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## Taxing Cloud Computing Proves to Be Just That--Taxing

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# TAXING CLOUD COMPUTING PROVES TO BE JUST THAT—TAXING

**Abstract:** In February 2020, the Massachusetts Supreme Judicial Court, in *Citrix Systems, Inc. v. Commissioner of Revenue* ruled that the sale of cloud computing subscriptions was subject to state sales tax because it was a transfer of tangible personal property. This was the first time a state’s highest court decided on the taxability of cloud computing products. As the industry continues to grow at a rapid pace, states have struggled to determine how to tax it. Some states find these products to be a non-taxable service, whereas others stretch their definitions of tangible personal property to allow taxation. This Comment argues that states cannot continue to make courts improperly fit new technology into outdated law, as in *Citrix Systems, Inc.* States must instead take aggressive steps to amend their tax statutes to partake in the bountiful profit of cloud computing and other unavoidable innovations in technology to come.

## INTRODUCTION

As technology continues to rapidly advance into unforeseen and increasingly non-physical platforms, current state sales tax laws become more difficult to apply.<sup>1</sup> States, therefore, must often choose either to apply unsuitable laws to the newest technological development or forego potential tax revenue from it.<sup>2</sup> One new technology, cloud computing, allows users to lease technology from a vendor without physically or electronically conveying the computer program.<sup>3</sup> It has quickly become a multi-billion dollar technological indus-

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<sup>1</sup> See Alesia Lewis, *A Closer Look at Sales and Use Taxation of the Cloud*, J. ACCOUNTANCY (Mar. 28, 2016), <https://www.journalofaccountancy.com/newsletters/2016/mar/sales-and-use-taxation-of-cloud.html> [<https://perma.cc/8NSQ-A9S6>] (commenting on the quick expansion of cloud computing); EY, CLOUD TAXATION ISSUES AND IMPACTS 6 (2015), <https://www.eyjapan.jp/industries/technology/knowledge/2015/pdf/Technology-2015-09-01-E.pdf> [<https://perma.cc/HAW3-URJ5>] (arguing that the current struggle between cloud computing companies and state tax authorities is a result of the inherently limitless cloud in comparison to an inherently limited tax jurisdiction). Over time, innovations can refine basic technology into increasingly complex iterations or replace old designs entirely. See Lewis, *supra* (contemplating the progression of technology). The shocking speed of such changes can render older technology unnecessary in a short amount of time. See *id.* (predicting, for example, that the cloud will lead to the imminent demise of more traditional retail shops).

<sup>2</sup> See Matthew Adam Susson, Comment, *Thinking Out Cloud: California State Sales and Use Taxability of Cloud Computing Transactions*, 17 CHAP. L. REV. 295, 296, 312 (2013) (providing the options of applying current tax statutes to inherently mismatched properties of new technology or, in the alternative, missing out on potential revenue).

<sup>3</sup> Orly Mazur, *Taxing the Cloud*, 103 CALIF. L. REV. 1, 3 (2015); ORACLE, TAX IMPLICATIONS OF CLOUD COMPUTING: WHAT EVERY CFO NEEDS TO KNOW 2 (2015), <http://www.oracle.com/us/cfo-docs/tax-cloud-computing-best-practices-2540334.pdf> [<https://perma.cc/U34D-EHU3>]. “Cloud computing” has several definitions in the field. EY, *supra* note 1, at 6. One organization defines it as any

try.<sup>4</sup> Thus, the ability to tax cloud computing products is increasingly significant because it could lead to billions of dollars in potential tax revenue.<sup>5</sup> There is, nonetheless, little guidance from individual states on the applicability of state sales taxes to vendors in this area.<sup>6</sup> In February 2020, in *Citrix Systems, Inc. v. Commissioner of Revenue*, the Massachusetts Supreme Judicial Court shed light on future taxability of the industry as the highest state court to ever consider the matter.<sup>7</sup>

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transfer of a business product to a consumer's device made wirelessly and without geographic restriction. *Id.* In 2019, in *Amazon.com, Inc. v. Moyer*, the District Court for the Western District of Washington defined cloud computing as the instantaneous transportation of digital material using the world wide web. 417 F. Supp. 3d 1388, 1392 (W.D. Wash. 2019).

<sup>4</sup> See Stephen Watts, *Cloud Revenue & Market Share Trends in 2020*, BMC (Apr. 21, 2020), <https://www.bmc.com/blogs/cloud-revenue-market-share-trends/> [<https://perma.cc/JHJ6-CJYW>] (reflecting on cloud computing's recent economic boom). In 2019, cloud computing revenue totaled \$227.8 billion. *Id.*

<sup>5</sup> See Mazur, *supra* note 3, at 3 (predicting that cloud computing products will generate \$241 billion in revenue by 2020). Sales tax collection is one of the ways that states generate revenue. See *What Are the Sources of Revenue for State Governments?*, TAX POL'Y CTR., <https://www.taxpolicycenter.org/briefing-book/what-are-sources-revenue-state-governments> [<https://perma.cc/8K7J-TUYX>] (listing various taxes, commissions or tolls, and payments from the federal government as the ways that states generate revenue). Generally, individuals that make purchases must also pay a portion of the price of the good as a tax to the state government. *General Sales Taxes and Gross Receipts Taxes*, URB. INST., <https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/projects/state-and-local-backgrounders/sales-taxes> [<https://perma.cc/3888-ENGT>]. For example, an individual who purchased a \$100 item in a state with a 10% sales tax rate would pay \$10 in sales tax to the state in addition to the \$100 paid to the vendor. See *id.* (explaining how to determine the amount of a sales tax).

<sup>6</sup> See Mazur, *supra* note 3, at 4 (suggesting that current state law is insufficient to cover cloud computing). It is even more difficult to discern how to apply state sales taxes to vendors of cloud computing products because of unclear and inconsistent rules amongst states. See *id.* (opining that the available guidance does not do enough to aid cloud companies). In 2019, the Internal Revenue Service (IRS) proposed regulations that purported to help taxpayers determine whether a cloud product was property or services. See Joyce Beebe, *How Should We Tax the Cloud?*, BAKER INST. BLOG (Aug. 23, 2019), <https://blog.bakerinstitute.org/2019/08/23/how-should-we-tax-the-cloud/> [<https://perma.cc/DF23-68NM>] (suggesting that the new IRS regulation might clarify cloud taxability for vendors by standardizing the definition of a "cloud transaction"); Classification of Cloud Transactions and Transactions Involving Digital Content, 84 Fed. Reg. 40,317 (proposed Aug. 14, 2019) (to be codified at 26 C.F.R. pt. 1) (detailing the IRS's proposed regulation). Nevertheless, some commentators have criticized this guidance for being unclear. See Roger Russell, *Fresh Ideas on Taxing the Cloud*, ACCT. TODAY (Oct. 8, 2019), <https://www.accountingtoday.com/news/fresh-ideas-on-taxing-the-cloud> [<https://perma.cc/8QLQ-8TDT>] (providing the criticism by tax lawyer Edward Tanenbaum that, although the regulation would help to categorize cloud computing transactions, it does not sufficiently explain how to apply the rule).

<sup>7</sup> See *Citrix Sys., Inc. v. Comm'r of Revenue*, 139 N.E.3d 293, 301 (Mass. 2020) (holding that the sale of subscriptions to cloud computing products is taxable); Tim Wolfe, *Online Software Subscriptions Subject to MA Sales Tax*, BUS. L. TODAY, Apr. 2020, at 17, 17 (commenting that, prior to *Citrix Systems, Inc.*, the highest courts of all other states had not yet considered whether cloud computing was taxable).

