EXHIBIT A-17

REDACTED - PUBLICLY FILED VERSION OF DOC. 151-17 PURSUANT TO COURT ORDER, DATED MARCH 21, 2023 (DOC. 178)

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

CAT BROOKS and RASHEED SHABAZZ, individually and on behalf of all others similarly situated	)	
v.	)	Case No. 3:21-cv-1418-EMC
THOMSON REUTERS CORPORATION,	)	
Defendant.	)	HIGHLY CONFIDENTIAL – ATTORNEYS' EYES ONLY

EXPERT REPORT OF DOUGLAS KIDDER

September 7, 2022

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1 Scope of Work

1. I have been retained by counsel for Thomson Reuters Corporation ("Thomson Reuters") to review and reply to two expert reports filed on behalf of Cat Brooks, Rasheed Shabazz and the proposed class ("Plaintiffs") in this matter. The first report was submitted by Professor Joseph Turow on June 1, 2022[1] (the "Turow Report.") I have not been asked to comment on all aspects of the Turow Report – only those aspects that relate to damages. The second report was submitted by Terry Lloyd on behalf of the Finance Scholars Group, Inc. on June 1, 2022[2] (the "Lloyd Report") and I have been asked to comment on it in its entirety.

2. The opinions contained in my report are based on the opinions, information and data available to me as of the date of service of this report. If additional data, opinions, or information become available, I reserve the right to modify or change the opinions expressed in this report based on any such data, opinions, or information.

2 Qualifications

3. My name is Douglas Kidder. I am a Managing Partner with OSKR, LLC, a firm that provides expert services primarily in the area of damages calculations. I was also an Adjunct Professor at Golden Gate University teaching a graduate course on damages in the school of accounting. I am also a member of the Licensing Executives Society, a former Director of i-cap Partners – a venture capital fund investing in technology companies – and a former member of the Trade New Zealand advisory board – a group formed to review New Zealand-based startups for support entering the U.S. market.

4. I have been performing business analyses and valuations for over thirty years, as a consultant, business owner, board member and manager. My focus is on the economics of knowledge and information generally typically in connection with damages associated with patents, copyrights, trade secrets and trademarks. I have published and spoken on business and valuation issues and have co-authored seven published articles relating to intellectual property damages. I have been retained to render expert opinions in the context of litigation, to assist in licensing and evaluation of intellectual property that is not subject to litigation and to develop and refine business strategies.

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1 On July 25, 2022, I received an updated version of this report that was also dated June 1, 2022.

2 On July 25, 2022, I received an updated version of this report that was also dated June 1, 2022.

5. I hold a B.A. in Mathematics and English with Honors from Amherst College (1983) and a Master of Science from the University of California at Berkeley (1986). While at Berkeley, I was a lecturer in the Computer Science department.

6. A copy of my resume is attached as **Exhibit 1**. A list of documents reviewed in connection with this Report is attached as **Exhibit 2**. I am being compensated at an hourly rate of $650 per hour, plus reimbursement of expenses. I have been assisted in this matter by OSKR staff, working under my supervision and control. I have no financial interest in the outcome of this matter.

3 Summary of Conclusions

3.1 The Turow Report

7. Professor Turow states that CLEAR causes class members to "lose the value of the information."[3] He presents no methodology in support of this theory. His conclusion that the mere existence of CLEAR causes a loss in value of the information accessible through CLEAR is contrary to the economics of information. One of the defining characteristics of information is that, by giving or selling someone my personal information, I do not lose the use of that information for myself. Based on generally accepted principles in the fields of economics, there is no sense in which Californians have "lost" the value of that information simply because that information is accessible via CLEAR.

8. Professor Turow does not offer any methodology that might assist him or the Court to determine the "lost" value of any information as a result of CLEAR.

9. There is no nexus between Professor Turow's report and Mr. Lloyd's opinion. As a result, Professor Turow's opinion is irrelevant to the Lloyd Report.

3.2 The Lloyd Report

10. The Lloyd Report purports to calculate the profit (which he calls, inaccurately, "net profit") attributable to "using and selling" Californians' data through CLEAR. Mr. Lloyd's approach is unscientific and without basis. The Lloyd Report does not offer any methodology to determine what portion of Thomson Reuters' revenues from CLEAR are attributable to the

[3] Turow Report, p. 19.

wrongful or "unjust" conduct alleged in this case. Instead, the Lloyd Report assumes that all income received in connection with CLEAR is attributable to "using and selling" personal information accessible in CLEAR. At least some profits from CLEAR are driven by functionalities of CLEAR other than the data it makes accessible. Mr. Lloyd's approach does not ascribe any revenues or profits to these other functionalities. For example, as discussed in Section 6.3.1.4, below, CLEAR revenues depend at least in part on product functionality in contrast to data. CLEAR has an understandable user interface, is designed to not display wholly irrelevant information and provides access to data other than data on individuals. These functionalities have value and are responsible for at least some portion of Thomson Reuters' revenues from CLEAR. Yet Mr. Lloyd does not take them into account. The Lloyd Report treats all revenues from CLEAR as entirely resulting from the availability of data and it does not separate Thomson Reuters' revenues derived from collecting or providing access to data from revenues derived from other CLEAR functionality. Mr. Lloyd, therefore, offers no reliable methodology to determine profits that result from the allegedly unjust conduct in this case.

11. Further, I understand that the two claims remaining in this case are for unjust enrichment and unfair competition, and that both of these claims require balancing the benefit or utility of the conduct targeted in this case against the harm it allegedly causes. But the Lloyd Report does not purport to measure, evaluate, calculate, or even consider any benefits or utility of CLEAR.

12. The Lloyd Report also includes several critical methodological errors. For example, I understand that unjust enrichment must be calculated as net profits, yet Mr. Lloyd calculates an amount he characterizes as total incremental profits or gross profits. Nor does Mr. Lloyd deduct many costs, including royalties, that are clearly related to collecting and providing access to data on Californians and would be properly deducted when calculating either incremental or gross profits.

13. As another example of a critical methodological error, Mr. Lloyd's calculation of the proportion of revenue attributable to Californian's data is unreliable. He attributes [redacted] of Thomson Reuters' "net profits" to California based on (a) California's share of United States economic activity (GDP) in 2021, and (b) the 2018 California arrest rate. Mr. Lloyd does not offer any basis for his assumption that there is a direct relationship between California's share of United States economic activity, or the California arrest rate to CLEAR's revenues. Determining

the portion of CLEAR revenue that results from the availability of data about Californians, requires analyzing the how many searches are actually tied to data about Californians. Mr. Lloyd has only vaguely asserted that GDP and arrest rates are related to some of the possible searches performed on CLEAR.

14. Finally, Mr. Lloyd presents no opinion on how his proposed unjust enrichment figure should or could be apportioned among class members. There is simply no connection between his proposed unjust enrichment figure and the profits made by Thomson Reuters from data associated with any individual class member. Because not all class members will have had information about them displayed as a result of a search, the degree to which Thomson Reuters has been purportedly unjustly enriched by a particular class member will vary depending on at least: the information available about the individual, whether a search displayed any information about the individual, and the pricing plan of the customer doing the search. All of these variables may affect whether income received by Thomson Reuters from a particular customer is in fact attributable to data relating to any Californian, much less a particular Class member. Yet the Lloyd Report ignores all of these differences. To be clear, my criticism is not just that Mr. Lloyd's proposed methodology would require individualized inquiry; it is that Mr. Lloyd has not proposed any methodology for apportioning disgorged profits to class members, nor do I believe that any feasible methodology exists.

4 Background

15. On December 3, 2020, Cat Brooks and Rasheed Shabazz filed a class action complaint against Thomson Reuters Corporation alleging that Thomson Reuters' CLEAR:

- Violated the common law right to publicity/misappropriation of likeness
- Violated the California Unfair competition law, §17200 (Monetary and public injunctive relief)
- Unjustly enriched Thomson Reuters[4]

16. On August 16, 2021, the Court dismissed Plaintiffs' right to publicity claim and also limited their relief under California's unfair competition law to injunctive relief.[5] I

[4] Complaint at, e.g., pp. 16–20.

[5] Order Granting In Part and Denying in Part Defendant's Motion to Dismiss, August 16, 2021.

understand that the sole remaining claim for monetary relief in the case is based on a theory of unjust enrichment.

4.1 CLEAR

17. Thomson Reuters describes CLEAR as follows:

> Thomson Reuters CLEAR® is powered by billions of data points and leverages cutting-edge public records technology to bring all key content together in a customizable dashboard. Locate hard-to-find information and quickly identify potential concerns associated with people and businesses to determine if further analysis is needed. The user-friendly platform was designed with intuitive navigation and simple filtering parameters, so you can quickly search across thousands of data sets and get accurate results in less time.[6]

18. Thomson Reuters specifically notes that CLEAR is not providing consumer reports:

> Thomson Reuters is not a consumer reporting agency and none of its services or the data contained therein constitute a 'consumer report' as such term is defined in the Federal Fair Credit Reporting Act (FCRA), 15 U.S.C. sec. 1681 et seq. The data provided to you may not be used as a factor in consumer debt collection decisioning, establishing a consumer's eligibility for credit, insurance, employment, government benefits, or housing, or for any other purpose authorized under the FCRA. By accessing one of our services, you agree not to use the service or data for any purpose authorized under the FCRA or in relation to taking an adverse action relating to a consumer application. [7]

19. All of the data available through CLEAR is from third party sources and databases.[8] Data that is restricted (*e.g.* DMV records) are only available to entities that are authorized to view such data under applicable law (*e.g.* the Driver's Privacy Protection Act). Every customer must certify to Thomson Reuters that CLEAR is being used for a permissible purpose.[9]

20. Use cases for CLEAR vary widely but generally are focused on the detection, investigation, and prevention of fraud. They include, for example, criminal investigations, anti-

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6 https://legal.thomsonreuters.com/en/products/clear-investigation-software.

7 https://legal.thomsonreuters.com/en/products/clear-investigation-software.

8 Thomson Reuters Responses to Plaintiffs First Set of Interrogatories, Attachment A, April 4, 2022.

9 Thomson Reuters Responses to Plaintiffs First Set of Interrogatories, Attachment A, April 4, 2022.

money laundering activities, insurance fraud investigations, and unemployment insurance investigations. Thomson Reuters describes some of these uses in case studies, including:

- Helping courts, banks, and other public and private entities perform Know Your Customer ("KYC") diligence and combat fraud;
- Helping law enforcement find missing persons and kidnapped children;
- Supporting law enforcement officers with solving crimes, including, for example, investigating cold murder cases, combating drug trafficking, combating human trafficking, dismantling child exploitation groups, and identifying criminal perpetrators;
- Supporting public defenders, including in exoneration attempts for wrongful convictions;
- Investigating, identifying, and combating fraud, including financial fraud, identity theft, and fraud in various government benefits programs;
- Supporting regulatory compliance programs, including compliance with the Bank Secrecy Act and its Anti-Money Laundering regulations;
- Combating tax evasion, including Social Security and property tax fraud;
- Providing support for people in need, including finding relatives to keep children out of the welfare system, and finding absentee parents who owe child support;
- Responding to active shooter situations, such as the December 2015 San Bernadino terrorist attack;
- Helping the US Veterans Affairs Department locate veterans to continue providing them with benefits after moving;
- Identifying updated address information to provide adequate notice of a class action to class members;
- Supporting corporate security needs to keep public and private locations safe; and

- Helping law enforcement recover stolen goods. [10]

21. [redacted].[11] The top ten customers of CLEAR are shown in the table below along with their revenue from December 2020 to February 2021:

[redacted][12]

[redacted]

22. The majority of CLEAR revenues come from recurring revenue – also described as subscription plans. Under a typical CLEAR subscription plan, a customer signs a contract and pays a monthly amount that allows for a certain number of searches. If the customer exceeds the number of searches for their subscription plan, they will be charged an additional amount. Between 2017 and 2021, the percent of revenue from subscription plans was between [redacted] and [redacted] with the remaining revenue described as "transactional."[13]

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[10] Thomson Reuters Responses to Plaintiffs First Set of Interrogatories, Attachment A, April 4, 2022.

[11] TR-BROOKS047405. *See also* TR-BROOKS127541.

[12] TR-BROOKS127541, tab "Trans by Cust by Sub".

[13] Thomson Reuters First Supplemental Answers to Plaintiffs First Set of Interrogatories, May 24, 2022.

23. CLEAR is not a separate business unit within Thomson Reuters. It is treated as a product that is sold alongside other Thomson Reuters products by customer-focused business segments including Legal Professionals, Corporates, and Tax & Accounting.[14] Thus, while CLEAR's revenues are tracked by Thomson Reuters' accounting system, all of the expenses incurred to support CLEAR are not separately identified in the accounting system.[15]

4.2 Class Definition

24. The complaint defines the proposed class as follows:

> All persons residing in the state of California whose name, photographs, personal identifying information, or other personal data is or was included in the CLEAR database during the limitations period.
>
> The proposed class definition excludes any officers and directors of Thomson Reuters; Class Counsel; and the judicial officer(s) presiding over this action and the members of his/her immediate family and judicial staff.[16]

25. Note that the class is defined by residency in California while the data accessed via CLEAR about that person is not limited to California as it can include information from when the individual resided in other states or other countries. On a personal level, my information would include data from periods when I resided in Massachusetts, Maryland and Illinois – and might include information from the six months I spent on an extended assignment in Hong Kong.

4.3 Economics of Information

26. The economics of information – of which personal data is one type – differ from the economics of physical goods. As a starting point, information has the characteristic of being non-rivalrous for consumption whereby we can both use the same information at the same time without affecting the value of the information.[17] For example, if I tell you my name, address and phone number I am not deprived of the use of my name, address or phone number. In contrast,

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[14] TR-BROOKS014840–038 at 847–849 (Thomson Reuters Annual Report 2020, pp. 6 – 8).

[15] Conversations with Irene Caratto and Kelly Shelton, July 20, 2022.

[16] Complaint, ¶¶70 - 71.

[17] *See, e.g.*, Jones, Charles I., and Christopher Tonetti. 2020. "Nonrivalry and the Economics of Data." American Economic Review, 110 (9): 2819-58.

physical goods have rivalrous consumption. If I am using a hammer, you cannot also be using that hammer.

27. There is also a time-based component to information that is neatly encapsulated by the phrase "yesterday's news." Today's news can be valuable and interesting, but yesterday's news – which was valuable and interesting yesterday – is no longer as valuable and interesting.[18] This is unlike the hammer example; to this day I use my grandfather's hammer, but I don't have much interest in what was news to him.

28. Information is also only valuable to the extent that it is used and acted upon. There is no value to my listening to a weather forecast indicating rain if I do not alter my behavior based on that forecast. Information can reduce uncertainty about the future, and thereby affect future actions.[19]

29. Another important characteristic of information is that the reproduction cost for digital information is close to zero. The economists Carl Shapiro and Hal Varian wrote a seminal book – *Information Rules* – in 1999 discussing the economics of information. Below I have excerpted parts of the first chapter that I believe are germane to this case:

> Information is costly to *produce* but cheap to *reproduce*. Books that cost hundreds of thousands of dollars to produce can be printed and bound for a dollar or two and 100-million dollar movies can be copied on videotape for a few cents.
>
> Economists say that the production of an information good involves high fixed costs but low marginal costs. The cost of producing the first copy of an information good may be substantial, but the cost of producing (or reproducing) additional copies is negligible. This sort of cost structure has many implications. For example, cost-based pricing makes no sense when unit cost is zero. You must price your information goods according to consumer value, not according to your production cost.
>
> Since people have widely different values for a particular piece of information, value-based pricing leads naturally to differential pricing. …
>
> …
>
> Economists say that a good is an *experience good* if consumers must experience it to value it. Virtually any new product is an experience good, and marketers have

18 *See, e.g.* Avinash Dixit and Robert Pindyck, *Investment Under Uncertainty*, 1994, Princeton University Press.

