From the Halls of Justice

Faster Than a Speeding Bullet: Blockchain, Predictive Coding, Artificial Intelligence

Presenters:
Josias N. Dewey, Partner
Suzanne E. Gilbert, Partner
Christopher C. Brockman, Partner
Faster Than a Speeding Bullet:
Blockchain, Predictive Coding, Artificial Intelligence

Presenters: Josias Dewey, Suzanne Gilbert and Christopher Brockman
Quick Overview

» Transformative change.

» Implications for profession.

» What technologies are driving this change?
  - Blockchain and distributed ledger technology.
  - Artificial Intelligence & machine learning.
  - Robotics and automation.
  - Data analytics.

Transformative Change

» Accelerating advances in technology.

» Not incremental improvement (e.g., WordPerfect to Word).

» Dramatic efficiency gains.

» Ability to do certain tasks not possible before, at least not with a level of precision.

With Allen & Overy’s MarginMatrix, the time taken to manually handle the 10,000 contracts on average that any major bank holds can be reduced from over 15 years in lawyer hours to just 12 weeks*
Implications for Profession

» Machine learning
  - While powerful tools that can reduce costs dramatically and materially increase quality of work, these tools can't replace a lawyer's judgement.
  - Human brain is more complex than a series of logic gates.
  - Not even close to achieving general intelligence.

» Artificial intelligence is only one piece of the innovation puzzle
  - Process engineering tools have improved.
  - Profession more open to change.
  - Change is being demanded.

Implications for Profession (continued)

» We are eliminating process level work, which does not require any critical thinking or reasoning skills.

» Implementation allows talented lawyers and other employees to be used for their highest and best use.

» Do we need to change what we teach in law school? Data science?

» What will lawyers do in five or ten years?

» Ethical considerations?
THE BASICS: Blockchain in Five Minutes

1. Ledger
   a. Database or spreadsheet
   b. State persistence ("state machines")
   c. Immutable (Create, Retrieve, Update & Delete)—append only
THE BASICS (continued)

2. Consensus algorithm
   a. Proof-of-Work (mining)
   b. Proof-of-Stake
   c. Byzantine fault tolerance

3. Decentralized, peer-to-peer communication protocol
   a. No central point of failure
   b. Censorship free
4. Public key encryption and other cryptographic techniques (e.g., hashing algorithms)

Smart Contracts

1. State machine now records and changes states for any tangible or intangible thing (not just BTC)—stocks, bonds, letters of credit, property registry.

2. Each node now has a virtual computer as part of the protocol. Now, ledger can be updated based on sophisticated computer code (or think Excel formulas) rather than basic math.
Artificial Intelligence & Machine Learning

» The definition of AI varies depending on who you ask, and changes over time. Rule-based logic, which was the initial form of AI, is often excluded from definitions of AI by others. Any computer system that mimics human-like intelligence.

» Machine learning is a subset of AI that by definition is comprised of a statistical algorithm of some kind that can accomplish computational tasks through statistical reasoning, which is generally capable of improving functionality by being exposed to more experiences.

» Machine learning is not new to the law.
Artificial Intelligence & Machine Learning
(Predictive Coding)

» Predictive coding has been used for years in discovery.

» How else can it be used by the legal profession?

» What can we expect in the future?

Artificial Intelligence & Machine Learning
(Natural Language Processing)

» Expression of words as vectors allows mathematical comparison.

» Algorithms have largely been optimized and standardized.

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<th>Bag-of-words matching</th>
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Word Vector Representations
Use a sliding window over a big corpus of text and count word co-occurrences in between.

1. I enjoy flying.
2. I like NLP.
3. I like deep learning.
Artificial Intelligence & Machine Learning (Deep Learning)

» Deep neural networks (deep learning).
» Attempts to mimic certain aspects of human brain.

