



TCRP Legal Research Digest 37: Legal Arrangements for Use and Control of Real-Time Data

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Legal Research Digest 37

LEGAL ARRANGEMENTS FOR USE AND CONTROL OF REAL-TIME DATA

This report was prepared under TCRP Project J-5, "Legal Aspects of Transit and Intermodal Transportation Programs," for which the Transportation Research Board is the agency coordinating the research. The report was prepared by Larry W. Thomas, Attorney-at-Law. James B. McDaniel, TRB Counsel for Legal Research Projects, was the principal investigator and content editor.

The Problem and Its Solution

The nation's 6,000 plus transit agencies need to have access to a program that can provide authoritatively researched, specific, limited-scope studies of legal issues and problems having national significance and application to their business. Some transit programs involve legal problems and issues that are not shared with other modes; as, for example, compliance with transit-equipment and operations guidelines, FTA financing initiatives, private-sector programs, and labor or environmental standards relating to transit operations. Also, much of the information that is needed by transit attorneys to address legal concerns is scattered and fragmented. Consequently, it would be helpful to the transit lawyer to have well-resourced and well-documented reports on specific legal topics available to the transit legal community.

The *Legal Research Digests* (LRDs) are developed to assist transit attorneys in dealing with the myriad of initiatives and problems associated with transit start-up and operations, as well as with day-to-day legal work. The LRDs address such issues as eminent domain, civil rights, constitutional rights, contracting, environmental concerns, labor, procurement, risk management, security, tort liability, and zoning. The transit legal research, when conducted through the TRB's legal studies process, either collects primary data that generally are not available elsewhere or performs analysis of existing literature.

Applications

Transit agencies rely more and more on computerized real-time data, using global positioning systems

(GPS) and similar technologies. Such data can be used to provide customers real-time arrival information through personal computers, personal digital assistants (PDAs), bus stop signs, and other means. Another set of uses are for performance measures. As used herein, the term "real-time data" means data being collected at the same time it is being generated, which may be disseminated immediately to patrons or others.

Transit agencies increasingly are taking advantage of technological advancements in the collection and distribution of real-time data to provide up-to-date information to patrons. As transit agencies develop these technologies, outside entities are asking for access to this data for a variety of purposes. Some transit agencies allow subscribers to use their mobile telephones or PDA devices for access to real-time data.

There are a range of possibilities for how transit agencies can own, license, and use real-time data. These range from completely exclusive use by the agency to full rights for the public to access and use the data stream. But these issues raise even more questions, such as appropriate models for data ownership and use; how real-time data will be controlled; ownership rights and how aggressively an agency should protect those rights; the legal requirements for the data to be made publicly available; the public policy implications of using transit real-time data for advertising purposes; and the application of freedom of information requirements to real-time and related automatic vehicle location data.

This digest should help transit officials understand the legal options and limitations for real-time data ownership, protection, and use.

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LEGAL ARRANGEMENTS FOR USE AND CONTROL OF REAL-TIME DATA

by Larry W. Thomas, Attorney-at-Law

INTRODUCTION

This digest addresses the legal implications of a transit agency's ownership and sharing of real-time data. As a 2006 Transit Cooperative Research Program Report discussing real-time data stated, "[t]he transit industry is in the midst of a revolution from being data poor to data rich."¹ As used herein, the term real-time data means data that are being collected at the same time they are being generated and that may be disseminated immediately to patrons or others.

Transit agencies increasingly are taking advantage of technological advancements in the collection and distribution of real-time data to provide up-to-date information to patrons. Transit agencies are able to provide useful information through a number of distribution channels to enhance customer relations, such as their own Web sites, as well as via Google Transit.² In addition, some transit agencies allow subscribers to use their mobile telephones or PDA devices for access to real-time data.

As discussed in Appendix A, participating transit agencies report that customer relations have improved as a result of providing information in real time. However, another use of real-time data is to improve transit management and performance.³ An automatic vehicle location (AVL) system is capable of capturing and archiving data that may be analyzed to improve transit practices.⁴ This digest discusses whether a transit agency has ownership rights in its real-time data and whether it may protect itself from someone copying, using, or disseminating its real-time data. The digest addresses whether real-time data may be protected by the law of intellectual property, in particular the Fed-

eral Copyright Act of 1976,⁵ or whether, alternatively, an agency would have a claim under state law for someone's misappropriation of the agency's data. The digest discusses whether an agency may protect its data by a terms-of-use, end-user license or other agreement.⁶ As will be discussed, it appears that protection for real-time data is pursuant to contract and licensing law, not the copyright laws.

The digest examines whether a transit agency may have to disclose its real-time data pursuant to a public records disclosure law, such as a freedom of information act (FOIA) or a freedom of information law (FOIL), even if the government paid for the technology needed to collect real-time data. The digest considers whether a transit agency could refuse to provide its real-time data pursuant to a FOIA or FOIL request because of homeland security and antiterrorism or other public safety concerns. Appendix A to the digest discusses the results of a survey of transit providers regarding their collection, use, and protection of real-time data, including whether real-time data are being used to increase advertising revenue. Following the discussions of many of the issues covered by the digest, the author has included a section entitled "Guidance" based on the immediately preceding text.

I. COPYRIGHT LAW AND THE PROTECTION OF TRANSIT AGENCIES' REAL-TIME DATA

A. Whether a Public Transit Agency May Hold a Copyright in Real-Time Data

Although the issue of whether data are copyrightable is an important one, much of the American economy is based on "the creation and compilation of information" that are not copyrightable or are "only weakly protected by copyright."⁷ For transit agencies that are governmental entities, a threshold issue is whether they may hold a copyright in their works or in works authored by others for the government.

¹ PETER G. FURTH, BRENDON HEMILY, THEO H.J. MULLER, & JAMES G. STRATHMAN, USING ARCHIVED AVLAPC DATA TO IMPROVE TRANSIT PERFORMANCE AND MANAGEMENT 25 (Transit Cooperative Research Program, Transportation Research Board, TCRP Report No. 113, 2006), hereinafter cited as "TCRP Report 113," http://onlinepubs.trb.org/Onlinepubs/tcrp/tcrp_rpt_113.pdf, last accessed on Dec. 7, 2009.

² See Michael Perkins, It's here! Metro posts transit data online, Greater, Greater Washington, weblog, <http://greater.washington.org/post.cgi?id+1845>, *Metro Involvement with Google Held up by the Details*, D.C. EXAMINER, Dec. 16, 2008, http://www.dcxaminer.com/local/Metro_involvement_with_Google_Transit_held_up_by_the_details12-16.html.

³ TCRP Report 113, at 1.

⁴ *Id.* at 14–17 for more details regarding the operation of AVL systems.

⁵ Pub. L. No. 95-553, 90 Stat. 2541 (1976).

⁶ See, e.g., Katleen Janssen & Jos Dumortier, *The Protection of Maps and Spatial Databases in Europe and the United States By Copyright and the Sui Generis Right*, 24 J. MARSHALL J. COMPUTER & INFO. L. 195, 196 (2006).

⁷ Joel Rothstein Wolfson, *Contract and Copyright Are Not at War: A Reply to "The Metamorphosis of Contract into Expand,"* 87 CAL. L. REV. 79, 86 (1999) (citing, e.g., Warren Publ'g Co. v. Microdos Data Corp., 115 F.3d 1509 (11th Cir. 1997)) (no copyright protection for a factbook that was scanned and then sold as a CD-ROM in competition with Warren's paper publication).

1. Federal Agencies and Copyright

Federal agencies do not have copyright protection for any work created by the government; for example, the decennial census is not copyrightable.⁸ The government may hold a copyright in a work transferred to the government,⁹ but the government may not copyright a work prepared by a federal employee.¹⁰ A work is copyrightable when commissioned by the government but written by an independent contractor.¹¹

2. State Agencies and Copyright

As for state or local governmental agencies, the Copyright Act does not preclude a state employee's work from being copyrightable. Whether a state or local agency may copyright a work is a matter of state law. Some state laws "explicitly recognize the authority of public officials or agencies to copyright specific public records that they have created."¹² At least 28 states claim the right to copyright, "and state copyright claims are routinely made for some categories of state data...."¹³ As the Second Circuit has held, "states and their subdivisions are not excluded from protection under the [Copyright] Act."¹⁴ In sum, the majority rule appears to be that, unless prohibited by state law, state and local agencies may seek copyright protection for their works.

B. Whether Real-Time Data Are Copyrightable as a Compilation or Database

Under Section 102(a) of the Copyright Act, "[c]opyright protection subsists...in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device." Therefore, an original work is protected by copyright law from the moment it is "first embodied in a tangible medium" and even "subsists" prior to a copyright registration.¹⁵ An author has a copyright in his or her works regardless of whether the work has been registered with the Copyright Office. The registration requirement under 17 U.S.C. § 411(b) is a jurisdictional prerequisite to copyright-holder's right to enforce a copyright in fed-

eral court.¹⁶ Under 17 U.S.C. § 412, a registration made within 3 months of first publication entitles the copyright holder to statutory damages for infringement dating back to the work's creation. After a court has jurisdiction of an action for copyright infringement, the court may grant injunctive relief to restrain infringement of any copyright, whether registered or unregistered.¹⁷

As will be discussed, the closest analogy in copyright law to real-time data is a database, which may have some limited copyright protection as a compilation.¹⁸ Although the courts have construed the term "compilation" broadly,¹⁹ pure data are not copyrightable. Only the selection and arrangement of a compilation are copyrightable.²⁰ Thus, although data are not copyrightable, a compilation of data having some originality is subject to the copyright laws.²¹

Under Section 101 of the Copyright Act, although facts, ideas, and concepts are not copyrightable, "a 'compilation' is a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged in such a way that the resulting work as a whole constitutes an original work of authorship."²² There are three requirements for a compilation under the copyright laws: "(1) the collection and assembly of preexisting data; (2) the selection, coordination, or arrangement of that data; and (3) a resulting work that is original, by virtue of the selection, coordination, or arrangement of the data contained in the work."²³

At the present time, based on decisions by the United States Supreme Court and lower federal courts, it does not appear that real-time data may be copyrighted. There is some copyright protection for a data-

¹⁶ *Murray Hill Publ'ns, Inc. v. ABC Communs., Inc.*, 264 F.3d 622, 630 (6th Cir. 2001); *see also* *N.Y. Mercantile Exch., Inc. v. IntercontinentalExchange, Inc.*, 389 F. Supp. 2d 527, 539 n.9 (S.D.N.Y. 2005) (citing 17 U.S.C. § 411(a)).

¹⁷ *See, e.g.,* *Olan Mills, Inc. v. Linn Photo Co.*, 23 F.3d 1345, 1349 (8th Cir. 1994); *Pac. & S. Co., Inc. v. Duncan*, 744 F.2d 1490, 1499 n.17 (11th Cir. 1984).

¹⁸ "Databases, or 'compilations,' have been protected by copyright since 1790, when the first U.S. Copyright Act was enacted." Executive Summary (on legal protection for databases), Copyright Office, available at: <http://www.copyright.gov/reports/execsum2.pdf>.

¹⁹ MELVILLE B. NIMMER & DAVID NIMMER, 1 NIMMER ON COPYRIGHT § 1.08[B] at 1-107, Mathew Bender, Mar. 6, 1997.

²⁰ *Id.* § 3.04[B][3][c] at 3-34.26.

²¹ *Id.* § 3.02, at 3-5 (stating also that a compilation that "incorporates pre-existing 'materials' or 'data' that may or may not be capable of being protected by copyright" may be protected by copyright).

²² 17 U.S.C. § 101; Lars S. Smith, *RFID and Other Embedded Technologies: Who Owns the Data?*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 695, 707 (2006), hereinafter cited as "Lars Smith" (citing 17 U.S.C. § 101 (definition of compilation)).

²³ *KEY PUBL'NS, INC. v. CHINATOWN TODAY PUB. ENTERS., INC.*, 945 F.2d 509, 512 (2d Cir. 1991) (citation omitted).

⁸ Robert Gellman, *Twin Evils: Government Copyright and Copyright-Like Controls over Government Information*, 45 SYRACUSE L. REV. 999, 1003 (1995).

⁹ 17 U.S.C. § 105 (2009).

¹⁰ *Id.* §§ 101, 105 (2009).

¹¹ *See* ROBERT A. GORMAN, COPYRIGHT LAW 52 (2d ed. 2006), pdf version available at [http://www.fjc.gov/public/pdf.nsf/lookup/copyright.pdf/\\$file/copyright.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/copyright.pdf/$file/copyright.pdf).

¹² *County of Santa Clara*, 170 Cal. App. 4th 1301, 1331, 89 Cal. Rptr. 3d 374, 397 (citation omitted).

¹³ Gellman, *supra* note 8, at 1027 (footnote omitted).

¹⁴ *County of Suffolk, N.Y. v. First Am. Real Estate Solutions*, 261 F.3d 179, 187 (2d Cir. 2001) (citation omitted).

¹⁵ 17 U.S.C. § 102 (2009).

base as a compilation if it satisfies the test of originality within the meaning of the Copyright Act. As for how much originality is required, the U.S. Supreme Court addressed the issue in *Feist Publications, Inc. v. Rural Tel. Serv. Co.*²⁴ Although a telephone directory is a compilation, the Court held in *Feist* that a telephone directory is not protected by copyright law. The respondent Rural Telephone Service Co. had published a typical telephone directory of white and yellow pages distributed free of charge to its subscribers. When Rural Telephone refused to license its listings to Feist Publications, Feist used Rural Telephone's listings anyway. In holding that Rural Telephone's directory was not protected by copyright as a compilation, the Supreme Court reiterated a fundamental principle in copyright law: "facts are not copyrightable."²⁵

Some compilations are copyrightable but only if they satisfy the test of originality within the meaning of the Copyright Act. In *Feist*, the Court held that although "no one may claim originality as to facts,"²⁶ a factual compilation could meet the originality test "if it features an original selection or arrangement."²⁷ Nevertheless, the "copyright in a factual compilation is thin."²⁸ The Court rejected a test that had been used by lower courts that had held "that copyright was a reward for the hard work that went into compiling facts"—the "sweat of the brow" or "industrious collection" test.²⁹ Because Rural Telephone's white pages did not meet the test of originality, Feist's use of Rural Telephone's information was not copyright infringement.

In *Feist*, the Court explained what is meant by the term "originality" within the meaning of the copyright laws.

Original...means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses at least some minimal degree of creativity....To be sure, the requisite level of creativity is extremely low; even a slight amount will suffice....Originality does not signify novelty; a work may be original even though it closely resembles other works so long as the similarity is fortuitous, not the result of copying.³⁰ (emphasis added)

Although the Court stated that "even a slight amount [of originality] will suffice,"³¹ the Court held that the selection, coordination, and arrangement of Rural's white pages did not warrant copyright protection.³²

Guidance Number 1

Pure data are not copyrightable. If there is some originality, even though slight, in the selection and arrangement of data, then a database may be an original work that is copyrightable as a compilation. However, there is no copyright protection for the underlying data, which may be extracted freely and copied and distributed by anyone without infringing the copyright for the compilation.

Relevant to the issue of the copyrightability of a transit agency's real-time data is that data selection for a compilation must involve an exercise of judgment in deciding what to include in the compilation.³³ If a compilation "uses a standard set of selection criteria, then the compilation is not copyrightable."³⁴ For example, an article discussing the use by manufacturers of radio frequency identification (RFID) tags to track a manufacturer's products after sale concludes that "if the tag is tracking everywhere the item has been, ...then likely the compilation will not be held to be copyrightable."³⁵

More to the point is that in 2007 the Second Circuit affirmed a district court's decision in New York holding that real-time data are not subject to the protection of the copyright laws. In *N.Y. Mercantile Exch., Inc. v. IntercontinentalExchange, Inc.*,³⁶ the New York Mercantile Exchange (NYMEX) brought an action against IntercontinentalExchange, Inc. (ICE) for copyright infringement under the 1976 Copyright Act and for trademark infringement under the trademark laws of the United States, as well as for violations of New York law.³⁷ At issue was daily real-time data used in the pricing of commodity futures contracts for natural gas and light sweet crude oil.³⁸ The changes in the value of contracts "are determined by reference to the end-of-day 'settlement prices' for the futures contracts."³⁹ As discussed in Section I.C.8, *infra*, the Copyright Office was willing to register NYMEX's copyright in its database of daily settlement prices but refused to register the daily settlement prices themselves.

NYMEX and ICE disputed how the settlement prices were determined. According to NYMEX, it uses a Settlement Price Committee (SPC) to assist in the determination of the prices "pursuant to NYMEX's rules,

³³ *Key Publ'ns, Inc.*, 945 F.2d at 513 (2d Cir. 1991) (citation omitted).

³⁴ Smith, *supra* note 22, at 713 (2006); *Financial Information, Inc. v. Moody's Investors Serv., Inc.*, 808 F.2d 204, 208 (2d Cir. 1986) (agreeing with the district court that there was "insufficient proof of 'independent creation' to render...Daily Bond Cards copyrightable [when] [t]he researchers had five facts to fill in on each card—nothing more and nothing less").

³⁵ *Id.* at 713.

³⁶ 389 F. Supp. 2d 527 (S.D.N.Y. 2005).

³⁷ *Id.* Because the court had granted a summary judgment for ICE dismissing the federal claims, the court declined to exercise jurisdiction of the claims asserted under state law.

³⁸ *Id.* at 530.

³⁹ *Id.* (citations omitted).

²⁴ 499 U.S. 340, 111 S. Ct. 1282, 113 L. Ed. 2d 358 (1991).

²⁵ *Id.* at 344.

²⁶ *Id.* at 347 (citation omitted).

²⁷ *Id.* at 348 (citation omitted).

²⁸ *Id.* at 349.

²⁹ *Id.* at 352.

³⁰ *Id.* at 345 (citations omitted).

³¹ *Id.*

³² *Id.* at 362.

through a process that reflects creativity and the exercise of judgment.”⁴⁰ At the close of each day of trading, NYMEX’s subcommittees “determine the appropriate price for the delivery of crude oil for each of the next 32 or 33 months and for delivery of natural gas for each of the next 72.”⁴¹

ICE, on the other hand, contended that NYMEX determined prices with a “back office” computer program.⁴² It is not clear from the district and appellate courts’ opinions how much of the NYMEX committees’ judgment was involved in determining the prices, particularly for the contracts for the low-volume or more distant or “outer” months.⁴³ In any event, NYMEX disseminates its settlement prices through licensed market data vendors in accordance with a Market Data Agreement (MDA).⁴⁴ NYMEX’s MDA applied to three categories of data, some of which was distributed within 30 minutes. For example, “[i]ntermittent Real Time NYMEX Market Data” was “redistributed more than two minutes but less than thirty minutes” after a vendor’s receipt of the data.⁴⁵

NYMEX alleged that ICE “unlawfully reproduced” and transmitted NYMEX’s settlement prices, thus free-riding on “NYMEX settlement prices, reputation, and goodwill each day.”⁴⁶ In ruling in favor of ICE, the district court held, first, that there is no copyright protection for an idea, fact, procedure, process, system, or method of operation.⁴⁷ Second, the district court held that, regardless of NYMEX’s assertion that the settlement prices are the result judgment and creativity, “there is plainly only one settlement price....”⁴⁸

In affirming the district court, the Second Circuit stated that it was “a close question” whether NYMEX’s committees’ daily determinations satisfied the originality test required by the Copyright Act. Thus, the court declined to decide whether settlement prices are original.⁴⁹ The Second Circuit held, however, that even if NYMEX’s real-time settlement prices are created, not simply discovered, there was still no violation of NYMEX’s copyright in its database of settlement

prices.⁵⁰ The court explained, first, that there is no copyright protection for ideas because such protection would impede the advancement of knowledge and learning.⁵¹

Second, invoking the doctrine of merger in copyright law, discussed *infra*, the court held that there is no protection under the copyright laws for a work when “there is only one or so few ways of expressing an idea that protection of the expression would effectively accord protection to the idea itself.”⁵² NYMEX could avoid summary judgment only if it could “demonstrate that the range of possible settlement prices is broad enough that any possible expression will not necessarily be substantially similar,”⁵³ a showing that the court held that NYMEX had not made.⁵⁴ Accordingly, the court applied the doctrine of merger and held “that, in using the settlement prices, ICE ‘took nothing more than ideas, for which the copyright law affords no protection to the author.’”⁵⁵

Guidance Number 2

Real-time data are not copyrightable. A database that meets the test of originality may be copyrightable as a compilation, but the underlying data would not be protected by the copyright laws. A database produced automatically by a computer program also may not be copyrightable because there would be no exercise of judgment and discretion in choosing which data to include in a compilation of data. A second issue for real-time data and the copyrightability of a database is that there are so few ways to express the data that all expressions would be substantially the same. Thus, any attempted copyright would violate the doctrine of merger.

C. Issues for Real-Time Data Under the Copyright Act

As for whether a transit agency’s real-time data are subject to the protection of the copyright laws, a number of issues are presented under the Copyright Act, including those identified in the *Feist* and *NYMEX* cases.

1. Fixed in a Tangible Medium of Expression

One issue is whether real-time data “is ‘fixed’ in a tangible medium of expression.”⁵⁶ Assuming other prerequisites are satisfied, a writing that is in a fixed form, including an electronic form, is protected by the copyright laws.⁵⁷ Under § 101 of the Copyright Act,

⁴⁰ *Id.* at 531 (citations omitted).

⁴¹ NYMEX, 497 F.3d 109, 112 (2d Cir. 2006) (footnote omitted).

⁴² NYMEX, 389 F. Supp. 2d at 531.

⁴³ NYMEX, 497 F.3d at 111.

⁴⁴ NYMEX, 389 F. Supp. 2d at 532 (citation omitted).

⁴⁵ *Id.* (citations omitted). The court noted that “[t]he MDA states that GlobalView ‘will not furnish Real Time or Intermittent Real Time NYMEX Market Data to any of its Subscribers until a Uniform Subscriber Addendum...has been executed by the Subscriber and returned to Vendor.’” *Id.*

⁴⁶ *Id.* at 533 (citation omitted).

⁴⁷ *Id.* at 541 (citation omitted).

⁴⁸ *Id.* at 541–42. It may be noted that ICE did “not engage in wholesale copying and sale of NYMEX settlement prices, but rather, use[d] NYMEX settlement prices solely as the established benchmarks in the energy trading industry to facilitate the clearing of its own OTC swaps.” *Id.* at 543.

⁴⁹ NYMEX, 497 F.3d at 115.

⁵⁰ *Id.* at 116 (footnote omitted).

⁵¹ *Id.* at 118 (citation omitted).

⁵² *Id.* at 116–17 (citation omitted).

⁵³ *Id.* at 117 (citation omitted) (internal quotation marks omitted).

⁵⁴ *Id.* at 118.

⁵⁵ *Id.* (citation omitted).

⁵⁶ 17 U.S.C. § 102(a) (2009).

⁵⁷ Smith, *supra* note 22, at 706 (2006).

[A] work is “fixed” in a tangible medium of expression when its embodiment in a copy or phonorecord, by or under the authority of the author, is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration. A work consisting of sounds, images, or both, that are being transmitted, is “fixed” for purposes of this title if a fixation of the work is being made simultaneously with its transmission. (emphasis supplied).

The Copyright Act’s “tangible medium of expression” requirement is “satisfied if the work as fixed can be perceived ‘either directly or with the aid of a machine or other devices.’”⁵⁸

Real-time data appear to satisfy the requirement of being fixed in a tangible medium of expression, because it is possible to perceive, reproduce, or communicate the data with the aid of a machine or device.⁵⁹ According to one authority, however, “a reproduction captured momentarily in the memory of a computer” is not a work fixed in a tangible medium of expression.⁶⁰

2. Original Work of Authorship

Another issue is whether the collection of real-time data has an author within the meaning of the Copyright Act. Section 102 of the Copyright Act requires that a work of authorship be an “original” work. Furthermore, originality is “the essence of authorship” that requires a “modicum of intellectual labor” by an author.⁶¹ Only an author of an original work is entitled to copyright protection.⁶² Among the works of authorship referenced in § 102 are “literary works” and “audiovisual works,”⁶³ terms that apply to compilations, including electronic ones or databases. Even if data are not copyrightable, data come within the subject matter or scope of the Copyright Act.

In *NYMEX*, although the Second Circuit did not decide the originality of the settlement prices, the court recognized that originality requires some independent, although “minimal,” creativity.⁶⁴ The court stated that “there is a strong argument that...NYMEX does not ‘author’ the settlement prices as the term is used in copyright law.”⁶⁵ The court regarded the settlement prices as “an empirical reality, an economic fact about the world[] that Committee members are seeking to discover.”⁶⁶ A discoverer of a fact is not an author; only if there is some originality in the manner of the reporting

or expression of the fact is there an author.⁶⁷

After a system is designed and implemented to capture a transit agency’s real-time data, it appears that the data would be collected “without the slightest element of creativity,”⁶⁸ a feature of real-time data indicating that it would not have an author or be an original work of authorship as required under the copyright laws. If a process for the selection of data is “too rote and mechanical,” a compilation is not subject to the copyright laws.⁶⁹ Under § 101, the term “[s]election implies the exercise of judgment in choosing which facts from a given body of data to include in a compilation.”⁷⁰ Also relevant is that under § 101, the term “[a]rrangement ‘refers to the ordering or grouping of data into lists or categories that go beyond the mere mechanical grouping of data as such, for example, the alphabetical, chronological, or sequential listings of data.’”⁷¹ According to *Patry on Copyright*, the copyrightability of a database is “problematic,” because the arrangement and location of data for the most part is “meaningless,” and retrieval is accomplished “by means of a complementary computer program in which the only creativity lies.”⁷²

In any event, no case was located for the digest that holds that real-time data are an original work of authorship that may be copyrighted.

Guidance Number 3

It appears that real-time data may satisfy the Copyright Act’s requirement that a work be fixed in a tangible medium of expression. However, there may be an issue whether real-time data has an author in the sense that the data are created with the required degree, albeit minimal, of intellectual creativity needed to satisfy the copyright laws. To the extent that a system merely discovers facts, *i.e.*, data, the Copyright Act’s author/originality test is not fulfilled.

⁶⁷ *Id.* at 114. Although not deciding whether determinations of settlement prices met the test for originality, the court noted that it was disputable whether settlement prices for high volume markets amounted to the discovery of facts not subject to copyright protection. *Id.*

⁶⁸ *Southco, Inc. v. Kanebridge Corp.*, 390 F.3d 276, 282 (3d Cir. 2002).

⁶⁹ *Mid Am. Title Co. v. Kirk*, 59 F.3d 719, 722 (7th Cir. 1995). *See, however*, *Data General Corp. v. Grumman Sys. Support Corp.*, 834 F. Supp. 477 (D. Mass. 1992) (holding that computer software product called “ADEX” was protected by copyright laws, even though product, as distributed, was machine-generated compilation of object code).

⁷⁰ *Key Publ’ns, Inc. v. Chinatown Today*, 945 F.2d 509, 513 (2d Cir. 1991) (citation omitted).

⁷¹ *Id.* (citing Copyright Office, *Guidelines for Registration of Fact-Based Compilations 1* (rev. Oct. 11, 1989)).

