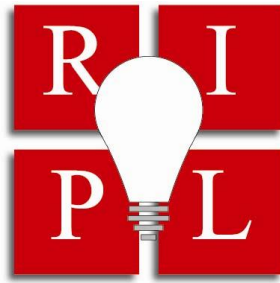


THE JOHN MARSHALL REVIEW OF INTELLECTUAL PROPERTY LAW



PUBLIC STANDARDS AND PATENT DAMAGES

BEN JOHNSON

ABSTRACT

Some markets require legislation in order to exist. The products and/or services offered by those markets may be covered by one or more letters patent. In certain of those markets, a situation arises in which a private party owns a right to exclude others from participating in that publicly-enabled market. These situations may be referred to “public standards.” Like their cousins in the private sector, public standards require special consideration when it comes to determining potential compensation to the patentee from its competitors. Following the lead of the Western District of Washington, this paper recommends a modification of the traditional *Georgia-Pacific* reasonable royalty formulation for a patent damages calculation. Specifically, this paper recommends that calculating damages for public standard patents should require an explicit, thorough consideration of the public interest in addition to the patents themselves and the relationship of the involved parties. Only then will the interests of the public be adequately protected.

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PUBLIC STANDARDS AND PATENT DAMAGES

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I. INTRODUCTION

Within five years, 20% of automobile insurance policies will be covered by patents owned by a handful of companies.² These patents have thus far resisted challenges by some of the largest insurance carriers in the country.^{3,4} The holders of these patents have the right to burdensome licensing fees from their competitors,⁵ threatening to reduce competition and consumer choice in a multi-million dollar market.⁶

Exclusion of competition is part and parcel of the patent system, but the situation with auto insurance differs from most other markets in one key way: insurance products, like oil and gas products and tax strategies, are to some extent the creation of public law. These products may be thought of as “public standards.” This difference should be paramount in any determination of the market entry cost comprising patent infringement damages.

The most common form of damages calculation is known as a “reasonable royalty” calculation.⁷ This paper argues that public standards should follow the lead of a recent decision in the electronics industry and tailor the reasonable royalty calculation to its specific context. That case, *Microsoft Corp. v. Motorola, Inc., et al.*, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013), tailored the analysis for products incorporating one or

* © Ben Johnson 2015. Ben Johnson is currently Patent Counsel at Freescale Semiconductor Inc. ¹ The view and opinions contained within this paper are those of the author alone and do not represent those of his any employer and/or client, past or present.

² The National Association of Insurance Commissioners reports that “industry experts predict that . . . 20 percent of all vehicle insurance in the U.S. [is] expected to incorporate some form of [usage-based insurance] within five years.” Nat’l Ass’n of Ins. Comm’rs & The Center for Ins. Policy and Research, *Usage-Based Insurance and Telematics*, http://www.naic.org/cipr_topics/topic_usage_based_insurance.htm. See Section II, *infra*, for a discussion of the relevant patents.

³ Progressive has filed suit against Safeco and Liberty Mutual, Progressive Casualty Ins. Co. v. Safeco Ins. Co. of Ill. et al., case no. 1:10-cv-01370-BYP (N.D. Ohio (June 18, 2010), Allstate, Progressive Casualty Ins. Co. v. Allstate Ins. Co. et al., case no. 1:11-cv-00082-BYP (N.D. Ohio Jan. 12, 2011), Hartford, Progressive Casualty Ins. Co. v. Hartford Fire Ins. Co. et al., case no. 1:12-cv-01070-BYP (N.D. Ohio Apr. 30, 2012), and State Farm, Progressive Casualty Ins. Co. v. State Farm Mutual Auto. Ins. Co., case no. 1:12-cv-01068-BYP (N.D. Ohio Apr. 30, 2012), among others. All four cases were administratively closed in April 2013 pending the outcome of a reexamination proceeding against the patent-at-issue.

⁴ See generally *infra* Section II.A discussing the Progressive patent portfolio. U.S. Patent No. 6,064,970 (Progressive’s parent patent) was the subject of *ex parte* reexamination. Reexamination No. 90/011,252. The reexamination certificate issued Jan. 4, 2012.

⁵ See generally Section III *infra*.

⁶ See note 1 for an estimate of the potential size of the usage-based insurance market.

⁷ William O. Kerr & Gauri Prakesh-Canjels, *Patent Damages and Royalty Awards: The Convergence of Economics and Law*, LES NOUVELLES: JOURNAL OF LICENSING EXECUTIVES SOCIETY (June 2003). In April 2009, an updated version of this paper was published at <http://www.mondaq.com/unitedstates/x/76748/Patent/Patent+Damages+And+Royalty+Awards+The+Convergence+Of+Economics+And+Law>.

more technology standards (e.g., universal serial bus (“USB”);⁸ 802.11, the standard specifying the implementation of wireless networks;⁹ etc.). These technology standards may be thought of as “private standards.”

For public standards, the tailoring should focus on protecting the public interest. Part II of this paper introduces the idea of a public standard and uses the example of usage-based insurance to demonstrate the ability of a relatively small number of patents to occupy a public standard market. Part III surveys patent damages law, focusing on the reasonable royalty/“hypothetical negotiation” analysis common to private standard litigation. Part IV explores how the “hypothetical negotiation” analysis should be adapted to public standards. Finally, Part V briefly discusses some other considerations associated with public standards and the focus on the public interest.

II. PUBLIC STANDARDS

A public standard may be thought of as any product or service whose ability to be sold to the public depends specifically on a law, regulation, or a set of laws or regulations. Public standards stand in contrast to products that are merely regulated. For example, the Consumer Product Safety Commission (“CPSC”) regulates thousands of consumer products ranging from toys to coffee makers in order to protect the public.¹⁰ However, the regulations promulgated by the CPSC and other agencies typically concern things like product information and labeling.¹¹ For most consumer products, regulation does not reach the level of enabling the *existence* of a product.¹² This is not the case for public standards.

Markets for public standard products require enabling legislation for their existence. This section examines three such markets: automobile insurance, tax practice, and oil and gas products. The first offers a broad view into the patent issues facing public standards and is treated with some depth. The latter two are summarized briefly to provide further context.

A. Automobile Insurance

Automobile insurance holds a curious place in the regulatory landscape. Although rather clearly within the ambit of Congress’s interstate commerce powers,¹³ Congress

⁸ USB is an inter-device communication standard promulgated by the USB Implementers Forum. USB.org, *USB 3.1 Specification*, <http://www.usb.org/developers/docs/>.

⁹ 802.11 is a wireless communication standard promulgated by the Institute of Electrical & Electronics Engineers (“IEEE”). IEEE, *IEEE Get Program*, <http://standards.ieee.org/about/get/802/802.11.html>. Microsoft Corp. v. Motorola, Inc., et al., 2013 WL 2111217, (W.D. Wash. Apr. 25, 2013).

¹⁰ E.g., Consumer Product Safety Commission, *About CPSC*, <http://www.cpsc.gov/en/About-CPSC/>.

¹¹ E.g., 16 C.F.R. § 1500.19 - Misbranded toys and other articles intended for use by children.

¹² Exceptions include pharmaceuticals, 21 U.S.C. § 360 (requiring the registration of producers of drugs or devices).

¹³ See 15 U.S.C. § 1013(a) (“Until June 30, 1948, the Act of July 2, 1890, as amended, known as the Sherman Act, and the Act of October 15, 1914, as amended, known as the Clayton Act, and the

has expressly disavowed federal regulation.¹⁴ In 1945, Congress passed the McCarran-Ferguson Act, declaring that “the continued regulation and taxation by the several States of the business of insurance is in the public interest, and that silence on the part of the Congress shall not be construed to impose any barrier to the regulation or taxation of such business by the several States.”¹⁵ Thus, each state acts within their own sphere to decide which insurance products to allow and the rules that apply to each.¹⁶

Usage-based insurance products, a relatively new creation, have been approved by most, but not all, of the states (Texas was among the first, Illinois one of the most recent, and California has yet to come aboard).¹⁷ Generally, “usage-based insurance” refers to any insurance product with a cost tied directly to the insurer’s behavior while operating a vehicle.¹⁸ This paper uses the term “usage-based insurance” to encompass a variety of products that come in a variety of flavors. It is beyond the scope of this paper to detail them all, but an overview of the two major categories provides context for the remaining analysis. Those two categories are: (1) term products that rely on usage data to alter a base rate of insurance; and (2) products that price a unit of insurance based on something other than time. An example of the first category is Progressive’s “Snapshot” product;¹⁹ the products offered by the now-defunct MileMeter are an example of the second.²⁰

The following sections describe the patent portfolios protecting each product. They will demonstrate the depth and breadth of coverage these two companies retain over a burgeoning industry.

1. *Snapshot by Progressive*

Snapshot by Progressive allows an insured to install a small electronic device in the on-board diagnostics port standard in modern vehicles.²¹ The current version of this port, termed “ODBII,” allows communication between a device plugged into the port and the on-board computer within the vehicle.²² The computer may communicate

Act of September 26, 1914, known as the Federal Trade Commission Act [15 U.S.C. 41 et seq.], and the Act of June 19, 1936, known as the Robinson-Patman Anti-Discrimination Act, shall not apply to the business of insurance or to acts in the conduct thereof.”)

¹⁴ *Id.*

¹⁵ 15 U.S.C. § 1011.

¹⁶ 15 U.S.C. § 1012(a) (“The business of insurance, and every person engaged therein, shall be subject to the laws of the several States which relation to the regulation or taxation of such business.”).

¹⁷ California is one of the seven states listed by Progressive in which Snapshot is unavailable. Progressive Agent, *Snapshot FAQs*, <http://www.progressiveagent.com/auto/snapshot-faqs.aspx>, (last accessed Jan. 24, 2015).

¹⁸ See generally Jason E. Bordoff & Pascal J. Noel, *Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity*, THE HAMILTON PROJECT (Brooking Institute, July 2008).