Efficient Estimation of Word Representations in Vector Space

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Abstract

We propose two novel model architectures for computing continuous vector representations of words from very large data sets. The quality of these representations is measured in a word similarity task, and the results are compared to the previously best performing techniques based on different types of neural networks. We observe large improvements in accuracy at much lower computational cost, i.e. it takes less than a day to learn high quality word vectors from a 1.6 billion word data set. Furthermore, we show that these vectors provide state-of-the-art performance on our test set for measuring semantic and syntactic word similarities.
Artificial Intelligence & Machine Learning

» Law firms can now actively develop and train machine learning models having domain expertise in various areas of practice.

» Relativity and other tools can also be re-purposed for non-litigation tasks.

» Contract analytics vendors.
  - Luminance
  - Kira
  - eBrevia

Artificial Intelligence & Machine Learning

» Workflows – organize process.
» Pattern recognition.
» Ability to compare 1,000 leases and generate spreadsheet with only specific clauses.
Artificial Intelligence & Machine Learning

» Consider creative uses.

» Anything that can be improved by the identification and classification of clauses or other text.

» Assist with developing best practices clauses.

Where does AI fit? Process, process, process.

» Don't forget process.

» Lean, Six Sigma.

» Legal process management.
Robotic and Automation

» Goes beyond mail merge.

» Real practice tool.

» Alternative clauses.

Can integrate drafting checklist into the template.

Useful guidance for younger lawyers about the nature of certain clauses.

Can highlight areas that routinely cause problems or offer up parties' positions on most commonly negotiated clauses.
Robotics and Automation

» Starts with structured data, which can be passed from task to task.
» Consider custom solutions where no vendor solutions.

Data Driven Solutions

» Pricing and alternative fee arrangements.

» Consider where the source of data is within the organization.

» Are there external sources of data you can access?

» Value is there, you just need to unlock it.
Josias “Joe” N. Dewey, practice group leader of Holland & Knight’s Miami Real Estate Practice Group, is a financial services and real estate attorney and is considered a thought leader on blockchain and distributed ledger technology (DLT). Mr. Dewey is the co-author of the book, “The Blockchain: A Guide for Legal and Business Professionals,” published by Thomson Reuters.

Mr. Dewey regularly represents a diverse group of banks and other financial institutions, from large international banks to local community banks. Mr. Dewey also represents life insurance companies and investment funds involved in finance transactions. His finance practice encompasses a broad range of asset classes and transaction structures, including real estate financing, healthcare real estate finance and asset-based lending, such as receivable, inventory, equipment and working capital facilities. He has substantial experience representing both lead lenders and participant lenders in participations, syndicated transactions and other co-lending arrangements.

Mr. Dewey is also an experienced software developer who has developed workflow applications to speed up the lifecycle of financing and other transactions by reducing the inefficiencies caused by repetitive, process level tasks. These pain points and areas of friction are often caused by transaction steps involving manual transcription of deal terms, tracking the status of deliveries and the lack of effective communication channels, all of which increase transaction costs and increase the risk of human error. Mr. Dewey’s group has extensive experience leveraging statistical learning models, including natural language processing, text classifiers and similar tools – all in an effort to automate many of these manual processes. This has allowed the group to collaborate with clients and to provide true value-added service.

Mr. Dewey has written and spoken extensively on blockchain, DLT and the convergence of traditional human-prose contracts and computer code-based “smart contracts.” This includes experience with several distributed ledger protocols, including Hyperledger Fabric (IBM Blockchain), Ethereum (both public and permissioned versions) and R3’s Corda. Mr. Dewey spends a considerable amount of his practice in this space assisting clients in refining use cases and developing proof-of-concept (PoC) applications. He combines his technical understanding with his experience addressing the legal and regulatory issues that surround the use of blockchain in a broad range of applications. Mr. Dewey also participates in blockchain
hackathons, most recently submitting a functional pharmaceutical supply chain application for reducing counterfeit drugs and prescription pill abuse.

As applied to blockchain and DLT, Mr. Dewey has experience in several substantive areas of the law outside his traditional area of practice. In handling these engagements, he works collaboratively with other lawyers in the firm who practice in the areas of emerging companies, corporate and securities, investment products and regulation, capital markets, insurance, money transmitter, anti-money laundering and Office of Foreign Assets Control (OFAC) compliance, intellectual property, private wealth, tax matters and several others.

