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**The Journal of Robotics,  
Artificial Intelligence & Law**

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# Enhancing Contract Playbooks with Interactive Intelligence—Part I

Marc Lauritsen\*

*Contract playbooks are rich sources of knowledge and guidance. Yet, even when digitally delivered, in few organizations are playbooks interactive or “smart.” This article explores two technological fronts upon which to change that situation: one (document automation) that is mostly well established and another (preference management) that is relatively novel. This first part of a two-part article summarizes current ways in which technology is being applied to contracting processes, describes playbooks and their limitations, reviews how well-established document automation techniques can be applied to address some of those limitations and takes up ways in which contracting is a process of choice management. The second part of the article, which will appear in an upcoming issue of The Journal of Robotics, Artificial Intelligence & Law, describes a system and method for managing choices, applies that method to contracting, and contains concluding thoughts.*

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Playbooks are widely used by lawyers and other professionals to guide the drafting and negotiation of contracts. They embody preferred terms and texts, including acceptable fallback alternatives and recommended processes for settling business deals. They are rich sources of knowledge and guidance. Yet, even when digitally delivered, in few organizations are playbooks interactive or “smart.” This article explores two technological fronts upon which to change that situation: one (document automation) that is mostly well established and another (preference management) that is relatively novel.<sup>1</sup>

## Dead C Scrolls

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A popular book in the 1970s among law professors and students was Grant Gilmore’s *Death of Contract*.<sup>2</sup> Gilmore was referring to the field of law cultivated by generations of professors and judges, a highly artificial one with veins of contradiction and incoherence.

The academic field, of course, still thrives, and contracts themselves have hardly died. In most of our business, professional, and personal lives they are more numerous and problematic than ever. There is a wealth of scholarship on all aspects of deal making and the economics of contracting.<sup>3</sup> Contracts and their negotiation have been the subject of academic research in artificial intelligence for decades.<sup>4</sup> Empirical approaches are gaining steam.<sup>5</sup> Commercial technologies relevant to contracting are flourishing.<sup>6</sup> Fascinating innovations are being explored in “design jams”<sup>7</sup> and research labs. Plain language and other forms of simplification are being championed.<sup>8</sup> Tools and approaches that emphasize new modes of visualization and text layout are gaining attention.<sup>9</sup> Scholars are talking about contracts as computable objects.<sup>10</sup>

Yet many regard our systems of contracting as broken. Contracts are often just bags of words, with uncharted land mines, not consulted until things go wrong. Even beautifully written and painstakingly designed documents that exemplify the best practices of such contract artisans as Ken Adams<sup>11</sup> often fail to respond to the business needs of organizations.

A report by the International Association for Contract and Commercial Management on *The Future of Contracting*<sup>12</sup> sounded many distressing themes:

- Contracting is often a source of complexity, not an antidote to it.
- Contracts are often “dead” instruments, when we need living ones. They are not designed to accommodate changing circumstances.
- Contracts are viewed as documents, rather than relational frameworks. They are opaque and inaccessible.
- Contract formation is often a wasteful and disruptive process, mired in bad habits rather than driven by quality and innovation.
- Contract management systems and processes often focus on individual transactions rather than portfolios of rights, obligations, and commitments.

In short, our systems of contracting are scandalously suboptimal.

We need systems that not only help us settle contracts that are acceptable, but that are optimal for the parties. We need systems that not only help us ascertain when contracts are being followed,

but when they need to be changed. Not only that the parties are doing what *they* are supposed to be doing, but that the contract is doing what *it* is supposed to be doing. We need systems that are accessible, transparent, agile, and aligned with genuine business strategy.

Part of the solution is to do a better job of drafting and negotiating contracts in the first place. Smarter playbooks can help.

This two-part article is organized as follows. Following this introduction, the article summarizes current ways in which technology is being applied to contracting processes, describes playbooks and their limitations, reviews how well-established document automation techniques can be applied to address some of those limitations, and takes up ways in which contracting is a process of choice management. The second part of the article, which will appear in an upcoming issue of *The Journal of Robotics, Artificial Intelligence & Law*, describes a system and method for managing choices, applies that method to contracting, and contains concluding thoughts.

