1

UCLA Journal of Law & Technology

BEYOND EFFICIENCY: THE TRANSFORMATION OF COURTS THROUGH TECHNOLOGY[^]

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This paper advances the notion that procedure should be restored to the high road from which it has been diverted in the last decades. In the 1960s and 70s, the traditional approach, which subordinated procedure as ancillary to substance, was replaced by a much richer understanding of procedure's significance. But this trend was reversed largely as a result of the drive for efficiency that has dominated the courts and their alternatives. One of the side effects of this development has been the channeling of technology's impact on dispute resolution procedure to what I term the "efficiency paradigm."

While the technological revolution of the recent decades has had a far reaching impact on substantive legal arrangements and doctrines, it has had only a limited effect on procedure, where it has typically been neglected or narrowly viewed as efficiency-enhancing. In this fashion, procedure has been pushed back to its subsidiary role with regards to substance. This paper advances a more comprehensive view, which underscores the potential of new technologies to advance a wide range of procedural values (including efficiency) under a "multi-dimensional learning paradigm."

These themes are explored in the arena of digital technology in the courtroom and, specifically, by focusing on a particular case study - that of the Israeli court computerization, which is simultaneously caught up in the efficiency paradigm and creates the basis for a shift to the alternative approach that is promoted in this article.

[^] JOLT assumes no responsibility for the correctness of citations to sources in Hebrew. Because English translations are often unavailable, JOLT was unable to verify these sources.

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I. INTRODUCTION

It's time to rethink procedure, yet again.[1]

The present paper was provoked by a sense of disappointment with the limited impact technology has had on dispute resolution procedures. In the 1960s and 70s, the approach to procedure underwent revolutionary change in both legal practice and the academy. The previous hierarchy, which subordinated procedure as ancillary to substance, was replaced by a much richer understanding of procedure's significance to legal outcomes.[2] But this trend was reversed largely as a result of the drive for efficiency that has dominated the courts[3] and the alternative dispute resolution ("ADR") mechanisms.[4]

One of the side effects of this development has been the channeling of technology's impact on dispute resolution procedure to what I term the "efficiency paradigm." On the substantive level, the technological revolution of the recent decades has had a far reaching impact on legal arrangements and doctrines relating to such areas as free speech and intellectual property. But the new capabilities for gathering, storing, analyzing, manipulating and disseminating information have had only a limited effect on procedure, where they have been

[1] *See* ROBERT M. COVER & OWEN M. FISS, THE STRUCTURE OF PROCEDURE, at iii (1979) (discussing the importance of procedure in American Law).
[2] *See generally id* at iii–iv (discussing procedural reform in American law).
[3] *See infra* Part III.A for a description of such measures in the Israeli court system. The heavy backlog has plagued many other court systems, most notably the American court system, *see infra* Part II (discussing the roots of ADR in the U.S.), and the British court system, *see generally* LORD WOOLF, ACCESS TO JUSTICE FINAL REPORT (1996), *available at* http://www.dca.gov.uk/civil/final/contents.htm (recommending changes to the British case management system).
[4] One of the roots of the institutionalization of ADR and one of its strongest selling points is the claim that ADR processes are quicker and less expensive than the litigation alternative. *See* Carol A. Wittenberg et al., *Why Employment Disputes Mediation Is on the Rise*, 578 PLI/LIT 747, 750–51 (1998); Edward A. Dauer, *The Future of ADR*, 1 PEPP. DISP. RESOL. L.J. 3, 7 (2000) (listing some of ADR's benefits).

typically neglected or narrowly viewed as efficiency-enhancing.[5] In this fashion, procedure has been pushed back to its subsidiary role with regards to substance.

I proceed to explore these ideas by analyzing the arena of digital technology in the courtroom and, specifically, by focusing on a particular case study—that of the Israeli court computerization project. In the area of court digitization projects, we normally see the efficiency paradigm at work. For example, the incorporation of technology into the courtroom is perceived as a technical or procedural change that enhances the efficiency of litigation. It is accompanied by an amendment to procedural and evidentiary rules and is heralded as a more efficient and convenient way to conduct litigation. Thus, the impact of technology is seen as one-dimensional, ignoring its potential for advancing other important values. The Israeli case study is exceptional and instructive because while it is caught up in the efficiency paradigm like other similar projects, it also creates the basis for a shift to the alternative approach that is promoted in this article.

This paper advances a more comprehensive view, which underscores the potential of new technologies to advance a wide range of procedural values (including efficiency) under a multi-dimensional "learning paradigm." As opposed to the efficiency-based paradigm, a multifaceted approach recognizes that the link between procedures and outcomes, and calls for procedures that meet a range of values that extend beyond efficiency. No procedural system can advance all values simultaneously, but a minimal level of certain basic values must be met for disputants to trust the system and rely on it. Furthermore, this approach acknowledges that choices made in the design of court procedures necessarily impact the particular mix of values promoted in a

[5] *See, e.g.*, Cumulative Index, 20 BERKELEY TECH. L.J. 1799, 1867–925 (2005). Out of twenty-six topics, only two are related to procedural matters; these are limited to evidentiary issues, internet governance, and regulation (under which the majority of the papers are devoted to such matters as the applicability of substantive doctrines online. There is no topic entitled "procedure" or "dispute resolution," but eight articles cover related matters, such as the ICANN domain name dispute resolution policy, digital litigation, and the arbitration of copyright disputes.

given system. Therefore, when new technologies are introduced into the design of a dispute resolution system, they alter the particular mix of values promoted under the previous arrangement because the technology itself and the manner in which it is incorporated into the system, are not value free.[6] Finally, the multifaceted approach, views dispute resolution systems as flexible learning systems, which can improve and change over time in an attempt to ensure that an ideal mix of values is being promoted.

This is not to say that the quest for enhanced efficiency should be abandoned. Efficiency is obviously an important value and has bearing on other values as well—a more efficient system could increase access to justice, which assists parties belonging to disadvantaged social groups in bringing their case to court and therefore promotes equality. An efficient system is one in which parties can actually enforce their rights and therefore legitimacy is enhanced. Nevertheless, the focus on efficiency has tended to overshadow other values and what used to be a means to an end has become an end in and of itself at the expense of other competing values. Because technology's impact has been reduced to that of rendering dispute resolution systems more efficient, its potential to generate improved systems that are successful in advancing additional values, other than efficiency, has not been fully realized. One important by-product of adopting the multi-dimensional learning paradigm is the strengthening of the legitimacy of the justice system—a central value that is often promoted by an emphasis on efficiency.

My argument is two-fold. First, a rich understanding of procedure, as enhancing a wide array of values, is needed. Such a shift would re-establish the centrality of procedure. Second, to do so, we must gain a fuller understanding and application of technology in procedural

[6] *See generally* Helen Nissenbaum, *Values in Technical Design*, *in* 1 ENCYCLOPEDIA OF SCIENCE TECHNOLOGY AND ETHICS lxvi, lxvi–lxx (Carl Mitcham ed., 2005) (discussing the challenges of integrating values into the design of technology).

arrangements. In this context, the concept of learning is of crucial importance for promoting such values as fairness and equality, beyond efficiency.

On a theoretical level, this article brings together literature from several areas. One domain is the growing body of writing on dispute resolution system design—research that exposes the ways in which procedural design choices impact substantive outcomes and the values promoted through such mechanisms. This literature draws on writing on ADR, civil procedure, procedural justice, organizational learning and empirical analyses of various dispute resolution systems. Another domain is that of law and technology.

This convergence generates several important insights often neglected in the literature in each of the respective fields. From a law and technology perspective, the need to attach greater significance to the impact of technology on procedure is quite evident. Aside from the notable exception of the ICANN domain name dispute resolution mechanism, which has drawn fierce critique and has received broad attention,[7] the impact of the introduction of technology into these realms has mostly been overlooked. One of the chief lessons the field of ADR has taught us is that the design of the dispute resolution process will impact the outcomes individual disputants can reach long before disputes arise. We need, therefore, to pay attention not only to new types of disputes that arise due to the introduction of new technologies and the ways in which these

[7] *See* A. Michael Froomkin, *ICANN 2.0: Meet the New Boss*, 36 LOY. L.A. L. REV. 1087, 1087–101 (2003); A. Michael Froomkin, *ICANN'S "Uniform Dispute Resolution Policy" – Causes and (Partial) Cures*, 67 BROOK. L. REV. 605, 605–718 (2002); Laurence R. Helfer & Graeme B. Dinwoodie, *Designing Non-National Systems: The Case of the Uniform Domain Name Dispute Resolution Policy*, 43 WM. & MARY L. REV. 141, 141–274 (2001); Yee Fen Lim**,** *Internet Governance, Resolving the Unresolvable: Trademark Law and Internet Domain Names*, 16 INT'L REV. L. COMPUTERS & TECH. 199, 199–208 (2002); Yeo Yee Ling, *Domain Name Dispute Resolution Within the Asian Region*, 38 U. TOL. L. REV. 403, 403–16 (2006); Rosanne T. Mitchell, *Resolving Domain Name-Trademark Disputes: A New System of Alternative Dispute Resolution Is Needed in Cyberspace*,14 OHIO ST. J. ON DISP. RESOL. 157–92 (1998); Milton Mueller, *Rough Justice: A Statistical Assessment of ICANN's Uniform Dispute Resolution Policy*, 17 INFO. SOC'Y 151–63 (2001); Ryan R. Owens, Note, *Domain-Name Dispute-Resolution After Sallen v. Corinthians Licenciamentos & Barcelona.com, Inc. v. Excelentisimo Ayuntameiento de Barcelona*, 14 BERKELEY TECH. L.J. 257–74 (2003); Elizabeth G. Thornburg, *Fast, Cheap, and Out of Control: Lessons from the ICANN Dispute Resolution Process*, 6 J. SMALL & EMERGING BUS. L. 191, 191–233 (2002); Richard W. S. Wu, *The New Hong Kong Domain Name Dispute Resolution Policy: A Comparative Analysis*, 16 INT'L REV. L. COMPUTERS & TECH. 251, 251–60 (2002).

disputes challenge existing legal doctrines, but also to the forums in which these disputes are addressed, the design of such procedures, and the role played by technology in the design.

