LEGAL ISSUES AND A CHECKLIST FOR RESPONDING TO RANSOMWARE ATTACKS

Excerpted from the forthcoming 2023 update to Chapter 27 (Cybersecurity: Information, Network and Data Security) *E-Commerce and Internet Law: Legal Treatise with Forms 2d Edition* A 5-volume legal treatise by Ian C. Ballon (Thomson/West Publishing, <u>www.IanBallon.net</u>)

(These excerpts are unrevised page proofs for the current update and may contain errors. Please email the author at <u>ballon@gtlaw.com</u> for a complimentary copy of the final published version.)

PRIVACY & CYBERSECURITY LITIGATION YEAR IN REVIEW

PRIVACY AND CYBERSECURITY SECTION

OF THE LOS ANGELES COUNTY BAR ASSOCIATION

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• COSO, *Risk Assessment in Practice*, https://www.coso.or g/Documents/COSO-ERM%20Risk%20Assessment%20i n%20Practice%20Thought%20Paper%20October %202012.pdf

2. Developing a Comprehensive Written Information Security Program

- NIST, Framework for Improving Critical Infrastructure Cybersecurity, Version 1.1 (April 16, 2018); https:// nvlpubs.nist.gov/nistpubs/CSWP/ NIST.CSWP.04162018.pdf
- NIST Special Publication 800-53, Rev. 5, Security and Privacy Controls for Information Systems and Organizations (Updated Aug. 2017), https://csrc.nist.gov/csrc/med ia/publications/sp/800-53/rev-5/draft/documents/sp800-53r5-draft.pdf
- ISO/IEC 27001:2013 (Information technology—Security techniques—Information security management systems—Requirements), https://www.iso.org/isoiec-27001-information-security.html
- Mass. Office of Consumer Affairs and Business Regulation, A Small Business Guide: Formulating a Comprehensive Written Information Security Program, https://a rchives.lib.state.ma.us/bitstream/handle/2452/685875/oc n987380700.pdf?sequence=1&isAllowed=y
- Peter Sloan, *The Reasonable Information Security Pro*gram, 21 Rich. J.L. & Tech. 2 (Nov. 21, 2014)

3. Examples of a WISP

- Example of NIST 800-53 Template—http://examples.co mplianceforge.com/example-nist-800-53-written-informa tion-security-program-it-security-policy-example.pdf
- Wellesley College—http://www.wellesley.edu/lts/policie s/wisp
- Buchanan & Associates—Sample template—https://ww w.buchananassociates.com/Buchanan-Associates-Sampl e-Template-Written-Information-Security-Plan-WIS P.pdf
- New England Teamsters Pension Fund—http://nettipf.c om/pdf_files/wisp.pdf

27.14 Legal Issues and A Checklist for Responding to Ransomware Attacks

A ransomware attack involves a security breach where an

Pub. 4/2020

27-1509

unauthorized third party gains access to a network and encrypts data or systems, to prevent the owner from using its essential systems or data until a "ransom" is paid (typically in cryptocurrency¹) for a decryption key, often accompanied by the threat that sensitive data stolen from the target company will be released if the ransom is not paid. Unlike a typical cybersecurity breach where a third party gains access to a network and copies information that it seeks to use itself or monetize, a ransomware attack is undertaken to obtain money—a ransom²—from the target of

[Section 27.14]

¹The increasing frequency in ransomware attacks during the 2010s tracked the rise in acceptance of cryptocurrency, which generally allows for anonymous transactions. In 2021, however, the FBI was able to track disbursement of approximately \$4.4 million in cryptocurrency paid to DarkSide as a ransom for the Colonial Pipeline Co. ransomware attack, and recover cryptocurrency worth approximately \$2.3 million. See David Uberti, *How the FBI Got Colonial Pipeline's Ransom Money Back*, Wall St. J., June 11, 2021. Cryptocurrencies are held in digital accounts known as wallets, which store the addresses for the virtual locations of cryptocurrency and the private keys needed to access the funds. While wallets are generally private, cryptocurrency transactions are recorded on the Blockchain, a public ledger that is visible to third parties, including law enforcement. *See id.; see also supra* § 27.03A (blockchain).