Mr. Dewey is also an adjunct professor of law at the University of Miami School of Law, teaching a real estate transactions course where he places a heavy emphasis on how technology is changing the way transactions are structured and counterparty risks are allocated, as well as what skills students will need to succeed in law during the next 20 years and into the future.

Honors & Awards

- The Legal 500 USA, Corporate/Mergers & Acquisitions, 2014
- Chambers USA – America’s Leading Business Lawyers guide, Real Estate, 2009; Banking & Finance: Transactional, 2013-2017

Memberships

- Digital Currency & Ledger Defense Coalition
- The Florida Bar, Real Property, Probate and Trust Law Section
- The Florida Bar, Business Law Section

Publications

- Improving the Supply Chain Through Technology: From Trade Finance to Produce, April 9, 2018
- Blockchain and 5G-Enabled Internet of Things (IoT) Will Redefine Supply Chains and Trade Finance, The Secured Lender, Jan/Feb 2018
- Bitcoin Tech May Be the Future, But It Raises Serious Antitrust Questions, The Hill, May 25, 2017
- Asset Management: A Case For Distributed Ledger Technology, GlobeSt.com, May 3, 2017
- Distributed Ledger Technology, The Internet of Things (IoT) and Artificial Intelligence and Cognitive Analytics: The Future of Trade Finance is Rapidly Approaching, Chapter

- Blockchain Collaborators Should Be Attuned To Potential Antitrust Issues, Corporate Counsel Connect, March 2017
- Working With Outside Counsel on Blockchain Projects: Five Proposed Projects That Could Be Game Changers, Corporate Counsel Connect, December 2016
- Blockchain Technology: Why Law & Finance Won’t Look the Same in 5 Years, Thomson Reuters Legal Executive Institute, November 23, 2016
- Blockchain, International Legal Technology Association Blog, November 8, 2016
- Will Top Law Firms Become Software Companies?, Medium, June 13, 2016
- What if We Developed Legal Contracts like We Developed Software Applications?, Medium, April 2, 2016
- On What Law Firms Can Do With the Blockchain, Bloomberg BNA, October 7, 2015
- Where Are We Going?, Bloomberg BNA, October 2, 2015
- The Next Level: Smart Contracts and Real Estate Deals, Bloomberg BNA, September 28, 2015
- What is a Smart Contract?, Bloomberg BNA, September 24, 2015
- What is a Blockchain?, Bloomberg BNA, September 22, 2015
- Blockchain Technology Will Transform the Practice of Law, Bloomberg BNA, June 25, 2015
- Drone Use In Fla. Real Estate: Tricky But Not Impossible, Law360, June 25, 2015
- Board of Contributors: Does the Latin American model make good business sense, Co-Author, Daily Business Review, November 9, 2011
- Organizational Due Diligence in Real Estate Secured Loan Transactions - The Role of Lender’s Counsel, Probate & Property, July/August 2002