From a dispute resolution standpoint, there are two important insights. One point has to do with gaining a better understanding of the role technology can and does play in promoting various procedural values and in improving procedural systems. Second, the procedural design of court systems is lagging compared to ADR, where the area of dispute system design has flourished. Therefore, the paper, by applying the ramifications of the convergence between dispute system design and technology to the workings of the traditional courthouse, offers a fresh look at the design of court procedures as a means for enhancing their fairness and legitimacy, beyond their efficiency.

In Part II, I place the analysis within the broader theoretical framework of the interconnections among technology, dispute system design and the procedural values underlying such design. One of the arenas in which these connections are visible is that of digital court projects. I then present the Israeli New Generation Court System (the "NCGS") as a particular case study for the exploration of the themes presented in this article in Part III. I describe the history of the project and the features of the system, and analyze its promise and limitations. Next, in Part IV, I examine some of the ways in which technology can promote a wide array of procedural values under a multi-dimensional learning paradigm, and offer some concluding thoughts in Part V.

II. THE NEW LANDSCAPE OF DISPUTE RESOLUTION: DISPUTE SYSTEM DESIGN, TECHNOLOGY AND PROCEDURAL VALUES

Our analysis of the new landscape of dispute resolution and the interconnections among dispute system design, technology and procedural values must begin with a brief description of

what can be named the "traditional landscape." In broad terms, we can divide this landscape into two phases. The first phase was the formal institutionalization of ADR processes in the court system (in the U.S. as of the late 1960s—early 70s[8] and in Israel in the early 1990s[9]). Consequently, a variety of programs were adopted in different courts under which litigating parties were referred to ADR processes that included mediation, arbitration, and/or various hybrid processes. The adoption of these schemes was the realization of Professor Sander's vision of a "multi-door courthouse"[10]—a court that provides a variety of dispute resolution processes tailored to dispute types and party preferences and needs.

Indeed, the rise of ADR in the second half of the 20th century in the U.S. can be seen as a reaction to several sources of dissatisfaction with the court system. Within the legal community much of the discontent had to do with the backlogs and inefficiencies of the overburdened, complex and expensive system.[11] But the quest for quick, simple and inexpensive avenues for the resolution of disputes was not the only rationale for the institutionalization of ADR. Some highlighted the inequities of the litigation process that often, but not always, paralleled financial imbalances among disputing parties.[12] There was also the recognition that for certain types of disputes, litigation was inappropriate and often led to unsatisfactory and

[8] *See* Deborah R. Hensler, *Our Courts, Ourselves: How the Alternative Dispute Resolution Movement Is Re-Shaping Our Legal System*, 108 PENN ST. L. REV. 165, 170–81 (2003).
[9] Mediation was formally institutionalized in Israel in 1992, with the amendment of the Courts Law of 1984. *See* Courts Law (Consolidated Version), 1984, S.H. 198, § 79B–C (Isr.)
[10] *See* Frank E. A. Sander, Professor of Law, Harvard Univ., Varieties of Dispute Processing, Address at the National Conference on the Causes of Popular Dissatisfaction with the Administration of Justice (Apr. 7–9, 1976), *in* 70 F.R.D. 79, 111–34 (1976).
[11] *See* Hensler, *supra* note 8, at 174–81.
[12] Marc Galanter's seminal article exposed the structural biases that made courts a more favorable arena to "repeat players"—typically the "haves." These biases were a result of certain features of the court system, namely: the precedent system; the backlog; complexity and costs of the court system; and the characteristics of the attorney bar at the time of the article. Since ADR systems were, at least in theory, supposed to operate on a case-by-case basis (with no precedents), and were touted as simple, quick and inexpensive processes for which legal representation was often unnecessary, they were expected to be free of these biases. *See* Marc Galanter, *Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change*, 9 LAW & SOC'Y REV. 95 (1974).

suboptimal results.[13] These proponents of ADR emphasized the possibility for preserving ongoing relationships, exploring of root cause problems and devising tailored, creative resolutions to disputes.[14] Others still, viewed ADR processes as tools for individual and community empowerment[15] and hoped that exposure to such mechanisms through the court system would drive parties to turn to ADR prior to litigation in future disputes. Next, institutionalization of ADR (primarily mediation) extended to administrative agencies[16] and large organizations,[17] with the latter offering private, in-house dispute resolution services for employees and clients.

In the second phase, the impact of, and reactions to, the institutionalization phase, became apparent. Despite broad support for the incorporation of ADR procedures in the courtroom, these developments were accompanied by fierce critiques of the creation of a privatized dispute resolution landscape. The criticism centered around two main issues. The first was the need to have courts, as public institutions, declare societal values, allocate social resources and protect individual and group rights.[18] The second was the claim that private and confidential processes are used by powerful parties to obtain settlements that are more attractive to them at the expense of their less knowledgeable and powerful adversaries.[19] The situation, then, seemed to leave disputants, policymakers and practitioners with a choice between two

[13] *See* ROGER FISHER & WILLIAM URY, GETTING TO YES: NEGOTIATING AGREEMENT WITHOUT GIVING IN 70–76 (Bruce Patton ed., 2d ed. 1991).
[14] *See* ROBERT H. MNOOKIN ET AL., BEYOND WINNING: NEGOTIATING TO CREATE VALUE IN DEALS AND DISPUTES 100–01 (2000); Carrie Menkel-Meadow, *Pursuing Settlement in an Adversary Culture: A Tale of Innovation Co-Opted or "The Law of ADR,"* 19 FLA. ST. U. L. REV. 1, 6–13 (1991).
[15] *See* Robert A. Baruch Bush, *Mediation and Adjudication, Dispute Resolution and Ideology: An Imaginary Conversation*, 3 J. CONTEMP. LEGAL ISSUES 1, 11–12 (1989–90).
[16] *See* DAVID B. LIPSKY ET AL., EMERGING SYSTEMS FOR MANAGING WORKPLACE CONFLICT: LESSONS FROM AMERICAN CORPORATIONS FOR MANAGERS AND DISPUTE RESOLUTION PROFESSIONALS 305 (2003).
[17] *See id.* at 114–15, 147–52.
[18] *See* Owen M. Fiss, *Against Settlement*, 93 YALE L.J. 1073, 1086 (1984); David Luban, *Settlements and the Erosion of the Public Realm*, 83 GEO. L.J. 2619, 2626–27 (1995); Judith Resnik, *Many Doors? Closing Doors? Alternative Dispute Resolution and Adjudication*, 10 OHIO ST. J. ON DISP. RESOL. 211, 226 (1995).
[19] *See* Laura Nader, *Controlling Processes in the Practice of Law: Hierarchy and Pacification in the Movement to Re-Form Dispute Ideology*, 9 OHIO ST. J. ON DISP. RESOL. 1, 13 (1993).

"evils"—a litigation process that is committed to public values and transparency but suffers from structural biases, institutional rigidity and extreme inefficiencies vs. alternatives to litigation that are flexible, satisfying and often less expensive for disputants than courts, but are also private and confidential and therefore suffer from biases of their own.

In the next phase, a more complex understanding of the new landscape of dispute resolution, has sought to provide innovative ways for breaking the divide between public courts and private ADR, and for devising more satisfying and fair dispute resolution processes, both in the court setting and in their shadow. Indeed, two phenomena—one within the ADR field and the other relating to the courts—can be seen in this light.

In ADR, growing attention has been focused on the domain of dispute system design. With several leading books coming out since the 1980s on this topic[20] and many more articles,[21] this has become a major focus in the ADR field. This writing analyzes the design of dispute resolution systems, typically within organizations, which offer employees, management and clients various informal, private and typically confidential avenues for raising complaints, addressing problems and resolving conflicts.[22]

The dispute system design literature exposes procedural design choices that are available to dispute system designers (and, to a lesser extent, to users of such systems). The principal

[20] *E.g.*, CATHY A. COSTANTINO & CHRISTINA SICKLES MERCHANT, DESIGNING CONFLICT MANAGEMENT SYSTEMS: A GUIDE TO CREATING PRODUCTIVE AND HEALTHY ORGANIZATIONS (1995); LIPSKY ET AL., *supra* note 16; WILLIAM URY ET AL., GETTING DISPUTES RESOLVED: DESIGNING SYSTEMS TO CUT THE COSTS OF CONFLICT (1988).

[21] *E.g.*, Frank J. Barrett & David L. Cooperrider, *Generative Metaphor Intervention: A New Approach for Working with Systems Divided by Conflict and Caught in Defensive Perception*, 26 J. APPLIED BEHAV. SCI. 219 (1990); Lisa B. Bingham, *Control over Dispute-System Design and Mandatory Commercial Arbitration*, 67 LAW & CONTEMP. PROBS. 221 (2004); Lisa B. Bingham, *Self-Determination in Dispute System Design and Employment Arbitration*, 56 U. MIAMI L. REV. 873 (2002); John P. Conbere, *Theory Building for Conflict Management System Design*, 19 CONFLICT RES. Q. 215 (2001); Cathy A. Costantino, *Using Interest-Based Techniques to Design Conflict Management Systems*, 12 NEGOT. J. 207 (1996); Deborah M. Kolb & Susan S. Silbey, *Enhancing the Capacity of Organizations to Deal with Disputes*, 6 NEGOT. J. 297 (1990); Mary P. Rowe, *The Ombudsman's Role in a Dispute Resolution System*, 7 NEGOT. J. 353 (1991); Karl A. Slaikeu, *Designing Dispute Resolution Systems in the Health Care Industry*, 5 NEGOT. J. 395 (1989).