While cryptocurrency exchanges generally are used for lawful purposes, SUEX OTC, S.R.O. was placed on the OFAC sanctions list in September 2021, based on a finding that more than 40% of its known transactions involved illicit actors and that SUEX had facilitated transactions involving at least eight ransomware variants. *See* U.S. Department of the Treasury, *Treasury Takes Robust Actions to Counter Ransomware*, Sept. 21, 2021.

²Ransom demands may vary depending on the size of an enterprise, its ability to pay, and the extent of its insurance coverage. REvil, a Russian ransomware attacker identified by the FBI, reportedly obtained an \$11 million payment for a Memorial Day 2021 attack on global meat supplier JBS and demanded \$70 million in cryptocurrency for a universal decryptor in response to the attack on Kaseya, a software company that provided remote IT services to up to over 800,000 businesses located around the world, which was discovered at the beginning of the July 4 holiday weekend in 2021. See Ben Kochman, Software Vendor Hack Leads to Ransomware Spree, Law360, July 6, 2021.

While it is difficult to accurately estimate the average ransomware payment since information on payments is incomplete and payment amounts often depend on individual negotiations and various factors such as the extent of insurance coverage and a company's need to obtain a decryption tool, Coveware estimated that ransomware payments declined in 2021 as a result of ransomware being treated as a national security concern, fewer companies making ransom payments, and ransomware at-

27 - 1510

the attack (usually in the form of anonymized cryptocurrency), in return for a decryption key to allow the target to regain access to systems or data that had been rendered inaccessible and/or to prevent its public disclosure. A ransomware attacker typically will disclose some data to the victim to prove to the owner that the person or organization making the ransom demand is the same person or organization that encrypted it (since otherwise a company could be doubly victimized by paying the wrong scammer). Target companies typically must react quickly-especially if their ability to conduct business is implicated. Adding to the complexity of responding to a ransomware attack, however, is the fact that paying or even simply facilitating ransomware payments to persons, entities or countries subject to U.S. sanctions or embargoes, may subject a person to civil penalties and fines imposed the U.S. Treasury Department's Office of Foreign Asset Controls (OFAC).

OFAC sanctions may be imposed on businesses that directly pay or facilitate ransomware payments to on behalf of victims, including, according to OFAC, financial institutions, cyber insurance providers, forensic firms and others,³ based on strict liability. Pursuant to the International Emergency Economic Powers Act (IEEPA) or the Trading with the Enemy Act (TWEA),⁴ U.S. persons are generally prohibited from engaging in transactions, directly or indirectly, with individuals or entities on OFAC's Specially Designated Nationals and Blocked Persons List (SDN List), other blocked persons, and those covered by comprehensive country or region embargoes (such as Cuba, Russian occupied Crimea, Iran, North Korea, and Syria). Additionally, any transaction that causes a violation under IEEPA, includ-

³See U.S. Department of the Treasury, Updated Advisory on Potential Sanctions Risks for Facilitating Ransomware Payments, Sept. 21, 2021, available at https://home.treasury.gov/system/files/126/ ofac_ransomware_advisory.pdf.

⁴50 U.S.C.A. §§ 4301–41, 1701–06.

Pub. 4/2020

27 - 1511

tackers targeting smaller companies that were less well prepared to withstand an attack. *See* Coveware Ransomware Recovery Blog, https://www.coveware.com/blog (last visited Dec. 26, 2021).

The costs associated with remediating a ransomware attack are not limited to the ransom payment, if any. Whether addressed exclusively through backups or with a decryptor purchased for a ransom, a target company will need to expend significant time and money to restore and harden the security of its software, networks and data following a ransomware attack.

ing a transaction by a non-U.S. person that causes a U.S. person to violate any IEEPA-based sanctions prohibitions, is also prohibited. U.S. persons, wherever located, are also generally prohibited from facilitating actions of non-U.S. persons that could not be directly performed by U.S. persons due to U.S. sanctions regulations.⁵ For this reason, businesses need to act cautiously in evaluating whether to accede to ransom demands.

