

What Lawyers Must Know About Technology to Avoid Losing Clients or Their License

Speakers:

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Hon. Leo M. Gordon, United States Court of International Trade

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Agenda

- Overview
  - Ethical Obligations to Understand Technology
  - Understanding Technology as a Lawyer
- Technology Competence Framework
- Understanding Computer Storage
- Data
- Digital Forensics
- Key Takeaways

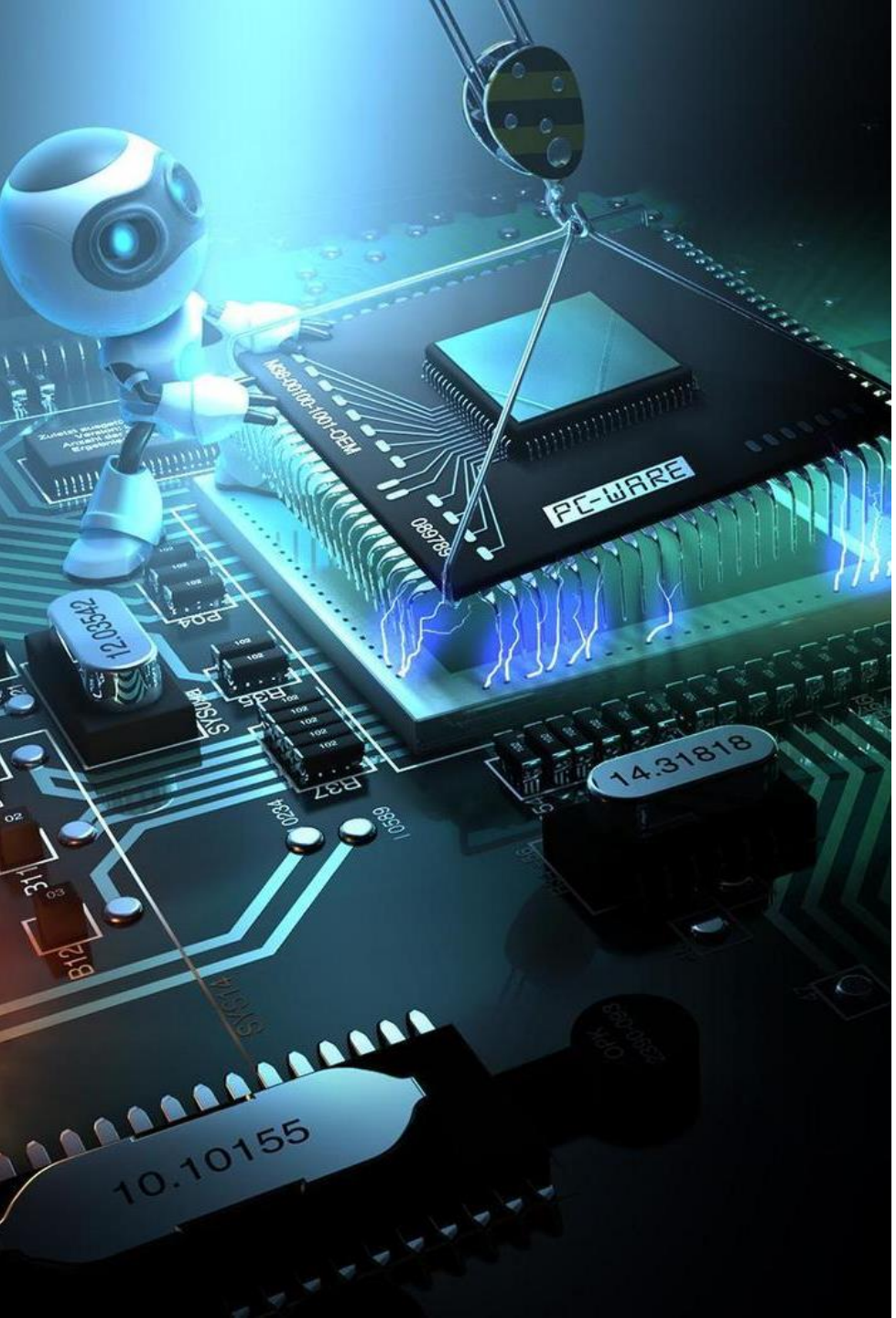
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Overview



- In 2012, with the amendment to Comment 8 of Rule 1.1 of the ABA Model Rules of Professional Conduct, lawyers have a duty to be competent not only in the law and its practice, but also in technology.
- As technology continues to grow progressively in the world, especially the legal sector, more courts and bar associations are revising their ethical rules to mandate that lawyers must have some level of technological competence to qualify as a "competent counsel."
- Clients will continue to expect their lawyers to use technological solutions for certain matters. Thus, this competency guideline will be relevant to all lawyers.

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Ethical Obligations to Understand Technology

- The American Bar Association (ABA) modified its rules in 2012. It now provides an important update:
  - *"To maintain the requisite knowledge and skills, a lawyer should keep abreast of changes in the law and its practice,* ***including the benefits and risks associated with relevant technology****, engage in continuing study and education and comply with all* ***continuing legal education requirements to which the lawyer is subject****."*
- The technology competency requirement has been defined as a core obligation. Lawyers should have a sufficient understanding of technologies and how they affect their practice.