¹⁹ See Progressive Corp., *Snapshot Common Questions*, <http://www.progressive.com/auto/snapshot-common-questions/>.

²⁰ See *infra* notes 51–57.

²¹ Progressive Corp., *Snapshot Common Questions*, <http://www.progressive.com/auto/snapshot-common-questions/>.

²² California Environmental Protection Agency, Air Resources Board, *On-Board Diagnostics (OBD) Program*, <http://www.arb.ca.gov/msprog/obdprog/obdprog.htm>.

a variety of data to the OBDII port, including mileage, velocity, and diagnostic messages.²³ For example, it is the OBDII port that allows mechanics to identify a particular one of the myriad issues that may trigger a vehicle’s “check engine” light.²⁴

The Snapshot device captures mileage, velocity, and other data from the vehicle’s on-board computer for later communication to a central server for analysis.²⁵ Progressive then uses the collected data to calculate a discount (or theoretically, a premium) to the cost of insurance.²⁶ In some respects, Snapshot is similar to programs offered by other insurers such as National General Insurance.²⁷ National General offers a “Low-Mileage Discount” available to OnStar subscribers in 35 states.²⁸ Like Snapshot, National General uses a telematics device (in their case, the OnStar system)²⁹ to track the number of miles driven in a premium period.³⁰ The mileage value is then used to calculate a discount to the base insurance rate.³¹

Snapshot and other telematics-based programs have been somewhat controversial, with consumers expressing concern over the use of such data, particularly when combined with a time stamp and/or location-identifying technology (e.g., GPS).³² Even with these concerns, Progressive has extended the program from nine states in 2009³³ to more than 44 in 2013.³⁴

Although the intricacies of the Snapshot program are not publicly available, the methods embodied in Progressive’s patent portfolio provide some insight. Progressive’s usage-based portfolio consists of a family of six patents. The parent of the family is U.S. Patent No. 5,797,134 (“the ’134 Patent”). Progressive filed for the ’134 Patent on January 29, 1996, and the ’134 Patent issued August 18, 1998.³⁵ The ’134 Patent broadly claims a method of adjusting a cost of insuring a vehicle based on data gathered from the insured. Claim 1 states:

1. A method of determining a cost of automobile insurance for a selected period based upon monitoring, recording and communicating data

²³ *Id.*

²⁴ *Id.*

²⁵ Progressive Corp., *Snapshot Common Questions*, <http://www.progressive.com/auto/snapshot-common-questions/>.

²⁶ *Id.*

²⁷ National General Insurance was formerly known as GMAC Insurance. *GMAC Insurance Changes Name to National General Insurance Effective July 1*, Business Wire, June 13, 2013, <http://www.businesswire.com/news/home/20130613005198/en/GMAC-Insurance-National-General-Insurance-Effective-July#.VEFNf010yUk>.

²⁸ National General Insurance, *National General Insurance Low-Mileage Discount*, <http://www.nationalgeneral.com/auto-insurance/smart-discounts/low-mileage-discount.asp>.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *E.g.*, Jessica Schley, *Bill Spurs Privacy Concern*, Ventura County Star, Aug. 6, 2008, <http://www.vcstar.com/news/pay-as-you-drive-insurance-spurs-big-brother>.

³³ Progressive Corp., *Question About MyRate*, formerly available at <http://www.progressive.com/myrate/myrate-faq.aspx>. An uncertified historical version of this website may be found at <http://web.archive.org/web/20090122220027/http://www.progressive.com/myrate/myrate-faq.aspx>.

³⁴ Progressive Corp., *Snapshot Common Questions*, <http://www.progressive.com/auto/snapshot-common-questions/>.

³⁵ U.S. Patent No. 5,797,134 (“the ’134 Patent”).

representative of operator and vehicle driving characteristics during said period, whereby the cost is adjustable by relating the driving characteristics to predetermined safety standards, the method comprising:

determining an initial insured profile and a base cost of automobile insurance based on said insured profile;

monitoring a plurality of data elements representative of an operating state of a vehicle or an action of the operator during the selected period;

recording selected ones of the plurality of data elements when said ones are determined to have a preselected relationship to the safety standards;

consolidating said selected ones for identifying a surcharge or discount to be applied to the base cost; and,

producing a final cost of automobile insurance for the selected period from the base cost and the surcharge or discount.³⁶

Claim 1 illustrates the breadth of the Progressive patents. A competitor could infringe the '134 Patent by using a range of "data elements representative of an operating state of a vehicle;"³⁷ using any type of device for "recording selected . . . data elements;"³⁸ and calculating the "final cost of automobile insurance" for any "selected period."³⁹

The '134 Patent is accompanied by a family of five other patents,⁴⁰ detailed in the table below. While not all of these patents have been asserted in litigation,⁴¹ Progressive has stated that all are available for a standard licensing fee.⁴²

³⁶ '134 Patent, 11:34–53.

³⁷ *Id.* at 11:42–44.

³⁸ *Id.* at 11:46–48.

³⁹ *Id.* at 11:51–53.

⁴⁰ In addition to the patents listed, the Progressive portfolio also includes U.S. Patent Application No. 13/617,929, published Jan. 10, 2013 under Publication No. 2013/0013347.

⁴¹ Progressive Casualty Ins. Co. v. Safeco Ins. Co. of Ill. et al., case no. 1:10-cv-01370-BYP, Docket No. 64 (N.D. Ohio (June 18, 2010)); *Progressive Casualty Ins. Co. v. Allstate Ins. Co. et al.*, case no. 1:11-cv-00082-BYP, Docket No. 6 (N.D. Ohio Jan. 12, 2011); *Progressive Casualty Ins. Co. v. Hartford Fire Ins. Co. et al.*, case no. 1:12-cv-01070-BYP, Docket No. 1 (N.D. Ohio Apr. 30, 2012); and *Progressive Casualty Ins. Co. v. State Farm Mutual Auto. Ins. Co.*, case no. 1:12-cv-01068-BYP, Docket No. 4 (N.D. Ohio Apr. 30, 2012).

⁴² Progressive Casualty Insurance Co., *Progressive Announces Terms for Usage-Based Insurance Licensing Program*, <http://www.progressive.com/newsroom/article/2012/December/ubi-licensing/> (last visited Oct. 13, 2013).

TABLE 1

Patent No.	Filing Date	Issue Date	Title
5,797,134	1/29/1996	8/18/1998	“Motor vehicle monitoring system for determining a cost of insurance”
6,064,970 (“the ’970 Patent”)	08/17/1998	05/16/2000	“Motor vehicle monitoring system for determining a cost of insurance”
6,868,386 (“the ’386 Patent”)	05/15/2000	03/15/2005	“Monitoring system for determining and communicating a cost of insurance”
8,090,598 (“the ’598 Patent”)	01/23/2004	01/03/2012	“Monitoring system for determining and communicating a cost of insurance”
8,140,358 (“the ’358 Patent”)	06/03/2008	03/20/2012	“Vehicle Monitoring System”
8,311,858 (“the ’858 Patent”)	02/17/2012	11/13/2012	“Vehicle Monitoring System”

The remaining patents in the Progressive portfolio expand on the general data collection/insurance cost calculation claimed in the ’134 Patent. The ’970 Patent—the patent most often asserted in litigation⁴³—details further how Progressive may use the collected data.⁴⁴ The ’386 and ’598 Patents cover the communication of data from a user to an insurance company.⁴⁵ In the era of online insurance servicing—an area which Progressive trumpets as one of its business differentiators⁴⁶—it may be

⁴³ See *supra* note 41.

⁴⁴ *E.g.*, U.S. Patent No. 6,064,970, 12:26–39 (Claim 6):

6. A method of monitoring a human controlled power source driven vehicle, the method comprising:

extracting one or more data elements from at least one sensor wherein the one or more elements are of at least one operating state of the vehicle and the at least one human's actions during a data collection period;

analyzing, grouping, and storing the one or more data elements as group data values in a first memory related to a predetermined group of elements; and,

correlating the group data values to preset values in a second memory and generating an output data value based on the correlation wherein the output data value is used to compute an insurance rating for the vehicle FOR the data collection period.

⁴⁵ *E.g.*, ’386 Patent, 13:60–14:5; ’598 Patent, 28:22–49.

⁴⁶ Progressive Corp., *Customer Service*, <http://www.progressive.com/online-customer-service/>.

extremely difficult for any competitor to offer a usage-based insurance product without providing the types of internet-based customer feedback claimed by the '386 and '598 Patents. The customer's ability to visualize how her driving habits impact her cost of insurance is one of the advantages of usage-based products.⁴⁷

Beyond usage data gathering, analysis, and communication, the Progressive portfolio also carves out a space in the hardware side—the telematics units required for gathering the data from an insured. The patent landscape for telematics devices is quite crowded.⁴⁸ To avoid as much of this prior work as possible, the Progressive patents claim the use of a device in combination with other features. For example, the '358 Patent claims: (1) a “processor that collects vehicle data from a vehicle bus,” (2) a “wireless transmitter” to transmit the data, (3) a networked database gathering the data, and (4) a server to do the analytical heavy lifting.⁴⁹

2. *MileMeter*

MileMeter was a Texas start-up company offering a pre-paid, insure-by-the-mile product.⁵⁰ MileMeter's products were primarily marketed toward college students residing on campus, retirees, mass transit users, and others who may have an occasional need for a vehicle.⁵¹ MileMeter explicitly distinguished its products from those that used vehicle tracking and/or credits to a traditional insurance premium by only using the actual mileage driven by the insured.^{52,53} MileMeter gathered this data either from publicly available records (e.g., automobile inspection records) or from the insured's self-reporting.

The MileMeter patent portfolio consists of four issued patents detailed below in Table 2. U.S. Patent No. 7,865,378 (“the '378 Patent”) is the parent of the patent family. The heart of the '378 Patent is a method for calculating a cost of insurance.