As ransomware attacks have become more prevalent, accounting for 22% of cyberattacks in 2021 by one estimate,⁶ some criminal enterprises have reduced ransomware attacks to an organized business, typically run offshore (in Russia and elsewhere), with predictable demands and sought-after terms for resolving an attack.⁷ Lawyers who deal regularly with ransomware attacks will recognize particular criminal

⁶Bree Fowler, *Data breaches break record in 2021*, c/net, Jan 24, 2022 (quoting the Identity Theft Resource Center's 2021 Data Breach Report).

'Some have dubbed this more organized approach of groups such as REvil and DarkSide as *ransomware-as-a-service*, suggesting that like cloud-based SaaS application providers, they offer tools and services used by others. *See* Gerrit De Vynck, Rachel Lerman, Ellen Nakashima & Chris Alcantara, *The anatomy of a ransomware attack*, Wash. Post, July 9, 2021; Isabelle Khurshudyan & Loveday Morris, *Ransomware's suspected Russian roots point to a long détente between the Kremlin and hackers*, Wash.

27 - 1512

⁵U.S. Department of the Treasury, Updated Advisory on Potential Sanctions Risks for Facilitating Ransomware Payments, Sept. 21, 2021, https://home.treasury.gov/system/files/126/ available atofac_ransomware_advisory.pdf; see also 31 C.F.R. part 501, appx. A (OFAC's Economic Sanctions Enforcement Guidelines). Although knowledge or intent are not determining factors (since OFAC sanctions may be imposed based on strict liability), OFAC will consider the existence, nature and adequacy of a sanctions compliance program in determining an appropriate enforcement response to an apparent violation. See Updated Advisory, at 4; see also Cybersecurity and Infrastructure Security Agency Guidance, Ransomware Guide, Sept. 2020, available at https:// www.cisa.gov/sites/default/files/publications/CISA_MS-ISAC_Ransomware%20Guide_S508C_.pdf. Mitigating factors "could include maintaining offline backups of data, developing incident response plans, instituting cybersecurity training, regularly updating antivirus and anti-malware software, and employing authentication protocols, among others." Updated Advisory, at 5. "While the resolution of each potential

enforcement matter depends on the specific facts and circumstances, OFAC would be more likely to resolve apparent violations involving ransomware attacks with a non-public response (i.e., a No Action Letter or a Cautionary Letter) when the affected party took the mitigating steps described above, particularly reporting the ransomware attack to law enforcement as soon as possible and providing ongoing cooperation." *Id.*

organizations, which have set practices, follow particular routines, and are known to make particular demands or be willing to negotiate particular settlement terms. At the same time, efforts by the Biden Administration to pressure Russia to shutter ransomware groups based in Russia, beginning in 2021, have reduced somewhat the volume of attacks.⁸

When a ransomware attack occurs, the victim company typically must confront two separate but related concerns: (1) access to critical systems or information, which have become inaccessible, and (2) the compromise of information that has been exfiltrated, which could be further disseminated or publicly disclosed.

Following a ransomware attack, there is often pressure on the target of the attack to act quickly. If a business does not have adequate backup copies of its data or the ability to operate without accessing a compromised system, the business could be shut down for days or even weeks until it regains access to its data, systems or network. A business also may be under pressure to inform customers and vendors if data or systems are inaccessible, and may face regulatory pressure to quickly report a breach if data has been exfiltrated. The ransom demand itself typically establishes a deadline for a response.

Ransomware attackers may also feel pressure to close a transaction quickly before they are unmasked, which may allow room for negotiating the amount of the ransom payment.

Ransomware attackers typically offer the ability to regain access coupled with the threat to release sensitive informa-

Pub. 4/2020

27 - 1513

Post, June 12, 2021; see also Andrew E. Kramer, Michael Schwirtz & Anton Troianovski, Secret Chats Show How Cybergang Became a Ransomware Powerhouse, N.Y. Times, June 3, 2021 (describing how DarkSide, as the malware developer, charged a user fee to affiliates, who used DarkSide software to break into victim networks, and even provided technical support for hackers, negotiating with targets, processing payments, and developing pressure campaigns, with DarkSide earning fees on a sliding scale ranging from 25% for ransoms under \$500,000 to 10% for ransoms over \$5 million).