## Technologies

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A contract is a complex communicative act, conventionally accomplished through the medium of words. Both the processes and results of contracting naturally lend themselves to digital treatment, hence modern information technologies have been widely applied. Here are some features of the current landscape.

## Contract Preparation Resources

Individuals and organizations that prepare contracts turn to a variety of sources, including organizational precedents, form books, physical form suppliers, packaged software, online form sites,<sup>13</sup> free document repositories,<sup>14</sup> legal document technicians, groups like the Association of Corporate Counsel,<sup>15</sup> corporate law departments, conventional private law practices, and virtual law practices.<sup>16</sup>

An increasingly popular—and controversial—category of service providers includes those that generate customer-specific documents over the Internet, using interactive software, without purporting to be engaged in the practice of law. These include



commercial services,<sup>17</sup> nonprofit sites,<sup>18</sup> and free services by law firms.<sup>19</sup>

Shake<sup>20</sup> is a smartphone app targeted at freelancers and small businesses that helps you “create, sign and send legally binding agreements in seconds.”

## Tools for Wordsmiths

In the good old days, a basic piece of word processing software sufficed to handle most document production needs. You typed or pasted the words you wanted, manipulated and formatted them as desired, and shared the results with others via print or a saved file. Tools for redlining versions and adding comments were available, initially as add-ins, then as standard features. Adventurous users leveraged macros and merge functions to automate text preparation, and some migrated to specialized document assembly packages. Templates, clause libraries, and models sprouted up on the textual landscape.

Document management soon emerged as a must-have for most law offices. Documents were tagged, tracked, versioned, and access controlled. Our ability to search them by parameter or content grew almost as fast as the number of hits from a given search. More advanced tools for intelligently locating and abstracting documents ensued. Smart cite-checking and proofreading applications appeared. Extranets, portals, and dealrooms began to supplement email as vehicles for document sharing.

In short, the world of document-related technologies has been exploding. One needs to know a lot to operate effectively in that world. Word processors, document managers, metadata scrubbers, and similar products are not enough anymore. Workers want visibility and control of their document life cycles. Managers are looking for better ways to establish and enforce policies. Tools like Workshare Professional<sup>21</sup> can help us compare, review, and protect our documents in safe, efficient, and compliant ways.

## Contract Life Cycle Management

There are dozens of specialized solutions for managing contracts once they have been drafted and executed. Examples include

Ariba, Emptoris, and SciQuest (formerly Upside).<sup>22</sup> Such solutions can be foundational for most organizations. They enable more effective management of the rights, obligations, deadlines, and other aspects of contract portfolios, with special emphasis on processes downstream of initial drafting and execution.

## Document Assembly

Advanced document assembly software has long been used in law offices. In brief, that technology enables someone to program “what words go where” under various sets of answers, gathered in interactive questionnaires that change as users work through them, with context-specific guidance. Applications can embody rule sets of arbitrary size and complexity, and generate highly tailored and precisely styled documents.

The industry is mature. Vendors include:

- ContractExpress;
- Exari;
- HotDocs;
- Leaflet;
- Pathagoras;
- Rapidocs;
- TheFormTool;
- Turner;
- WordFusion; and
- XpressDox.<sup>23</sup>

Many of the contract life cycle management solution vendors offer basic document assembly features.

A promising use of document assembly software in connection with collaborative tools like Workshare is to treat it as a fellow drafter in a community of draftspersons. A (human) lawyer who acts as lead drafter naturally will want to assure him-/herself that changes made by others (whether carbon or silicon based) do not negatively affect the intended meanings and legal integrity of a document.

Lauritsen and Gordon<sup>24</sup> provide an entry into the Artificial Intelligence and Law literature around document modeling.

## Document Disassembly

You don't always get to generate the first draft of a contract, and may have to "disassemble" one proposed by the other side.