Part I of this Comment gives an overview of cloud taxability in Massachusetts and *Citrix Systems, Inc.*, the state's principal case on the matter.<sup>8</sup> Part II examines the conflicting and often unclear ways that states tax the cloud and *Citrix Systems, Inc.*'s role as the first decision of its kind.<sup>9</sup> Finally, Part III argues that states should amend their sales tax laws to tax the cloud and anticipate future innovation.<sup>10</sup>

## I. TAXING CLOUD COMPUTING IN MASSACHUSETTS

In February 2020, in *Citrix Systems, Inc. v. Commissioner of Revenue*, the Massachusetts Supreme Judicial Court upheld state sales taxes that the Commissioner of Revenue (commissioner) assessed on subscription sales for cloud computing products.<sup>11</sup> This was the first ruling by a state's highest court on the taxability of cloud computing.<sup>12</sup> Section A of this Part introduces the Massachusetts sales tax through its application to software.<sup>13</sup> Section B introduces a recent technological advancement, cloud computing.<sup>14</sup> Section C addresses the *Citrix Systems, Inc.* court's application of sales tax regulations to allow the state to tax cloud computing software transfers.<sup>15</sup>

### A. Massachusetts Sales Tax

Massachusetts began to tax the sale of goods in 1966 when it enacted General Laws Chapter 64H.<sup>16</sup> The state generally taxes vendors for 6.25% of the revenue earned from the sale of "tangible personal property" or "services."<sup>17</sup> A sale occurs, and is therefore taxable, whenever a vendor transfers

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<sup>8</sup> See *infra* notes 11–58 and accompanying text.

<sup>9</sup> See *infra* notes 59–89 and accompanying text.

<sup>10</sup> See *infra* notes 90–115 and accompanying text.

<sup>11</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 301. When subscribing to a cloud product, customers pay set, incremental rates to the company in exchange for the ability to operate its product on their own devices. See *id.* at 295 (explaining Citrix's sales model). Citrix customers paid the company either once a year or every month for continued use. *Id.* Citrix also provided supplementary services to ensure that the software ran properly. See *id.* (listing that the responsibilities of Citrix employees included up-keeping and assisting the products sold).

<sup>12</sup> See Wolfe, *supra* note 7, at 17 (indicating that the Massachusetts Supreme Judicial Court was the highest court in any state to decide on cloud computing's taxability).

<sup>13</sup> See *infra* notes 16–27 and accompanying text.

<sup>14</sup> See *infra* notes 28–32 and accompanying text.

<sup>15</sup> See *infra* notes 33–58 and accompanying text.

<sup>16</sup> MASS. GEN. LAWS ANN. ch. 64H, § 2 (West 2009); see *Citrix Sys., Inc.*, 139 N.E.3d at 298 (discussing the early application of Chapter 64H and the push from the state and its courts to find physical transfers of goods taxable).

<sup>17</sup> MASS. GEN. LAWS ANN. ch. 64H, § 2. Under this statute, a "sale" includes all exchanges of "title or possession" for "tangible personal property" and "services." See *id.* § 1 (defining the term "sale" as used in Massachusetts General Laws Chapter 64H). "Tangible personal property" broadly encompasses almost all products that were made or are presently in the state of Massachusetts. *Id.* "Services" are products wherein one individual undertakes a task for another as a means for business.

either the “title or possession” to a purchaser.<sup>18</sup> Transfers of services that do not involve a sale, or merely involve an insignificant associated sale, however, are not taxable.<sup>19</sup>

Notably, the depth of software’s inclusion as “tangible personal property” has changed over time.<sup>20</sup> In its early application, sales taxes only applied when the purchaser physically received the software.<sup>21</sup> In this way, the taxability of software purchases relied heavily on how the purchaser acquired it.<sup>22</sup> Thus, wanting to eliminate variability in the statute’s application, the Legislature

*Id.* “Vendor[s]” include any individual or business that sells tangible personal property or services to generate revenue from the taxable sale. *Id.*

<sup>18</sup> *Id.* §§ 1, 2. A person may gain a property interest in something through “title,” which documents the ownership, or “possession,” which demonstrates ownership through an individual’s ability to wield control. *See generally* Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73 (1985) (examining the axiom that all legal ownership stems from an original domination).

<sup>19</sup> MASS. GEN. LAWS ANN. ch. 64H, § 1. Massachusetts does not assess a sales tax on software provided at no charge because it is not a sale. *Id.* Additionally, it does not assess tax when the sale is merely incidental to the transfer, as long as there are no additional fees. *Id.* Massachusetts courts determine the significance of the accompanying sale by assessing the buyer’s subjective motivation for making the purchase rather than considering the relationship of the underlying service and property. Jerome R. Hellerstein, *The Scope of the Taxable Sale Under Sales and Use Tax Acts: Sales as Distinguished from Services*, 11 TAX L. REV. 261, 274 (1956). The more influence that the property has on the purchaser’s decision to buy the product, the less likely it is to be incidental to the overall sale. *See Houghton Mifflin Co. v. State Tax Comm’n*, 370 N.E.2d 441, 447 (Mass. 1977) (concluding that book reproductions were not services because the publisher wanted to buy the finalized physical documents from the composer and not just the artistry needed to make them).

<sup>20</sup> *See Citrix Sys., Inc.*, 139 N.E.3d at 298 (highlighting the change in Massachusetts from excluding software as tangible personal property to including it); *Directive 01-3: Sales Tax Consequences of Computer Software “Load and Leave” Transactions*, MASS. DEP’T REVENUE (May 8, 2001) (superseded by 830 MASS. CODE REGS. 64H.1.3 (2006) for transactions after Apr. 1, 2006) (directing that digital sales of software were nontaxable in 2001 because there was no transfer of a physical good).

<sup>21</sup> MASS. DEP’T REVENUE, *supra* note 20. Prior to 2005, the state understood the language of Massachusetts Annotated Laws Chapter 64H §§ 1, 2 to exclude non-physical or electronic transfers of intangible property. *See Citrix Sys., Inc.*, 139 N.E.3d at 298. One year after the enactment of Chapter 64H, the State Tax Commission passed an emergency regulation that further emphasized the statutory requirement that vendors actually convey the title or possession to the purchaser for a sale to be taxable. *See id.* (addressing the emergency regulation that the State Tax Commission pushed through to confirm that the strict requirement applied even in the case of rented property). For examples of Massachusetts courts emphasizing the importance of transfer of possession in sales tax, see *Circuit City Stores, Inc. v. Commissioner of Revenue* and *Browning-Ferris Industries v. State Tax Commission*. *See Circuit City Stores, Inc. v. Comm’r Revenue*, 790 N.E.2d 636, 641–43 (Mass. 2003) (superseded by statute as stated in *Citrix Sys., Inc.*, 139 N.E.3d 293 (Mass. 2020)) (allowing the taxation of a sale of a product located in New Hampshire because the title passed in Massachusetts); *Browning-Ferris Indus. v. State Tax Comm’n*, 376 N.E.2d 568, 570 n.4, 571 n.5 (Mass. 1978) (superseded by statute as stated in *Citrix Sys., Inc.*, 139 N.E.3d 293 (Mass. 2020)) (concluding that the ability of a customer to manage the garbage bin the trash company provided met the possession requirement necessary to tax its rental cost).

<sup>22</sup> *See Citrix Sys., Inc.*, 139 N.E.3d at 298 (asserting that the delivery method determined taxability prior to a 2005 amendment).

broadened “tangible personal property” in 2005 to include more types of non-physical property, such as electronic transfers.<sup>23</sup>

Following this amendment, the commissioner enacted a regulation that made the sale of computer software taxable regardless of how the purchaser received it.<sup>24</sup> This expansion allowed the state to tax software that was “pre-written,” or that the vendor charged users for the “access or use of,” even if it existed on a remote server.<sup>25</sup> Yet, the regulation still includes exceptions to software taxability.<sup>26</sup> Any fees paid to “access or use” software via a “remote server” are not taxable when the software’s actual use is: (1) free, and (2) not the purpose for the sale.<sup>27</sup>

### B. A Brief Breakdown of Cloud Computing

A new form of technology, cloud computing, allows its users to take advantage of electronic resources through a completely remote transaction.<sup>28</sup> There are three non-exclusive categories of cloud computing: software as a service (SaaS), platform as a service (PaaS), and infrastructure as a service (IaaS).<sup>29</sup> Using any of these services, customers can electronically access the

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<sup>23</sup> See 830 MASS. CODE REGS. 64H.1.3 (2006) (permitting the taxability of software transferred electronically and other computer-based transactions). Courts have interpreted this amendment as reflecting a legislative intent to apply the law more consistently by removing the emphasis on the delivery method and a physical transfer. See *Citrix Sys., Inc.*, 139 N.E.3d at 298 (detailing the difference in application before and after the amendment).