⁸Shortly after President Biden demanded that Russian President Putin crack down on ransomware attackers based in Russia that targeted American entities, REvil's darknet (.onion) and clearnet (decoder.re) websites went dark. David E. Sanger, *Russia's most aggressive ransomware group disappeared*, N.Y. Times, July 13, 2021; Maggie Miller, *Russian hacking group believed to be behind Kaseya cyber attack goes offline*, The Hill, July 13, 2021.

tion to the public if a ransom is not paid. When deals are made, ransomware attackers typically promise to honor their agreements and not further use, disseminate or retain the company's data or information once a ransom is paid. These commitments may be honored by attackers who are concerned about their reputations—and their ability to extract ransoms from other victims—but ransomware attackers ultimately are criminals, whose credibility and trustworthiness may be questionable.

Network and data access may be restored without paying a ransom if the company has adequate back up files and redundant capacity. If a company is unable to access its system or critical information, its business may be interrupted and it may face financial consequences that may a ransom payment appear reasonable. Even if a ransom is paid, there is no guaranty that a business can quickly resume operations. Some attackers are more skilled than others, and the process of encrypting and then decrypting files may not be bug-free. Decryption tools may be only as sophisticated as the criminals who created them. In many cases, it may be easier to prevent an owner from accessing critical systems or information than it is to restore them to working conditions. In addition, ransomware attackers have a greater incentive to engineer a detection-free attack than to create best-in-breed decryption and restoration tools. Victims that pay a ransom for decryption tools also must be careful to determine whether an attacker has created backdoors that would allow for future attacks or otherwise intentionally or unintentionally inserted malware or security flaws into a system.

With respect to data, although a victim typically may be deprived of access to information it needs to run its business, it may also face competitive, privacy or regulatory risks as a result of the exposure and possible further dissemination or publication of its information. The threat of publicizing company, employee or consumer information may not present as immediate a threat as being locked out of a system or network but the long term consequences for a company could be more significant.⁹ Businesses that reject ransom demands may also face further extortion efforts,

27-1514

⁹Indeed, Babuk Locker, a ransomware gang, announced in 2021 that it was closing its affiliate program and transitioning to an extortion-only model—stealing data and threatening to release it if payments were not

including DDoS attacks or efforts to publicize the attack or contact key customers or business partners.

Among other things, a business must evaluate whether it is obligated to provide notice of a security breach to consumers and regulators, as detailed in sections 27.08 and 27.09. Not every ransomware attack will require notification under U.S. law.

Ransomware attacks also may lead to regulatory enforcement by the Federal Trade Commission or State Attorneys' General and to litigation. Customers may seek indemnification or contributions where their businesses were impacted by a ransomware attack on a supplier. The victim itself also may have disputes with its insurer over coverage. In addition, consumers and shareholders may file putative class action suits, as analyzed in section 27.07. For these reasons, it is important for businesses to respond to ransomware attacks in coordination with counsel.¹⁰

A ransomware attack may also involve the theft of trade secrets which, if exposed, could destroy their value, as analyzed in chapter 10. Even if information does not rise to the level of a trade secret, its disclosure could cause competitive harm, put the victim in breach of third party obligations, or expose customer or employee information.

In responding to a ransomware attack, a company also should evaluate whether and when to involve law enforcement, which may provide useful information about a known attacker but may also discourage cooperation or payment of a ransom.¹¹

While some ransomware attacks arise out of software flaws that are exploited by attackers, many have involved more

¹⁰See supra § 27.07[5] (preservation of privilege and confidentiality in putative data breach class action litigation).

¹¹See generally infra chapter 43 (criminal vs. civil remedies and related considerations).

Pub. 4/2020

27 - 1515

received—after concerns emerged about bugs in its decryptor program which could destroy the victim's files "and, potentially, lead to revenue losses for the gang in the future if victims' would've refused to pay ransoms." Segiu Gatlan, *Ransomware gang leaks data from Metropolitan Police Department*, Bleeping Computer, May 11, 2021. In addition to D.C. police personnel files, criminal case files and payroll data of the 63-officer Azusa, California police department were leaked online when the department refused to pay a ransom. *See* Harriet Ryan, *Ransomware hack puts sensitive Azusa Police Department documents online*, L.A. Times, May 31, 2021.

mundane methods to access a network such as using phishing emails to trick employees into opening an attachment or clicking on a link that downloads malware,¹² and thus can be countered by better employee training and vendor or other third party supervision. Businesses should also follow the periodic reports issued by the U.S. government's Cybersecurity & Infrastructure Security Agency, which reports on known attacks and the ways that a company may harden its protection against those attacks.¹³

The following checklist identifies ways that a business can mitigate its risk of a ransomware attack and outlines steps to take once an attack has occurred.