⁷² WILLIAM F. PATRY, 2 PATRY ON COPYRIGHT, § 3-69, at 3-220 (2010).

⁵⁸ 1 NIMMER ON COPYRIGHT, *supra* note 19, § 2.03[B][1], at 2-32.

⁵⁹ 17 U.S.C. § 102 (2009).

⁶⁰ 1 NIMMER ON COPYRIGHT, *supra* note 19, § 2.03[B][2], at 2-34 (citation omitted) (internal quotation marks omitted).

⁶¹ *Id.* § 1.06[A], at 1-104 (emphasis in original).

⁶² *Id.* at 1-103.

⁶³ 17 U.S.C. §§ 102(a)(1) and (6) (2009).

⁶⁴ *NYMEX*, 497 F.3d at 113 (citation omitted).

⁶⁵ *Id.* at 114 (citation omitted) (footnote omitted).

⁶⁶ *Id.* at 115.

3. Whether Facts, Ideas and Processes Are Copyrightable

In a case involving the alleged infringement of a compilation, the Second Circuit stated that “the law of copyrights defies the laws of logic...since it ‘affords to the summation of one hundred or one million [individual facts and their unadorned expression] a significant measure of protection’ while affording none to the facts themselves....”⁷³ Copyright protection does not “extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.”⁷⁴ Thus, facts, ideas, and processes are not copyrightable.

As seen in the Supreme Court’s decision in *Feist*, facts have “limited copyright coverage,” because “there are only a limited number of ways to express factual material....”⁷⁵ Even if a transit agency has taken action to make its real-time data a unique database in that the selection and arrangement of the data are original, the copyright laws do not prevent the extraction of unprotected data from an otherwise protected database. Indeed, “[t]he more comprehensive a data collection becomes, the harder it is to protect it via copyright.”⁷⁶

4. Doctrine of Merger

In *NYMEX*, the Second Circuit applied the doctrine of merger in ruling that NYMEX had no copyright protection for its real-time settlement prices, because the settlement prices were the only way of expressing the idea of the price. When there is no other way to express an idea, a work is not copyrightable because of the doctrine of merger.

The doctrine of merger, a necessary corollary to the non-copyrightability of ideas, holds that “when there is essentially only one way to express an idea, the idea and its expression are inseparable and copyright is no bar to copying that expression.” ...The related doctrine of *scenes a faire* denies copyright protection to “unoriginal elements flowing from the undisputed standard and inherent characteristics” of a common idea.⁷⁷

NYMEX was unable to show that “the range of possible settlement prices is broad enough” to permit other expressions of the prices that would not be “substantially similar.”⁷⁸

The doctrine of merger is a potential issue also with

⁷³ *Key Publ’ns, Inc.*, 945 F.2d at 512 (quoting Robert C. Denicola, *Copyright in Collections of Facts: A Theory for the Protection of Nonfiction Literary Works*, 81 COLUM. L. REV. 516, 527 (1981)).

⁷⁴ 17 U.S.C. § 102(b) (2009).

⁷⁵ *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1236 (3d Cir. 1986).

⁷⁶ 1 NIMMER ON COPYRIGHT, *supra* note 19, § 3.04[B][2][b], at 3-33.

⁷⁷ *Maddog Software Inc., v. Skladder*, 382 F. Supp. 2d 268, 278 (D.N.H. 2005) (citation omitted) (footnote omitted).

⁷⁸ *NYMEX*, 497 F.3d at 117 (citation omitted) (internal quotation marks omitted).

respect to the copyrightability of a computer program for the collection, display, or dissemination of real-time data. Whether and to what extent a computer program is protected by the copyright laws depends on whether the program is an expression of an idea or is the idea itself. The expression of an idea in a computer program is copyrightable, but the idea is not copyrightable. It is difficult, however, to articulate the difference between an idea and the expression of an idea.⁷⁹

In sum, when there is only one way to express the idea, idea and expression merge, meaning there is no copyrightable material.⁸⁰ The reason for the rule is that if it were possible to copyright expression, the result would be a monopoly of the idea.⁸¹

5. Copyrightability When Expression Is Dictated by Industry Practice

A related issue is that the requirements or practices of the transit industry may dictate how real-time data are expressed or displayed and render the data non-copyrightable for that reason as well. In *Maddog Software Inc. v. Sklader*,⁸² Sklader, a former employee of Maddog Software, Inc., designed a computer program known as FastFreight to assist Maddog with dispatch and billing functions relating to intermodal trucking, for which Maddog registered a copyright. The program permitted the entry of data on different forms that had been “designed to accommodate the standard practices of the industry.”⁸³ After leaving Maddog’s employment, Sklader designed and sold a software package known as IMX that used forms that looked identical to those of FastFreight.⁸⁴ Maddog’s problem in establishing copyright infringement was that, because of the needs of the industry, the forms were the only possible expression of the idea.

The expression of an idea is not copyrightable if the expression of the idea is dictated by industry practice. Thus, to the extent that the form of expression or display of real-time data, such as arrival and departure information, is set by industry practice, the data may not be copyrightable for that reason as well. Similarly, with respect to computer programs, it has been held that if there are “external factors,” such as market or industry demands, requiring, for example, that all computer programs display specific words on a computer screen, “the components of that program that provide such a function are not protected by copyright laws.”⁸⁵

⁷⁹ *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1253 (3d Cir. 1983) (citations omitted).

⁸⁰ *M. Kramer Manuf. Co. v. Andrews*, 783 F.2d 421, 436 (4th Cir. 1986).

⁸¹ *Compaq Computer Corp. v. Procomm Tech.*, 908 F. Supp. 1409, 1418–19 (S.D. Tex.) (citation omitted).

⁸² 382 F. Supp. 2d 268 (D.N.H. 2005).

⁸³ *Id.* at 272.

⁸⁴ *Id.* at 274.

⁸⁵ *Cognotec Servs., Ltd. v. Morgan Guar. Trust Co. of N.Y.*, 862 F. Supp. 45, 49 (S.D.N.Y. 1994).

6. Noncopyrightability of Numbers, Short Words, and Phrases

Another issue for real-time data is that, just as individual facts may not be copyrighted,⁸⁶ numbers, short words and phrases, and even the titles of works are not copyrightable.⁸⁷ The Copyright Office, to which the courts tend to defer, has a “long-standing practice...to deny copyright protection to words and short phrases, ...because they do not “constitute copyrightable subject matter.”⁸⁸ The courts have held that there is no copyright protection for “naked numbers.”⁸⁹ Moreover, the Sixth Circuit has held that a catalog with part numbers, as well as illustrations, not only lacked sufficient originality for copyright protection but also that the classification scheme was an idea that was not copyrightable under § 102(b).⁹⁰

The lack of copyright protection for numbers and short phrases is relevant to the issue of whether real-time data are copyrightable. As observed in the *NYMEX* case, copyright protection does not extend to numbers: “The mere fact that numbers are attached to[] or are a by-product of categories and descriptions that are copyrightable does not render the numbers themselves copyrightable.”⁹¹

7. Fair Use

A copyrighted work is subject to the “fair use” doctrine. Thus, if another party copies part of a copyrighted database, there may be no basis for a copyright infringement claim. The fair use doctrine depends in part on the purpose and character of the use, such as whether the use was for a commercial or a nonprofit educational purpose. The copying of a copyrighted work purely for a commercial use is a factor that militates against a finding of fair use.⁹² Other factors that are considered in deciding whether copying is a fair use are the nature of the copyrighted work, the amount of the copying of the work, and how the use affects the market for or the value of a copyrighted work.⁹³ If part of an unpublished work is copied, the absence of publishing is an important but not necessarily a determinative factor in whether the copying is permitted the fair use doc-

trine.⁹⁴

Guidance Number 4

Several rules of copyright law appear to preclude the copyrighting of real-time data. When there is only one way to express an idea, or when the ways of expressing an idea are substantially the same, a work is not copyrightable because of the doctrine of merger. Moreover, when the expression of an idea is determined by industry needs or practice, the copyrightability of a work may be precluded. Just as facts and data are not copyrightable, numbers, short words, and phrases such as are used to express real-time data would not be copyrightable. Even if data are copyrighted as a compilation, the underlying data may be extracted without violating the copyright laws.

8. Whether Predictive Real-Time Data Are Copyrightable

Although the issue was present in the *NYMEX* case, the district and appellate courts did not decide whether real-time data of a predictive nature may be protected by copyright. In *NYMEX*, the Second Circuit implied that *NYMEX* had a stronger copyright argument for the settlement prices that were determined for the outer or more distant months because the committees’ work was more akin to making “predictions.”⁹⁵ On the other hand, in a footnote, the court stated that “[w]hile there is a strong argument *NYMEX* did not independently create the settlement prices,” the court had not considered “the extent of *NYMEX*’s creativity.”⁹⁶ The court did not address whether the settlement prices for the more distant, outer months could be copyrighted even if the settlement prices for the more recent, higher-volume months could not be copyrighted.

To the extent that an agency’s real-time data may be used to make predictions, there may be an argument that such predictions are not the same as the discovery of facts, which are not copyrightable. A concurring opinion in *NYMEX* cited *CCC Information Services, Inc. v. Maclean Hunter Market Reports*,⁹⁷ in which the Second Circuit held that a compilation of projections of used car prices merited copyright protection. The majority opinion in *NYMEX*, however, distinguished *CCC Information Services*, because in that case it was not necessary for the court to decide whether the estimates were copyrightable. The compilation was copyrightable based on its selection and arrangement of the estimates.⁹⁸ According to the court, unlike *NYMEX*’s settlement prices

⁸⁶ *Feist*, 499 U.S. at 340, 344.

⁸⁷ Melville B. Nimmer & David Nimmer, 2 NIMMER ON COPYRIGHT § 7.26; *Southco, Inc. v. Kanebridge Corp.*, 390 F.3d 276, 285–87 (3d Cir. 2004).

⁸⁸ *NYMEX*, 389 F. Supp. 2d at 543–44 (citations omitted) (footnote omitted).

⁸⁹ 1 NIMMER ON COPYRIGHT, *supra* note 19, § 3.04[B][2][c], at 3-34.4(1).

⁹⁰ *ATC Distribution Group, Inc. v. Whatever It Takes Transmissions & Parts, Inc.*, 402 F.3d 700, 705–06 (6th Cir. 2005).

⁹¹ *NYMEX*, 389 F. Supp. 2d at 541–42 (citation omitted).

⁹² *Compaq Computer Corp.*, 908 F. Supp. at 1419.

⁹³ *Id.* (citing 17 U.S.C. § 107).

⁹⁴ *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 554, 105 S. Ct. 2218, 2227, 85 L. Ed. 2d 588, 603 (1985).

⁹⁵ *NYMEX*, 497 F.3d at 116.

⁹⁶ *Id.* at 115 n.4.

⁹⁷ 44 F.3d 61 (2d Cir. 1994). See also *CDN Inc. v. Kapes*, 197 F.3d 1256 (9th Cir. 1999); Justin Hughes, *Created Facts and the Flawed Ontology of Copyright Law*, 83 NOTRE DAME L. REV. 43 (2007).

⁹⁸ *NYMEX*, 497 F.3d at 115 n.5 (citation omitted).

that were factual statements of daily market value, in *CCC Information Services* the editors “created” the used car prices based on the editors’ assumptions about the prices for “average cars” for which there was “no actual market to discover.”⁹⁹

Possibly there is an argument that real-time data used to predict future events are not discoveries of existing facts as were NYMEX’s settlement prices and thus are subject to copyright protection. Nevertheless, even if a transit agency could register and update real-time data as an automatic database, discussed below, it is not clear that it would be practical or beneficial to do so. As one transit agency stated when responding to the survey, a transit agency’s real-time data are “ephemeral.”

D. Registration of Automatic Databases with Real-Time Data

NYMEX was unable to register a copyright in its real-time data, its settlement prices.¹⁰⁰ What NYMEX obtained was a copyright solely in its database. If a database is registered with the Copyright Office, it is possible to register updates to the database. Electronic databases come within the category of literary works, but they are copyrightable, if at all, only as compilations;¹⁰¹ for example, a database that is arranged merely alphabetically or chronologically will not be sufficiently original.¹⁰² As *Patry on Copyright* states, registering a copyright in a database is “very problematical.”¹⁰³ For example, it may be impossible to separate the idea of the database from its expression.¹⁰⁴ Moreover, a database may lack any selection or arrangement needed to meet the originality test, with the data being searchable and retrievable by an off-the-shelf computer program.¹⁰⁵

Section 408 of the Copyright Act requires copyright holders to deposit material in connection with their applications for copyright registration. Subsection 408 (c)(1) permits registration of classes of work, one of which may be for “a single registration for a group of related works.” According to its *Report on Legal Protection for Databases*, in 1989 the Copyright Office adopted

⁹⁹ *Id.*

¹⁰⁰ In the NYMEX case, NYMEX first “sought a copyright for its database including the settlement prices. After the Copyright Office informed NYMEX that it was unwilling to provide a copyright in its settlement prices, NYMEX filed a replacement application and obtained a copyright for its database only.” *Id.* at 112. The United States filed an amicus brief in NYMEX in which the government argued that “the settlement prices are facts,” and “even if they are not facts the idea of the prices [has] merged with the expression” such that the prices are not copyrightable. The government also contended that settlement “prices are not copyrightable because they are short phrases.” *Id.* at 113.

¹⁰¹ PATRY, *supra* note 72, § 3:69, at 3-220.

¹⁰² *Id.* § 3:67, at 3-216.

¹⁰³ *Id.* § 3:69, at 3-224.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

a regulation allowing group registration for both published and unpublished automated databases. The regulation allows 3 months’ worth of updates to be registered at one time, with a deposit consisting of identifying material from one representative day.¹⁰⁶ An “automated database [is] a body of facts, data, or other information assembled into an organized format, suitable for use in a computer and comprising one or more files.”¹⁰⁷ The report explains that “[o]ne of the major issues posed by automated databases is the status of ongoing updates or other changes.”¹⁰⁸ However, “[t]o the extent that each update of a database contains copyrightable subject matter, it may be registered. Each registration for a published, updated database covers only the additions that were published on the date specified in the application as the date of publication (emphasis supplied).”¹⁰⁹

Accordingly, the Copyright Office’s regulations provide

that, on the basis of a single application, deposit, and filing fee, a single registration may be made for automated databases and their updates or other derivative versions that are original works of authorship, if, where a database (or updates or other revisions thereof), if unpublished, is (or are) fixed, or if published is (or are) published only in the form of machine-readable copies....¹¹⁰

One of the seven conditions that must be met is that each update must be made within 3 months of the filing

¹⁰⁶ U.S. COPYRIGHT OFFICE, REPORT ON LEGAL PROTECTION FOR DATABASES (1997) (available at <http://www.copyright.gov/reports/dbase.html>), last accessed on Dec. 23, 2009. The Copyright Office’s Circular 65, *Copyright Registration for Automated Databases*, explains the process and requirements for database registration.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* The report explains that “Automated databases may be updated frequently; it is not unusual for a database to be updated several times a day. Database producers on many occasions informed the Office that it was impossible as a practical matter to register and deposit the “new” work each time revisions were made available to the public.” *Id.*

¹¹⁰ 37 C.F.R. § 202.3 (2009). The requirements are:

(A) All of the updates or other revisions are owned by the same copyright claimant;

(B) All of the updates or other revisions have the same general title;

(C) All of the updates or other revisions are similar in their general content, including their subject;

(D) All of the updates or other revisions are similar in their organization;

(E) Each of the updates or other revisions as a whole, if published before March 1, 1989, bears a statutory copyright notice as first published and the name of the owner of copyright in each work (or an abbreviation by which the name can be recognized, or a generally known alternative designation of the owner) was the same in each notice;

(F) Each of the updates or other revisions if published was first published, or if unpublished was first created, within a three-month period in a single calendar year; and

(G) The deposit accompanying the application complies with § 202.20(c)(2)(vii)(D).

with the Copyright Office. For example, the Wall Street Journal Online made a single registration for all updates from April 2009 through June 2009.¹¹¹ The method of registration is also the method used by NYMEX to register its databases.¹¹²

Registering a database or an update to a database does not assure that any real-time data therein would be protected by copyright. As the *Feist* Court stated, “[n]otwithstanding a valid copyright, a subsequent compiler remains free to use the facts contained in another’s publication to aid in preparing a competing work, so long as the competing work does not feature the same selection and arrangement.”¹¹³

Guidance Number 5

If a work is copyrightable as an automatic database, updates could be registered with the Copyright Office, but the update must contain copyrightable subject matter. An automatic database may have little beneficial or practical value for a transit agency. The underlying data still could be copied without violating the copyright. A transit agency’s terms of use, end-user license, or other agreement may be the best and possibly only protection for its real-time data.

II. COPYRIGHT OF COMPUTER PROGRAMS FOR THE COLLECTION AND DISSEMINATION OF REAL-TIME DATA

A. Applicability of the Copyright Act to Computer Programs

The Copyright Act applies to computer programs because of a 1980 amendment to the Act that “include[ed] in the definitional section of copyrightable subject matter a definition of ‘computer program.’”¹¹⁴ Under the Copyright Act, a computer program is defined as “a set of statements or instructions to be used directly or indi-

rectly in a computer in order to bring about a certain result.”¹¹⁵ Computer programs are literary works under the copyright laws,¹¹⁶ and audiovisual works are separately copyrightable as well.¹¹⁷

As noted by the Fourth Circuit, the Copyright Act “‘makes clear that *the expression adopted by the programmer is the copyrightable element in a computer program*, and...the actual processes or methods embodied in the program are not within the scope of the copyright law.”¹¹⁸ Because “the Copyright Act contains no explicit standards for separating a work’s expression from its underlying ideas,”¹¹⁹ it is necessary to “separate[e] protectable expression of ideas in a disputed program from unprotectable ideas, facts, processes, and methods of operation.”¹²⁰

Although ideas may not be copyrightable, a computer program that expresses an idea by way of a computer device or machine brings the expression within the standard of communications that are copyrightable.¹²¹ Although there are elements of a computer program that are not copyrightable as ideas, it has been held that the rule against the copyrighting of ideas does not prevent an entire computer program from being copyrightable.¹²² In *Apple Computer, Inc. v. Franklin Computer Corp.*,¹²³ the Third Circuit held that computer programs are not to be denied copyrightability on the basis of their being a “process,” a “system,” or a “method of operation” that is not copyrightable.¹²⁴

B. Copyright of Audiovisual Programs

Separate copyrights may be issued for an audiovisual program and for the computer program that implements the audiovisual program.¹²⁵ A copyright may protect a computer program that implements the audiovisual component.¹²⁶ It has been held “that a copyright in the audiovisual display, which display is created by a computer program, protects not only the audiovisual from copying, but also the underlying computer program to the extent the program embodies the

¹¹¹ *The Wall Street Journal Online*; published updates from Apr. 1, 2009, to June 30, 2009; representative publication date, Apr. 1, 2009; updated continuously. Registration number and date: TX0006978934/2009-07-22.

¹¹² Group registration for automated database titled *NYMEX Database*; published updates from Apr. 1, 2007, to June 30, 2007. Registration Number/Date: TX0006935449/2008-04-02. However, the last such database registration made by NYMEX appears to have occurred in 2007.

¹¹³ *Feist Publ’ns, Inc.*, 499 U.S. at 349.

¹¹⁴ *M. Kramer Manuf. Co. v. Andrews*, 783 F.2d 421, 432 (4th Cir. 1986) (footnote omitted); 1 NIMMER ON COPYRIGHT, *supra* note 19, § 2.04 [C][3], at 2-51 (stating that “[i]t is...firmly established that computer programs qualify as [a] work of authorship” subject to copyright protection); *Brignoli v. Balch Hardy and Scheinman, Inc.*, 645 F. Supp. 1201, 1204 (S.D.N.Y. 1986) (stating that “[t]he great weight of authority indicates that computer programs are entitled to protection under copyright law”), (*citing* *Videotronics, Inc. v. Bend Elects.*, 564 F. Supp. 1471, 1477 (D. Nev. 1983); *Williams Elects., Inc. v. Artic Int’l, Inc.*, 685 F.2d 870, 875 (3d Cir. 1982); *Apple Computer, Inc. v. Formula Int’l, Inc.*, 562 F. Supp. 775 (C.D. Cal. 1983).

¹¹⁵ 17 U.S.C. § 101 (2009).

¹¹⁶ *Whelan Assocs., Inc.*, 797 F.2d at 1234 (*citing* H.R. REP. NO. 1476, 94th Cong., 2d Sess. 54, *reprinted in* 1976 U.S. CODE CONG. & ADM. NEWS 5659, 5667).

¹¹⁷ *M. Kramer Manuf. Co.*, 783 F.2d at 435 n.12.

¹¹⁸ *Id.* at 434–35 (*quoting* 1976 U.S. CODE CONG. & ADM. NEWS at 5670) (emphasis in original). *See also* Annotation, *Copyright Protection of Computer Programs*, 180 A.L.R. FED. 1 (2002).

¹¹⁹ Annotation, *Copyright Protection of Computer Programs*, 180 A.L.R. FED. at 19 § 2[a].

¹²⁰ *Id.*

¹²¹ *M. Kramer Mfg. Co., Inc.*, 783 F.2d at 435.

¹²² *Brignoli*, 645 F. Supp. at 1204.

¹²³ 714 F.2d 1240 (3d Cir. 1983).

¹²⁴ *Id.* at 1250–51.

¹²⁵ *M. Kramer Manuf. Co.*, 783 F.2d at 441.

¹²⁶ *Id.* (citation omitted).

game's expression";¹²⁷ thus, an "infringer may copy the audiovisuals themselves or the infringer may copy the underlying computer program."¹²⁸

C. Computer Programs and Compilations or Databases

Commentators addressing the copyrightability of data or computer programs to collect and process data are not in agreement on whether there is copyright protection. According to one source, firms are interpreting, analyzing, and electronically processing data; the enhanced data are subject to copyright protection; and "data enhancement firms are in fact copyrighting their products."¹²⁹ Although the case did not involve real-time data, in *Corsearch, Inc. v. Thomson & Thomson*,¹³⁰ a federal court in New York held that a state trademark computer database was copyrightable. In another case, a unique program to assist municipalities in compiling data for the purpose of tax assessment was sufficiently original to be protected by copyright.¹³¹ Copying the data in the "structure setup" would have been copyright infringement; however, copying the underlying data in the database would not be a violation of the copyright.¹³² On the other hand, some courts and commentators state that a computer program is not a compilation; rather the elements of the program must be judged on their own merit as being unique or original.¹³³

*Assessment Technologies of WI, LLC v. WIREdata, Inc.*¹³⁴ illustrates a situation that could arise if a transit agency enters into a contract with a company having a copyrighted program to collect and distribute an agency's real-time data. Assessment Technologies of WI, LLC (AT) was the copyright owner that sought to use the copyright laws to block access to non-copyrightable data. AT had developed and copyrighted a computer program called Market Drive to compile tax assessment data. Municipal tax assessors typed information obtained from various sources into a computer using the Market Drive program, which automatically

placed the data into 456 fields and 34 master categories or tables.¹³⁵ WIREdata sought to obtain the non-copyrighted data. Three municipalities refused to provide the data to WIREdata out of concern that providing the data would subject them to claims that they had violated AT's copyright in Market Drive.¹³⁶ WIREdata only wanted the raw data so that it could use the data for its own purposes.¹³⁷

As the Seventh Circuit saw it,

[f]rom the standpoint of copyright law all that matters is that the process of extracting the raw data from the database does not involve copying Market Drive, or creating, as AT mysteriously asserts, a derivative work; all that is sought is raw data, data created not by AT but by the assessors, data that are in the public domain....W]ork that merely copies uncopyrighted material is wholly unoriginal and the making of such a work is therefore not an infringement of copyright. The municipalities would not be infringing Market Drive by extracting the raw data from the databases by either method that we discussed and handing those data over to WIREdata....¹³⁸

The court held that the data in the municipalities' tax assessment databases were beyond the scope of AT's copyright¹³⁹ and that AT was "trying to use its copyright [in Market Drive] to sequester uncopyrightable data...."¹⁴⁰ If so, AT's action could constitute a violation of the doctrine of "copyright misuse" that "prevents copyright holders from leveraging their limited monopoly to allow them control of areas outside the monopoly."¹⁴¹ However, the court did suggest that there were other solutions.¹⁴² For instance, WIREdata could obtain the data without violating AT's copyright by extracting the data and placing it in an electronic file; by using Microsoft Access to create an electronic file of the data; by allowing WIREdata's programmers to use their computers to extract the data; or by copying the database and giving it to WIREdata for the purpose of extracting the data.¹⁴³

In a related case involving WIREdata, it was held that municipalities could not avoid liability under Wisconsin's open records law by contracting with independent contractor assessors for the collection, maintenance, and custody of property assessment records.¹⁴⁴ See discussion in Section VII.B.1, *infra*.

¹²⁷ *Id.* at 442.

¹²⁸ *Id.* at 445. "Copying is ordinarily, due to the lack of direct evidence, established by proof that the defendant had access to the plaintiff's work and produced a work that is substantially similar to the plaintiff's work." *Id.* (citation omitted).

¹²⁹ J. Richard West, *Comment: Copyright Protection for Data Obtained by Remote Sensing: How the Data Enhancement Industry Will Ensure Access for Developing Countries*, 11 N.W. J. INT'L L. & BUS. 403, 407 (1990).

¹³⁰ 792 F. Supp. 305 (S.D.N.Y. 1992).

¹³¹ *Assessment Techs. of WI, LLC v. WIREdata, Inc.*, 350 F.3d 640, 642 (7th Cir. 2003).

¹³² *Id.* at 643–44. See also *Baystate Techs, Inc. v. Bentley Sys., Inc.*, 946 F. Supp. 1079 (D. Mass. 1996) (holding that data structure names and organization of those names in software manufacturer's computer aided design (CAD) product were not protected expression under the copyright laws).

¹³³ 180 A.L.R. FED. at 22 § 2[a] (citing authorities); PATRY, *supra* note 72, § 3:69, at 3-221.

¹³⁴ 350 F.3d 640 (7th Cir. 2003).

¹³⁵ *Assessment Technologies*, 350 F.3d at 642–43.

¹³⁶ *Id.* at 642.

¹³⁷ *Id.* at 643.

¹³⁸ *Id.* at 644 (citations omitted).

¹³⁹ *Id.* at 647.

¹⁴⁰ *Id.* at 645, 647.

¹⁴¹ *Id.* at 646–47 (citations omitted). The court stated that "[t]o try by contract or otherwise to prevent the municipalities from revealing their own data, especially when, as we have seen, the complete data are unavailable anywhere else, might constitute copyright misuse." *Id.*

¹⁴² *Id.* at 646.

¹⁴³ *Id.* at 648.

¹⁴⁴ *WIREdata, Inc. v. VIII. of Sussex*, 2008 WI 69, 310 Wis. 2d 397, 751 N.W.2d 736 (2008).

Guidance Number 6

A computer program designed to collect and disseminate real-time data appears to be protected by the copyright laws. However, a copyright may not be used to “sequester” data that are not otherwise copyrightable.