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Understanding Technology as a Lawyer

- "An attorney's obligations under the ethical duty of competence evolve as new technologies develop and become integrated with the practice of law. Attorney competence related to litigation generally requires, among other things, and at a minimum, a basic understanding of, and facility with, issues relating to e-discovery, including the discovery of electronically stored information ("ESI"). On a case-by-case basis, the duty of competence may require a higher level of technical knowledge and ability, depending on the e-discovery issues involved in a matter, and the nature of the ESI. Competency may require even a highly experienced attorney to seek assistance in some litigation matters involving ESI." **- THE STATE BAR OF CALIFORNIA STANDING COMMITTEE ON PROFESSIONAL RESPONSIBILITY AND CONDUCT FORMAL OPINION NO. 2015-193**

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Technology Competence Framework

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Professional Competence

- “Professional Competence” is defined as the capability to perform the duties of one's profession generally, or to perform a particular professional task with skill of an acceptable quality.
- It is notable that the law crosses all industries, and each industry has their own unique guidelines, regulations and compliance requirements.

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Technology Competence

- Lawyers should be aware of the day-to-day skills and operational computer competencies.
- Competencies that virtually all individuals who work within a professional service should be efficient in, especially lawyers;
  - Computer software tools – Microsoft Office Suite;
  - Lawyer must have tools that perform data and file conversions from text to PDF files;
  - Optical character recognition scanning, and other specialty tools should be regularly utilized;
  - Email systems, time and billing applications;
  - Document and case management systems
  - Conflict-checking applications; and
  - Other project management tools

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Technology Competence ctd.

- Expectations of lawyers:
  - Ability to conduct a Google search;
  - Navigate various government sites with relation to legal and tax filings;
  - Perform basic research;
  - Awareness of basic privacy and security requirements and risks associated with communications internally and externally via the internet
- Routine technology-related activities:
  - Analysis and use of social media platforms such as Instagram, Facebook, etc.

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Compliance with Regulations

- Lawyers should be aware of the various guidelines that are set forth by the Federal Rules of Civil Procedure (FRCP).
  - Rule 26 - discovery and disclosure
  - Rule 34 - the production of documents and electronically stored information (ESI)
- The understanding of the unique technology and process challenges related to “chain of custody” evidence collection is often crucial on certain matters.
- Technology competencies must always go hand in hand with regulations and compliance.

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Understand Computer Storage

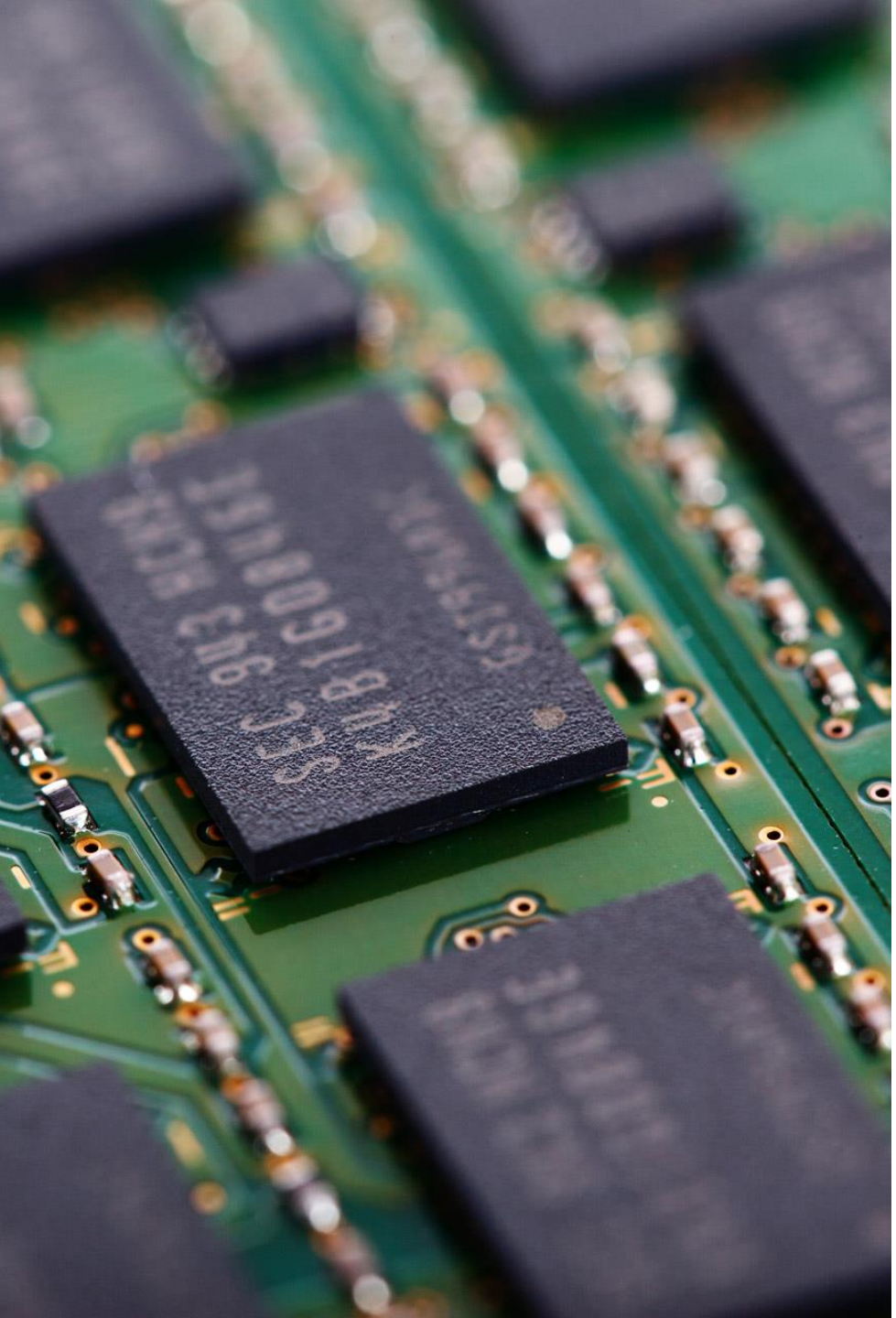
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Getting Familiar with Computer Storage: Where's the Data?