19 *See, e.g.* Avinash Dixit and Robert Pindyck, *Investment Under Uncertainty*, 1994, Princeton University Press.

> developed strategies such as free samples, promotional pricing, and testimonials to help consumers learn about new goods.
>
> But information is an experience good *every* time it's consumed. How do you know whether today's *Wall Street Journal* is worth 75 cents until you've read it? Answer: you don't.
>
> …
>
> The brand name of the Wall Street Journal is one of its chief assets and the Journal invests heavily in building a reputation for accuracy, timeliness and relevance.
>
> …
>
> Now that information is available so quickly, so ubiquitously, and so inexpensively, it is not surprising that everyone is complaining of information overload. Nobel prize-winning economist Herbert Simon spoke for us all when he said that "a wealth of information creates a poverty of attention."
>
> Nowadays, the problem is not information access but information overload. The real value produced by an information provider comes in locating, filtering and communicating what is useful to the consumer.[20]

30. All of the information accessed via CLEAR is obtained from other sources.[21] Thus, CLEAR offers its customers a tool to be used to reduce search costs for information. As Shapiro and Varian point out, the real value that CLEAR offers is derived from CLEAR's effectiveness in locating, filtering and communicating the information that is most useful to CLEAR customers.

4.4 Unjust Enrichment Relief

31. As described in the Restatement (Third) of Restitution and Unjust Enrichment § 51 (2011) ("Restatement"), also cited by Mr. Lloyd, it is my understanding that, when calculating unjust enrichment, care must be taken to separate profits generated by the underlying wrong from profits generated by lawful actions:

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[20] Shapiro, C., Varian, H., Information *Rules: A Strategic Guide to the Network Economy*, 1999, Harvard Business School Press, pp. 3-6. *Emphasis* in the original.

[21] TR-BROOKS144207 – 10 at 07.

> The profit for which the wrongdoer is liable by the rule of § 51(4) is the net increase in the assets of the wrongdoer, *to the extent that this increase is attributable to the underlying wrong*.
>
> …
>
> Calculation of profits is simplest when the whole of the wrongdoer's unjust enrichment is captured in the ownership, possession, or disposition of specific property. … Elsewhere the application of the disgorgement remedy turns on problems of attribution, *as the court attempts to decide what portion of the defendant's assets or income is properly attributable to the underlying wrong* to the claimant.[22]

32. This understanding informs my opinion as to the proper measure of unjust enrichment, but I am not offering a legal opinion.

5 Discussion of the Turow Report

33. In the following section, I first provide an overview of the Turow Report as it relates to recovery under a theory of unjust enrichment (I will refer to this monetary relief as "damages"). Then I provide a discussion of the implications of his opinions for calculation of unjust enrichment in this matter.

5.1 Summary of the Turow Report

34. Professor Turow states that the purpose of his report is to:

> … assist the Court in evaluating, at this stage of the case, whether Thomson Reuters' operation of the CLEAR product affects a privacy interest of Californians in such a way that all Californians whose information is accessible through CLEAR could claim to be harmed in the same way. [And] … to offer a method for understanding how the accumulation, connection, and sale of individual information through online databases without robust opportunities for individuals to control, correct, opt-out, or contextualize the information in those databases, violates long-held conceptions of individual privacy and causes cognizable economic harm.[23]

[22] Restatement (Third) of Restitution and Unjust Enrichment § 51 (2011). *Emphasis* added.

[23] Turow Report, p. 4.

35. Professor Turow's report defines the class in this case as "individuals – California residents – whose information is available in CLEAR."[24] Throughout his report, he appears to abbreviate this definition as "all Californians."[25]

36. Professor Turow concludes that:

> Thomson Reuters' operation of the CLEAR product affects privacy interests of Californians – the right to control personal information and to be let alone – in such a way that all Californians whose information is accessible through CLEAR are harmed. … Thomson Reuters' practice of aggregating disparate sources of information, interconnecting that information into dossiers, and selling it for profit without the consent, input, or, in most cases, even the knowledge of those profiled also causes those individuals whose information is aggregated and made available by Thomson Reuters to lose the value of the information itself, which they would retain and have the option to capture in the absence of such practices.[26]

37. Professor Turow opines that the privacy harm is the lack of control and the violation of the right to be let alone:

> While the specific content of individual reports may vary, every Californian whose information is accessible through CLEAR has suffered the same fundamental privacy harm of a lack of control and violation of their right to be let alone.[27]

38. Professor Turow opines that the resulting economic harm to Californians from the alleged privacy harms is the diminished value of their information:

> By taking disaggregated sources of information, compiling dossiers, and selling those dossiers for profit (without giving Californians the opportunity to control or profit from that practice), Californians lose the value the information would have retained, value they could have chosen to capture themselves.[28]

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24 Turow Report, pp. 9 – 10. Following the complaint which defines the class as "All persons residing in the state of California whose name, photographs, personal identifying information, or other personal data is or was included in the CLEAR database during the limitations period." Complaint, ¶70.

25 See, *e.g.*, Turow Report, pp. 4, 5, 13, 16.

26 Turow Report, pp. 5-6.

27 Turow Report, p. 13.

28 Turow Report, p. 19.

39. Thus, as it relates to damages, Professor Turow's opinion is that the underlying harm arises from Californians' alleged inability to control the information about them, thereby diminishing the value of that information to the individual.

5.2 DISCUSSION OF THE TUROW REPORT AS IT RELATES TO DAMAGES

40. Professor Turow's opinion that "individuals …lose the value of the information itself which they would retain"[29] is without basis and unscientific. First, Professor Turow does not support this opinion with empirical evidence. Professor Turow has not identified any way in which this value might be realized by the individual or quantified by how much that value was reduced.[30] Second, this opinion is contrary to the economics of information described in Section 4.3 above. Because information is a non-rivalrous good, sharing information with another person does not prevent the first person from also using the information. There is no sense in which the Plaintiffs or proposed class members have lost the value of the information about them that is available through CLEAR.

41. Further, as discussed above at paragraph 14, the attribution of income received from Thomson Reuters in connection with CLEAR, whether that income is attributable to data about any Californian, will depend on many variables. Professor Turow does not propose any methodology that could be used to apportion damages among proposed class members. As he stated in his deposition:

> THE WITNESS: It -- earlier, I said that I'm not quantifying the -- the amount of harm that Californians have. We didn't talk about valuation of privacy. [31]
>
> …
>
> Beyond the idea that many, many people suffer the harm, virtually all Californians, I haven't quantified the amount of harm per person. No, that was not part of my mandate.[32]

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29 Turow Report, p. 5.

30 Deposition of Joseph Turow, August 26, 2022 at 106:21 – 107:4, 128:10 – 13.

"Relatedly, do you have any background or specialized training in quantifying the amount of damage or harm experienced by any person or persons?

A. That's not -- that's not what I was asked to do in this case."

"THE WITNESS: It -- earlier, I said that I'm not quantifying the -- the amount of harm that Californians have. We didn't talk about valuation of privacy."

31 Deposition of Joseph Turow, August 26, 2022 at 128:10 - 13.

32 Deposition of Joseph Turow, August 26, 2022 at 187:16 – 19.

5.3 THE LLOYD REPORT IS UNRELATED TO THE TUROW REPORT

42. Mr. Lloyd's calculations do not follow from Professor Turow's opinion on harm to the proposed class. The only input from the Turow Report to the Lloyd Report is an understanding of the CLEAR product.[33] As stated by Mr. Lloyd in his deposition:

> Q How does your report relate to this report from Professor Turow?
>
> A This report provides some context that addresses the issues that you and I discussed a few minutes ago. It's contextual for me. We were assigned to do different things. But I found it informative at least as it relates to the case and data and privacy and those issues.
>
> …
>
> Q Mr. Lloyd, my question is, did you attempt to calculate the loss of value of information that Californians did not retain as a result of CLEAR?
>
> A That was not my assignment.
>
> …
>
> Q In your own work in this case, did you ever attempt to calculate any diminished value theory of damages?
>
> A No. We were engaged to calculate unjust enrichment, or the benefit allegedly derived by the defendant and not the loss suffered by the plaintiff.[34]

43. Additionally, Professor Turow and Mr. Lloyd never spoke to each other, and Professor Turow was unaware that Mr. Lloyd had issued a report.[35]

44. Thus, there is no causal link between the harm alleged by Plaintiffs according to the Turow Report and the calculation performed by Mr. Lloyd.

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33 Lloyd Report, p. 5, footnote 14.

34 Deposition of Terry Lloyd, August 22, 2022 at 262:4 – 11, 264:17 – 20, 265:15 - 20.

35 Deposition of Terry Lloyd, August 22, 2022 at 269:18 - 20.

"Q Have you had any conversations with Professor Turow?

A No, sir, I have not."

Deposition of Joseph Turow, August 26, 2022 at 357:7 – 21.

"Q. Okay. The -- and, again, for clarity, have you read the report of another expert that's been engaged by the Plaintiffs in this case, FSG, Finance Scholars Group is the name of that company, and the person, I believe, who created that report is a fellow named Lloyd. Did you review the other report that's been offered in this case by Plaintiffs?

A. No. No, I did not.

Q. Okay. Do you have any understanding of what that report says?

A. I didn't even know about that report's existence --

Q. Okay.

A. -- you know, so..."

6 Discussion of the Lloyd Report

45. Mr. Lloyd's opinion on what he calls "net profits" attributable to CLEAR's inclusion of data about "Californians" is flawed and unreliable for at least three reasons. First, Mr. Lloyd has not measured unjust enrichment to Thomson Reuters – at best he has measured all of Thomson Reuters profits from CLEAR (attributed to California) whether or not those profits result from the allegedly unjust conduct in this case. Second, Mr. Lloyd's estimate of profits from CLEAR attributable to Californians is inflated, methodologically flawed and unreliable. Finally, Mr. Lloyd does not address a critical question of how the court might go about allocating any unjust enrichment to each proposed class member.

46. In the following section, I first provide an overview of the Lloyd Report and then discuss flaws in Mr. Lloyd's opinions.

6.1 Overview of the Lloyd Report

47. Mr. Lloyd understands the class to be composed of "California residents."[36]

48. Mr. Lloyd states that the purpose of his report was to calculate Thomson Reuters' profits from CLEAR attributable to the presence of data on California residents:

> On behalf of FSG, I have been asked to evaluate the feasibility of calculating the total net profits that Thomson Reuters has derived since December 3, 2017, in connection with making information about California residents available through CLEAR.[37]

49. He concludes that it is feasible to calculate Thomson Reuters' net profits attributable to "using and selling Californians' data through CLEAR":

> I have concluded that it is possible to calculate Thomson Reuters's net profits attributable to using and selling Californians' data through CLEAR. Based on publicly available information and discovery produced to date, I have structured a calculation, consistent with standard methodology, for determining these net profits dating back to December 2017, which shows total net profits of approximately [redacted] as of the end of 2021.[38]

36 Lloyd Report, p. 1.

37 Lloyd Report, p. 1.

38 Lloyd Report, p. 1.

50. Mr. Lloyd explicitly does not calculate net profits. He claims to calculate Thomson Reuters' gross or incremental profits:

> Throughout this report, I use the term "net profit" to describe what Plaintiffs seek to calculate for purposes of their unjust enrichment claim. I use that language because it is the term used in the cases and Restatement section that I cite in footnote number four above. However, the measure of profitability called "net profit" by the Restatement and other authorities is what an accountant or financial analyst would more likely call "gross margin," "gross profit," or "incremental profit."[39]

51. As a starting point, "gross profit" and "incremental profit" are two different concepts as Mr. Lloyd acknowledges.[40] Further, Mr. Lloyd calculates neither gross profit nor incremental profit as I discuss in Section 6.3.1. Throughout my report I will refer to his calculation as providing an estimate of "incremental profits" because he only deducts what he views to be incremental costs.[41] Mr. Lloyd calculates this "incremental profit" through the following methodology:

Table 2: Lloyd Calculation[42]

Total Worldwide CLEAR Revenue, December 2017 – 2021	[redacted]
Percent of CLEAR Revenue from the U.S.	[redacted]
Percent of Revenue Attributable to California	[redacted]
Percent of Database Attributable to Individuals (not businesses)	[redacted]
Profit Margin	[redacted]
TR CA Profits on CLEAR	[redacted]

39 Lloyd Report, pp. 7 – 8.

40 Lloyd Report, p. 8, footnote 28. I disagree with Mr. Lloyd's assertion that gross profit and incremental profit are equivalent in this case.

41 Lloyd Report, p. 9.

42 Lloyd Report, Exhibit 1.

52. Mr. Lloyd's critical estimate that [redacted] of CLEAR's U.S. revenue is attributable to California is calculated as the average of two other figures:[43]

- California's share of U.S. economic activity at [redacted]
- California's arrest rate at [redacted].

53. Mr. Lloyd cites, but does not incorporate into his calculation, California's share of the U.S. population at 11.8%.[44]

6.2 Mr. Lloyd Has Not Measured Unjust Enrichment

54. The Lloyd Report claims to estimate "Thomson Reuters' net profits attributable to using and selling Californians' data through CLEAR."[45] As Mr. Lloyd describes it, the correct measure of unjust enrichment is a calculation of "profits … attributable to the alleged misconduct" or, as he states in his report:

> Plaintiffs allege that Thomson Reuters's conduct in operating CLEAR violates a California statute known as the Unfair Competition Law and also that it has led to Thomson Reuters's unjust enrichment from monetizing the Plaintiffs' personal data. I am informed that California law generally allows plaintiffs to recover the net profits of the defendant that are *attributable to the alleged misconduct*.[46]

55. Mr. Lloyd's calculation is not a measure of unjust enrichment, it is simply his estimate of all of Thomson Reuters' profits from CLEAR that he has attributed to California based on the California arrest rate and California's share of U.S. GDP. Mr. Lloyd's approach does not distinguish between profits that are attributable to the alleged misconduct and profits that are attributable to other actions or investments.

56. Mr. Lloyd defines the underlying wrong in this matter as "[t]he aggregation and compilation and distribution of personal data of Californians for profit by Thomson Reuters."[47] Yet he makes no attempt to attribute the profits he calculates to that wrong. Mr. Lloyd does not explain whether or why he believes all of CLEAR's profits that he attributes to Californians' data to be attributable to the "aggregation and compilation and distribution of personal data of

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43 Lloyd Report, p. 13.

44 Lloyd Report, p. 12.

45 Lloyd Report, p. 1.

46 Lloyd Report, p. 2. *Emphasis* added.

47 Deposition of Terry Lloyd, August 22, 2022 at 269:2 – 4.

Californians for profit," as opposed to, for example, the functionality of CLEAR or data regarding people who are not California residents.