D. Copyright and Web Sites

A number of transit agencies reported making real-time data available through their Web sites. As held in *Ticketmaster, LLC v. RMG Technologies, Inc.*, “[c]opyright protection for a website may extend to both the screen displays and the computer code for the website.”¹⁴⁵ In ordering a preliminary injunction in *Ticketmaster*, the court agreed that it was highly likely that the plaintiff would succeed in showing that the defendant received notice of and assented to Ticketmaster’s Terms of Use by using its Web site.¹⁴⁶ The court held that “[t]he terms permit access for personal use only, prohibit commercial use, prohibit the use of bots and automated devices, limit the frequency with which users can make requests through the website, and require the user to agree not to interfere with the proper working of the website.”¹⁴⁷ The “[u]se of a work in excess of a license gives rise to liability for copyright infringement.”¹⁴⁸

In sum, real-time data may be collected and distributed with the aid of a computer program or made available to users by a Web site for which a transit agency has registered a copyright with access to and use of the site restricted by the agency’s terms-of-use agreement. As discussed in Section IV, *infra*, a transit agency has a protectable property interest in its real-time data until it releases the data into the public domain.

Guidance Number 7

A web site may constitute an original work of authorship protected by the Copyright Act. Moreover, the copyright-owner may control the use of data accessible via the site by the owner’s terms-of-use agreement to which users must assent when wanting access to the site.

E. Copyright Protection and the Digital Millennium Copyright Act

In 1998, Congress enacted the Digital Millennium Copyright Act (DMCA). The Act applies only to a work protected by the Copyright Act.¹⁴⁹ Other federal statutes

are discussed in Section VI, *infra*. A copyright holder may use digital rights management (DRM) technology to place a digital “fence” around any data provided to a requestor.¹⁵⁰ “Copyright owners use two main types of existing technologies, known as ‘watermarking’ and ‘fingerprinting,’ to create digital identifications for their works....”¹⁵¹ Second, “DRM software may...provide copyright owners with control over the various excludable rights of copyright ownership, including...the ability to make copies of and redistribute the work.”¹⁵² The courts apply the DMCA to cases involving copyright infringement; the Act is not limited to matters solely involving the Internet.¹⁵³ However, the Act only creates causes of action; it does not create a new property right.¹⁵⁴

Section 1201(a)(1) is the anti-circumvention provision of the DMCA. The section “prohibits a person from ‘circumventing a technological measure that effectively controls access to a work protected under [Title 17, governing copyright].’”¹⁵⁵ It should be noted that individuals “who use such devices may be subject to liability under § 1201(a)(1) whether they infringe or not.”¹⁵⁶ Thus, an element of the DMCA that a copyright holder must prove is that the circumvention was “undertaken ‘without the authority of the copyright owner.’”¹⁵⁷

There are various exceptions in the DMCA, for example, for nonprofit libraries, archives, and educational institutions,¹⁵⁸ and reverse engineering is permitted by the statute.¹⁵⁹ An important exception under the Act is that it does not prohibit fair use of information, even if the information is unlawfully obtained under the Act.¹⁶⁰

Sections 1201(a)(2) and 1201(b)(1) are the “anti-trafficking provisions” of the DMCA. The provisions prohibit trafficking “in devices that circumvent access

The DMCA modernizes copyright law for the digital age. Pub. L. No. 105–304, 112 Stat. 2860 (1998).

¹⁵⁰ Ira Bloom, *Freedom of Information Laws in the Digital Age: The Death Knell of Informational Privacy*, 12 RICH. J.L. & TECH. 9, nn.277–81 (2006).

¹⁵¹ *Id.* at nn.277–81.

¹⁵² *Id.* (footnote omitted).

¹⁵³ 17 U.S.C.A. § 1201(a)(2) (2009); *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 292 F. Supp. 2d 1023 (N.D. Ill. 2003).

¹⁵⁴ *Chamberlain Group, Inc. v. Skylink Techs.* 381 F.3d 1178, 1192 (Fed. Cir. 2004).

¹⁵⁵ *Id.* at 1195 (quoting *Universal City Studios v. Corley*, 273 F.3d 429, 440–41 (2d Cir. 2001) (some internal quotation marks omitted)).

¹⁵⁶ *Id.* at 1195.

¹⁵⁷ *Id.* at 1193 (citation omitted).

¹⁵⁸ 17 U.S.C. § 1201(d) (2009).

¹⁵⁹ *Id.* § 1201(f) (2009).

¹⁶⁰ *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 443–44 (2d Cir. 2001). “The legislative history of the enacted bill makes quite clear that Congress intended to adopt a ‘balanced’ approach to accommodating both piracy and fair use concerns, eschewing the quick fix of simply exempting from the statute all circumventions for fair use.” *Id.* at 444 n.13, (citing H.R. REP. NO. 105-551, pt. 2, at 25 (1998)).

¹⁴⁵ *Ticketmaster LLC*, 507 F. Supp. 2d at 1104 (citation omitted).

¹⁴⁶ *Id.* at 1107 (citation omitted) and 1109.

¹⁴⁷ *Id.* at 1108.

¹⁴⁸ *Id.* (citation omitted).

¹⁴⁹ 17 U.S.C. § 1201(a) (2009). Congress enacted the DMCA “to implement the World Intellectual Property Organization Copyright Treaty and [to serve] as a means to better protect copyright in the digital age.” *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 292 F. Supp. 2d 1023, 1034 (N.D. Ill. 2003).

controls in ways that facilitate infringement....”¹⁶¹ The two anti-trafficking provisions differ in that

subsection 1201(a)(2) covers those who traffic in technology that can circumvent “a technological measure *that effectively controls access* to a work protected under” Title 17, whereas subsection 1201(b)(1) covers those who traffic in technology that can circumvent “protection afforded by a technological measure *that effectively protects a right of a copyright owner* under” Title 17.¹⁶²

Section 1202 of the DMCA concerns the protection of copyright management information and is “limited to components of technological measures” that protect the copyright.¹⁶³ For Section 1202 to apply, “the information removed must function as a component of an automated copyright protection or management system,”¹⁶⁴ the section does not apply if there is a “failure to prove the knowledge or intent requirements for [a] violation.”¹⁶⁵ It has been held that neither a logo nor a hyperlink comes within the protection of Section 1202 of the DMCA, because neither is “a component of an automated copyright protection or management system....”¹⁶⁶

Section 1203 of the DMCA provides for jurisdiction in a federal court and for remedies that include injunctive relief;¹⁶⁷ impoundment of any unlawful device or product¹⁶⁸ or its destruction;¹⁶⁹ damages, either actual or statutory;¹⁷⁰ and costs and attorneys’ fees in the discretion of the court.¹⁷¹

Although no cases were located involving the DMCA and registered compilations or databases or computer programs for collecting or disseminating real-time data, in *Ticketmaster L.L.C. v. RMG Technologies, Inc.*,¹⁷² Ticketmaster, the copyright-owner, brought an action against the defendant RMG Technologies for developing and marketing an automated device that accessed and navigated Ticketmaster’s Web site in a manner that infringed Ticketmaster’s copyrights and violated the accepted terms of use for its Web site. The court granted Ticketmaster’s motion for a preliminary injunction. Ticketmaster demonstrated that it was highly likely that the defendant’s use of automated devices to access the Ticketmaster Web site violated a provision in the Web site’s terms of use and that the defendant’s use

of the Ticketmaster Web site was not a fair use.¹⁷³

Guidance Number 8

The DMCA only applies to works protected by the Copyright Act. Assuming a work is copyrightable (e.g., a compilation or an automatic database), digital rights management technology could be used to protect the copyright and subject violators using circumvention devices (or engaging in trafficking in such devices) to liability as provided under the DMCA.

III. PROTECTION FOR REAL-TIME DATA UNDER STATE LAW

A. Preemption by the Copyright Act of Causes of Action Under State Law

The dissemination of real-time transit data is analogous to the distribution of other real-time data, such as news, sports, or stock-market data via new technologies. However, as one article notes, “the potential for the sale of real-time information...as a major revenue source will necessarily hinge on the ability of [the licensor] to retain the exclusive ability or legal right to control that information long enough to exploit its real-time value.”¹⁷⁴ Regardless of whether data are copyrightable, if a transit agency has a cause of action against an unauthorized user of real-time data, there may be an issue whether a state remedy, even for breach of contract, is preempted by the Copyright Act. The reason for federal preemption is

to prevent states from giving special protection to works of authorship that Congress has decided should be in the public domain, which [Congress] can accomplish only if “subject matter of copyright” includes all works of a type covered by sections 102 and 103, even if federal law does not afford protection to them.”¹⁷⁵

Claims under state law are preempted when they satisfy the “subject matter” and the “equivalency” tests for preemption under Section 301 of the Copyright Act. Both tests must be satisfied for preemption to occur.¹⁷⁶ As for the subject matter test, Section 102 of the Copyright Act provides that the scope of copyright protection extends to “original works of authorship fixed in any tangible medium of expression.” A nonexclusive list of eight categories of subject matter is included in

¹⁶¹ *Chamberlain Group, Inc.*, 381 F.3d at 1195.

¹⁶² *Universal City Studios, Inc.*, 273 F.3d at 441 (citations omitted).

¹⁶³ *IQ Group, Ltd. v. Wiesner Publ’g LLC*, 409 F. Supp. 2d 587, 593 (D.N.J. 2006) (footnote omitted).

¹⁶⁴ *Id.* at 597.

¹⁶⁵ *Id.* at 593 (citations omitted).

¹⁶⁶ *Id.* at 598.

¹⁶⁷ 17 U.S.C. § 1203(b)(1) (2009).

¹⁶⁸ *Id.* § 1203(b)(2) (2009).

¹⁶⁹ *Id.* § 1203(b)(6) (2009).

¹⁷⁰ *Id.* §§ 1203(b)(3) and (c) (2009).

¹⁷¹ *Id.* §§ 1203(b)(4) and (5) (2009).

¹⁷² *Ticketmaster LLC v. RMG Techs., Inc.*, 507 F. Supp. 2d 1096 (C.D. Cal. 2007).

¹⁷³ *Id.* at 1117.

¹⁷⁴ Gary R. Roberts, *The Scope of the Exclusive Right to Control Dissemination of Real-Time Sports Event Information*, 15 STAN. L. & POL’Y REV. 167, 168 (2004). Roberts states “that sports promoters do appear to have some limited rights to control the dissemination of real-time information about their own events, but that these rights are probably not broad enough to provide a basis for the generation of significant new revenues.” *Id.*

¹⁷⁵ *ATC Distrib. Group, Inc.*, 402 F.3d at 713 (citations omitted).

¹⁷⁶ See *Baltimore Orioles, Inc. v. Major League Baseball Players Ass’n*, 805 F.2d 663, 674 (7th Cir. 1986).

§ 102(a).¹⁷⁷ The subject matter test “is met when the work of authorship being copied or misappropriated ‘fall[s] within the ambit of copyright protection.’”¹⁷⁸ Compilations of facts come within the subject matter of copyright.¹⁷⁹ Furthermore, “[e]lectronic databases are expressly mentioned as falling within the category of literary works in the 1976 House Judiciary Committee report.”¹⁸⁰

It is important to note that the types of works that are *protectable by copyright* are narrower than the types of subjects that are *within copyright’s subject matter*.¹⁸¹

The fact that none of these works are eligible for copyright protection under federal law does not preclude the preemption of ATC’s state law claims. “As long as a work fits within one of the general subject matter categories of sections 102 and 103, the bill prevents the States from protecting it even if it fails to achieve Federal statutory copyright because it is too minimal or lacking in originality to qualify, or because it has fallen into the public domain.”¹⁸² (emphasis supplied)

Noncopyrightable works are still “within the subject matter of copyright.”¹⁸³ For example, some courts have found that *Feist*-like collections of facts, even if ineligible for copyright protection, come within the subject matter of copyright, meaning that a state cause of action may be preempted.¹⁸⁴

Second, under the equivalency test, there is preemption when a right sought to be asserted under state law is protected exclusively under the Copyright Act. Because real-time transit data comes within the *scope* of copyright, a state law claim would be preempted that is *equivalent* to the rights protected by the Copyright Act.

A right under state law is “equivalent” to one of the rights within the general scope of copyright if it is violated by the exercise of any of the rights set forth in § 106. ...That section grants the owner of a copyright the exclusive rights to reproduce (whether in original or derivative form), distribute, perform, and display the copyrighted

¹⁷⁷ 17 U.S.C. § 102(a) lists 1) literary works; 2) musical works, including any accompanying words; 3) dramatic works, including any accompanying music; 4) pantomimes and choreographic works; 5) pictorial, graphic, and sculptural works; 6) motion pictures and other audiovisual works; 7) sound recordings; and 8) architectural works.

¹⁷⁸ *Nat’l Basketball Ass’n v. Motorola, Inc.*, 105 F.3d 841, 848 (2d Cir. 1997) (citation omitted).

¹⁷⁹ *Lipscher v. LRP Publs., Inc.*, 266 F.3d 1305, 1311 (11th Cir. 2001) (citation omitted).

¹⁸⁰ *PATRY supra* note 72, § 3:69, at 3-220.

¹⁸¹ *See ATC Distribution Group, Inc.*, 402 F.3d at 713.

¹⁸² *Id.* (citations omitted).

¹⁸³ *Lipscher*, 266 F.3d at 1311 (quoting *Feist Publ’ns, Inc.*, 499 U.S. at 345).

¹⁸⁴ *See, e.g., ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1453 (7th Cir. 1996) (holding that information in the form of raw data, such as telephone listings and customer names, are “within the subject matter of copyright” even if, after *Feist*, they are not sufficiently original to be copyrighted”) (citation omitted).

work. ...Thus, a right is equivalent to one of the rights comprised by a copyright if it “is infringed by the mere act of reproduction, performance, distribution or display.”¹⁸⁵

A wide variety of causes of action under state law may be preempted. Some claims are more likely to be preempted than other claims. For example, the courts generally have held that claims sounding in quasi-contract,¹⁸⁶ unjust enrichment,¹⁸⁷ right of publicity or privacy,¹⁸⁸ tortious interference with contracts,¹⁸⁹ and unfair competition¹⁹⁰ are preempted. On the other hand, claims for breach of a bailment,¹⁹¹ of an express con-

¹⁸⁵ *Baltimore Orioles, Inc.*, 805 F.2d at 676–77 (citations omitted) (footnote omitted).

¹⁸⁶ 1 NIMMER ON COPYRIGHT, *supra* note 19, § 1.01[B][1][g] (stating that claims for quasi contract and unjust enrichment are preempted).

¹⁸⁷ *Murray Hill Publ’ns, Inc. v. ABC Communs., Inc.*, 264 F.3d 622, 637–38 (6th Cir. 2001) (holding that an unjust enrichment claim was preempted); *Briarpatch Ltd., L.P. v. Phoenix Pictures, Inc.*, 373 F.3d 296, 306–07 (2d Cir. 2004) (holding that a claim for unjust enrichment or quasi contract was an “equivalent right” and preempted to the extent it applied to the subject matter of copyright).

¹⁸⁸ *Laws v. Sony Music Entertainment, Inc.*, 448 F.3d 1134, 1144, 1145 (9th Cir. 2006). In *Laws*, the court affirmed the district court’s decision that a performer’s claims for violation of her common law right to privacy and her statutory right of publicity were preempted by the Copyright Act. However, the court stated that not all claims based on common law or statutory rights of privacy, publicity, and trade secrets, as well as the general law of defamation and fraud, were extinguished as long as “those causes of action do not concern the subject matter of copyright and contain qualitatively different elements than those contained in a copyright infringement suit.”

¹⁸⁹ *Huckshold v. HSSI, L.L.C.*, 344 F. Supp. 2d 1203, 1208 (E.D. Mo. 2004) (holding that tortious interference with a contract claim was not qualitatively different from a claim for infringement under the Copyright Act); *Stromback v. New Line Cinema*, 384 F.3d 283, 306 (6th Cir. 2004) (“The fact that the tort, unlike copyright infringement, requires awareness of the conflicting contract and an intentional interference with it merely means that the state-created right is narrower than its copyright counterpart, not that it is qualitatively different so as to preclude pre-emption.”); *Harper & Row Publishers, Inc. v. Nation Enters.*, 723 F.2d 195, 201 (2d Cir. 1983) (holding that a claim for intentional interference was preempted). *See, however, Brush Creek Media, Inc. v. Boujaklian*, 2002 U.S. Dist. LEXIS 15321, at *16 (N.D. Cal. 2002) (finding that a state claim for interference with prospective economic advantage was not preempted because the claim required the element of improperly licensing the right to copyrighted material in addition to the element of copying).

¹⁹⁰ *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 789, 797 (5th Cir. 1999) (claim for unfair competition by misappropriation preempted); *ATC Distrib. Group, Inc. v. Whatever It Takes Transmission and Parts, Inc.*, 402 F.3d 700, 713 (6th Cir. 2005) (holding that a claim for unfair competition “completely preempted by federal law”).

¹⁹¹ *Boyle v. Stephens Inc.*, 1998 U.S. Dist. LEXIS 15215, at *20 (S.D.N.Y. 1998) (holding that a bailment claim was preempted because the claim was “in actuality a claim for retention of ‘intellectual property rights’ and not the tangible property”) (citations omitted).

tract¹⁹² or of an implied-in-fact contract,¹⁹³ or for conversion,¹⁹⁴ defamation,¹⁹⁵ or breach of fiduciary duty¹⁹⁶ may or may not be preempted. The courts generally have held that claims under state law for theft of trade secrets,¹⁹⁷ misrepresentation¹⁹⁸ or fraud,¹⁹⁹ and trespass²⁰⁰

¹⁹² *Firoozye v. Earthlink Network*, 153 F. Supp. 2d 1115, 1126–27 (N.D. Cal. 2001) (stating that “[w]here a plaintiff’s breach of contract claim only asserts that a defendant violated a promise not to use a certain work, that breach of contract claim is preempted,” but holding that “[a] promise to pay for a work constitutes an extra element such that a breach of contract claim is not preempted by section 301”); *Wolff v. Inst. of Elec. & Elecs. Eng’rs, Inc.*, 768 F. Supp. 66, 69 (S.D.N.Y. 1991) (contract claim preempted). *See, however*, *Huckshold v. HSSL, LLC*, 344 F. Supp. 2d 1203 (E.D. Mo. 2004) (contract claim not preempted); *Telecom Tech. Servs. Inc. v. Rolm Co.*, 388 F.3d 820, 829–30 (11th Cir. 2004) (contract claim not preempted); *Lipscher v. LRP Publ’ns, Inc.*, 266 F.3d 1305, 1318 (11th Cir. 2001) (no preemption of contract claim); *Nat’l Car Rental Sys., Inc. v. Computer Assocs. Int’l, Inc.*, 991 F.2d 426, 431 (8th Cir. 1993) (restrictions on use may constitute an additional element making a breach of contract not equivalent to a copyright action); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1454 (7th Cir. 1996) (holding that a claim for breach of contract was not equivalent to the exclusive rights protected by the Copyright Act); *Taquino v. Teledyne Monarch Rubber*, 893 F.2d 1488, 1501 (5th Cir. 1990) (holding that because a breach of contract action involves a promise that is in addition to the mere reproduction, distribution, or display of a work, the contract claim was not preempted by Section 301 of the Copyright Act).

¹⁹³ *Murray Hill Publ’ns, Inc. v. ABC Communs., Inc.*, 264 F.3d 622, 638 (6th Cir. 2001) (noting that “[c]ontracts implied in law...meet the equivalency requirement of the preemption analysis” and are preempted). Compare *Wrench LLC v. Taco Bell*, 256 F.3d 446, 458 (6th Cir. 2001) (holding implied-in-fact contract at issue had the necessary extra element and therefore was not preempted).

¹⁹⁴ *Microstrategy, Inc. v. Netsolve, Inc.*, 368 F. Supp. 2d 533, 537 (E.D. Va. 2005) (holding that the “conversion claim is preempted because it contains no extra element rendering it qualitatively different from the copyright claim”); *Cassetica Software, Inc. v. Computer Scis. Corp.*, 2009 U.S. Dist. LEXIS 51589, at *14 (N.D. Ill. Jun. 18, 2009) (conversion claim preempted); *but see United States ex rel. Berge v. Bd. of Trustees of the Univ. of Ala.*, 104 F.3d 1453, 1463 (4th Cir. 1997) (stating that “§ 301(a) will preempt a conversion claim ‘where the plaintiff alleges only the unlawful retention of its intellectual property rights and not the unlawful retention of the tangible object embodying its work’” and finding conversion claim preempted) (citation omitted), *cert. denied*, 522 U.S. 916, 118 S. Ct. 301, 139 L. Ed. 2d 232 (1997).

¹⁹⁵ *Kindergartners Count, Inc. v. DeMoulin*, 249 F. Supp. 2d 1233, 1251 (D. Kan. 2003) (defamation claim based on statement that person was a plagiarist not preempted); *but see Daboub v. Gibbons*, 42 F.3d 285, 289–90 (5th Cir. 1995) (holding that claims for defamation and plagiarism were preempted).

¹⁹⁶ *Briarpatch Ltd. v. Phoenix Pictures, Inc.*, 373 F.3d 296, 307 (2d Cir. 2004) (claim for breach of fiduciary duty not preempted).

¹⁹⁷ *Dun & Bradstreet Software Servs., Inc. v. Grace Consulting, Inc.*, 307 F.3d 197, 219 (3d Cir. 2002) (“[T]rade secret claims were qualitatively different from the rights protected by

or trespass to chattels²⁰¹ are not preempted.

Guidance Number 9

Real-time data, even if not copyrightable, come within the scope of the Copyright Act. State law claims are preempted when they are equivalent to a copyright claim applicable to an act of reproduction, performance, distribution, or display of a work in violation of an owner’s copyright. Although there is some authority to the contrary, some courts have held that the Copyright Act does not preempt claims for breach of contract, discussed further in Section V.B, *infra*.

B. Tort of Misappropriation Under State Law

One possible claim under state law against an unauthorized user of a transit agency’s real-time data is for the tort of misappropriation.²⁰² The tort encompasses the taking without payment for the product of another’s

the Copyright Act because Grace’s evidence of breach of confidentiality constituted the extra element necessary to avoid preemption.”).

¹⁹⁸ *Firoozye v. Earthlink Network*, 153 F. Supp. 2d 1115, 1127–28 (N.D. Cal. 2001) (claim for misrepresentation not preempted).

¹⁹⁹ *Shuptrine v. McDougal Littell*, 535 F. Supp. 2d 892, 897 (E.D. Tenn. 2008) (holding that a claim for fraud was “more than just copyright infringement” and was not preempted); *Valente-Kritzer Video v. Pinckney*, 881 F.2d 772, 776 (9th Cir. 1989) (claim for common law fraud not preempted).

²⁰⁰ *Integrative Nutrition, Inc. v. Acad. of Healing Nutrition*, 476 F. Supp. 2d 291, 298–99 (S.D.N.Y. 2007) (claim for trespass not preempted).

²⁰¹ *eBay, Inc. v. Bidder’s Edge, Inc.*, 100 F. Supp. 2d 1058, 1072 (N.D. Cal. 2000) (claim for trespass to chattels not preempted); *but see Ticketmaster Corp. v. Tickets.com, Inc.*, 2000 U.S. Dist. LEXIS 4553 (C.D. Cal. 2000) (dismissing trespass claim based on unauthorized Internet information aggregation as preempted by copyright law).

²⁰² Not considered herein is any claim under state law for misappropriation of an idea inasmuch as such a claim appears to be completely inapplicable to real-time data. For cases see *McGhan v. Ebersol*, 608 F. Supp. 277, 284 (S.D.N.Y. 1985) (discussing essential elements needed under New York idea misappropriation law); *Nadel v. Play-By-Play Toys & Novelties, Inc.*, 208 F.3d 368, 378 (2d Cir. 2000) (stating that “[i]n contrast to contract-based claims, a misappropriation claim can only arise from the taking of an idea that is original or novel in absolute terms, because the law of property does not protect against the misappropriation or theft of that which is free and available to all”) (citations omitted); *Mayer v. Josiah Wedgwood & Sons, Ltd.*, 601 F. Supp. 1523, 1534 (S.D.N.Y. 1985) (“New York misappropriation tort law has grown much broader” and “is now a fact-oriented action, providing relief from all types of ‘commercial immorality.’ Generally, it protects against a defendant’s competing use of a valuable product or idea created by the plaintiff through investment of time, effort, money and expertise.”) (citations omitted) (footnote omitted). Another jurisdiction recognizing a claim for idea misappropriation is California. *See Chandler v. Roach*, 156 Cal. App. 2d 435, 319 P.2d 776, 781–82 (1957).

skill, expenditure of money, or labor or property right.²⁰³ When the misappropriation involves the taking of the intellectual property of another, such as a writing that is noncopyrightable, the issue is whether the tort, nevertheless, is preempted by the Copyright Act.

It may be noted that there is possibly one way that real-time data does not come within the scope of the copyright laws. *Nimmer on Copyright* states that if a work (e.g., a real-time data feed) is not permanently fixed in a tangible medium of expression, and, therefore, is not subject to the Copyright Act, unauthorized users of an agency's real-time data may be subject to suit in some states for the tort of misappropriation.²⁰⁴

In general, however, the tort of misappropriation of a non-copyrightable work is preempted unless the claim satisfies a possible exception for "hot news" that was recognized in 1918 by the U.S. Supreme Court in *International News Service v. Associated Press*.²⁰⁵ In World War I, reporters working for the International News Service (INS), a news organization that was a competitor of the Associated Press (AP), had been barred from the front line. Reporters for the INS obtained and distributed to newspapers on the West Coast articles written by the AP that were published in newspapers on the East Coast. The Supreme Court wrote that news of the day

is not the creation of the writer, but is a report of matters that ordinarily are *publici juris*; it is the history of the day. It is not to be supposed that the framers of the Constitution...intended to confer upon one who might happen to be the first to report a historic event the exclusive right for any period to spread the knowledge of it.²⁰⁶

Nevertheless, the Court held that in some circumstances noncopyrightable information could be protected by state law. The Court characterized the information that the INS obtained and used as hot news and recognized an exception for it. The Court's rationale for the exception was that the plaintiff had invested substantial resources to gather the news, and, if the defen-

dant were allowed to free-ride on the plaintiff's efforts, the defendant's free-riding would prevent the plaintiff from realizing the full value of its reporting of the news.²⁰⁷ That is, the defendant's free-riding would "deprive the plaintiff of sufficient incentive to gather the information and, in turn, deprive the public of access to that news."²⁰⁸ Accordingly, the Court held that INS had committed the tort of misappropriation. INS had taken the news acquired by the AP by virtue of its organization and "expenditure of labor, skill, and money which is salable by [the AP] for money."²⁰⁹ The Court enjoined INS from copying and reselling the AP's news bulletins.

Between the time of the Supreme Court's decision in *International News Service* and the passage of the Copyright Act, the "courts in fourteen states recognized the general tort of misappropriation as a matter of state law;" 36 states did not recognize the tort; and the courts in at least 2 states rejected such a tort.²¹⁰

Assuming a tort of misappropriation is recognized under state law, an issue for real-time data is whether a claim for misappropriation would be preempted by the Copyright Act. Although the issue appears to be unsettled at this juncture, the Second Circuit at least has recognized that there is a narrow exception for the equivalent of hot news for which the Copyright Act has not preempted a state tort claim for misappropriation.