⁴⁷ See '134 Patent, 3:42–60 (“Additionally, the present invention allows for frequent (monthly) adjustment to the cost of coverage because of the changes in operator behavior and driving patterns. This can result in automobile insurance charges that are readily controllable by individual operators.”); Jason E. Bordoff & Pascal J. Noel, *Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving-Related Harms and Increase Equity*, THE HAMILTON PROJECT (Brookings Institute July 2008)

⁴⁸ See, e.g., U.S. Patent No. 8,140,358, pp. 1–6 (citing six pages, double-columned, of relevant references cited to the Examiner).

⁴⁹ '358 Patent, 41:56–42:13 (Claim 1). See also, U.S. Patent No. 8,311,858, 41:63–42:16 (claiming an “in-vehicle monitor that filters data by selectively polling one or more in-vehicle controllers,” in-vehicle memory that “retains relationship data that links the selected vehicle data to a vehicle identifier and a wireless network,” a “wireless transceiver,” and a second receiver to “receive continuously transmitted trilateral encoded signals.”).

⁵⁰ See, e.g., Sheryl Jean, *MileMeter Morphs Into Zengine*, DALLAS MORNING NEWS BIZ BEAT BLOG, Apr. 3, 2012, <http://bizbeatblog.dallasnews.com/2012/04/post-2.html/>.

⁵¹ See, e.g., *id.*; see also MileMeter, <http://www.milemeter.com> (last visited Feb. 2, 2009). MileMeter ceased operation in 2012. It is no longer accepting new customers and the website remains functional only to service existing customer. An uncertified copy of the site is available at <http://web.archive.org/web/20090121133341/http://milemeter.com/>.

⁵² E.g., STATE OF CALIFORNIA DEPT. OF INSURANCE, Transcript of Public Hearing on Pay-Drive (Usage-Based Auto Insurance), Oct. 20, 2008, pp. 11–18.

⁵³ MileMeter FAQ, <http://www.milemeter.com/faq> (last visited Feb. 2, 2009). See *supra* note 51 regarding the general availability of the MileMeter website.

The steps of the method are: (1) receive an odometer reading, and (2) provide a quote to the customer based on a “cost per distance unit” for a certain number of distance units.⁵⁴ The remaining patents are relatively minor variations on the same theme.⁵⁵

TABLE 2

Patent No.	Filing Date	Issue Date	Title
7,865,378 (“the ’378 Patent”)	10/29/2004	01/04/2011	“System and Method for the Assessment, Pricing, and Provisioning of Distance-Based Vehicle Insurance”
7,890,355 (“the ’355 Patent”)	11/27/2006	02/15/2011	“System and Method for the Assessment, Pricing, and Provisioning of Distance-Based Vehicle Insurance”

⁵⁴ 35 U.S.C. § 101 requires that, in order for an invention to be eligible for patent protection, it must qualify as a “process, machine, manufacture, or composition of matter. *See also* *Bilski v. Kappos*, 561 U.S. 593, 130 S. Ct. 3218 (2010). As a result of the ever-evolving jurisprudence of § 101, a patentee occasionally must resort to couching claim limitations in a particular structure. For example, the U.S. Patent & Trademark Office considers software to be *per se* unpatentable. MANUAL OF PATENT EXAMINING PROCEDURES § 2106. The claims of the ’378 Patent are illustrative of this practice. The full text of Claim 1 of the ’378 Patent recites:

1. A computer system for assessing, pricing, and provisioning distance-based vehicle insurance, the system comprising:

a computer processor; and

a computer memory accessible to the computer processor, the computer memory and computer processor being communicatively detached from a customer associated vehicle, wherein the computer memory comprises a plurality of instructions which, when executed by the computer processor, perform a method, the method comprising:

receiving a current odometer reading of the vehicle from the customer, wherein the odometer is the factory installed odometer and is representative of the original miles traveled by the vehicle;

providing a plurality of coverage types to the customer;

providing the customer with at least one quote upon receiving an input selecting one of the coverage types, wherein the quote includes a policy rate identifying a cost per distance unit based on the customer and vehicle identification information;

providing the customer with a plurality of pre-calculated items based on the quote, wherein each item includes a total number of distance units for purchase at the policy rate; and

performing a purchase transaction for an insurance policy in response to input from the customer electing one of the items for purchase, wherein coverage provided by the insurance policy is based on an expiration odometer value defined as the sum of the current odometer reading and the local number of distance units included in the selected item, and wherein the current odometer reading is not audited prior to or during the purchase transaction.

’378 Patent, 10:56–11:22 (Claim 1).

⁵⁵ *E.g.*, compare ’378 Patent, 10:56–11:22 with ’355 Patent, 14:32–15:3.

7,991,629 ("the '629 Patent")	03/14/2007	08/02/2011	"System and Method for the Assessment, Pricing, and Provisioning of Distance-Based Vehicle Insurance"
7,987,103 ("the '103 Patent")	04/23/2007	07/26/2011	"System and Method for the Assessment, Pricing, and Provisioning of Distance-Based Vehicle Insurance"

Despite its patent portfolio and potential for profitability, MileMeter was unable to withstand the combined pressures of much larger competitors and a bad economy that made it difficult to grow.⁵⁶ MileMeter ceased operation in 2012, although it continues to service existing customers.⁵⁷

B. Usage-Based Insurance Going Forward

The above analysis is intended to give an idea of the depth and breadth of patent protection in the usage-based insurance market. Any insurance provider, large or small, new or established, will face a high barrier to entry in the form of increased costs.

If a competitor chooses to fight the patents in the courts or the Patent Office, the road is long and the expense high: the cost of patent litigation runs in the millions of dollars, even for relatively small damages amounts.⁵⁸ This is before any settlement is negotiated or trial damages calculated. Progressive offered another option for potential competitors.

In December 2012, Progressive announced a licensing program for its usage-based insurance patent portfolio.⁵⁹ By its terms, a licensee must: (1) pay 0.02% of all "Private Passenger Auto direct written premiums for the most recently reported year" and (2) not sell any usage-based insurance products before April 1, 2015.⁶⁰ The license runs through April 2022,⁶¹ and sign-up for the license closed in June 2013.⁶²

⁵⁶ See, e.g., Sheryl Jean, *MileMeter Morphs Into Zengine*, DALLAS MORNING NEWS BIZ BEAT BLOG, Apr. 3, 2012, <http://bizbeatblog.dallasnews.com/2012/04/post-2.html/>.

⁵⁷ MileMeter, <http://www.milemeter.com>. Please note that this citation is to the existing version of the MileMeter website. See *supra* note 51 regarding the general availability of the MileMeter website.

⁵⁸ AMERICAN INTELLECTUAL PROPERTY LAW ASSOC., 2013 Report of the Economic Survey.

⁵⁹ Progressive Casualty Insurance Co., *Progressive Announces Terms for Usage-Based Insurance Licensing Program*, <http://www.progressive.com/newsroom/article/2012/December/ubi-licensing/> (last visited Oct. 13, 2013).

⁶⁰ *Id.*

⁶¹ The author only has access to the publicly available terms of the license. One of the difficulties with the lack of information about the license itself is the term. The '134 Patent is set to expire in 2016 and the '970 Patent is set to expire in 2017. It is unclear how the license is structured to deal with the expiration of the constituent patents.

⁶² See *supra* note 58.

It appears from news reports that only United Services Automobile Association (“USAA”) took advantage of this offer.⁶³ At the stated royalty rate of 0.02%, this may only cost USAA between \$1.5 and \$2 million per year.⁶⁴ However, USAA forfeits any ability to offer usage-based insurance products until 2015.⁶⁵ USAA must therefore pay Progressive somewhere around \$4 million before it ever sells a single usage-based insurance product. This is presumably less than the license fee paid by Allstate Fire & Casualty Insurance Co. (“Allstate”) to settle its long-running litigation with Progressive.⁶⁶ Progressive’s goal appears to be to position itself as the market leader, relying on a first mover-type advantage to offset any potential losses from its patent portfolio.

Regardless of its motives, the window for competitors to sign up for Progressive’s license has closed.⁶⁷ For companies other than Allstate and USAA, the only options that remain are to seek a license from Progressive (presumably at less favorable terms) or to litigate the patents in court.⁶⁸ For the new entrant into the world of usage-based insurance, there are no inexpensive options.

Progressive’s patent portfolio differentiates usage-based insurance from other insurance products. Typically, the regulatory framework enabling insurance products works to provide predictability and clarity to new market entrants. If you want to offer car insurance, you must simply meet the rules and regulations laid out by the relevant Department of Insurance. Of course, there are business-related barriers to entry. State Farm, Allstate, Progressive, and others have been around for a long time and have economies of scale and much larger advertising budgets. But if all one needs is the legal-minimum level of insurance, one need not go to one of the more established companies.

Insurance companies have, to this point, differentiated themselves on typical business-side aspects: customer service, focus on a particular market, cost, etc.⁶⁹ But with usage-based insurance, there is now an unpredictable, specific, significant cost to offering a legislation-enabled product. Small insurance companies may not be able to meet the licensing terms demanded by patent holders.

⁶³ Progressive Casualty Insurance Co., *Progressive Insurance and United Services Automobile Association (USAA) Enter License Agreement for Usage-Based Insurance*, <http://www.progressive.com/newsroom/article/2013/June/usaa-ubi/> (last visited Oct. 13, 2013).

⁶⁴ See Insurance Journal, *Progressive to License Usage-Based Pricing Tool to USAA*, July 1, 2013 (reporting that USAA “wrote more than \$8 billion in 2012 auto premiums”).

⁶⁵ See *supra* note 58.

⁶⁶ Progressive Casualty Insurance Co., *Progressive Settles Patent Dispute with Allstate*, <http://www.progressive.com/newsroom/article/2011/October/patent-dispute/> (last visited Oct. 13, 2013). No terms of the license were disclosed.