57. CLEAR's customers are not just paying for access to the data via CLEAR. They are also paying for sophisticated search engine functionality, potentially access to other databases (such as news databases whose value is only incidentally related to individual information) and potentially access to customizable risk scoring. Therefore, only some of the revenue and profits from CLEAR are attributable to what Mr. Lloyd describes as CLEAR's "aggregation and compilation and distribution of personal data of Californians for profit."

58. As an example of additional functionality, the plans offered to Law Enforcement entities include functionalities such as web searching and articles from the Thomson Reuters newsroom that are unrelated to data on Californians. [48] Law Enforcement entities are provided with the options of CLEAR for Law Enforcement (basic plan) and CLEAR for Law Enforcement Plus (premium plan). [49] The descriptions of both plans note that "Price varies by plan features" so there are likely a wide variety of plans in use. The basic plan includes the ability to "View a full list of your subject's web results" while the premium plan includes the ability to "View public and proprietary articles from Reuters newsroom." [50] Thus, at least some portion of the payments by Law Enforcement professionals are attributable to CLEAR functionality and Thomson Reuters' own property, yet Mr. Lloyd's methodology does not take this into account in any way.

59. The CLEAR subscription plans targeted to corporations and government agencies offer a similar range of functionalities, which increase as the price paid by the customer increases. In other words, the price paid by these customers is driven not by the data accessible through CLEAR, but by the platform's functionality. For example, CLEAR contains functionality that determines an individual's "associates" and any businesses to which they are connected.[51] This functionality, while it includes some personal information, is also the result of analyzing and synthesizing that information and is of separate value from the underlying data.[52]

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[48] https://legal.thomsonreuters.com/en/products/clear-investigation-software/plans-pricing#publicsafety.

[49] https://legal.thomsonreuters.com/en/products/clear-investigation-software/plans-pricing#publicsafety.

[50] https://legal.thomsonreuters.com/en/products/clear-investigation-software/plans-pricing#publicsafety.

[51] https://legal.thomsonreuters.com/en/products/clear-investigation-software/plans-pricing#corporate.

[52] Shapiro, C., Varian, H., *Information Rules: A Strategic Guide to the Network Economy*, 1999, Harvard Business School Press, p. 6.

60. Further, some of the revenues and profits attributed to CLEAR must be due to Thomson Reuters' investments in technology, brand, sales and service. Because information is an experience good, as described previously, at least some of the credit for acquiring new customers must be given to the Thomson Reuters brand. Again, Mr. Lloyd's approach ignores the fact that a customer may pay for CLEAR at least in part due to its trust in the Thomson Reuters brand and not because of Thomson Reuters' "aggregation and compilation and distribution of personal data of Californians for profit."

61. Data does not provide the entire value of CLEAR. In fact, the profit and loss statements provided by Thomson Reuters indicate that royalties – which I understand relate to costs to acquire data – accounted for approximately [redacted] of the direct expenses and [redacted] of total expenses for CLEAR in 2020 and 2021.[53] Thus, [redacted] to [redacted] of Thomson Reuters' expenses for providing CLEAR are directed to functionality other than acquiring the data that includes information about California residents.

62. Finally, the Lloyd Report does not purport to measure, evaluate, calculate, or even consider any benefits or utility of CLEAR. I understand that measuring the "unjust" component of profits requires balancing harms against utility, which Mr. Lloyd does not do.

63. In summary, Mr. Lloyd's calculation of "net profits" is unrelated to, and certainly overstates, any unjust enrichment associated with CLEAR by including profits from functionality in CLEAR that is separate from accessing the data and failing to consider any benefit or utility of CLEAR. Thus, Mr. Lloyd's estimate is not a reliable estimate of Thomson Reuters' unjust enrichment from the "aggregation and compilation and distribution of personal data of Californians for profit."

6.3 Calculation Errors

64. In the following sections I describe the following specific errors in Mr. Lloyd's calculation, which significantly overstates net profits in several ways.

65. First, and most notably, his [redacted] profit margin is neither incremental nor gross profits and is inflated. Second, Mr. Lloyd's allocation of [redacted] of CLEAR's revenue to California is unreliable and based on an *ad hoc* methodology that contains a calculation error. Third, Mr.

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[53] TR-BROOKS017074. Royalties for 2020 and 2021 of [redacted] respectively out of [redacted] direct expenses and [redacted] of total expenses.

Lloyd's estimate that [redacted] of revenues are attributable to individuals as opposed to businesses appears to rely on a subjective classification by one of Plaintiffs' attorneys.

6.3.1 Unreliable Profit Margin

66. Mr. Lloyd's estimated incremental profit margin of [redacted] is flawed for at least three reasons. First, Mr. Lloyd did not calculate net profits, which his own sources declare to be the proper measure for disgorgement in unjust enrichment cases. Instead, Mr. Lloyd calculated what he describes as incremental or gross profit. Second, Mr. Lloyd did not calculate incremental profits correctly. He starts with allocated CLEAR revenues but deducts incremental CLEAR costs to produce a profit margin that is neither incremental nor gross profits. Third, Mr. Lloyd omitted multiple costs that should have been deducted even from a gross or incremental profit calculation.

6.3.1.1 Mr. Lloyd Has Not Calculated Net Profits as Described in the Restatement

67. Mr. Lloyd states his belief that the correct measure of unjust enrichment is "gross profit" even though the term "net profits" is used in the Restatement. As Mr. Lloyd states in his report:

> Throughout this report, I use the term "net profit" to describe what Plaintiffs seek to calculate for purposes of their unjust enrichment claim. I use that language because it is the term used in the cases and Restatement section that I cite in footnote number four above. However, the measure of profitability called "net profit" by the Restatement and other authorities is what an accountant or financial analyst would more likely call "gross margin," "gross profit," or "incremental profit." [54]

68. I note that Mr. Lloyd does not support his opinion by citing any particular part of the Restatement; he simply asserts that the Restatement did not use the right language.

69. I do not agree that the Restatement did not use the right language. The term "net profits" is initially described in the Restatement as:

> (5) In determining net profit the court may apply such tests of causation and remoteness, may make such apportionments, may recognize such credits or deductions, and may assign such evidentiary burdens, as reason and fairness dictate, consistent with the object of restitution as specified in subsection (4). The following rules apply unless modified to meet the circumstances of a particular case:

[54] Lloyd Report, pp. 7 – 8.

(a) Profit includes any form of use value, proceeds, or consequential gains (§ 53) that is identifiable and measurable and not unduly remote.

…

(c) A conscious wrongdoer or a defaulting fiduciary may be allowed a credit for money expended in acquiring or preserving the property or in carrying on the business that is the source of the profit subject to disgorgement. By contrast, such a defendant will ordinarily be denied any credit for contributions in the form of services, or for expenditures incurred directly in the commission of a wrong to the claimant.[55]

70. The Restatement further clarifies appropriate deductions:

g. Apportionment. The general question of attribution may include issues of apportionment at one or more levels. If the defendant's business is complex, and the underlying wrong to the claimant affects only one of its various components, threshold apportionment issues may involve (i) the proportion of the firm's overall results properly attributable to the particular business in which the wrong has been committed, and (ii) the proportion of overhead or other common expenses properly charged against these results in determining the net profits of the business in question. Because similar questions need to be addressed for a variety of purposes, unrelated to liability in restitution, it may be possible to find appropriate answers in existing accounting practice.

…

h. Deductions and credits. A recurring issue of the accounting described in § 51(5) is the extent to which the defendant should be allowed a deduction (that is, a credit against liability) for contributions made by the defendant to the gain for which the defendant is liable. As a general rule, the defendant is entitled to a deduction for all marginal costs incurred in producing the revenues that are subject to disgorgement. Denial of an otherwise appropriate deduction, by making the defendant liable in excess of net gains, results in a punitive sanction that the law of restitution normally attempts to avoid. See § 42, Comment *i*.

By contrast, the defendant will not be allowed to deduct expenses (such as ordinary overhead) that would have been incurred in any event, if the result would be that defendant's wrongful activities—by defraying a portion of overall expenses—yield an increased profit from defendant's operations as a whole.

[Illustration] 19. Edwards discovers and develops a cave located partially under Lee's property, as described in § 40, Illustration 4, and in Illustrations 13 and 15, supra. Edwards is liable to disgorge 30 percent of the net profits realized from the exhibition of the cave, but the court must decide what deductions to allow from gross revenues in calculating these net profits. In the ensuing accounting, Edwards will typically be allowed a credit for cash outlays necessary to the operation of the business from which the profit has been realized. Under the circumstances, such outlays include the cost of building walkways and installing electric lights, as well

55 Restatement (Third) of Restitution and Unjust Enrichment § 51 (2011).

> as operating expenses such as wages and utilities. No credit is allowed for Edwards's personal services in the discovery, development, and subsequent management of the cave, despite the fact that no profit would have been realized without these contributions.[56]

71. I am not offering a legal opinion on the proper measure of profits for unjust enrichment. My opinion, as a damages expert reading the Restatement, is that I do not agree with Mr. Lloyd's assertion that gross profits are the proper measure of unjust enrichment. In particular, I note that the Restatement identifies "operating expenses" as being properly deducted in the discussion of Illustration 19. As I describe below, operating expenses are deducted from revenues when calculating either operating profits or net profits – but they are not deducted from revenues when calculating incremental or gross profits.

72. The difference between gross profits and net profits is significant – particularly in this case. Every business has multiple measures of profit including gross, operating and net profits. Profits result from deducting expenses from revenues; the measure of profit varies depending on which expenses are deducted from revenues. In essence, there are different layers of profits that are calculated by deducting different expenses. Gross profits are calculated by deducting only the cost of goods sold (also described as direct costs) from revenues. Operating profits are calculated by deducting direct costs and operating costs such as R&D or sales from revenues. Finally, net profits are calculated by deducting direct costs, operating costs and all other business costs such as overhead and financing costs from revenues. In table form showing the layering of profit levels:

56 Restatement (Third) of Restitution and Unjust Enrichment § 51 (2011).

Table 3: Levels of Profit[57]

Revenues
- Cost of Goods Sold
= Gross Profit
- Operating Costs
= Operating Profit
- Overhead, Financing and Other Costs
= Net Profit

73. Mr. Lloyd's decision to measure Thomson Reuters' gross or incremental profits rather than operating profit or net profit significantly overstates the net profits attributable to CLEAR by not giving Thomson Reuters any credit for (i) most of its direct costs to provide access to data, (ii) any operating costs such as I/T infrastructure, R&D or sales, or (iii) any overhead, financing or other costs.

6.3.1.2 Mr. Lloyd Has Not Calculated Gross or Incremental Profits

74. In fact, Mr. Lloyd does not actually calculate gross profits or even incremental profits. While in some cases gross profits and incremental profits can be the same, they are not in this case. Mr. Lloyd equates gross profits and incremental profits:

> However, the measure of profitability called "net profit" by the Restatement and other authorities is what an accountant or financial analyst would more likely call "gross margin," "gross profit," or "incremental profit." In other words, speaking generically rather than about CLEAR specifically, the concept refers to the difference between the sales price of additional units and the cost required to produce those additional units, that is the "marginal" or "incremental" profit from selling an additional unit.[58]
>
> …

57 *See, generally*, FASB ASC Master Glossary https://asc fasb.org/glossary; New York Society of CPAs Accounting Terminology Guide https://www.nysscpa.org/professional-resources/accounting-terminology-guide#sthash.tWSUqFQr.dpbs; Deposition of Terry Lloyd, August 22, 2022, 57:7 – 8: "Generally speaking, the difference between gross and net are operating costs, many of which are fixed." I note that the classification of any particular expense as being, *e.g.*, a cost of goods sold as opposed to an operating cost can vary by business and by accountant.

58 Lloyd Report, pp. 7 – 8.

> Using the example of a grocery store, the marginal cost of a gallon of milk is typically the same for the first gallon sold as for the last one. For some items, like assets held in digital form (music, movies, images, data), there may be little if any additional cost to create another unit sold to the latest customer. In some cases, such as tickets to a less-than-full stadium or movie theater, there may be no additional cost incurred to produce the additional revenue from the last ticket sold. In those cases, the incremental profit from the sale is the entire revenue.[59]

75. While I agree with Mr. Lloyd that the gross profits and the incremental profits from the sale of a gallon of milk are the same, they are not the same for his example of the less-than-full stadium. In the case of a less-than-full stadium, while the incremental profits from one more attendee may be equal to the price of the ticket (after commissions), the gross profits from the show would deduct at least the amount paid to the band playing the show and the cost of renting the venue from the total ticket sales. The difference is that the incremental profits in his case arise from the sale of one additional ticket. However, the incremental profit from the show (a large group of tickets) deducts the costs to put on the show. In short, when calculating incremental profits, the definition of the increment matters. The incremental profits from a ticket are different from the incremental profits from a show.

76. Mr. Lloyd claims to be starting from incremental revenue, but his starting point is an allocation of revenue.[60] Mr. Lloyd states that he is trying to determine revenue from "additional units."[61] In his deposition, Mr. Lloyd described the additional unit as being an additional sale of a CLEAR license to a customer or an additional one-time use due to the inclusion of data on Californians.[62] Yet nowhere does Mr. Lloyd attempt to determine what

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[59] Lloyd Report, p. 9.

[60] Deposition of Terry Lloyd, August 22, 2022 at 203:8 – 14, 207:8 – 10.

"Q So did -- do you know what's included in technology infrastructure or whether that's properly included as a marginal cost?

A As a marginal cost, it appears to have some marginal features to the overall business, but not to the incremental user or the incremental revenue derived by usage of the data."

…

"But for our purposes here, but for my purposes, is to look at the incremental cost or the incremental revenue of using that data."

[61] Lloyd Report, pp. 7 – 8.

[62] Deposition of Terry Lloyd, August 22, 2022 at 191:18 – 192:8.

"…like any digital business, the incremental profits are phenomenal.

Q The increment that you're discussing here is the additional sale of a CLEAR license to a CLEAR customer; right?

A Or a one-time usage. Either way, it's that additional or incremental sale."

CLEAR revenues are incremental – in the sense that they are sales that are either solely or largely attributable to ability to access data on Californians via CLEAR. Mr. Lloyd simply allocates all of CLEAR's revenues according to his estimate of the relative size of California.

77. In connection with allocating CLEAR's revenue to Californians, Mr. Lloyd deducts incremental expenses (as he's defined them) from allocated revenue to arrive at a profit figure. As stated by Mr. Lloyd in his deposition:

> I didn't calculate marginal revenues. I calculated total revenues derived by CLEAR using data on California persons, and then calculated the marginal or incremental cost related to producing that revenue. [63]
>
> …
>
> We're looking at the revenues in the aggregate and under the methodology of calculating unjust enrichment. We start with those revenues and then subcontract [sic] from those the incremental costs.[64]

78. Mr. Lloyd's calculation is, therefore, neither incremental profits for providing access to data on Californians nor gross profits – it is a hybrid based on allocated revenues and incremental expenses. To calculate incremental profits, Mr. Lloyd should have started with incremental revenues – revenues from performing an additional search – and subtracted the incremental expenses attributable to that search. For Thomson Reuters, the incremental revenue associated with one more search is zero for most customers because they are on subscription plans.[65] To calculate gross profits, Mr. Lloyd should have started with CLEAR's revenues and subtracted its direct expenses including – at the very least – the royalty costs to allow access to the data. To be consistent in his analysis, if Mr. Lloyd believes that it is appropriate to allocate all of CLEAR's revenue on the basis of the relative size of California, he should also allocate all of CLEAR's expenses on the basis of the relative size of California. Graphically, what Mr. Lloyd has done is:

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63 Deposition of Terry Lloyd, August 22, 2022 at 226:8 - 17.