In *National Basketball Association v. Motorola, Inc.*,²¹¹ the court used the "extra element" analysis to determine whether a state tort claim for misappropriation was preempted. The National Basketball Association (NBA) alleged claims, *inter alia*, against Motorola for unfair competition by misappropriation and for copyright infringement. The Second Circuit held that a "narrow 'hot news' exception does survive preemption" under the Copyright Act but that Motorola's use of information collected at NBA games did not "constitute a misappropriation of 'hot news' that is the property of the NBA."²¹²

At issue was Motorola's SportsTrak paging device that used information provided by its Sports Team Analysis and Tracking Systems (STATS). Data was supplied by "STATS reporters who watch...games on television or listen to them on the radio" and then enter the information into a personal computer that in turn relayed the information to the STATS host computer that compiled, analyzed, and formatted the data for transmission via common carrier and satellite ultimately to SportsTrax pagers.

The court noted that in 1976 Congress provided for copyright protection for simultaneously recorded broadcasts of live performances such as sports events but not

²⁰³ *Standard & Poor's Corp. Inc. v. Commodity Exchange, Inc.*, 683 F.2d 704, 710 (2d Cir. 1982); *Roy Export Co. Establishment of Vaduz, Liechtenstein v. Columbia Broad. Sys., Inc.*, 672 F.2d 1095, 1105 (2d Cir. 1982).

²⁰⁴ 1 NIMMER ON COPYRIGHT, *supra* note 19, § 2.02, at 2-20. The text states that a "work that is not 'fixed in a tangible medium of expression' is indisputably immune from federal preemption." *Id.* The authority also notes that California, for example, "now explicitly protects 'any original work of authorship that is not fixed in any tangible medium of expression....'" *Id.* § 2.02, at 2-23 (citing CAL. CIV. CODE § 980(a)(1)). Later, commenting on *Nat'l Basketball Ass'n v. Motorola*, 105 F.3d 841 (2d Cir. 1997), discussed in this section, *Nimmer* states "that misappropriation may remain alive today in the context of unfixed works." *Id.* § 3.04[B][3][b], at 3-34.23. Elsewhere the text states that "whether labeled 'common law copyright,' the 'misappropriation' variety of unfair competition, or by any other name, state laws protecting unfixed works are fully viable." *Id.* § 101[B][2][a], at 1-66.

²⁰⁵ 248 U.S. 215, 39 S. Ct. 68, 63 L. Ed. 211 (1918).

²⁰⁶ *Id.* at 234.

²⁰⁷ See Gary R. Roberts, *The Scope of the Exclusive Right to Control Dissemination of Real-Time Sports Event Information*, 15 STAN. L. & POL'Y REV. 167, 170 (2004).

²⁰⁸ *Id.*

²⁰⁹ *Int'l News Serv.*, 248 U.S. at 239.

²¹⁰ Roberts, *supra* note 207, at 170 (footnotes omitted).

²¹¹ 105 F.3d 841 (2d Cir. 1997).

²¹² *Id.* at 843.

for the underlying events.²¹³ Because the underlying events are not protected by the Copyright Act, the court held that “Motorola and STATS did not infringe NBA’s copyright because they reproduced only facts from the broadcasts, not the expression or description of the game that constitutes the broadcast.”²¹⁴ As the district court had stated, “the ‘defendants provide purely factual information which any patron of an NBA game could acquire from the arena without any involvement from the director, cameramen, or others who contribute to the originality of a broadcast.’”²¹⁵

In regard to whether the NBA had a claim for misappropriation, the court observed that under the Copyright Act

[A] state law claim is preempted when: (i) the state law claim seeks to vindicate “legal or equitable rights that are equivalent” to one of the bundle of exclusive rights already protected by copyright law under 17 U.S.C. § 106—styled the “general scope requirement”; and (ii) the particular work to which the state law claim is being applied falls within the type of works protected by the Copyright Act under Sections 102 and 103—styled the “subject matter requirement.”²¹⁶

The district court had applied what it referred to as a partial preemption doctrine and held that the NBA’s misappropriation claim was not preempted. The Second Circuit rejected the district court’s partial preemption doctrine, because it was not consistent with the Copyright Act. The appellate court held that when “the challenged copying or misappropriation relates in part to the copyrighted broadcasts of the games, the subject matter requirement is met as to both the broadcasts and the games.”²¹⁷ Under the Copyright Act, the NBA could not “assert claims both for infringement of its copyright in a broadcast and misappropriation of its rights in the underlying event.”²¹⁸

The court held that “Section 301 preemption bars state law misappropriation claims with respect to uncopyrightable as well as copyrightable elements,”²¹⁹ (emphasis supplied) because “Congress, in extending copyright protection only to the broadcasts and not to the underlying events, intended that the latter be in the public domain.”²²⁰ Although a narrow misappropriation claim survived the Copyright Act, the hot news exception was limited to cases in which

(i) a plaintiff generates or gathers information at a cost; (ii) the information is time-sensitive; (iii) a defendant’s use of the information constitutes free-riding on the plaintiff’s efforts; (iv) the defendant is in direct competition with a product or service offered by the plaintiffs; and (v) the ability of other parties to free-ride on the ef-

forts of the plaintiff or others would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened.²²¹

One of the above critical elements was missing to support the NBA’s claim of free-riding by Motorola: “Motorola and STATS expend their own resources to collect purely factual information generated in NBA games to transmit to Sports Trax pagers. They have their own network and assemble and transmit data themselves.”²²²

In the *National Basketball Association* case, the Second Circuit relied on the U.S. Supreme Court’s decision in *International News Service*. However, the First Circuit stated in *Columbia Broadcasting, Inc. v. De Costa*²²³ that in *Sears, Roebuck & Co. v. Stiffel Co.*²²⁴ and *Compco Corp. v. Day-Brite Lighting, Inc.*²²⁵ the Supreme Court overruled its decision in *International News Service*.²²⁶ The First Circuit stated that the Supreme Court, for example, in *Compro*, held “that when an article is unprotected by a patent or a copyright, state law may not forbid others to copy that article. To forbid copying would interfere with the federal policy...favoring free dissemination of intellectual creations...”²²⁷ (emphasis supplied). Thus, if Congress intended for data to be in the public domain, a remedy under state law attempting to protect the data from copying and use by others is preempted by the copyright laws.²²⁸ In contrast, the Second Circuit has stated that although the Supreme Court’s decision in *International News Service* is no longer authoritative, “its doctrine...has been adopted as the common law of a number of states...”²²⁹

More recently, in *Scranton Times, L.P. v. Wilkes-Barre Publishing Company*,²³⁰ in which the defendant had published obituaries copied from the plaintiffs’ newspapers and Web sites, a federal district court in Pennsylvania held that the plaintiffs’ tort claim for misappropriation was preempted by the Copyright Act because one of the extra elements identified in the *National Basketball Association* case was lacking.²³¹ Likewise, according to *Patry on Copyright*, a misappropriation claim under state law is preempted by the Copyright Act.²³² However, *Nimmer on Copyright* takes

²²¹ *Id.* at 845.

²²² *Id.* at 854.

²²³ 377 F.2d 315 (1st Cir. 1967).

²²⁴ 376 U.S. 225, 84 S. Ct. 784, 11 L. Ed. 2d 661 (1964).

²²⁵ 376 U.S. 234, 84 S. Ct. 779, 11 L. Ed. 2d 669 (1964).

²²⁶ *Columbia Broad. Sys., Inc.*, 377 F.2d at 318.

²²⁷ *Id.* at 319.

²²⁸ *See id.*

²²⁹ *McKevitt*, 339 F.3d 530, 534–53 (7th Cir.), (citing *Bd. of Trade v. Dow Jones & Co.*, 98 Ill. 2d 109, 456 N.E.2d 84, 88 (Ill. 1983)).

²³⁰ 2009 U.S. Dist. LEXIS 17278 (M.D. Pa. 2009).

²³¹ *Id.* at *12–13.

²³² PATRY, *supra* note 72, § 3:69, at 3-221–322 (citing *Feist Publ’ns, supra*, and *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 109 S. Ct. 971, 103 L. Ed. 2d 118 (1989)).

²¹³ *Id.*

²¹⁴ *Id.* at 847.

²¹⁵ *Id.* (citation omitted).

²¹⁶ *Id.* at 848 (footnote omitted).

²¹⁷ *Id.*

²¹⁸ *Id.* (citation omitted).

²¹⁹ *Id.* at 849.

²²⁰ *Id.*

a different view, particularly with respect to “unfixed” works.²³³

Assuming a state recognizes the tort of misappropriation, it is not clear whether a claim for misappropriation of a transit agency’s real-time data would be preempted by the Copyright Act. On the one hand, several of the elements in the *National Basketball Association* case appear to be satisfied. A transit agency collects the data at its own expense; the data are time-sensitive; any unauthorized persons using the data would be free-riding because they would not be expending their own resources to collect the data; and any data or software applications distributed or sold would be competing with the services offered by the transit agency. In sum, an unauthorized user selling an agency’s real-time data would be able “to produce a directly competitive product for less money because it has lower costs.”²³⁴

On the other hand, even if a transit agency were able to show that an unauthorized user is free-riding, the transit agency’s misappropriation claim still could be preempted. Since its decision in the *National Basketball Association* case, the Second Circuit has stated that “legal protection for the gathering of facts is available only when unauthorized copying of the facts gathered is likely to deter the plaintiff, or others similarly situated, from gathering and disseminating those facts.”²³⁵ A transit agency likely would have to demonstrate that free-riding reduces the transit agency’s incentive to provide real-time data to such an extent that its continued supply of real-time data “would be substantially threatened.”²³⁶ A putative free-rider could argue that

free-riding would not affect a transit agency’s decision to continue collecting and disseminating real-time data for the agency’s or its passengers’ benefit.

Second, a transit agency may need to show that a free-rider is competing unfairly in the transit agency’s “primary market.”²³⁷ A free-rider could argue that it is not unfairly competing in an agency’s primary market because a transit agency’s primary market is providing transit services, not providing or selling real-time data.

Guidance Number 10

In some cases under state law there may be a tort for misappropriation of noncopyrightable data, i.e., a claim not preempted by the Copyright Act. Because a transit agency collects data at its own expense, data that is time sensitive, unauthorized persons taking and using an agency’s data would be free-riding and competing unfairly with and at lower costs than the agency. What could be determinative is whether a transit agency’s decision to continue collecting real-time data is substantially threatened by the free-rider’s actions, as well as whether the free-rider is competing unfairly with the transit agency in its primary market.

IV. WHETHER A TRANSIT AGENCY HAS PROPRIETARY RIGHTS IN REAL-TIME DATA

Assuming that real-time data are not copyrightable but that a transit agency, public or private, is collecting the data to disseminate on its own Web site or to a party of its choosing, another issue is whether the transit agency has a protectable, proprietary interest in its real-time data. Presumably, only a transit agency or its authorized representative would have the necessary access to transit operations for the collection and dissemination of real-time data. According to one authority, “a person having no trust or other relationship with the proprietor of a computerized database should not be immunized from sanctions against electronically or cryptographically breaking the proprietor’s security arrangements and accessing the proprietor’s data.”²³⁸

It appears that a transit agency has a property interest in its data until such time that the agency releases its information into the public domain.²³⁹ In *Morris Communications Corporation v. PGA Tour, Inc.*,²⁴⁰ the issue was whether the PGA Tour, Inc. (PGA Tour) could condition access to its tournaments on the defendant Morris Communications Corp.’s (Morris) agreement not to syndicate real-time golf scores obtained from an on-site media center. The PGA Tour developed a system, known as the Real-Time Scoring System

²³³ *Firoozye v. Earthlink Network*, 153 F. Supp. 2d 1115, 1126–27 (N.D. Cal. 2001) (stating that “[w]here a plaintiff’s breach of contract claim only asserts that a defendant violated a promise not to use a certain work, that breach of contract claim is preempted,” but holding that “[a] promise to pay for a work constitutes an extra element such that a breach of contract claim is not preempted by section 301”); *Wolff v. Inst. of Elec. & Elecs. Engrs, Inc.*, 768 F. Supp. 66, 69 (S.D.N.Y. 1991) (contract claim preempted). See, however, *Huckshold v. HSSL, LLC*, 344 F. Supp. 2d 1203 (E.D. Mo. 2004) (contract claim not preempted); *Telecom Tech. Servs. Inc. v. Rolm Co.*, 388 F.3d 820, 829–30 (11th Cir. 2004) (contract claim not preempted); *Lipscher v. LRP Publ’ns, Inc.*, 266 F.3d 1305, 1318 (11th Cir. 2001) (no preemption of contract claim); *Nat’l Car Rental Sys., Inc. v. Computer Assocs. Int’l, Inc.*, 991 F.2d 426, 431 (8th Cir. 1993) (restrictions on use may constitute an additional element making a breach of contract not equivalent to a copyright action); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1454 (7th Cir. 1996) (holding that a claim for breach of contract was not equivalent to the exclusive rights protected by the Copyright Act); *Taquino v. Teledyne Monarch Rubber*, 893 F.2d 1488, 1501 (5th Cir. 1990) (holding that because a breach of contract action involves a promise that is in addition to the mere reproduction, distribution, or display of a work, the contract claim was not preempted by Section 301 of the Copyright Act).

²³⁴ *Nat’l Basketball Ass’n*, 105 F.3d at 854.

²³⁵ *McKevitt v. Pallasch*, 339 F.3d at 534–35.

²³⁶ See *Nat’l Basketball Ass’n*, 105 F.3d at 847 (citations omitted).

²³⁷ Restatement (Third) of Unfair Competition, § 38 cmt. c, at 412–13 (stating that “[a]ppeals to the misappropriation doctrine are almost always rejected when the appropriation does not intrude upon the plaintiff’s primary market”).

²³⁸ 1 NIMMER ON COPYRIGHT, *supra* note 19, § 101[B][2][b], at 1-69–1-70 (citation omitted).

²³⁹ See *Roberts*, *supra* note 207, at 185.

²⁴⁰ 235 F. Supp. 2d 1269 (M.D. Fla. 2002).

(RTSS), for collecting the players' scores at its golf tournaments in a manner so as not to disturb the players by the use of volunteer workers or "hole reporters" following groups of golfers. The hole reporters relayed the scores to a remote production truck with staff employed by the PGA Tour that relayed the information ultimately to the Tour's Web site.²⁴¹

Morris wanted to obtain the data in real time and sell it to media outlets. The case "present[ed] a novel and compelling question of who has the 'right' to report the news, produced and gathered by others, in an age of near-instantaneous information."²⁴² Although involving golf, the collection and dissemination of scores at a tournament where players are playing 18 holes simultaneously is relevant to the question of a transit agency's proprietary interest in its real-time data. In the *Morris Communications Corporation* case, the dispute concerned the online publication of real-time golf scores, "scores that are transmitted electronically nearly contemporaneously to their actual occurrence on the golf course."²⁴³ RTSS permitted Internet users to follow the play of golfers "on a hole-by-hole basis."²⁴⁴

Morris was unable to implement its own system because the PGA Tour's rules prohibited "unauthorized use of wireless communication devices on the golf course at its tournaments."²⁴⁵ In addition, the PGA Tour had Online Service Regulations (OLSR), whereby the PGA Tour made the scores immediately available only to the Tour's "credentialed media invitees."²⁴⁶ The PGA Tour's amended OLSR provided, for example, that "no scoring information may be used by, sold, given, distributed or otherwise transferred to, any party other than the Credentialed Site in any manner whatsoever, without the prior written consent of the PGA Tour."²⁴⁷ The PGA Tour would not grant media credentials to Morris unless the latter agreed to use scores obtained from the on-site media center only in publications within the Morris Communications Group.²⁴⁸

The federal district court and the Eleventh Circuit both agreed that the case did not involve the copyright laws, because golf scores are noncopyrightable facts.²⁴⁹ Both courts also agreed with the PGA Tour that it had "a property right in RTSS and that its regulations...constitute[d] a reasonable safeguard against would-be free riders seeking to unfairly capitalize on its product."²⁵⁰ The district court held, first, that the PGA

Tour had "a property right in the scores compiled by the use of RTSS, but that [the] property right vanishes when the scores are in the public domain."²⁵¹ Second, the district court held that "the PGA Tour controls the right of access to that information and can place restrictions on those attending the private event, giving the PGA Tour a property right that the Court will protect."²⁵² Third, "the PGA Tour has the right to license or sell broadcasting rights of its products over the Internet."²⁵³ The district court distinguished the *National Basketball Association* case on several grounds, including the ground that Motorola used information that was in the public domain, because the information had been broadcast already on television or radio.²⁵⁴ Also, in the *National Basketball Association* case, there was no free-riding, because "once in the public domain, Motorola 'expended their own resources to collect purely factual information generated in NBA games.'"²⁵⁵

In affirming the district court, the Eleventh Circuit held that "[t]he compiled real-time golf scores acquired through RTSS are not a product that Morris has a right to sell because they are a derivative product of RTSS, which PGA owns exclusively."²⁵⁶ Furthermore, the PGA had "agreed to sell its product to Morris, and [had] acted appropriately to protect its economic interests and investments," but Morris was demanding access to the Tour's proprietary RTSS without compensating the PGA Tour for data that Morris wanted to acquire and sell to others, a "classic example of 'free-riding....'"²⁵⁷

According to one source, government agencies are protecting their noncopyrightable data by "using copy-right-like controls to limit access to and use of public databases and other information developed under federal programs or using federal funds," such as by licensing agreements, royalties for the use of data, restrictions on the re-disclosure of information, limitations on who may be qualified recipients, and denial of access to digital versions of publicly available information.²⁵⁸ Another way to exercise control is through pricing.²⁵⁹

A transit agency may use its Web site to make real-time data available but include a terms-of-use agreement that a user must accept so as to restrict the further use, copying, or dissemination of the data. In *Scranton Times, supra*, the court held that the defendant violated "certain Terms of Use when accessing Plaintiffs' website" and that the plaintiff's breach of contract claim was not preempted by the Copyright Act.²⁶⁰

²⁴¹ *Morris*, 235 F. Supp. 2d at 1273.

²⁴² *Id.* at 1272.

²⁴³ *Id.* at 1273.

²⁴⁴ *Id.*

²⁴⁵ *Id.* at 1273–74.

²⁴⁶ *Id.* at 1274.

²⁴⁷ *Id.* at 1275 (citation omitted).

²⁴⁸ *Id.*

²⁴⁹ Morris's claims were for 1) monopolization of the Internet markets, 2) unlawful refusal to deal, 3) monopoly leveraging, and 4) attempted monopolization of the Internet markets. *Id.* at 1278.

²⁵⁰ *Id.* at 1275.

²⁵¹ *Id.* at 1281.

²⁵² *Id.*

²⁵³ *Id.* at 1283.

²⁵⁴ *Id.* at 1279.

²⁵⁵ *Id.* (citation omitted).

²⁵⁶ *Id.* at 1296 (footnote omitted).

²⁵⁷ *Id.* at 1298.

²⁵⁸ Gellman, *supra* note 8, at 1004–05 (footnotes omitted).

²⁵⁹ *Id.* at 1047–48.

²⁶⁰ 2009 U.S. Dist. LEXIS 17278 at *19 (citation omitted).

However, transit agencies may choose to make information available with little restriction and without charging for it. The Bay Area Rapid Transit's (BART) response to the survey was that BART "share[s] real-time data in an XML feed format (<http://www.bart.gov/dev/eta/barteta.xml>) along with documentation (<http://www.bart.gov/schedules/developers/etas.aspx>)." BART's response stated also that "[s]ince BART has been sharing data with others for so long...it always seemed antithetical to begin charging for it." With respect to developers wanting to use BART's data, BART's Web site states:

Developers please note: If you want more than just ETAs, check out The Real BART API. It has service advisories, complete BART trip plans, station information and more.

For quick and easy real-time ETAs, use our simple-to-parse XML feed and crank out your killer app with the same real-time data we use on the BART website, hot off the griddle from BART Central. Here's what you need to know:

Getting a validation key

Psyche: you don't need one. We're opting for "open" without a lot of strings attached. Just follow our simple License Agreement, give our customers good information and don't hog resources. If that doesn't work for you, we can manage usage with keys and write more terms and conditions. But who wants that?

Keep your work up to date

This feed is a work in progress. When we change something, we'll try to give you plenty of notice through the RSS feed and the opt-in email list and the BART Developers Google Group.

Don't use the BART logo

Only we get to use official BART trademarks and copyrighted works to let customers know when they're getting info directly from BART versus someplace else.

Don't forget about us

Give us a shout out or a link back in your app, then drop us a line to make a suggestion for the App Center.

About the Feed

The BART Real Time ETA Feed is an XML data file with a root element that encompasses elements holding the station name, the station abbreviation, the date and time and a series of ETA elements. Each ETA element contains a destination and an estimate showing up to the next three trains arriving at the specified station with the Given destination. The file is updated every 60 seconds.²⁶¹

BART's response to the survey stated also that open data initiatives have allowed BART to reach more customers in more places than otherwise would be possible:

There are dozens of mobile apps, free and fee, for Android, BlackBerry, iPhone, J2ME, and other mobile platforms (see <http://bart.gov/apps>). In fact, there is literally

competition among developers over who can serve BART customers "best" on these platforms (e.g. there are four BART apps on iPhone alone). This sort of competition is extremely beneficial for customers.

There are BART apps for Facebook and Twitter (see <http://bart.gov/apps>), which supplement BART's existing presence in these social channels.

There are BART real-time ETA displays in cafes, buildings, and shopping malls that use our open-data services (See <http://bart.gov/display>). BART did not fund the capital, maintenance, or operation costs for these displays, which essentially advertise BART services for free.

In sum, based on the *National Basketball Association* and *Morris* cases, as well as the *NYMEX* case, it does not appear that real-time data are copyrightable, because, *inter alia*, facts such as real-time data are not subject to copyright protection. Nevertheless, real-time data come within the subject matter of copyright, meaning that causes of action that otherwise could be used to protect real-time data may be preempted. Second, however, as between private parties, a contract or license may restrict access to or the use of the real-time data until it becomes part of the public domain. Furthermore, the weight of authority appears to be that a transit agency may protect its real-time data by contract and that Section 301 of the Copyright Act does not preempt a state court's enforcement of such a private right or restriction on access to or use of the data. In addition to contracts, such as licenses and terms-of-use agreements, even if real-time data are not copyrightable, there may be copyright-like controls to limit access to and use of real-time data. As discussed in Section VII, *infra*, however, a government-owned transit agency may be required to produce its data in response to a FOIA or FOIL request. Finally, however, some transit agencies may choose to make real-time data available with little restriction and without charge.

Guidance Number 11

Based on current case law, as long as real-time data have not entered the public domain, a transit agency has a proprietary interest in its data. A transit agency has the right to license or sell its real-time data. A transit agency's restriction of access to and use of its real-time data is a reasonable safeguard against would be free-riders or other unauthorized users. Access to real-time data, for example, via a Web site, may be restricted by a transit agency's terms-of-use agreement for its Web site.

V. CONTRACTUAL ISSUES AND THE PROTECTION OF REAL-TIME DATA

A. Use of Contracts, Licenses, and End-User Agreements

A transit agency may impose restrictions on access to and the use and dissemination of its data by a terms-of-use, end-user license or other agreement. In responding to the survey, several transit agencies reported that

²⁶¹ Available at <http://www.bart.gov/schedules/developers/etas.aspx>, last accessed on May 6, 2010.

they would rely on contractual provisions to protect real-time data. Indeed, a “contract is the chief, and sometimes the only, means of the protection” of such data.²⁶² It may be noted that the license agreement, for example, used by the Regional Transportation District, Denver, Colorado, contains a provision referring to copyright. Paragraph 9 states,

The Data and all content of this website is the property of RTD or its content suppliers, and is protected by United States and international copyright laws. The compilation of the Data on this website is the exclusive property of RTD, and is likewise protected by US and international copyright laws.²⁶³

It appears that Google relies on licensing restrictions, not copyright, as its primary means of controlling the use of information.²⁶⁴

A licensing agreement may prohibit a licensee—user from extracting data for uses other than those intended by the transit agency, such as making the data available to third parties or using the data in a manner sanctioned by a transit agency. Nevertheless, as discussed in subsection B, *infra*, there may be an issue whether a provision in a licensing agreement seeking to protect real-time data, even if noncopyrightable, from unauthorized copying and use is preempted by the copyright laws.

In addition to the example of the PGA Tour’s use of an agreement in *Morris Communications Corporation v. PGA Tour, Inc.*,²⁶⁵ an example of an entity taking measures to protect its real-time data is the stock market exchange known as the Nasdaq.²⁶⁶ Nasdaq Stock Market, Inc.’s, up-to-date quotations and information on stock trades “are packaged by Nasdaq into a broadcast

²⁶² Wolfson, *supra* note 7, at 84.

²⁶³ Available at: http://www.rtd-denver.com/License_Agreement/License_Agreement.pdf, last accessed on June 30, 2010. Paragraph 4 in the license agreement provides that “RTD trademarks and copyrighted materials, including any confusingly similar variants, may not be used in association with [the] Data.” For links to other license agreements used by transit agencies, see Google Transit, “Public Feeds, List of Publicly Accessible Transit Data Feeds,” available at: <http://code.google.com/p/googletransitdatafeed/wiki/PublicFeeds>, last accessed on June 30, 2010.

²⁶⁴ The copyrights Google holds in relation to Google Maps consist of the images, the symbols and legends used, and other works of authorship related to their mapping service. Although Google has a copyright in its photos and maps, Google, Inc., apparently has registered only two copyrights with the Copyright Office. One of the copyrights is for a documentary movie Google produced on polio eradication, and the other is a software program named InCircle.

²⁶⁵ 235 F. Supp. 2d 1269, 1327 (M.D. Fla. 2002), *aff’d*, 364 F.3d 1288 (11th Cir. 2004) (stating that access was conditioned on the PGA Tour’s agreement that required that real-time scores obtained in the media center would not be syndicated).