⁶⁷ See *supra* note 58.

⁶⁸ As discussed in Section III.A *infra*, one of the components in determining a reasonable royalty calculation for patent litigation damages is looking at licenses that have been negotiated between similar parties for the same or similar patents. Although beyond the scope of this paper, it would be interesting to see how courts view Progressive’s license offer in terms of being a comparable royalty.

⁶⁹ E.g., Progressive Corp., *Auto Insurance*, <http://www.progressive.com/auto/>; Allstate, *Auto Insurance & Car Insurance Quotes—Allstate*, <http://www.allstate.com/auto-insurance.aspx>.

C. Other Public Standard Markets

Tax practice, and oil and gas products, two other public standard markets, have previously encountered a patent problem. Both have lessons for the future of patents in public standard markets.

1. Patenting Tax Strategies

In 2006, a patentee sued a tax lawyer for infringement of U.S. Patent No. 6,567,790 that describes “an estate planning method for minimizing transfer tax liability with respect to the transfer of the value of stock options from a holder of stock options to a family member of the holder.”⁷⁰ This case, and others like it, spawned a brief cottage industry in tax patent Armageddon.⁷¹ Many articles were written arguing that tax strategies should be specifically excluded from patentability under 35 U.S.C. § 101.⁷² As a result of the uproar, tax patents were largely (if not entirely) eliminated by the Leahy-Smith America Invents Act of 2011.⁷³

Automobile insurance patents, however, may be different from tax patents both in policy terms and technical terms. On the technical side, electronic devices themselves are protected subject matter under 35 U.S.C. § 101.⁷⁴ At least some of Progressive’s patents cover physical electronic devices.⁷⁵ On the policy side, there is a difference between a patented method of *practicing* a public standard (i.e., a tax patent) and a patented method *preempting* a public standard (i.e., a usage-based insurance patent). The former retains the consumer benefit of competition for the optimal way to practice a standard, while the latter does not.

However, there is something to be gained from literature surrounding tax patents, and that is a focus on incentives. One of the arguments for the patent system is that it is intended to provide an incentive for innovation—a time-limited right of exclusion in exchange for inventing something new and disclosure sufficient to make it public.⁷⁶

⁷⁰ U.S. Patent No. 6,567,790, Abstract; *Wealth Transfer Group, LLC v. Rowe*, 2006 WL 434187 (D. Conn. Jan. 6, 2006).

⁷¹ *E.g.*, Camp Announces Hearing on Issues Relating to the Patenting of Tax Advice: Advisory from the Subcomm. on Select Revenue Measure of the H. Comm. on Ways & Means, 109th Cong., 2d Sess. (June 27, 2006), available at <http://www.gpo.gov/fdsys/pkg/CHRG-109hrg30450/pdf/CHRG-109hrg30450.pdf>.

⁷² *E.g.*, Brian C. Banner, *Patenting Tax Strategies: The Case for Excluding Legal Methods from the Realm of Patentable Subject Matter*, 15 TEX. INTELL. PROP. L.J. 491 (2007); Matthew A Melone, *The Patenting of Tax Strategies: A Patently Unnecessary Development*, 5 DePaul Bus. & Com. L.J. 437 (2007); Anish Parikh, *The Proliferation of Tax Strategy Patents: Has Patenting Gone Too Far?*, 7 J. Marshal Rev. Intell. Prop. L. 202 (2007).

⁷³ American Institute of CPAs, *Tax Strategy Patents*, <http://www.aicpa.org/Advocacy/Issues/Pages/TaxStrategyPatents.aspx>; Leahy-Smith American Invents Act § 14.

⁷⁴ See *Bilski*, *supra* note 53 for a brief discussion of the fine line between a patentable electronic device and software resident on an electronic device.

⁷⁵ *E.g.*, ‘358 Patent, 41:56–42:13.

⁷⁶ See *White Consol. Indus., Inc. v. Vega Servo-Control, Inc.*, 713 F.2d 788, 791 (Fed. Cir. 1983) (“The sine qua non of a valid patent is a full, clear, enabling description of the invention.”).

Innovations in tax avoidance strategies do not require such an incentive.⁷⁷ Arguably, the incentive to reduce one's tax bill is sufficient to drive the need for new, creative tax strategies.⁷⁸ That is, these inventions may come to light even in the absence of a patent system.⁷⁹

A similar focus on the incentives in creating insurance products is helpful. State Departments of Insurance are public entities tasked with regulating the insurance industry in order to protect the public.⁸⁰ The Departments of Insurance must mediate competing public and private interests to craft solutions that best serve the public.⁸¹ The patent system hasn't been needed to incentivize these products because the private interests involved were business-focused rather than technology-focused.

Usage-based insurance changed the dynamic by changing the focus. The ideas behind usage-based insurance go back at least as early as the 1960s. In 1968, William Vickrey stated that "the manner in which [automobile insurance] premiums are computed and paid fails miserably to bring home to the automobile user the costs he imposes in a manner that will appropriately influence his decision."⁸² As an example of a better method, Vickrey states: "There is no real conceptual difficulty in charging an insurance premium according to mileage; the problem is one of implementation."⁸³ That is, then-current technology did not allow for accurate recording and reporting of usage data.⁸⁴ What Progressive and others eventually patented are technological embodiments of these old ideas.⁸⁵ The difficulty is determining how to handle these patents when they preempt a publicly-enabled market.

2. Oil & Gas

In 1991, California mandated the use of clean-burning gasoline.⁸⁶ Unocal owned U.S. Patent No. 5,288,393 ("the '393 Patent").⁸⁷ The '393 Patent claimed a particular unleaded gasoline fuel that could reduce emissions "of NO_x, CO and/or hydrocarbons."⁸⁸ The '393 Patent appeared to preempt all implementations of the

⁷⁷ See generally, Brian C. Banner, *Patenting Tax Strategies: The Case for Excluding Legal Methods from the Realm of Patentable Subject Matter*, 15 TEX. INTELL. PROP. L.J. 491 (2007).

⁷⁸ *Id.* at 497–500.

⁷⁹ *Id.*

⁸⁰ See, e.g., TEX. INS. CODE § 31.002 ("In addition to the other duties required of the Texas Department of Insurance, the department shall . . . protect and ensure the fair treatment of consumers; and ensure fair competition in the insurance industry in order to foster a competitive market.") (internal enumeration omitted).

⁸¹ *Id.*

⁸² Williams Vickrey, *Automobile Accidents, Tort Law, Externalities, & Insurance: An Economist's Critique*, 33 LAW & CONTEMP. PROBS. 464, 470 (1968).

⁸³ *Id.* at 471–2.

⁸⁴ *Id.* at 472.

⁸⁵ See, e.g. *supra* note 39 and accompanying text.

⁸⁶ News Release, Cal. Env'tl. Prot. Agency, *California Air Resources Board Orders World's Cleanest Burning Gasoline* (Nov. 22, 1991), available at <http://www.arb.ca.gov/newsrel/nr112291.htm> (last visited Oct. 13, 2013); Cal. Code Regs. tit. 13, § § 2260–76 (2002).

⁸⁷ U.S. Patent & Trademark Office Assignment Records, Reel No. 005561, Frame No. 0913.

⁸⁸ U.S. Patent No. 5,288,393, Abstract.

regulations.⁸⁹ Unocal sought royalties from its competitors of about 5.75 cents a gallon.⁹⁰ Unocal waged a long legal battle to defend its patent and its licensing practice despite heavy public criticism.^{91,92} Eventually, the case settled as a result of Unocal's merger with Chevron.⁹³ Thereafter, Chevron agreed not to enforce the patents.⁹⁴

This is an example of what can occur when a single entity, through its patents, preempts a public standard. In this case the preemption was mitigated when Unocal came under intense public pressure following an investigation into its role in drafting the regulations that it sought to capture.^{95,96}

The next few sections of this paper highlight important points for calculating a reasonable royalty for a patent that preempts a public standard market. When a public standard patentee has sued a competitor for infringement, the patent is valid, and the competitor has infringed, what then is the damages model? How should that number be adjusted up or down to account for other factors?

III. PUBLIC STANDARDS AND THE REASONABLE ROYALTY

A. *The Reasonable Royalty*

A party infringes a patent when, without authority, that party “makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patent invention.”⁹⁷ In order to prove infringement, a patentee must show by a preponderance of the evidence that the accused party's product or service

⁸⁹ Janice M. Mueller, *Patent Misuse Through the Capture of Industry Standards*, 17 Berkeley Tech. L.J. 623, 625 (Spring 2002).

⁹⁰ *Id.* at 627.

⁹¹ See *Union Oil Co. of Cal. v. Atlantic Richfield Co.*, 208 F.3d 989, 1002 (Fed. Cir. 2000).

⁹² Unocal's participation in the actual passage of the pertinent regulations outraged the public. See Julie Tamaki, *Unocal Patent on Clean Fuel Stirs Outrage*, L.A. Times, Oct. 9, 2000, A3.

⁹³ Toby Eckert, *Unocal Patent Dispute Settled*, The San Diego Union-Tribune (June 11, 2005).

⁹⁴ *Id.*

⁹⁵ See *supra* note 91.

⁹⁶ For the purposes of this paper, there is an assumption that no patent misuse has occurred. A patent may be found unenforceable under the doctrine of patent misuse when a patentee uses to the patent to “acquire a monopoly not embraced in the patent.” *Princo Corp. v. Int'l Trade Comm'n*, 616 F.3d 1318, 1327 (2010) (en banc) (quoting *Transparent-Wrap Mach. Corp. v. Stokes & Smith Co.*, 329 U.S. 637,643 (1947). A patent holder commits patent misuse if it: (1) “broadened the physical or temporal scope of the patent grant,” (2) such that the “overall effect . . . tends to restrain competition unlawfully in an appropriately defined relevant market.” *Princo*, 616 F.3d at 1334. Cases have argued that the nondisclosure of pertinent patents to a standards-setting organization is grounds for patent misuse and thus unenforceability. Arguably, *Princo* refutes a patent misuse challenge based on a “patentee's unilateral conduct, including misleading a [standards-setting organization.” Daniel J. Matheson, *Patent Misuse: The Questions That Linger Post-Princo*, Am. Bar Assoc. Section of Antitrust Law Intellectual Prop. Comm. (2011). Regardless of the accuracy of this approach, patent misuse is beyond the scope of this paper.