64 Deposition of Terry Lloyd, August 22, 2022 at 233:20 – 234:11.

65 Lloyd Report, p. 7.

Table 4: Lloyd's Profit Methodology

	Allocated	Incremental
Revenues	✓	
Expenses		✓
Profits	?	?

79. Instead of allocating costs to follow his allocated revenue methodology, Mr. Lloyd argues that:

> …costs, such as sales, editorial, and other operational expenses … do not actually appear to vary based on customer usage or the availability of particular data within CLEAR (namely, the availability of data about Californians in CLEAR).[66]
>
> …
>
> Based on my review of Thomson Reuters's reported costs during the relevant time period, the only marginal costs for CLEAR are royalties that Thomson Reuters pays to other vendors for data made available through CLEAR.[67]

80. In particular, and quoting the language he uses for his analysis of costs, Mr. Lloyd does not consider whether <u>revenues</u> varied "…based on customer usage or the availability of particular data within CLEAR (namely, the availability of data about Californians in CLEAR)."[68] Mr. Lloyd only performed that analysis on the cost side.

81. Mr. Lloyd's methodology – subtracting his estimate of marginal costs from his estimate of allocated revenues – is not an estimate of incremental costs and significantly overstates Thomson Reuters' gross profits.

6.3.1.3 Mr. Lloyd's [redacted] Cost Estimate Does Not Include All Attributable Costs

82. Mr. Lloyd justifies using a [redacted] profit margin for CLEAR on the basis that the only incremental costs that should be considered are transactional royalty costs:

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66 Lloyd Report, p. 16.

67 Lloyd Report, p. 16.

68 Lloyd Report, p. 16.

> Various documents produced in discovery reflect that Thomson Reuters's transactional royalty costs are consistently at or below [redacted] of the corresponding revenues. For that reason, my calculations use the [redacted] figure as a reasonable estimate of the relevant marginal costs incurred by Thomson Reuters on CLEAR.[69]

83. As a starting point, it is worth noting that Mr. Lloyd's [redacted] figure is based on two documents – an email exchange and an Excel document – neither of which explain what the [redacted] actually represents or how it should be used, and there is no indication in the Lloyd Report that Mr. Lloyd understands the veracity of, or the basis for the [redacted] figures in these two documents.[70]

84. Mr. Lloyd's cost estimate is also flawed because he opines that Thomson Reuters' only marginal costs are for royalties:

> Based on my review of Thomson Reuters's reported costs during the relevant time period, the only marginal costs for CLEAR are royalties that Thomson Reuters pays to other vendors for data made available through CLEAR.[71]

85. However, Mr. Lloyd did not consider other marginal costs for Thomson Reuters such as servers, storage and bandwidth (hosting costs) or sales costs. Mr. Lloyd assumes that [redacted] of Thomson Reuters' revenue is tied to data on Californians. Removing that revenue would also remove costs for web hosting as less data is stored and fewer searches were run. Thomson Reuters might also be able to reduce its sales force in California. Each of those costs would be marginal costs for Thomson Reuters that are directly tied to allowing customers to access data on Californians via CLEAR.

86. Indeed, Mr. Lloyd admitted that "servers or support or security" could be considered marginal costs and that he had not accounted for them in his report or calculations.[72]

6.3.1.4 Mr. Lloyd Does Not Deduct Costs for California Data

87. Mr. Lloyd's estimated profit margin of [redacted] does not give credit to Thomson Reuters for any costs other than his estimate of what he describes as transactional royalty costs.[73]

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69 Lloyd Report, p. 17.

70 Lloyd Report, p. 17, footnote 61: TR-BROOKS110695; TR-BROOKS129381.

71 Lloyd Report, p. 16.

72 Deposition of Terry Lloyd, August 22, 2022 at 276:15 – 22.

"A I'd have to think about that one, but I think if they removed all of that data, there might be some -- you and I discussed at length fixed and variable costs, there might be some cost savings, say, in servers or support or security, but also the primary driver of that would be the royalties they saved that they didn't have to pay for not using the data."

73 Lloyd Report, pp. 16 – 17.

Mr. Lloyd cites no evidence that these transactional royalty costs are attributable to California or are a complete set of royalties paid by Thomson Reuters' for accessing data on individual Californians.

88. He dismisses what he describes as "flat fee royalties" by stating:

> I see no indication that material flat fee royalty costs would have been avoided had Thomson Reuters not made information about Californians available through CLEAR. Instead, the agreements impose flat fee royalty costs in connection with data that is mostly multistate and nationwide in scope.[74]

89. Note that the majority of CLEAR's subscriptions would also be characterized as "flat fee" yet are included in his estimate of revenues. [75] Thus, Mr. Lloyd, when confronted with flat fee revenue amounts paid by CLEAR customers, allocated those revenues, but when confronted with flat fee royalty amounts paid for that data, Mr. Lloyd concludes that none of those flat fee royalty amounts would have been avoided.

90. Furthermore, Mr. Lloyd does not account for the fact that some of the data costs are incurred solely to acquire data related to Californians. For example, in his deposition, Mr. Lloyd was shown two agreements under which Thomson Reuters agreed to purchase data from the [redacted].[76] Mr. Lloyd was not familiar with either of these documents and did not consider whether the payments in the agreements might be properly tied to allowing access to data on Californians via CLEAR.[77] These data costs are unequivocally "a credit for money expended in acquiring or preserving the property or in carrying on the business that is the source of the profit subject to disgorgement."[78]

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[74] Lloyd Report, p. 16.

[75] Lloyd Report, p. 7.

[76] Deposition of Terry Lloyd, August 22, 2022, Exhibits F16 & F17.

[77] Deposition of Terry Lloyd, August 22, 2022 at 257:22 – 259:10.

"My question is: Does your [redacted] figure account for the cost savings of terminating a recurring data licensing agreement.

[Objection]

A I cannot answer your -- I cannot answer your question because the entire premise is unfounded.

…

A We did not parse down to individual components within contracts or individual contracts.

That Thomson Reuters knows its transactional royalty costs better than any of us, and I accept their representations at face value as representative of transactional royalty costs across the entire spectrum of licensing agreements."

[78] Restatement (Third) of Restitution and Unjust Enrichment § 51 (2011).

Even under Mr. Lloyd's purported incremental cost methodology, these must be considered marginal costs. However, Mr. Lloyd's calculation gives no such credit.

6.3.1.5 Summary of Unreliable Profit Margin

91. In summary, Mr. Lloyd's calculation of a [redacted] profit margin on sales is the unreliable result of an *ad hoc* and unsound methodology. In my reading of it, the Restatement does not support his claim that the proper measure of unjust enrichment is gross profits as opposed to net profits. While claiming to calculate gross or incremental profits, he does neither – he deducts only some of the incremental costs from his allocated revenue. Most notably, he does not give Thomson Reuters credit for the amounts it spent to allow access to data on Californians.

92. In the following sections I describe errors in Mr. Lloyd's attribution of revenues to individual Californians.

6.3.2 ESTIMATES FOR CALIFORNIA ARE UNRELIABLE

93. Mr. Lloyd's estimate of the share of "CLEAR's revenue attributable to Californians" is unreliable and flawed.[79] Mr. Lloyd dismisses the most obvious way to allocate the revenue – the percentage of U.S. citizens living in California by stating:

> … while California's share of the total U.S. population is 11.8%, I understand the Class to encompass natural persons who resided in California at any time during the relevant time period, including those who lived in California at one point and then moved out of state, along with those who initially lived out of state but then moved into California. For that reason, statistics that identify the fixed population within California at any given time would likely undercount the total number of "Californians" included in the Class relevant to this Case.[80]

94. Thus, Mr. Lloyd objects that any estimate of the number of Californians at a single point in time would be unreliable. But Mr. Lloyd's interpretation of the proposed class is not, in fact, what is alleged in the Complaint, which defines the class as "All persons residing in the state of California whose name, photographs, personal identifying information, or other personal data is or was included in the CLEAR database during the limitations period." The proposed

[79] Lloyd Report, p. 12.

[80] Lloyd Report, pp. 12 – 13.

class is composed of current California residents, and the Lloyd Report does not measure net profits associated with that population.[81]

95. In addition, Mr. Lloyd bases his calculation on an average of arrest data from 2018 and GDP data from 2021. Mr. Lloyd claims that this approach avoids the issue of proposed class members who moved in or out of state. I disagree. Both of his favored metrics – GDP for 2021 and arrest rates for 2018 – are tied to the number of residents of California at the time the metric was calculated and do not account for movement in or out of the state.[82]

96. Mr. Lloyd has justified his use of GDP data on the basis that:

> First, CLEAR is used in large part as a tool related to economic activity. For that reason, to the extent the proportion of U.S. economic activity conducted within California is not the same as the proportion of the U.S. population within California, then California's share of economic activity is likely to be more useful in conducting this apportionment analysis.[83]

97. Yet Mr. Lloyd has provided no evidence that "CLEAR's revenue attributable to Californians" bears any relationship to economic activity in the state of California. There is no evidence that economic activity affects the portion of CLEAR's revenue that might be attributable to proposed class members.

98. Mr. Lloyd's only justification for the use of the arrest rate is:

> To the extent CLEAR is used by law enforcement for non-economic purposes, I note that California also has a higher arrest rate [redacted] than its share of the U.S. population [redacted].[84]

99. Mr. Lloyd has not provided any analysis that indicates what percent of CLEAR's revenues are from police departments – particularly not police departments located in the state of California which might have a particular interest in arresting Californians.

100. Mr. Lloyd notes that CLEAR is used for a broad set of use cases:

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[81] Second, even if it did reflect the proposed class in this case (it does not), Mr. Lloyd's estimate does not take into account data available on people moving into and out of California. *See, e.g.*, https://www.capolicylab.org/pandemic-patterns-california-is-seeing-fewer-entrances-and-more-exits-april-2022-update/.

[82] *See, e.g.*, https://www.capolicylab.org/pandemic-patterns-california-is-seeing-fewer-entrances-and-more-exits-april-2022-update/.

[83] Lloyd Report, p. 12.

[84] Lloyd Report, p. 13.

> I understand CLEAR to … target industries and customers in the financial services (banks, brokerages, etc.), insurance, and retail sectors, among others. The data is used for a broad set of "use cases."[85]

101. This highlights a fundamental problem with Mr. Lloyd's approaches – he has not done any analysis indicating what information accessible via CLEAR is of interest to CLEAR's customers, nor has he determined whether, how, or to what extent that information is related to the California arrest rate or economic activity. Mr. Lloyd simply assumes, without any basis, that the percentage of CLEAR revenues from the "aggregation and compilation and distribution of personal data of Californians for profit" via CLEAR is directly related to the arrest rate and economic activity in the state of California.

102. In addition, although Mr. Lloyd has gone out of his way to avoid apportioning CLEAR's revenues on the basis of the number of current California residents, his preferred metrics are highly related to the number of Californians at any given point in time.

103. Furthermore, Mr. Lloyd appears to have made a math error when calculating his [redacted] figure. Mr. Lloyd's representation that the FBI arrest data indicates that California accounted for [redacted] of arrests in 2018 is not supported by the data.[86] The data purportedly used by Mr. Lloyd reports [redacted] arrests in California out of a total of [redacted] arrests in the U.S. for a percentage of arrests in California of [redacted].[87] Yet even this [redacted] overstates the true percentage because the FBI arrest data states that it is incomplete. There are notes in the source data file indicating that the arrest data for Illinois is incomplete and that no arrest data was received from the New York City Police Department. The file also does not present any data for Iowa.[88] Thus, the actual percentage is somewhat lower than [redacted] and Mr. Lloyd's [redacted] is unsupported and inflated. Furthermore, if [redacted] arrests are made each year in the U.S., then that means that [redacted] or [redacted] of Americans were arrested in 2018.[89] Extrapolating the percent of revenues for CLEAR attributable to Californians based on the [redacted] of the U.S. population that was arrested is not representative and is not reliable.

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85 Lloyd Report, p. 5.

86 Nor does Mr. Lloyd provide any exhibit which supports his estimate.

87 Exhibit 3. FBI Crime Stats Table 69

88 https://ucr fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/topic-pages/tables/table-69?

89 https://www.macrotrends.net/countries/USA/united-states/population.

104. Mr. Lloyd's selection of California's share of GDP at [redacted] is based on 2021. In 2020, his own data shows that the share was [redacted].[90] GDP figures from 2020 and 2021 should also be viewed with some caution as they were affected by the pandemic.

105. Mr. Lloyd's averaging arrest rates from 2018 and GDP from 2021 results in an *ad hoc* number that has no real interpretation. This average is a meaningless number that is based on figures that are only arguably related to two of the many possible use cases for CLEAR.

106. In summary, Mr. Lloyd's allocation of [redacted] of CLEAR revenues to the state of California is *ad hoc*, unreliable and based on an apparent math error.

6.3.3 Estimates for Business Data Are Unreliable

107. Mr. Lloyd's attribution of CLEAR revenues to data on businesses is unreliable. Mr. Lloyd recognizes that "CLEAR…aggregates and makes available to its customers information relating to individuals and businesses."[91] He categorizes [redacted] of revenue as being derived from searches related to individuals on the basis of an analysis of search types apparently performed by one of Plaintiffs' attorneys.[92] Mr. Lloyd describes the methodology as:

> Totaling the search types reasonably tied to natural persons (i.e., excluding company search, court search, search all business, risk inform business standalone, and intellectual property searches), the data indicates that approximately [redacted] of all CLEAR searches relate to individuals.[93]

108. The underlying data does not support Mr. Lloyd's division between business searches and searches tied to natural persons. *E.g.* a search term for a business name and a last name is not categorizable as being related to an individual or a business – it is both. The [redacted] calculation relied upon by Mr. Lloyd categorizes all searches described as "Phone Search" as being a search for a person.[94] As a matter of logic, some of those phone searches must be for phone numbers related to businesses, and, in fact one of the searches categorized as a "Phone

90 https://www.bea.gov/sites/default/files/2022-03/qgdpstate0322.pdf.

91 Lloyd Report, p. 5.

92 Lloyd Report, p. 14; Deposition of Terry Lloyd, August 22, 2022, Exhibit F21, tab "Search Summary" cell A1 "Zeke Person Search Totals:".

93 Lloyd Report, p. 14.

94 Deposition of Terry Lloyd, August 22, 2022, Exhibit F21, tab "Search Summary" cell A1 "Zeke Person Search Totals:" includes cell C5 for "Phone Search."

Search" is just "businessName." [95] Thus, the attorney's calculation is nothing more than a subjective assessment that is not supported by the underlying data and does not give any insight into the relative value of information on businesses and individuals in CLEAR.[96]

109. In summary, Mr. Lloyd's allocation of revenues to individuals is subjective and unreliable.

6.4 Mr. Lloyd Has No Methodology to Allocate Damages to Class Members

110. The Lloyd Report is flawed in that it does not propose a methodology to determine damages due to each class member.[97]

111. Mr. Lloyd explicitly rejects estimating damages according to the number of residents of California and, thereby, implicitly rejects allocating his estimated damages equally to each member of the proposed class.[98] I also believe that an equal allocation would not be a reasonable way to allocate damages to individual class members because it would ignore significant variability among the class. Variations that would likely be relevant to individual damage apportionment would include, at a minimum, differences between class members in the quantity of data, the accuracy of data, the time of residency in California, and the benefits or harms enjoyed or suffered by each member as a result of access to their information via CLEAR.