²⁶⁶ Another example is Dun & Bradstreet, “which prohibits redissemination of its reports. D&B is able to protect the privacy of the subjects of its reports by strict contractual prohibitions that undoubtedly ‘abrogate or restrict’ fair use rights.” Wolfson, *supra* note 7, at 92.

data feed called the Level 1/Last Sale feed” for which “[m]arket professionals...pay \$20.00 per month for unlimited access to real-time (less than fifteen-minute delayed) data. Non-professionals are charged just \$4.00 per month for the same information. Professional and non-professional users who can wait fifteen minutes or more for the information receive it free of charge.”²⁶⁷

According to one authority, “the Nasdaq Subscriber Agreement generally prohibits retransmission of the real-time data.”²⁶⁸

Nasdaq does permit numerous entities to freely redisseminate its data, but it does so under a different contractual structure—a vendor agreement. Under this agreement, a vendor is given the authority to redisseminate data, as long as it agrees to obtain the Subscriber Agreement from its customers, and report and bill the number of customers it services to Nasdaq. In this way, Nasdaq is able to facilitate broad dissemination of its real-time data worldwide while guarding its vital revenue stream.²⁶⁹

As noted, several agencies responding to the survey stated that they would rely primarily on their contracts to protect real-time data. An example of a contractual clause protecting a transit agency’s real-time data is the one appearing in the August 2009 agreement between the San Francisco Municipal Transportation Agency (SFMTA) and NextBus:

1.33. Ownership of Data. The City recognizes that the AVLS and related software provided by Contractor under the AVLS Contract are proprietary systems to which the City’s interest is limited to the license provisions set out in this Maintenance Agreement and in the AVLS Contract. *Notwithstanding any understandings or agreements created prior to this Maintenance Agreement to the contrary, however, all data generated, transmitted, distributed, manipulated, compiled, stored, archived, or reported by the AVLS concerning SFMTA vehicles and operations, including but not limited to data concerning vehicle location, predicted arrival times, route and stop configuration and historic AVLS data is the property of the SFMTA without reservation of rights or other restriction of any kind.* AVLS data concerning the location of SFMTA vehicles in real time and predicted arrival times are records that the City may make available to the public through passenger information display signs, data feeds (including but not limited to XML data feeds), internet web pages and weblinks, information kiosks, public information systems, PDA and cell phone applications, electronic messaging, and other technologies that may be utilized to inform persons wishing to access, process, or archive information concerning public transit in San Francisco. Contractor may retain and use copies of SFMTA AVLS data for reference and as documentation of its experience and capabilities.²⁷⁰ (emphasis supplied)

²⁶⁷ Wolfson, *supra* note 7, at 89.

²⁶⁸ *Id.* (footnote omitted) (*citing* The Nasdaq Stock Market, Inc., Consolidated Subscriber Agreement).

²⁶⁹ *Id.* at 90 (footnote omitted) (*citing* The Nasdaq Stock Market, Inc., Vendor Agreement for Level 1 Service and Last Sale Service (on file with the author)).

²⁷⁰ Available at <http://sfappeal.com/news/2009/08/mike-smith-of-next-bus-said.php>, last accessed on Jan. 5, 2010.

BART stated in its response to the survey that its “license agreement is very straightforward.”

Developer License Agreement

The San Francisco Bay Area Rapid Transit District (BART) hereby grants you (Licensee) non-exclusive, limited and revocable rights to use, reproduce, and redistribute BART Data (Data) subject to the following Terms:

- BART trademarks and copyrighted materials, including any confusingly similar variants, may not be used in association with Data.
- Data is provided on an “as is” and “as available” basis. BART makes no representations or warranties of any kind, express or implied. BART disclaims all warranties, express or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose. BART and its employees, officers, directors and agents will not be liable for damages of any kind arising from the use of Data including but not limited to direct, indirect, incidental, punitive and consequential damages.
- BART reserves the right to alter and/or no longer provide Data at any time without prior notice.
- BART maintains title, ownership, rights and interest in and to Data.

By using BART Data, you agree to be bound by all of the Terms and Conditions set forth in this agreement.²⁷¹

The Maryland Transit Administration stated that “[r]ights in technical data are covered by our standard Special Conditions language, included in contract solicitation packages.”

SGP -7.04 Rights in Technical Data

A. Technical data means any and all information of a scientific or technical nature, regardless of form or characteristics, to be furnished by the Contractor pursuant to this contract. It includes, but is not limited to, documentation of research, experimental, development or engineering work plus the information used to define a design or process or to procure, produce, support, maintain or operate the goods, supplies, systems, and equipment furnished hereunder. Examples of technical data include research and engineering data, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identification and related information.

B. The Administration, its employees and its consultants, shall have the unlimited right to use, duplicate and disclose, in whole or in part and without charge, all technical data, in any manner and for any purpose when, in the opinion of the Administrator, such use is required by the Administration in the installation, operation, modification, maintenance, repair, replacement, overhaul and training in respect to the Baltimore Region Rapid Transit System.

C. Nothing herein shall be construed as modifying or abridging the obligations of the Administration in respect to the provisions of the Public Information Act, Section 10-611 *et seq.* of the State Government Article of the An-

notated Code of Maryland. To assist the Administration the Contractor, if he wishes, shall, as hereinafter described in Article E below, clearly identify each portion of the technical data it considers a “trade secret” to which the public shall be denied inspection. Contractor acknowledges that such classifications are advisory only.

D. The following categories of technical data shall not be construed or stamped or otherwise identified as “trade secrets”:

1. Technical data prepared or required to be delivered under this contract and any subcontracts hereunder for the purpose of identifying sources, part numbers, size, configurations, mating, attachment characteristics, functions characteristics and performance requirements.
2. Manual or instructional materials prepared or required to be delivered under this contract and any subcontracts hereunder, for installation, operation, maintenance, repair, replacement, overhaul and training purposes.

Finally, as will be discussed in the next part, when there are FOIA or FOIL requests in New York and South Carolina, but not in California or Florida, a public authority may require an individual or entity requesting access to public data to sign an appropriate agreement restricting the requester’s dissemination or other use of the data.

Guidance Number 12

The authorities seem to be in agreement that a transit agency may restrict access to and the copying or dissemination of its real-time data by a terms-of-use, end-user license or other agreement. Possibly other forms of copyright-like controls noted above could be used as well. However, a preemption issue could arise with any agreement or control seeking to protect non-copyrightable data as though the data were protected by the copyright laws.

B. Whether Copyright Law Preempts Provisions of Licenses or Other Agreements Seeking to Protect Noncopyrightable Data

There is an issue as to whether a contract or license may protect data that are not copyrightable under the copyright law and, thus, whether a restriction imposed by a license or other agreement may be preempted by the Copyright Act.²⁷² Federal policy favors the free dissemination of facts and ideas. Thus, there is an argument that the copyright laws preempt restrictive provisions in contracts, which otherwise are enforceable under state law, to the extent that they attempt to keep information out of the public domain that Congress intended to be available to the public. Under 17 U.S.C. § 301, a state may not create rights that are equivalent to any exclusive rights provided under the Copyright Act.

One writer maintains that “interpretations of the appropriate scope of a copyright license or of the suffi-

²⁷¹ Available at <http://bart.gov/dev/schedules/license.htm>, last accessed on May 6, 2010.

²⁷² Deborah Tussey, *UCITA, Copyright, and Capture*, 21 CARDOZO ARTS & ENT. L.J. 319, 340 (2003). See Copyright Act § 301.

ciency of a written transfer of an exclusive license are deemed matters of federal copyright law, not state contract law.²⁷³ The commentator argues that “Supremacy Clause preemption would occur [when] contract terms undermine the objectives of federal copyright law.”²⁷⁴ Although some courts have refused to enforce contracts that provide copyright-like protection to facts or unoriginal databases in the belief that the Copyright Act preempts such contracts, the majority view appears to be that such contractual clauses are not preempted and are enforceable.²⁷⁵

As the 11th Circuit has observed, “courts generally read preemption clauses to leave private contracts unaffected.”²⁷⁶ The basis of the apparent majority rule is that “[a] copyright is a right against the world,” whereas “[c]ontracts...generally affect only their parties” and do not “create ‘exclusive rights.’”²⁷⁷ For example, in *ProCD, Inc. v. Zeidenberg*,²⁷⁸ a customer purchased the plaintiff’s CD-ROM in which ProCD had compiled information from more than 3,000 telephone directories into a computer database and proceeded to resell it. The court held that the contract or license at issue that limited the use of the program to noncommercial purposes was enforceable. The contract or license, which the court did not seek to distinguish, was not unenforceable on the theory that Section 301(a) of the Copyright Act had preempted the parties’ ability to restrict the dissemination of facts that Congress had decided should be in the public domain. The court explained that

[O]ne function of § 301(a) is to prevent states from giving special protection to works of authorship that Congress has decided should be in the public domain, which it can accomplish only if “subject matter of copyright” includes all works of a type covered by sections 102 and 103, even if federal law does not afford protection to them.²⁷⁹

However, the court held that, unlike the copyright laws, a contract usually only affects the rights of parties to the contract and does not involve exclusive rights within the meaning of the Copyright Act.²⁸⁰ “[c]ontracts...generally affect only their parties; strangers may do as they please, so contracts do not create ‘exclusive rights.’”²⁸¹

It may be noted that the Second Circuit in the *National Basketball Association* case, stated that “the misappropriation claims [were] preempted” but that “the

²⁷³ *Id.* at 334–35 (footnote omitted).

²⁷⁴ *Id.* at 339 n.111 (citation omitted).

²⁷⁵ See *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

²⁷⁶ *Lipscher, Inc.*, 266 F.3d at 1318.

²⁷⁷ *Huckshold*, 344 F. Supp. 2d at 1207.

²⁷⁸ 86 F.3d 1447 (7th Cir. 1996).

²⁷⁹ *Id.* at 1453 (citation omitted).

²⁸⁰ *Id.* at 1454 (citing *Nat’l Car Rental Sys., Inc. v. Computer Assocs. Int’l, Inc.*, 991 F.2d 426, 433 (8th Cir. 1993); *Taquino v. Teledyne Monarch Rubber*, 893 F.2d 1488, 1501 (5th Cir. 1990); *Acorn Structures, Inc. v. Swantz*, 846 F.2d 923, 926 (4th Cir. 1988)).

²⁸¹ *Id.*

contract right claims were not preempted because the general scope requirement was not met.”²⁸²

Guidance Number 13

Although real-time data as such are not copyrightable, the majority view seems to be that a license or other agreement with provisions restricting access to or use or dissemination of data are not preempted by the Copyright Act. The rationale is that contracts affect the rights of the parties to the contract and do not involve exclusive rights against the world as exist under the copyright laws.

C. Transit Agencies’ Survey Responses Regarding Laws and Contractual Issues

1. Laws Applicable to Contracts and Real-Time Data

The survey of transit agencies for the digest sought to identify any laws and contractual issues of which they were aware that are pertinent to transit agencies’ agreements for the collection or sharing of real-time data. Twenty-seven transit agencies responding to the survey stated that they did not know, or were unaware, of any applicable laws or stated that the question was inapplicable. Three agencies responded that any issues would be covered by the agency’s contract.²⁸³

One agency responded that “[t]o the best for our knowledge, the only such regulations are federal in na-

²⁸² *Nat’l Basketball Ass’n*, 105 F.3d at 850. *Firoozye v. Earthlink Network*, 153 F. Supp. 2d 1115, 1126–27 (N.D. Cal. 2001) (stating that “[w]here a plaintiff’s breach of contract claim only asserts that a defendant violated a promise not to use a certain work, that breach of contract claim is preempted,” but holding that “[a] promise to pay for a work constitutes an extra element such that a breach of contract claim is not preempted by section 301”); *Wolff v. Inst. of Elec. & Elecs. Engrs, Inc.*, 768 F. Supp. 66, 69 (S.D.N.Y. 1991) (contract claim preempted). See, however, *Huckshold v. HSSL, LLC*, 344 F. Supp. 2d 1203 (E.D. Mo. 2004) (contract claim not preempted); *Telecom Tech. Servs. Inc. v. Rolm Co.*, 388 F.3d 820, 829–30 (11th Cir. 2004) (contract claim not preempted); *Lipscher v. LRP Publ’ns, Inc.*, 266 F.3d 1305, 1318 (11th Cir. 2001) (no preemption of contract claim); *Nat’l Car Rental Sys., Inc. v. Computer Assocs. Int’l, Inc.*, 991 F.2d 426, 431 (8th Cir. 1993) (restrictions on use may constitute an additional element making a breach of contract not equivalent to a copyright action); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1454 (7th Cir. 1996) (holding that a claim for breach of contract was not equivalent to the exclusive rights protected by the Copyright Act); *Taquino v. Teledyne Monarch Rubber*, 893 F.2d 1488, 1501 (5th Cir. 1990) (holding that because a breach of contract action involves a promise that is in addition to the mere reproduction, distribution, or display of a work, the contract claim was not preempted by § 301 of the Copyright Act).

²⁸³ One agency responded that it “normally requires each contract to contain provisions that give it rights to contract data.” BART’s response was that it “address[ed] rights and ownership in our form of agreement.” Likewise, the Maryland Transit Authority replied that “[r]ights in technical data are covered by our standard Special Conditions language[] included in contract solicitation packages.”

ture. They can be found in FTA Circular 4220.1f and the FTA Master Grant Agreement.” The referenced Federal Transit Administration (FTA) Circular, *Third Party Contracting Guidance*, “provides contracting guidance for the recipient of financial assistance awarded by the [FTA] when using those funds to finance their procurements (third-party contracts).”²⁸⁴ The Circular includes provisions regarding FTA’s rights in data. For example, “when FTA provides Federal assistance to support the costs of a research, development, demonstration, or a special studies project, FTA generally seeks sufficient rights in the data developed so that the resulting data can be made available to any FTA recipient, subrecipient, third-party contractor, or third-party subcontractor.”²⁸⁵ (One transit agency (AC Transit) stated that funds from a federal grant paid for the initial cost of its AVL system.) Although the Circular seems relevant to a development project involving the collection of real-time data, it does not seem particularly relevant to the collection of real-time data after a system is implemented.

Another agency cited the New York Public Authorities Law 1265-A that governs acquisitions that do not involve the acquisition of real property. The statute applies, *inter alia*, to “all purchase contracts for supplies, materials or equipment involving an estimated expenditure in excess of fifteen thousand dollars and all contracts for public work involving an estimated expenditure in excess of twenty-five thousand dollars.”²⁸⁶ The law provides that contracts “shall be awarded by the authority to the lowest responsible bidder after obtaining sealed bids in the manner hereinafter set forth.”²⁸⁷ As the law provides, contracts may be let without competitive bidding in the event of an emergency, as defined in the statute,²⁸⁸ or when “the authority wishes to experiment with or test a product or technology or new source for such product or technology or evaluate the service or reliability of such product or technology....”²⁸⁹ The referenced statute does not appear to be relevant to legal arrangements for the use and control of real-time data.

Finally, the Washington Metropolitan Area Transit Authority (WMATA) advised that it “is not subject to any local acquisition laws and regulations on this matter.”

²⁸⁴ U.S. Dep’t of Transp., Fed. Transit Admin., FTA Circular 4220.1f, *Third Party Contracting Guidance* (Nov. 1, 2008, rev. Apr. 14, 2009), available at http://www.fta.dot.gov/laws/circulars/leg_reg_8641.html, last accessed on Jan. 3, 2010. The revised Circular “incorporates the new procurement provisions of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and includes the most current available guidance for the Federal public transportation program as of the date of publication.” *Id.*

²⁸⁵ *Id.* ¶ 2(i)(2).

²⁸⁶ N.Y. PUB. AUTH. L. § 1265-a(2)(a) (2009).

²⁸⁷ *Id.*

²⁸⁸ *Id.* § 1265-a(4)(a) (2009).

²⁸⁹ *Id.* § 1265-a(4)(a) (2009).

2. Contractual Issues Regarding the Sharing of Real-Time Data

Transit agencies were asked to identify any contractual issues that the agencies had considered to maximize revenue from real-time data or to restrict the further dissemination of the data.

One agency said that it had a contract to provide a live feed to Google Transit.²⁹⁰ Another agency stated that it had an information-sharing agreement with its transit partners, which it identified as FTA subrecipients. The Maryland Transit Administration responded that “[t]his has only come up in relation to static schedule data, not real-time data. We recently executed a no-cost licensing agreement with Google Transit for schedule data and itinerary planning.”

BART’s response was that

[S]ince BART has been sharing data with others for so long...it always seemed antithetical to begin charging for it. Our license agreement is very straightforward (<http://bart.gov/dev/schedules/license.htm>).

We’ve closely watched other transit agencies attempt to monetize schedule and real-time data for years. Like every other public agency, we’re always interested in developing viable revenue streams.

But we’ve never seen a transit data revenue model that can scale well, generate enough revenue to offset administration and legal costs, and not stir up a negative public backlash against the agency (an often overlooked factor in the cost-benefit analysis). At some point, agencies must weigh the benefits of serving customers, and the public’s expectation of transparency, against the hopes for a big revenue stream that has yet to materialize.

Twenty-seven agencies responded that they were unable to identify any contractual issues.

3. Transit Agencies’ Other Actions for Protecting Real-Time Data

Transit agencies were asked to identify other steps they take to protect their rights to the information they collect. Of the 34 agencies responding that they are collecting real-time data, 24 did not identify any steps or actions that they are taking to protect their data. Some agencies responded that they would rely on their procurement laws; that they would stipulate in any agreement for sharing real-time data that the agency retained ownership of the data; that they would use data-encryption and limit access to data only to authorized personnel; or that they would make information available only through the agency’s Web site.

The Long Island Rail Road’s (LIRR) response was that

[I]nformation extracted from our operational systems, such as TIMACS, is stored in the LIRR Data Warehouse (DW). DW is a collection of non-volatile subject oriented, time-variant, integrated data, stored and maintained for

²⁹⁰ A copy of license agreements being used by transit agencies may be obtained at Google Transit Data Feed, <http://code.google.com/p/googletransitdatafeed/wiki/PublicFeeds>, last accessed June 30, 2010.

decision support efforts. It is a centralized database containing data from various existing operational systems, providing the ability to combine data from two or more systems and to access such data by way of common fields. The DW is a query only database—no updates can be applied directly to it. To protect its right to the information collected, the LIRR has created the Data Distribution Policy.

WMATA stated that it

has a draft data sensitivity policy that is currently under approval review. The policy provides explicit classification of information (data) and intended audience. It identifies certain types of documents as public, internal use only, proprietary, or confidential. Unless specifically designated for public consumption, all Metro information is to remain at Metro unless it is intentionally provided by an appropriate management authority or data owner to a requesting party.

As for whether any outside developers have requested or required any limitations on the disclosure of data to anyone beyond the agency's or developer's control or supervision, 34 agencies responded that no such requests had been made of them. The Maryland Transit Administration stated that "[t]he developers of our real-time systems require [the] execution of licensing agreements that limit use beyond MTA business purposes. Generally this applies to software, but not necessarily the data." BART stated that it "does not outsource the collection of real-time data, so 'rights' are not in dispute as with other agencies using third-party technology for this task."

Guidance Number 14

Transit agencies' responses to the survey indicated that they would rely mostly on their contracts and possibly use some copyright-like controls, such as data encryption, to protect real-time data. No transit agency suggested that it would attempt to copyright real-time data as a compilation or database.

VI. PROTECTION OF REAL-TIME DATA UNDER OTHER FEDERAL AND STATE LAWS

A. Electronic Communications Privacy Act

The Electronic Communications Privacy Act (ECPA), although a criminal statute, creates a cause of action for damages and other relief against electronic trespassers or "computer hackers."²⁹¹ If an unauthorized party gains access to a transit agency's real-time data "by intercepting an electronic communication or accessing information stored about such communication," the unauthorized interception may violate the ECPA.²⁹² Title

²⁹¹ *Sherman & Co. v. Salton Maxim Housewares, Inc.*, 94 F. Supp. 2d 817, 820 (2000) (quoting *State Wide Photocopy Corp. v. Tokai Financial, Inc.*, 909 F. Supp. 137, 145 (S.D.N.Y. 1995)).

²⁹² Lars Smith, *supra* note 22, at 751; see Electronic Communications Privacy Act of 1986, Pub. L. No. 99-508, 101-303,

I of the ECPA amended the Federal Wiretap Act so that it is applicable to the interception of electronic communications,²⁹³ whereas Title II of the ECPA created the Stored Communications Act (SCA) to cover unauthorized access to stored communications and records.²⁹⁴

1. Federal Wiretap Act

The Federal Wiretap Act²⁹⁵ proscribes the interception of electronic communications, as well as wire and oral communications. Thus, the Act applies, *inter alia*, to any person who "intentionally intercepts, endeavors to intercept, or procures" another person to intercept an electronic communication.²⁹⁶ The Act also applies to someone who intentionally discloses or uses or endeavors to disclose or use the contents of any electronic communication knowing or having reason to know that the electronic communication was intercepted in violation of the statute.²⁹⁷ An interception means the acquisition of an electronic communication "through the use of any electronic, mechanical, or other device"²⁹⁸ contemporaneously with the transmission of the electronic communication.²⁹⁹

Section 2520 authorizes a civil action for an interception, disclosure, or intentional use of an electronic communication in violation the Act. A plaintiff may seek preliminary and other equitable or declaratory relief; damages, including punitive damages in appropriate cases; and "reasonable attorney's fees and other litigation costs reasonably incurred."³⁰⁰

2. Stored Communications Act

Section 2701 of the SCA prohibits the intentional accessing of electronic data without authorization or in excess of one's authorization.³⁰¹ Section 2701(a) applies to anyone, except as provided in subsection (c), who "intentionally accesses without authorization a facility through which an electronic communication service is provided; or...intentionally exceeds an authorization to access that facility; and thereby obtains, alters, or prevents authorized access to a wire or electronic communication while it is in electronic storage...."

Section 2701 prohibits only unauthorized access and not the misappropriation or disclosure of information.³⁰²

100 Stat. 1848 (1986) (*codified* at 18 U.S.C. 1367, 2510–2521, 2701–2710, 3121–3126 (2000)).

²⁹³ *United States v. Steiger*, 318 F.3d 1039, 1046 (11th Cir. 2003), *cert. denied*, 538 U.S. 1051, 123 S. Ct. 2120, 155 L. Ed. 2d 1095 (2003).

²⁹⁴ *Id.* at 1047 (citing 18 U.S.C. § 2701(a)).

²⁹⁵ 18 U.S.C. §§ 2510–2522 (2009).

²⁹⁶ *Id.* § 2511(1)(a) (2009).

²⁹⁷ *Id.* § 2511(c) (2009).

²⁹⁸ *Crowley*, 166 F. Supp. 2d 1263, 1268 (N.D. Cal. 2001) (quoting 18 U.S.C. § 2510).

²⁹⁹ *Steiger*, 318 F.3d at 1047 (citations omitted).

³⁰⁰ 18 U.S.C. § 2520.

³⁰¹ *Sherman*, 94 F. Supp. 2d at 820.

³⁰² *Therapeutic*, 488 F. Supp. 2d at 997–98.

Thus, the section “outlaws illegal entry, not larceny.”³⁰³ A person with authorized access to a database does not violate the section no matter how malicious or larcenous the intended use of that access.³⁰⁴

Communications are in electronic storage within the meaning of the SCA even when “the storage is transitory and lasts for only a few seconds.”³⁰⁵ Moreover, information stored on a server and conveyed from a private Web site to users is subject to the SCA,³⁰⁶ as well as information held temporarily in random access memory.³⁰⁷

In *In re Intuit Privacy Litigation*,³⁰⁸ the plaintiffs alleged that the defendant implanted “cookies” on their computer hard drives when they visited certain Web sites. The court held that for there to be a violation of Section 2701, a defendant need not “be a third party to an electronic communication [that] eventually [is] in electronic storage in a facility” or even that there be a communication at all with the defendant.³⁰⁹ All that is required for a violation of the statute is the defendant’s “act of accessing electronically stored data.”³¹⁰ Although presumably not applicable to transit agencies and real-time data, Section 2702(a) of the SCA prohibits voluntary disclosure of a customer’s electronic data by persons or entities providing an electronic communication service, or providing a remote computing service to the public.

Although the SCA provides for criminal liability, an aggrieved party may bring a civil action for a violation of the Act, subject to a 2-year statute of limitations,³¹² and recover actual damages and “any profits made by a violation,”³¹³ plus “attorney’s fees and other litigation costs.”³¹⁴ If damages are awarded, the amount is to be for no less than \$1,000.³¹⁵

B. Computer Fraud and Abuse Act

The Computer Fraud and Abuse Act (CFAA),³¹⁶ a somewhat complicated statute, appears to be directed primarily at the prevention of unauthorized disclosure of data involving the national defense or foreign relations of the United States. However, other provisions of

the CFAA have broader applicability as the Act applies to “damage caused by unauthorized access or access in excess of authorization to a computer system....”³¹⁷ For example, the statute applies to anyone who “intentionally accesses a computer without authorization or exceeds authorized access, and thereby obtains...information from any protected computer if the conduct involved an interstate or foreign communication....”³¹⁸ The CFAA is applicable also to anyone who

knowingly and with intent to defraud, accesses a protected computer without authorization, or exceeds authorized access, and by means of such conduct furthers the intended fraud and obtains anything of value, unless the object of the fraud and the thing obtained consists only of the use of the computer and the value of such use is not more than \$5,000 in any 1-year period...³¹⁹

The Act is applicable also to anyone, *inter alia*, who “knowingly causes the transmission of a program, information, code, or command, and as a result of such conduct, intentionally causes damage without authorization, to a protected computer,” or who “intentionally accesses a protected computer without authorization” and recklessly causes damage or causes damage³²⁰ and by such conduct caused or would have caused “loss to 1 or more persons during any 1-year period...aggregating at least \$5,000 in value....”³²¹

Although the term “damage” under the statute means “any impairment to the integrity or availability of data, a program, a system, or information,”³²² a defendant’s alleged access to and disclosure of trade secrets may constitute “an impairment [of] the integrity of data...or information.”³²³ Moreover, the unauthorized access to or disclosure of information may constitute an impairment even though there was no physical change in or erasure of data.³²⁴

Some courts have found that a license that prohibits using a Web site or online database for a certain purpose may subject someone to a Section 1030(a)(2)(c) claim if the party, nevertheless, accesses information online and uses it for a purpose for which the party had agreed not to use the information.³²⁵ Moreover, it has been held that a violation of a subscription agreement, such as the unauthorized sharing of a subscriber’s con-

³⁰³ *Sherman*, 94 F. Supp. 2d at 821.

³⁰⁴ *Id.*

³⁰⁵ *Columbia Pictures, Inc. v. Bunnell*, 245 F.R.D. 443, 450 (C.D. Cal. 2007) (citation omitted).

³⁰⁶ *Steiger*, 318 F.3d at 1047 (citing *Konop v. Hawaiian Airlines, Inc.*, 302 F.3d 868, 876 (9th Cir. 2002)).

³⁰⁷ *Columbia Pictures, Inc.*, 245 F.R.D. at 446 (a ruling in-volvement discovery).

³⁰⁸ 138 F. Supp. 2d 1272 (C.D. Cal. 2001).

³⁰⁹ *Id.* at 1275–76.

³¹⁰ *Id.* at 1276 (footnote omitted).

³¹¹ *Sherman & Co.*, 94 F. Supp. 2d at 820.

³¹² 18 U.S.C. § 2707(f) (2009).

³¹³ *Id.* § 2707(c) (2009).

³¹⁴ *Id.* § 2707(b)(3) (2009).

³¹⁵ *Id.* § 2707(c) (2009).

³¹⁶ *Id.* § 1030 (2009), *et seq.*

³¹⁷ *Charles Schwab & Co., Inc. v. Carter*, 2005 U.S. Dist. LEXIS 5611, at *9 (N.D. Ill. 2005).

³¹⁸ 18 U.S.C. § 1030(a)(2)(c) (2009).

³¹⁹ *Id.* § 1030(a)(4) (2009).

³²⁰ *Id.* § 1030(a)(5)(i), (ii), and (iii) (2009).

³²¹ *Id.* § 1030(a)(5)(B) (2009).

³²² *Id.* § 1030(e)(8) (2009).

³²³ *Shurguard Storage Ctrs., Inc. v. Safeguard Self Storage, Inc.*, 119 F. Supp. 2d 1121, 1126 (W.D. Wash. 2000) (holding that the plaintiff’s complaint stated a claim and denying defendant’s motion to dismiss).