⁹⁷ 35 U.S.C. § 271(a). There are other ways of finding a party liable as an infringer, as covered by the remainder of 35 U.S.C. § 271. For the purposes of this discussion, it is sufficient to only consider infringement under § 271(a).

meets each and every limitation of a patent claim.⁹⁸ An accused party may respond to infringement allegations with a number of affirmative defenses and/or counterclaims, including attacks on patent validity under 35 U.S.C. §§ 101–03, 112.⁹⁹

Upon a finding of infringement, “the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer.”¹⁰⁰ A reasonable royalty, then, is the floor for a patent damages award. Courts have defined a reasonable royalty as “an amount ‘which a person, desiring to manufacture and sell a patented article, as a business proposition, would be willing to pay as a royalty and yet be able to make and sell the patented article, in the market, at a reasonable profit.’”¹⁰¹ In most situations, the lack of an available established royalty (whether by industry standard or an extant licensing regime by the patentee) forces courts to undergo a murky analysis based on a “hypothetical negotiation.”¹⁰²

A hypothetical negotiation analysis typically proceeds by considering fifteen factors first formalized by United States District Court for the Southern District of New York in *Georgia Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 197), *modified by* 446 F.2d 295 (2d Cir. 1971). The Federal Circuit once described the hypothetical negotiation as taking place “as if the parties negotiated at arm’s length as a willing licensor and a willing licensee on the date when the infringement began.”¹⁰³

The characterization of the hypothetical negotiation doctrine as between a “willing licensor and a willing licensee” has not aged well. The Federal Circuit has called the “willing licensor-willing licensee” characterization “absurd,” and notes that the use of such a model “for determining damages ‘risks creation of the perception that blatant, blind appropriation of inventions by individual, nonmanufacturing inventors is the profitable, can’t-lose course.’”¹⁰⁴ To “avoid such a result,” the Federal Circuit

⁹⁸ Proving patent infringement is a two-step process. The first step, often referred to as “claim construction,” involves interpreting the terms of a patent claim to establish their breadth. The second step involves a comparison of the accused product or service with the interpreted claim. *See, e.g., Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (*en banc*). The comparison in the second step is either a literal comparison or one under the Doctrine of Equivalents. *See Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 608 (1950).

⁹⁹ Traditionally, there are five requirements for patentability: (1) patentable subject matter, 35 U.S.C. § 101; *Bilski v. Kappos*, 561 U.S. 593 (2010); (2) utility, 35 U.S.C. § 101; *In re Brana*, 51 F.3d 1560, 1564 (Fed. Cir. 1995); (3) novelty, 35 U.S.C. § 102; (4) nonobviousness, 35 U.S.C. § 103; and (5) sufficient disclosure, 35 U.S.C. § 112.

¹⁰⁰ 35 U.S.C. § 284.

¹⁰¹ *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157–58 (6th Cir. 1978) (quoting *Goodyear Tire & Rubber Co. v. Overman Cushion Tire Co.*, 95 F.2d 978, 984 (6th Cir. 1937) (citing *Rockwood v. General Fire Extinguisher Co.*, 37 F.2d 62, 66 (2d Cir. 1930)), *appeal dismissed on motion of counsel for petitioners*, 306 U.S. 665 (1938).

¹⁰² *See generally Georgia Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970), *modified by* 446 F.2d 295 (2d Cir. 1971).

¹⁰³ *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1576 (Fed. Cir. 1995) (citing *State Indus. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989)).

¹⁰⁴ *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1109 (Fed. Cir. 1996) (quoting *Fromson v. Western Litho Plate & Supply Co.*, 853 F.2d 1568, 1575 (Fed. Cir. 1988), *overruled on other grounds by Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1343-44 (Fed. Cir. 2004)).

suggests application of the *Georgia Pacific* factors.¹⁰⁵ This may involve modifying a royalty rate in order to “do justice” to the patentee.¹⁰⁶

The factors enumerated by the *Georgia-Pacific* court are listed below. Not all factors may be applicable in every case, and the Federal Circuit has noted that the list is “comprehensive (but unprioritized and often overlapping).”¹⁰⁷

1. *Georgia-Pacific Factors*¹⁰⁸

1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.
2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.
3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.
4. The licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.
6. The effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.
7. The duration of the patent and the term of the license.
8. The established profitability of the product made under the patent; its commercial success; and its current popularity.
9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.

¹⁰⁵ *Maxwell*, 86 F.3d at 1109.

¹⁰⁶ See *TWM Mfg. v. Dura Cop.*, 789 F.2d 895, 900 (Fed. Cir. 1986) (stating that “[t]he willing licensee/licensor approach must be flexibly applied as a ‘device in the aid of justice.’”) (quoting *Cincinnati Car Co. v. New York Rapid Transit Corp.*, 66 F.2d 592, 595 (2d Cir. 1933)). See also *Maxwell*, 86 F.3d at 1109–10 (finding that the district court’s instruction to the jury to calculate damages in addition to a reasonable royalty to not be an abuse of discretion).

¹⁰⁷ *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed. Cir. 2010).

¹⁰⁸ *Georgia-Pacific*, 318 F. Supp. at 1120.

10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.

11. The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.

12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.

13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

14. The opinion testimony of qualified experts.

15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee- who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention- would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

At least one commentator has noted that factor (15) is the ultimate determination made by the fact-finder, supported by evidence of the applicable factors (1)–(14).¹⁰⁹ Some courts have resisted applying Factor (1): “royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty,”¹¹⁰ arguing that the “risk and expense of litigation”¹¹¹ skews the reasonable royalty calculation.¹¹² However, the Federal Circuit has noted that, in the absence of other reliable evidence, litigation-derived licenses may be the best available indicator of a starting point for a reasonable royalty calculation.¹¹³ Following the Federal

¹⁰⁹ Janice M. Mueller, AN INTRODUCTION TO PATENT LAW, P. 403 (2d ed. 2005).

¹¹⁰ *Georgia-Pacific*, 318 F. Supp. at 1120.

¹¹¹ *Rude v. Westcott*, 130 U.S. 152, 164 (1889) (“The avoidance of the risk and expense of litigation will always be a potential motive for a settlement.”).

¹¹² See *Am. Original Corp. v. Jenkins Food Corp.*, 774 F.2d 459, 464 (Fed. Cir. 1985) (noting that a license derived from litigation “does not establish . . . the minimum reasonable royalty,” because “[a] royalty at which a patentee offers to license his invention, particularly when coupled with a claim of infringement, is not necessarily the same rate as that upon which a hypothetical willing licensee and willing licensor would agree”).

¹¹³ *ResQNet*, 594 F.3d at 872.

Circuit's observation, courts have begun to more seriously consider the value of litigation-derived licenses.¹¹⁴

Another method of calculating a reasonable royalty approved by the Federal Circuit in *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895 (Fed. Cir. 1986), *cert. denied*, 479 U.S. 852 (1986), applies primarily when an infringer has calculated projected profits prior to beginning infringement.¹¹⁵ In *TWM*, the Federal Circuit endorsed a royalty rate based on the difference between the projected profit on the infringing product (about 40%) and the industry standard net profit (about 10%).¹¹⁶ Although internal estimates of potential profit are not uncommon, they are not necessarily easy to obtain or prove. The *Georgia-Pacific* analysis therefore remains the most common form of reasonable royalty calculation.

B. Entire Market Value Rule

Reasonable royalty damages have two components: the royalty rate and the base to which it is applied. The *Georgia-Pacific* analysis helps to establish the royalty rate.¹¹⁷ The base may be sales of the infringing product or sales of a product incorporating an infringing component. A major factor in determining the royalty base is the "entire market value rule." When it applies, the entire market value rule enables a patentee to establish as the royalty base not just the patented component, but also unrelated, unpatented items.¹¹⁸ These unpatented items fall into two categories: "convoyed" sales (those that typically accompany a patented item) and "derivative" sales (essentially spare parts).¹¹⁹

Generally, the entire market value rule applies when: "(1) the infringing components must be the basis for customer demand for the entire machine including the parts beyond the claimed invention; (2) the individual infringing and non-infringing components must be sold together so that they constitute a functional unit or are parts of a complete machine or single assembly of parts; and (3) the individual infringing and non-infringing components must be analogous to a single functioning unit. . . . Notably, these requirements are additive, not alternative ways to demonstrate eligibility for application of the entire market value rule."¹²⁰

Of most importance to the present analysis is the application of the entire market value rule to a product incorporating many separate components (or a product incorporating many separate features), only one of which is covered by the particular patent at issue. In *Lucent Tech., Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009), the Federal Circuit tackled the task of calculating the reasonable royalty base for an infringed patent that covered a method of "entering information on a computer screen

¹¹⁴ See Layne S. Keele, *Res"Q"ing Patent Infringement Damages After ResQNet: The Dangers of Litigation Licenses as Evidence of a Reasonable Royalty*, 20 TEX. INTELL. PROP. L.J. 181, 194 (2012).

¹¹⁵ *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895 (Fed. Cir. 1986), *cert. denied*, 479 U.S. 852 (1986)

¹¹⁶ *Id.*

¹¹⁷ *Georgia-Pacific*, 318 F. Supp. at 1120

¹¹⁸ See *Juicy Whip, Inc. v. Orange Bang, Inc.*, 382 F.3d 1367 (Fed. Cir. 2004)

¹¹⁹ *Carborundum Co. v. Molten Metal Equipment Innovations, Inc.*, 72 F.3d 872, 881 n. 8 (Fed. Cir. 1995).

