
Massachusetts Institute of Technology


**American Bar Association Annual Meeting**

**Internet Law Subcommittee of the Cyberlaw Committee**

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# *Electronic Agents & Automated Transactions:*

# *Outline of Issues in Statutes and Contracts*


**Daniel J. Greenwood, Esq. (Present By Teleconference)**

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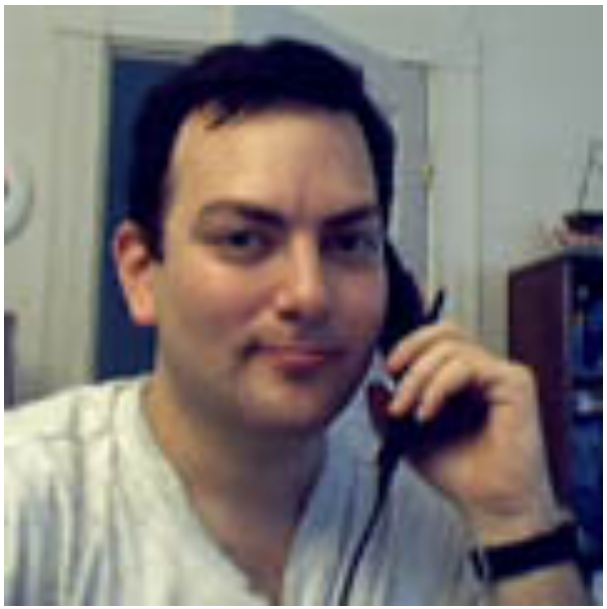
Director, MIT E-Commerce Architecture Project (ECAP)

## Since I'm Only Virtually Present . . .

# Picture This . . .



**Daniel J. Greenwood, Esq.**

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# Some Relevant Statutory Provisions

## eAgents can form contracts with you and/or with other agents

**UETA SECTION 14. AUTOMATED TRANSACTION.**

In an automated transaction, the following rules apply:

(1) A contract may be formed by the interaction of electronic agents of the parties, even if no individual was aware of or reviewed the electronic agents' actions or the resulting terms and agreements.

(2) A contract may be formed by the interaction of an electronic agent and an individual, acting on the individual's own behalf or for another person, including by an interaction in which the individual performs actions that the individual is free to refuse to perform and which the individual knows or has reason to know will cause the electronic agent to complete the transaction or performance.

# Some Relevant Statutory Provisions

## *eAgents should allow you to avoid or correct errors*

**UETA SECTION 10. EFFECT OF CHANGE OR ERROR.**

If a change or error in an electronic record occurs in a transmission between parties to a transaction, the following rules apply: . . .

(2) In an automated transaction involving an individual, the individual may avoid the effect of an electronic record that resulted from an error made by the individual in dealing with the electronic agent of another person if the electronic agent did not provide an opportunity for the prevention or correction of the error and, at the time the individual learns of the error, the individual:

(A) promptly notifies the other person of the error and that the individual did not intend to be bound by the electronic record received by the other person; and (B) takes reasonable steps, including steps that conform to the other person's reasonable instructions, to return to the other person or, if instructed by the other person, to destroy the consideration received, if any, as a result of the erroneous electronic record; and

(C) has not used or received any benefit or value from the consideration, if any, received from the other person.

# Some Relevant Statutory Provisions

***In Addition to Forming Contracts, eAgents Can Form, Create and Deliver Enforceable and Legally Valid "Records".***

***However, the Acts of the eAgent Must be "Legally Attributable to the Person to be Bound".***

**ESIGN SECTION 101 (h) ELECTRONIC AGENTS**

A contract or other record relating to a transaction in or affecting interstate or foreign commerce may not be denied legal effect, validity, or enforceability solely because its formation, creation, or delivery involved the action of one or more electronic agents so long as the action of any such electronic agent is legally attributable to the person to be bound.


An Electronic Agent – By Any Other Name . . .

***What IS an Electronic Agent?***

# Statutory Definitions

## Uniform Electronic Transactions Act (UETA)

## Electronic Signatures in Global and National Commerce Act (ESIGN)

- **Electronic (UETA & ESIGN):** relating to technology having electrical, digital, magnetic, wireless, optical, electromagnetic, or similar capabilities.

- **Electronic Agent (UETA):** a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part, **without review or action by an individual.** (emphasis added)

- **Electronic Agent (ESIGN):** a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic records or performances in whole or in part **without review or action by an individual *at the time of the action or response*** (emphasis added)

If there is review or action by an individual after the time of the action or response (such as a required “manual” approval; or a later audit in which review occurs), does the definition of an “electronic agent” still apply under UETA or ESIGN?