Speaking Engagements

- International Economic Forum of the Americas World Strategic Forum, Moderator, Blockchain, Bitcoin and the Future of Money, April 16-17, 2018
- Blockchain, Virtual Currencies and Implications for Banking, Federal Reserve Bank Atlanta S & R Leadership Conference, April 11, 2018
- Smart Contracts for a Smarter Supply Chain, Chain Reaction Blockchain Supply Chain Summit, April 10, 2018
- Blockchain 101 CLE, Association of Corporate Counsel North Florida Chapter, April 4, 2018
- Blockchain and Distributed Ledger Applications: Potential Impact on Consumer Privacy, Clear Law Institute Webinar, March 29, 2018
- Blockchain: A Deeper Dive, MIT Enterprise Forum, March 27, 2018
- Blockchain and Bitcoin, Member Summit 2018, March 16, 2018
- Understanding the World According to Blockchain, 2018 Florida Venture Capital Conference, January 30-31, 2018
- The Role of Lawyers in Adopting Blockchain Technology and Smart Contracts, Atlanta Bar Association, November 15, 2017
- GEW - Into the Blockchain - Smart Contracts + ICOs, Launch Pad, University of Miami, November 14, 2017
- Planning for Special Assets (Aircraft, Yachts, Bitcoin), Panelist, South Florida Wealth Conference, November 8, 2017
- The Token Economy: When Tokens Make Sense for Your Venture, Unbound Miami, November 1, 2017
- Blockchain Smart Contracts Technology, NJ Leep, October 25, 2017
- Fintech Americas 2017, October 5-6, 2017
- Blockchain Short-Term or Long-Term Disruption?, Moderator, 17th Annual Financial Technology & Innovation Conference, August 30, 2017
- Creating & Implementing a Strategic Plan, Fintech America, July 13, 2017
- Emergence of Blockchain: New Applications and Issues for Corporate Counsel, Strafford, July 12, 2017
- Advances in NLP and Machine Learning Justify a New Approach to Smart Legal Documents, The Third R3 Smart Contract Templates Summit, June 13, 2017
- Community Banks & Blockchain – Overcoming Barriers of Entry, Blockchains and Digital Currencies, American Banker Conference, June 13, 2017
- Innovate Miami: A Catalyst for Disruption, Greater Miami Chamber of Commerce, May 19, 2017
- Dirty Money in a Digital World: Modernizing Approaches to KYC, AML and Sanctions, K(NO)W Identity Conference, May 15-17, 2017
- Blockchain/Distributed Ledger Technology and its Application to the Loan Market, The Loan Syndications and Trading Association Seminar, April 4, 2017
- Tech Talk: Smart Contracts as Legal Contracts, Cardozo Law Tech Talks, February 22, 2017
- Blockchain Technology, The Blockchain Event 2017, February 9, 2017
- Cybersecurity Threats - What is Blockchain and What Will It Do For You and Your Business, Economic Forum of Palm Beach County, January 11, 2017
- The Blockchain: An Introduction for Lawyers and Other Professionals, Clear Law Institute, October 7, 2016
- Blockchain Technology and the Legal Profession, ILTACON 2016, August 28, 2016
- Blockchain Fundamentals for Finance Professionals, Blockchain Congress USA, June 16, 2016
• The Blockchain: What Is It and How Will It Affect Us?, The Loan Syndications and Trading Association, June 16, 2016
• Commercial Loan Documents: Current Issues for Lenders, Clear Law Institute, September 16, 2015
• Spotting Red Flags in Stock Real Estate Contracts, National Business Institute, July 21, 2015
• Commercial Loan Documentation: Hot Topics for Lenders, American Law Institute’s Continuing Legal Education Program, June 18, 2015
• Looking out for the Lender, American Conference Institute: Distressed Condominium Projects and Workout Strategies, June 26, 2007
• Financing the Construction of Residential Condominiums, Legal Aspects of Condominium Development, March 15, 2006
• Condominium Issues from the Lender’s Perspective/Developer Financing Considerations, Lorman: Condominium Law in Florida, September 18, 2005
• Financing the Construction of Residential Condominiums: What You Need to Know to Obtain Your Construction Funds, Lorman Seminars: Problem Solving for Condominium and Homeowners’ Associations in Florida, April 29, 2005
• Purchase and Sale Contracts; Insured Closing Letters, NBI Seminar: Florida Real Estate Title Law, October 7, 2004

Education

• University of Florida Levin College of Law, J.D., with high honors
• University of Florida, B.A., with honors

Bar Admissions

• Florida
SUZANNE E GILBERT  
Partner  
Orlando  
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Practices: Litigation and Dispute Resolution | Financial Services | Bankruptcy, Restructuring and Creditors’ Rights | TCPA Class Action Litigation | Class Action Litigation and Arbitration

Suzanne Gilbert is a partner in Holland & Knight’s Orlando office and practices in the areas of financial and real estate litigation, business litigation and creditors’ rights.