<sup>24</sup> 830 MASS. CODE REGS. 64H.1.3(3)(a).

<sup>25</sup> *Id.*; see *id.* § 64H.1.3(2) (defining “prewritten computer software” as any software that the developer has not individualized for the recipient); *id.* § 64H.1.3(14)(a) (permitting the state to tax the “access or use of software”). A remote server is a computer that the user can “access,” even though it is not physically connected to the user’s device. *Remote Server*, L. DICTIONARY, <https://thelawdictionary.org/remote-server/> [<https://perma.cc/958F-QBDL>]. Users can access remote servers from as close as the same room as the user or as far away as the other side of the planet. See *id.* (placing no geographic limitation on the distance from the device to the server).

<sup>26</sup> See 830 MASS. CODE REGS. 64H.1.3(14)(a) (exempting certain software fees from taxation based on a two-pronged assessment of its cost and objective). The relevant language of the regulation states that tax does not apply to charges for the “access or use” of software on a remote server when: (1) the user does not have to pay to “use” the program, and (2) the user does pay, but for some other aspect of the product (e.g., its maintenance). See *id.* (excluding this type of payment from taxation and giving two examples of the exemption’s application).

<sup>27</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 300. The Massachusetts statute precludes the taxation of arrangements where the “sale” is: (1) non-existent, or (2) incidental. See MASS. GEN. LAWS ANN. ch. 64H, § 1 (West 2009) (exempting the taxation of certain “professional” and “personal” services); *supra* note 26 and accompanying text (describing the regulatory two-prong test for non-taxability).

<sup>28</sup> See EY, *supra* note 1, at 6 (defining cloud computing as a means for customers to purchase and use products globally simply through the internet); Antonio Regalado, *Who Coined ‘Cloud Computing’?*, MIT TECH. REV. (Oct. 31, 2011), <https://www.technologyreview.com/2011/10/31/257406/who-coined-cloud-computing/> [<https://perma.cc/3U43-APWK>] (attributing the birth of present-day “cloud computing” to a technology symposium in 2006).

<sup>29</sup> See *Software in the Cloud: What Are the Tax Implications?*, VERTEX, <https://www.vertexinc.com/resources/resource-library/software-cloud-what-are-tax-implications> [

vendor's product without ever having the proprietary program on their own device.<sup>30</sup> This model can be beneficial to both the consumer and the vendor.<sup>31</sup> Despite its growing popularity, current state guidance regarding cloud computing's taxability is inconsistent and deals almost exclusively with SaaS services.<sup>32</sup>

### C. Taxing Citrix Systems, Inc.'s Cloud Computing Software

In 2020, in *Citrix Systems, Inc.*, the Massachusetts Supreme Judicial Court held that the subscription fees that Citrix Systems, Inc. (Citrix) charged customers to use its software on a remote server were taxable.<sup>33</sup> Citrix is a software company that has several SaaS products available in the cloud computing industry.<sup>34</sup> Although the customer must download an "Endpoint Soft-

QWFF] (providing for the three separate classes of cloud computing services); EY, *supra* note 1, at 7 (describing the potential for overlap and specialization of the three categories of cloud computing services to create "hybrid" forms). The SaaS model allows customers to utilize a vendor's software that is programmed in the cloud without needing the actual hardware that holds the software. VERTEX, *supra*. SaaS products include many popular and recognizable examples like Google Workspace, Dropbox, Salesforce, and Cisco Webex. Stephen Watts & Muhammad Raza, *SaaS vs PaaS vs IaaS: What's the Difference & How to Choose*, BMC BLOGS (June 15, 2019), <https://www.bmc.com/blogs/saas-vs-paas-vs-iaas-whats-the-difference-and-how-to-choose/> [<https://perma.cc/6E74-KP6E>]. The PaaS model allows customers to use the vendor's operating system that is programmed in the cloud to create or execute a computer application without installing anything on their own device. VERTEX, *supra*. PaaS includes products like Windows Azure and Heroku. Watts & Raza, *supra*. The IaaS model allows customers to utilize the vendor's "computing resources" (e.g., servers) to execute non-specific software without overseeing the hardware or software themselves. VERTEX, *supra*. IaaS includes products like DigitalOcean, Linode, and Rackspace. Watts & Raza, *supra*.

<sup>30</sup> See Mazur, *supra* note 3, at 3 (describing the entirely virtual nature of cloud computing).

<sup>31</sup> See *id.* at 9 (discussing the reciprocal utility of cloud computing). For the consumer, the benefits of using cloud computing include: a decreased chance of losing data, no need to purchase super-capable devices to use more advanced technology, and the ability to access a product across the world. *Id.* For the vendor, the benefits of using cloud computing include: an increased ability to scale products accessibly across the globe and cost savings. *Id.*

<sup>32</sup> See DMA STAFF, *Completely Compliance: Taxability of Cloud Computing*, DMA (Nov. 5, 2015), <https://devsitefinity.dmainc.com/about/blog/sales-use-commodity-tax/2015/11/05/completely-compliance-taxability-of-cloud-computing> [<https://perma.cc/C4NN-A29K>] (assessing the current variances amongst state approaches to taxing cloud computing that focus primarily on SaaS).

<sup>33</sup> *Citrix Sys., Inc. v. Comm'r of Revenue*, 139 N.E.3d 293, 301 (Mass. 2020).

<sup>34</sup> See *id.* at 295 (listing at least three cloud products for which Citrix sells subscriptions); VERTEX, *supra* note 29 (describing how an SaaS model product gives a user the ability to use a vendor's software through the cloud without ever needing control over the hardware and servers that actually possess the software); *About Us*, CITRIX SYS., INC., <https://www.citrix.com/about/governance> [<https://perma.cc/QKT7-YE74>] (stating Citrix Systems, Inc.'s business is in "cloud computing"). Citrix sells various digital operating programs. See *Citrix Products and Solutions*, CITRIX SYS., INC., <https://www.citrix.com/products/> [<https://perma.cc/N2ZD-7FEN>] (detailing the applications and workspaces that Citrix offers for sale). The three Citrix products that the commissioner assessed for tax were: "GoToMyPC," which allows users to use their computer remotely, "GoToAssist," which allows users to give "technical support" by controlling another device, and "GoToMeeting," which allows users to present remotely. *Citrix Sys., Inc.*, 139 N.E.3d at 295 n.4. The relevant products all connected the purchaser's computer with at least one other remote computer to allow the screen display of one device to visually and functionally act in tandem with the other's. See *id.* at 295 (describing the

ware” to use Citrix’s products, at no time do the users download its proprietary software to their own computers.<sup>35</sup> The customer instead pays a subscription fee in exchange for the “access and use” of the products through remote access to the proprietary software existing only on Citrix’s servers.<sup>36</sup>

The commissioner determined that this exchange constituted a taxable sale.<sup>37</sup> Thus, the commissioner taxed Citrix on the subscription fees that it charged for three of its SaaS products from April 2007 to June 2009 and from October 2009 to December 2011.<sup>38</sup> After the commissioner denied Citrix’s application for abatement on two occasions, Citrix appealed the decision to the Appellate Tax Board (the Board).<sup>39</sup>

In April 2017, the Board upheld the taxes and concluded that Citrix had sold “tangible personal property.”<sup>40</sup> Citrix argued that the subscription fees were not a taxable sale under General Laws Chapter 64H, Sections 1 and 2 because the proprietary software remained on Citrix’s servers and Citrix never

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Citrix product’s screen-sharing capabilities). The Citrix products were not subject to tax exclusion under 830 MASS. CODE REGS. 64H.1.3(6)(a) because their software was not specific to the individual user. See 830 MASS. CODE REGS. 64H.1.3(6)(a) (2006) (disallowing Massachusetts to tax the sale of “custom software”); *Citrix Sys., Inc.*, 139 N.E.3d at 295 (noting that Citrix did not personalize the relevant products).