Planning in Advance

- Plan in advance to secure your systems and train employees, contractors and vendors to minimize the risk of a ransomware attack
- Adopt, implement, and update an incident response plan (which should anticipate alternative potential attacks)
- Obtain insurance
- Include a recovery strategy for dealing with ransomware attacks in a company's written information security or incident response plan
- Conduct tabletop exercises (including I.T., security,

Additional resources may be found at https://www.cisa.gov/ stopransomware or StopRansomware.gov (which both resolve to the same location).

27 - 1516

¹²See Gerrit De Vynck, Rachel Lerman, Ellen Nakashima & Chris Alcantara, *The anatomy of a ransomware attack*, Wash. Post, July 9, 2021.

¹³CISA alerts are posted at https://www.cisa.gov/uscert/ncas/alerts. See, e.g., CISA, CISA, FBI, NSA and International Partners Issue Advisory to Mitigate Apache Log4J Vulnerabilities, available at https:// www.cisa.gov/news/2021/12/22/cisa-fbi-nsa-and-international-partnersissue-advisory-mitigate-apache-log4j (posted Dec. 22, 2021); CISA, CISA, FBI, & NSA Release Joint Cybersecurity Advisory on BlackMatter Ransomware, available at https://www.cisa.gov/uscert/ncas/currentactivity/2021/10/18/cisa-fbi-and-nsa-release-joint-cybersecurity-advisoryblackmatter (posted Oct. 18, 2021); CISA, CISA, FBI, & NSA Release Joint Cybersecurity Advisory on Conti Ransomware, available at https:// www.cisa.gov/uscert/ncas/current-activity/2021/09/22/cisa-fbi-and-nsarelease-joint-cybersecurity-advisory-conti (posted Sept. 22, 2021); U.K. National Cyber Security Centre, CISA, the U.S. Department of Justice & the NSA, Advisory, Further TPPs Associated with SVR Cyber Actors, available at https://www.ncsc.gov.uk/files/Advisory-further-TTPs-associatedwith-SVR-cyber-actors.pdf (posted May 7, 2021).

legal and communications professionals) to be ready to respond quickly when an attack occurs, directed by counsel

- Consider privilege issues to minimize the risk that a company's efforts to plan for ransomware attack become discoverable in litigation if an attack occurs¹⁴
- Retain offline mirror copies or complete backups of essential systems and data to minimize the risk of business interruption, and the likelihood that your company could be held hostage, in the event of an attack, and make sure that backups are current and operational¹⁵
- Plan in advance, to the extent possible, which lawyer(s) or consultants to use if negotiations are contemplated
- Implement and continually update industry standard security measures and best practices, as outlined elsewhere in this chapter, including using multi-factor authentication and avoiding or limiting use of accounts with administrative access privileges, where possible
- Train employees and audit vendor security to deter cybersecurity breaches and vulnerability to phishing scams
- Conduct regular vulnerability scans to identify and remediate vulnerabilities and regularly update and

- Maintain regularly updated "gold images" of critical systems in the event they need to be rebuilt. This entails maintaining image "templates" that include a preconfigured operating system (OS) and associated software applications that can be quickly deployed to rebuild a system, such as a virtual machine or server.
- Retain backup hardware to rebuild systems in the event rebuilding the primary system is not preferred.
 - Hardware that is newer or older than the primary system can present installation or compatibility hurdles when rebuilding from images.
- In addition to system images, applicable source code or executables should be available (stored with backups, escrowed, license agreement to obtain, etc.). It is more efficient to rebuild from system images, but some images will not install on different hardware or platforms correctly; having separate access to needed software will help in these cases.