Ms. Gilbert has experience representing clients in complex commercial disputes in federal, state and bankruptcy courts. Ms. Gilbert has substantial experience representing financial institutions and other lenders in a variety of matters, including complex commercial foreclosures, loan workouts, defense of lender liability claims, and in fraudulent transfer and preferential transfer actions. Additionally, a significant portion of her practice involves real estate litigation, including contract disputes, title issues, environmental issues and mortgage fraud. She also has significant experience in matters involving Article 3 and Article 9 of the Uniform Commercial Code. In addition to her focus on financial and real estate litigation, Ms. Gilbert has also defended class actions involving Florida’s Deceptive and Unfair Trade Practices Act and the Telephone Consumer Protection Act. She has also represented one of the world’s largest biotechnology companies in disputes and arbitrations relating to product licensing arrangements.

Since 2007, Ms. Gilbert has served as the practice group leader for the firm’s Central Florida Litigation Group. In addition, she chairs the firm’s eDiscovery and Technology Committee. She previously served as the Orlando office coordinator of Holland & Knight’s Women’s Initiative Group, a firmwide program aimed at enhancing opportunities for female attorneys, as well as promoting marketing and client development programs for Central Florida businesswomen and community leaders. In addition, in 2003, Ms. Gilbert was selected to participate in the inaugural class of the firm’s Rising Stars program, a year-long economic development program which encourages women attorneys towards community and firm leadership, as well as their advancement in the legal profession.

In college, Ms. Gilbert was a manager for the men’s basketball team at Duke University. During her tenure as head manager, the team won the 1991 and 1992 NCAA National Championships.

Honors & Awards

- Florida Legal Elite “Hall of Fame”, Florida Trend magazine, 2016, 2017
- Florida Legal Elite, Florida Trend magazine, 2009-2017
• The Best Lawyers in America guide, Orlando Banking & Finance Litigation Lawyer of the Year, 2012
• The Best Lawyers in America guide, Orlando Banking & Finance Lawyer of the Year, 2017
• Martindale-Hubbell AV Preeminent Peer Review Rated
• Florida Super Lawyers magazine, 2010-2017
• Florida Legal Elite “Up & Comer,” Florida Trend magazine, 2005-2008
• Star of the Bar Award, Orange County Bar Association, 2015
• Best of the Bar, Orlando Business Journal, 2005
• University of Florida Law Student of the Year, 1996

Memberships

• American Bar Association, House of Delegates, Drafting Committee
• American Bar Association, Standing Committee on Meetings and Travel, Chair
• American Bar Association, Board of Governors, former Member
• American Bar Association, Young Lawyers Division, Executive Board, former Member
• 11th Circuit Historical Society, Inc., Vice President-Florida
• Orlando Shakespeare Theater, Board of Directors, President
• American Counsel Association, Past President
• Orange County Bar Association, ABA House of Delegates
• Florida Blue Key
• Florida Hospital Foundation Cardiovascular Institute, Board Member
• Central Florida Sports Commission, Board Member
• Frederick Leadership Institute, Board Member
• Duke Club of Central Florida
• Junior League of Greater Orlando
• The American Law Institute

Publications

• Following the meeting of the G-7 Finance Ministers and Central Bank Governors Treasury Secretary Henry M. Paulson, Jr. outlined broad principles., Holland & Knight Alert, October 16, 2008

Speaking Engagements

• No Good Deed Goes Unpunished: Avoiding Lender Liability Claims in Workouts, Seminar for Commercial Real Estate Loan and Special Assets Officers, April 21, 2009
Retail Bankruptcies Have Arrived—More Are Coming, What You Need to Know Now: Practical Answers for Dealing With Troubled Retail Tenants, December 2, 2008

Education

- University of Florida Levin College of Law, J.D., with honors
- Duke University, B.A., Political Science

Bar Admissions

- Florida

Court Admissions

- U.S. District Court for the Northern District of Florida
- U.S. District Court for the Middle District of Florida
- U.S. District Court for the Southern District of Florida
- U.S. Court of Appeals for the Eleventh Circuit
- U.S. Supreme Court
Practices: Real Estate | Retail Development and Leasing | Sustainable Development | Healthcare Real Estate

Christopher C. Brockman is the deputy practice group leader for Holland & Knight’s Southeast Real Estate Group. He focuses his practice in the area of real estate law, with special emphasis on commercial real estate transactions, including commercial leasing matters.