<sup>35</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 295. The technical field uses the term “endpoint” to mean any computer or device that the company does not protect with its own security measures. See Jennifer Deming Burnham, *A Simple Definition: What Is an ‘Endpoint’?*, DRUVA (Feb. 13, 2015), <https://www.druva.com/blog/simple-definition-endpoint/> [<https://perma.cc/9PSN-YQGC>] (defining “endpoint”). Vendors can use endpoint software to track the activity of remotely connected devices. See Mirko Bagaric et al., *The Hardship That Is Internet Deprivation and What It Means for Sentencing: Development of the Internet Sanction and Connectivity for Prisoners*, 51 AKRON L. REV. 261, 294 (2017) (describing the vendor’s ability to surveil users through endpoints). Companies may use endpoint software to replicate protections that might exist for a device within their firewalls to better secure external devices. See *id.* (suggesting that businesses use endpoint software in response to security vulnerabilities). Any individual may download Citrix System Inc.’s endpoint software for free, however, only subscribers may actually use it. *Citrix Sys., Inc.*, 139 N.E.3d at 295 n.5.

<sup>36</sup> See *Citrix Sys., Inc.*, 139 N.E.3d at 295 (outlining Citrix’s subscription-based business model).

<sup>37</sup> *Id.* at 295–96.

<sup>38</sup> *Id.* The commissioner assessed \$3.2 million worth of sales tax on Citrix during the relevant tax periods. See Wolfe, *supra* note 7, at 17 (reporting the monetary implications of the court’s decision in *Citrix Sys., Inc.*).

<sup>39</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 296. In Massachusetts, taxpayers may dispute their taxes by filing for an “abatement.” See 830 MASS. CODE REGS. 62C.37.1 (showing Massachusetts taxpayers how to challenge their state tax value). Approved abatements reduce the amount of tax the taxpayer owes after the fact and allow the taxpayer to recoup any overpayment. See *id.* (explaining why a taxpayer would file for a tax adjustment). Citrix completed and filed its petitions pursuant to MASS. GEN. LAWS ANN. ch. 62C, § 39 (West 2009). See *Citrix Sys., Inc.*, 139 N.E.3d at 296 (providing background to Citrix’s requests to reduce its taxes for cloud subscriptions). The commissioner denied these two petitions for abatement in 2012 and 2014. *Id.*

<sup>40</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 296.



transferred it to the customer.<sup>41</sup> It further claimed that even if it were a sale, it would be a non-taxable sale of services and not “tangible personal property.”<sup>42</sup> The Board rejected both arguments.<sup>43</sup> It reasoned that Citrix’s service model was a taxable sale because it exemplified a transfer of the right to operate computer software that already existed on a separate device and was therefore taxable “prewritten software.”<sup>44</sup> Additionally, despite Citrix’s assertion that the products were merely services, the Board determined that customers paid the subscription fees for “access and use” of them.<sup>45</sup> In its determination, the Board relied on the consumers’ intentions for the product rather than the vendor’s.<sup>46</sup>

On appeal to the Massachusetts Supreme Judicial Court, Citrix again argued that its products were nontaxable services.<sup>47</sup> Citrix contended that its model of retaining all software and hardware that established the remote connection precluded it from making an actual “transfer of title or possession,” as the regulation requires.<sup>48</sup> In turn, the commissioner argued that this model was explicitly taxable under the regulation.<sup>49</sup> Providing broad deference to the

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<sup>41</sup> *Id.* The Board disagreed, determining that taxing Citrix’s products as a conveyance of the right to operate a program that existed on an unrelated server was consistent with the plain meaning of the statute. *Id.*

<sup>42</sup> *Id.* The sale of “custom software” is an example of a non-taxable sale of a service in Massachusetts. See 830 MASS. CODE REGS. 64H.1.3(3)(e) (relieving individualized software from tax liability). Custom software is any software that is not prewritten. See *id.* at 64H.1.3(2) (defining the term “custom software” and “prewritten computer software”); *supra* note 25 and accompanying text (explaining that “prewritten computer software” is software that is not unique or individualized for a particular client).

<sup>43</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 296.

<sup>44</sup> See *id.* (finding support in statutory and regulatory language to reject Citrix’s argument); MASS. GEN. LAWS ANN. ch. 64H, §§ 1, 2 (providing for the taxability of software that the developer had not customized to the liking of the user before making the sale); 830 MASS. CODE REGS. 64H.1.3(3)(a) (stating that an exchange that gives an individual the legal authority to use a program that already exists on a “remote server” is one of “prewritten software” and thus is taxable in Massachusetts).

<sup>45</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 296. Citrix unsuccessfully suggested that its offerings were services because the subscribers paid for the ancillary work and assistance it provided to customers. *Id.* at 300.

<sup>46</sup> See *id.* at 300 (focusing on the motivation of a consumer to purchase the product and not the intention of the vendor). Although Citrix provided written materials and their vice-president’s testimony which suggested that the company may have viewed the product as a service, the Board based its determination on the customer’s intentions. See *id.* at 300–01 (rejecting the evidence Citrix presented to suggest it sold services and not property). The court found that customers purchase products like those of Citrix for their functionality and ability to help them complete a specific task, not for any unseen background services the company incidentally provided. *Id.*

<sup>47</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 297.

<sup>48</sup> *Id.*; see MASS. GEN. LAWS ANN. ch. 64H, §§ 1–2 (providing for the taxability of a “sale”); 830 MASS. CODE REGS. 64H.1.3(3)(a) (accounting for the applicability of sales taxes to computer products).

<sup>49</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 297. The commissioner argued that the relevant regulatory language specifically covered Citrix’s sales that gave its customers the power to interact with software

Board, the court agreed with the commissioner, finding that Citrix's subscription fees were taxable.<sup>50</sup> The court reasoned that there was, in fact, a "transfer of rights" because the subscription to the products relied on access to Citrix's proprietary software through an online connection to its server.<sup>51</sup> Moreover, the court concluded that extending the statute to cover remote access to a virtually delivered software was permissible because the 2005 amendment eliminated delivery method as a factor of taxability.<sup>52</sup>

Citrix also argued that even if the subscription fees were "tangible personal property," they were still not taxable because users actually subscribed to get the associated service.<sup>53</sup> Nonetheless, as the commissioner countered and the court agreed, the product could not be a nontaxable service.<sup>54</sup> Although

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located on the company's server. *Id.*; see 830 MASS. CODE REGS. 64H.1.3(3)(a) (codifying the taxability of fees paid to use "prewritten software").

<sup>50</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 297. Usually, the state interprets tax legislation stringently and settles any vagueness to the taxpayer's benefit. *See id.* (providing the court's standard approach to applying tax statutes); *Dental Serv. of Mass., Inc. v. Comm'r of Revenue*, 94 N.E.3d 802, 808 (Mass. 2018) (establishing that the standard of review requires the court interpret ambiguity to benefit the payer). The court, however, gave weight to the Board's interpretation because it is the Board's job to administer tax law with a high level of competence. *See Citrix Sys., Inc.*, 139 N.E.3d at 297 (permitting the Board to have greater influence on the way the court should read the statute); *AA Transp. Co. v. Comm'r of Revenue*, 907 N.E.2d 1090, 1094 (Mass. 2009) (establishing that the standard of review requires the court to afford significance to the Board's interpretation).

<sup>51</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 299.

<sup>52</sup> *Id.* (noting that the legislature intended for the 2005 amendment to resolve the disparate application of taxes based on the way that vendors provided software to customers). In 2005, the Massachusetts legislature updated its sales tax statute so that the taxability of a product would not continue to depend on whether the vendor sold it physically or electronically. *Id.* at 298; see *An Act Relative to Tax Laws*, ch. 163, sec. 34, 2005 Mass. Acts 720, 732 (2005) (broadening the definition of "tangible personal property" to allow the state to tax sales made on a computer or by phone). Thus, the court, in *Citrix Systems, Inc.*, concluded that it should not consider how Citrix got its proprietary software to its customer to determine the product's taxability. *See* 139 N.E.3d at 299 (reasoning that the commissioner could logically tax the software Citrix sold via the cloud because the 2005 amendment made all modes of delivery potentially taxable).