³²⁴ *Id.*

³²⁵ *See, e.g., EF Cultural Travel BV v. Explorica, Inc.*, 274 F.3d 577 (1st Cir. 2001), and *Register.com v. Verio*, 356 F.3d 393 (2d Cir. 2004) (plaintiff failed to show \$5,000 in damage as required by statute).

fidential user name and password, is an impairment that states a claim under the CFAA.³²⁶

Guidance Number 15

The ECPA, although a criminal statute, also creates a cause of action for damages and other relief against electronic trespassers. The ECPA through the federal Wiretap Act and the SCA seeks to protect against unauthorized electronic intercepts of communications or the accessing of stored communications and records. The SCA prohibits unauthorized access to information, not the misappropriation or disclosure of the information. Information stored in a server and conveyed from a private Web site to users is subject to the SCA. The CFAA applies, *inter alia*, to damage caused by unauthorized access or access in excess of authorization to a computer system when the conduct involves an interstate or foreign communication. Violations of a license with respect to an online database or of a subscription agreement may subject a violator to a claim under the CFAA.

C. State Legislation Applicable to Electronic Communications or Stored Data

Depending on the circumstances, there may be remedies under state legislation when an unauthorized person intercepts electronic communications such as real-time data or obtains access to archived data. Indeed, one source argues that “[s]tate statutes presently serve a more important role than federal law in prohibiting illegal behavior with computers because many state legislatures have enacted laws with broader protection than provided at the federal level.”³²⁷ For example, by statute in California a plaintiff may sue for damages³²⁸ when someone

(2) [k]nowingly accesses and without permission takes, copies, or makes use of any data from a computer, computer system, or computer network, or takes or copies any supporting documentation, whether existing or residing internal or external a computer, computer system, or computer network[;]

(3) [k]nowingly and without permission uses or causes to be used computer services[;] ...

(6) [k]nowingly and without permission provides or assists in providing a means of accessing a computer, computer system, or computer network[;]

(7) [k]nowingly and without permission accesses or causes to be accessed any computer, computer system, or computer network.³²⁹

An issue that may arise with state legislation is

³²⁶ Therapeutic Research Faculty v. NBTY, Inc., 488 F. Supp. 2d 991, 997 (E.D. Cal. 2007).

³²⁷ Charles Victor Lang, *Note: Stolen Bytes: Business Can Bite Back*, 1986 COLUM. BUS. L. REV. 251, 259 (1986) (footnotes omitted) (stating also that “[t]hirty-six states presently have computer crime statutes, a number which is bound to increase in the future”).

³²⁸ CAL. PENAL CODE § 502(e) (2009).

³²⁹ *Id.* §§ 502(c)(2), (3), (6), (7) (2009).

whether federal legislation preempts state law. However, in *Bansal v. Russ*,³³⁰ a federal court in Pennsylvania held that the Federal SCA did not preempt Pennsylvania’s Wiretapping and Electronic Surveillance Control Act that prohibits unlawful access to stored communications.³³¹

Claims under state law also may be challenged on the basis of the “dormant commerce clause” doctrine. As explained in one article, “[t]he dormant Commerce Clause is preoccupied with state economic protectionism. ... [T]he Supreme Court has applied a virtually fatal form of strict scrutiny to state laws that discriminate against interstate commerce and a more forgiving balancing test that practically rubber-stamps other laws that only incidentally affect interstate commerce.”³³² However, usually dormant commerce clause challenges are made to state legislation rather than state common law claims.³³³

In *Crowley v. Cybersource Corporation*,³³⁴ in which the plaintiff brought a class action pursuant to the Federal Wiretap Act and the ECPA, the court held that state law claims for unjust enrichment, invasion of privacy, fraud by concealment, and breach of contract were not in violation of the Constitution on the theory “that only Congress may enact legislation regarding the Internet. ... Amazon cites no cases removing commercial activity from the reach of state tort law on dormant commerce clause grounds.... Indeed, the Third Circuit has expressed doubt as to whether state common law claims could violate the dormant commerce clause.”³³⁵

Guidance Number 16

State law may provide remedies if an unauthorized party obtains access to, copies, and/or distributes an agency’s real-time data or exceeds its authorization or license for access to and/or use of an agency’s data. These are causes of action that may not be preempted necessarily by federal statutes.

D. Whether Real-Time Data Constitutes a Trade Secret

According to the *Restatement (Third) of Unfair Competition*, “[a] trade secret is any information that can be used in the operation of a business or other enterprise

³³⁰ 513 F. Supp. 2d 264 (E.D. Pa. 2007).

³³¹ *Id.* at 282–83. See also *In re Nat’l Security Agency Telecommunications Records Litigation*, 483 F. Supp. 2d 934, 939 (N.D. Cal. 2007) (holding that the SCA did not completely preempt state law privacy claims against telephone companies for alleged disclosure of subscriber calling records to the government).

³³² Norman R. Williams, *The Dormant Commerce Clause: Why Gibbons v. Ogden Should be Restored to the Canon*, 49 ST. LOUIS L.J. 817 (2005).

³³³ *Crowley*, 166 F. Supp. 2d at 1272 (citing *Camden County Bd. of Chosen Freeholders v. Beretta U.S.A. Corp.*, 123 F. Supp. 2d 245, 254 (D.N.J. 2000)).

³³⁴ 166 F. Supp. 2d 1263 (N.D. Cal. 2001).

³³⁵ *Id.* at 1272 (citations omitted).

and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others.³³⁶ Forty-five states, the District of Columbia, and the U.S. Virgin Islands have adopted some version of the Uniform Trade Secrets Act (UTSA), a model law defining rights and remedies regarding trade secrets.³³⁷

Pursuant to the UTSA, “any information” may constitute a trade secret.³³⁸ The UTSA defines a trade secret to mean

information, including a formula, pattern, compilation, program device, method, technique, or process, that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.³³⁹

To preserve a trade secret, the owner must be careful “to limit access to the information, and such information should only be disclosed in confidence.”³⁴⁰

A claim may be available for misappropriation of trade secrets either under the UTSA³⁴¹ or at common law. Although a misappropriation of trade secrets is unlawful, “trade secret law does not create a right in the information itself.”³⁴² Thus, an owner “has no proprietary interest in the information,” and “the public at large remains free to discover and exploit the trade secret through reverse engineering...or by independent creation.”³⁴³

For example, as the court observed in *Sherman & Co. v. Salton Maxim Housewares, Inc.*,³⁴⁴ under the Michigan statute³⁴⁵ a claimant would have to establish among other things whether the data in question amounted to trade secrets and whether the party against whom the claim is made had express or implied consent to disclose or use the data.³⁴⁶ In *Sherman*, because Salton alleged that “Sherman took sales data constituting trade secrets and/or proprietary information under MCL § 445.1902(b)(ii)(A) and gave it to Salton’s competitor...without Salton’s consent,” Salton’s

³³⁶ Restatement (Third) of Unfair Competition, 39 cmt. d (1995).

³³⁷ Smith, *supra* note 22, at 722 n.138.

³³⁸ Uniform Trade Secrets Act 1, available at: <http://euro.ecom.cmu.edu/program/law/08-732/TradeSecrets/utsa.pdf>, last accessed on Jan. 8, 2010. See also State of Washington, Trade Secrets Act, WASH. REV. CODE § 19.108, *et seq.*, available at <http://apps.leg.wa.gov/RCW/default.aspx?cite=19.108>, last accessed on Jan. 8, 2010.

³³⁹ Uniform Trade Secrets Act § 1(4).

³⁴⁰ Smith, *supra* note 22, at 724; Restatement (Third) of Unfair Competition, 39 cmt. g (1995).

³⁴¹ See Uniform Trade Secrets Act 1(2).

³⁴² Smith, *supra* note 22, at 729 (citing Restatement (Third) of Unfair Competition, 39 cmt. c (1995)).

³⁴³ *Id.* at 730 (footnote omitted).

³⁴⁴ 94 F. Supp. 2d 817 (E.D. Mich. 2000).

³⁴⁵ MICH. COMP. LAWS § 445.1902(b)(ii)(A).

³⁴⁶ *Sherman*, 94 F. Supp. 2d at 821.

amended counterclaim stated a claim.³⁴⁷ (See discussion of cases in Section VII.B.3, *infra*, holding that certain records were not subject to disclosure under public disclosure laws because they were exempt as trade secrets.)

Not addressed in the *Sherman* case is the question of whether the Copyright Act preempts a state claim for misappropriation of a trade secret. As one article notes, as “the line between trade secret and copyright protection becomes blurred...the possibility of preemption increases.”³⁴⁸ Whether there is preemption depends on whether the essence of the claim for a violation of a state’s trade secrets law is merely for unauthorized copying of data or software.

In *Huckshold v. HSSL, LLC*,³⁴⁹ the plaintiff had entered into an agreement to develop software for the tracking and maintenance of a customer database for the defendant HSSL.³⁵⁰ Another defendant, The Miller Group, Inc., allegedly copied the software from one of HSSL’s computers in violation of the agreement between the plaintiff and HSSL. The court noted that a claim for misappropriation of trade secrets is preempted when the claim is based solely on copying, because the claim would be “qualitatively equivalent” to a claim for copyright infringement.³⁵¹ On the other hand, “claims of misappropriation of trade secrets that are based upon breach of an independent duty of trust or confidence to the plaintiff are qualitatively different than claims for copyright infringement and are not preempted.”³⁵² The court held that the plaintiff’s claim for misappropriation of trade secrets was not preempted, because the plaintiff would “have to prove that the software was a trade secret that was misappropriated by Miller from HSSL and that HSSL was under a duty to maintain the secret and limit its use. These are elements in addition to the copying required for a copyright infringement claim.”³⁵³

Likewise, in *Therapeutic Research Faculty*, the court held that the alleged misappropriation by the subscriber of its username and password for the defendants’ benefit was a violation of the UTSA adopted by California.³⁵⁴ Moreover, the court held that the plaintiff could prevail on its claim by showing damage because of the misappropriation or unjust enrichment.³⁵⁵

There also may be an issue of whether a state’s trade secret law preempts other claims at common law. Sec-

³⁴⁷ *Id.* at 822.

³⁴⁸ Carole P. Sadler, *Comment: Federal Copyright Protection and State Trade Secret Protection: The Case for Partial Preemption*, 33 AM. U.L. REV. 667, 668 (1984) (footnote omitted).

³⁴⁹ 344 F. Supp. 2d 1203 (E.D. Mo. 2004).

³⁵⁰ *Id.* at 1205.

³⁵¹ *Id.* at 1209 (citation omitted).

³⁵² *Id.* (citations omitted).

³⁵³ *Id.*

³⁵⁴ *Therapeutic Research Faculty*, 488 F. Supp. 2d at 999 (quoting *Fas Techs. Ltd. v. Dainippon Screen MFG., Co., Ltd.*, 2001 U.S. Dist. LEXIS 7503 (N.D. Cal. May 31, 2001) and citing CAL. CIV. CODE §§ 3426.2, 3426.3).

³⁵⁵ *Id.* at 1000 (citations omitted).

tion 7(a) of the UTSA provides that, except as provided in subsection (b), it “displaces conflicting tort, restitutionary, and other law of this State providing civil remedies for misappropriation of a trade secret.” However, the UTSA “does not affect: (1) contractual remedies, whether or not based upon misappropriation of a trade secret; or (2) other civil remedies that are not based upon misappropriation of a trade secret....”³⁵⁶ Of course, a trade secret statute does not preclude other civil remedies for misappropriation of confidential information if the information is not a trade secret under the applicable statute.³⁵⁷

Guidance Number 17

Any information may qualify as a trade secret, but access to the information must be limited and disclosed only in confidence to preserve a later claim for misappropriation. However, a claim under state law for misappropriation of trade secrets could be preempted by the Copyright Act if the claim is merely, for example, for unauthorized copying. A claim for misappropriation of a trade secret based on a breach of trust or confidential relationship is less likely to be preempted.

E. Licensing of Real-Time Data and the Computer Information Transactions Act

Assuming that a transit agency proceeds to make real-time data available in some format pursuant to a licensing agreement, in two states the agreement could be subject to the Uniform Computer Information Transactions Act (UCITA). In other states, such an agreement regarding the licensing of the use of electronic data presumably would be governed by contract law or Article 2 of the Uniform Commercial Code (UCC) or a state law on licensing.³⁵⁸ However, even in states that have not enacted UCITA, the courts may look to UCITA for guidance.³⁵⁹

A Task Force of the Delaware Bar Association, which recommended UCITA’s adoption in Delaware,³⁶⁰ observed that “computer information contracts are in fact licenses and as such involve a host of different legal

considerations.”³⁶¹ The Task Force concluded that Article 2 of the UCC, which is applicable to a sale of goods, “is a poor fit” for computer information contracts because typically in a computer information contract title does not pass between the parties.³⁶² Indeed, the parties have a continuing relationship, because one party is authorized to use the information.³⁶³ Under UCITA “any information transaction that transfers fewer than all rights in the information is automatically deemed to be a license, regardless of whether title to a copy is transferred.”³⁶⁴

According to the Task Force, another reason that UCITA is a better fit is that the Act “establishes rules where none exist now or improves present law, and represents the first comprehensive uniform computer information licensing law.”³⁶⁵ Although UCITA and UCC’s Article 2 are similar in many ways,³⁶⁶ UCITA’s provisions are more favorable to licensors even when the licensees are businesses.³⁶⁷ Nevertheless, because of opposition by various groups to UCITA, only Virginia and Maryland have enacted UCITA. Moreover, some states have enacted legislation blocking UCITA’s application.³⁶⁸ It should be noted that such blocking statutes may not block the application of UCITA in every instance. For example,

[If] a licensee from an anti-UCITA state were sued in its own state, these statutes would shield the licensee from UCITA. However, if that same licensee were sued in a UCITA state (currently only Maryland and Virginia), to avoid the application of UCITA that licensee would probably have to go to court in the UCITA state and argue either that such court did not have jurisdiction or that such court should apply the laws of the anti-UCITA

³⁶¹ Report of the Joint Task Force of the Delaware Bar Association Sections of Commercial Law, Computer Law, Intellectual Property, and Real and Personal Property 1, hereinafter cited as Report of the Joint Task Force, available at <http://euro.ecom.cmu.edu/program/law/08-732/Transactions/UCITAOverview.pdf>, last accessed on Jan. 5, 2010.

³⁶² *Id.*

³⁶³ Smith, *supra* note 358, at 392.

³⁶⁴ Tussey, *supra* note 272, at 327 (footnote omitted).

³⁶⁵ Report of the Joint Task Force at 1.

³⁶⁶ Nim Razook, *The Politics and Promise of UCITA*, 36 CREIGHTON L. REV. 643 (2003).

³⁶⁷ *Id.* at 653.

³⁶⁸ One source states that Iowa, North Carolina, and West Virginia have enacted identically-worded statutes that “invalidate choice of law provisions in agreements otherwise covered by UCITA, if those provisions require those agreements to be interpreted pursuant to the laws of a state that has enacted UCITA.” The article further states that

[t]he Iowa, North Carolina and West Virginia statutes require that those agreements be interpreted pursuant to their own laws, if the party against whom enforcement of the choice of law provision is sought is a resident of, or has its principal place of business located in, one of those states.

Michael A. Diener & Kenneth Slade, *Proposed Uniform State Licensing Law Is Losing Ground*, Apr. 9, 2002, available at: <http://www.wilmerhale.com/publications/whPubsDetail.aspx?publication=1950>, last accessed on Jan. 16, 2010.

³⁵⁶ Uniform Trade Secrets Act §§ 7(a) and (b).

³⁵⁷ *Burbank Grease Servs., LLC v. Sokolowski*, 294 Wis. 2d 274, 308, 717 N.W.2d 781, 798 (citing WIS. STAT. § 134.90(6)(a)).

³⁵⁸ Matthew J. Smith, *An Overview of the Uniform Computer Information Transactions Act: Warranties, Self-Help, and Contract Formation[:] Why UCITA Should be Renamed “The Licensors’ Protection Act,”* 25 S. Ill. U. L. J. 389 (2001) (noting that there is “more than a little uncertainty as to where computer software transactions fit within the body of commercial law”) (citation omitted).

³⁵⁹ *Rhone-Poulenc Agro v. Dekalb Genetics Corp.*, 284 F.3d 1323, 1331 (Fed. Cir. 2002) (stating that UCITA’s provisions regarding the “licensing of intangible property provides guidance on the U.C.C.’s view of the common law”).

³⁶⁰ UCITA was first proposed as additional article, Article 2B, to the UCC.

state, despite the contractual choice of law provision pointing to the UCITA state's laws. Such arguments may be difficult, although not impossible.³⁶⁹

UCITA is limited to “computer information transactions”³⁷⁰ such as “an agreement...to create, modify, transfer, or license computer information or informational rights in computer information.”³⁷¹ UCITA applies to contracts for online access to databases and contracts to distribute information over the Internet. The Act expressly excludes a contract that does not require that the information be furnished as computer information or a contract in which computer information is *de minimis* with respect to the primary subject matter of the transaction.³⁷²

As seen, there is a serious question whether a transit agency's real-time data are copyrightable. Nevertheless, the Copyright Act may preempt state laws, including UCITA, seeking to protect noncopyrightable data. UCITA recognizes the possibility of preemption inasmuch as the Act states that “[a] provision of this [Act] which is preempted by federal law is unenforceable to the extent of the preemption.”³⁷³

As one source notes, “UCITA's definitions of ‘information’ and ‘informational rights’ include content traditionally governed by copyright law and other intellectual property regimes as well as content, notably factual compilations, *explicitly excluded from copyright protection under current law.*”³⁷⁴ UCITA “covers much, but not all, of the same subject matter as copyright, as well as subject matter specifically denied copyright protection.”³⁷⁵ “UCITA allows contractual protection of public domain information, notably compilations of facts, and allows providers to control all uses of information. UCITA offers compilers the opportunity to ‘legislate’ protection of their products through mass market licenses whose terms are so pervasive as to establish rights ‘good against the world.’”³⁷⁶

Those taking a preemptionist position, including committees of the New York City Bar Association, have argued that UCITA's provisions conflict with the Copyright Act, interfere with federal policy for having a uniform national copyright law, and sanction “restrictions on copying and other uses that copyright law permits”

(emphasis supplied).³⁷⁷ One argument is that UCITA allows states in effect to extend copyright protection to works not subject to copyright protection.³⁷⁸ For example, the New York City Bar argued that UCITA “confers *prima facie* validity on market-wide use restrictions in mass market contracts without sufficient qualifications to safeguard the kinds of use and expression contemplated by the fair use doctrine or copyright law's accommodation of First Amendment interests.”³⁷⁹ Furthermore, the bar association argued that UCITA would protect as a property or contract right “databases...and other text ‘obtained from or through the use of a computer, or that is in digital or equivalent form capable of being processed by a computer.’”³⁸⁰ Thus, “databases distributed...online could be sold subject to...click licenses providing that purchasers will not copy any individual fact in the database,” an outcome that the bar association committees contend violates the Copyright Act³⁸¹ and results in the protection of “discrete facts [that] are not copyrightable....”³⁸²

UCITA's rules allow a licensor to “impose limitations on copying or distributing...information that implicate[s] values embodied in federal copyright law.”³⁸³ The preemptionist view is that UCITA impedes “the flow of information into the public domain”³⁸⁴ and that “[u]nlike a typical two-party contract, UCITA licenses can operate to have the same scope and effect” as if there were state copyright laws.³⁸⁵ For example, “contractual protection of databases under UCITA would amount to state-law-controlled circumvention of *Feist*.”³⁸⁶

The anti-preemptionist view of UCITA is that licensing rights with regard to material are not equivalent to the “exclusive rights of copyright law,”³⁸⁷ that there is no preemption because a “contractual restriction constitutes the ‘extra element’ needed to avoid preemption,”³⁸⁸ and that copyright law affords one “rights against the world,” whereas a private contract affects only the

³⁷⁷ THE COMMITTEE ON COPYRIGHT AND LITERARY PROPERTY, THE COMMITTEE ON COMMUNICATIONS AND MEDIA LAW, AND THE COMMITTEE ON ENTERTAINMENT LAW, *A Proposal of the National Conference of Commissioners on Uniform State Laws to Adopt a Proposed Uniform Computer Information Transactions Act*, 54 THE RECORD 784, 786 (1999), hereinafter cited as “N.Y. City Bar Record.”

³⁷⁸ *Id.* at 787.

³⁷⁹ *Id.* at 798.

³⁸⁰ *Id.* at 800 (quoting UCITA § 102(11)).

³⁸¹ *Id.* at 801.

³⁸² *Id.* at 801 n.72.

³⁸³ Pratik A. Shah, *Berkeley Technology Law Journal Annual Review of Law and Technology: I. Intellectual Property: A. Copyright: 5. Preemption: A) Contract Enforceability: The Uniform Computer Information Transactions Act*, 15 BERKELEY TECH. L.J. 85, 97 (2000).

³⁸⁴ *Id.* at 100.

³⁸⁵ *Id.* at 101 (footnote omitted).

³⁸⁶ *Id.* at 103–4.

³⁸⁷ *Id.* at 98 (footnote omitted).

³⁸⁸ *Id.* at 99 (footnote omitted).

³⁶⁹ *Id.*

³⁷⁰ UCITA § 103(a).

³⁷¹ *Id.* § 102(11).

³⁷² *Id.* § 103(d)(5).

³⁷³ *Id.* § 105(a).

³⁷⁴ Tussey, *supra* note 272, at 327 (emphasis supplied). The author notes that UCITA § 102(35) defines “information” as all “data, text, images, sounds, mask works, or computer programs, including collections and compilations of them” and that § 102(38) defines informational rights as explicitly including all rights created under current intellectual property laws. *Id.* n.38.

³⁷⁵ *Id.* at 334.

³⁷⁶ *Id.* at 337 (footnote omitted).

rights of the parties to the contract.³⁸⁹ Thus, the anti-preemptionist argument is that a private contract is enforceable even if the material that is protected by contract from being copied or distributed is not protected by the Copyright Act.³⁹⁰ Inasmuch as only Maryland and Virginia have enacted UCITA, no cases were located holding whether the Copyright Act preempts any provisions of UCITA.³⁹¹

Because UCITA applies to transactions in electronic information,³⁹² a licensor such as a transit agency may want to be aware of UCITA's provisions. For instance, although UCITA generally permits transfer of a contractual interest under a license, the parties may agree to the prohibition of a transfer.³⁹³ Section 503 of UCITA provides that "a term prohibiting transfers of a party's 'contractual interest' is enforceable."³⁹⁴

UCITA's self-help provisions, whereby a licensor could "reclaim software in the case of breach by the licensee," were revised from what was originally proposed.³⁹⁵ However, Section 605 of UCITA "still permits providers to enforce use restrictions on information through 'automatic restraints' if the agreement authorizes use of the restraint, and if the restraint prevents a use inconsistent with the agreement."³⁹⁶ A transit agency as a licensor may want to specify in a contract that it has the right to suspend providing real-time data either for a licensor's breach of the agreement or for other reasons within the licensor's discretion, including but not limited to matters such as transit safety or security.

Finally, although only two states have adopted UCITA, a transit agency should be aware of UCITA's provisions governing choice of law and of the forum so as to avoid, if desired, UCITA's default rules on the law or forum applicable to a licensing agreement.

Guidance Number 18

Only Maryland and Virginia have enacted UCITA. Even in those states, provisions of UCITA could be held to be preempted by the Copyright Act. Transit agencies that want to make certain that UCITA does not apply to a licensing agreement with respect to computer information will want to include a stipulation to that effect. On the other hand, there are provisions in UCITA that may be of interest to transit agencies, which could in-

clude them in a licensing agreement while excluding UCITA's application to the agreement. In particular, transit agencies will want to be aware of UCITA's default provisions.

VII. WHETHER GOVERNMENT TRANSIT AGENCIES MAY BE REQUIRED TO RELEASE REAL-TIME DATA

A. Federal FOIA Issues

The purpose of the Federal FOIA is to open the administrative process to public scrutiny,³⁹⁷ disclosure being the dominant objective of the Act.³⁹⁸ The law provides for full disclosure by an agency unless the information sought is exempt from disclosure under one of the Act's nine exceptions. In general, the statute is interpreted broadly to permit access to official information so as to create a judicially enforceable public right to government information that otherwise would not be available for inspection.³⁹⁹ The term "agency" as used in the Act includes any government corporation or government-controlled corporation.⁴⁰⁰ Furthermore, "the FOIA does not authorize an agency to restrict the use of information in the hands of a recipient."⁴⁰¹

When it comes to real-time data, it appears that the legal basis for refusing to disclose the data is either weak or even nonexistent.⁴⁰² Even if, as discussed in Sections I.B. and I.C, *supra*, the data are not protected by copyright law, or even if the real-time data are copyrightable, a requester may obtain the data and in some jurisdictions be able to reuse the data commercially or otherwise. One source has observed that when FOIA material is produced, the highest charges are imposed for records having a commercial use.⁴⁰³

B. State Public Records Disclosure Laws

1. Applicability to Government Data

As indicated in Table 1, of the transit agencies responding to the survey, which included private and government-owned transit agencies, 14 agencies responded either that they did not know, or were unaware, of any laws that could require them to make real-time data available to the public, whereas 3 agencies stated that there were none. Eleven agencies stated

³⁸⁹ *Id.* (footnotes omitted).

³⁹⁰ *Id.* at 100.

³⁹¹ *Wigand v. Costech Techs.*, 2008 U.S. Dist. LEXIS 743 (E.D. Va. 2008) (Unrept) (dismissing the plaintiffs' claims for breach of warranty under UCITA but not addressing whether the claims were preempted by the Copyright Act).

³⁹² *Tussey*, *supra* note 272, at 326 (noting the argument that "UCITA expands the power of information providers to control information use through enforcement of restrictive license terms").

³⁹³ UCITA, pt. V.

³⁹⁴ *Tussey*, *supra* note 272, at 339.

³⁹⁵ *Razook*, *supra* note 366, at 664.

³⁹⁶ *Tussey*, *supra* note 272, at 330 (footnote omitted).

³⁹⁷ 5 U.S.C. § 552(d) (2009).

³⁹⁸ *Id.*

³⁹⁹ *Id.*

⁴⁰⁰ *Id.* § 552(f)(1) (2009).

⁴⁰¹ *Gellman*, *supra* note 8, at 1032 (*citing* *Baldrige v. Shapiro*, 455 U.S. 345, 350 n.4, 102 S. Ct. 1103, 1106 n.4, 71 L. Ed. 2d 199, 206 n.4 (1982) (noting that there was no provision in the FOIA for releasing information but swearing all users to secrecy)).

⁴⁰² 5 U.S.C. § 552(b) (2009).