## Since I'm Only Virtually Present . . .


# Enforceability of Contracts "Without Review or Action by an Individual": eAgents and "Browse-Wrap" Contracts

eAgents ride upon a semantic web of business and legal information. They are configured to interact with data environments. The input and output of that data may constitute offers, acceptances and other legally important conduct. Since the user of the eAgent is not personally seeing the data that is available to the eAgent, this activity may be akin to so-called "Browse-Wrap" contracts. In a "Browse-Wrap" Contract (unlike a "Shrink-Wrap" or "Click-Wrap" contracts), the individual is not required to go through a step specifically and primarily for the purpose of manifesting assent to the contract. Rather, it may be that purportedly applicable terms and conditions are made available in a more passive manner, such as by including an optional link on a download page. In this way, Browse-Wrap contracts involve terms and conditions that are sought to be enforceable against a party who has not actually seen them and who was not requried to personally and deliberately agree to them. Similarly, when an eAgent comes into contact with terms and conditions, it is possible that the user of the eAgent may not have the opportunity to review, store, print or to explicitly and specifically manifest assent to those terms.

# Browse-Wrap: Two Cases; Different Results

**Register.com v. Verio**: Registar.com sought to enjoin the defendant, Verio, from using automated computer software processes (electronic agents) so as to access Register.com's WHOIS database and later using that information for mass marketing purposes. The district court found that Register.com demonstrated a likelihood of success on the merits and grante injunctive relief.

**Contract:** With regards to Vario's breach of contract claim . . . the court stated that Verio could not assert the defense that it had not assented to Register.com's terms of use **because there was no question that by going on to search th database Verio had consented to the terms of use.** While this was just an injunction, and the facts were not fully developed it was very difficult to determine what, if any, specific and explicity acceptance of the Register.com terms may have been required as part of the WHOIS query process. My experience with WHOIS queries has been that the terms are presented as mere Browse-Wrap contracts.

**Trespass**: The court also found a likelihood of success with regards to the trespass to chattels claim based on evidence that allowing electronic agents to freely crawl the database could slow down server response time and a risk of interruption of service.

**Specht v. AOL:** Consumers downloaded AOL's Netscape software via a service known as "SmartDownload", in which the terms and conditions were provided via a link at the bottom of the download page. In question was the enforceability of arbitration clause. The Court held that the provision was not enforceable because the requisite manifestation of assent was lacking. The court suggested in dicta that has the SmartDownload software required the user to click an "I agree" box that indicated assent to the terms in question, then the provision would have been enforceable.

# Two Cases; Different Results

**OPEN QUESTIONS**:

It remains unclear how courts will deal with the Browse-Wrap aspect of eAgent mediated contracts. Perhaps the different treatment of the Browse-Wrap contracts in the two cases above related to a reluctance to hold individual consumers to Browse-Wrap contracts, but less reticence to bind a commercial enterprise like Verio. Perhaps there was a latent discrimination against the use of an eAgent, which could have been configured to take cognizance of the Register.com terms, as opposed to the human consumer, who may be considered less generally competent to be put on notice of Browse-Wrap terms. This would be an interesting bias, considering the fact that a eAgent would presumably never come in contact with terms that are presented outside of the specific inputs and outputs involved in conducting a transaction. In other words, terms that are presented at the bottom of a download page, but which are not positioned directly in the patch of an eAgent may be literally outside the scope of knowledge of the eAgent, while a human viewing the same screen would at least have the potential to notice the link to the terms.

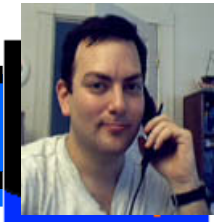

# Playing it Out in Experimental Implementations

**How does this issue play out? Here is an example from XNS.Org (an eAgents Contracting Standards Organization)**

"Do all XNS form transactions require approval from the agent owner?

No. In particular, spam-busting XNS email privacy contracts can be negotiated automatically. XNS architecture and the XNS Global Terms are designed to allow agent owners to decide which XNS transactions their agent can approve automatically and which transactions require "manual" approval from the owner. However, to keep it simple and earn the trust of personal agent owners, in XNS 1.0 all personal-to-business transactions require explicit approval of the personal agent owner."