- Computer systems store data in memory.
- There are two types of memory: volatile and non-volatile memory.
  - The distinction between the two types of memory is what happens to the data when the power is turned off.

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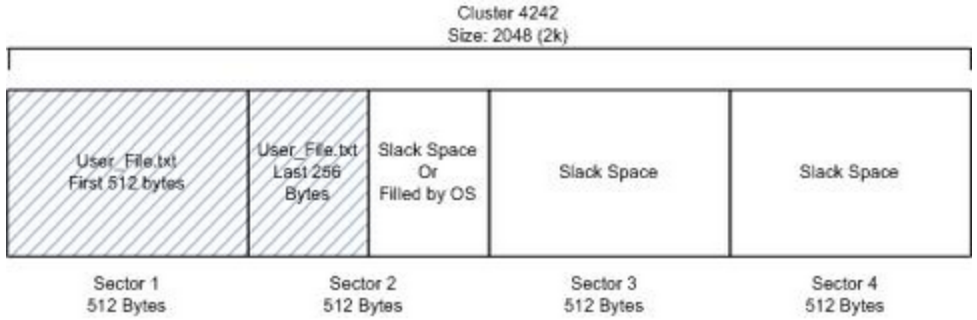
The Distinction Between the Two Types of Memory

- **Non-volatile memory** maintains information even when the power is off.
- **Volatile memory**, by comparison, is memory that is refreshed constantly, and once the power is shut off, all information is lost.

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Unallocated Space and File Slack

- *Unallocated space (AKA Free space)*: Available clusters that can be used to store data
- *File slack*: Storage area that remains if a file does not take up all its allocated data space
- Unallocated space and slack space can contain important information for an investigator



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Storage Devices – Many Flavors Across Many Devices

What is a Storage Device?

- An electronic hardware that stores information and supports the sending and retrieving of information.

Take Away

- Most digital devices are equipped with a hard-drive, which is a mass-storage device that provides cheap and non-volatile data storage.

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Hard-Disk Drives

- Hard drives are designed to mimic the state of DRAM, but instead of ones and zeros, it writes out magnetic patterns.
- There is a sequential address that gets you to the location of the data and a reliable technique for storing the data on the surface of the hard-drive platter.
- Most hard-drives consist of individual disks, each with read/write heads on an actuator arm controlled by a servo motor.

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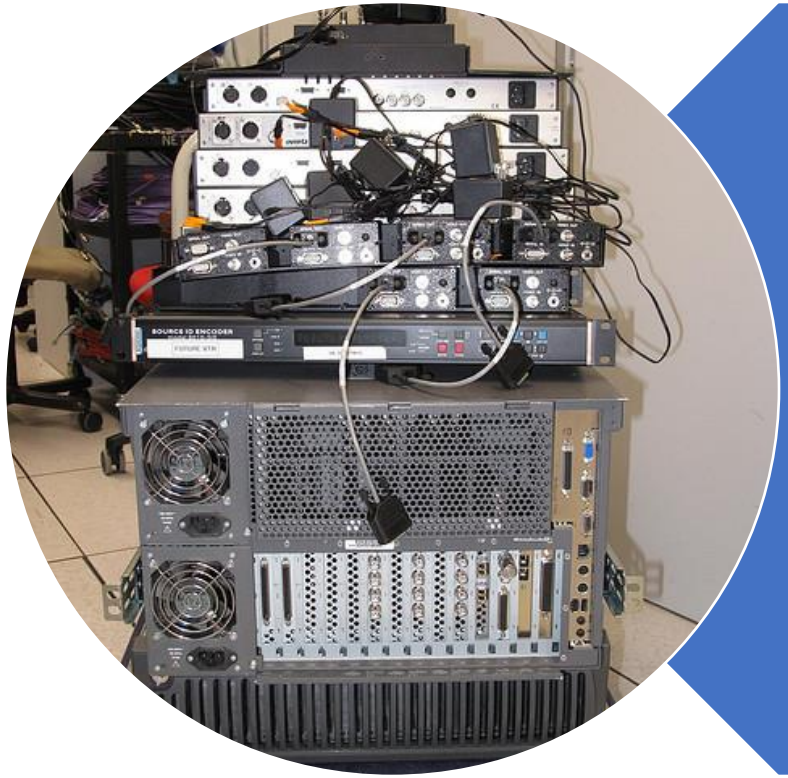
Solid-State Drives

- These drives use integrated circuit assemblies as a memory to store data persistently.
- Solid-state drives do not employ any moving mechanical components but use memory chips to store data.



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Redundant Array of Independent Disks (RAID)



Redundant Array of Independent Disks (RAID):

- An array or group of multiples independent physical drives that provide high performance and fault tolerance.
- A RAID essentially spreads data across several disks, using techniques such as disk striping and disk mirroring to achieve redundancy, lower latency, and/or higher bandwidth for reading and/or writing, and data recoverability.
- A RAID can be implemented as a software utility or as a hardware.

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Other Storage Devices



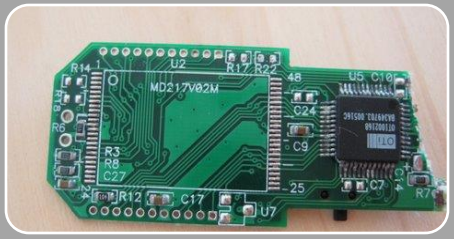
Compact Discs (CD) and Digital Versatile Disks (DVD) are optical disks

- Optical disks work by encoding data in a spiral on the surface of a shiny disc by either leaving the surface flat or pushing it down to form a pit.
- A laser bouncing off the surface then scans the surface of the disk.