⁴⁰³ *Gellman*, *supra* note 8, at 1031 (*citing* 5 U.S.C. § 552(a)(4)(A)(ii)(I) (1988)).

that they possibly could be required to make real-time data available pursuant to a FOIA or FOIL request. Of the transit agencies reporting that they collect real-time data, 29 stated that they had not had any requests for the release of real-time data, 3 had received requests, and 2 agencies did not respond to the question.⁴⁰⁴

Table 1.
Transit Agencies Reporting Requests for Their Real-Time Data

Transit Agencies Receiving No Requests for Real-Time Data	29
Transit Agencies Having Received Requests for Real-Time Data	3

Three agencies responded that they had had such requests; however, none of the three requests were FOIA or FOIL requests. In follow-up interviews with the three agencies, one agency reported that it had received one request for live GPS data.⁴⁰⁵ The request was from an individual who wanted to create an application that would allow him to use a handheld device to track a specific bus. As a rider, he wanted to be able to determine when his bus would arrive at a stop. Although the agency states that it would like to have made the data available, presently the agency is unable to extract live GPS data from its routing software system.

The second agency explained that it had agreed to provide a real-time data feed to an individual who wanted to provide the information without charge, along with information from other transit agencies, on the individual's Web site.

The third agency, which already shares real-time data in a wide variety of ways, explained that it had received a "generic" request from several sources for information regarding on-time bus performance, but the request was not a FOIA-type request.

In any event, all 50 states have enacted their own FOIA or FOIL pursuant to which individuals may obtain records of state and local government agencies and departments.⁴⁰⁶ If any form of real-time data is copyrightable, state law must be consulted because how the laws "are drafted may affect the terms of a state's copyright interest or whether a state can be deemed to have placed its documents in the public domain."⁴⁰⁷ One source suggests that by allowing the inspection of records but limiting copying, it may be possible "to apply an open records law and still preserve a copyright in-

terest";⁴⁰⁸ however, such an approach may have limited utility for "copyrighted compilations [that] are large in size and electronic in format...."⁴⁰⁹

As for whether an electronic data feed, for example by an AVL system, is a record for the purpose of a public records disclosure law, in general FOIAs and FOILs now apply to government information and data in electronic form.⁴¹⁰ Under New York's FOIL, for example, all agency records must be released to a requester unless they fall under one of the specific exemptions stated in the law that are similar to those in the Federal FOIA. Under New York's FOIL, "any information kept, held, filed, produced or reproduced by, with or for an agency or the state legislature" constitutes a record.⁴¹¹ A record may be in the form of a document, file, book, photograph, drawing, computer disk, or tape.⁴¹² However, an agency is not required to create a record if the record does not exist at the time a request is made.⁴¹³ One of the exemptions under the New York law is for records that "if disclosed, would jeopardize an agency's capacity to guarantee the security of its information technology assets, such assets encompassing both electronic information systems and infrastructures."⁴¹⁴

It has been held that a municipality may not avoid liability under its state's open records law through contracts, for example, with independent contractors responsible for collecting and maintaining and otherwise having custody of records on behalf of the municipality. *WIREdata, Inc. v. Village of Sussex*⁴¹⁵ involved Wisconsin's open-records law and WIREdata's request to three municipalities to provide information about their property assessments, information that WIREdata conceded that it planned to market and sell to assist real estate agents and brokers.⁴¹⁶ The municipalities had contracted with private, independent contractor assessors to complete their property assessments. Two of the municipalities were asked "to provide the data to the company in an 'electronic/digital' format."⁴¹⁷ WIREdata's initial request to the third municipality did not specify a format.⁴¹⁸ Thereafter, WIREdata asked the independent contractor assessors for the data they created and maintained in a computerized database.⁴¹⁹ The municipalities provided the data in a PDF format, a format that did not satisfy WIREdata with respect to its intended use of the data.

Although the case involved a number of issues, the

⁴⁰⁸ *Id.* at 1034.

⁴⁰⁹ *Id.* at 1035.

⁴¹⁰ Bloom, *supra* note 150, at 9, n.13 (2006).

⁴¹¹ N.Y. PUB. O. LAW § 86(4) (2009).

⁴¹² *Id.*

⁴¹³ *Id.* § 87 (2009).

⁴¹⁴ *Id.* § 87(2)(i) (2009).

⁴¹⁵ 310 Wis. 2d 397, 751 N.W.2d 736 (2008).

⁴¹⁶ *Id.* at 407.

⁴¹⁷ *Id.*

⁴¹⁸ *Id.*

⁴¹⁹ *Id.*

⁴⁰⁴ One agency responding to the survey did not say whether it had received a FOIA or FOIL request.

⁴⁰⁵ Interviews conducted Jan. 19, 2010.

⁴⁰⁶ Bloom, *supra* note 150, at 9, n.11.

⁴⁰⁷ Gellman, *supra* note 8, at 1035 (citing John A. Kidwell, "Open Records Laws and Copyright," 1989 WIS. L. REV. 1021, 1030 (1989)).

court held that under Wisconsin's open-records law, a municipality's independent contractor assessor is not an authority within the meaning of the open-records law; thus, the assessor was not a proper recipient of an open-records request.⁴²⁰ On the other hand, the municipalities could "not avoid liability under the open-records law by contracting with independent contractor assessors for the collection, maintenance, and custody of property assessment records."⁴²¹ Because the municipalities had provided the information, albeit in a format that could not be manipulated and used as WIREdata desired, the municipalities were not liable under the open-records law.⁴²²

The municipalities fulfilled their obligation when "they produced PDFs with the requested information and gave those files to WIREdata."⁴²³ The court stated that

despite the fact that the PDF files did not have all of the characteristics that WIREdata wished (that is, WIREdata could not easily manipulate the data), the PDF files did fulfill WIREdata's initial requests as worded. In addition, the records requested were offered to WIREdata, by all three municipalities, in written form shortly after its requests were made, demonstrating good faith efforts to satisfy such requests quickly.⁴²⁴

Furthermore, Wisconsin's Supreme Court stated that it disagreed

with the court of appeals' statement that requesters must be given access to an authority's electronic databases to examine them, extract information from them, or copy them. ... We share the DOJ's concern, as expressed in its amicus brief, that *allowing requesters such direct access to the electronic databases of an authority would pose substantial risks*. For example, confidential data that is not subject to disclosure under the open records law might be viewed or copied. Also, the authority's database might be damaged, either inadvertently or intentionally. We are satisfied that it is sufficient for the purposes of the open records law for an authority, as here, to provide a copy of the relevant data in an appropriate format. (emphasis added)⁴²⁵

Thus, there is some authority that a requestor may not be entitled to records in the format of the requestor's choice. Moreover, state law must be consulted regarding whether a government or government agency may refuse to produce a database or other electronic information either because of an exemption under state law or because the statute does not require that the information be provided in such a format, possibly for security reasons.

2. Whether an End-User Agreement May Be Required Before Disclosing Government Data

One issue is whether a government transit agency would be able to protect its real-time data from disclosure under a FOIA or FOIL and thereafter from being used for a commercial or other purpose. First, the cases discussed below hold uniformly that even a copyrighted compilation (e.g., a database) must be disclosed unless disclosure is precluded by a specific exemption. Second, in the cases located for the digest, in every instance the courts required that the database be disclosed to the requesting party even if the requester had a commercial motive. Third, the cases are divided on the issue of whether a public agency may require the requester to sign a contract, i.e., an end-user agreement, to prevent further distribution or use of a database by a requester or others.

In *Microdecisions, Inc. v. Skinner*,⁴²⁶ involving geographic information systems (GIS) maps, the court held that a county's property appraiser could not require prospective commercial users of the records created in his office to sign a licensing agreement as a condition to receiving the records.⁴²⁷ Although the court did not hold that the county had a copyright in the GIS maps,⁴²⁸ the court did hold that, under Florida law, "the fact that a person seeking access to public records wishes to use them in a commercial enterprise does not alter his or her rights under Florida's public records law."⁴²⁹ Even if there were a copyright in the GIS maps, the Florida public records law "overrides a governmental agency's ability to claim a copyright in its work unless the legislature has expressly authorized a public records exemption."⁴³⁰

In *County of Santa Clara v. The Superior Court of Santa Clara County*,⁴³¹ the county demanded, prior to furnishing its copyrightable GIS basemap to a requester under the California Public Records Act (CPRA), that the requester must sign an end-user agreement. In opposing the request for the database, the county argued that the CPRA, which permitted the nondisclosure of computer software⁴³² (that the county maintained also applied to computer mapping systems), also provided that "[n]othing in this section is intended to limit any copyright protections."⁴³³ The county argued that the copyright law protects its compilation of data as a "unique arrangement."⁴³⁴ The court observed that state law determines whether a public official may claim a copyright in the works of government entities and that

⁴²⁶ 889 So. 2d 871 (Fla. 2d DCA 2004).

⁴²⁷ *Id.* at 872.

⁴²⁸ *Id.* at 872 n.2.

⁴²⁹ *Id.* at 875.

⁴³⁰ *Id.* at 876 (citations omitted).

⁴³¹ 170 Cal. App. 4th 1301, 89 Cal. Rptr. 3d 374 (Cal. App. 6th Dist. 2009).

⁴³² CPRA § 6254.9 (a) and (b).

⁴³³ *Id.* § 6254.9 (d).

⁴³⁴ *County of Santa Clara*, 170 Cal. App. 4th at 1331.

⁴²⁰ *Id.* at 437.

⁴²¹ *Id.* at 441.

⁴²² *Id.* at 443.

⁴²³ *Id.* at 444.

⁴²⁴ *Id.* at 446–47 (footnote omitted).

⁴²⁵ *Id.* at 447.

“[i]n some states, statutes explicitly recognize the authority of public officials or agencies to copyright specific public records that they have created.”⁴³⁵ The court concluded, however, that although Section 6254.9 “recognizes the availability of copyright protection for software in a proper case, it provides no statutory authority for asserting any other copyright interest.”⁴³⁶

As for whether the county could demand that the requester sign an end-user agreement, the court noted that courts elsewhere had rendered conflicting decisions on the issue. However, the court, agreeing with the Florida court’s decision in *Microdecisions*, ruled that the county as part of its disclosure under the CPRA could not require a requester to sign an end-user agreement. The court held that “end user restrictions are incompatible with the purposes and operation of the CPRA.”⁴³⁷ The court held that “[t]he CPRA contains no provisions either for copyrighting the GIS basemap or for conditioning its release on an end user or licensing agreement by the requester. The record thus must be disclosed as provided in the CPRA, without any such conditions or limitations.”⁴³⁸

Similarly, in South Carolina there has been litigation concerning the state’s freedom of information statute and to what extent a government agency must disclose information that it compiles. However, in contrast to the courts’ decisions in *County of Santa Clara v. The Superior Court of Santa Clara County* and *Microdecisions, Inc.*, the South Carolina Supreme Court agreed that an end-user agreement could be required by the county.

In *George H. Seago, III v. Horry County*,⁴³⁹ the county’s geographic information department developed a digital database to combine several layers of information onto one digital photographic map of the county at a cost of \$7.5 million.⁴⁴⁰ A real estate company made a request for the digital photographic map for its Web site for the use of its customers.⁴⁴¹ Later the company requested full-county coverage of certain GIS data. The county notified Seago that it claimed a copyright in the information and would provide it only if the requester paid a \$100 fee and signed a licensing agreement restricting “any further commercial use without prior written consent.”⁴⁴²

The Supreme Court of South Carolina agreed with the *Second Circuit* in *County of Suffolk, New York v. First American Real Estate Solutions*,⁴⁴³ discussed below, that the county could obtain copyrights and that maps could be copyrighted to the extent they contained

“original materials, research, and creative compilation.”⁴⁴⁴ Furthermore, the court held that the county could restrict the subsequent commercial distribution of the data requested by Seago pursuant to the copyright law.

It does not violate FOIA for a public entity to copyright specially-created digital data and to restrict subsequent commercial use as long as the information is provided initially to the requesting person or entity. If an entity is allowed to copyright the specially-created data, it is logical that the governmental entity should be allowed to enact ordinances to restrict further commercial dissemination of the information in order to protect the copyright.⁴⁴⁵

The court remanded the case for a determination of whether a \$100 fee violated FOIA “because there is no evidence regarding what the actual copying costs would be.”⁴⁴⁶

*County of Suffolk, New York v. First American Real Estate Solutions*⁴⁴⁷ involved the attempt by the county to copyright and control the redistribution of the county’s official tax maps. Through a FOIL request, First American first obtained and then marketed copies of the tax maps and CD-ROM disks containing the maps without a license from or consent of the county. The Second Circuit stated that “states and their subdivisions are not excluded from protection under the Act” and unless they were prohibited from doing so by a specific state law may seek to copyright databases under their control.⁴⁴⁸ The court held that the state’s FOIL did not abrogate the county’s copyright in its tax maps, that the county could comply with its FOIL obligations while preserving its rights under the Copyright Act, that the county’s tax maps had enough originality to withstand a motion to dismiss for failure to state a claim, and that the tax maps could not, as a matter of law, be deemed to be in the public domain since their inception.⁴⁴⁹

3. Whether Real-Time Data Are a Trade Secret Not Subject to Disclosure

In *Dir., Dep’t of Information Technology of the Town of Greenwich v. Freedom of Information Comm’n*,⁴⁵⁰ the Supreme Court of Connecticut rejected the claim of the Department of Information Technology (DIT) that the disclosure of GIS data would reveal a trade secret for which the Connecticut statute provided an exemption:

⁴⁴⁴ *Seago*, 378 S.C. at 424.

⁴⁴⁵ *Id.* at 424–25 (citation omitted).

⁴⁴⁶ *Id.* at 429. The court also held that although federal district courts have original jurisdiction to hear any civil actions arising under any Act of Congress relating to copyrights, the “mere fact that a case concerns a copyright does not necessarily mean that the case comes within the exclusive jurisdiction of the federal courts,” the court noting that many disputes over copyright ownership arise under state law. *Id.*, 378 S.C. at 426, 663 S.E.2d at 44.

⁴⁴⁷ 261 F.3d 179 (2d Cir. 2001).

⁴⁴⁸ *First Am. Real Estate Solutions*, 261 F.3d at 187.

⁴⁴⁹ *Id.* at 195.

⁴⁵⁰ 274 Conn. 179, 874 A.2d 785 (2005).

⁴³⁵ *Id.* at 1331 (citation omitted).

⁴³⁶ *Id.* at 1334.

⁴³⁷ *Id.*

⁴³⁸ *Id.* at 1335–36.

⁴³⁹ 378 S.C. 414, 663 S.E.2d 38 (2008).

⁴⁴⁰ *Id.* at 419.

⁴⁴¹ *Id.* at 420.

⁴⁴² *Id.*

⁴⁴³ 261 F.3d 179 (2d Cir. 2001).

The requested GIS data in the present case, however, is readily available to the public, and, accordingly, it does not fall within the plain language of § General Statutes Section 1-210(b)(5)(A) as a trade secret. As the trial court noted,

[T]he GIS database is an electronic compilation of the records of many of the town's departments. Members of the public seeking the GIS data could obtain separate portions of the data from various town departments, where that data is available for disclosure. The requested GIS database simply is a convenient compilation of information that is already available to the public. The records therefore fail to meet the threshold test for trade secrets. (emphasis supplied)⁴⁵¹

There is authority holding that trade secrets are not subject to disclosure under public records disclosure laws. In *State ex. Rel. Cummer v. Pace*,⁴⁵² the court held that records concerning the operation of the municipal docks and terminals of the city concerning, *inter alia*, the routing of property were not subject to disclosure under the law providing for inspection of public records because the disclosure of such information would violate the Interstate Commerce Commission's rules protecting trade secrets. It has been held also that computer data purchased by the legislature with public funds for use in legislative redistricting constituted a trade secret owned by the vendor that prepared it and was exempt from disclosure as a public record.⁴⁵³ Finally, at least one court has held that a state's Public Records Act "protects a broader range of information than just that covered under the...definition [in] the Trade Secrets Act. The Public Records Act protects from disclosure documents in the hands of a public body 'which contain trade secrets or confidential commercial or financial information....'"⁴⁵⁴

In sum, the cases hold that electronic data are not necessarily protected from disclosure when requested pursuant to a FOIA or FOIL. In two cases the courts held that although the data had to be released, the government could restrict redistribution by requiring a requester to sign an end-user agreement. Unless there is a specific exemption, data compiled by the government is not protected as a trade secret from disclosure; however, information in the possession of the government that if released would reveal a third party's trade secrets may be protected from disclosure.

Guidance Number 19

Depending on the applicable FOIA or FOIL, real-time data constitute a record that may be subject to disclo-

⁴⁵¹ *Id.* at 195.

⁴⁵² 121 Fla. 871, 164 So. 723 (1935). The Municipal Docks and Terminals, when acting as agents for shippers and consignees, would receive and deliver goods and collect and remit the agreed prices and keep records thereof. *Id.* at 723–24.

⁴⁵³ *Brown v. Iowa Legislative Council*, 490 N.W.2d 551 (Iowa 1992).

⁴⁵⁴ *Caldwell & Gregory, Inc. v. Univ. of So. Miss.*, 716 So. 2d 1120, 1122 (Miss. Ct. App. 1998) (citation omitted).

sure pursuant to a request even if the requester intends to use the information for commercial purposes. Even a copyrighted database may have to be disclosed unless there is a specific exemption. However, in at least two states the courts have held that a requester must sign an end-user agreement so as to restrict the further distribution or use of a database.

VIII. POST-SEPTEMBER 11 SECURITY ISSUES AND PUBLIC ACCESS TO TRANSIT REAL-TIME DATA

The issue considered in this part of the digest regarding legislation since the terrorist attacks of September 11, 2001 (9/11), and disclosure of real-time data is the reverse of what has been discussed previously. That is, the issue is whether a public transit agency may refuse to disclose real-time data because of its concerns regarding public safety and security, including concerns about the possible use of such information by terrorists. According to one commentator, the states and localities would be prudent to establish policies for posting information and possibly "rethink some of the Web postings, particularly those potentially involving the lives and safety of their residents, including, for example, the location of key infrastructure systems."⁴⁵⁵

Several cases have addressed the question of whether information collected by a locality should not be disclosed because disclosure would threaten a town's or county's safety or security. In *Dir., Dep't of Information Technology of the Town of Greenwich v. Freedom of Information Comm'n*,⁴⁵⁶ the DIT denied a request by an individual requester that was directed to the town's board of estimate and taxation. The requester sought "a copy of all [geographic information system or 'GIS'] data concerning orthophotography, arc info coverages, structured query language server databases, and all documentation created to support and define coverages for the arc info data set."⁴⁵⁷ The DIT "claimed that the data...was exempt from disclosure pursuant to General Statutes § 1-210(b)(5)(A), which provides an exemption from disclosure for trade secrets, and § 1-210(b)(20), which exempts from disclosure information that would compromise the security of an information technology system."⁴⁵⁸

In regard to the issue of security, Connecticut's General Statutes Section 1-210(b)(19) provided that the FOIA did not require disclosure of:

Records when there are reasonable grounds to believe disclosure may result in a safety risk, including the risk of harm to any person, any government-owned or leased institution or facility or any fixture or appurtenance and equipment attached to, or contained in, such institution or facility, except that such records shall be disclosed to a

⁴⁵⁵ Bloom, *supra* note 150, at 9, nn.102–03 (2006) (footnotes omitted).

⁴⁵⁶ 274 Conn. 179, 874 A.2d 785 (2005).

⁴⁵⁷ *Id.* at 182 (footnote omitted).

⁴⁵⁸ *Id.* at 182–83 (footnotes omitted).

law enforcement agency upon the request of the law enforcement agency.⁴⁵⁹

The Supreme Court of Connecticut agreed with the trial court that the DIT had failed to seek a public safety determination from the commissioner of public works as required under the above provision; failed to show a potential threat to the town's residents if the requested GIS data were disclosed; failed to provide "statistical data that correlates criminal activity or potential terrorist type activity with disclosure of GIS data"; and failed to show how disclosure of the data "would compromise the security or integrity of the GIS."⁴⁶⁰

An attempted refusal to disclose a GIS basemap on the ground of federal homeland security law also was unsuccessful in *County of Santa Clara v. The Superior Court of Santa Clara County*.⁴⁶¹ The trial court had required the county to disclose its GIS basemap to a requester, the California First Amendment Coalition (CFAC), which sought a copy under the CPRA.⁴⁶² The court stated that the case "illustrate[d] [the] tensions between federal homeland security provisions and our state's open public record laws."⁴⁶³ One of the county's arguments was that federal law promulgated under the Homeland Security Act of 2002⁴⁶⁴ protected the information from disclosure.⁴⁶⁵ Although the court held that under the law the county had to disclose the information, it is worthwhile to note, first, the provisions of federal law on which the county relied, and, second, the court's analysis in determining why federal law did not apply.

The court noted that the federal statute at issue was the Critical Infrastructure Information Act of 2002 (CII Act),⁴⁶⁶ part of the Homeland Security Act of 2002 that established the Department of Homeland Security (DHS).⁴⁶⁷ Within the DHS, Congress established the Office of Intelligence and Analysis and the Office of Infrastructure Protection,⁴⁶⁸ which are responsible, *inter alia*, for carrying out "comprehensive assessments of the vulnerabilities of the key resources and critical infrastructure of the United States...."⁴⁶⁹

At the heart of the CII Act is the protection of critical infrastructure information (CII), statutorily defined as "information not customarily in the public domain and related to the security of critical infrastructure or protected systems...." "The CII Act authorized DHS to accept information relating to critical infrastructure from the pub-

lic, owners and operators of critical infrastructure, and State, local, and tribal governmental entities, while limiting public disclosure of that sensitive information under the Freedom of Information Act...and other laws, rules, and processes."⁴⁷⁰

The CII Act contains provisions exempting from disclosure, either under the Federal FOIA or under any state or local disclosure law, any critical infrastructure information that is submitted voluntarily to the DHS.⁴⁷¹ The CII Act directs DHS to establish uniform procedures for the receipt, care, and storage of such information and for the protection of the confidentiality of the information.⁴⁷² Under the regulations implementing the above statutory scheme, "protected CII" was referred to as "PCII," i.e., "CII that has been validated by DHS."⁴⁷³

The county argued that federal law preempted the CPRA, a question the court did not reach, because it held that the CII Act was inapplicable: "the County is a submitter of CII, not a recipient of PCII."⁴⁷⁴

Taken as a whole, this consistent and pervasive regulatory language supports our construction of the relevant provision of the CII Act, United States Code section 133(a)(1)(E)(i). As we interpret that provision, it draws a distinction between the submission of CII and the receipt of PCII. In the hands of the submitter, the nature of the information remains unchanged; in the hands of the governmental recipient, it is protected from disclosure.⁴⁷⁵

Thus, "the federal statute's prohibition on disclosure of protected confidential infrastructure information applies only when it has been 'provided to a State or local government or government agency....'"⁴⁷⁶

Although the county also asserted a public safety interest in guarding against terrorist threats,⁴⁷⁷ the court noted that the trial court found that the dissemination of the GIS basemap had not been an overriding concern because the county had sold it to 18 purchasers.⁴⁷⁸ The court held:

Security may be a valid factor supporting nondisclosure. ...But the "mere assertion of possible endangerment does not 'clearly outweigh' the public interest in access to these public records." ...While we are sensitive to the County's security concerns, we agree with the trial court that the County failed to support nondisclosure on this ground.⁴⁷⁹

The Connecticut Supreme Court also rejected the public safety reason as a basis for not disclosing a GIS database.⁴⁸⁰ In both the *Dep't of Information Technology*

⁴⁵⁹ *Id.* at 186.

⁴⁶⁰ *Id.* at 189, 191.

⁴⁶¹ 170 Cal. App. 4th 1301, 89 Cal. Rptr. 3d 374 (6th Dist. 2009).

⁴⁶² CAL. GOV'T CODE § 6250.

⁴⁶³ *County of Santa Clara*, 170 Cal. App. 4th at 1308.

⁴⁶⁴ 6 U.S.C. § 101 (2009), *et seq.*

⁴⁶⁵ *County of Santa Clara*, 170 Cal. App. 4th at 1308.

⁴⁶⁶ *Id.* at 1313 (citing 6 U.S.C. §§ 131–34).

⁴⁶⁷ *Id.* (citing 6 U.S.C. §§ 101, 111(a)).

⁴⁶⁸ *Id.* (citing 6 U.S.C. § 121(a)).

⁴⁶⁹ *Id.* (citing 6 U.S.C. § 121(d)(2), (5)).

⁴⁷⁰ *Id.* at 1313 (citations omitted).

⁴⁷¹ *Id.* at 1313–14.

⁴⁷² *Id.*

⁴⁷³ *Id.* at 1314–15 (citation omitted).

⁴⁷⁴ *Id.* at 1316.

⁴⁷⁵ *Id.* at 1318 (citation omitted) (footnote omitted).

⁴⁷⁶ *Id.* (citation omitted).

⁴⁷⁷ *Id.* at 1327.

⁴⁷⁸ *Id.* at 1329.

⁴⁷⁹ *Id.* (citations omitted).

⁴⁸⁰ *Dir., Dep't of Information Tech. of the Town of Greenwich v. Freedom of Information Comm'n*, 274 Conn. 179, 874 A.2d 785 (2005).

of the *Town of Greenwich* and the *County of Santa Clara* cases, it appears that disclosure was required because the statute in question was not broad enough to preclude disclosure and/or because the government failed to demonstrate that public safety or security was a creditable or verifiable reason for refusing to provide the requested data.

Guidance Number 20

If a FOIA or FOIL has an exemption for records the release of which could adversely affect public safety and security, a transit agency may have to make a sufficient showing that the exemption applies to the data in question. However, a transit agency could lose the benefit of the exemption if the agency has provided, even sold, the data on prior occasions.

CONCLUSION

It appears unlikely that the copyright laws would be a transit agency's means of protecting its real-time data. Based on current case law and the position of the Copyright Office as seen in the *NYMEX* case, real-time data are not copyrightable. Indeed, facts, such as pure data, are not copyrightable. If there is some originality, even though slight, in the selection and arrangement of data, then a database may be an original work and copyrightable as a compilation. However, there is no copyright protection for the underlying data, which may be extracted freely and copied and distributed by anyone without infringing the copyright for the compilation.

There are several reasons a database produced by an AVL-type system or a computer program would not be copyrightable. First, although the data may fulfill the Copyright Act's requirement that an original work must be fixed in a tangible medium of expression, such a database may not have an author within the meaning of the Copyright Act. With an automatic system there is no mental creativity or exercise of judgment in choosing data to be included in a compilation or database. Second, for a transit agency's real-time data there may be so few ways to express the data that all expressions would be substantially the same. A work is not copyrightable if there is a merger of an idea and the expression of the idea. Third, a work may not be copyrightable when the expression is determined by industry needs or practice. Fourth, just as facts and data are not copyrightable, numbers, short words, and phrases are not copyrightable. Although computer programs may be copyrighted, the above rules apply as well to a computer program designed to collect real-time data.

As discussed in the digest, it is possible to copyright an automatic database and register updates with the Copyright Office within 90 days. There still has to be originality in the selection and arrangement of the data for the work to be copyrightable. Such an approach, however, may have limited utility for a transit agency's real-time data. The underlying data, moreover, still could be copied without violating the copyright.