[22] *See* Orna Rabinovich-Einy, *Beyond IDR: Resolving Hospital Disputes Through ITR*, 81 ST. JOHN'S L. REV. 173, 174 (2007).

insight is that choice of particular dispute resolution processes, particular design choices made with respect to each, and the procedure used for the design of the dispute resolution system itself, impacts the values promoted through the system. These values include justice, fairness, participation, equality, promotion of stability and predictability, truth, participation, legitimacy and efficiency.[23] Naturally, no procedural system can promote all values simultaneously. A particular procedural arrangement represents a balance among the various values, promoting some at the expense of others. When we choose, for example, a procedural rule that permits parties to re-open (re-try) a complaint or court case an unlimited number of times, we place a higher degree of importance on the value of truth seeking than on efficiency, stability, and predictability. In addition, such arrangement could both promote legitimacy (in that it assists in uncovering wrong decisions) and undercut legitimacy (in that the various court decisions rendered may contradict one another). Thus, designers of dispute resolution systems need to be aware of the impact that choosing one procedural avenue over another has on the promotion of a particular value or values, and ensure that the particular mix created through that system meets a threshold level and generates legitimacy.

Over time, one of the important lessons conveyed in the writing on dispute system design was that these systems could be designed to promote learning and improvement.[24] Such learning would function on two levels—learning on the causes for the rise of disputes, and learning on the impact of interventions of the dispute resolution team on the results and the relationship between procedural values and substantive outcomes.[25] Therefore, for learning to take place, there must be documentation of the dispute resolution efforts (preferably in real time), and monitoring of

[23] These values are drawn from several sources. *See* HCJ 3914/92 Lev v. Tel Aviv Religious Tribunal [1994] IsrSC 48(2) 491, 498–503; COVER & FISS, *supra* note 1, at 2–46.
[24] *See, e.g.*, COSTANTINO & MERCHANT, *supra* note 20, at 30, 105–16.
[25] *See* Orna Rabinovich-Einy, *Technology's Impact: The Quest for a New Paradigm for Accountability in Mediation*, 11 HARV. NEGOT. L. REV. 253, 279 (2006).

performance and outcomes against predetermined goals by designated "caretakers of information," who analyze the information gathered.[26] These elements have often been in tension with dispute resolution systems' confidential nature.[27] Nevertheless, some systems have found creative ways for overcoming this tension.[28]

With respect to courts, two related developments have taken place in the procedural realm. First, there has been growing recognition of the centrality of procedures and their connection to substantive outcomes and the fairness of proceedings.[29] This realization has altered the way in which procedural rules are understood, from technical and dry instructions to important tools for promoting basic procedural values that are necessary for sustaining the legitimacy of the litigation process.[30] One result has been the strengthening of the constitutional protection of due process in civil trial proceedings.[31] In addition, the notion of "one size fits all" court procedural rules has been in undermined by the emergence of specialized courts and in particular innovative forms of problem-solving courts with their own, unique (and sometimes controversial) procedures.[32] The recognition that there is room for a plurality of procedures and that different procedures under varying circumstances promote different values and may generate divergent outcomes, underscores the significance of dispute system design for the court setting as well. And yet, these developments in the court system have had only a limited impact, certainly in the traditional civil court setting. Part of the problem has been that the significance of

[26] *See id*. at 282 (presenting a framework for learning under a structural accountability paradigm).
[27] *See id*. at 263–68.
[28] *See id*. at 286–91; Susan Sturm, *Second Generation Employment Discrimination: A Structural Approach*, 101 COLUM. L. REV. 458, 499–509 (2001).
[29] *See* COVER & FISS, *supra* note 1, at 47–104.
[30] *See* SHELOMOH LEVIN, TORAT HA-PROTSEDURAH HA-EZRAHIT: #B MOVO VE-'EKRONOT YESOD [THE THEORY OF CIVIL PROCEDURE: INTRODUCTION AND BASIC PRINCIPLES] 12–23 (1999).
[31] *See id*. at 24–40.
[32] *See* Greg Berman & John Feinblatt, *Problem Solving Courts: A Brief Primer*, 23 LAW & POL'Y 125 (2001) (describing problem-solving courts, outlining problem-solving principles, and answering basic questions about problem-solving courts).

procedure has been reduced to that of an efficiency-enhancing tool for court proceedings, while ignoring its role in promoting other procedural values.

Interestingly, despite the public nature of most court proceedings and related data and the existence of a court administration office which can easily function in the capacity of caretakers of information, typically, proactive analysis of court data and statistics has been devoted to the issue of caseload. There has been no broad, systemic and deliberate attempt to study the functioning of courts along different axis.

In recent decades, with the proliferation of the internet and digital communications, the significance of new technologies for dispute system design has become increasingly apparent. This includes technology's impact on the values promoted through courts and ADR systems and its potential for enhancing learning. Thus far, the impact of technology on procedure has been understood narrowly. New technologies and in particular the internet, are understood to generate new types of disputes and create new arenas for the resolution of these problems online.[33] Indeed, e-commerce sites[34] and virtual communities[35] have proven pioneering in developing online tools for the resolution of disputes, importing such processes as negotiation, mediation, arbitration and even mock-courts,[36] to the online setting. Over time, the new capabilities for storing, searching, manipulating and sharing information were understood by some as fundamentally impacting the dispute resolution field. Dispute resolution revolves around information, whether such disputes arose online or not and whether they were being addressed

[33] Domain name disputes present one prominent example.
[34] *See, e.g.*, SquareTrade, Solve Problems with Online Dispute Resolution (ODR), http://www.squaretrade.com/cnt/jsp/odr/overview_odr.jsp (last visited Jan. 22, 2008) (an online dispute resolution service provider that handles mainly eBay disputes).
[35] *See* Jennifer L. Mnookin, *Virtual(ly) Law: The Emergence of Law in LambdaMOO*, 2 J. COMPUTER-MEDIATED COMM. (1996), http://jcmc.indiana.edu/vol2/issue1/lambda.html (describing the emergence of one such system).
[36] *See* MELISSA CONLEY TYLER, 115 AND COUNTING: THE STATE OF ODR 2004 (2004), http://www.odr.info/unforum2004/ConleyTyler.htm (listing the various ADR services provided online).

through the internet or face-to-face, traditional means. Researchers such as Katsh,[37] Susskind,[38] and others exposed the ways in which digital technology has become an inherent component of the dispute resolution arena and part of the toolset attorneys, judges, designers of dispute resolution services, academics and laypeople rely on in addressing disputes.

Interestingly enough, despite the prominence of this impact on the ground with over one hundred online dispute resolution (ODR) providers offering ADR through the internet[39] (eBay alone claims to handle over thirty million disputes annually),[40] courts in a variety of countries launching some form of digitization project,[41] and the emergence of a great many number of websites offering legal information and services formerly monopolized by the legal profession,[42] there has been relatively little academic focus on these phenomena. Katsh & Rifkin in their pioneering book on ODR are one exception.[43] They describe technology's role in dispute resolution as that of a "fourth party"[44] (as opposed to the human "third party" involved in such

[37] *See* M. ETHAN KATSH, LAW IN A DIGITAL WORLD (1995); M. ETHAN KATSH, THE ELECTRONIC MEDIA AND THE TRANSFORMATION OF LAW (1989).
[38] *See* RICHARD SUSSKIND, THE FUTURE OF LAW (1996).
[39] *See* Tyler, *supra* note 36.
[40] This figure was cited by Colin Rule, Dir. for Online Dispute Resolution for eBay, Remarks at the Fifth International Forum on Online Dispute Resolution (Apr. 19–20, 2007).
[41] *See* JANET WALKER & GARRY D. WATSON, INT'L ASS'N OF PROCEDURAL LAW, NEW TECHNOLOGIES AND THE CIVIL LITIGATION PROCESS 4–33 (2007), http://research.osgoode.yorku.ca/iapl2007/documents/WalkerWatsonNewTechnologies.pdf (last visited Jan. 22, 2008) (general report); INT'L ASS'N OF PROCEDURAL LAW, THE CHALLENGE OF INFORMATION SOCIETY: THE APPLICATION OF ADVANCED TECHNOLOGIES IN CIVIL LITIGATION AND OTHER PROCEDURES (1999), http://ruessmann.jura.uni-sb.de/grotius/english/GeneralReport.htm (last visited Jan. 22, 2008) (provisional general report).
[42] These websites range from for-pay legal databases, such as, Lexis and Westlaw, through knowledge sharing websites where users can provide information on legal matters, such as AskMe.com, http://askme.com (last visited Jan. 22, 2008), to automated legal services rendered by software companies. Online legal advise, however, is not always what it seems. *See* Michael Lewis, *Faking It*, N.Y. TIMES MAG., July 15, 2001, at 32 (fifteen-year old boy gave legal advise to grown-ups on Askme.com). In fact, some of these phenomena have led to unauthorized practice of law proceedings in various jurisdictions in the U.S. *See* Unauthorized Practice of Law Comm. v. Parsons Tech., Inc., No. Civ.A. 3:97CV–2859H, 1999 WL 47235, at *1–*11 (N.D. Tex., Jan. 22, 1999), *vacated*, 179 F.3d 956 (5th Cir. 1999) (interpreting a subsequent legislative amendement).
[43] *See* ETHAN KATSH & JANET RIFKIN, ONLINE DISPUTE RESOLUTION: RESOLVING CONFLICTS IN CYBERSPACE (2001).
[44] *See id.* at 93–116.

processes as mediation or arbitration) and analyze the ways in which technology impacts dispute system design choices.[45]

This paper seeks to join this and similar works in filling this gap in the literature by focusing on the role of technology on the procedural realm. More specifically, this paper does so by focusing on the interconnections among dispute system design, technology and procedural values as they are manifested in digital courts. Courts provide a particularly interesting arena for exploring these ideas since all three dimensions—dispute system design, technology and procedural values—have been understood quite narrowly in this context; typically there has been limited discussion of dispute system design options, the role of technology is viewed as technical and the emphasis on efficiency has tended to overshadow other competing procedural values.