Blu-ray Discs :

- Blu Ray offer more capacity than DVD.
- The blue violet disc allows information to be more accurately written and read off the disk.



Flash Memory:

- It is a solid chip like DRAM, but stores data permanently. Mainly used in smartphones and some laptops

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Data

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Understanding Different Types of Data

- Four main types of data are:
  - Active Data
  - Inactive Data
  - Residual Data
  - Legacy Data

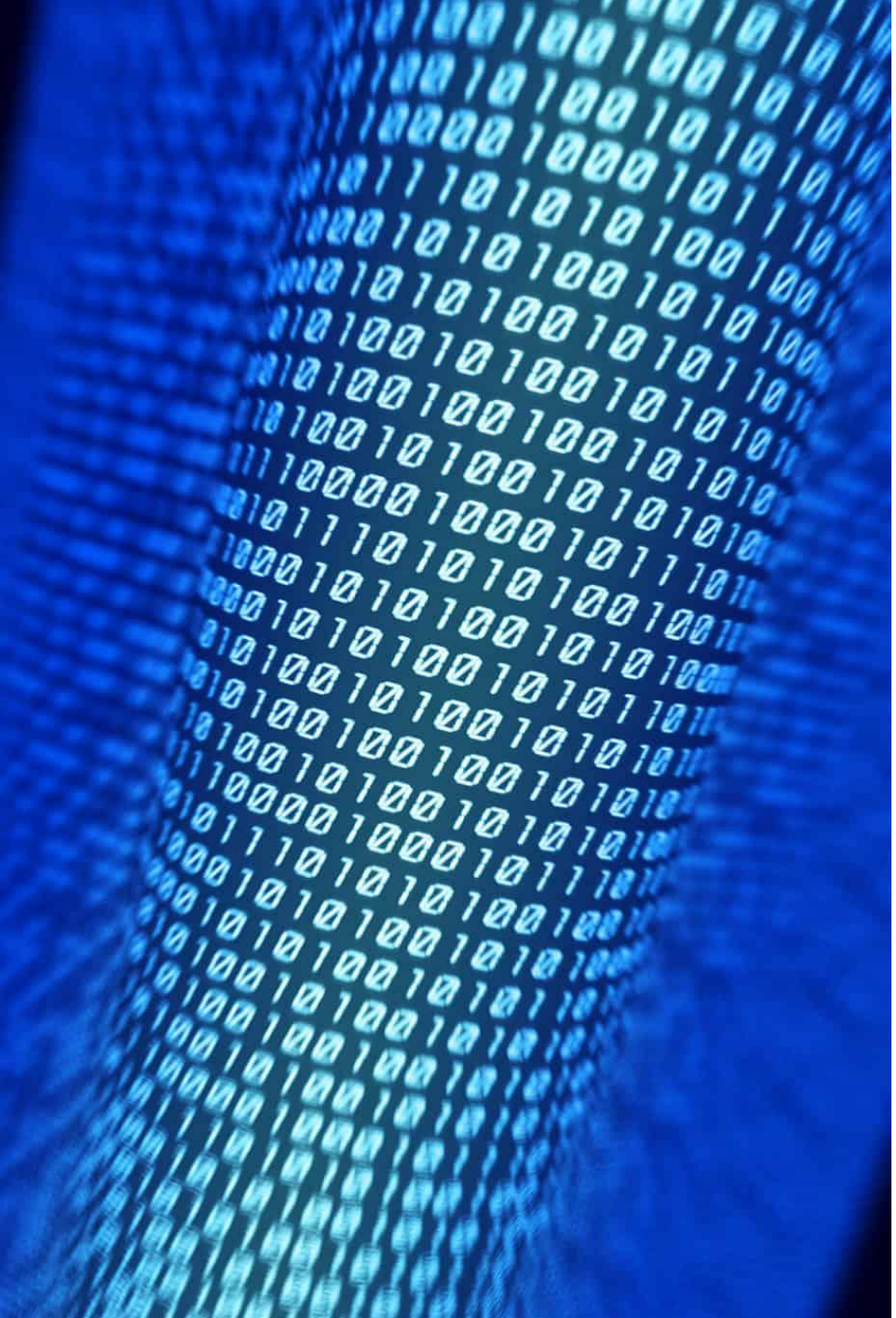
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Active Data

- This consists of ESI that "actively" resides on a person's computer hard drive or other storage devices and in company servers, drives and databases.
- It requires a user to deliberately share personal data – e.g., when completing an online retail transaction

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Inactive Data

- This consists of ESI related to closed, completed, or concluded activities, including ESI an organization maintains for long-term storage and record keeping purposes, but which is not immediately accessible to the user of a computer system.