Based on current case law, as long as real-time data have not entered the public domain, a transit agency has a proprietary interest in its data and has the right to license or sell them. For example, a transit agency may make its data accessible via its Web site but exercise control by its terms of use binding users of the site. Indeed, a terms-of-use or end-user agreement, a license, or other agreement seems to be the best and possibly only protection for a transit agency's real-time data. Nevertheless, just as there could be a preemption issue in regard to provisions of UCITA, discussed in the digest, a preemption issue could arise with an agreement seeking to protect noncopyrightable data. The majority view seems to be that a private contract regarding real-time data would not be preempted. The responses to the survey indicate that transit agencies would rely mostly on their contracts to protect real-time data. In responding to the survey, no transit agency indicated that it would seek to copyright real-time data.

As for noncontractual claims that a transit agency may have under state law, even if real-time data are not copyrightable, the data, nevertheless, come within the subject matter or scope of the Copyright Act. Therefore, as discussed in the digest, a claim arising under state law may be preempted unless a state claim includes an element not present with a claim for copyright infringement. For instance, although real-time data may qualify as a trade secret, a claim under state law for misappropriation of trade secrets could be preempted by the Copyright Act if the state claim is merely, for example, for unauthorized copying. In some states, if a transit agency is able to show that the "hot news" exception for noncopyrightable material applies to real-time data, a transit agency may have a tort claim for misappropriation. However, as explained in the digest, a transit agency could have difficulties making a case against a free-rider. Depending on the facts of the case, many other claims under state law that would otherwise apply for misappropriation or unauthorized use of real-time data may be preempted by the Copyright Act.

There are federal laws that create criminal and civil liability for a person's unauthorized access to computers, electronic communications, or stored communications and records. The Federal DMCA, however, applies only to copyrighted works. State law may furnish criminal and civil remedies for unauthorized access to, copying, or distributing an agency's real-time data or for exceeding one's authorization or license for access to an agency's data. There is authority holding that such state statutes are not preempted by the federal statutes.

Depending on the applicable state FOIA or FOIL, real-time data are a record that may be subject to disclosure pursuant to a request even if a requester intends to use the information for commercial purposes. Even a copyrighted database may have to be disclosed unless there is a specific exemption in the FOIA or FOIL. However, in at least two states the courts have held that a requester must sign an end-user agreement

restricting the further distribution or use of a database. Finally, if a public records disclosure law exempts records affecting public safety and security from dislo-

sure, a transit agency may be able to protect its real-time data from disclosure.

APPENDIX A—DISCUSSION OF RESPONSES TO SURVEY QUESTIONS

A. Profile of Transit Agencies Collecting Real-Time Data

As seen in Table 2, of the 65 agencies that responded to the survey,⁴⁸¹ 34 stated that they are collecting real-time data for trains or buses. Thirty-one agencies responded that they presently are not collecting real-time data. Twelve agencies responding to the survey also reported that they collect real-time data for both bus and rail service.

Table 2.
Sixty-Five Agencies' Responses to the Survey
Regarding Collection of Real-Time Data

Transit Agencies Collecting Real-Time Data	34
Transit Agencies Not Collecting Real-Time Data	31
Transit Agencies Collecting Real-Time Data for Both Trains and Buses	12

Table 3 shows the number of passenger trips by rail annually by agencies that are collecting real-time data. The number of trips ranged from less than 10 million to more than 80 million.

Table 3.
Number of Annual Passenger Trips by Rail by
Agencies Reporting They Collect Real-Time Data

No. of Passenger Trips by Rail Annually	No. of Agencies Responding
9,999,999 or less	3
Between 10,000,000 and 49,999,999	7
Between 50,000,000 and 81,000,000	2

The agency collecting real-time data with the least passenger trips by rail yearly was San Mateo County Transit with 1,057,634; the agency reporting the most trips was LIRR with more than 81 million trips annually.⁴⁸²

Table 4 shows the number of passenger trips by bus annually by agencies collecting real-time data. Not all agencies responded to the question; however, the agency responding to the survey collecting real-time data with the smallest number of passenger trips by bus annually was Montachusett Regional Transportation Authority with 610,867 passenger trips per year; the agency reporting the most trips was Miami-Dade Transit with 84,775,337 passenger trips per year.⁴⁸³

⁴⁸¹ Some agencies participating in the survey did not respond to every question.

⁴⁸² Two agencies responded that they collected real-time data for rail service but did not indicate their annual number of passenger trips by rail.

⁴⁸³ Some agencies that reported collecting real-time data did not state their annual number of passenger trips by bus.

Table 4.
Number of Passenger Trips by Bus Annually by
Agencies Reporting That They Collect Real-Time Data⁴⁸⁴

No. of Passenger Trips by Bus Annually	No. of Agencies Responding
9,999,999 or less	2
Between 1,000,000 and 5,999,999	4
Between 6,000,000 and 19,999,999	3
Between 20,000,000 and 49,999,999	7
Between 50,000,000 and 85,000,000	4

B. Profile of Transit Agencies Not Collecting Real-Time Data

As for transit agencies not collecting real-time data, although not all agencies responded to the question, Table 5 illustrates the agencies' profile by number of passenger trips by bus each year.

Table 5.
Number of Passenger Trips by Bus Annually by
Agencies Reporting That They Do Not Collect Real-Time Data⁴⁸⁵

No. of Passenger Trips by Bus Annually	No. of Agencies Responding
Less than 99,999	2
Between 100,000 and 499,999	3
Between 500,000 and 999,999	5
Between 1,000,000 and 1,499,999	6
Between 1,500,000 and 1,999,999	1
Between 2,000,000 and 2,999,999	2
Between 3,000,000 and 3,999,999	2
Between 4,000,000 and 4,999,999	2
Between 5,000,000 and 5,999,999	2
Between 6,000,000 and 6,999,999	1
Between 7,000,000 and 9,999,999	1
Between 10,000,000 and 36,999,999	0
More than 37,000,000	1

As for the number of passenger trips by rail by agencies not collecting real-time data, only two agencies responded: the Memphis Area Transit Authority with more than 1.3 million passenger trips by rail annually and the Connecticut Department of Transportation with annual passenger trips by rail of 38 million.

⁴⁸⁴ Not all agencies responding to the survey provided information.

⁴⁸⁵ Not all agencies responding to the survey provided information.

C. Method for Collecting Real-Time Data

Respondents to the survey indicated a variety of systems for collecting real-time data. However, several of the agencies responded in some detail.

AC Transit stated that “ACS AVL is used for internal operations. We also have a contract with NextBus to provide Real-Time Passenger information. NextBus uses the location data from the ACS AVL but provides the real-time predictions themselves. NextBus owns the prediction data.”

The Charlotte Area Transit System reported:

CATS does collect real-time data from both its bus and light rail vehicles. The bus fleet utilizes an Automatic Vehicle Locator (AVL) system equipped on each bus to collect and transmit location and adherence information every sixty seconds. This system works in conjunction with the Automatic Passenger Counters (APC), which collect and transmit passenger boarding and alighting data whenever activity occurs. Other data is also transmitted real-time, such as communication transactions with the control center, and mechanical alarms that are triggered. Farebox transaction data is also collected continuously, though this data is only transmitted to the central system at the end of each service day through a manual probe of the farebox.

For the rail service, a Supervisory Control and Data Acquisition (SCADA) system collects real-time vehicle location data based on track occupancy. Each rail vehicle is also equipped with an APC system, which collects and stores passenger boarding and alighting data. This data is available the next day after the rail vehicle returns to the yard.

Dallas Area Rapid Transit’s response to the survey on data collection was:

Our AVL system is 17+ years old. The onboard control systems (MDU) are connected to an on board GPS receiver and to the radio system. The MDU communicates to Central Dispatch servers via 800 and 900 mhz radio frequencies. Approximately every 90 seconds (more rapidly when less vehicles are on the street) the central dispatch servers send a request for vehicle location to the onboard units. The onboard units respond with the vehicle number, the latitude, longitude and a timestamp. Other data, the block number that the vehicle is running and the operator id are transmitted as part of this data stream if that data is available.

The Maryland Transit Administration stated that it used an ACS-TMS CAD/AVL system for its fixed-route bus system, a Trapeze-Mon system for paratransit service, and SCADA systems for its light, heavy, and commuter rail services.

The most detailed information was provided by the LIRR:

1. The Train Information Monitoring and Control System (TIMACS). TIMACS is the real-time application used by Transportation to keep track of train movement. This system provides the tower operators with “user-friendly” screens that allow him/her to record train timings and other transactions at their location. The operator also receives timings and transactions from other tower locations. This gives them and the Transportation Dispatchers a better perspective of what is happening throughout the Long Island Rail Road. Different versions of the TIMACS application exist at the Movement Bureau, tower locations, PSCC (Penn Station Central Control) and usher locations. Each version of the application shows train information in a format pertinent to each type of user that makes it easier to perform their day-to-day operations. In addition, TIMACS information is accessible through the LIRR Corporate Intranet.

2. Wayside Monitoring and Diagnostics System (WMDS). The WMDS is utilized to track, monitor and record data from the M7 MU fleet via GPS and cellular technology for the purpose of obtaining maintenance information. The system transmits status heartbeats, log files, software version control, event recorder and system’s real time data to LIRR wayside users for 24/7 support of the M7 fleet.

3. ArcGIS Global Information System (ArcGIS). The ArcGIS is utilized to record LIRR infrastructure assets with geographical data of Long Island and the New York City Metro area onto map documents. Custom maps can be created by user departments with the ArcGIS application. These maps can be referenced by a web based browser interface available to LIRR users on the LIRR Intranet.

4. **Automated Vehicle Locating & Monitoring (AVLM).** The AVLM is an electronic fleet web-based tracking system deployed on the LIRR automotive fleet assets. The AVLM tracks, transmits, and records real time positional data and status of the vehicles and its drivers.

5. **Passenger Information/Automated Station Identification (PIS/ASI).** The Passenger Information/Automated Station Identification system, which is integrated with TIMACS, is responsible for the communicating with the M7 fleet to supply active and backup route information, which propagates data to the M7 onboard signs and audio system upon demand by train operators. Active routes, which use TIMACS Points of Interest (POI), are tracked by GPS technology.

D. Models or Formats Used or Requested for Sharing Real-Time Data

Twelve agencies collecting real-time data reported having a variety of models or formats for sharing real-time data.

The Charlotte Area Transit System stated that

[f]or the bus system, real-time vehicle departure data is transmitted and displayed on digital signage at CATS' main transportation center via a SOAP interface with the AVL system. This data is also announced audibly at the transportation center for ADA compliance. CATS' customer service call center also has the ability to provide real-time location and adherence information to customer on demand. Bus APC data, while collected and transmitted in real-time, is not currently shared with the general public.

For the rail system, the SCADA system provides train data that is collected based on track occupancy, and train movement information is provided as audible and visual messages at each station.

Dallas Area Rapid Transit said: "The data is stored and utilized in its simplest form:

- Time stamp—date and time that the record is collected.
- Latitude.
- Longitude.
- Vehicle Id number—burned to an EPROM on the MDU and transmitted in the data stream."⁴⁸⁶

The LIRR stated that "[d]ata is shared in the form of free form text messages and display screens." Similar to the foregoing response, the only format the Maryland Transit Administration uses "for external real-time data sharing is plain text." WMATA stated that it shared "the data via various media, such as the Metro Web site, at www.wmata.com, Interactive Voice Response (IVR) on phone lines, and LED signs at rail and bus stations. The real-time data for rail and bus schedules are provided in PDF and GTFS file formats, and via RSS feeds."

E. Paying for Collection of Real-Time Data

Of agencies responding that they collect real-time data, 25 said that collection was paid for by the government, whereas 10 agencies said that a government entity did not pay for the cost of collecting the data. One agency (AC Transit) stated that originally the government had paid the cost of collecting real-time data as the result of a federal grant.⁴⁸⁷

F. Archival of Real-Time Data

As for whether and for how long agencies archive real-time data, 23 agencies responded that they archived the data; however, as indicated by Table 6 below, the responses varied considerably regarding the length of time that the data are archived.

⁴⁸⁶ The agency also states that readers should see <http://m.dart.org> for the agency's initial rollout of the data to the public and "[a]t this time, we are not seeking to generate revenue from this data stream. Vehicle arrival predictions are being provided to the transit customer at no charge and we have not sought sponsorship from private companies to attempt to generate revenue from providing this service to our customers."

⁴⁸⁷ Three agencies did not respond to the inquiry regarding whether a government agency paid for the cost of collecting real-time data.

Table 6.
Duration of Archival of Data

Period of Time in Years, Months, or Days	No. of Agencies Responding
Indefinitely	6 ⁴⁸⁸
10 years	1
7 years	1
3 years	1
2 years	1 (bus arrivals only)
13 months	1
1 year	4 ⁴⁸⁹
9 months	1
6 months	1
3 to 6 months	1
90 days	2
30 days	1
2 weeks	1
1 day	1 (train arrivals only)

As for specific responses, AC Transit stated that “[f]or the AVL system there is a long-term database that stores data for 3 months. For NextBus, they do not archive the real-time predictions, but do archive the AVL data.” According to BART, “[m]ost real-time data is ephemeral, but some is archived as required for regulatory compliance.”

The LIRR advised that

[d]ata for the ArcGis, AVLM and WMDS systems is transmitted by an Oracle wireless connection to a database and is archived for six months. After six months the information is routed to a warehouse for permanent storage. PIS/ASI and M7 data is temporarily retained and has no permanent storage process. For these two systems information is stored up to 2100 entries and then information is purged based on seniority of the information (the oldest being purged first) once that capacity is reached.

WMATA stated that it archived data for bus and rail trips: “Predictions for train arrival information are kept for 1 day. Predictions for bus arrivals are kept for 2 days.”

G. Sharing of Real-Time Data

1. Reasons for Sharing Real-Time Data

As seen in Table 7, of the 34 agencies reporting that they collect real-time data, 17 agencies are presently sharing their real-time data, whereas 17 are not.⁴⁹⁰

⁴⁸⁸ One agency responded that it archived the data on-site for 1 year and thereafter off-site indefinitely. Another agency reported that it archived data without a “set duration.”

⁴⁸⁹ One agency reported that it archives data on-site for 1 year and thereafter off-site without a “set duration.”

⁴⁹⁰ One agency’s response was not clear; another agency responded that it was willing to share its real-time data.

Table 7.
Agencies Responding to the Survey
Reporting They Share Real-Time Data

No. of Agencies Collecting and Sharing Real-Time Data	17
No. of Agencies Collecting But Not Sharing Real-Time Data	17

As for any laws and regulations that are or would be applicable to an agency's shared-use or protection of real-time data or that require that collected data be made publicly available, 22 agencies stated that there are none; 1 agency responded that the city had an administrative regulation concerning the protection of information; and the other agencies did not respond to the inquiry.⁴⁹¹

Although there was some overlap in the reasons given for sharing real-time data, as indicated in Table 8 below, of the agencies that responded to the question, most agencies identified customer service as the principal reason.

Table 8.
Agencies' Reasons for Sharing Real-Time Data

Reason Stated for Sharing	No. of Agencies Responding
Build confidence in service reliability	1
Customer service (e.g., convenience, improve ridership, integrity in trip-plans, provide enhanced information)	6
Increase advertising	1
Increase ridership	1
Provide real-time arrival predictions (e.g., communication and trip planning)	1

AC Transit stated that it

provides real-time passenger information through NextBus on the internet and signage at stations and bus shelters. Currently AC Transit is working on providing the regional funding body, MTC, with a data stream for real-time passenger information. It is unsure at this time as to how they will then provide this information to the public.

As for its reasons for sharing real-time data, BART stated that it had

been sharing transit data with other public agencies, including a metropolitan planning organization, for about 12 years. These other agencies [that] present BART data on various websites, in electronic displays and in brochures, posters and other printed materials. BART opened a public schedule data feed in 2007 and a public real time data feed in 2008.

⁴⁹¹ Seven agencies responded by identifying their public records disclosure act, a topic discussed in pt. VII, *supra*.

With no in-house developers to create new applications, and in a time of extremely limited budgets, *we view our open data initiatives as an ideal way to foster new and innovative services that directly benefits customers.* As an agency BART is accustomed to sharing transit data and we're used to seeing it presented by others. Many agencies have historically exercised tighter controls, but for us the idea of sharing may have been easier given our history. (Emphasis supplied.)

The Maryland Transit Administration stated:

Real-time data is shared via Next Vehicle Arrival electronic signs at selected bus stops. Also, commuter rail train status is provided via text to mobile devices using the MARCTracker system. In addition, text based service advisories are provided on our web site, via telephone, and to radio and TV media outlets. These are all *aimed at improving customer service and providing feedback for future projects to expand the availability of real-time data.* (Emphasis supplied.)

The LIRR said:

Operations Systems supports train movement, on time performance reporting and passenger information business functions. Systems supported by this section assist the LIRR's Transportation Department with monitoring the movement of trains, the associated equipment schedule and recording the location of each train over its entire run. For its customers, *the use of train location information keeps customers informed automatically* as to the train's location and on-time performance. For *LIRR's Information Technology Department, via TIMACS and delay analysis, actual train information is used for corporate on-time performance reporting.* (Emphasis supplied.)

WMATA stated that it shared its scheduling data in GTFS format on its Web site "for anyone to download and publish via web site or mobile applications." WMATA further stated:

The information *provides a major convenience to the riders* by letting them know where their bus or train is located and how long it will be before it arrives at a specific station.

We share the data via various media, such as the Metro Web site, at www.wmata.com, Interactive Voice Response (IVR) on phone lines, and LED signs at rail and bus stations. The real-time data for rail and bus schedules are provided in PDF and GTFS file formats, and via RSS feeds. (Emphasis supplied.)

2. Reasons for Not Sharing Real-Time Data

Of the 18 agencies not sharing their data, many did not give a reason. Of those agencies that did provide a reason for not sharing data, their reasons were: the agency had just begun collecting real-time data; the agency had a first generation AVL system that was not capable of "interfacing" with systems beyond its own dispatch office, but the transit agency was in the process of installing a new system; there had been no requests for the data; the data was not "100 percent" complete or accurate and thus were not reliable for the public's use; the AVL project was not fully operational; there was a lack of well-developed regional architecture to share the real-time data; there was no requirement for sharing the data; or the agency was still in the process of planning a system for the collection of real-time data.

3. Benefits of Sharing Real-Time Data

In addition to the responses discussed below, although there was some overlap in the responses to the survey questions, two agencies said that providing real-time data had improved service and increased ridership; two agencies said that there had been a reduction in complaints; one agency reported that there had been an improvement in customer relations; and two agencies reported an improvement in customer service. One agency said that the sharing of real-time data had improved operational efficiency; another agency cited an improvement in customer communication. Three agencies responded that no benefits could be identified as yet; that it was "too soon to tell"; or that there were no data because the agency's system was relatively new.

Dallas Area Rapid Transit's response was that the agency had "not attempted to quantify increases in ridership, reduction of complaints or other positive impacts providing this data might have achieved. The real time data sets are used extensively by transportation management to monitor operator performance and calculate On-Time performance and route segment level running times for schedule optimization."

The LIRR stated that there are benefits from sharing real-time data:

Keeping customers informed is beneficial because it has the effect of improving customer relations, which is measured by annual surveys. There are different mechanisms in place that have helped to improve customers' travel experiences. An example of this is Notification Alerts. This new and expanded alert system allows subscribers to receive email and text messages for alerts about LIRR train movement, as well as travel information from other MTA agencies. Information is communicated in real time to assist customers with planning travel arrangements.

The Maryland Transit Administration responded that “[t]he data has enhanced MTA’s image as a customer-friendly organization and has assisted our customers in accessing transit services.”

BART’s detailed explanation of benefits stated that “value” is created when third parties promote transit services through their use of open data.

Anecdotally, as far as “effects” are concerned, open data initiatives have allowed BART to reach more customers in more places than otherwise would be possible:

- There are dozens of mobile apps, free and fee, for Android, BlackBerry, iPhone, J2ME, and other mobile platforms (see <http://bart.gov/apps>). In fact, there is literally competition among developers over who can serve BART customers “best” on these platforms (e.g., there are four BART apps on iPhone alone). This sort of competition is extremely beneficial for customers.
- There are BART apps for Facebook and Twitter (See <http://bart.gov/apps>), which supplement BART’s existing presence in these social channels.
- There are BART real-time ETA displays in cafes, buildings, and shopping malls that use our open data services (See <http://bart.gov/display>). BART did not fund the capital, maintenance, or operation costs for these displays, which essentially advertise BART services for free.

In addition, providing open-format data:

- Creates a perception that BART is more “open” and transparent than other agencies that don’t share their data;
- Allows BART to benefit from the “halo effect” of being involved in so many innovative third-party platforms and uses;
- Allows BART to build partnerships with a local developer community—an important stakeholder segment in the San Francisco Bay Area;
- Has not adversely impacted Web site traffic;
- Has not resulted in lower quality information / incorrect information for customers;
- Has not confused customers about the origin or location of “official” BART information; [and]
- Has not generated additional customer services complaints.

WMATA similarly states that

[f]or the most part, sharing the real-time data has resulted in improvements in customer relations, including a reduction in customer complaints. The introduction of real-time NextBus information, as when the electronic Public Information Display Signs (PIDS) were deployed, has generated quite a few positive comments from customers and garnered some positive press. Overall bus and rail complaints have increased, and it is not possible to determine whether the availability of real-time information affected the number of complaints

4. Use of Real-Time Data to Increase Advertising Revenue

As for whether the agencies are sharing real-time data to increase advertising revenue, only 1 replied that it was; 32 agencies replied that they had not previously used, nor are presently using, real-time data to increase advertising revenue. The Maryland Transit Administration reported that “[a]dvertising was previ-

ously considered for MARCTracker, but currently there is no use of real-time data to increase advertising revenue.” WMATA reported that it was “in the RFP process for the ‘Metro Channel’ which intends to supplement the Metro advertising system with real-time data.”

APPENDIX B—TRANSIT AGENCIES RESPONDING TO THE SURVEY

AC Transit
Access Transportation System
Antelope Valley Transit Authority
Bay Area Rapid Transit
Bay Metro Transit
Berkshire Regional Transit Authority
Capital District Transportation Authority
Central Contra Costa Transit Authority
Central New York Regional Transit Authority
Centre Area Transit Authority
Chittenden County Transportation Authority
Charlotte Area Transit System
City and County of Honolulu Department of Transportation Services
City of Phoenix Public Transit Department
City of Sioux Falls
Connecticut Department of Transportation
Culver City Bus
Dallas Area Rapid Transit
Fayetteville Area System of Transit
Fort Worth Transportation Authority
Golden Gate Bridge Highway and Transportation District
Greater Bridgeport Transit
Greater Cleveland Regional Transit Authority
Greater New Haven Transit District
Greater Portland Transit District Metro
Johnson County Transit
JATRAM—Jackson, Mississippi
Kalamazoo Metro Transit
La Crosse Municipal Transit Utility
Laredo Transit Management, Inc.
Livermore Amador Valley Transit Authority
Long Island Rail Road Co.
Luzerne County Transportation Authority
Maryland Transit Administration
Massachusetts Transportation Authority
Memphis Area Transit Authority
Metra—Chicago
Metro St. Louis
Miami-Dade Transit
Milwaukee County Transit System
Montachusett Regional Transportation Authority
New Orleans Regional Transit Authority
Omni Transit
Pierce Transit
Ohio Valley RTA/Eastern Ohio RTA
Oshkosh Transit System
Palm Tran—West Palm Beach, Florida

Pee Dee Regional Transportation Authority
Pine Bluff Transit
Rome Transit Department
Salem-Keizer Transit
Santa Cruz Metropolitan Transit District
San Diego Metropolitan Transit System
Sioux City Transit
South Bend Public Transportation Corp.
Space Coast Area Transit
San Mateo County Transit
Seattle Monorail System
Sioux Falls Transit
StarTran
Transportation Authority of Northern Kentucky
Valley Regional Transit
Valley Transit
Votran—Volusia Transit Management, Inc.
Waco Transit System
Washington Metropolitan Area Transit Authority
Whatcom Transportation Authority
Winston-Salem Transit Authority (N.C.)

APPENDIX C—SURVEY QUESTIONS

TCRP J-5, STUDY TOPIC 12-04: LEGAL ARRANGEMENTS FOR USE AND CONTROL OF REAL-TIME DATA

Agency Name: _____
 Name of Employee: _____
 Job Title: _____
 Contact telephone / cell phone number: _____
 Email address: _____
 How many years have you been with the agency? _____
 What has been your agency's average annual ridership for the last year?
 (a) Number of passenger trips by rail per year _____
 (b) Number of passenger trips by bus per year _____

Note: As used herein, the term “real-time data” means data being collected at the same time it is being generated and that may be disseminated immediately to patrons or others.

(If insufficient space is allotted for your responses below, please feel free to place your responses on additional sheets of paper and attach them to the survey.)

1. Does your agency collect real-time data from its vehicles? **(please circle) YES NO**

IF YOUR ANSWER IS “NO,” PLEASE PROCEED TO SURVEY QUESTION NUMBER 8.

If your answer is **“YES,”**

a. Please describe the system that your agency uses to collect the data.

b. Does a governmental agency pay for the technology used by your agency for real-time data collection? **(please circle) YES NO**

If your answer is **“YES,”** identify any laws that require the government agency to make the real-time data available to the public.

c. Does your agency archive such real-time data? **(please circle) YES NO**

If your answer is **“YES,”** how long do you archive the data?

2. Does your agency currently share its real-time data with the public or a private entity that publishes or uses the information? **(please circle) YES NO**

If your answer is **“NO,”** please state your agency's reason for not doing so.

If your answer is **“YES,”**

a. Discuss your agency's reasons for doing so.

b. Explain what effects, beneficial or otherwise, that the sharing of such information has had on your

agency, such as an increase in ridership, increase in advertising revenue, and/or improvement in customer relations (e.g., reduction in complaints).

c. Provide details regarding the model(s) or format(s) used or requested for sharing the data, and, if possible, provide copies or any relevant documents.

3. Identify and discuss any contractual issues that your agency has considered (a) to maximize its revenue from real-time data, and/or (b) to restrict the further dissemination of the data. If possible, please provide copies of any relevant documents, such as contracts or memoranda.

4. List the steps your agency takes to protect its rights to the information collected. If there are relevant policies or contracts, please provide copies, if possible.

5. Does your agency currently use, or has it previously used, real-time data to increase advertising revenue? **(please circle) YES NO**

If your answer is **“YES,”** please identify and discuss any public policy issues that have arisen or that have been identified (e.g., using transit information to target recipients or advertising).

6. Have any outside developers requested or required any limitations on the disclosure of data to anyone beyond the agency’s or developer’s control or supervision? **(please circle) YES NO**

If your answer is **“YES,”** please identify the requested or required limitations.

7. Has your agency had any requests for the release of real-time data pursuant to a Freedom of Information Act or similar legislation applicable to your agency? If so, please provide details and, if possible, copies of any relevant laws, regulations, ordinances, and guidelines.

8. Identify any state or local acquisition laws and regulations that give your agency rights in technical data in connection with a contract and/or the performance thereof with your agency.

9. Identify any laws and regulations that are or would be applicable in your jurisdiction to the sharing or protection of real-time data by your agency; and specify which laws, if any, require that collected data be made publicly available.

10. Please attach any additional comments you wish to make to this survey.

**Please return your completed survey to:
The Thomas Law Firm
ATTN: Larry W. Thomas**

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Tel. (202) 280-7769
lwthomas@cox.net

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