Within this general topic, the choice to focus on the new Israeli court digitization project was deliberate. Through the access I gained to the project and the individuals involved in it, I learned that the Israeli case study provides an excellent demonstration of the potential and limitations of the efficiency paradigm. As the following section reveals, this multi-million dollar project, one of the advanced court digitization schemes worldwide, reflects an understanding of the unique characteristics of digital information technologies and their potential for enhancing learning. However, the Israeli project represents a narrow and partial understanding of learning, one that is limited to the realm of efficiency and overlooks the potential of learning for enhancing fairness, predictability and legitimacy.

[45] *See id.* at 71–92.

III. THE NEW GENERATION COURT SYSTEM: A CASE STUDY ON THE IMPACT OF TECHNOLOGY ON PROCEDURAL VALUES

A. The History of the Project

An examination of the history of the NGCS project makes clear that the roots of the project lie in the drive for efficiency. The NGCS follows a series of attempts to increase the effectiveness of the system through computerization and improved case management.[46] These efforts can be traced back to the 1990s, when preliminary, partial computerization efforts within the court system were launched, ADR mechanisms were institutionalized in the court setting,[47] and a small claims court was instituted.[48] This trend was reinforced in the beginning of the 21st century with the adoption of a fast track for the resolution of minor fiscal disputes and the establishment of Case Allocation Departments ("CADs") in the various magistrate courts.[49] All of these developments were aimed at increasing the system's effectiveness by reducing the caseload—either through the establishment of speedy processes for hearing complaints by the judiciary or by siphoning off complaints to alternative channels of dispute resolution. The CADs were to assist in the effective distribution of disputes in what has become the Israeli equivalent of the multi-door courthouse scheme.

Indeed, the efficiency framework is what drove early computerization efforts in the court system and, to a great extent, is still the governing paradigm. The history of computerization of Israeli courts dates back to the early 1990s when a mainframe-based computer system was introduced into the secretariat and was used for documenting court filings and hearing dates.

[46] The description of the history of the NGCS and previous computerization efforts is based on an Interview with Shalom Burstein, Court Admin. Office (Feb. 15, 2007) [hereinafter Interview with Shalom Burstein] (notes on file with author).
[47] *See* Courts Law (Consolidated Version), 1984, S.H. 198, § 79B–C (Isr.).
[48] *See id.*
[49] *See* Courts Regulations, 2002, KT 6189, 1198 (Isr.) (establishing Case Allocation Departments in general courts and in labor tribunals).

Court documents were not submitted digitally nor were they scanned; the system merely recorded the fact that such documents were filed on a particular date. Similarly, dates for court hearings were not generated electronically, but were simply recorded on the system after they had been set. In addition, word processing was introduced into the courtrooms, allowing the substitution of manual transcription with computer-generated transcripts. After the year 2000, a then state of the art computer system based on Lotus Notes and Microsoft Word 2000, was adopted for courtroom management, which allowed for the online publication of all decisions and protocols (under which only decisions were made widely available, while protocols and pleadings required a password). Around that same time, the mainframe-based secretariat system was replaced with a web-based system, which also supported judges' electronic calendars and the court fax system. The web-based system was viewed as the basis for a more comprehensive computerized scheme that would allow for online submission of court documents and for conducting proceedings via video-conferencing. A pilot project in the magistrate court in the city of Ramla in 2004 presented the highpoint of this plan, which never matured into a full-fledged project.

The history of court computerization in Israel is very much the story of two key players, both of which served as heads of the Court Administration Office ("CAO") in the last decade. The first was Judge Dan Arbel, the CAO chief between the years 1998—2004, who oversaw the computerization efforts post-2000, the establishment of the CADs and the Ramla pilot program. In 2004, Boaz Okon, came into office as Head of the CAO and revolutionized the approach to the issue of digitization. At that point, it was clear to all involved that a new system for the computerization of the court system was needed, but such system was perceived as one that would provide a digital, more effective equivalent to the CADs. Okon called for a more

expansive approach through a reevaluation of the needs of the court system and the design of the computerization project.

After several years of planning and development of the NGCS, the pilot was finally launched in the magistrate court in Hertzeliya in January 2007. Over the course of 2007, the new system has been implemented in several other magistrate courts across the country and is expected to be in full operation soon. Nevertheless, the project still faces significant hurdles. The Court Administration Office has undergone turbulent times, as its chief and the architect of the project, resigned in October of 2006, just as the pilot program was scheduled to be launched. The plan is progressing, at a slight delay, but there is a concern that the loss of the driving force behind this effort will further affect the pace at which the program is launched.

In addition, the exorbitant cost of the NGCS (in the hundreds of millions of shekels),[50] which is not to be funded through court fees, presents a significant burden for an already under-budgeted, under-staffed court system.

A third challenge has to do with the need to coordinate technical standards and substantive issues with several other bodies—the Israel Bar Association, the District Attorney's office and the police, all of which are large, bureaucratic entities, driven by their own, sometimes competing, interests and agendas.[51]

Finally, and perhaps most importantly, the project presents a serious cultural challenge to the judiciary on several levels. On the most immediate level, a significant number of Israeli judges, certainly in the District and Supreme Court, are uncomfortable with computers and resent

[50] *See* Knesset Comm. on Constitution, Law and Justice Session of the 16th Knesset, Protocol (Feb. 28, 2005), http://www.knesset.gov.il/protocols/data/html/huka/2005-02-28.html [hereinafter 16th Knesset Comm. on Constitution Protocol].
[51] *See id*.

the planned changes.[52] A less conspicuous challenge, which may prove more significant, has to do with the threat to the privacy and autonomy of judges presented by the NGCS.[53] The NGCS limits judges' control over scheduling, and makes their calendars visible to court administrators and, to a certain extent, attorneys. As further explained below, this is an important feature of the system that serves to enhance accountability.[54] Accountability results from the transparency and monitoring, which is made possible through the system. But oversight can also be disconcerting. The drive for effectiveness executed through the now possible review of work assignment, could backfire and drive out talented judges who are struggling under an unbearable load.

Despite these challenges, the NGCS represents an important and impressive project, which promises to revolutionize court proceedings in Israel. The detailed analysis of the features of the NGCS below reveals the innovative nature of the project and the promise for effectiveness and learning through new technologies.

B. Principal Features of the NGCS

The NGCS, represents an ambitious, and in many respects unprecedented, effort to adapt the court system to the era of digital technology. The NGCS is an advanced system for online document filing and case management, which is being introduced into all proceedings that are conducted in all courts subject to the jurisdiction of the Court Administration Office.[55] Former Judge and architect of the project, Boaz Okon, described the NGCS as including the following five basic features: electronic file, work space, calendar, e-filing and task assignment.[56] It is the

[52] *See* Joseph Hatoni, *Leading Media and Best Events*, DAILYMAILY, Feb. 12, 2007, http://www.pc.co.il/Index.asp?CategoryID=72&VolID=334.
[53] I thank Prof. Ethan Katsh for raising this point.
[54] *See* discussion under the heading "Task Assignment" *infra* Part III.B.1.
[55] The Court Administration Office oversees all courts in Israel, except for the religious and military tribunals.
[56] The description of the NGCS is based on the following: Presentation by Boaz Okon at the District Court in Tel Aviv (July 31, 2006) (notes on file with author); Interview with Shalom Burstein, *supra* note 46; 16th Knesset Comm. on Constitution Protocol, *supra* note 50.

combination of these characteristics that make this system so impressive, in particular the task assignment feature, made possible by the BPM engine. The first four features primarily promote efficiency, although they do impact other procedural values as well, as demonstrated below. The fifth feature, the task assignment element, is the one that lays the basis for a shift from the efficiency paradigm to the multidimensional learning framework. The examination below follows the scheme presented by Okon, and lays the foundation for an analysis of the implications of design choices made in the use of technology on the procedural values promoted by the system.

1. The Five Pillars of the NGCS

The Electronic File

The NGCS is premised on the idea that aside from trial hearings, the entire trial process is managed digitally. This means that the court case—traditionally a hefty pile of papers—is reduced to a link on the computer screen. All pleadings, protocols, affidavits and exhibits can be searched and viewed online.

Once the system is in place in all courthouses in Israel, the electronic court case will be fully accessible to the presiding judge, the secretariat, certain court administrators and the attorneys on the case by use of a smart card and password. Anyone accessing the case without the smart card will only be able to see the court decisions as permitted under the Inspection Regulations.[57] An amendment of these regulations is planned to allow general access to other documents in the file, such as pleadings and protocols, but these changes have yet to take place.

For the judge, access to an electronic, rather than a paper court case presents a significant change and a significantly more efficient way of performing her work. The court case, in digital

[57] The Inspection Regulations, 1986, KT 4962, 1342, § 2(a) (Isr.).

format, is accessible from the courthouse (a client-server system) or from home (through an IP-VPN connection) by use of a smart card and password. Even when at work, the electronic file obviates the need to carry boxes of documents to the judge's chambers each time a minor decision needs to be made. This reality has not only been cumbersome, but has also resulted in the loss of documents and entire court files. In addition, the case file itself becomes more accessible and user friendly. Instead of having to search inefficiently though a paper file organized chronologically, the judge will be able to search according to subject matter (pleadings, motions, etc.), or, if she so chooses, the "old way"—chronologically. In addition, the system automatically recognizes each party's role in the action (third party defendants, counter-claim plaintiffs) and classifies them accordingly, thereby assisting judges in keeping track of multiple parties in complex actions. Lastly, decisions, when they are final, are released to the system and can be viewed online instantaneously.