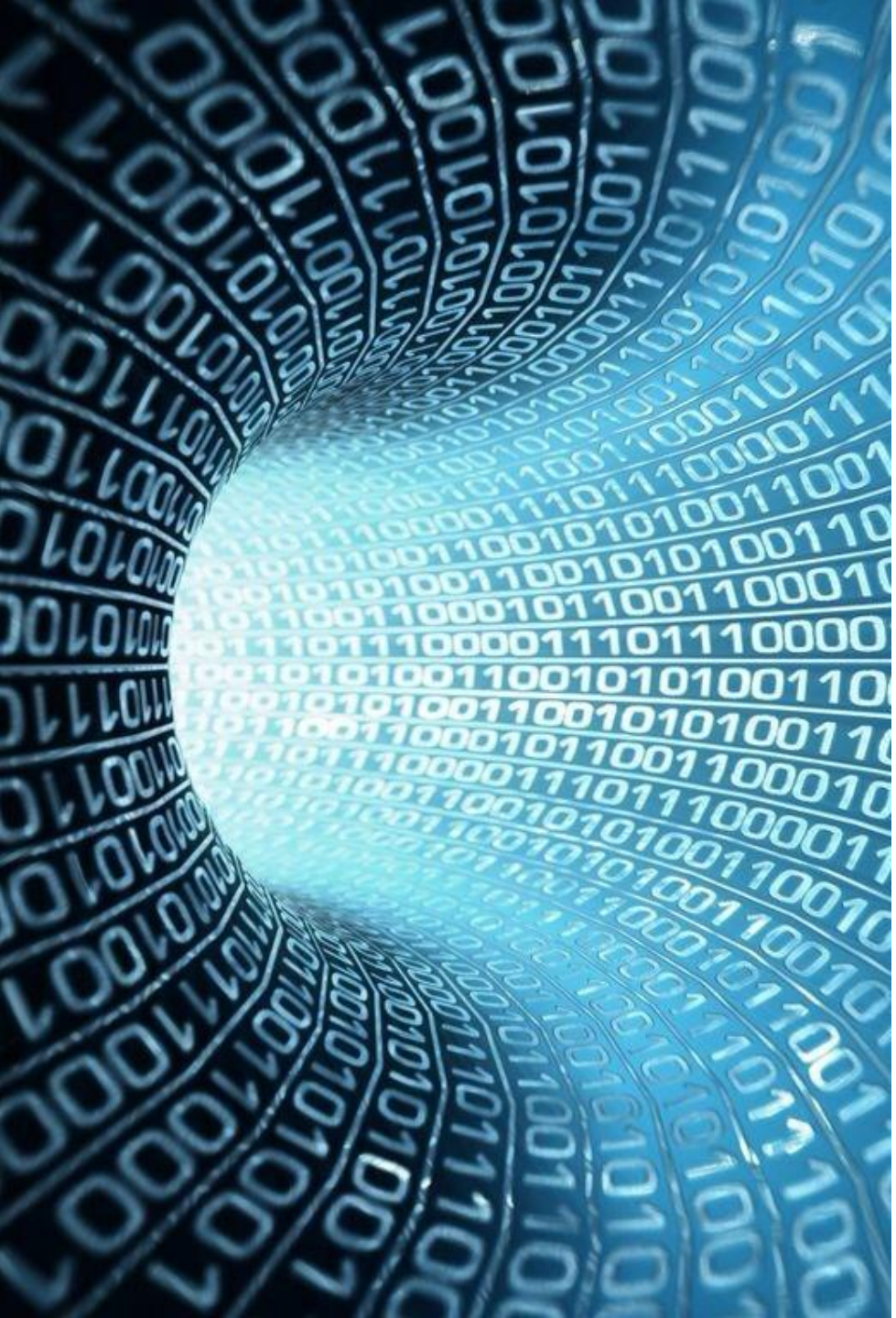
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Residual Data/Ambient Data

- This is data or information that is not actively used on a computer system. It includes data found in unallocated blocks on storage media, data found in the slack space of files and file systems, and data within files that has technically been deleted so that it is not accessible by the application used to create the file.
- This type of data can be retrieved by forensic investigators.

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Legacy Data

- This consists of ESI created by software or hardware that is outmoded or has become obsolete (legacy systems).
- A legacy system may be one that the company still uses but that the hardware or software vendor no longer supports.
- Legacy Data is everything that today's technology cannot open.

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Digital Forensics



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Overview

- Lawyers are essential to guiding digital forensics efforts. Notably, the nuances and specific requirements of the guidelines and considerations as to what data and information could potentially be admitted as evidence in a court of law.

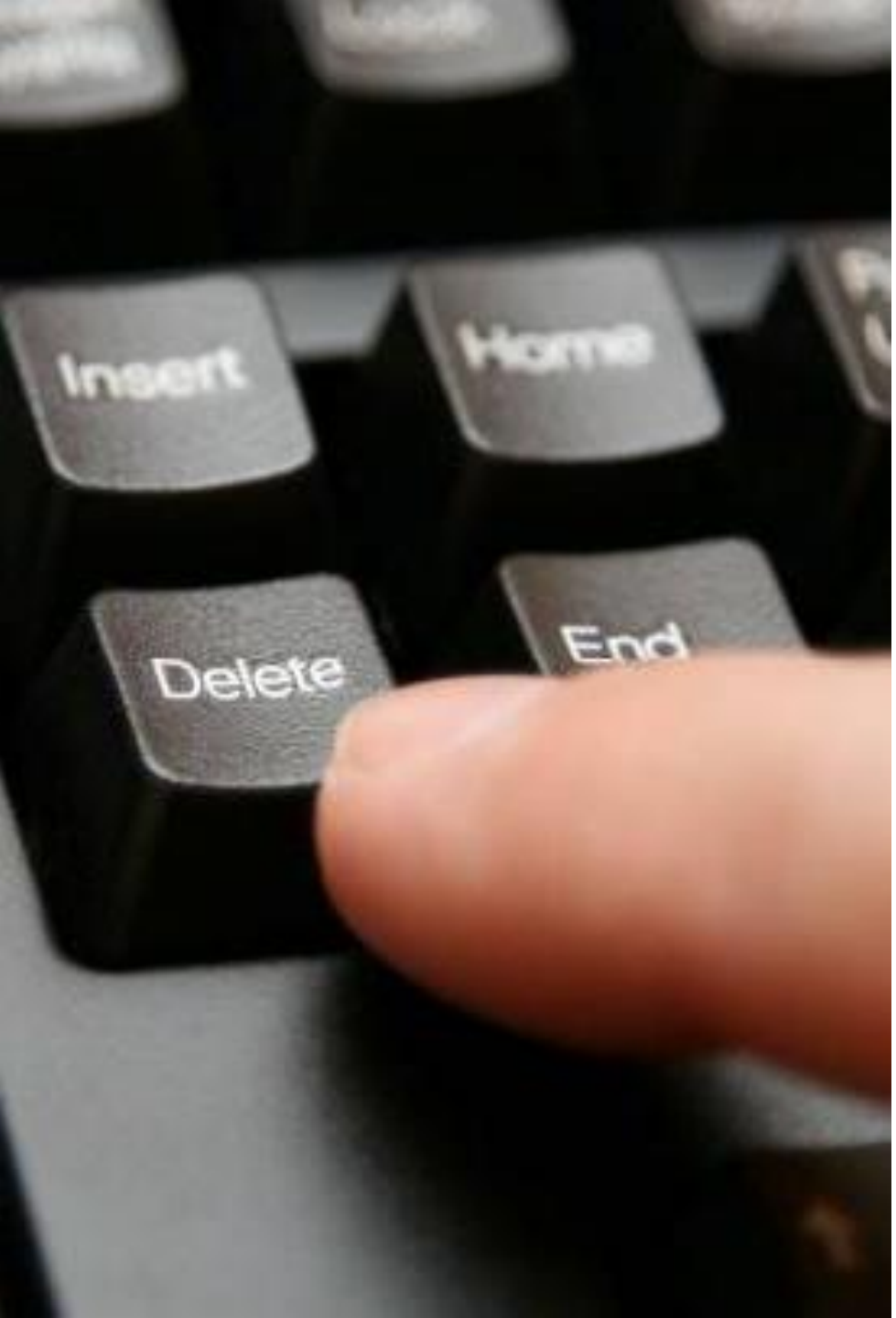
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Forensics in Civil and/or Criminal Cases