Cybersecurity & Infrastructure Security Agency and Multi-State Information Sharing & Analysis Center, Ransomware Guide 3 (Sept. 2020), *available at* https://www.cisa.gov/sites/default/files/publications/CISA_MS-ISA C_Ransomware%20Guide_S508C_.pdf.

Pub. 4/2020

27 - 1517

¹⁴See supra § 27.07[5].

¹⁵The Cybersecurity & Infrastructure Security Agency recommended in mid-2020 that organizations:

patch software, including antivirus and anti-malware software

• Audit contracts to verify if indemnification provisions would protect a company for an attack on a business partner, vendor or other third party, and consider whether to seek additional protection

When an Attack Occurs

- Determine what systems or information have been compromised and/or made inaccessible, isolate or shut down those components that have been compromised, and determine whether adequate backups or access exist to continue essential business functions
- Determine whether the attacker's access has been cut off or whether it is still able to access and compromise systems and data
- Consider coordination with law enforcement¹⁶
- Review CISA alerts on major ransomware attacks and evaluate if security researchers have available decryption tools since some Ransomware encryption algorithms have been broken
- Determine if there are notification requirements to consumers, state agencies, regulators, or business partners required by law¹⁷ or contract
- Determine if trade secrets have been compromised¹⁸
- Evaluate if OFAC rules even allow for the payment of a ransom
- Even if paying a ransom is an option, consider whether restoration from a past backup would be a faster and more secure option

¹⁷See supra §§ 27.08, 27.09. Whether there is an obligation to provide notification may depend on whether information was exfiltrated or merely potentially accessible, and applicable state law. See *id.* Notification obligations may arise as quickly as 72 hours for EU consumers, under the GDPR. See supra § 26.04.

¹⁸See supra chapter 10.

27-1518

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27.14

¹⁶See generally infra chapter 43. Among other things, reporting a ransomware attack to the appropriate U.S. government agency or agencies and cooperating with OFAC, law enforcement, and other relevant agencies, may be mitigating factors in the event of an OFAC violation. See U.S. Department of the Treasury, Updated Advisory on Potential Sanctions Risks for Facilitating Ransomware Payments 5, Sept. 21, 2021, available at https://home.treasury.gov/system/files/126/ofac_ransomware_advisory.pdf. A self-initiated and complete report of a potential violation will also be considered a mitigating factor. See id.

- If a ransom deal is sought and may be lawfully made, identify the terms and objectives for an agreement, including confidentiality so publicity about a payment does not encourage further attacks, and consider using entities experienced in negotiating with ransomware attackers (such as Arete, Coveware and Kivu¹⁹)
- Manage communications with employees, customers, vendors and others impacted by the attack
- Harden protection to prevent similar attacks in the future
- Evaluate whether indemnification obligations may be owed to the impacted business, to offset some of the costs

More specific recommendations on rebuilding compromised systems and technical best practices may be found in the Cybersecurity & Infrastructure Security Agency and Multi-State Information Sharing & Analysis Center's Ransomware Guide.²⁰

Pub. 4/2020

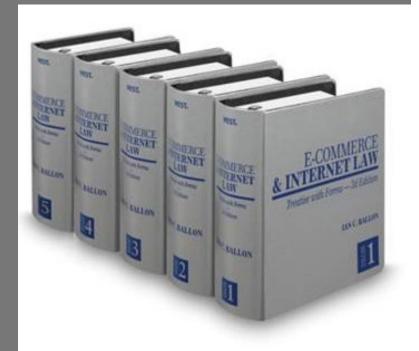
¹⁹See Ellen Nakashima & Rachel Lerman, Ransomware is a national security threat and a big business—and it's wreaking havoc, Wash. Post, May 15, 2021. Negotiations "typically happen through email or an encrypted chat room on the 'dark web,' a portion of the Internet where sites are not accessible through search engines and typically require use of an anonymizing browser, like Tor." *Id.*; see also Rachel Monroe, *How to Negotiate with Ransomware Hackers*, New Yorker, May 31, 2021 (describing the experiences of Kurtis Minder of GroupSense).

²⁰Cybersecurity & Infrastructure Security Agency and Multi-State Information Sharing & Analysis Center, Ransomware Guide (Sept. 2020), *available at* https://www.cisa.gov/sites/default/files/publications/CISA_MS-ISAC_Ransomware%20Guide_S508C_.pdf.