When you need to review and analyze incoming contract drafts, or glean intelligence from exemplars in an unstructured repository, other technologies come into play. There are at least two kinds on which major strides are being made.

One form of disassembly is *automated abstraction*. Contract Intelligence from Brightleaf,<sup>25</sup> for instance, is a service that delivers a structured database of all legal, financial, and operational attributes in a collection of contracts, along with a set of query, reporting, and analysis tools for working with that data. DiligenceEngine<sup>26</sup> "reads agreements for user-specified provisions (term, assignment, change of control, and many more), puts its findings into summary charts, and includes workflow tools to help users refine results." Recommind<sup>27</sup> specializes in predictive coding for use in document review and e-discovery.

Another form can be thought of as *automated template generation*. Here an existing repository (in-house or online) is mined for intelligence about contract *provisions* more so than terms. Exemplify<sup>28</sup> employs computational linguistics to identify the market standard language in the SEC Edgar database. KMstandards<sup>29</sup> (formerly known as KIAAC), developed by veteran lawyer and legal technologist Kingsley Martin, provides tools through which an organization can examine a collection of contracts of a given type—say, 500 license agreements—and construct a global table of contents that shows how often particular terms are used, and for each, the range of variations that are found, arrayed in a spectrum of typicality. Once that template is constructed, it can be tweaked to embody best practices, and then used as a reference standard against which to benchmark proposed new contracts.

## Structure and Standardization

KMstandards also offers Contract Standards,<sup>30</sup> which, via a "Unified Contract Structure," provides an organizing framework for all bilateral exchange agreements—basically a taxonomy of frequently encountered clauses.

One of the most radical current proposals for innovation in contracting processes comes from Jim Hazard, an entrepreneur

with long experience as a transactional lawyer at large firms in the United States and Europe. His CommonAccord<sup>31</sup> system centers around a data model in which contracts are represented as hierarchical and navigable data structures, rather than flat files. He takes a “semantic web approach to legal docs.”

One of Hazard’s slogans is “Make lists and outlines, not documents!” He believes that lawyers (and others) “took a wrong turn” when they adopted word processing software to create and manage contracts.

By taking a “source code” approach to contracts (vs. the current “compiled code” one), Hazard resonates strongly with the contract-as-software theme articulated by George Triantis and others.<sup>32</sup> Getting lawyers and business professionals to think like software engineers will likely prove challenging, so intuitive interfaces, supportive communities of practitioners, and adjustment time will be critical if the CommonAccord agenda is to succeed.

Model contracts can be extremely useful,<sup>33</sup> but painful to create and maintain. Automated analytical processes like KMstandard’s and crowdsourced efforts like CommonAccord can ease that pain.

Against this background of technology, the actual tools and methods used in most organizations for settling contracts in the first place are quite primitive. Most drafting and negotiation work occurs via email and paper and proceeds outside any structured environment.

## Playbooks

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Organizations that enter into a lot of contracts typically codify guidelines and standards. One increasingly common approach is to maintain a contracting “playbook,” analogous to the playbooks of schemes and strategies used in sports and to conduct business and political campaigns. A playbook contains sample and preferred versions of common provisions, acceptable fallbacks, explanations, checklists, tips, approvals needed for exceptions, and other kinds of guidance on the substance and process of contract negotiation. By standardizing terms and circumstances under which variations will be tolerated, organizations can better comply with applicable laws and policies, achieve consistency, and manage risk. Playbooks can be used both in training and in ongoing operations.

You can think of playbooks as encoding meta-obligations and meta-permissions, that is organizational rules and policies that require or permit certain contractual terms that may bind the organization to do or forebear from doing certain things, or permit it to do things. They will generally memorialize both general parameters and the kinds of circumstances that may warrant departure from them.

Playbooks are sometimes deployed as physical manuals, but more commonly delivered via an intranet, SharePoint repository, or other networked collection. Their content is generally authored and maintained by dedicated personnel, although some organizations facilitate collaborative editing and distribute the tasks of interactive annotation, classification, characterization, assessment, commentary, approval, and labeling via defined roles and permissions.