- Traces of digital evidence are involved in some aspect of your case.

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What is Digital Forensics?

- Why do we have to deal with digital forensic analysis?
- In cases where information is hidden, erased, or otherwise altered, digital forensic analysis is necessary to draw further conclusions about the available evidence.

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Where Does One Find Digital Evidence?

- Knowing where to look to find relevant digital evidence can:
  - Assist you in planning your strategy.
  - Guide you on instructing your expert on what data you need located and extracted.

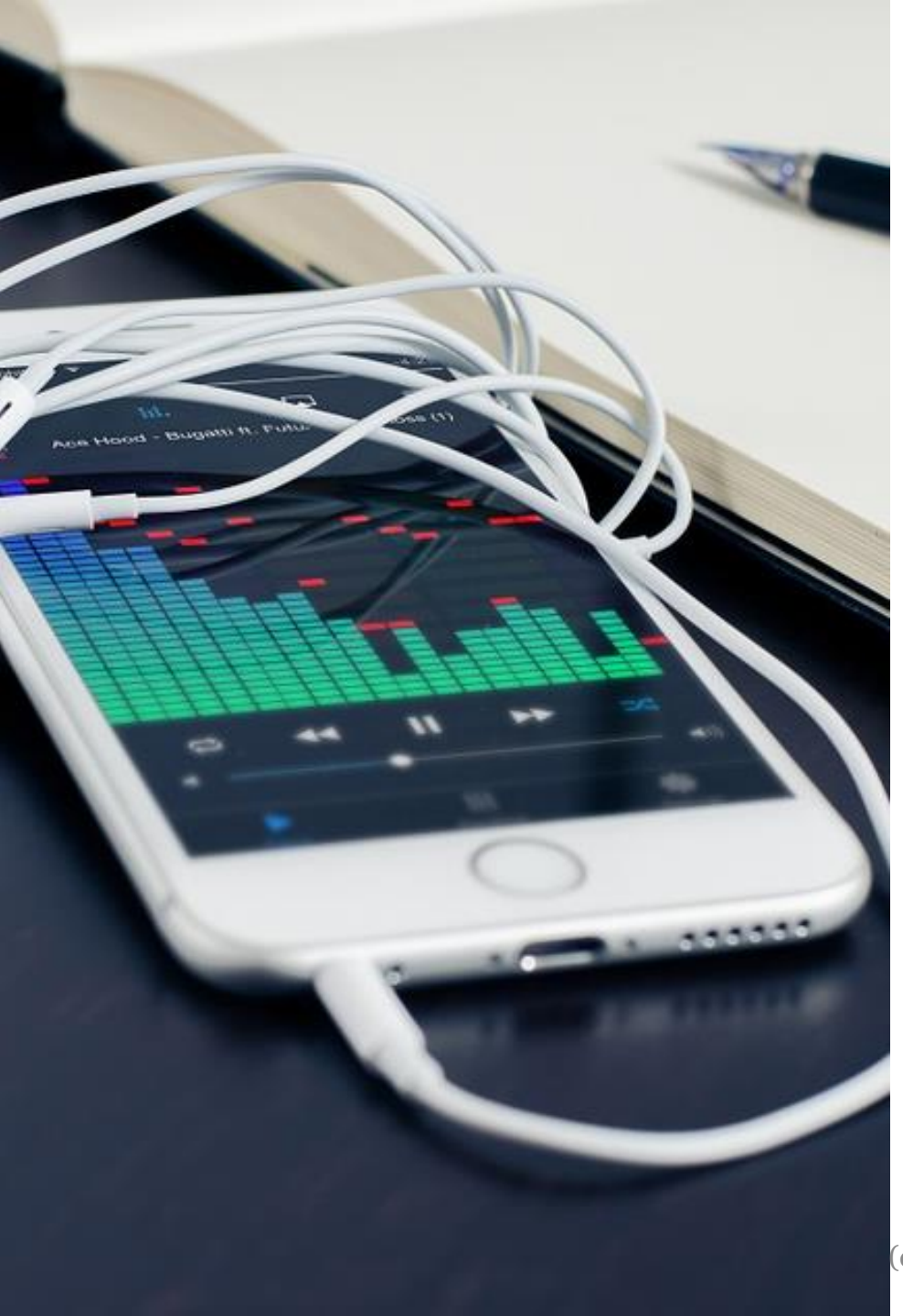
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Sources of Digital Evidence – Computers