# The World Today

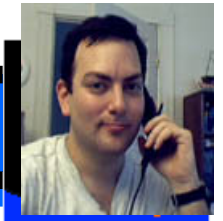


## Lets Get Real: How Are "Agents" and "Automated Transactions" Really Used in Business Today?

**Scrape This:** Many firms now use "agents" to automatically and methodically travel through web sites and databases of others for the purpose of gaining market intelligence and business information. For example, an online dispute resolution provider may set up a script to "scrub" all auctions on the eBay site for the purpose of determining their market share. This exercise would yield the percentage of auctions in which that provider's name was mentioned (as well as statistics correlating to the types of goods or services involved and the value of the bids). These types of methodical incursions onto other people's sites may also be for illegal purposes, such as intellectual property infringement, denial of service attacks or breaches of privacy protections.

**Gimmie Two Dozen of Those:** Another classic example is automated inventory control, whereby a system automatically detects depleted stocks and orders more.

# The World Tomorrow



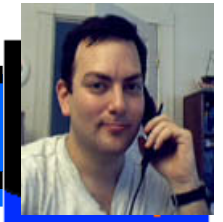
## Around the Corner: How Will "Agents" and "Automated Transactions" Be Used in Business Tomorrow?

## Semantic Web: Web Services and XML

**The Semantic Web Activity of the W3C: For commercial eAgents to be able to act effectively, there must be an infrastructure underlying them whereby the meaning and implications of contracting terms can be managed automatically. Otherwise, the use of eAgents would lead to unpredictable and anomalous results. The W3C "Semantic Web Activity" is leading toward such an infrastructure. With web services, and all wrapped in XML, the web can be made an efficient and reasonable platform for automated transaction.**

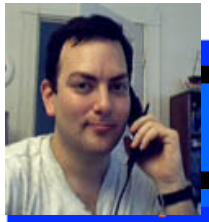
> **"The Semantic Web is a vision: the idea of having data on the Web defined and linked in a way that it can be used by machines not just for display purposes, but for automation, integration and reuse of data across various applications. In order to make this vision a reality for the Web, supporting standards, technologies and policies must be designed to enable machines to make more sense of the Web, with the result of making the Web more useful for humans. . . For the Web to scale, programs must be able to share and process data even when these programs have been designed totally independently. The Web can reach its full potential only if it becomes a place where data can be shared and processed by automated tools as well as by people."**

# The World Tomorrow



**Web Services:** "From its early days, Web technologies have been used to provide an interface to distributed services (e.g., HTML forms calling CGI scripts). The advent of XML has accelerated this development, and has sparked the emergence of numerous XML-based environments that enable Web services." Issues include:

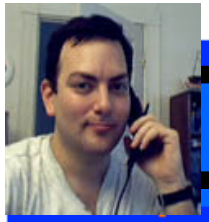
- Reliable messaging
- Security
- Privacy of business data
- Transactions
- Interface definition languages
- Discovery of Web service applications
- Web service descriptions
- Message and protocol semantics
- Development environments for Web services
- Other components of Web services not yet addressed by the XML Protocol Activity






# XML: Not Just Another TLA

This meta-language specification allows one to “markup” data based upon the semantic meaning of the content. This is different from “HTML” – Which Allows Formatting on the Web.





# Contract Example in HTML (Marks Up For Format)

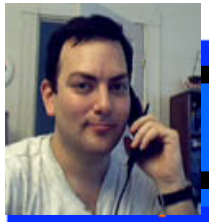
<html><body>

Contract for the Sale of Goods

<p> John Muller Hereby Agree to Sell all Right and Title in His Chuck Wagon to Daniel Greenwood on 8/5/01. Daniel Greenwood Hereby Agrees to Pay John Muller for Said Chuck Wagon the Sum of $10.00, Provided The Wagon is Delivered to Parking Lot 4 at MIT, Cambridge Massachusetts Before Noon on 8/5/01. </P>

 */s/ John Muller, 8/3/01; /s/ Daniel Greenwood, 8/3/01* 

</html></body>





# Contract Example in XML* (Marks Up For Content)

<XML>

<ContractType>Contract for the Sale of Goods </ContractType>

<Duty1>John Muller Hereby Agree to Sell all Right and Title in His Chuck Wagon to Daniel Greenwood</Duty1>

<Duty1:DateDue> on 8/5/01.</Duty1:DateDue>

<Duty2>Daniel Greenwood Hereby Agrees to Pay John Muller for Said Chuck Wagon </Duty2>

<Duty2:Amount> the Sum of $10.00</Duty2:Amount>

<Duty2:Proviso>, Provided The Wagon is Delivered to Parking Lot 4 at MIT, Cambridge Massachusetts Before Noon on 8/5/01. </Duty2:Proviso>

<XML:Sigs>/s/ John Muller, 8/3/01;  /s/ Daniel Greenwood, 8/3/01</XML:Sigs>

</XML>

* NOTE: This is not actual XML code.  This is a simplified example.