Playbooks are analogous to the standard precedents, model documents, and annotated forms often found in law office settings. Annotations are provided to explain the history, meaning, uses, or purposes of the material in whole or in part. They may profile the likely preferences of frequently encountered counterparties (so that drafters do not unknowingly propose terms that the other side will reject or resent).

In contract negotiation, a “battle of the forms” may ensue when the parties to a contract have strong but incompatible preferences as to the elements or wording of particular provisions. Since even the most powerful organizations occasionally have to make concessions, arrangements may be specified for determining when to accept deviations and what escalations are necessary to secure the required approvals.

Playbooks express drafting norms that personnel can responsibly follow. They delineate safe contractual territory and good practices. They communicate organizational know-how and wisdom. Their quality and consolidatedness (the degree to which they comprehensively integrate multiple variations and considerations) are among the primary metrics by which the quality of a playbook can be judged.

You can cram a lot of knowledge into a playbook, but that knowledge is of limited utility if it is not dynamic and interactive. Ironically, playbooks do not do much of a job of monitoring the state of play in a negotiation. Let’s consider two ways in which the knowledge embodied in playbooks can be made more dynamic and responsive.

## Automating Texts

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Document assembly tools of the sort mentioned earlier can enable menu- or questionnaire-driven consumption of playbook content. In other words, rather than having to read and follow instructions, and copy and paste verbiage, users can enjoy automated assembly of materials based on specifications they enter.

Implemented as intelligent templates, playbooks can:

- present interactive features like questionnaires that gather data and decisions to populate variable fields and resolve alternatives;
- easily vary questions, annotations, results, and other aspects of the user experience based on the user's role and authority (for instance, certain users might only receive non-editable PDFs rather than editable documents);
- enable users to work inside of drafts that contain annotations, which are deleted when a version is to be reviewed by an outside party or is ready for execution;
- condition language and other recommendations on the involvement of a particular customer or partner.

Automated templates can be much more effective for both managers (to express alternative wordings) and users (to get the wording they want by answering questions rather than wrangling with variations in a word processor or text editor.)

From a contract management perspective, document assembly offers major benefits:

- Perfectly formatted and substantively complete contracts can be generated almost instantaneously once terms have been entered.
- Standardized and pre-approved language can be used for most circumstances, reducing risk and improving compliance.
- Users do not have to manually enter contract terms or extract them with post-production processes in order to populate databases; that can happen automatically. Rich metadata can be embedded right within the contract itself for downstream management and analysis.

- Systems can notice when a user has omitted something important or included something that is ill advised.

Yet there are also ways in which conventional document assembly approaches are not well suited for contexts involving multiple drafts and significant negotiation. While some products support a basic level of “round tripping,” where automated reassembly of a document can be invoked against updated drafts even after their texts have been custom edited, none yet do that very satisfactorily. And while most products enable integrations with document management systems and databases within which playbook-like material may be housed, changes in policies and procedures in the latter environments generally have to be hand-coded back in the document automation environment.

A deeper shortcoming of document automation as the sole or primary technology in support of contract drafting and negotiation, however, is its lack of natural structures for managing the clashes of values and evaluative perspectives that are central to those business processes.

## Contracts as Choices

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Whether bitterly fought or nonchalantly accepted, a contract is a set of ways that parties have *chosen* to interact with each other. (Even contracts of adhesion are generally treated *as if* they have been voluntarily entered into.) As congealed choices, contracts both enable and constrain further choices. In that sense, contract management is a form of choice management.

To reach a contract in a given context is to reach agreement about whether and how to handle a collection of issues, most of which involve both an abstract understanding (sometimes codified in a term sheet) and a set of specific words. The written contract is largely just a linear rendering of textual modules that codify those issue dispositions, the order and structure of which have little significance other than for readability, convention observance, and perceived craftsmanship.