- Computers
  - Laptops
  - Desktops
- Internet Service Providers
  - Comcast
  - Viacom

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Sources of Digital Evidence – Mobile/Tablets

- Cell Phones
  - Smart phones
  - iPhone,
  - Androids,
  - Blackberry's …
- Tablets
  - Android
  - iPads, Tablets
- Devices
  - Android Glasses
  - Smart Watches

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Sources of Digital Evidence – Cloud/Email

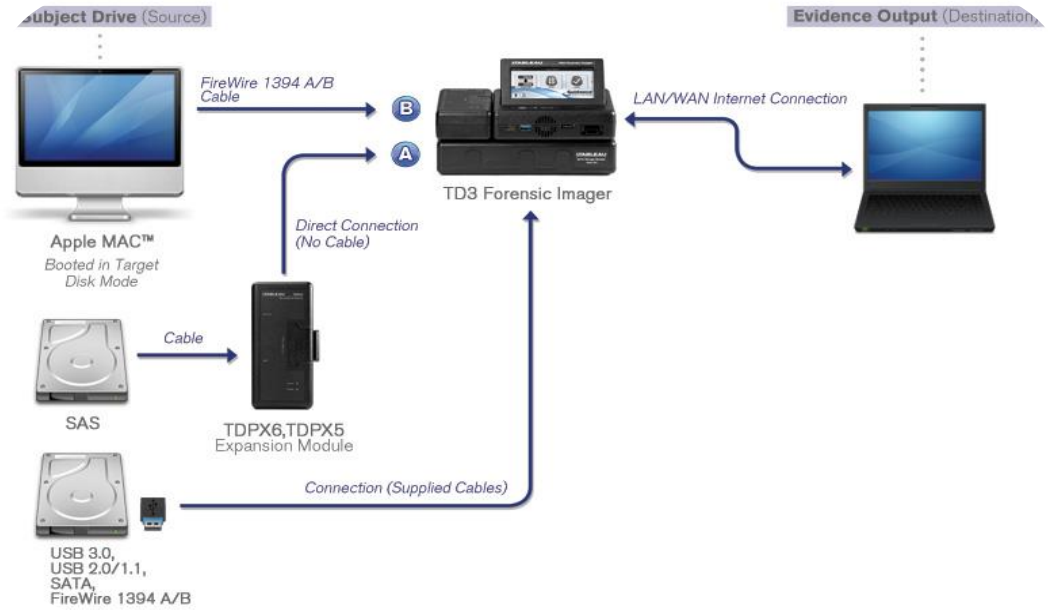
- The Cloud
  - Google Docs
  - Dropbox
  - Windows Live
  - Facebook
- E-Mails
  - Computer
  - Mobile device or
  - On the web or all three sources.

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Computer Forensic Basics for Attorneys

The Digital Forensic Process:

- Create duplicate of the media.
- Verify image is an exact duplicate.
- Backup the image.
- Place original into evidence (Observe Chain of Custody Rules).
- Use forensic software to conduct analysis.



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Key Takeaways

- Technology competence is now a requirement for all lawyers. We have a duty to improve and maintain our technological skills. Mere exposure to technology will not be enough.
- There is no requirement to be a tech genius!
- Honestly assess your current skills and decide whether to delegate or take matters into your own hands and personally learn. Training may take time, but the skill gained can reduce time wasted and positively serve you and your client in the long run.

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Questions?

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Jennifer M. Hoekstra is a partner with Aylstock, Witkin, Kreis & Overholtz, PLLC. A native of Saint Paul, Minnesota, Ms. Hoekstra boasts an impressive academic and professional record, including graduation from two of the nation's top schools. She earned her earned Bachelor of Arts in Environmental Science from Columbia College, Columbia University in the City of New York. She relocated to Louisiana to attend Tulane Law School, where she earned her J.D. while also completing a certificate in Environmental Law. During her law school career, she spent a semester studying at the University of Wisconsin School of Law and visited on their International Law Journal as a Junior Member during her Hurricane Katrina evacuation semester. While in law school, Ms. Hoekstra served as Executive Treasurer of the Student Bar Association and as a Graduate Student Association delegate.

Ms. Hoekstra has been involved in complex litigation cases of all forms since 2007. Jennifer was inspired to pursue her law degree while working as a Litigation Assistant at Cravath Swaine and Moore LLP in New York. Ms. Hoekstra has earned a solid reputation as a skilled writer and researcher, and plays an integral role in several complex litigation cases, practicing in the areas of Pharmaceutical Mass Torts, Defective Device Mass Torts, and other complex litigation. Ms. Hoekstra has been involved in all aspects of MDL litigation involving Actos, Genetically Modified Rice, DePuy ASR, DePuy Pinnacle, Biomet, Plavix, NuvaRing, the BP Oil Spill, and other defective drugs or devices. She is currently a member of the DePuy Pinnacle Law and Briefing Committee as well as a member of the Biomet II PSC. Jennifer was central to the successful outcome in bellwether trials in the Genetically Modified Rice, Actos and DePuy Pinnacle Hip MDLs with more than $11 Billion in trial verdicts resulting from those cases.