<sup>53</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 299; see MASS. GEN. LAWS ANN. ch. 64H § 1 (excluding "inconsequential" fees from the definition of a "sale at retail"). Per Massachusetts tax laws, the state cannot tax a payment made for services just because the exchange also involved some tangible personal property. *See* MASS. GEN. LAWS ANN. ch. 64H § 1 (explaining that the presence of physical property in a transaction does not necessarily preclude non-taxability for the sale of intangible goods and work); 830 MASS. CODE REGS. 64H.1.3(14)(a) (same). Thus, Citrix claimed that its subscribers really paid for the service and not any property the vendor exchanged simultaneously. *See Citrix Sys., Inc.*, 139 N.E.3d at 300 (presenting Citrix's argument that the fees were not taxable regardless of the court finding them to be "tangible personal property"). To evaluate the assertion, the court assessed the primary purpose for a customer to pay the subscription fee. *See id.* (evaluating the "true object" for customer payment).

<sup>54</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 299–300. The court applied the two-pronged test prescribed in 830 MASS. CODE REGS. 64H.1.3(14)(a) to determine whether the product was a nontaxable service. *See id.* at 300 (relying on the regulatory two-pronged test to assess Citrix's cloud computing products); *supra* note 26 and accompanying text (providing the two-pronged test which requires that software be both free and also not the reason for the purchase to exclude the software from taxability).

both a statute and a regulation bar taxing transactions that are primarily services and not sales, these products were taxable because customers primarily purchased the subscription to obtain and use the software.<sup>55</sup> The court gave significant deference to the Board's findings by applying a "substantial evidence" standard of review to determine that the products were "tangible personal property," despite having aspects of a service.<sup>56</sup> Even though the company may have viewed its products more akin to a service, the court agreed with the Board that a customer would purchase the products to use the software.<sup>57</sup> In affirming the sales tax on Citrix's subscription sales, the Massachusetts Supreme Judicial Court became the highest state court to ever address the taxation of cloud computing.<sup>58</sup>

## II. TAXING THE CLOUD: LIKE FITTING A SQUARE PEG IN A ROUND HOLE

Before the 2020 Massachusetts Supreme Judicial Court ruling in *Citrix Systems Inc. v. Commissioner of Revenue*, there was little guidance to suggest how states should tax cloud computing.<sup>59</sup> One reason for the lack of guidance may be that states have been unprepared to match the development speed of popular technology.<sup>60</sup> Although several states now provide guidance on potential cloud taxability, there remains a lack of clarity in the industry because the guidance is inconsistent amongst states.<sup>61</sup> Section A of this Part discusses

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<sup>55</sup> See *id.* (determining that users sought "access to and use of" Citrix's screen-sharing products). Had the court concluded that Citrix's customers subscribed because they sought the company's servicing, it may have found the fees to be non-taxable. See *id.* (holding the sales to be taxable based on the opposite conclusion about customer desires).

<sup>56</sup> *Id.* The substantial evidence standard favors the findings and opinions of the agency. *Id.* Notably, courts are likely to support such factual findings unless there is evidentiary support suggesting that their conclusion is not true. See *New Bos. Garden Corp. v. Assessors of Bos.*, 420 N.E.2d 298, 304 (Mass. 1981) (distinguished by *Pollard v. Conservation Comm'n of Norfolk*, 897 N.E.2d 1242 (2008)) (explaining that the substantial evidence test will prefer agency conclusions unless they seem impossible). In its opinion, the Board said that customers seek products like Citrix's for their ability to help the customers do work, not for the associated services. *Citrix Sys., Inc.*, 139 N.E.3d at 300–01.

<sup>57</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 301. The court, relying on language from the 1981 Massachusetts court case, *New Boston Garden Corp. v. Assessors of Boston*, agreed with the Board that Citrix's customers realistically paid for the software that they actually interacted with, not the unseen background support Citrix also provided. *Id.*; see *New Bos. Garden Corp.*, 420 N.E.2d at 304 (basing its application of the substantial evidence test on what a rational person would believe).

<sup>58</sup> *Citrix Sys., Inc.*, 139 N.E.3d at 301; Wolfe, *supra* note 7, at 17 (describing the Massachusetts Supreme Judicial Court decision in *Citrix Systems, Inc.* as the first instance of a state's highest court ruling on the taxability of cloud computing).

<sup>59</sup> See *Citrix Sys., Inc. v. Comm'r of Rev.*, 139 N.E.3d 293, 301 (Mass. 2020) (deciding on the taxability of Citrix's cloud computing transactions); Beebe, *supra* note 6 (describing the lack of clarity and inconsistency of state guidance in this area of taxation).

<sup>60</sup> See Susson, *supra* note 2, at 297 (lamenting that states often do not have the means to properly resolve the difficult problem of regulating the cloud).

<sup>61</sup> See *id.* at 296 (noting that discrepancies exist amongst states that have provided guidance on the taxability of cloud computing). As a result of states' unpreparedness, the rare application of sales

states that do not impose sales taxes on cloud computing services, as well as the subsequent economic consequences.<sup>62</sup> Section B addresses states that do tax the cloud and the associated tension with tech companies.<sup>63</sup> Section C highlights *Citrix Systems Inc.*'s role as the first time a state's highest court has ruled on the taxability of a cloud computing product.<sup>64</sup>

### *A. States That Decline to Tax the Cloud Because It Is a Service and Not Tangible Personal Property*

A large majority of states do not assess sales taxes on the cloud computing industry.<sup>65</sup> Although no highest state court has held that cloud computing is not taxable, some states have made it clear that they will not tax these products.<sup>66</sup> To tax the sale of a product in most states, it must meet their respective statutory definition of "tangible personal property."<sup>67</sup> Many states do not tax the cloud on the basis that this type of product is a non-physical and non-taxable service that

taxes to cloud computing has been sloppy and uncertain. *See id.* (suggesting government fault as the source of discord). Additionally, most of the available guidance comes from sources that do not carry the same weight as legislation. *See id.* (suggesting that much of the guidance from tax authorities on cloud taxability comes from individualized determinations or internal references).

<sup>62</sup> *See infra* notes 65–75 and accompanying text.

<sup>63</sup> *See infra* notes 76–85 and accompanying text.

<sup>64</sup> *See infra* notes 86–89 and accompanying text.

<sup>65</sup> *See Beebe, supra* note 6 (analyzing which states tax the cloud). Currently, thirty-three states do not impose a sales tax on cloud computing products. *Id.*

<sup>66</sup> *See* Jennifer Dunn, *Sales Tax by State: Is SaaS Taxable?*, TAXJAR (Apr. 8, 2020), <https://blog.taxjar.com/saas-sales-tax/> [<https://perma.cc/6TNP-PA54>] (giving examples of states like Arkansas and Kentucky that do not tax the industry given the explicit language of their current statutes as well as local departmental stances); Wolfe, *supra* note 7, at 17 (describing *Citrix Systems, Inc.* as the first and only time that a state's highest court has made any determination on the taxability of cloud computing and concluded that it, in fact, was taxable). In October 2015, in *Auto-Owners Insurance Company v. Michigan Department of Treasury*, the Michigan Court of Appeals held that cloud computing was non-taxable because the company did not distribute the relevant software to the customer during the cloud transaction. 880 N.W.2d 337, 345 (2015); *see* MICH. COMP. LAWS ANN. § 205.92b(p) (West 2018) (concluding that the statute did not reach sales of cloud computing services because it required that a product be "delivered"). This case did not continue on to the Michigan Supreme Court. *See generally Auto-Owners Ins. Co.*, 880 N.W.2d 337 (showing no appellate history beyond the Michigan Court of Appeals).