Currently, all court files that predate the NGCS are being scanned into the system so that they too will be accessible online. In addition, the numbering system of court cases will change from a locally-based one to a state-wide system, in which all court cases across the country are numbered sequentially, a change that will facilitate locating particular cases and will ease the transfer of court cases from one jurisdiction to another.

The Workspace

The judge's workspace under the new system is an outlook type system, which concentrates all assignments that are outstanding for the judges (for example, a case awaiting final decision, or the need to schedule a hearing). These assignments appear as headings on emails and the file in need of action is then easily accessed by clicking on the link.

From her workspace, the judge can access the electronic court case and a variety of legal databases that include local legislation, case law and scholarship as well as foreign materials. The work station connects between different types of documents, allowing the judge to search for a key term or a person (party, witness, etc) simultaneously in pleadings, protocols, affidavits, exhibits, etc. This can be done during a hearing, allowing the judge to compare the testimony she is hearing with that witness's affidavit. The judge can add private comments, invisible to the parties, on the documents stored in the digital file, preserving the judge's real time impressions in an accessible format. The judge can also make public comments or changes by, for example, amending the protocol where necessary (correcting errors, noting a change in representation). The protocol of the proceedings is "smart" in that it links between a decision in the text and the motion with respect to which the decision documented in the protocol is rendered. Similarly, a witness's testimony documented in the protocol is linked to her affidavit.

In addition, the system allows the judge to create a work scheme according to which her assignments are to be organized (for example, the system can be instructed to schedule all administrative appeals on Monday mornings, between specific hours). The main advantage is that this feature allows for automatic case allocation instead of having to wait for the judge to schedule a hearing, thereby reducing some of the caseload off judges and shortening the time period parties have to wait for scheduling decisions to be made. In addition, the scheduling policy itself (by the judge herself and the system more generally) can become more effective through monitoring and learning over time. For example, data collected on delays can be instructive in deciding how much time to allocate for different types of cases and hearings.

The Calendar

The NGCS allows for efficient work assignment. As described above, this can be done on an individual basis, by having judges specify in advance their preferences for scheduling cases, but this can also be performed on a systemic level, by having court administrators predetermine what types of cases should be assigned to which judges. This means that the court calendar is determined automatically according to specified criteria. This is efficient on two levels. First, the assignment can be performed by the system without the need for human intervention. Second, the work allocation scheme maximizes efficiency because the work is assigned according to areas of expertise (and the judges themselves schedule the work in a way that allows them to work more effectively).

e-Filing

A major improvement in terms of efficiency is realized through the NGCS' e-filing feature. The system allows for remote filing and online service of process of all court documents, twenty-four hours and seven days a week, through the internet. Under the arrangement that preceded the NGCS, there was no electronic filing of documents or service of process, but an amendment from 1997 to the Civil Procedure Regulations, 1984[58] ("Civil Procedure Regulations"), allowed for service of process by fax under certain circumstances (Rules 497A and 497B) and for the initiation of "mechanized actions"—certain pre-approved plaintiffs (large companies, such as cellular companies or banks, suing a great number of defendants for small-scale debts) could initiate a proceeding electronically by way of summary judgment.

[58] Civil Procedure Regulations 1984, KT 4685, 1288 (Isr.).

Recently, the Civil Procedure Regulations were amended to allow for online filing and service of process under the NGCS.[59] In addition, the Archive Regulations (Preservation and Extermination of Court and Tribunal Files), 1986[60] ("Archive Regulations"), were amended to allow for the extermination of paper court documents ten days after being scanned[61] thereby increasing efficiency through digital archiving.

The NGCS is open to all users—judges, the court secretariat and other court personnel, attorneys and the general public, but different users enjoy varying levels of access to the system. An attorney who wishes to file documents online must use a smart card, which is distributed by the Israel Bar Association for a nominal sum of approximately $30 for a period of three years and must have access to a "safe"—a secure email account administered under the Israeli e-government initiative.[62] Attorneys will be required to check their email account daily and will be deemed to have read communications received in the secure email account. With respect to two types of proceedings an exception has been made and access is granted to the entire file based on an identification number without use of a smart card: small claims court cases and actions for failure to pay wages at the labor court, both of which involve unrepresented parties who do not possess a smart card. This reduces somewhat the security level of these proceedings, but compensates with added accessibility for *pro se* litigants.

Since access to the system is, as a rule, restricted to those with a smart card, communication is secure. In fact, as former judge Okon remarked when presenting the system,

[59] The principal revisions were the following: Rule 1 (Definitions) now includes definitions for "an electronic means," "electronic signature," "secure electronic signature," "target of electronic submission," "electronic pleadings," "address," and "mechanized system;" Rules 7b–7c (under the heading of "Initiating a Proceeding") now allow for online filing of a claim; Rule 215E governs e-filing of a court document; Rule 475, which lists the ways in which an action can be initiated, now includes electronic means; and Rules 497B1, 497C, 497C1 and 497D, all dealing with electronic service of process, were added. *See id.*

[60] Archives Regulations (Preservation and Extermination of Court and Tribunal Files), 1986, KT 4962, 1342 (Isr.).

[61] *See id.* § 2A(a).

[62] Tehila: The Governmental ISP, http://www.tehila.gov.il/Tehila1/TopNav/MimshalZamin/Mimshal+Zmin+-+Kassefet.htm (last visited Jan. 22, 2008).

communication under the NGCS is far more secure than the paper-based arrangement, where court files can be checked out by depositing an identification card and the secretariat has no way of ascertaining whether the file has been tampered with or not. Indeed, there have been a significant number of cases where documents, even entire files, disappeared.[63] Conversely, the NGCS digitally records all actions taken in the file and is therefore, perhaps counter-intuitively, safer.

In terms of the nuts and bolts of remote filing of court documents, the system provides an accessible format for preparing and submitting documents. When initiating a proceeding, the system requires that certain fields be filled out, such as the court details, the type of proceeding, the name and identification number of the parties (the system is connected to the census registration, the companies registry and the registry of residents in the occupied territories and if the identification numbers do not match the name provided, the plaintiff will not be able to initiate the proceeding). The parties can write their pleadings onto the system or attach a file from their hard disk. It is possible to add attachments in PDF or TIFF format as appendices to the pleadings. Once the file is submitted, it cannot be revised since it is sealed with an electronic signature. In addition, court fees are paid online via credit card or by charging a bank account when initiating a proceeding.

The system balances between efficiency and fairness by remaining voluntary. For example, the option to file documents and initiate proceedings in paper format will remain open to those who choose to do so. However, an attorney using the system will have to be consistent across cases—she will not be able to submit documents electronically in one case while insisting on the submission of paper documents in another. In addition, access to the system will be provided free of charge at legal clinics and *matnasim* (publicly-funded community centers). In

[63] *See* 16th Knesset Comm. on Constitution Protocol, *supra* note 50.

those cases in which pro se parties or attorneys choose to submit paper documents, the courts will scan the paper documents to ensure a full electronic database of court cases.

Task Assignment

One of the most remarkable features of the NGCS is the task assignment element. In the design of the system, an arduous process of mapping the various types of proceedings involved was performed in order to identify, step-by-step, the different stages that each of these processes is comprised of. For example, civil proceedings were divided into sub-categories such as standard civil proceedings, fast track, small claims, etc. The same was done for all other types of court cases—criminal, administrative and employment-related actions. Next, each particular type of proceeding was further analyzed, resulting in a detailed scheme of the steps associated with such procedure. Each step was named a "task" and each task was associated with a person or entity in charge of performing such assignment (plaintiff, defendant, judge, a particular person within the secretariat). The mapping of procedures was necessary to allow the BPM engine to substitute for the manual administration of a court case. Instead of having the parties or court employees initiate action, the system designates task performers for each ensuing action and is either capable of performing a necessary function automatically or prompts the task performer for action. The system periodically examines whether a task was performed and, if not, there are pre-programmed consequences that escalate over time.

The task assignment feature is significant in several respects. An obvious advantage is the added efficiency afforded through increased automation. The system can easily substitute manual assignment of court cases to particular judges or the manual scheduling of hearings post-assignment to judges, with automated processes. Similarly, the onus for filing such motions as a

motion to strike out a claim for inaction will no longer be on the defendant; the system will be able to automatically detect and handle such matters.

A more subtle, but no less important, benefit has to do with the fact that this impressive project of mapping the various court proceedings, serves to enhance accountability in the system. By linking the tasks with a person in charge for their execution, the system clarifies what the duties and areas of responsibility of the various actors in the system are. Therefore, presumably, there should be no tasks that fall between the cracks, assignments should be handled more quickly and proceedings in general more efficiently. Most importantly, in those cases in which tasks are not executed at all or carried out poorly, responsibility can be assigned.

Finally, the fine-grained mapping of procedures allows for improvement and learning on a system-wide level. Reports per-case type can be produced, allowing in depth analysis of, and comparison among: different types of proceedings; the manner in which they are handled; the allocation of judicial time to their resolution; and the need for further development and refinement of the system. For example, a study of how judges perform specific functions (conduct pre-trials, conduct hearings, write decisions) could underscore areas in which further training is needed (running a courtroom, ascertaining under what circumstances and in what ways to encourage settlement, developing writing skills, etc.). The architects and implementers of the system, despite realizing its learning potential have had a limited view of learning, one that is focused on efficiency. Therefore, they have tended to view the mapping of procedures as a tool for detecting pockets of inefficiencies in the system (such as scheduling of cases) but have overlooked the potential for broader learning advancing values other than efficiency, as further explained below.

2. Limitations of the NGCS

Despite its impressive features, the NGCS system has several limitations. First, the NGCS does not fully realize the potential of technology even within the efficiency paradigm. One example for this is the area of subject matter and personal jurisdiction. These areas have become extremely complex and at the same time the rationale behind existing rules that had justified the distinction among courts has been eliminated. Subject matter jurisdiction has become so complex over the years that lower courts have, in certain cases, turned a blind eye to this issue, at times openly defying the rules.[64] The distinction between magistrate and district courts' jurisdiction as a first instance was based in the past on the differing levels of expertise between the judges of these courts. This reality justified such rules as limiting the jurisdiction of magistrate courts to civil disputes relating to the rental of real property but not the sale of such property, since the latter was perceived as too complex a matter to be handled by a magistrate court.