¹²⁰ *Cornell Univ. v. Hewlett-Packard Co.*, 609 F. Supp. 2d 279, 286–87 (N.D.N.Y. 2009) (Rader, J. sitting by designation) (internal citations omitted).

without using a keyboard.”¹²¹ The patent holder, Lucent Technologies, accused Microsoft Outlook, Money, and Windows Mobile of infringing the patent.¹²² At trial, the jury awarded damages of over \$350 million based on Microsoft’s infringement.¹²³ The jury applied the entire market value rule to the total sales value of the three accused products, approximately \$8 billion.^{124,125} The Federal Circuit rejected the jury’s damages calculation.¹²⁶

The Federal Circuit took exception to the application of the entire market value rule for two reasons: first, the lack of nexus between the patented feature and consumer demand for the accused products,¹²⁷ and second, the unreasonable expectations for a royalty rate.¹²⁸ As a general rule, the Court noted, there “is nothing inherently wrong with using the market value of the entire product, especially when there is no established market value for the infringing component or feature, so long as the multiplier accounts for the proportion of the base represented by the infringing component or feature.”¹²⁹ The Court vacated the damages award and remanded for a new trial on damages.¹³⁰ At the subsequent trial, the jury awarded damages of \$70 million.¹³¹ Following motions for judgment as a matter of law, the amount was reduced to a grand total of approximately \$41 million.¹³²

C. Private Standards

Understanding the entire market value rule is key to understanding the application of reasonable royalty analyses in the private standards context. One of the highest-profile cases in the private standard arena is the recent controversy between Google and Microsoft as part of the so-called “smartphone wars.”¹³³ Google, as the

¹²¹ Lucent Tech., Inc. v. Gateway, Inc., 580 F.3d 1301, 1038 (Fed. Cir. 2009). The patent at issue was U.S. Patent No. 4,763,356.

¹²² *Lucent*, 580 F.3d at 1038.

¹²³ *Id.* at 1039.

¹²⁴ *Id.* at 1323.

¹²⁵ It is unclear how exactly the jury arrived at its damages figure. On the jury form, it indicated that it was a lump sum royalty payment rather than a running royalty. However, the damages amount was given to the penny: \$357,693,056.18. The Federal Circuit assumed that the jury applied the entire market value rule to arrive at the number. *Id.* at 1336.

¹²⁶ *Id.*

¹²⁷ *Id.* at 1338 (“The date-picker tool’s minor role in the overall program is further confirmed when one considers the relative importance of certain other features, e.g., e-mail.”).

¹²⁸ *Id.* at 1338–39 (“Lucent’s expert tried to reach the damages number he would have obtained had he used the price of the entire computer as a royalty base. Being precluded from using the computer as the royalty base, he used the price of the software, but inflated the royalty rate accordingly.”)

¹²⁹ *Id.* at 1339. The Court was, in part, responding to criticism of the application of the entire market value rule to the reasonable royalty context. See, e.g., Mark A. Lemley, *Distinguishing Lost Profits from Reasonable Royalties*, 51 WM. & MARY L. REV 655 (2009).

¹³⁰ *Id.* at 1340.

¹³¹ Lucent Techs., Inc. v. Microsoft Corp., 837 F. Supp. 2d 1107, 1111 (S.D. Cal. 2011).

¹³² *Id.* at 1127.

¹³³ E.g., E. Robert Yoches, *Lessons from the Smartphone Wars*, Managing Intellectual Property, Chinese Edition (Dec. 2012), available at <http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=e0cc3946-20e3-4f96-ab5e-534d60de33b4>.

owner of a portfolio of patents originally held by Motorola Mobility,¹³⁴ demanded royalties from Microsoft in the hundreds of millions of dollars.¹³⁵ The patents at issue covered two different communications standards: H.264¹³⁶ and 802.11.^{137,138}

There are two key factors in Google’s ability to demand such a large royalty amount. First, standards are essential to the operation of modern technological devices.¹³⁹ A smartphone that was unable to communicate over 802.11—the communications standard used by wireless routers—would not be of much use to consumers.¹⁴⁰ Second, a smartphone, like many other electronic devices, implements a vast array of standards.¹⁴¹

The first problem is referred to as patent “holdup.”¹⁴² As the *Microsoft* court noted, holdup “can threaten the diffusion of valuable standards and undermine the standard-setting process.” It also “harms consumers to the extent that those excess [royalty] costs are passed onto them.”¹⁴³ The second problem is known as patent “stacking.” This occurs both when a single standard is covered by multiple patents and when a single device implements multiple standards. Patent stacking runs the risk “of the use of post-adoption leverage to exact excessive royalties [] compounded by the number of potential licensors”¹⁴⁴

To mitigate these issues, many standards-setting organizations implement patent policies that require participating members to disclose any patents that might cover a potential standard, and to make those patents available at a reasonable, nondiscriminatory (“RAND”) royalty rate.¹⁴⁵ The standards-setting organizations responsible for both the H.264 and 802.11 standards required patentees to offer standards-essential patents at RAND rates.¹⁴⁶ However, what “RAND” actually means is not specified by the organizations and is left to the courts to decide.¹⁴⁷

In *Microsoft v. Motorola*, Judge Robart finally addressed this issue. According to Judge Robart:

¹³⁴ Parmy Olson *Google Buys Motorola Mobility for \$12.5B, Revs Up Patent Portfolio*, Forbes.com (Aug. 15, 2011), available at <http://www.forbes.com/sites/parmyolson/2011/08/15/google-buys-motorola-mobility-for-12-5b-revs-up-patent-portfolio/>.

¹³⁵ See Susan Decker, *Judge Cuts Google’s Motorola Royalty Demand to Microsoft*, BLOOMBERG.COM, (visited on Apr. 26, 2013 12:07 P.M.), <http://www.bloomberg.com/news/2013-04-26/judge-cuts-google-s-motorola-royalty-demand-to-microsoft.html>.

¹³⁶ H.264 is a video compression standard created by the International Telecommunication Union, the International Organization for Standardization, and the International Electrotechnical Commission. It is widely used in the communication of high definition video. Int’l Telecommunication Union, *H.264: Advanced Video Coding for Generic Audiovisual Services*, <http://www.itu.int/rec/T-REC-H.264>.

¹³⁷ 802.11 is a wireless communication standard promulgated by the Institute of Electrical & Electronics Engineers (“IEEE”). IEEE, *IEEE Get Program*, <http://standards.ieee.org/about/get/802/802.11.html>.

¹³⁸ *Microsoft Corp. v. Motorola, Inc., et al.*, 2013 WL 2111217, (W.D. Wash. Apr. 25, 2013).

¹³⁹ See, e.g., *Microsoft*, at *8.

¹⁴⁰ *Id.*

¹⁴¹ *Id.* at *14.

¹⁴² *Microsoft*, at *10–11.

¹⁴³ *Id.* at *10.

¹⁴⁴ *Id.* at *11.

¹⁴⁵ *Id.* at *9–11.

¹⁴⁶ *Microsoft*, 2013 WL 2111217 at *6–9.

¹⁴⁷ *Id.* at 9–10.

[T]he hypothetical negotiation under a RAND obligation must be different than the typical *Georgia-Pacific* analysis historically conducted by courts in a patent infringement action. This is so for at least two reasons. First, the owner of [a standards-essential patent (“SEP”)]¹⁴⁸ is under the obligation to license its patents on RAND terms, whereas the owner of a patent uncommitted to RAND has monopoly power over its patent and may choose to withhold licensing. Second, the hypothetical negotiation almost certainly will not take place in a vacuum: the implementer of a standard will understand that it must take a license from many SEP owners, not just one, before it will be in compliance with its licensing obligations and able to fully implement the standard.¹⁴⁹

Thus, to Judge Robart, the willingness of a patentee to submit to the terms of a standards-setting organization implies an abandonment of its normal patent-based right to seek the highest market value possible for royalties. When a standards-setting organization recognizes a patent as essential, royalties may be calculated only after consideration of the number of other, related standard-essential patents. Judge Robart, therefore, modified the *Georgia-Pacific* standards to account for the differences inherent in a standards-driven environment.¹⁵⁰

D. Public Standards

While Judge Robart’s analysis is welcome in the world of private standards, his specific reasons for calculating the reasonable royalty are not necessarily applicable to the world of public standards. Public standards do not yet have to cope with the problem of patent stacking. For example, an automotive insurance company must license far fewer patents than electronics and telecommunications industries.¹⁵¹ For usage-based insurance products, there may be only a single portfolio license required.^{152,153} While this can be expensive, it is not unique to public standards.

Public standards also do not typically involve the explicit, contract-based agreements characteristic of private standards. In the *Microsoft* example above,

¹⁴⁸ Private standards-setting organizations use the term “essential” if a patent “is necessary to implement either an optional or mandatory provision of a patent.” *Id.* at *15.

¹⁴⁹ *Id.* at *16.

¹⁵⁰ *E.g., id.* at *18 (in examining Factor 1, Judge Robart concluded that “past royalty rates for a patent must be negotiated under the RAND obligation or a comparable negotiation. Thus, license agreements where the parties clearly understood the RAND obligation, and . . . patent pools, will be relevant to a hypothetical negotiation for SEPs.”).

¹⁵¹ See Section II.A; *Microsoft*, at *17 (noting evidence that standards “related to 802.11 Standard ‘generally is acknowledged to be in the thousands.’”).

¹⁵² See *supra* Section II.A.