# The World in Transition

## Professor Benjamin Grosof, MIT Sloan Professor in E-Commerce IT

Our speaker from the last Cyberlaw meeting in Philadelphia is pushing the envelope even further . . . With RuleML.

**What is RuleML?**

1. an XML syntax for rule knowledge representation (KR); inter-operable among major commercial rule systems

2. actually a family of rule KR expressive classes . . .

3. Webize rule KR: URIs for logical vocabulary and knowledge subsets; labels for rules/rulebases, import/export; headers: meta-data describes doc's expressive class; procedural attachments using Web protocols; queries or actions via CGI/servlets/SOAP/...

4. practical mechanics of Webizing/interop. KRs: build on existing W3C standards: namespaces; share mechanisms with RDF/RDFS, DAML+OIL; use ontologies for rules, and rules for ontologies; ontology tags in: rulebase, predicate symbol, …

***Interested? RuleML is gaining momentum. W3C Semantic Web group will probably have an ontology group soon and a sub-group on rules. Cyberlaw Committee members are encourage to contact Benjamin Grosof to find out how to participate. Bgrosof@mit.edu (include "ABA Agents Group" in subject line).***

# The World in Transition

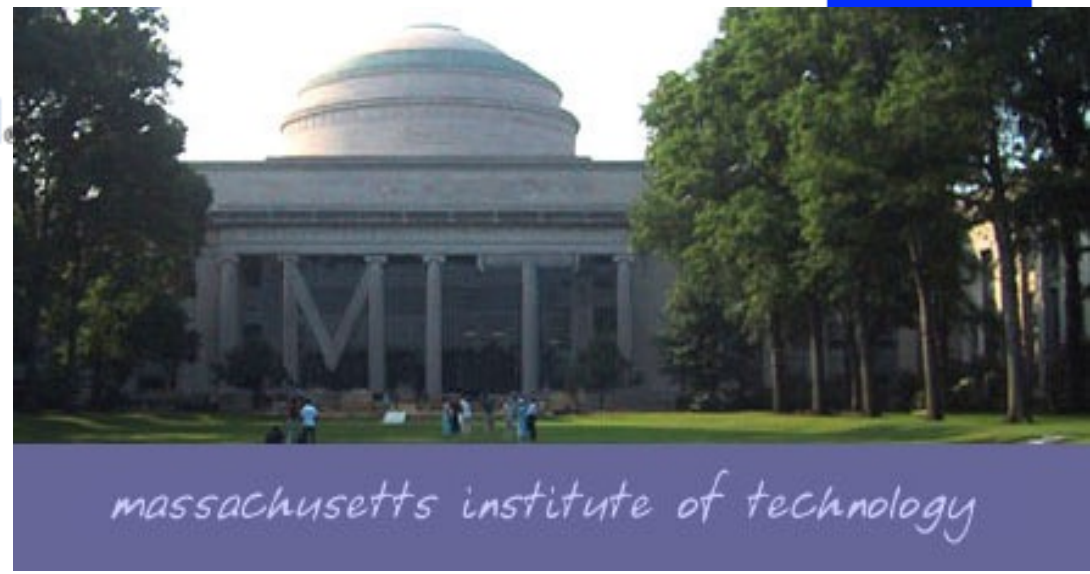