Over the years, this and other distinctions have become artificial, as the magistrate courts' mandate expanded and the rules of subject matter jurisdiction have grown more and more complex to accommodate such expansion. A special commission led by a former Israeli Supreme Court justice, Justice Or, recommended that the rules for subject matter jurisdiction be revised completely, making the magistrate courts a general court of first instance with district courts functioning almost exclusively as a court of appeal.[65] These recommendations have yet to be implemented, but have influenced court rulings on matters relating to subject matter jurisdiction, often justifying a deviation from the rules governing subject matter jurisdiction.[66] Other courts have felt compelled to follow existing law despite a general recognition that the

[64] *See* CA (HI) 4209/03 Kaadan v. Lahem, [2003] IsrDC 2003(1) 22536. .
[65] *See* REPORT OF THE INSPECTION COMMITTEE ON REGULAR COURTS 13–16, 132–45 (1997) (Isr.).
[66] *See Kaadan*, *supra* note 64..

rules have become dated.[67] The informal decline in subject matter jurisdiction has enhanced the unpredictability and expense associated with litigation, further hindering access to justice.

Similarly, courts have come to attach very little significance to personal jurisdiction, noting that the rules governing this area fail to fulfill their rationale—parties' convenience and the efficient allocation of cases among courts. The Israeli Supreme Court ruled that in a country as small as Israel, the site in which litigation takes place hardly presents an encumbrance on parties.[68] This is particularly true in recent years, as the road infrastructure and technological communication have made both travel and distant communication between clients and attorneys prevalent and effective. In addition, experience has shown that the rules governing personal jurisdiction are a poor tool for regulating the flow of lawsuits to the various courts.[69] The NGCS presents an excellent opportunity to change the framework altogether and shift the onus of determining the subject matter and personal jurisdiction in a case to the court system. Parties could be required to submit their claims to a virtual central address, describing the case and disclosing the relevant facts that establish subject matter and personal jurisdiction, but they would not be required to select the appropriate court. Rather, the court system could, much more effectively, perform this task, taking into account, among other considerations, the issue of effective case allocation among the various courts.[70] Such a change would reduce case load off courts and simplify procedures thereby enhancing access to justice.

A second limitation of the NGCS has to do with the fact that the NGCS does not cover the full range of issues that arise in connection with the impact of technology on court

[67] *See* CA 4991/03 Jameel v. Levi [2003] IsrSC 57(5) 556, 558-560.
[68] *See* CA 188/02 Isr. State Lottery v. Cohen [2002] IsrSC 57(4) 473, 478-479.
[69] *See id.*
[70] This idea draws on an article published in Israel in the 1970s in which it was argued that the responsibility for determining subject matter jurisdiction should lie with the court system. *See* Shalev Ginosar, *Delay of Proceedings*, 31 THE ATT'Y 29 (1978) (Isr.).

proceedings. This hinders efficiency and undercuts other procedural values. One area in which there is an opportunity to revise the law is the abolition of the best evidence rule, a rule that bars the admissibility of copied documents as evidence.[71] This rule is a product of the print era and is no longer a good means for ascertaining credibility in an era in which the terms copy and original have little significance when dealing with digital documents.[72] Despite attempts to amend the legal situation (including the establishment of a special committee and the drafting of a bill entitled "The Law to Amend the Evidence Ordinance [New Version] (Original and Copy as Evidence)—2006"[73]), the rule has endured. Leaving this rule in place hinders efficiency since the potential for digital archiving is not realized by parties wary of future litigation and the need to present originals, but also undercuts other procedural values such as fairness and equality (exceptions to the rule have been recognized in the case of businesses, benefiting repeat players)[74] and predictability (as some courts enforce the rules religiously while others have been more flexible).[75]

In addition, courts' reluctance to allow use of video conferencing has hindered efficiency in an increasingly global world. Video conferencing technology is available in civil proceedings

[71] The "best evidence rule" is an evidentiary rule derived from the common law. The rule requires the submission of the original document whenever a party wishes to submit a document to court as evidence of the content of such document (as opposed to its mere existence). The rule is premised on the notion that the original presents the most reliable source of information. Over the years, various exceptions were recognized to the rule allowing for the submission of copies under certain circumstances, such as when the original was destroyed or was held by a third party. To ensure consistency and appropriate standards, the rule and its exceptions were codified. *See* Evidence Ordinance [New Version], 5731-1971, 25 LSI 421, § 41 (1970-71) (Isr.); Testimony Regulations, 1969, KT 2470, 316 (Isr.).

[72] *See* Knesset Comm. on Constitution, Law and Justice Session of the 17th Knesset, Protocol (June 26, 2006), http://www.knesset.gov.il/protocols/data/html/huka/2006-06-26-01.html.

[73] Law to Amend the Evidence Ordinance [New Version] (Original and Copy as Evidence), 2006, HH, 232, 248 (Isr.).

[74] *See* The Evidence Ordinance [New Version], 1971 SH 229, §§ 35, 36, 39A, 39B, 41A, 41B.

[75] Most notably, two supreme court decisions significantly undermined the rule, but have not abolished it. In *Snir v. Israel*, Justice Heshin, the then Chief Justice held that the best evidence rule should be viewed as "preference rule" that allocates the appropriate weight to evidence and *not* as an admissibility rule that bars such evidence from being presented to the court. *See* CrimA 869/81 Snir v. Israel [1984] IsrSC 38(4) 169, 229-231. In a more recent decision, Justice Heshin's view is that nowadays the rule simply requires that a party provide a sufficient explanation as to why the original could not be produced. *See* CA 6205/98 Unger v. Ofer [2001] IsrSC 55(5) 71, 81–82.

in Israel, but is not widely used. Under Clause 13(a) to the Evidence Ordinance [New Version], 1971 ("Evidence Ordinance"),[76] a court may order that a witness's examination be conducted outside the jurisdiction of Israel in order to promote justice. Case law has interpreted this clause to encompass the authority to order that examination be conducted via videoconferencing,[77] but courts have mostly viewed this tool with suspicion, limiting its use to cases where parties requested videoconferencing in good faith, the testimony was relevant to the contested issues and the circumstances preventing the witness from traveling to Israel were substantial.[78] Health reasons and security threats have generally been viewed as sufficient grounds for permitting witness examination through videoconferencing,[79] while the mere inconvenience associated with travel has not.[80] Nevertheless, decisions are inconsistent across courts. More liberal decisions highlight the advancements in technology and the need to allow such testimony where the alternative is not hearing the testimony at all.[81] A somewhat more expansive approach to videoconferencing exists in the criminal setting. Just recently, the law was amended to allow for video-conferencing with a suspect in extension of pretrial detention in light of a several break outs by suspects and convicted felons.[82] This amendment was subject to critique by some and has resulted in an appeal to the high court of justice by the Bar Association, claiming that conducting the hearing via videoconferencing will interfere with a defendant's right to due process. Here also, the perseverance of the old legal arrangement undercuts efficiency.

[76] The Evidence Ordinance [New Version], 1971 SH 229.
[77] *See* CA 3005/02 Smithkline Beecham P.L.C. v. Unifarm Inc. [2002] IsrSC 56(6) 865, 868.
[78] *See id*.
[79] *See* Law to Amend the Evidence Ordinance [New Version] (Original and Copy as Evidence), 2006, HH, 232, 248 (Isr.); CA 6635/02 Superplast Ltd. v. Societe Nouvelle de Chimie Industrielle [2002] IsrSC 56(6) 739, 741; CC (Jer) 5194/03 Spier v. S.J.R Assocs., [2005] (Isr) 03(16) 54.
[80] *See* CC (Jer) 4052/05 Wells Fargo Bank Minn. Nat'l Ass'n v. Zimring, [2007] IsrDC 07(43) 600; CC (Hi) 8967/05 Daud v. Daud, [2005] IsrDC 05(21) 711.
[81] *See* CC (TA) 2337/02 Laidersdorff Harling v. Air Force Housing Ass'n, [2003] IsrDC 2003(4) 6834.; CC (TA) 186534/02 Blue Sea View Ltd. v. Orian, [2005] IsrDC 05(29) 318.
[82] Criminal Procedure Law (Enforcement Authorities – Arrests) (Video Conferencing – Temporary Order), 2007, S.H. 2079 (Isr.).

Examples of this include the need to cover travel expenses and missing work days in the civil setting, the need to fund escorts for suspects or convicted felons when brought to the court room to testify. Additionally, there is a fear that open embracement of the new technologies may end up undercutting fairness and justice if judges' impressions of witnesses are incomplete or otherwise tainted.

The above limitations demonstrate the difficulty in grasping the full range of issues technology has an impact on, even from the relatively narrow efficiency prism. Another and perhaps more significant limitation for our purposes, is the NGCS's focus on efficiency. As mentioned above, the chief contribution of the NGCS—creating the infrastructure for learning and improvement—is currently viewed through an efficiency lens, while the potential for learning in other domains is generally neglected. What would learning look like under a multidimensional learning paradigm? In the next section, I analyze in more detail some of the ways in which technology can enhance various procedural values under this alternative paradigm.

IV. PROMOTING A MULTIDIMENSIONAL LEARNING PARADIGM: LESSONS OF THE NGCS ON PROCEDURAL VALUES AND TECHNOLOGY

A. General: On Learning and Procedural Values

A learning dispute resolution system is one that monitors its performances against predetermined goals and constantly strives to improve results as well as refine the original goals set, according to information gathered and analyzed and lessons learned.[83] Therefore, for learning to take place, there must be documentation of performance and results (ideally in real time) as well as an ability to analyze such data in a way that produces meaningful information.