112. As an example of the difficulty in apportioning damages to individual class members, I do not know of any logical method that accounts for differences in the availability of data among class members. The information accessible via CLEAR for each individual will vary in both amount and type. The revenues attributable to that information will also vary depending

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95 Deposition of Terry Lloyd, August 22, 2022, Exhibit F21, tab "Fields By Search", row 6460.

96 Deposition of Terry Lloyd, August 22, 2022 at 284:15 – 285:6.

"Q Similar question to what I asked you earlier. Here it says: "Zeke person search totals. Zeke nonperson search totals." Do you see that at the top of Exhibit F21?

A I do.

Q And Zeke to you is the lawyer representing plaintiffs here?

A He's not the only Zeke I know, but he's the only one that would appear in this document.

Q Okay. And is it possible that you took your [redacted] figure from these Zeke calculations?

A Yes. It's possible that I directed him using the data to perform some calculations, but yes, this appears to be the source of the [redacted]."

97 I note that Professor Turow did not "…[quantify] the amount of harm per person. No, that was not part of my mandate." Deposition of Joseph Turow, August 26, 2022 at 187:18 – 19.

98 Lloyd Report, pp. 12 – 13. "…statistics that identify the fixed population within California at any given time would likely undercount the total number of 'Californians' included in the Class relevant to this Case."

on whether that information is presented as the result of a search. Each CLEAR customer may perform searches that only present data on Californians, searches that present no data on Californians, and searches that present a mix of data. I know of no way to determine which searches presented information on Californians that the searcher found relevant.

113. Apportioning damages based on search results would not be possible. As an initial matter, I understand that Thomson Reuters does not possess search results from which such analyses could be conducted.

114. Moreover, since CLEAR's revenues are largely the result of subscription plans, it is not obvious how to determine revenue attributable to any individual search.[99] The incremental revenue attributable to any particular search performed under a subscription plan is generally zero – *i.e.* if a customer did not perform a particular search for a particular person, Thomson Reuters' revenues would not change. Allocating revenues by dividing by the number of searches performed by that customer into the subscription fees for that customer would provide an allocated figure for revenue per search, but it leaves unanswered the questions of which searches disclose information on proposed class members and the value of that information. For example, we would have no way of knowing whether, even if information was disclosed about a particular proposed class member, whether that information was of any value to the searcher, *i.e.* whether that information was the point of the search.

115. There are at least five issues that must be addressed to determine unjust enrichment related to any individual in the proposed class:[100]

- What information was displayed as the result of a search.

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[99] Lloyd Report, p. 7.

[100] Note that assessing individual harm compounds these problems as it requires considering each individuals' privacy preferences. *See, e.g.*, Deposition of Cat Brooks, August 10, 2022 at 173:17 – 174:9.

"A. So my overall position is that the utilization of people's information without their knowledge or consent is more harmful than any benefit that could come from it.

Q. Any benefit whatsoever?

A. That's my position.

Q. Do you think everyone would agree with you?

A. Again, I cannot speak for everyone.

Q. Because --

A. I think many, many, many, many people might agree with me, yes.

Q. Do you think some people might disagree with that?

A. There's always a possibility for someone to disagree with me."

- Whether any proposed class member's information was part of the information displayed.
- Whether the proposed class member whose information was displayed was the target of the search or just incidental information that was of no value to the searcher.
- The amount of revenue CLEAR would have lost had the search not been performed.
- When the search was performed relative to the residency in California of the individual.

116. In summary, Mr. Lloyd proposes no methodology for allocating any unjust enrichment to each proposed class member. Nor do I believe that such an analysis is feasible as it goes beyond just individualized inquiry; it requires an inquiry into each search based on data that is not available.

7 SIGNATURE PAGE

117. I certify that, to the best of my knowledge and belief:

- The statements of fact in this report are true and correct.
- The reported analyses, opinions and conclusions are limited only by the reported assumptions and are my personal, unbiased and professional analyses, opinions and conclusions.
- I have no personal interest or bias with respect to the parties involved.
- My compensation is not contingent on an action or event resulting from the analyses, conclusions or opinions of this report.

Douglas G. Kidder September 7, 2022

Exhibit 1: Kidder Resume

Douglas G. Kidder

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(510) 610-0325 (cell)
dkidder@oskr.com

CURRENT EMPLOYMENT

2008 - Present **Managing Partner** **OSKR, LLC** **Emeryville, CA**

Patent valuation and business strategy expert with over 25 years of experience analyzing patents, business opportunities and risks. Consult for clients on complex damages and licensing issues with a particular focus on technology companies. www.oskr.com

PRIOR EXPERIENCE

2014 – 2020 **Adjunct Professor** **Golden Gate University** **San Francisco, CA**

Taught a graduate-level course in the School of Accounting on damages.

2001 – 2007 **Principal** **LECG, LLC** **Emeryville, CA**

1997 – 1999 Primarily consulted for companies on damages issues arising from allegations of antitrust and intellectual property infringement.

2005 **Office Director**

Responsible for the operations of a 90-person office including reviews, hiring, firing, promotions, morale and general administration.

2001 - 2005 **Special Assistant to the Chairman, Strategy**

Advised the Chairman on corporate acquisitions and general strategic direction.

2000 - 2001 **Managing Director** **SCIENT** **San Francisco, CA**

Joined corporate strategy group to help design and implement a turn-around for this Internet consulting firm. Responsible for company organizational transition.

1999 - 2000 **VP Operations** **KENAMEA** **San Francisco, CA**

Helped develop strategy and business plan for an Internet software startup. Managed the operations of the company as we grew from 4 to 25 people.

1996 - 1997 **Principal** **MANAGEMENT RESOURCES** **Berkeley, CA**

Independent consultant performing due diligence and analyses of startup high-tech business opportunities.

1995 – 1996 **Vice President Business Development** **WALT DISNEY IMAGINEERING** **Glendale, CA**

Evaluated new business ideas for WDI including creative concepts and technology initiatives.

1993 - 1995 **Director** **VALSPAR** **Chicago, IL**

Managed the production planning, distribution and I/T functions for the $200 million Consumer Paint Division.

1992-1993 **Senior Associate** **BOOZ, ALLEN** **San Francisco, CA**
1990-1991 **Associate**
1987-1989 **Analyst**

Performed general business strategy and organization assignments across a wide range of industries. Exceptional (second in the history of the firm) promotion granted from Analyst to Associate waiving the usual requirement for an MBA.

1984 - 1986 **Lecturer** **UC BERKELEY** **Berkeley, CA**

Taught an introductory computer science class.

1986 **Chief Engineer** **WINDWARD YACHTS** **Oakland, CA**

Responsible for the detailed design of custom yachts.

OTHER BUSINESS EXPERIENCE

2013 – Present **Naval Architect** **Berkeley, CA**

Design custom rowing shells for open water.

2001 - 2013 **President** **MAAS BOAT COMPANY** **Richmond, CA**

Purchased, managed and sold a company that manufactures and sells open water rowing shells in the U.S. and around the world. Primary responsibilities were design, management, marketing, finance, and license negotiation.

2008 – 2012 **President** **NAOWRC, Inc.** **Richmond, CA**

Created a national championship for open water rowing that brought together rowers from around the U.S. and the world.

2004 – 2011 **President** **KIDDER RACING** **Richmond, CA**

Developed design brief for an innovative one-person sailing skiff. Founded company and was responsible for final design, strategy, marketing and finance.

Board Positions

Skyflow Inc. (former), NextWindow (former), Hero Arts (Advisory Board, former),Trade New Zealand (Advisory Board, former), Berkeley Rowing Club (former)

Other

Member of the Licensing Executives Society

Member of the National Associate of Business Economists

Member of The Sedona Conference

Participant in the Stanford IP Roundtable

Booz, Allen & Hamilton Professional Excellence Award

Outstanding Graduate Student Instructor Award

Significant experience evaluating new businesses.

EDUCATION

1986 M.Sc., University of California at Berkeley

1983 B.A. with Honors, Amherst College

Elected to Sigma Xi, National Scientific Honor Society

PUBLICATIONS & PRESENTATIONS

"Are Patents Really Options?", *les Nouvelles Journal of the Licensing Executives Society*, V. 38(4), December 2003.

"Most Favored Licensee Clauses: Draining the Swamp" presentation at *Advanced Topics in IP Valuation* to the Intellectual Property Society, July 2004.

"Reasonable Royalties by the New Rules", *Dunn on Damages*, Summer 2011.

"Infringer's Profits Should Not Be the Focus of Patent Damages Cases", *Dunn on Damages*, Fall 2011.

"Simply Wrong: The 25% Rule Examined", *les Nouvelles Journal of the Licensing Executives Society*, December, 2011.

"For Want of Damages the Case was Tossed: Judge Posner's Ruling in Apple v. Motorola", *Dunn on Damages*, Fall 2012.

"Nash Bargaining and Patent Damages", *les Nouvelles Journal of the Licensing Executives Society*, March 2014.

"Lump Sums, Running Royalties and Real Options", *les Nouvelles Journal of the Licensing Executives Society*, December 2015.

Litigation Experience

Ossur Holdings Inc. and Generation II USA, Inc., v. Bellacure, Inc., Shane Sterling and Maurice Cannon. Before United States District Court, Western District of Washington at Seattle. Civil Action No: 05-CV-01552-CMP. Retained by counsel for plaintiffs, re: lost profits and unjust enrichment due to alleged theft of trade secrets in the medical device industry (osteoarthritis knee braces).

Google, Inc. v. American Blind & Wallpaper Factory, Inc. Before United States District Court, Northern District of California. Case No. C 03-5340 JF EAI. Retained by counsel for plaintiffs re: damages arising from Google's alleged infringement of American Blind & Wallpaper's trademarks.

Comcast Cable Communications Corporation, LLC v. Finisar Corporation. Before United States District Court for the Northern District of California. Case No. C 06-04206 WHA. Retained by counsel for plaintiffs re: damages arising from Comcast's alleged infringement of Finisar patent number 5,404,505.

Carter Bryant, an individual v. Mattel Inc. and Consolidated Actions. Before United States District Court for the Central District of California, Eastern Division. Case No. CV 04-9049 SGL (RNBx) Consolidated with Case No. CV 04-09059 Case No. CV OS02727. Retained by counsel for plaintiff re: damages arising from Mr. Bryant's alleged theft of copyrighted materials, breach of fiduciary duty and theft of trade secrets.

American Airlines, Inc. v. Google, Inc. Before United States District Court for the Northern District of Texas, Fort Worth Division. Case No. 4-07CV-487-A. Retained by counsel for defendant re: damages arising from Google's alleged infringement of American Airline's trademarks.

H. Richard Dallas, Shareholder Representative for dMarc v. Google Inc. Before JAMS, reference #1100054656. Retained by counsel for defendant re: damages arising from a breach of contract claim arising from Google's acquisition of dMarc.

Flashseats, LLC. v. Paciolan Inc. Before United States District Court, District of Delaware. Case No. CA 07-575 (JJF). Retained by counsel for defendant re: damages arising from Paciolan's alleged infringement of Flashseats' patent number 6,496,809.

Charlotte Russe Holding, Inc. v. Versatile Entertainment, Inc. and People's Liberation, Inc. Before Superior Court of the State of California, County of Los Angeles, Central District. Case No. BC424734. Retained by counsel for plaintiff re: damages arising from alleged breach of contract.

M&H Realty Partners V L.P. v. Aerojet-General Corporation, Boeing Realty Corporation, The Boeing Company, McDonnell Douglas Corporation. Before Superior Court for the State of California, County of Orange. Case No. 30-2008-00080378-CUTT-CXC. Retained by counsel for plaintiff re: damages arising from environmental contamination at a property redevelopment.

Firefly Digital, Inc. v. Google Inc. Before United States District Court, Western District of Louisiana, Lafayette Division. Case number 6:10cv00133-TLM-PJH. Retained by counsel for defendant re: damages arising from alleged trademark infringement.

American Technology, Inc., v. FrozenCPU.com, Inc. Before the United States District Court, Middle District of Florida, Orlando Division. Case Number 6:11-CV-110-ORLACC-GJK. Retained by counsel for defendant re: damages arising from alleged patent infringement.

C&C Jewelry Mfg., Inc. v. Trent West. Before United States District Court, Northern District of California, San Jose Division, Case No. 5:09-cv-01303-JF-HRL. Retained by counsel for plaintiff re: reasonable royalty damages arising from alleged patent infringement.

Pixart Imaging, Inc. v. Avago Technologies General IP (Singapore) PTE. LTD. Before United States District Court Northern District of California, San Jose Division. Case No. C 10-00544 JW. Retained by counsel for plaintiff re: additional royalties due from alleged breach of a patent license agreement.

EasyWeb Innovations, LLC. v. Twitter, Inc. Before United States District Court, Eastern District of New York. Case No. 2:11-cv-04550-JFB-WDW. Retained by counsel for defendant re: reasonable royalty damages arising from alleged patent infringement.

Oncology Tech, LLC v. Elekta AB and Elekta, Inc. Before United States District Court, Western District of Texas, San Antonio Division. Case No: 5:12-CV-00314-HLH. Retained by counsel for defendants re: damages arising from alleged breach of contract.

American Medical Response, Inc. v. Paramedics Plus, LLC. Before Superior Court of the State of California, County of Alameda. Case No: RG10541623. Retained by counsel for defendant re: damages arising from alleged low-cost bid for emergency medical services.

AMC Technology, L.L.C., v. Cisco Systems, Inc. Before United States District Court, Northern District of California, San Jose Division. Case No: C-11-03403 (PSG). Retained by counsel for plaintiff re: damages arising from alleged breach of contract.

Silicon Storage Technology, Inc. v. National Union Fire Insurance Company of Pittsburgh, PA and XL Specialty Insurance Company. Before United States District Court, Northern District of California. Case No: 5:13-CV-05658. Retained by counsel for defendants re: damages arising from a claim for theft of trade secrets.

Neustar, Inc. v. F5 Networks, Inc. Before United States District Court, Northern District of California, San Jose Division. Case No: CV12-02574. Retained by counsel for plaintiff re: damages arising from alleged breach of contract.

Qiang Wang v. Palo Alto Networks, Inc. Before United States District Court, Northern District of California, San Francisco Division. Case No: C 12-05579 WHA. Retained by counsel for defendant re: damages arising from alleged misappropriation of trade secrets and alleged patent infringement.

Affymetrix, Inc. v. Enzo Biochem Inc. Before United States District Court, Southern District of New York, Case No. 1:04-cv-01555-RJS. Retained by counsel for Plaintiffs re: damages arising from an alleged breach of contract.

Enzo BioChem, Inc. v. Affymetrix, Inc. Before United States District Court, Southern District of New York, Case No. 1:03-cv-08907-RJS. Retained by counsel for Defendants re: damages arising from an alleged breach of contract.

Wyde Voice, LLC and Free Conferencing Corporation v. Global IP Solutions, Inc. and Google Inc. Before Superior Court of the State of California, County of San Francisco, Case No. CGC-12-522868. Retained by counsel for defendants re: damages arising from an alleged breach of contract.

Alexander Stross v. ZipRealty, Inc. Before United States District Court, Western District of Texas, Austin Division. Civil Action No. A-13-CV-419-SS. Retained by counsel for defendants re: damages arising from alleged copyright infringement.