W3C WORLD WIDE WEB consortium

XML

Semantic Web

Web Services

RDF




LegalXML

Appellate Court Filing

Child Support

Citations

**Contracts**

Court Filing

Dictionary

E Terms

Integrated Justice

Judicial Decisions

Legislation

Publications

Signatures

Transcripts

OASIS

**ebXML**

RuleML

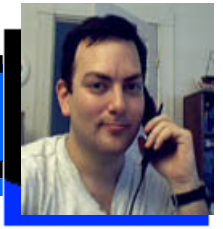
Operating Rules Markup Language

SECTION OF BUSINESS LAW

LAW TECHNOLOGY

**Model Trading Partner Agreement!**

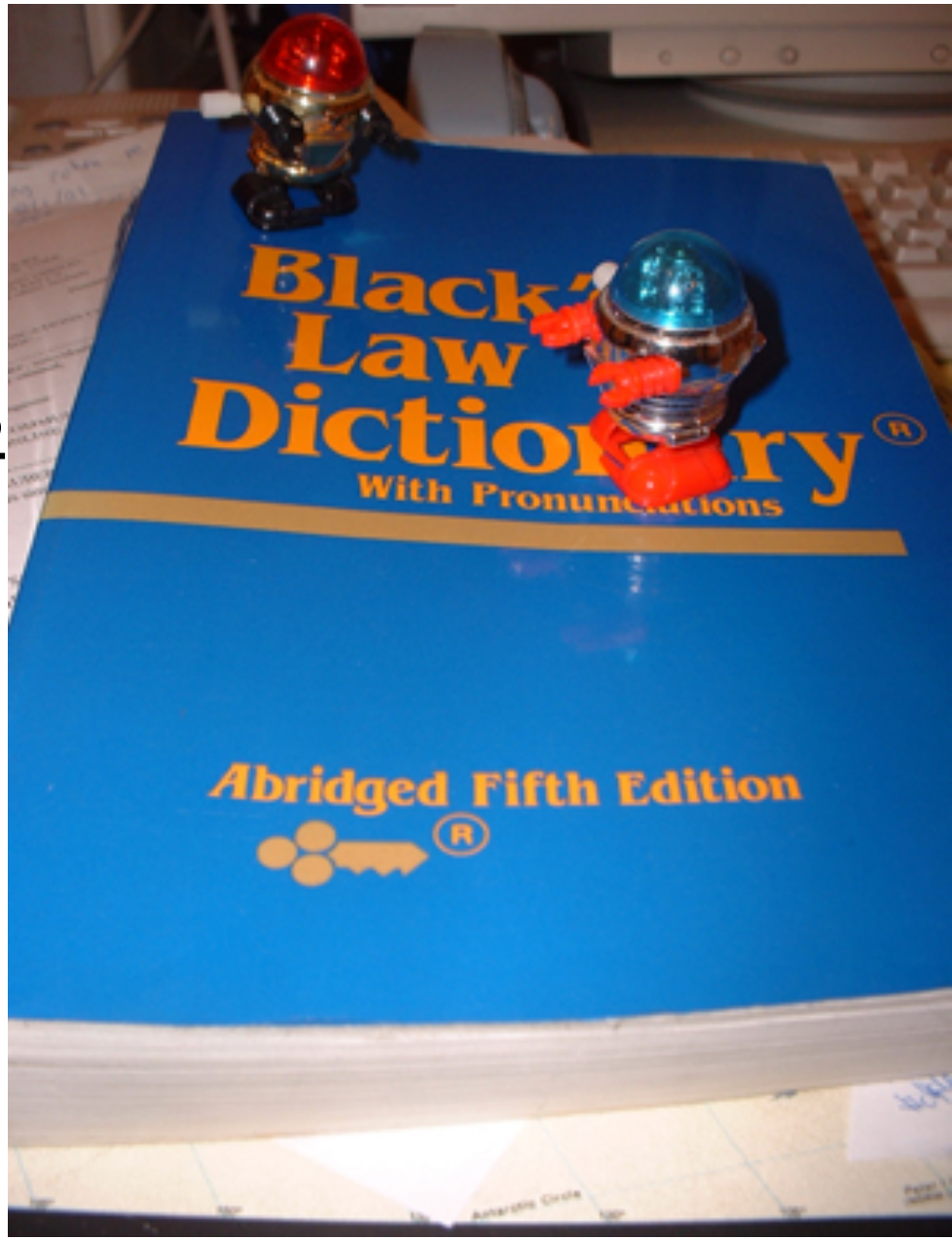
**eAgents Contract Specifications?**



# Agents, Agents Everywhere!

# They Ride on Words and Semantics.

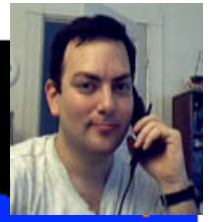
# The Law Won't be The Same Again . . .



# PRESENTATION


The ABA is the Best and Most Appropriate Organization to Provide Thought Leadership as Business, Technology and Public Policy Emerges in This Exciting and Important Area.

**Join the Electronic Agents and Automated Transactions Task Force Today! Sign up to be on our Internet Law Subcommittee E-Mail List and Get Involved!**



## Presentation

# For More Information:

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