Honors & Awards

- Chambers USA - America’s Leading Business Lawyers guide, Real Estate, 2013-2016
- Florida Legal Elite, Florida Trend magazine, 2013-2017
- The Best Lawyers in America guide, Real Estate Law, 2013-2018
- Martindale-Hubbell AV Preeminent Peer Review Rated

Memberships

- Orlando, Inc., Board of Directors
- Coalition for the Homeless of Central Florida, Chairman, Board of Directors
- The Kimball Foundation, former Chairman
- Journal of Land Use and Environmental Law, Florida State University College of Law, former Editor-in-Chief
- American Bar Association

Publications

- Florida Development Permits Eligible for Extensions Due to Storms and Other Conditions, Holland & Knight Alert, November 11, 2016
- Changes to Lien Laws Create Opportunities for Contractors and Pitfalls for Owners, Holland & Knight Alert, January 30, 2012
- Avoiding Hidden Pitfalls in Selling a Portion of Your Shopping Center, Florida Investor, January 2011
- Avoiding Hidden Pitfalls in Selling a Portion of Your Shopping Center, RE Business Online, December 14, 2010
- Florida Retail Leases: When – and How Many – Witnesses Do You Need?, Holland & Knight Alert, June 16, 2009
- CVS: A Prescription for Success!, Holland & Knight Newsletter, April 29, 2002
Speaking Engagements

- Economic Snapshot of Orlando, Moderator, Bisnow Orlando 2018 Forecast: Your CRE Playbook is Here, February 1, 2018
- State of Sports and Job Creation in Orlando, Bisnow Orlando State of the Market, May 16, 2017
- The Life Cycle of a Net Lease Asset – Site Selection to Development to Disposition Session Details, ICSC N3 Triple Net Lease Conference, March 4, 2014
- ICSC U.S. Shopping Center Law Conference, Double Trouble: Can You Make a Site Work When You Lease From two Different Owners? What if You Buy 1/2 and Lease 1/2, October 16-19, 2013
- Shopping Center Outparcel Sales, Florida Real Estate Journal web podcast, December 17, 2010
- ICSC U.S. Shopping Center Law Conference, When the Landlord is No Longer the Developer: Purchasing an Outparcel and Dealing with Enforcement of Center-Wide Restrictions, Exclusives and Other Obligations When You Don’t Own Center, November 3, 2010
- Central Florida: Where it is, Where it is Headed, International Council of Shopping Centers Panel Discussion, July 28, 2009
- Savvy Leasing & Litigating in the Current Economy, Presentation for CBRE - CB Richard Ellis, Inc., March 25, 2009
- Retail Bankruptcies Have Arrived—More Are Coming, What You Need to Know Now: Practical Answers for Dealing With Troubled Retail Tenants, December 2, 2008
- ICSC U.S. Shopping Center Law Conference, When the Landlord Is No Longer the Developer: Purchasing an Outparcel and Dealing with the Enforcement of Center-wide Restrictions, Exclusives and Other Obligations When You Don’t Own the Center, 2008
- The Outlook for Leasing, Investment and Development in the Industrial Market, RealShare Central Florida Conference, Panel Discussion, 2008
- Legal Aspects of Condominium Development in Florida, Panelist, July 11, 2006
- Representations and Warranties in Purchase Agreements, International Conference of Shopping Centers Law Conference, 2005
- Unique Issues of Resort Communities: Structuring the Resort Condominium Development, University of Miami Institute on Condominium and Cluster Developments, 2005

Education

- Florida State University College of Law, J.D.
- Florida State University, B.A.

Bar Admissions

- Florida