Collarity, Inc. v. Google, Inc. Before United States District Court, District of Delaware. Case No. 11-1103 MPT. Retained by counsel for defendants re: damages arising from alleged patent infringement.

TomTom International, B.V. v. Broadcom Corporation. Before United States District Court, Central District of California. Case No. 8:14-cv-00475 PA (DFMx). Retained by counsel for defendants re: damages arising from alleged breach of warranty.

In Re Google Inc. Privacy Policy Litigation. Before United States District Court, Northern District of California, San Jose Division. Case No. 12-CV-01382 PSG. Retained by counsel for Google re: damages arising from alleged breach of privacy policy.

Sarvint Technologies, Inc. v. Athos Works, Inc., and Mad Apparel, Inc. (and related cases filed by Sarvint against OMSignal, Ralph Lauren, Victoria's Secret, Textronics and adidas, and Sensoria). Before United States District Court, Northern District of Georgia, Atlanta Division. Civil Action No. 1:15-CV-00068-TCB. Retained by counsel for defendants re: irreparable harm arising from alleged patent infringement.

California Expanded Metal Products Co., v. ClarkWesternDietrich Building Systems LLC, James Klein and BlazeFrame Industries, Ltd. Before United States District Court, Central District of California, Case No. 2:12-cv-10791-DDP-MRWx. Retained by counsel for defendants re: damages arising from alleged breach of contract and patent infringement.

In Re: Multiple Listing Service Real Estate Photo Litigation. Before United States District Court, Southern District of California, Case No.: 14CV1158 BAS (JLB). Retained by counsel for defendant (CoreLogic) re: damages arising from an alleged breach of copyright.

TeleSign Corporation v. Twilio, Inc. Before United States District Court, Central District of California, Case No. 15-3240-PSG-SS. Retained by counsel for defendant re: irreparable harm in the context of a motion for preliminary injunction.

Quantum Corporation v. Crossroads Systems, Inc. Before United States District Court, Northern District of California, San Francisco Division, Case No. 3:14-cv-04293-WHA. Retained by counsel for plaintiff re: lost profits and reasonable royalty arising from alleged patent infringement.

United States of America ex rel. Floyd Landis v. Tailwind Sports Corp., Lance Armstrong and Johan Bruyneel. Before United States District Court, District of Columbia, Case No. 1:10-cv-00976 (CRC). Retained by counsel for Lance Armstrong re: benefits received by the U.S. Postal Service from its sponsorship of the USPS Cycling Team.

Integra LifeSciences Corp., Integra LifeSciences Sales LLC, Confluent Surgical, Inc., and Incept LLC, v. HyperBranch Medical Technology, Inc. Before United States District Court, District of Delaware, Case No. C.A. No. 15-1819 (LPS)(CJB). Retained by counsel for defendant re: irreparable harm in the context of a motion for preliminary injunction.

Alice Svenson, individually and on behalf of all others similarly situated, v. Google, Inc. and Google Payment Corporation. Before United States District Court, Northern District of California, Case No. CV-13-04080-BLF. Retained by counsel for defendant re: damages from alleged breach of privacy policy.

Telecom Asset Management, LLC v. Cellco Partnership d/b/a Verizon Wireless, Verizon Sourcing LLC, Verizon Corporate Resources Group LLC. Before United States District Court, Southern District of New York, Case No.: 15 Civ 2786 (SHS) (RLE). Retained on behalf of defendants re: damages from alleged breach of contract.

Celestica (USA) Inc. v. The Crossbow Group, LLC, Before JAMS, San Jose, CA. JAMS Ref. No. 1110018525. Retained by counsel for plaintiffs re: damages from alleged breach of contract.

Varentec, Inc. v. Gridco, Inc. *et al*. Before United States District Court for the District of Delaware, C.A. No. 16-217-RGA. Retained by counsel for defendants re: irreparable harm in the context of a motion for preliminary injunction.

Connectus, LLC d/b/a eDegree Advisor v. Ampush Media, Inc. and DGS Edu LLC. Before United States District Court, Middle District of Florida, Tampa Division, Case No.: 8:15-cv-02778-VMC-JSS. Retained by counsel for plaintiffs re: damages from breach of contract, unjust enrichment and unfair competition.

Doug Baird, Doug Hesse and Bob Schmitt Derivatively on Behalf of BlinkMind, Inc. v. Joe Baird, Nathan Stratton, Michael Tessler, Exario Networks, Inc., and BroadSoft, Inc. Before District Court of Harris County, Texas, 270th Judicial District, Cause No. 2015-16576. Retained by counsel for defendants Joe Baird, Nathan Stratton and BroadSoft re: damages from theft of trade secrets.

Integra LifeSciences Corp., Integra LifeSciences Sales LLC, Confluent Surgical, Inc., and Incept LLC, v. HyperBranch Medical Technology, Inc. Before United States District Court, District of Delaware, Case No. C.A. No. 15-1819 (LPS)(CJB). Retained by counsel for defendant re: damages from patent infringement.

Klaustech, LLC. v. AdMob, Inc. Before United States District Court, Northern District of California, Oakland Division. Case No. 10-CV-05899-JSW. Retained by counsel for defendant re: damages from patent infringement.

Google LLC, v. Anthony Scott Levandowski and Lior Ron. Before JAMS, San Francisco, Case No. 1100086069 & 1100086032. Retained by counsel for plaintiff re: damages from breach of contract, fraud, and disloyalty.

Express Mobile, Inc., v. Svanaco, Inc., BigCommerce, Inc. Before United States District Court For the Eastern District of Texas, Marshall Division. Retained by counsel for defendant re: damages from patent infringement.

Safeway, Inc. v. Sheppard Mullin Richter & Hampton, LLP. Before JAMS, San Francisco, Case No. 1220052996. Retained by counsel for defendant re: damages from legal malpractice.

Juliana Griffo v. Oculus VR, Inc. and Palmer Luckey. Before United States District Court, Central District of California, Southern Division (Santa Ana), Case No. 8:15-cv-01228-DOC (JCGx). Retained by counsel for defendants re: damages from copyright infringement.

Beijing Choice Electronic Technology Co., Ltd. v. Contec Medical Systems USA INC. and Contec Medical Systems Co., Ltd. Before United States District Court, Northern District of Illinois, Case No: 18-cv-00825. Retained by counsel for defendants re: irreparable harm in the context of a motion for a preliminary injunction.

Alarm.com, Inc. and ICN Acquisition, LLC v. SecureNet Technologies, LLC. Before United States District Court, District of Delaware. Case No.: 1:15-cv-00807-GMS. Retained by counsel for defendants re: damages from patent infringement.

Ameranth, Inc. v. Mobo Systems (d/b/a Olo). Before United States District Court, Southern District of California, San Diego Division. Case No.: 3:12-cv-01642-JLS-NLS. Retained by counsel for defendant re: damages from patent infringement.

International Longshore and Warehouse Union and Pacific Maritime Association vs. ICTSI Oregon, Inc. Before the United States District Court for the District of Oregon. Case No. 3:12-cv-01058-SI. Retained by counsel for plaintiff and counterclaim defendant re: damages from labor slowdown.

International Code Council, Inc. v. UpCodes, Inc., Garrett Reynolds and Scott Reynolds. Before the United States District Court for the Southern District of New York. Case No. 1:17-cv-6261. Retained by counsel for defendants re: damages from copyright infringement.

United States of America v. Sushovan Tareque Hussain. Before the United States District Court, Northern District of California. Case No. CR 16-00462 CRB. Retained by counsel for defendant re: gains from fraud.

Nevro Corp., v. Stimwave Technologies, Inc. Before the United States District Court for the District of Delaware. Case No. 19-325 (CFC). Retained by counsel for defendant re: irreparable harm in the context of a motion for a preliminary injunction.

CellInfo, LLC v. American Tower Corporation and American Tower Do Brasil. Before American Arbitration Association, Boston Regional Office. Case No. 01-18-0004-5894. Retained by counsel for plaintiff re: damages from misappropriation of trade secrets and confidential information.

Booker T. Huffman v. Activision Publishing, Activision Blizzard and Major League Gaming Corp. Before the United States District Court for the Eastern District of Texas, Marshall Division. Case No. 2:19-cv-00050-RWS-RSP. Retained by counsel for defendant re: damages from copyright infringement.

PTP OneClick, LLC v. Avalara, Inc. Before the United States District Court, Western District of Washington at Seattle. Case No. 2:19-cv-00640-JLR. Retained by counsel for defendant re: damages from misappropriation of trade secrets and breach of contract.

Arendi S.A.R.L. v. Motorola Mobility LLC. Before the United States District Court, District of Delaware. Case No. 12-1601-LPS. Retained by counsel for defendant re: damages from patent infringement.

Arendi S.A.R.L. v. Google LLC. Before the United States District Court, District of Delaware. Case No. 13-919-LPS. Retained by counsel for defendant re: damages from patent infringement.

FurnitureDealer.net, Inc. v. Amazon.com, Inc., and COA, Inc. d/b/a Coaster Company of America. Before the United States District Court, District of Minnesota. Case No. 18-232 (JRT/HB). Retained by counsel for defendant re: copyright infringement.

Crown Building Maintenance, Inc. v. Metro Services Group, Jeff Dachenhaus, Mark Nolan and Derek Schulze. Before the Superior Court of the State of California, County of San Francisco. Case No. CGC-18-566118. Retained by counsel for plaintiffs re: damages from breach of contract and misappropriation of trade secrets.

Hong Kong Ucloudlink Network Technology Limited v. SIMO Holdings Inc. and Skyroam, Inc. Before the United States District Court, Northern District of California. Case No. 8-cv-05031. Retained by counsel for plaintiffs re: damages from patent infringement.

Fisher & Paykel Healthcare, Ltd v. Flexicare Incorporated. Before the United States District Court, Central District of California. Case No. 8:19-cv-00835-JVS-DFM. Retained by counsel for defendants re: damages from patent infringement.

Hughes & Company Construction, Inc. v. Weber Hung Family Trust. Before American Arbitration Association. Case No. 01-20-0004-8744. Retained by counsel for defendants / counterclaimants re: damages from breach of contract.

Equicare Health Inc. v. Varian Medical Systems, Inc. Before the American Arbitration Association. Case No.: 01-19-0002-4132. Retained by counsel for defendant re: damages from breach of contract.

Personalized Media Communications, LLC v. Netflix, Inc. Before the United States District Court, Eastern District of Texas, Marshall Division, Case No. 2:19-cv-00091-JRG. Retained by counsel for defendant re: damages from patent infringement.

Red Hydrogen, LLC v. CloudMinds (HK) Ltd. Before JAMS Arbitration, JAMS Ref. No. 1220062943. Retained by counsel for defendant re: factors relating to alter ego and damages from breach of contract.

USC IP Partnership, L.P., v. Facebook, Inc. Before the United States District Court for the Western District of Texas, Waco Division, Case No. 6:20-cv-00555-ADA. Retained by counsel for defendant re: damages from patent infringement.

Brad Peters, David Gray and Paul Staelin v. Infor (US), Inc. Before the United States District Court, Northern District of California, San Francisco Division, Civil Action No. 19-cv-8102 Retained by counsel for defendants / counter-claimant re: damages from breach of contract.

Netlist v. Samsung Electronics, Co., Ltd. Before United States District Court, Central District of California, Southern Division, Case No. 8:20-cv-993-MCS (ADSx). Retained by counsel for defendants re: damages from breach of contract.

Alexander Walker v. Kitty Hawk Corporation. Before JAMS, JAMS Ref. No. 1100110678. Retained by counsel for defendants re: damages from alleged fraud and breach of contract.

Contour Data Solutions, LLC. v. Gridforce Energy Management LLC, NAES Corporation, CDW Corporation, CDW Direct. Before United States District Court, Eastern District of Pennsylvania, Case No. 2:20-CV-03241. Retained by counsel for Gridforce and NAES re: breach of contract.

Rex Medical, L.P. v. Intuitive Surgical, Inc., Intuitive Surgical Operations, Inc. and Intuitive Surgical Holdings, LLC. Before United States District Court, District of Delaware, Civil Action No. 19-cv-5-MN. Retained by counsel for Rex Medical re: damages from patent infringement.

Estech Systems, Inc. v. Howard Midstream Energy Partners d/b/a Howard Energy Partners. Before United States District Court, Western District of Texas, Waco Division, Civil Action No.: 6-20-cv-00777. Retained by counsel for Howard Energy Partners re: damages from patent infringement.

Bay Materials, LLC v. 3M Company. Before United States District Court, District of Delaware, Civil Action No. 21-cv-1610-RGA-JLH. Retained by counsel for 3M Company re: irreparable harm in the context of a motion for a preliminary injunction.

RSB Spine, LLC v. DePuy Synthes Sales, Inc. and DePuy Synthes Products, Inc. Before United States District Court, District of Delaware, C.A. No. 19-1515-RGA. Retained by counsel for RSB Spine re: damages from patent infringement.

RSB Spine, LLC v. Medacta USA, Inc. Before United States District Court, District of Delaware, C.A. No. 18-1973-RGA. Retained by counsel for RSB Spine re: damages from patent infringement.

RSB Spine, LLC v. Precision Spine, Inc. Before United States District Court, District of Delaware, C.A. No. 18-1974-RGA. Retained by counsel for RSB Spine re: damages from patent infringement.

Quest Media & Supplies v. Aerojet Rocketdyne, Inc. Before Superior Court of the State of California, County of Sacramento, Case No. 34-2017-00207975. Retained by counsel for Quest Media re: damages from breach of contract.

Dennis P. Flynn v. Sara L. Flynn and Christopher J. Dressel. Before JAMS, Reference No. 1100111518. Retained by counsel for Dennis Flynn re: dissolution of partnerships and valuation of real estate interests.

AlphaSense v. Sentieo. Before United States District Court, District of Delaware, C.A. No. 21-1011-CFC. Retained by counsel for Sentieo re: irreparable harm in the context of a motion for preliminary injunction.

Documents Reviewed
Exhibit 2

Legal Filings

Class Action Complaint, December 3, 2020
Defendant Thomson Reuters Corporation's Answer and Affirmative Defenses to Plaintiffs' Class Action Complaint, September 10, 2021
Defendant Thomson Reuters Corporation's First Supplemental Answers and Objections to Plaintiffs' First Set of Interrogatories to Defendant, May 24, 2022
Defendant Thomson Reuters Corporation's Responses and Objections to Plaintiffs' First Set of Interrogatories to Defendant, April 4, 2022
Ivie v. Kraft Foods Global, Inc. , NDCAL, C-12-02554-RMW, Jan. 14, 2015.
Notice of Defendant's Motion to Dismiss Pursuant to FRCP 12(b)(6), and Motion to Strike Pursuant to California Code of Civil Procedure § 425.16, and Memorandum In Support, April 5, 2021
Order Granting In Part and Denying in Part Defendant's Motion to Dismiss, August 16, 2021
Plaintiffs' First Set of Interrogatories to Defendant, March 4, 2022
Plaintiffs' First Set of Requests for Production of Documents to Defendant, October 1, 2021
Plaintiffs' Second Set of Interrogatories to Defendant, March 11, 2022
Stipulation to Set Case Schedule and Order, August 26, 2021
Thomson Reuters First Supplemental Answers to Plaintiffs First Set of Interrogatories, May 24, 2022

Thomson Reuters Responses to Plaintiffs First Set of Interrogatories, Attachment A, April 4, 2022

Expert Reports

Professor Joseph Turow, June 1, 2022, revised July 25, 2022
Terry Lloyd, June 1, 2022, revised July 25, 2022

Depositions

Deposition and Exhibits of Dorian Buckethal, May 18, 2022
Deposition and Exhibits of Paul Godlewski, May 6, 2022
Deposition and Exhibits of Steven Fox, May 16, 2022
Deposition and Exhibits of Terry Lloyd, August 22, 2022.
Deposition and Exhibits of Joseph Turow, August 26, 2022.
Deposition and Exhibits of Rasheed Shabazz, August 18, 2022
Deposition and Exhibits of Cat Brooks, August 10, 2022

Correspondences

Conversations with Irene Caratto and Kelly Shelton, July 20, 2022

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United States FBI Crime Statistics, Table 69

Source https //ucr.fbi.gov/crime-in-the-u.s/2018/crime-in-the-u.s.-2018/tables/table-69/table-69.xls/@@template-layout-view?override-view=data-declaration.