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- Dormant Commerce Clause restrictions on state law regulation of online and mobile commerce
- The law of SEO and SEM and its impact on ecommerce vendors
- Defending cybersecurity breach and data privacy class action suits – case law, trends & strategy
- IP issues including Copyright and Lanham Act fair use, Rogers v. Grimaldi, patentable subject matter, negative trade secrets, rights of publicity laws governing the use of a person's images and attributes, initial interest confusion, software copyrightability, damages in internet and mobile cases, the use of hashtags in social media marketing, new rules governing fee awards, and the applicability and scope of federal and state safe harbors and exemptions
- Online anonymity and pseudonymity state and federal laws governing permissible disclosures and subpoenas
- Sponsored links, embedded links, #hashtags, and internet, mobile and social media advertising
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- Applying the First Sale Doctrine to virtual goods
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- Data Privacy, Cybersecurity and Advertising
- The Conduct and Regulation of E-Commerce
- Internet Speech, Defamation, Online Torts and the Good Samaritan Exemption
- Obscenity, Pornography, Adult Entertainment and the Protection of Children
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- 28. Advertising in Cyberspace

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31. Online Financial Transactions and Payment Mechanisms

32. Online Securities Law

33. State and Local Sales and Use Taxes on Internet and Mobile Transactions

- 34. Antitrust Restrictions on Technology Companies
- and Electronic Commerce

35. Dormant Commerce Clause and Other Federal Law Restrictions on State and Local Regulation of the Internet

36. Best Practices for U.S. Companies in Evaluating Global E-Commerce Regulations and Operating Internationally

Part VI. Internet Speech, Defamation, Online Torts and the **Good Samaritan Exemption**

37. Defamation, Torts and the Good Samaritan Exemption (47 U.S.C.A. § 230) 38. Tort and Related Liability for Hacking, Cracking,

Computer Viruses, Disabling Devices and Other **Network Disruptions**

39. E-Commerce and the Rights of Free Speech, Press and Expression in Cyberspace

Part VII. Obscenity, Pornography, Adult Entertainment and the Protection of Children

40. Child Pornography and Obscenity

41. Laws Regulating Non-Obscene Adult Content Directed at Children

42. U.S. Jurisdiction, Venue and Procedure in

Obscenity and Other Internet Crime Cases

Part VIII. Theft of Digital Information and Related Internet Crimes

43. Detecting and Retrieving Stolen Corporate Data 44. Criminal and Related Civil Remedies for Software and Digital Information Theft

45. Crimes Directed at Computer Networks and Users: Viruses and Malicious Code, Service Disabling Attacks and Threats Transmitted by Email

Volume 5

Chapter 46. Identity Theft 47. Civil Remedies for Unlawful Seizures Part IX. Liability of Internet Sites and Service (Including Social Networks and Blogs) 48. Assessing and Limiting Liability Through Policies, Procedures and Website Audits 49. Content Moderation and Platform Liability: Service Provider and Website, Mobile App, Network and Cloud Provider Exposure for User Generated Content and Misconduct 50. Cloud, Mobile and Internet Service Provider Compliance with Subpoenas and Court Orders 51. Web 2.0 Applications: Social Networks, Blogs, Wiki and UGC Sites

Civil Jurisdiction and Litigation Part X.

- 52. General Overview of Cyberspace Jurisdiction
- 53. Personal Jurisdiction in Cyberspace
- 54. Venue and the Doctrine of Forum Non Conveniens
- 55. Choice of Law in Cyberspace
- 56. Internet ADR
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General Counsel, ResearchGate

Ра

ABOUT THE AUTHOR

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Ian Ballon is Co-Chair of Greenberg Traurig LLP's Global Intellectual Property and Technology Practice Group and is a litigator in the firm's Silicon Valley Los Angeles and Washington, DC offices. He defends data privacy, cybersecurity



breach, AdTech, TCPA, and other Internet and mobile class action suits and litigates copyright, trademark, patent, trade secret, right of publicity, database, AI and other intellectual property cases, including disputes involving safe harbors and exemptions, platform liability and fair use.