[83] *See supra* note 25 and accompanying text.

To that end, caretakers of information need to monitor performance and results as compared to the goals set, generating lessons that allow the system to continuously improve.

In the case of courts, the goals are to bring about fair and effective resolutions to disputes. To that end, the procedures that generate substantive outcomes must promote the same basic values that other dispute resolution systems promote, which include: fairness and equality, access to justice, efficiency, stability and predictability, uncovering the truth, participation, and legitimacy.[84] Therefore, in a learning dispute resolution system we can examine the degree to which procedural rules do in fact promote these values and the degree to which these values actually lead to fair and effective outcomes. A learning court system would therefore document broadly judicial interventions and their outcomes, nominate caretakers of information and implement revisions (such as amendments to court procedures), in light of the information gathered and analyzed. In this process, technology can play a pivotal role.

The introduction of new technologies impacts learning on procedural values in dispute resolution in two important ways. First, the transformation of procedural tasks formerly performed manually or on paper into a digital format upsets the particular mix of procedural values promoted under the previous arrangement. The direction of such impact may vary, as the new technology and the manner in which it is incorporated into the system are not value free.[85] By introducing online filing, for example, we naturally enhance efficiency. However, depending on the manner in which we choose to do so (requiring access through smart cards, making the system voluntary/compulsory, charging an extra fee for digital filing, creating free access for clinics, etc.) we could detract from, strengthen or sustain the level of fairness and equality and the degree of access to justice in the system.

[84] *See* HCJ 3914/92 Lev v. Tel Aviv Religious Tribunal [1994] IsrSC 48(2) 491, 498–503.
[85] *See* Nissenbaum, *supra* note 6, at lxvi–lxx.

Second, digital technologies not only impact the value mix, but also facilitate the learning process and the improvement of the court system as a whole in ways that were not possible in the past. Through detailed documentation of the chain of actions taken by all involved in the court case throughout the proceedings and digital data analysis, lessons can be drawn on the performance of courts (as other dispute resolution institutions) and the related ramifications for different groups of disputants, across various types of cases and procedures used. Such a contextualized comparison can generate insights that extend beyond efficiency and ask more interesting questions regarding the degree of fairness of various processes, taking into account the particulars of parties (are they represented, do they belong to a minority group, did they receive a waiver of court fees), case type (housing dispute, small claims, wrongful dismissal) and the procedure employed (fast track procedures, judicial compromise). Because the information already exists digitally, the process of analysis and monitoring can be performed instantaneously and practically at no cost to the system (beyond the initial cost of implementing the digitization system).

In the next few sections, I explore the first dimension of the impact of digital technologies—their impact on procedural values—as it is evidenced in the NGCS case study. I will conclude this section with some thoughts on the ways in which dispute resolution systems like the NGCS could adopt a multidimensional learning paradigm, allowing them to monitor the values promoted through their system.

B. Procedural Values

1. Efficiency

As noted throughout this paper, a value that can be dramatically enhanced through technology is that of efficiency. Efficiency is promoted by digital technologies on many levels.

Court proceedings become more efficient for the parties involved, for their attorneys, for the individual judges and for the civil justice system as a whole. From the description of the NGCS above, it is clear that the possibility for e-filing of complaints and motions and for online service of process will reduce costs and allow for efficient storing of data. Increased automation is efficient in that it both ensures that tasks are performed (and quickly, at that) and frees up time for all involved to perform other, essential assignments. In addition, the need to commit to a timeline for actions (a feature of the NGCS) makes court proceedings more efficient. Moreover, the possibility for accessing files automatically, from the office and from home, serves to shorten proceedings. Finally, judges' ability to view all materials digitally during the trial and add private comments shortens the time needed for writing a decision by memorializing the judge's impressions in real time.

Despite these developments, the potential for added efficiency through technology in courts in Israel is far from realized.[86] The slow pace in which changes are introduced into evidentiary rules tailored to the print era, has dramatically reduced efficiency. Because of the best evidence rule, parties are forced to keep a hold of original documents rather than enjoy the efficiencies of digital archiving. Similarly, courts' suspicion towards videoconferencing has restricted the use of such technology to extreme cases, thereby increasing costs for witnesses and the total cost of litigation. Since Israel follows the British rule (the losing party bears the litigation costs),[87] this may deter plaintiffs of few means from accessing the legal system, a point further developed in the next section.

[86] *See supra* Part III.B.2.
[87] *See* URI GOREN, CIVIL PROCEDURE ISSUES § 695 (9th ed. 2007).

2. Access to Justice

As court proceedings become more efficient, access to justice increases. Therefore, the enhanced efficiency offered through technology is expected to promote access to justice. If court proceedings are consummated over a shorter period of time, more plaintiffs will have access to the courts. If trials become shorter and more efficient, potential plaintiffs who are currently ineligible for waiver of fees and appointed counsel but nevertheless cannot afford the costs associated with prolonged litigation, will be able to access the court system.

In terms of the digital divide and the ability of poor plaintiffs to afford online filing and enjoy the advantages of the NGCS, several important points should be noted. First, since the system is voluntary and the option to continue and use paper filing is open, there is no discrimination against those who cannot afford computer and internet access. At the same time, those who continue to rely on paper documents will benefit from the added efficiency gained through the shift of a critical mass of attorneys to digital filing and the court system's adoption of the new case management system. Second, by making the new system accessible to legal clinics and allowing web access to the system from community centers, the system is actively assisting pro se litigants and those representing disadvantaged clients.

Thus, in terms of access to justice, the NGCS presents a step in the right direction, certainly in an era in which the right of access to courts has received constitutional status in Israel.[88] Nevertheless, as stated in the above section, for technology's potential for procedural efficiency to be realized, additional changes need to be made.

[88] *See* CA 733/95 Arpel Aluminum v. Klil Indus. Ltd [1997] IsrSC 51(3) 577.

3. Fairness and Equality

Beyond access to the system, the question arises to what degree the new technologies impact the fairness and equality of court proceedings with respect to different types of parties and attorneys. As stated above, the NGCS is a voluntary system in that no attorney or pro se litigant is forced to use it. In addition, the impact of computerization and the related added efficiency is expected to benefit all participants, even those who choose not to use the new means for e-filing of documents. Therefore, it seems that these changes are fair and can be expected to promote equality in that freeing some of the caseload off courts will impact poor litigants more dramatically, promoting equality in a broad sense.

In addition, the loosening of evidentiary constraints can be expected to level somewhat the playing field between different types of litigants and attorneys. It is typically individuals (as opposed to corporations) and their attorneys who are forced to rely on copies of documents that are in the possession of their opponents and who lack the manpower to sort through endless piles of documents in search of a critical piece of evidence. Therefore, the liberalization of the best evidence rule and the rule against hearsay as well as developments in the area of electronic discovery can be expected to enhance the fairness of civil proceedings. However, the limited effect technologies have had in this milieu—namely the adoption of the business records exception—has benefited large-scale, commercial disputants in an unbalanced manner.[89] It seems that a looser application, perhaps even abolishment, of these evidentiary rules is in order in the digital communications era and in light of the fact that Israeli evidence law has shifted in recent decades from an admissibility paradigm to one based on the assignment of weight.[90] However, with this liberalization comes a greater risk for admitting unreliable evidence in light

[89] *See supra* note 74 and accompanying text.
[90] *See* Menachem Mautner, *The Decline of Formalism and the Rise of Value in Israeli Law*, 17 IUNEY MISHPAT 503 (1993) (Isr.); *see also* JACOB KEDMI, 2 ON THE EVIDENCE § 590 (2003).

of the ease with which digital information can be manipulated, a risk that may impact another important procedural value—the uncovering of the truth.

4. Truth

Technology's impact on the process of determining the "truth" through the litigation process is complex. On the one hand, the loosening of evidentiary rules is resulting in the admission of information that would have been left out in the past. This development could mean that courts now have a fuller perspective, better allowing them to ascertain the "truth." On the other hand, the ease with which digital information can be seamlessly manipulated raises the concern that the broad admissibility of such evidence would serve to thwart the evidentiary picture before the court and lead to incorrect decisions. Since the lowering of evidentiary bars seems inescapable, more thought needs to be devoted to the development of effective guidelines that would aid judges in discerning authentic digital information from forgeries and in assigning the appropriate weight to such evidence.

A similar concern arises with respect to the evaluation of testimony via videoconferencing. Barring the use of such technology may mean that relevant testimony will not be before the court, but allowing it may lead to a wrongful assignment of weight to evidence because the judge was unable to get an accurate, close up impression of the witness. Again, the trend in Israel is towards broad admissibility of evidence. Therefore, it seems inconsistent to bar videoconferencing altogether based on this concern. However, it should lead to close scrutiny of the technology used and the ongoing modernization of videoconferencing technology relied on by the courts.

One way in which technology in general, and the NGCS in particular, advance truth seeking, is through judges' ability to search through relevant materials and add private comments

into the protocol in real time. This feature ensures that judges' impressions are documented when they are fresh, raising the likelihood of her reaching accurate judgments at the end of the trial.

Finally, with increased digital documentation, traditional limits on intervention by appeal courts may be loosened and even removed, bringing the Israeli system closer to the civil law systems.[91] A move in this direction has already taken place with the increased reliance on written evidence through the substitution of direct examination of witnesses with affidavits.[92] Still, the appeal court in Israel does not review a case *de novo* and generally refrains from revisiting a lower court's factual findings. However, if court proceedings are to be documented, it seems that the advantage lower courts have over higher instances in determining witness credibility will be lost. Broader review by appeal courts (made possible by the increased effectiveness of the system in the era of the NGCS) would promote accurate decisions and, as further explained below, enhance predictability, accountability and legitimacy.