She is licensed to practice before all Louisiana state and federal courts and the U.S. District Courts for the Northern District of Texas and Eastern District of Missouri as well as the 5th and 8th Circuit Courts. She is a member of the American Bar Association, the Louisiana Bar Association, the Acadiana Federal Bar Association, the Alexandria Louisiana Bar Association and the American Association for Justice. She is a member of Women En Mass and was also a member of the inaugural 2018 Board of Directors for Emerge Louisiana.



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Daniel Garrie is the Co-Founder of Law & Forensics LLC, Head of Computer Forensics and Cyber Security Practice Groups and has been a dominant voice in the computer forensic and cybersecurity space for over 20 years. Prior to Daniel's legal career, he successfully built and sold several technology start-up companies. Since co-founding Law & Forensics LLC in 2008, Daniel has built it into one of the leading boutique cybersecurity forensic engineering firms in the industry. Daniel has both a Bachelor's and a Master's Degree in computer science from Brandeis University, as well as a J.D. degree from Rutgers Law School. Daniel has led forensic teams in some of the most visible and sensitive cyber incidents in the United States. In particular, Daniel recently located and recovered deleted files in both private and public cloud computing environments using his patented software, Forensic Scan. This investigation took less than forty-eight hours to clean and recover the data from the servers of a cloud-hosting provider that was compromised by a malicious cyber-attack. Thanks to the Forensic Scan technology, that Daniel co-invented and patented (US9990498B2 and US9990497B2), and his own expertise, Daniel and his team was able to identify the source of the breach and remediate the problem in record time.

Daniel regularly testifies as an e-discovery, cybersecurity and computer forensic expert witness, authoring forensic expert reports on multi-million-dollar disputes. His ability to perform complex investigations and effectively communicate the results to a jury has made him one of the most sought-after experts in the country. His testimony has been pivotal in a number of cases, including one involving the embezzlement of millions of dollars from a large non-profit. Daniel was able to perform a thorough analysis of the alleged embezzlers' phone and computer, despite the embezzlers' attempts to wipe them, and identify concrete evidence of the embezzlement to a jury. Since 2008, Daniel has served as a Neutral and Special Master and in 2016, he joined JAMS as one of the organization's youngest Neutrals. At JAMS, Daniel serves as an Arbitrator, Forensic Neutral, and technical Special Master with a focus on cybersecurity, cyrptocurrency, and complex software and technology related disputes. Some of the major cases for which he has served as an e-discovery special master, or forensic neutral include: *Hougan vs. City of Newport Beach, No. 30-2012-00582855* (Super. Ct. Cal. 2014); *Small v. University Medical Center of Southern Nevada, 2014 WL 4079507*(D. Nev. 2014); *C.D.S. Inc. v. Zelter and Amazon Web Services, Inc.*, (S.D.N.Y. 2016); *Jawbone, Inc. v. Fitbit Inc.* et al (Super. Cal., S.F. County 2018). In addition to his vast litigious experience, Daniel is well-published in the cybersecurity space, Editor-in-Chief of the Journal of Law & Cyberwarfare, author of more than 200 articles and books including, "Understanding Software, the Internet, Mobile Computing, and the Cloud. A guide for Judges", published by the Federal Judicial Center. He has been recognized by several United States Supreme Court Justices for his legal scholarship and is a trusted source and a thought leader for cybersecurity articles and opinions, being cited over 500 times to date.

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Judge Leo M. Gordon has served as a judge of the United States Court of International Trade since March 2006. Judge Gordon is responsible for resolving judicial disputes involving challenges to the administration and enforcement of the federal customs and international trade laws by principally U.S. Customs and Border Protection, the U.S. Departments of Commerce, Agriculture, and Labor, and the U.S. International Trade Commission. In addition to his judicial duties, Judge Gordon has chaired, at different times, the Court's Rules, Budget, Public Affairs/Education, and Strategic Planning Committees. Judge Gordon began his career in 1977 as Assistant Counsel at the Subcommittee on Monopolies and Commercial Law, Committee on the Judiciary, U.S. House of Representatives. In that capacity, Judge Gordon was the principal attorney responsible for the Customs Courts Act of 1980 that created the U.S. Court of International Trade. He also had responsibilities involving a wide range of antitrust and other commercial law legislative projects.

Judge Gordon is a member of the Board of Directors for the Federal Judges Association ("FJA"), serves on its Executive Committee, and co-chairs the Association's Benefits Committee. Judge Gordon is also a member of the Board of Directors for the Federal Judges Association ("FJA"), serves on its Executive Committee, and co-chairs the Association's Benefits Committee.

Judge Gordon is a Fellow (Miembro de Numero) of the International Customs Law Academy ("ICLA"). He has addressed the annual meeting of the ICLA in 2012 in Cancun, Mexico speaking on the "Resolution of Customs Disputes in the United States in the Digital Age," and in 2014 in New York speaking on "The U.S. Court of International Trade and Its Role in U.S. Customs Law." Judge Gordon is also a Director of the Academia de Intercambio y Estudios Judiciales ("AIEJ") (The Academy for the Interchange and Study of Judicial Matters) based in Buenos Aires, Argentina. Since 2013, he has conducted several judicial training programs for AIEJ in the United States and Argentina. He also played a principal role in the development of AIEJ's training program for 2017 and 2018.

Judge Gordon attended the University of North Carolina – Chapel Hill, graduating Phi Beta Kappa. He received a J.D. degree from Emory University School of Law. Judge Gordon is a member of the New Jersey, Georgia, and District of Columbia Bars.

Don’t Fall Behind: A Cybersecurity Guide for Law Firms

This concise guide offers steps all law firms, small and large, should take to protect their networks and data against cyber attacks.

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