Contracts are composite documents, made up of sections, provisions, and other elements. They are hierarchical collections of quasi-autonomous chunks.

Characteristic of contracts—more so than of unilateral instruments like wills, trusts, and deeds—is the ubiquitous presence of alternative ways to address and “paper” each of many issues, both in the process of drafting and the process of negotiation. Dueling alternatives are proffered and considered.

Both the entire contract and most of its parts have *subjects* (what is it *about*?) and *purposes* (what is it *for*?). Subjects include things like the rights, obligations, and representations of various parties, and the circumstances of a transaction. Purposes include things like allocating risk, establishing rights and obligations, protecting intellectual property, and memorializing terms.

Negotiation, then, is a form of option management. In order to negotiate responsibly, you have to have at least a general sense of which issues you care the most about. In most business contexts, how much you care about things depends on their relative business value impact, or more coarsely, upon your answer to the question “how much would I pay to have this issue resolved my way?”

Lawyers know that the life of the law is not logic, but experience. Legal technologists should recognize that contracts also are not matters of logic, but the encodings of power relationships, hopes, dreams, fears, and other “animal spirits.” Choices of terms and provisions are driven by strategic considerations in light of circumstances. What is unacceptable in most circumstances may be tolerable in relation to a particular party or opportunity.

By definition, parties are in disagreement (or at least non-agreement) unless and until they settle and execute a contract. Deal making thus is analogous to dispute resolution. There are asymmetries in both power and knowledge.

Few present technologies pay attention to what’s going on *behind* the term sheets and proposed verbiage. Our current practices and technologies do not provide sufficient clarity about which choices have been or are being made, by whom, and why. A majority of businesses evidently make use of *no* special tools for purposes of negotiating contracts.

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The second part of this article, which will appear in an upcoming issue of *The Journal of Robotics, Artificial Intelligence & Law*, will take a look at a tool for decision support that has promising applicability to contracting.



## Notes

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1. This is based in part on a paper prepared for the Roundtable on Contract Automation and Legal Practice held at Stanford Law School, December 13, 2013.

2. Gilmore, G. *The Death of Contract* (1974).

3. An article by George Triantis provides a useful entry into this literature. Triantis G., *Improving Contract Quality: Modularity, Technology, and Innovation in Contract Design*. *Stan. J.L. Bus. & Fin.*, 18, 177-319 (2013).

4. Some of this research is mentioned below.

5. George Geis (*Automating Contract Law*. *NYUL Rev.*, 83, 450 (2008)) explores the possibility that the combination of growing databases of real world contracts and advanced tools for extracting patterns from them will enable powerful new forms of empirical analysis about what contracting parties actually want and do, and asks whether their results will support the theoretical models posited by contracts scholars. Talley et al. report using regular expression and latent semantic analysis to calibrate a machine learning algorithm for analyzing force majeure clauses in merger and acquisition agreements. Talley, E., & O’Kane, D. *The Measure of a MAC: A Machine-Learning Protocol for Analyzing Force Majeure Clauses in M&A Agreements*. *Journal of Institutional and Theoretical Economics JITE*, 168(1), 181-201 (2012).

6. See below.

7. See, e.g., <http://www.openlawlab.com/2013/09/20/legal-design-jam-stanford/>.

8. See, e.g., “How IBM Shrunk a Complex Contract Down to 2 Pages,” <https://www.law.com/corpcounsel/almID/1202679072646/How-IBM-Shrunk-a-Complex-Contract-Down-to-2-Pages/?slreturn=20180513113837#ixzz3P2Cy3Im6>.

9. See, e.g., Haapio, H. *A Visual Approach to Commercial Contracts*. *Europäische Projektkultur als Beitrag zur Rationalisierung des Rechts. Tagungsband des*, 14, 559-566 (2011) and Camilleri, J.J., Paganelli, G. and Schneider, G., 2014, August. A CNL for contract-oriented diagrams. In *International Workshop on Controlled Natural Language* (pp. 135-146). Springer, Cham.