Table 69

Arrests

by State, 2018

State		Total all classes[1]	Violent crime[2]	Property crime[2]	Murder and nonnegligent manslaughter	Rape[3]	Robbery	Aggravated assault	Burglary	Larceny-theft	Motor vehicle theft	Arson	Other assaults	Forgery and counterfeiting	Fraud	Embezzlement	property; buying, receiving, possessing	Vandalism	Weapons; carrying, possessing, etc	Prostitution and commercialized vice	Sex offenses (except rape and prostitution)	Drug abuse violations	Gambling	against the family and children	Driving under the influence	Liquor laws	Drunkenness[4]	Disorderly conduct	Vagrancy	All other offenses (except traffic)	Suspicion	Curfew and loitering law violations	Number of agencies	2018 estimated population	*Percent of Total Arrests*	*Percent of Population*
ALABAMA	Under 18	3,578	296	959	13	22	111	150	212	627	112	8	608	2	19	0	92	82	88	0	9	130	0	11	26	131	24	250	0	851	0	0	171	3,070,799	*1.5%*	*1.1%*
	Total all ages	126,404	4,761	15,609	214	245	919	3,383	2,352	12,332	840	85	13,027	768	2,103	112	1,756	1,004	1,585	0	446	8,217	0	420	6,391	1,434	5,300	1,815	34	61,622	0	0				
ALASKA	Under 18	1,687	206	439	4	35	21	146	96	218	103	22	374	5	6	6	4	109	18	0	34	183	0	3	35	65	1	10	0	184	0	5	32	733,747	*0.4%*	*0.3%*
	Total all ages	30,620	2,686	3,763	38	149	367	2,132	602	2,392	726	43	4,943	154	201	54	120	1,103	387	2	263	1,046	0	174	3,148	592	47	843	17	11,072	0	5				
ARIZONA	Under 18	20,478	1,127	3,298	16	65	388	658	535	2,414	325	24	3,866	21	77	12	87	1,631	247	2	221	3,239	1	248	141	1,060	74	1,424	27	3,022	0	653	91	6,586,181	*3.0%*	*2.4%*
	Total all ages	256,785	11,628	32,622	281	328	1,940	9,079	3,883	26,621	1,711	407	25,198	1,121	2,055	854	1,087	10,177	3,093	349	1,386	32,272	2	2,448	19,200	7,082	11,514	14,723	567	78,700	54	653				
ARKANSAS	Under 18	7,697	427	1,423	6	48	82	291	291	1,030	93	9	1,668	18	33	4	187	311	114	1	17	925	0	3	50	158	74	579	0	1,446	0	259	241	2,640,116	*1.4%*	*1.0%*
	Total all ages	120,240	4,650	12,516	141	238	474	3,797	1,748	10,118	594	56	11,688	820	852	49	1,736	1,544	1,112	136	83	17,954	6	434	5,761	1,265	5,035	2,301	303	51,736	0	259				
CALIFORNIA	Under 18	42,958	7,210	7,484	84	245	2,937	3,944	2,864	3,048	1,402	170	8,026	37	118	17	915	2,030	2,748	12	876	2,967	8	1	474	930	522	1,007	88	6,836	0	652	700	39,431,921	*12.8%*	*14.7%*
	Total all ages	1,093,080	110,236	97,247	1,409	2,539	16,670	89,618	35,230	42,468	18,020	1,529	81,812	4,118	6,105	921	16,227	16,652	28,290	6,418	8,901	219,251	403	268	127,250	5,948	58,286	3,451	7,290	293,353	1	652				
COLORADO	Under 18	17,906	758	3,161	18	90	211	439	338	2,455	314	54	1,895	4	78	13	22	700	279	2	145	2,257	0	37	217	1,056	0	1,762	0	4,747	0	773	180	4,952,541	*2.3%*	*1.8%*
	Total all ages	193,216	7,832	24,136	195	549	1,166	5,922	2,301	19,199	2,437	199	16,477	688	2,243	112	526	4,843	2,313	376	521	16,172	7	2,466	20,353	7,007	144	6,887	549	78,790	1	773				
CONNECTICUT	Under 18	7,106	325	1,359	6	27	153	139	206	862	273	18	1,763	10	41	1	135	284	153	0	64	489	1	34	18	18	0	1,460	0	950	0	1	104	3,457,743	*1.1%*	*1.3%*
	Total all ages	95,709	3,399	12,312	79	212	870	2,238	1,624	9,834	778	76	17,370	582	921	140	692	1,640	1,088	184	360	8,087	10	1,363	7,484	96	11	10,505	41	29,423	0	1				
DELAWARE	Under 18	2,851	302	547	2	15	86	199	134	370	41	2	788	4	48	2	62	114	82	1	28	279	1	0	0	49	1	228	0	283	0	32	52	964,106	*0.3%*	*0.4%*
	Total all ages	28,742	1,965	5,337	33	77	391	1,464	688	4,511	116	22	6,121	210	1,348	163	324	755	322	121	107	3,707	9	185	427	669	323	1,164	164	5,289	0	32				
DISTRICT OF COLUMBIA[5]	Under 18	505	92	34	0	0	64	28	0	32	2	0	111	0	1	0	5	12	13	0	2	10	0	0	0	1	0	53	0	171	0	0	2	0	*0.2%*	*0.0%*
	Total all ages	13,682	185	86	0	2	113	70	0	76	9	1	411	3	3	0	14	35	42	0	20	290	0	2	9	817	49	300	13	11,403	0	0				
FLORIDA[6, 7]	Under 18	48,213	3,218	12,686	46	253	1,090	1,829	3,040	7,380	2,209	57	8,152	48	401	32	119	890	799	0	290	5,399	4	0	69	405	0	0	0	15,701	0	0	596	21,278,278	*8.4%*	*7.9%*
	Total all ages	715,424	34,907	89,456	712	1,936	5,761	26,498	14,757	66,157	8,295	247	80,570	1,989	11,207	1,086	1,632	6,129	6,604	1,920	2,862	134,142	123	0	32,127	10,590	0	0	0	300,080	0	0				
GEORGIA	Under 18	15,400	836	3,161	50	24	233	529	590	2,311	228	32	2,451	32	74	1	241	467	391	4	264	2,053	2	122	139	207	14	1,387	77	3,328	6	143	258	6,742,246	*2.4%*	*2.5%*
	Total all ages	200,643	7,920	22,314	307	168	990	6,455	2,689	18,597	913	115	16,260	1,573	2,298	127	2,147	2,919	2,619	322	1,629	37,291	152	2,607	23,449	1,467	1,273	9,230	366	64,518	19	143				
HAWAII	Under 18	1,762	104	309	1	9	46	48	32	233	40	4	307	1	3	0	51	7	12	0	31	337	0	0	11	49	0	18	0	413	0	109	2	1,148,121	*0.3%*	*0.4%*
	Total all ages	24,487	828	2,413	40	75	204	509	290	1,844	252	27	2,968	51	109	0	449	92	185	104	125	1,873	149	17	4,288	319	0	463	0	9,945	0	109				
IDAHO	Under 18	5,993	192	978	2	57	19	114	136	766	48	28	759	5	30	7	14	257	94	1	71	928	0	7	78	196	25	188	0	2,046	3	114	74	1,554,954	*0.6%*	*0.6%*
	Total all ages	52,292	1,542	4,896	16	162	90	1,274	777	3,911	157	51	4,559	132	355	47	175	788	283	12	243	8,777	1	716	5,689	874	333	1,455	8	21,290	3	114				
ILLINOIS[6]	Under 18	7,366	786	1,876	18	29	564	175	143	897	826	10	1,297	2	14	0	45	264	620	0	17	834	47	6	1	27	0	564	0	916	0	50	2	2,865,349	*1.0%*	*1.1%*
	Total all ages	86,947	5,581	14,859	416	437	2,422	2,306	1,015	9,514	4,267	63	16,749	127	247	0	84	2,696	6,798	115	350	17,060	706	355	2,825	181	0	3,987	28	14,149	0	50				
INDIANA	Under 18	8,831	615	1,784	9	29	163	414	199	1,339	220	26	1,652	20	63	8	24	342	203	0	64	1,155	0	203	36	457	16	518	9	1,556	2	104	202	4,025,425	*1.5%*	*1.5%*
	Total all ages	125,536	7,236	14,135	184	212	1,118	5,722	1,617	11,037	1,408	73	10,492	968	1,434	210	289	1,054	2,024	204	540	25,058	7	912	11,890	2,824	3,261	3,177	39	39,648	30	104				
IOWA[8]	Under 18																																		*0.0%*	*0.0%*
	Total all ages																																			
KANSAS	Under 18	1,639	43	105	0	12	4	27	17	77	10	1	165	0	2	7	8	42	3	0	12	202	0	14	31	335	0	108	0	562	0	0	213	1,308,859	*0.4%*	*0.5%*
	Total all ages	32,837	387	1,005	5	43	15	324	116	802	78	9	1,590	58	271	25	120	285	83	1	44	2,242	0	152	4,554	1,971	119	946	0	18,984	0	0				
KENTUCKY	Under 18	2,985	161	691	9	24	59	69	125	428	107	31	767	6	12	16	86	77	24	0	28	257	0	2	39	11	27	137	0	643	0	1	332	3,500,586	*2.4%*	*1.3%*
	Total all ages	205,075	1,982	12,269	126	252	517	1,087	2,060	9,363	723	123	9,649	812	989	378	1,459	806	508	95	237	19,355	1	4,729	14,812	168	14,231	3,664	23	118,907	0	1				
LOUISIANA	Under 18	16,533	1,175	3,683	31	97	202	845	1,099	2,223	328	33	3,231	52	33	0	408	390	439	4	117	1,496	6	88	15	78	12	2,076	29	2,963	2	236	165	3,954,330	*2.1%*	*1.5%*
	Total all ages	176,520	10,465	30,218	334	443	1,376	8,312	5,163	23,652	1,304	99	21,314	703	1,283	138	2,761	3,019	3,648	405	1,102	30,437	33	1,727	5,650	1,287	2,880	7,178	250	51,773	13	236				
MAINE	Under 18	2,845	51	673	3	9	16	23	96	532	39	6	531	6	16	3	11	205	6	0	33	304	0	1	22	395	0	95	0	483	0	10	134	1,338,404	*0.5%*	*0.5%*
	Total all ages	40,851	756	5,456	16	73	135	532	561	4,615	235	45	4,877	209	480	46	116	1,032	144	54	167	3,692	2	137	5,811	2,049	15	1,360	1	14,432	5	10				
MARYLAND	Under 18	17,825	1,907	3,705	22	83	1,048	754	608	2,462	525	110	4,697	19	29	5	47	784	615	5	153	2,046	19	13	41	311	1	967	16	2,369	8	68	153	5,879,299	*2.1%*	*2.2%*
	Total all ages	181,434	10,327	21,592	266	477	3,283	6,301	3,851	15,404	2,030	307	21,826	440	866	103	337	2,527	3,694	809	690	31,914	76	1,821	18,150	4,439	56	4,843	204	56,390	262	68				
MASSACHUSETTS	Under 18	4,508	464	615	0	17	88	359	132	428	39	16	1,343	6	25	1	67	299	72	1	56	132	1	21	18	103	17	227	0	1,040	0	0	327	5,884,293	*1.2%*	*2.2%*
	Total all ages	101,681	6,608	10,308	21	315	709	5,563	1,478	8,263	512	55	17,237	391	1,087	112	794	2,207	913	360	304	7,125	9	1,185	8,280	1,280	5,168	3,554	3	34,756	0	0				
MICHIGAN	Under 18	13,267	1,044	3,054	12	174	229	629	497	2,266	253	38	2,711	23	151	42	221	416	284	5	110	1,668	0	4	166	282	0	498	0	2,338	0	250	611	9,857,904	*2.8%*	*3.7%*
	Total all ages	235,757	12,793	23,212	299	970	1,190	10,334	3,034	18,770	1,201	207	29,164	702	3,767	1,149	2,019	2,873	4,798	216	663	30,320	26	2,642	26,130	4,739	284	5,724	107	84,179	0	250				
MINNESOTA	Under 18	19,391	864	4,165	2	100	351	411	378	3,318	441	28	2,419	27	188	3	297	697	316	0	105	1,698	2	15	154	1,609	0	2,110	108	4,154	0	460	378	5,570,925	*1.7%*	*2.1%*
	Total all ages	147,370	5,482	23,768	101	588	1,005	3,788	2,014	20,063	1,595	96	14,842	1,075	3,428	15	1,964	2,662	1,859	153	878	20,404	30	585	20,186	7,099	23	8,994	225	33,238	0	460				
MISSISSIPPI	Under 18	2,453	80	562	2	9	28	41	120	402	35	5	348	8	12	2	31	42	69	0	8	190	0	197	41	27	15	301	4	432	0	84	53	1,161,807	*0.7%*	*0.4%*
	Total all ages	60,902	1,201	7,352	58	67	322	754	1,003	5,998	314	37	4,884	303	704	275	642	571	945	16	119	8,003	74	2,160	5,370	747	3,039	3,102	72	21,239	0	84				
MISSOURI	Under 18	15,560	893	2,886	32	102	265	494	408	2,156	280	42	2,821	19	50	14	367	697	236	5	308	2,018	1	76	108	484	7	1,210	9	2,819	0	532	331	5,406,785	*2.3%*	*2.0%*
	Total all ages	197,865	9,005	27,019	369	507	1,426	6,703	3,325	21,098	2,383	213	19,443	1,387	2,088	249	2,814	3,484	3,565	269	1,089	32,982	38	2,128	11,874	2,985	197	6,333	773	69,611	0	532				
MONTANA	Under 18	3,722	81	666	1	11	10	59	58	546	57	5	501	1	10	2	0	189	15	0	15	358	0	35	38	499	0	254	0	760	0	298	97	995,183	*0.3%*	*0.4%*
	Total all ages	27,357	1,174	4,114	10	64	97	1,003	296	3,487	305	26	3,962	100	196	40	110	762	75	12	81	2,732	0	321	3,794	1,406	0	2,003	10	6,167	0	298				