¹⁵³ This may not be the case for insurance companies that wish to manufacture (or have manufactured for them) their own devices for use with a usage-based insurance product. As described above in Section II.A, for example, Progressive’s Snapshot device allows for communication of telematics data over a wireless network. This communication path is covered by the 802.11 standard. However, as noted above, the private standards governing electronic devices have a distinct and growing jurisprudence that does not necessarily implicate the same considerations as those governing public standards.

Motorola joined an agreement to offer its standards-essential patents at RAND rates.¹⁵⁴ Public standards instead rely on an implicit agreement between competitors: that state agencies will act as the guardian of the customer's interest.

The role of state agencies in this agreement strengthens the need to consider the public interest in determining the cost of participation in a patent-controlled market. It is one thing to consider "the benefits to those who have used the invention"¹⁵⁵ (*Georgia-Pacific* factor #10) when determining a royalty rate for Microsoft Outlook. It is quite another to consider the public interest in determining an entry cost for a market explicitly enabled by law.

However, the idea of explicitly considering a strong public interest seems to have little place in a traditional "willing licensee/willing licensor"-style hypothetical negotiation. In an *ex ante* negotiation, the public interest factor is entirely on the side of the licensor and provides little leverage against a licensee whose business has already been permitted by legislation. In markets traditionally subject to patent licensing negotiations, there is substantially more room to offer a slightly different product or compete in a slightly different way that may, even theoretically, avoid the patents at issue. There is no requirement, for example, that any smartphone manufacturer implement the H.264 standard; it is just better for their business for them to do so.¹⁵⁶

In the case of public standards, there are fewer options. There may be some room to "design around" a patent and still comply with regulation, but there may not be.¹⁵⁷ The negotiating power in a hypothetical negotiation is incredibly asymmetric. As a result, a court considering a reasonable royalty calculation must be willing to modify the *Georgia-Pacific* factors to accommodate the strong public interest inherent in public standard patents.

To paraphrase Judge Robart then, there is one question left to be answered: what factors should a court force a patent owner and public standard-implementer to consider during such a hypothetical negotiation?¹⁵⁸

IV. A HYPOTHETICAL NEGOTIATION FOR A PUBLIC STANDARD.

As discussed above in Section III.A, there are fifteen enumerated factors in the traditional *Georgia-Pacific* reasonable royalty analysis.¹⁵⁹ However, not all of them may be applicable to a given case.¹⁶⁰ For example, in the *Microsoft v. Motorola* case,

¹⁵⁴ *Microsoft*, at *8.

¹⁵⁵ *Georgia-Pacific*, 318 F. Supp. at 1120.

¹⁵⁶ See *Microsoft*, at *9.

¹⁵⁷ See *supra* notes 98-103 and accompanying text.

¹⁵⁸ See *Microsoft*, at *17 ("With respect to methodology, there is one question left to be answered: what factors would [a standard-essential patent] owner and standard-implementer consider during such a hypothetical negotiation?").

¹⁵⁹ *Georgia-Pacific*, 318 F. Supp. at 1120.

¹⁶⁰ *Id.* at 1119–21.

Judge Robart's modified factors¹⁶¹ may be summarized as described below in Table 3.¹⁶²

TABLE 3

Factor #	Description	Modification
1	Royalties received for licensing the patent in suit	Limited to RAND agreements ¹⁶³
6, 8	Importance of patented invention to licensor and licensee's sales	Limited to value of component invention, not the standard itself ¹⁶⁴
9	Advantages over other alternatives	Limited to consideration of alternative prior to standard's adoption ¹⁶⁵
10, 11	Benefits to the infringer	Focused on the value of the component invention more so than the standard itself. ¹⁶⁶
12	Customary royalty values in the industry	Limited to "customary practices of businesses licensing RAND-committed patents." ¹⁶⁷
13	Portion of profit attributable to invention	Limited to value of component invention, not the standard itself. ¹⁶⁸
15	Amount parties would have agreed to <i>a priori</i>	Must reflect the RAND "commitment of widespread adoption of the standard through avoidance of holdup and stacking." ¹⁶⁹

Not all of these modifications are as applicable to the realm of public standards. For example, absent the concerns over patent holdup, the modifications to factors 6, 8, 10, and 11 have less force.¹⁷⁰ Judge Robart's opinion illustrates how a court may apply the *Georgia-Pacific* analysis to a specific business context when that context is sufficiently understood.

With respect to public standards, potential modifications look quite different. The proposed modifications below attempt to balance two competing realities: public

¹⁶¹ Judge Robart's *Georgia-Pacific* analysis arguably does not modify the traditional factors, but merely applies them to a RAND-specific context. However, I use the term here given the Judge's use of the word "modified," see *supra* note 150.

¹⁶² *Microsoft*, at *18–20.

¹⁶³ *Id.* at *18.

¹⁶⁴ *Id.* at *18. Arguably this is not a modification of factors (6) and (8), but rather an application of the entire market value rule. See *supra* Section III.B.

¹⁶⁵ *Id.* at *19.

¹⁶⁶ *Id.* at *19.

¹⁶⁷ *Id.* at *19.

¹⁶⁸ *Id.* at *19.

¹⁶⁹ *Id.* at *20.

¹⁷⁰ See *supra* notes 151–56 and accompanying text.

standard patentees hold a valid¹⁷¹ right to exclude others from the patented invention, but the ability of any party to practice the patented invention arises entirely from public legislation. This tension almost places the public in the shoes of the licensor. Any reasonable royalty calculation must incorporate the public interest into the fabric of the analysis. The sections below examine the most relevant of the reasonable royalty factors.

A. Factor 1: Royalties Received for Licensing the Patent in Suit

It is unclear how this factor might apply to public standard litigation. As noted above, the number of patents covering a standard may be relatively small.¹⁷² Further, the licenses that are available may be litigation-based, which the Federal Circuit has recognized may be of limited evidentiary value.¹⁷³ With the example of usage-based automobile insurance, the most relevant license data point would be the license between Progressive and USAA discussed in Section II.A, above. Even this license may be of limited use, however, due to its terms requiring delay in implementing any competing usage-based products.¹⁷⁴

One approach to applying in Factor 1 to public standards is to look for elements in prior licensing agreements that comport with the public interest. For example, in considering the license between Progressive and USAA, a court may consider whether it is more important to the public that a particular market have as many competitors as quickly as possible (thus driving down prices) or to have competitors paying a lower up-front rate in the hopes that the savings will be passed on to consumers. If the former, the analysis may allow for a higher, flat-rate royalty. If the latter, more creative alternatives may be considered such as a rate that rises over time.

B. Factors 4–5: Licensor’s Monopoly Policy

Factors 4–5 weigh most heavily in the patentee’s favor. Factor 4 considers the patentee’s licensing program. In *Microsoft*, Judge Robart considers Factor 4 inapplicable “because the licensor has made a commitment to license on RAND terms and may no longer maintain a patent monopoly by not licensing to others.”¹⁷⁵ As discussed above,¹⁷⁶ this may not be the case with public standards. Indeed, Progressive’s example illustrates precisely what Factor 4 attempts to capture: a consistent policy of attempting to maintain a patent monopoly “by granting licenses under special conditions designed to preserve that monopoly.”¹⁷⁷ A sophisticated public

¹⁷¹ Once issued, a patent is presumed valid. 35 U.S.C. § 282. Invalidation must be proved by clear and convincing evidence. *See Buildex, Inc. v. Kason Indus., Inc.*, 849 F.2d 1461, 1463 (Fed. Cir. 1988).

¹⁷² *See supra* Section II.A.

¹⁷³ *See supra* notes 112–13 and accompanying text.

¹⁷⁴ *Id.*

¹⁷⁵ *Microsoft*, at *18.

¹⁷⁶ *See supra* Section II.A.

¹⁷⁷ *Georgia-Pacific*, 318 F. Supp. at 1120. Progressive’s 2013 offered license required that any licensee forestall offering its own products prior to 2015, and gave Progressive a potential right of

standard patentee may well take advantage of a policy similar to Progressive's in order to establish a strong monopoly policy.

Factor 5 considers the “commercial relationship between the licensor and licensee, such as whether they are competitors in the same territory in the same line of business.”¹⁷⁸ A greater monetary range is allowed between competitors. Typically, a licensing arrangement touching on public standards would be between or among competitors.

C. Factors 6, 8, 9: Advantages Over Old Modes

Factors 6 and 8 reflect the importance of the patented invention to the sales (including those of conveyed and derivative products) of the parties.¹⁷⁹ Factor 6 considers the value of the invention “in promoting sales of other products,” while Factor 8 analyzes the “established profitability of the product made under the patent; its commercial success; and its current popularity.”¹⁸⁰ Factor 9 contemplates the “utility and advantages of the patent property over the old modes or devices.”¹⁸¹

Application of all three factors should focus on currently available alternatives to the patented version of the public standard. If no alternatives exist—if the patent completely preempts the standard—then public interest in the competitive availability of the invention should weigh more heavily. If alternatives do exist, then these alternatives should be taken into account and the patentee allowed a greater royalty rate.

The *Microsoft* analysis in the private-standard sphere requires that the Factor 9 analysis consider only “alternatives that could have been written into the standard instead of the patented technology.”¹⁸² In the public standard context, one must first define what is meant by “alternatives.” Judge Robart compares competing technical solutions to a problem presented by the standards-setting organization when considering his royalty calculation.¹⁸³ Public standards, however, may not arise in a similar manner.¹⁸⁴

For example, usage-based insurance products are, strictly speaking, “alternatives” to traditional insurance premium plans. However, when comparing traditional premiums to usage-based products, the advantages the latter are rather significant. As Professor Vickrey noted forty-five years ago, “the manner in which [automobile insurance] premiums are computed and paid fails miserably to bring home to the automobile user the costs he imposes in a manner that will appropriately

recognition. Progressive Casualty Insurance Co., *Progressive® Insurance and United Services Automobile Association (USAA) Enter License Agreement for Usage-Based Insurance* (June 28, 2013), available at <http://www.progressive.com/newsroom/article/2013/June/usaa-ubi/>.