<sup>67</sup> *See* Walter Hellerstein & Jon Sedon, *State Taxation of Cloud Computing: A Framework for Analysis*, 117 J. TAX'N 11, 16 (2012) (claiming that software is usually taxable if it is "tangible personal property"). States are able to establish their own definitions and tax statutes, which means that states do not necessarily define taxable "tangible personal property" similarly. *See* Susson, *supra* note 2, at 296 (referencing the differences in cloud computing taxability amongst the states based on differences in the states' definitions of "tangible personal property"). Some states rely more heavily on the physical nature of property to invoke taxability, whereas others expanded their definition to include non-physical property as well. *Compare* CAL. REV. & TAX. CODE § 6016 (2010) (confining the California sales tax to physical and "perceptible" property), *with* 830 MASS. CODE REGS. 64H.1.3 (2006) (allowing Massachusetts to impose a sales tax on non-physical transfers of software).

does not fit into their statutes' tangible property classifications.<sup>68</sup> The relevant state statutes often use language that clearly encompasses the physical world but nothing more because legislatures enacted the statutes before remote sales of property were even fathomable.<sup>69</sup> These states remain unwilling to expand the statutory language that solely designates physical property as taxable to account for these increasingly non-physical bodies of technology.<sup>70</sup>

States that do not impose a sales tax on the cloud cannot receive revenue from the multi-billion dollar industry.<sup>71</sup> The ability to collect sales taxes is more important for some state governments than others, but it plays a significant role in each state's local economy.<sup>72</sup> There are states, however, that depend on their sales tax revenue but do not collect taxes from cloud computing products.<sup>73</sup> State deficits continue to grow because cloud computing, often un-

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<sup>68</sup> See Dunn, *supra* note 66 (providing whether each state does or does not tax cloud computing subscriptions and why). For example, Indiana determined that fees associated with cloud computing products were non-taxable because they were services. CCH Tax Group, *Indiana ~ Sales and Use Tax: Cloud Computing Services Were Not Taxable*, WOLTERS KLUWER (Dec. 2, 2016), <http://news.cchgroup.com/2016/12/02/indiana-sales-use-tax-cloud-computing-services-not-taxable/corporate-solutions/> [<https://perma.cc/7ZXQ-L85F>]. Kentucky disallowed sales taxes on cloud computing products because they do not constitute tangible property. Dunn, *supra* note 66. California reasoned that cloud computing products were too similar to electronically downloaded software, which it exempts from sales tax. *What You Need to Know About the Taxability of SaaS in 9 Western States*, MILES CONSULTING (July 16, 2019), <https://www.milesconsultinggroup.com/blog/2019/07/16/what-you-need-to-know-about-the-taxability-of-saas-in-9-western-states/> [<https://perma.cc/QN2W-28G8>].

<sup>69</sup> See Mazur, *supra* note 3, at 9–10 (comparing past practices of getting software on a physical disk with modern streaming capabilities). A classic example of the physical exchange of software is the floppy disk. See *id.* (describing a more traditional way to transfer software from a vendor to the user).

<sup>70</sup> See, e.g., Susson, *supra* note 2, at 316–19 (providing, as an example, that the inherently non-physical nature of transferring software via the cloud precludes cloud computing from California's statutory definition of tangible property). California does not impose sales taxes on cloud computing products. MILES CONSULTING, *supra* note 68. Under current state law, taxability depends significantly on the physical perceptibility of the property. See CAL. REV. & TAX. CODE § 6016 (defining "tangible personal property" in terms of sensory factors that describe its physical appearance and size).

<sup>71</sup> See Susson, *supra* note 2, at 312 (discussing the correlation between state sales taxes and state revenue). Forty-five of the fifty states collect sales taxes. *Id.* These sales taxes make up a significant part of states' revenues. See *id.* (estimating that state and local taxes account for close to half of all state revenues).

<sup>72</sup> See *id.* at 313–14 (discussing the significance of sales taxes as a source of state revenue). Not all states assess their sales taxes at the same rate. *Id.* Additionally, although most states' revenues also rely heavily on income taxes, states like Washington that do not collect income taxes must rely more on their ability to collect sales taxes to generate revenue. *Id.* at 314. Therefore, even if two states had equivalent dollar sales for cloud computing products, the inability to collect tax on said products might disparately impact them. *Id.* at 313–14.

<sup>73</sup> See *How Do State and Local Taxes Work?*, TAX POL'Y CTR., <https://www.taxpolicycenter.org/briefing-book/how-do-state-and-local-sales-taxes-work> [<https://perma.cc/WAC9-BSNJ>] (providing the dependence of individual states on revenue obtained through their sales taxes); Christopher T. Lutz, *A Multistate Perspective on Taxation of Digital Products*, HMB (Nov. 13, 2018), <https://www.hmblaw.com/blog/state-and-local-tax/a-multistate-perspective-on-taxation-of-digital-products/> [<https://perma.cc/MM8G-7VES>] (providing a list of states that do or do not allow for sales taxes on cloud

taxed, is taking over a portion of the market once held by taxable industries.<sup>74</sup> The inability to tax these sizable revenues could have costly effects on a local government's budgetary constraints.<sup>75</sup>

### *B. States that Stretch Statutes to Tax the Cloud as Tangible Personal Property*

States that have regulations, advisory statements, or intermediate court decisions that allow tax assessments on cloud computing are in the minority.<sup>76</sup> For most, taxability has meant squeezing an entirely non-physical product into an incompatible definition of “tangible personal property.”<sup>77</sup> State sales tax statutes often use the language that the legislature originally drafted to reflect technology and software that was purely material and the vendor physically

computing). In 2017, Nevada obtained a higher percentage of its revenue from sales tax than any other state. TAX POL'Y CTR., *supra*. Sales taxes accounted for nearly one-half of its total yearly revenue. *Id.* At the same time, Nevada has not imposed a sales tax on cloud computing. See Lutz, *supra* (including the state in a list of those that have yet to clarify their stance on cloud taxability).

<sup>74</sup> See Susson, *supra* note 2, at 295 (noting that states increasingly struggle with budgetary constraints); Liz Farmer, *The Struggle to Tax the Cloud*, GOVERNING (June 2015), <https://www.governing.com/topics/finance/gov-cloud-computing-revenue.html> [<https://perma.cc/2DS8-4CGV>] (explaining the shift in the economic market away from physical products and towards intangible services). Assuming the size of the market remains stagnant, the growth of cloud computing necessitates the shrinking of another industry. See Famer, *supra* (discussing the impact of the growth of cloud computing on traditional industries such as retail). As consumers shift their business toward newer and easier technology in the cloud, they will naturally stop using many other outdated or redundant products. See *id.* (describing a recent trend away from tangible goods toward intangibles in response to technological advances).

<sup>75</sup> See Erin Duggan, *Little-Known Sales Tax Benefits White Plains*, N.Y. TIMES (Feb. 4, 2007), <https://www.nytimes.com/2007/02/04/nyregion/nyregionspecial2/04wetopic.html> [<https://perma.cc/R4L2-JYMU>] (noting that monies paid in sales taxes can benefit the community as a whole because states use them to make needed improvements to infrastructure); Farmer, *supra* note 74 (describing the potential for massive profits that one state lost out on when it was not able to impose sales taxes on cloud computing products for the year 2013).

<sup>76</sup> See Beebe, *supra* note 6 (stating that the number of states that do tax the cloud is slightly larger than one-third of all states). Seventeen states and the District of Columbia allow their tax collectors to assess sales taxes on cloud computing products. *Id.*

<sup>77</sup> See Mazur, *supra* note 3, at 3 (describing cloud computing products as non-physical); Dunn, *supra* note 66 (listing states that tax cloud computing either as a service or as tangible software). For example, Louisiana has allowed the taxation of SaaS cloud computing products since 2011. See Dunn, *supra* note 66 (commenting that the state does not tax a customer's recreational use of cloud software). Likewise, Maine considers SaaS to qualify as tangible personal property, making it subject to sales tax. See *id.* (indicating Maine as a pro-cloud taxation state). Iowa has gone so far as to expand its definition of taxable software to allow more services to be subject to sales tax. See *Taxation of Specified Digital Products, Software, and Related Services*, IOWA DEP'T REV., <https://tax.iowa.gov/taxation-digital-products> [<https://perma.cc/3DX4-JUCW>] (listing additional software products and services subject to Iowa's state sales tax after January 1, 2019). Iowa now subjects: “storage of tangible or electronic files,” “information services,” “software as a service,” and “video game services” to sales tax. *Id.*

handed to the user.<sup>78</sup> Although the language remains stagnant, technological innovations are simultaneously becoming more distinct from their predecessors.<sup>79</sup> Some states have been willing to allow their definitions of “tangible personal property” to encompass cloud computing to capitalize on the innovative and rapid growth in technology.<sup>80</sup> But even so, states that do tax the cloud often do not tax every category of cloud computing products.<sup>81</sup>

Taxing cloud computing has come with its own costly struggle for these states.<sup>82</sup> Lawmakers are not necessarily in a position to adequately address in-

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<sup>78</sup> See JEROME R. HELLERSTEIN ET AL., STATE TAXATION ¶ 15.12 (3d ed. 2020) (describing the inherent issue of trying to apply old and steadfast rules to new and unexpected situations); Mazur, *supra* note 3, at 9–10 (describing the past practice of treating a software sale as a physical transaction); Lutz, *supra* note 73 (calling applicable tax law “outdated”). Tax assessors will therefore struggle to apply the old statutes to innovative technology, such as cloud computing. See HELLERSTEIN ET AL., *supra*, ¶ 15.12 (citing revolutionary developments as a source of disharmony and discomfort).