Table 69

Arrests

by State, 2018

State		Total all classes[1]	Violent crime[2]	Property crime[2]	Murder and nonnegligent manslaughter	Rape[3]	Robbery	Aggravated assault	Burglary	Larceny-theft	Motor vehicle theft	Arson	Other assaults	Forgery and counterfeiting	Fraud
NEBRASKA	Under 18	6,985	207	1,426	6	46	90	65	65	1,222	121	18	1,255	5	61
	Total all ages	53,007	1,671	6,581	36	213	247	1,175	398	5,735	391	57	7,474	236	1,066
NEVADA	Under 18	10,026	1,340	1,262	24	70	304	942	266	855	121	20	1,944	5	45
	Total all ages	140,967	8,012	10,245	191	408	1,411	6,002	3,103	6,314	749	79	17,883	428	1,813
NEW HAMPSHIRE	Under 18	3,283	59	349	0	8	16	35	39	278	23	9	600	2	12
	Total all ages	46,413	872	3,681	10	76	144	642	309	3,186	165	21	5,668	237	758
NEW JERSEY	Under 18	11,513	870	1,819	11	44	369	446	305	1,382	97	35	1,003	24	65
	Total all ages	226,427	7,146	20,307	115	274	1,699	5,058	2,982	16,659	540	126	16,839	852	3,558
NEW MEXICO	Under 18	3,203	231	478	7	10	22	192	69	360	40	9	664	1	7
	Total all ages	74,786	4,232	7,309	67	103	425	3,637	916	5,993	359	41	8,588	171	324
NEW YORK[6]	Under 18	14,434	1,207	3,468	22	166	466	553	499	2,536	370	63	2,249	56	96
	Total all ages	244,041	11,433	40,466	244	933	2,630	7,626	4,291	34,122	1,786	267	26,623	2,019	3,749
NORTH CAROLINA	Under 18	11,088	757	2,673	30	13	412	302	708	1,655	290	20	2,013	20	118
	Total all ages	200,411	9,180	26,731	351	165	2,177	6,487	5,451	20,037	1,115	128	22,676	863	4,412
NORTH DAKOTA	Under 18	4,009	91	435	0	19	9	63	44	338	51	2	498	4	20
	Total all ages	33,210	724	3,100	10	47	63	604	254	2,622	215	9	2,846	140	369
OHIO	Under 18	20,003	873	2,995	17	79	275	502	396	2,351	199	49	4,360	14	119
	Total all ages	218,433	8,085	29,413	237	470	1,548	5,830	3,354	25,004	777	278	30,939	770	2,089
OKLAHOMA	Under 18	7,701	392	1,641	11	20	93	268	306	1,218	81	36	824	8	32
	Total all ages	101,053	4,859	14,717	138	216	642	3,863	2,388	11,304	856	169	7,785	539	1,332
OREGON	Under 18	8,618	351	1,720	4	32	110	205	196	1,310	157	57	1,117	9	55
	Total all ages	125,230	4,232	18,015	55	217	824	3,136	1,725	14,123	1,911	256	10,735	616	1,871
PENNSYLVANIA	Under 18	36,034	2,558	4,540	19	225	772	1,542	617	3,338	520	65	4,986	50	948
	Total all ages	345,822	19,536	44,478	444	1,132	3,915	14,045	5,185	36,453	2,508	332	40,984	2,222	8,126
RHODE ISLAND	Under 18	2,373	121	406	0	13	44	64	70	302	30	4	441	1	16
	Total all ages	25,996	954	2,660	4	77	194	679	498	1,992	158	12	4,169	125	551
SOUTH CAROLINA	Under 18	10,803	616	2,328	28	106	179	303	455	1,692	148	33	1,969	8	50
	Total all ages	152,664	6,970	22,900	287	532	1,209	4,942	3,116	18,578	1,070	136	15,413	1,115	3,333
SOUTH DAKOTA	Under 18	4,886	92	657	1	8	17	66	89	506	55	7	689	2	63
	Total all ages	44,268	1,046	2,866	11	43	72	920	294	2,348	201	23	4,451	124	816
TENNESSEE	Under 18	19,692	1,421	3,843	46	103	410	862	506	2,690	624	23	3,922	59	111
	Total all ages	330,989	14,353	38,557	380	435	1,797	11,741	4,458	30,141	3,822	136	30,862	1,690	5,043
TEXAS	Under 18	55,458	3,946	10,127	67	363	1,242	2,274	1,560	7,577	926	64	11,680	121	320
	Total all ages	729,902	34,166	74,627	747	2,068	5,708	25,643	9,009	60,263	4,952	403	92,541	4,332	6,320
UTAH	Under 18	12,307	374	2,523	6	76	93	199	148	2,187	163	25	1,238	11	43
	Total all ages	104,886	2,327	14,038	36	306	398	1,587	890	12,545	541	62	7,972	704	1,007
VERMONT	Under 18	702	40	100	0	16	4	20	13	74	9	4	163	0	8
	Total all ages	14,334	684	1,637	11	86	38	549	220	1,343	54	20	1,519	52	306
VIRGINIA	Under 18	15,864	719	2,994	18	90	330	281	314	2,420	217	43	2,694	19	126
	Total all ages	268,094	7,090	26,694	356	558	1,431	4,745	2,309	23,014	1,180	191	30,541	1,572	4,868
WASHINGTON	Under 18	10,996	866	2,274	19	81	323	443	411	1,617	216	30	2,764	8	17
	Total all ages	171,466	8,384	25,722	150	536	1,767	5,931	4,292	19,762	1,504	164	24,701	677	1,130
WEST VIRGINIA	Under 18	496	38	55	1	2	3	32	9	44	2	0	121	0	1
	Total all ages	29,202	1,173	3,757	28	55	56	1,034	440	3,112	181	24	2,825	214	265
WISCONSIN	Under 18	35,109	1,023	4,622	14	220	258	531	472	3,531	578	41	2,419	37	96
	Total all ages	245,015	7,907	25,731	171	925	1,172	5,639	2,080	22,087	1,431	133	16,251	899	2,220
WYOMING	Under 18	3,191	52	391	0	1	1	50	62	299	23	7	404	0	5
	Total all ages	28,437	600	2,197	12	26	21	541	239	1,811	128	19	1,902	36	127
	Under 18	597,409													
	Total all ages	8,526,509													

State		Embezzlement	property; buying, receiving, possessing	Vandalism	Weapons; carrying, possessing, etc	Prostitution and commercialized vice	Sex offenses (except rape and prostitution)	Drug abuse violations	Gambling	against the family and children	Driving under the influence	Liquor laws	Drunkenness[4]	Disorderly conduct	Vagrancy	All other offenses (except traffic)	Suspicion	Curfew and loitering law violations	Number of agencies	2018 estimated population	***Percent of Total Arrests***	***Percent of Population***
NEBRASKA	Under 18	4	105	394	78	0	66	1,006	0	199	63	504	1	341	0	1,142	0	128	118	1,516,162	***0.6%***	***0.6%***
	Total all ages	63	736	1,693	775	92	314	8,993	0	945	4,630	2,355	1	1,851	13	13,390	0	128				
NEVADA	Under 18	12	169	261	231	55	74	1,244	2	23	70	430	125	615	2	1,757	0	360	47	3,013,371	***1.7%***	***1.1%***
	Total all ages	282	1,850	1,635	2,240	2,859	903	11,238	23	961	10,984	3,720	362	2,213	3,182	59,772	2	360				
NEW HAMPSHIRE	Under 18	6	37	205	4	0	31	344	0	5	29	267	209	68	0	1,026	0	30	184	1,317,257	***0.5%***	***0.5%***
	Total all ages	91	553	1,254	146	24	130	6,522	5	187	5,053	1,989	3,844	884	99	14,386	0	30				
NEW JERSEY	Under 18	12	325	398	470	4	94	2,769	0	13	42	395	0	992	23	1,892	0	303	478	7,844,556	***2.7%***	***2.9%***
	Total all ages	214	1,826	2,474	2,766	522	895	48,008	41	7,297	17,230	1,356	24	9,922	197	84,648	2	303				
NEW MEXICO	Under 18	4	45	86	66	1	10	472	0	18	53	132	7	161	0	765	1	1	59	1,406,211	***0.9%***	***0.5%***
	Total all ages	123	1,015	1,015	535	87	70	5,375	3	1,388	6,464	1,333	568	1,497	30	34,655	3	1				
NEW YORK[6]	Under 18	1	328	1,449	288	3	279	2,643	1	9	59	126	0	393	9	1,770	0	0	505	9,571,301	***2.9%***	***3.6%***
	Total all ages	27	2,752	12,509	3,156	561	1,705	69,571	45	470	25,094	943	0	4,273	580	38,065	0	0				
NORTH CAROLINA	Under 18	22	351	478	386	0	72	1,414	0	18	141	173	0	686	2	1,759	0	5	204	5,380,474	***2.4%***	***2.0%***
	Total all ages	799	2,682	3,006	4,052	148	608	26,936	39	3,181	27,915	1,490	0	4,183	15	61,490	0	5				
NORTH DAKOTA	Under 18	2	21	122	23	0	30	429	0	243	41	385	1	644	0	914	0	106	103	757,131	***0.4%***	***0.3%***
	Total all ages	34	278	438	340	11	81	5,448	1	356	5,136	2,623	263	1,583	4	9,329	0	106				
OHIO	Under 18	0	337	760	327	5	92	1,675	5	138	61	409	41	1,722	1	5,685	2	382	417	9,011,984	***2.6%***	***3.3%***
	Total all ages	14	2,701	3,142	3,948	792	451	39,708	23	1,275	13,723	4,793	5,855	9,835	20	60,471	4	382				
OKLAHOMA	Under 18	18	307	194	147	0	35	1,146	11	7	70	83	217	567	0	1,350	0	652	400	3,847,775	***1.2%***	***1.4%***
	Total all ages	362	2,932	1,224	2,418	7	376	17,766	28	630	8,660	1,198	10,698	2,195	13	22,658	4	652				
OREGON	Under 18	3	32	553	97	0	49	1,653	0	2	104	632	0	546	0	1,388	0	307	194	3,710,013	***1.5%***	***1.4%***
	Total all ages	54	611	3,677	2,113	281	348	13,605	1	342	13,707	2,891	29	6,210	3	45,582	0	307				
PENNSYLVANIA	Under 18	34	302	1,353	710	5	477	3,231	0	26	280	1,696	128	6,882	34	2,980	0	4,814	1,375	12,629,530	***4.1%***	***4.7%***
	Total all ages	446	2,119	6,267	4,921	1,182	2,286	61,934	34	1,806	43,798	6,716	19,808	31,264	234	42,847	0	4,814				
RHODE ISLAND	Under 18	3	33	138	85	0	11	104	0	25	2	21	0	552	0	396	0	18	48	1,057,315	***0.3%***	***0.4%***
	Total all ages	75	352	915	347	63	82	2,049	4	74	2,423	337	11	2,269	0	8,518	0	18				
SOUTH CAROLINA	Under 18	21	151	299	415	1	48	1,957	0	11	69	283	64	1,103	0	1,377	0	33	373	4,408,967	***1.8%***	***1.6%***
	Total all ages	348	2,366	2,473	2,594	285	284	34,105	70	1,167	15,188	4,092	5,722	8,101	588	25,517	0	33				
SOUTH DAKOTA	Under 18	4	26	196	95	0	10	819	0	242	51	447	0	408	0	1,010	0	75	114	816,012	***0.5%***	***0.3%***
	Total all ages	31	152	536	250	15	51	8,108	1	490	5,891	2,164	99	2,409	616	14,077	0	75				
TENNESSEE	Under 18	26	147	777	423	0	105	2,380	9	30	104	394	165	1,422	0	3,517	0	837	437	6,363,426	***3.9%***	***2.4%***
	Total all ages	716	1,611	4,177	2,869	527	545	47,876	71	4,361	19,108	3,245	13,627	5,968	10	134,936	0	837				
TEXAS	Under 18	36	157	1,525	895	34	380	9,893	15	153	349	1,072	567	1,144	21	11,378	0	1,645	876	26,829,159	***8.6%***	***10.0%***
	Total all ages	447	862	7,246	12,968	3,987	2,442	139,188	304	3,931	69,643	8,237	54,286	7,549	497	204,684	0	1,645				
UTAH	Under 18	4	113	732	140	14	262	2,258	1	24	92	670	57	354	0	3,075	1	321	109	2,670,944	***1.2%***	***1.0%***
	Total all ages	35	940	2,868	839	374	686	19,562	1	1,428	7,119	3,826	2,677	2,280	63	35,815	4	321				
VERMONT	Under 18	2	3	75	12	0	9	38	0	5	15	45	0	79	0	108	0	0	72	615,720	***0.2%***	***0.2%***
	Total all ages	56	98	321	36	1	38	902	0	201	2,576	82	0	853	0	4,972	0	0				
VIRGINIA	Under 18	25	176	515	294	4	109	2,132	0	36	49	503	68	588	0	4,293	0	520	389	8,240,312	***3.1%***	***3.1%***
	Total all ages	1,272	1,085	3,490	4,062	373	597	45,409	12	1,536	20,885	4,131	19,398	2,844	46	91,669	0	520				
WASHINGTON	Under 18	1	165	798	215	4	140	1,053	0	4	152	554	10	263	0	1,699	0	9	198	6,423,244	***2.0%***	***2.4%***
	Total all ages	55	3,245	4,798	1,824	211	550	11,283	7	257	27,632	1,721	78	2,460	120	56,599	3	9				
WEST VIRGINIA	Under 18	1	2	22	9	0	6	67	0	0	6	13	7	15	0	124	0	9	131	1,052,107	***0.3%***	***0.4%***
	Total all ages	41	263	468	281	60	63	6,044	2	86	3,141	555	727	689	8	8,531	0	9				
WISCONSIN	Under 18	36	335	1,443	444	5	521	3,150	1	96	213	1,786	0	6,994	27	10,437	0	1,424	422	5,730,204	***2.9%***	***2.1%***
	Total all ages	368	1,125	5,531	3,683	451	1,587	31,066	19	2,116	24,368	10,654	0	31,008	530	78,077	0	1,424				
WYOMING	Under 18	0	6	108	16	21	21	580	0	9	50	364	15	104	41	906	12	86	54	507,616	***0.3%***	***0.2%***
	Total all ages	6	80	421	52	53	109	4,895	0	433	3,432	1,725	3,062	840	166	8,198	17	86				
	Under 18																			269,030,693		
	Total all ages																					

[1] Does not include traffic arrests.

[2] Violent crimes are offenses of murder and nonnegligent manslaughter, rape, robbery, and aggravated assault. Property crimes are offenses of burglary, larceny-theft, motor vehicle theft, and arson.

[3] The rape figures in this table are aggregate totals of the data submitted based on both the legacy and revised Uniform Crime Reporting definitions.

[4] Drunkenness is not considered a crime in some states; therefore, the figures vary widely from state to state.

[5] Includes arrests reported by the District of Columbia Fire and Emergency Medical Services Arson Investigation Unit and the Metro Transit Police. These agencies have no population associated with them.

[6] See 2018 arrest data information in the data declaration for further explanation.

[7] The Florida arrest counts for offenses against the family and children, drunkenness, disorderly conduct, vagrancy, suspicion, and curfew and loitering law violations are included under the category *All other offenses*.

[8] Limited data for 2018 were available for Iowa.

NOTE Because the number of agencies submitting arrest data varies from year to year, users are cautioned about making direct comparisons between 2018 arrest totals and those published in previous years' editions of *Crime in the United States* . Further, arrest figures may vary widely from state to state because some Part II crimes are not considered crimes in some states.