¹⁷⁸ *Georgia-Pacific*, 318 F. Supp. at 1120.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² *Microsoft*, at *19.

¹⁸³ *Id.*

¹⁸⁴ The example of the patented oil and gas product patented by *Unocal* is more analogous to the rise of private standards. In that case, different technical alternatives were considered before settling on Unocal's product. See *supra* Section II.D.2.

influence his decision.”¹⁸⁵ It may be more accurate, however, to compare usage-based alternatives. For example, the MileMeter program offers a different way to go about establishing a usage-based insurance program.¹⁸⁶ When they are available, it is preferable to focus on standard-*competing* alternatives rather than standard-*replacing* alternatives.

D. Factor 10: Benefit to Invention Users

Factor 10 credits “the benefits to those who have used the invention.”¹⁸⁷ In a typical reasonable royalty calculation, identifying benefits to those who have used the invention works in favor of the patentee. In a public standard context, however, the public benefit has been articulated and implemented through public legislation.¹⁸⁸ As a result, Factor 10 may be used as the doctrinal basis for explicitly considering the public interest.

E. Factor 12: Customary Profit

The “portion of the profit or of the selling price that may be customary in the particular business or in comparable business to allow for the use of the invention” helps to give a baseline for a royalty calculation.¹⁸⁹ In the *Microsoft* case, the court held that this inquiry should be limited to “business practices involving RAND commitments.”¹⁹⁰

It is unclear how this requirement would work in the public standard realm. Given the relatively small number of applicable patents,¹⁹¹ there may not be any available comparisons.

F. Factor 15: The Hypothetical Negotiation

“Factor 15 considers the amount that a licensor and a licensee would have agreed upon (at the time infringement began) if both had been reasonably and voluntarily trying to reach an agreement.”¹⁹² Factor 15 allows a fact-finder to bring together all of the evidence contributed by the other factors in order to determine a reasonable royalty rate and make any final adjustments necessary.¹⁹³ In addition to Factor 10, Factor 15 provides the foundation through which the public interest can most clearly be incorporated.

¹⁸⁵ William Vickrey, *Automobile Accidents, Tort Law, Externalities, & Insurance: An Economist's Critique*, 33 LAW & CONTEMP. PROBS. 464 (1968).

¹⁸⁶ See *supra* notes 49–56 and accompanying text.

¹⁸⁷ *Georgia-Pacific*, 318 F. Supp. at 1120.

¹⁸⁸ See, e.g., *supra* note 73 and accompanying text.

¹⁸⁹ *Georgia-Pacific*, 318 F. Supp. at 1120.

¹⁹⁰ *Microsoft*, at *19.

¹⁹¹ See *supra* Section II.A.

¹⁹² *Microsoft*, at *20.

¹⁹³ See *supra* note 108.

As the Federal Circuit has noted, strict adherence to the “willing licensor/willing licensee” theory can lead to “absurd” results.¹⁹⁴ Courts have used Factor 15 to adjust a preliminary reasonable royalty calculation to fit the particular facts of a case.¹⁹⁵ Fact-specific context should include the interest of the public in ensuring competition for publicly-enabled goods and services.

As discussed above, in the context of public standards, the “willing licensor/willing licensee” paradigm suffers from dramatic leverage asymmetry.¹⁹⁶ A potential licensee may have no idea that a particular market will be covered by a patent when that market is enabled. This differs markedly from a purely private-enterprise situation in which a company wants to enter a new market. That company may study the patent landscape and decide on an approach other than that covered by the patent. With a public standard, that alternative approach may be against the law.

G. Conclusion

The nature of public standard patents requires that courts give special attention to the interests of the public when determining patent infringement damages. Courts should consider the nature of the standard—whether alternatives exist to implementation,¹⁹⁷ whether the enabling body considered alternatives prior to enactment,¹⁹⁸ etc.—as well as protecting the public’s interest in promoting competition in publicly-enabled markets.¹⁹⁹

The court in *Microsoft v. Motorola* showed how a traditional damages calculation could be adapted to the context of a private standard.²⁰⁰ An analogous tailoring process would serve the public standard sphere well.

V. OTHER CONSIDERATIONS

One of the difficulties in implementing a public interest-focused approach to a reasonable royalty calculation is the question of who will advocate for the public interest or even what, exactly, the “public interest” might be. Given the leverage asymmetries of the hypothetical negotiation, one would expect that a licensee would invoke the public interest in pleadings. It is perhaps easy to imagine that the interests of a party in the midst of controversy might not perfectly align with the public interest.

One approach may be for judges, when faced with public standard patents, to call for the opinion of the state attorney general or other interested parties. Although rare,

¹⁹⁴ See *supra* notes 102–05 and accompanying text; *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1576 (Fed. Cir. 1995) (citing *State Indus. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989)).

¹⁹⁵ See *supra* note 105 and accompanying text.

¹⁹⁶ See *supra* Section III.B.3.

¹⁹⁷ See *supra* notes 73–78 and accompanying text.

¹⁹⁸ See *supra* notes 178–86 and accompanying text.

¹⁹⁹ See *supra* note 79 and accompanying text.

²⁰⁰ See *supra* Section III.

trial courts may entertain amici briefs according to their discretion.²⁰¹ Patent damages cases are not typically within the realm of attorneys general. However, some states have made noise recently about their desire to participate in some of the more high-profile patent issues.²⁰² The ability of insurance companies to compete for a lucrative new product may be something that states themselves would take an interest in. Further, the call for amici need not be limited to state agents. Consumer groups, trade industry groups, etc. might all be enlisted to provide balance to the leverage asymmetry.

A similar issue exists in determining the extent to which a patent or portfolio of patents covers a public standard. As discussed above in Section IV, certain of the *Georgia-Pacific* factors may turn on whether or not a patent wholly preempts the ability to practice a public standard.²⁰³ This type of analysis fits more squarely within the realm of a trial court's competence. The determination would require a combination of patent claim construction and statutory interpretation. A court could schedule a hearing on the issue of available alternatives prior to determining damages.

One additional practical consideration includes giving courts greater comfort with this explicit consideration of the public interest in what is theoretically a hypothetical negotiation between two private parties. One approach would be for states to require public standard patentees to offer any patents that cover a public standard at RAND rates. This would have the advantage of making the RAND analysis an explicit term to which a patentee agreed.²⁰⁴

Moving away from implementation, a looming issue in the realm of private standards is exactly what it means for a patent to be "standard essential" for the purposes of a reasonable royalty analysis. In the standards at issue in the *Microsoft* case, the standards-setting organizations themselves defined the term "essential."²⁰⁵ However, other patents may cover features of a standard that, while not "essential," are nevertheless required in order to make a product commercially viable. If the modified *Georgia-Pacific* analysis crafted by Judge Robart stands, it remains to be seen how far it may be applied to patents outside the rarified air of essentialness.

With regard to public standards, the same consideration awaits. For example, for usage-based insurance, a court may determine that a particular portfolio (e.g., Progressive's portfolio) completely covers the business aspects of practicing a public

²⁰¹ *Strougo v. Scudder, Stevens & Clark, Inc.*, 1997 WL 273566 (S.D.N.Y. Aug. 18, 1997) ("Federal courts have discretion to permit participation of amici where such participation will not prejudice any party and may be of assistance to the court.") (citing *Vulcan Society of New York City Fire Dept., Inc. v. Civil Service Comm'n*, 490 F.2d 387, 391 (2d Cir. 1973)).

²⁰² For example, the Attorneys General of Minnesota, Vermont, and Nebraska have all initiated legal action against so-called "patent troll" MPHJ and its representatives. Timothy B. Lee, *Nebraska's Attorney General Has Declared War On Patent Trolls*, *The Washington Post—The Switch*, Sept. 12, 2013, <http://www.washingtonpost.com/blogs/the-switch/wp/2013/09/12/nebraskas-attorney-general-has-declared-war-on-patent-trolls/>. In a filing with the District of Nebraska, the Nebraska Attorney General argues that the "public interest will be served by the duly elected office of the state, the attorney general, being allowed to continue his investigation pursuant to his statutory authority." *Activision TV, Inc. v. Pinnacle Bancorp, Inc. et al.*, Case No. 8:13CV00215 (D. Neb.), Docket No. 22, p. 37.

²⁰³ See *supra* Section IV and accompanying text.

²⁰⁴ See *supra* note 153 and accompanying text (discussing the explicit agreements of private standard companies to offer standard-essential patents at RAND rates).

²⁰⁵ See *Microsoft*, at *6–7.

standard. However, these patents may not cover the technology required to actually implement those business aspects (e.g., the telematics device). It remains to be determined how far courts will extend their authority to patents outside the currently defined realm of “standard essential.”

VI. CONCLUSION

Some markets require legislation in order to exist. For example, the oil and gas industry and the automobile insurance industry are heavily regulated, and new products and services often require legislative and/or regulatory approval before they may be offered to the general public.²⁰⁶ When those new products or services are covered by one or more letters patent, a situation arises in which a private party owns a right to exclude others from participating in that publicly-enabled market.²⁰⁷ These situations may be referred to “public standards.”

Like their cousins in the private sector, public standards require special consideration when it comes to determining potential compensation to the patentee from its competitors.²⁰⁸ Following the lead of the Western District of Washington, this paper has presented a recommendation for a modification of the traditional *Georgia-Pacific* reasonable royalty formulation for a patent damages calculation.²⁰⁹ Specifically, calculating damages for public standard patents requires an explicit, thorough consideration of the public interest in addition to the patents themselves and the relationship of the involved parties.²¹⁰ Only then will the interests of the public be adequately protected.

²⁰⁶ See *supra* Section II.

²⁰⁷ See *supra* Section II.A.

²⁰⁸ See *supra* Sections III–IV.

²⁰⁹ *Id.*

²¹⁰ *Id.*