<sup>79</sup> See Mazur, *supra* note 3, at 9–10 (contrasting the physicality and possessory nature of preceding technology with the entirely digital nature of cloud computing). When states developed many of the regulations that allow for software taxability, technology existed in an almost entirely physical form. See *id.* (commenting on the tangibility of older products). Originally, customers could come in person to a store, receive a copy of software on a disk from the employee’s hands, go home, and download that software onto their own personal device. See *id.* (recognizing the vast procedural difference of purchasing software decades ago). None of these steps are necessary for a customer to access software via the cloud. See *id.* (contrasting the old approach with the new one).

<sup>80</sup> See Susson, *supra* note 2, at 324 (explaining how some states, including Washington, developed broad tax statutes to encompass technology that might not yet exist or be popular, with the expectation that the state would want to have the ability to tax it in the future). Because other areas of taxation have decreased in recent years, states have had to look for other sources to continue to bring in tax revenue. *Id.* at 295; see, e.g., Matt Richtel, *Starved Budgets Inspire New Look at Web Gambling*, N.Y. TIMES (Aug. 13, 2011), <https://www.nytimes.com/2011/08/14/business/states-study-online-gambling-to-bring-needed-revenue.html?searchResultPosition=1> [<https://perma.cc/27BZ-NUAA>] (discussing several jurisdictions like California, Massachusetts, and D.C., that have pushed to tax online gambling in response to revenue insufficiencies).

<sup>81</sup> See DMA STAFF, *supra* note 32 (commenting on the tendency of states to provide more guidance on SaaS than the other two common forms of cloud computing services). Currently, there are three main forms of cloud computing available and that the general public use. See VERTEX, *supra* note 29 (distinguishing PaaS, SaaS, and IaaS as the major categories of cloud computing). In addition to the main forms, there is a known possibility for intersection. See EY, *supra* note 1, at 7 (recognizing the additional hybrid forms of cloud computing). States have almost exclusively provided guidance for SaaS and not PaaS or IaaS, leaving the other two forms and any potential intersections with indeterminate taxability. See Lewis, *supra* note 1 (contrasting the degree of guidance provided for SaaS with the lack of guidance provided for IaaS and PaaS). Additionally, the average customer tends to view SaaS as the easiest cloud computing product to use. See Beebe, *supra* note 6 (theorizing that SaaS may be more prominent because it is not complicated to use). This is likely why states that tax the industry give the most attention to SaaS. See *id.* (connecting the prevalence of SaaS to its customer-friendly nature).

<sup>82</sup> See Farmer, *supra* note 74 (providing examples of states like Massachusetts that have struggled to tax the cloud in the past because of harsh corporate backlash). Technology develops quickly, and it constantly intersects and diverges in a way that can make it seem unmanageable. *Id.* Tax assessors have particularly struggled with the dynamic aspect of technology, especially as innovation becomes commonplace. See *id.* (indicating that the fast-paced and everchanging nature of technology provides states with additional challenges).

sufficiencies in current sales tax statutes due to budgetary constraints.<sup>83</sup> Because guidance is so inconsistent and the applicability of statutes to their products is not airtight, companies regularly bring suit to challenge the assessed sales tax.<sup>84</sup> Notably, several states have repealed regulations that allowed for a cloud sales tax due to general confusion and pressure from the industry.<sup>85</sup>

*C. A State's Highest Court Speaks to the Taxability of Cloud Computing: the Massachusetts Supreme Judicial Court Says It Is Taxable*

Until the *Citrix Systems, Inc.* ruling in 2020, the highest court of no state had spoken to the taxability of cloud computing products.<sup>86</sup> In doing so, Massachusetts became the first state to provide authoritative guidance as to the future taxability of cloud computing products.<sup>87</sup> The court held that the sale of cloud subscriptions constituted a transfer of tangible personal property, as Massachusetts described in its sales tax laws and regulations.<sup>88</sup> Thereby, in the first decision of its kind, the court deemed that the sale of cloud computing is taxable in its state.<sup>89</sup>

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<sup>83</sup> See Susson, *supra* note 2, at 297 (indicating that states do not have enough funds to completely overhaul their sales tax statutes in a meaningful way). Reformation of the sales tax statutes might require outside consulting to assist in addressing the thorny issue. See *id.* (doubting the ability for local tax divisions to resolve cloud taxability internally).

<sup>84</sup> See Beebe, *supra* note 6 (claiming that inconsistency in cloud computing regulation has made litigation common). Two major companies, Netflix and Apple, both brought suit against Chicago, Illinois after it assessed taxes on the sale of their products. *Id.* Although Netflix massively profited off of the demise of traditional cinema consumption in favor of Internet streaming, the company said that it would thrust any sales tax costs onto its customers if the tax succeeded. See Stephanie Cueman, Comment, *The Netflix Tax: Chicago's Extension of Its Amusement Tax to Include Electronically Delivered Entertainment Faces Numerous Challenges and Sets the State for Taxing on Streaming-Based Entertainment*, 15 DEPAUL BUS. & COMM. L.J. 159, 159–60 (2017) (paraphrasing Netflix's proposed response to the Chicago tax).

<sup>85</sup> See Farmer, *supra* note 74 (describing the corporate pressure states experience when they try to expand their sales tax laws). In 2013, the Massachusetts Legislature attempted to impose a sales tax on the cloud through promulgated legislation. *Id.* Cloud computing companies vehemently opposed its enactment, making their displeasure known to the government. See *id.* (noting corporate pleas that the bill would force local businesses to close). Two months later, the Legislature repealed the bill, leaving the industry untaxed. *Id.* Similarly, when Florida attempted to assess sales tax on services, corporate protests led the state to repeal the tax within months. See *id.* (recounting major businesses, like Coca-Cola Co. and Procter & Gamble Co., that withheld a significant amount of advertising and business from the state in opposition to the tax).

<sup>86</sup> Wolfe, *supra* note 7, at 17. As the first decision at its level, the *Citrix Systems, Inc.* decision would have been historic and arguably predictive of the future regardless of its outcome. See *First Impression*, LEGAL INFO. INST., [https://www.law.cornell.edu/wex/first\\_impression](https://www.law.cornell.edu/wex/first_impression) [<https://perma.cc/F5Q2-7HAM>] (suggesting that the principal cases in an area of law are important and can provide guidance to future decisions in a similar sector).

<sup>87</sup> Wolfe, *supra* note 7, at 17; see Susson, *supra* note 2, at 296 (describing previous lower level court rulings and statements as having created a “patchwork” guide that could give little clarification as to how states might tax cloud computing in the future).

<sup>88</sup> *Citrix Sys., Inc. v. Comm’r of Revenue*, 139 N.E.3d 293, 301 (Mass. 2020).

<sup>89</sup> *Id.*; see Wolfe, *supra* note 7, at 17 (recognizing the significance of the decision).