10. See Surden, H. *Computable Contracts*. *UC Davis Law Review*, 46(629) (2012). Flood & Goodenough show that financial contracts can be expressed in terms of state-transition logic and formalized mathematically as finite-state machines, against which automated reasoning can be performed. Flood, M. & Goodenough, O., *Contract as Automaton: The Computational Representation*

of Financial Agreements (December 16, 2014), *available at* SSRN: <http://ssrn.com/abstract=2538224> or <http://dx.doi.org/10.2139/ssrn.2538224>.

11. Ken Adams, author of *A Manual of Style for Contract Drafting* (4th edition, 2017), is a leading force for quality improvement in that field. His blog at <http://www.adamsdrafting.com/> is worth visiting.

12. *Available at* <http://www.ariba.com/assets/uploads/documents/The+Future+of+Contracting-5-15-2012.pdf>.

13. *See, e.g.*, US Legal Forms (<http://www.uslegalforms.com>), Smart-LegalForms (<http://www.smartlegalforms.com>), and CompleteCase.com (<http://completecase.com>).

14. *See, e.g.*, Docracy, <http://www.docracy.com/>.

15. *See, e.g.*, Contract Advisor, Association Of Corporate Counsel, <http://contracts.acc.com/acc/forms.aspx>.

16. *See, e.g.*, Stephanie Kimbro, *Virtual Law Practice* (2010).

17. *See* <http://www.legalzoom.com>, <http://www.rocketlawyer.com>, <http://www.smartlegalforms.com>, and <http://whichdraft.com>.

18. For example, LawHelp Interactive, an award-winning service of Pro Bono Net, has delivered millions of customized documents for free. *See* <https://lawhelpinteractive.org/> and <http://collegeoflpm.org/innovaction-awards/award-winners/2010-innovaction-award-winners/>.

19. *See, e.g.*, <https://www.foundersworkbench.com/>, <https://tsc.orrick.com/>, <http://www.startuppercolator.com>, <http://launch.wilmerhale.com/>, and <http://www.wsgr.com/wsgr/display.aspx?sectionname=practice/termsheet.htm>.

20. <http://www.shakelaw.com/>.

21. <http://www.workshare.com/>.

22. <http://www.ariba.com/solutions/buy/contract-management>, <http://www-01.ibm.com/software/info/emptoris/>, <http://www.sciquest.com/solutions/contracts/sciquest-contract-director>.

23. <http://www.business-integrity.com/index.html>, <http://www.exari.com/>, <http://www.hotdocs.com/>, <http://www.leafletcorp.com/>, <http://www.pathagoras.com/>, <http://www.epoq.us/>, <http://www.theformtool.com/>, <http://www.zumesoft.com/>, <http://www.xpressdox.com/>, <http://papersoftware.com/>.

24. Lauritsen, M., & Gordon, T. F. Toward a general theory of document modeling. In *Proceedings of the Twelfth International Conference on Artificial Intelligence and Law*, 202-211 (2009).

25. <http://www.brightleaf.com/what-is-brightleaf-new/abstract-instantly>.

26. <https://diligenceengine.com/>.

27. <http://www.recommind.com/>.

28. <http://www.exemplify.com/>.

29. <http://kmstandards.com/>.

30. <http://kmstandards.com/contractstandards/index.htm>.

31. <http://commonaccord.wordpress.com/>.

32. See, e.g., Surden, H. Computable Contracts. *UC Davis Law Review*, 46(629) (2012) and Triantis G., Improving Contract Quality: Modularity, Technology, and Innovation in Contract Design. *Stan. JL Bus. & Fin.*, 18, 177-319 (2013).

33. Such as this one in Denmark for long-term IT projects: [www.scl.org/site.aspx?i=ed34480](http://www.scl.org/site.aspx?i=ed34480). For a good list of similar efforts, see [http://beta.com.monaccord.org/wiki/Model\\_Document\\_Projects](http://beta.com.monaccord.org/wiki/Model_Document_Projects).