Mr. Ballon was the recipient of the 2010 Vanguard Award from the State Bar of California's Intellectual Property Law Section. He also has been recognized by *The Los Angeles and San Francisco Daily Journal* as one of the Top Intellectual Property litigators in every year the list has been published (2009-2021), Top Cybersecurity and Artificial Intelligence (AI) lawyers, and Top 100 lawyers in California.

Mr. Ballon was named a "Groundbreaker" by *The Recorder* at its 2017 Bay Area Litigation Departments of the Year awards ceremony and was selected as an "Intellectual Property Trailblazer" by the *National Law Journal*.

Mr. Ballon was selected as the Lawyer of the Year for information technology law in the 2022, 2021, 2020, 2019, 2018, 2016 and 2013 editions of *The Best Lawyers in America* and is listed in Legal 500 U.S., Law Dragon and Chambers and Partners USA Guide. He also serves as Executive Director of Stanford University Law School's Center for the Digital Economy.

Mr. Ballon received his B.A. *magna cum laude* from Tufts University, his J.D. *with honors* from George Washington University Law School and an LLM in international and comparative law from Georgetown University Law Center. He also holds the C.I.P.P./U.S. certification from the International Association of Privacy Professionals (IAPP).

Mr. Ballon is also the author of *The Complete CAN-SPAM Act Handbook* (West 2008) and *The Complete State Security Breach Notification Compliance Handbook* (West 2009), published by Thomson West (www.lanBallon.net).

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NEW AND IMPORTANT FEATURES FOR 2022

- > Antitrust in the era of techlash (chapter 34)
- Platform moderation and liability, safe harbors and defenses (ch. 49, 4, 6, 8, 37)
- Privacy and IP aspects of Artificial Intelligence (AI) and machine learning (ch. 5, 26)
- How TransUnion v. Ramirez (2021) changes the law of standing in cybersecurty breach, data privacy, AdTech and TCPA class action suits.
- > 90+ page exhaustive analysis of the CCPA and CPRA, all statutory amendments and final > regulations, and how the law will change under the CPRA – the most comprehensive analysis available! (ch 37)
- > Text and other mobile marketing under the TCPA following the U.S. Supreme Court's ruling in *Facebook, Inc. v. Duguid,* 141 S. Ct. 1163 (2021) – and continuing pitfalls companies should avoid to limit exposure
- Software copyrightability and fair use in light of the U.S. Supreme Court's 2021 decision in Google LLC v. Oracle America, Inc., 141 S. Ct. 1183 (2021) (ch 4)
- Rethinking 20 years of database and screen scraping case law in light of the U.S. Supreme Court's opinion in Van Buren v. United States, 141 S. Ct. 1648 (2021) (ch5)
- FOSTA-SESTA and ways to maximize CDA protection (ch 37)
- IP aspects of the use of #hashtags in social media (ch 6)
- > The CLOUD Act (chapter 50)
- > Virginia, Colorado and Nevada privacy laws (ch 26)
- Applying the single publication rule to websites, links and uses on social media (chapter 37)
- Digital economy litigation strategies
- Circuit-by-circuit, claim-byclaim analysis of CDA opinions

- How new Copyright Claims Board proceedings will disrupt DMCA compliance for copyright owners, service providers and users (ch 4)
- Website and mobile accessibility under the ADA and state laws (chapter 48)
- Online and mobile Contract formation – common mistakes by courts and counsel (chapter 21)
- Updated Defend Trade Secrets Act and UTSA case law (chapter 10)
- Drafting enforceable arbitration clauses and class action waivers (with new sample provisions) (chapter 22)
- AdTech law (chapter 28, Darren Abernethy)
- > The risks of being bound by the CASE Act's ostensibly voluntary jurisdiction over small copyright cases
- Rethinking approaches to consumer arbitration clauses in light of mass arbitration and case law on representative actions.
- Dormant Commerce Clause challenges to state privacy and other laws – explained
- First Amendment protections and restrictions on social media posts and the digital economy – important new case law
- The GDPR, ePrivacy Directive and transferring data from the EU/EEA (by Francoise Gilbert and Viola Bensinger) (ch. 26)
- Patent law (updated by Josh Raskin) (chapter 8)
- Idea protection & misappropriation (ch 13)
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