5. Participation

A related value, which impacts the legitimacy of the judicial system, is participation. Research in the field of procedural justice has underscored the significance of participation for certain litigants, often bypassing the importance of the substantive outcome of litigation.[93] The introduction of technology into court proceedings could contribute to greater involvement, if not participation, by parties themselves. The design of the NGCS does not seem to realize this potential, as access, in most cases, is restricted to attorneys possessing a smart card and the

[91] *See, e.g.*, John H. Langbein, *The German Advantage in Civil Procedure*, 52 U. CHI. L. REV. 823, 841–49 (1985).
[92] *See* Amendment of Civil Procedure Regulations of 1984, 1991, 5336 KT, 624 (Isr.) (adding §§ 143(5) and 168).
[93] *See* John M. Conley & William M. O'Barr, *Hearing the Hidden Agenda: The Ethnographic Investigation of Procedure*, 51 LAW & CONTEMP. PROBS. 181, 181-97 (1998); William M. O'Barr & John M. Conley, *Litigant Satisfaction Versus Legal Adequacy in Small Claims Court Narratives*, 19 LAW & SOC'Y REV. 661, 663 (1985).

system does not permit parties (or victims in the criminal context) to follow closely, in real time, the motions filed and protocols transcribed (except for the decisions that are made publicly available online).[94]

6. Predictability and Stability

Civil procedure in Israel has undergone dramatic changes that can be traced back to the 1980s and 1990s. These changes include the shift from rules to standards (mainly the adoption of the good faith standard) and the growing impact of Basic Laws (the Israeli equivalent of a Constitution) on civil procedure.[95] These changes have underscored the importance of procedure and procedural values, strengthened access to courts and curbed opportunistic party behavior. At the same time, the shift towards standards has resulted in broader judicial discretion and consequently reduced predictability and stability in procedural arrangements.

The introduction of technology into civil proceedings might ameliorate some of the difficulties associated with broad judicial discretion by substituting discretion with automated processes in some cases and through monitoring over judicial decisions in which discretion was employed, as further explained in the following section.

7. Legitimacy

One of the central values in any procedural system is that of legitimacy. Without public faith in the legal system, the system cannot survive. Procedural arrangements play a central role in determining the level of legitimacy a judicial system enjoys. In the Israeli context, the impact of procedure on legitimacy has been complex. As explained above, legal proceedings in Israel have undergone dramatic changes in the late 20th century, which, despite having a major positive

[94] *See* 16th Knesset Comm. on Constitution Protocol, *supra* note 50**.**
[95] *See* Dudi Schwartz, *Devlopmental Tendencies in the Civil Procedure*, 36 Y.B. ISRAELI LAW 417, 451-479 (2006).

impact on individual rights, have also resulted in decreased predictability and, as a result, in a sharp decline in the level of public faith in the court system.

The introduction of technology into civil proceedings, by enhancing consistency, improving predictability and most importantly by allowing for effective means of quality control and monitoring over judicial decision-making, can ameliorate some of the difficulties associated with broad judicial discretion in two ways. First, digitization and automatic processes can curb discretion and enhance consistency across cases and judges (conditions under which certain types of motions should be granted, alimony awarded, etc.).

Second, where discretion is employed, the documentation that comes with digital communication—the "digital trail"—allows for greater transparency over judicial decisions and more supervision, either formally through appeal, or informally through the media and the general public. Such documentation and monitoring, in particular where detailed mapping of procedures is available, can expose problematic trends in the exercise of discretion by a particular judge, group of judges, or other decision maker.

This will not only increase the efficiency of the system, but will also heighten the legitimacy of the backlogged Israeli court system. These features are made possible by the NGCS, but could be maximized by further steps such as documentation of court proceedings[96] and greater transparency of electronic files.[97]

[96] Another area in which technology has impacted court proceedings is in the electronic coverage of proceedings. In the United States, for example, such coverage has existed for several decades, but the potential for its expansion has grown with the drop in costs of documenting the proceedings and transmitting them to a broad audience via the internet. Unlike the United States, electronic coverage of court proceedings in Israel is forbidden, unless permitted by a court. *See* Courts Law (Consolidated Version), 1984, S.H. 198, § 70(b) (Isr.). Such special permission has been granted only on rare occasions, all of which were criminal proceedings of special significance to the Israeli public (such as the Dimyaniuk trial). In 2000, a proposed bill was passed under which electronic coverage was to be allowed in all court cases conducted in open court. *See id.* § 68. Following the bill, a committe was established by the Minister of Justice to examine the desirability of electronic coverage of court proceedings in light of concerns regarding parties' right to due process and to privacy. The committee, in its 2004 report, recommended that a pilot be conducted in the Israeli Supreme Court in its capacity as High Court of Justice. *See* REPORT OF THE INSPECTION

C. Applying a Multidimensional Learning Paradigm

In what way, then, could a system like the NGCS apply a multidimensional learning paradigm in order to advance a wide array of values that extend beyond efficiency? The system provides for documentation of a broad range of data (much of it in real time) and provides a convenient platform for analyzing such information. Two of the elements of learning dispute resolution systems seem to be missing—designated caretakers of information whose mandate for monitoring court performance and analyzing data gathered is broader than the efficiency paradigm. An example of the type of analysis conducted under such a broad mandate would be a study of the way judges' decision-making and conduct through the NGCS. Instead of focusing solely on an analysis of judges' delays to generate learning on how to schedule hearings more effectively, additional patterns related to judicial decision-making could be reviewed. One could examine whether a statistically significant difference exists in judicial decisions made with respect to minorities, women and other suspect groups. In other cases, one could compare the performance of civil and criminal judges with respect to the same type of decision, such as extension of arrests.[98] These types of examinations could generate deep learning on the fairness of the system and provide the court system with guidance on how to generate increased predictability and equality in its decisions, a step that would necessarily enhance the legitimacy of the system as well.

Another way in which systems like the NGCS could apply a multidimensional learning paradigm is by using the learning capacity to refine criteria for ADR referral and to

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COMMITTEE ON THE OPENING OF ISRAELI COURTS TO ELECTRONIC MEDIA COVERAGE (2004), http://elyon1.court.gov.il//heb/doch%20electroni.pdf (last visited Jan. 22, 2008). These recommendations have not yet been implemented and the status quo continues to be one in which there is no electronic coverage of court proceedings.

[97] *See supra* note 57 and accompanying text.

[98] This topic is the subject of a research project conducted by my colleague Oren Gazal-Ayal and Raanan Solitziano Keynan.

institutionalize such criteria. Today, referral to ADR in Israel is performed by the CADs and/or the presiding judge. Despite some general guidelines on considerations for referral of cases to ADR, the reality is one in which there is wholesale referral to mediation and some referral to arbitration, with no effective criteria to distinguish among cases, appropriate ADR processes and suitable third parties (considering areas of expertise, conflicts, linguistic capabilities, and the like). By use of the elaborate mapping of procedures in the NGCS, a detailed analysis could be performed of the different types of cases referred to various ADR processes, the outcome, types of parties involved and their respective levels of satisfaction. Again, the driving force for learning would not be solely the desire to make referrals necessarily more efficient (in that a maximum number of court files are closed), but, no less important, an attempt to ensure that such criteria promotes fairness, party satisfaction, and engenders predictability and legitimacy.

V. CONCLUSION

The law, like other social institutions, is undergoing dramatic changes due to the introduction of new technologies, the effects of which are far from settled. One arena, in which these changes are evident, is that of court computerization programs. A prominent example of one such system is that of the NGCS. As explained above, the project is exceptionally advanced in several respects. First, the system is based on a full mapping of the different court proceedings, resulting in a detailed list of all of the necessary tasks and related task-performers. This is efficient in that it substitutes several manual tasks with automated ones, creates a time frame for action for all tasks and prevents duplication of work through clear predetermined task allocation. Moreover, this feature enhances accountability by allocating responsibility for the performance of tasks and the effective advancement of court proceedings.

Second, the system affords judges a convenient and efficient working tool, which is easily accessible from home. This efficient work environment enjoys a high level of security by requiring both a smart card and password for access to the system and by documenting all actions taken with respect to an electronic file thereby exposing attempts to tamper with the integrity of the file. No computer system is ever fail proof, but in many respects, the system is more secure than the paper-based court, where documents are easily removed and have indeed frequently been misplaced.

Finally, the system performs advanced case management by allowing for automated case assignment and *ex-post* learning of the effectiveness of policies chosen. Learning is made possible by the nuanced typology of cases and the broad digital documentation of information on cases (all pleadings, motions, protocols, affidavits, hearings, etc.). The combination of the task assignment feature and the digital documentation of the performance (or lack thereof) of all tasks allows for learning, improvement and change.

The driving force for these changes has been the quest for added efficiency. The efficiency perspective, however, is much too narrow. Other important respects in which technology will shape procedural values have to do with its promise for greater accountability, fairness and equality. This is now possible because of the ways in which technology curbs discretion, documents decision-making and uncovers inaction, inappropriate conduct, and systematic problems. Such documentation, coupled with systematic review of performance, could drive the judicial system to continuously improve. These features are provided by the NGCS, but their significance is not appreciated in a system driven by the desire to reduce its caseload. Furthermore, the capacity for multidimensional learning could be maximized by additional changes in court procedures, such as electronic documentation and greater

transparency of electronic files. These changes would allow for broader intervention by appeal courts and a more informed public discourse, which, in turn, could strengthen the judiciary's legitimacy.

The Israeli case study is not unique in its focus on efficiency. It is part of a broader tendency to view procedure as technical, peripheral and as a tool for enhancing efficiency, and technology as a means for maximizing the effectiveness of dispute resolution systems. The NGCS is noteworthy in that it also demonstrates the potential of technology to transform dispute resolution systems into learning systems. This potential has not been fully realized by the designers of the NGCS, but the paradigm shift suggested above, could achieve that end. A significant by-product of such a development could be to restore procedure to the high road from which it has been diverted in the last decades.