### III. TAXING TECHNOLOGY: NOT FOCUSING ON THE CURRENT WORLD BUT, RATHER, ON THE NEXT

Although only binding in Massachusetts, the Massachusetts Supreme Judicial Court's holding in *Citrix Systems Inc. v. Commissioner of Revenue*, in 2020, could open the door to other states adopting a similar rule on the taxability of cloud subscriptions.<sup>90</sup> Resorting to court involvement, however, is unlikely to be the most efficient mechanism for states to tax the cloud.<sup>91</sup> Cloud computing is not merely a fad but the oncoming future of technology.<sup>92</sup> State legislatures, therefore, must clearly address its taxability through aggressive amendments to their statutes and not continue to force their courts to fit a square peg in a round hole.<sup>93</sup>

Because states often rely on sales taxes, they need to take active steps to ensure the taxability of cloud computing products, as cloud computing continues to become a larger and more accessed form of software.<sup>94</sup> The cloud computing industry continues to grow rapidly with little reason to expect a plateau.<sup>95</sup> Vendors continue to produce increasingly non-physical products, meaning that the industry has the ability to spread further and faster than traditional

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<sup>90</sup> See *Citrix Sys., Inc.*, 139 N.E.3d at 294 (demonstrating the judicial support for cloud taxability in Massachusetts). But see Jeffrey C. Dobbins, *Structure and Precedent*, 108 MICH. L. REV. 1453, 1462–63 (2010) (explaining that some precedent, although directly relevant to an issue, does not necessarily bind other courts).

<sup>91</sup> See Beebe, *supra* note 6 (implying that taxpaying entities will likely rely on litigation moving forward without strong, affirmative guidance on whether they should expect states to tax their products); Craig C. Martin, *Avoiding the Inefficiency of Litigation*, 15 PRETRIAL PRAC. & DISCOVERY (2007), [https://jenner.com/system/assets/publications/2105/original/PP\\_D\\_Martin\\_Spring07.pdf?1315481513](https://jenner.com/system/assets/publications/2105/original/PP_D_Martin_Spring07.pdf?1315481513) [<https://perma.cc/T2LH-28QB>] (claiming that legal action can be wasteful and unproductive); see also *Citrix Sys., Inc.*, 139 N.E.3d at 294 (challenging, unsuccessfully, the validity of the state's sales tax on cloud subscriptions). Companies may also try to distinguish their product from previously litigated ones because cloud computing technologies vary so widely amongst themselves. See EY, *supra* note 1, at 6 (mentioning that there is not a universal definition of cloud computing); VERTEX, *supra* note 29 (recognizing that there are at least three distinct categories of cloud computing).

<sup>92</sup> See Tom Gillis, *Criticism Abounds, But Cloud Computing Is Here to Stay*, FORBES (May 24, 2011), <http://www.forbes.com/sites/tomgillis/2011/05/24/criticism-abounds-but-cloud-computing-is-here-to-stay/> [<https://perma.cc/AA6J-DR2V>] (explaining that cloud computing will endure the test of time because of its efficiency, inexpensive cost, and the ability for companies to specialize their products).

<sup>93</sup> See Lewis, *supra* note 1 (explaining that cloud computing does not align well with the current sales tax categorization). Taxing the cloud under current statutes proves much like fitting a square peg in a round hole because, although possible to do, like in *Citrix Systems., Inc.*, it does not seem to fit well. See *A square peg in a round hole*, MERRIAM-WEBSTER.COM DICTIONARY, <https://www.merriam-webster.com/dictionary/a%20square%20peg%20in%20a%20round%20hole> [<https://perma.cc/L55E-29FS>] (defining a “square peg in a round hole” as an idiom suggesting that something is ill suited for the position it is in).

<sup>94</sup> See Susson, *supra* note 2, at 312 (commenting on the importance of sales taxes to states); Lewis, *supra* note 1 (observing the rapid evolution of cloud computing).

<sup>95</sup> See Gillis, *supra* note 92 (describing cloud computing as a benchmark shift and not merely a fad in technology).

software services.<sup>96</sup> As the breadth and ubiquity of cloud computing services has increased, so has its fruitfulness.<sup>97</sup> Naturally, state tax assessors want and often need to be able to tap into such a gainful venture to supplement the state's revenue.<sup>98</sup> Without strong and consistent guidance, states have been unable to impose such taxes successfully or effortlessly.<sup>99</sup> As a result, the states that do tax the cloud must do so through a convoluted application of their existing laws.<sup>100</sup> Those that do not impose a sales tax are left with an increasingly negative impact on their economy.<sup>101</sup>

Although *Citrix Systems, Inc.* generally reflects a step in the right direction for the future of states being able to better tax the cloud, it also sheds light on the need to update sales tax statutes.<sup>102</sup> In its decision, the Massachusetts Supreme Judicial Court had to stretch the language of its law based on physical

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<sup>96</sup> See Mazur, *supra* note 3, at 3 (projecting that cloud computing will expand quickly).

<sup>97</sup> See *id.* (providing the anticipated value of cloud computing sales over time). In 2019, cloud computing revenue surpassed \$200 billion, marking a 17% increase since 2018. See Watts, *supra* note 4 (showing that cloud computing earnings were \$196.7 billion in 2018 and \$227.8 billion in 2019). The four largest cloud providers for public SaaS products are Amazon, IBM, Google, and Microsoft. *Id.*

<sup>98</sup> See Susson, *supra* note 2, at 312 (stating that states tend to depend on sales taxes for one-third of their revenue). In 2013, analysts anticipated that taxing cloud computing in Massachusetts could generate close to \$160 million in revenue for the state in one year alone. See Farmer, *supra* note 74 (citing the administrative forecast for a short-lived state tax bill).

<sup>99</sup> See Beebe, *supra* note 6 (noting that several entities have brought lawsuits against local governments in response to taxes assessed on the cloud); Farmer, *supra* note 74 (explaining how several states have had to repeal legislation attempting to tax the cloud); see, e.g., *Newsletter Nov/Dec 2019*, 79 ARIZ. TAX RSCH. ASS'N 2 (2019), [http://www.arizonatax.org/sites/default/files/publications/newsletters/file/atra\\_nov\\_dec\\_2019\\_newsletter\\_0.pdf?utm\\_content=9678630eeb23d1117f2563057d14cdd8&utm\\_campaign=oct%2018%20Newsletter&utm\\_source=Robly.com&utm\\_medium=email](http://www.arizonatax.org/sites/default/files/publications/newsletters/file/atra_nov_dec_2019_newsletter_0.pdf?utm_content=9678630eeb23d1117f2563057d14cdd8&utm_campaign=oct%2018%20Newsletter&utm_source=Robly.com&utm_medium=email) [https://perma.cc/8MJT-Z2NU] (claiming that Netflix, Inc., Automatic Data Processing, Inc., and NuOrder Technologies all sued the Arizona Department of Revenue in 2019 over a service tax).

<sup>100</sup> See EY, *supra* note 1, at 4 (commenting on the inherent impasse between bounded tax laws and a seemingly boundless cloud).

<sup>101</sup> See Susson, *supra* note 2, at 295 (introducing the struggle that states face because their budgets shrink along with the depreciation of their sources for lucrative tax collection). When states do not or cannot tax cloud computing, they may forego hundreds of millions of dollars in revenue. See Farmer, *supra* note 74 (predicting the amount of revenue that one state could have generated were it able to successfully proceed with legislation that would have permitted taxation of the cloud).

<sup>102</sup> See Wolfe, *supra* note 7, at 17 (noting that the *Citrix Systems, Inc.* case was the first time a court of this level ruled that its state could tax cloud computing products); Lewis, *supra* note 1 (suggesting that states will respond to taxability issues for cloud computing). See generally *Citrix Sys., Inc. v. Comm'r of Revenue*, 139 N.E.3d 293 (Mass. 2020) (affirming a sales tax on one business's cloud offerings). The value of cloud taxes for Citrix alone, even in a single state and over a limited span of time, was significant. *Id.* at 295–96; see Wolfe, *supra* note 7, at 17 (claiming that the commissioner had assessed \$3.2 million in taxes on Citrix during the relevant tax periods). For many years, however, these taxes were also indeterminate. See *Citrix Sys., Inc.*, 139 N.E.3d at 295–96 (noting that, in part, the 2020 decision examined taxes the commissioner first assessed in 2007). Thus, the ability to tax cloud computing with certainty on a large scale is paramount. See Watts, *supra* note 4 (claiming that the entire industry generates hundreds of billions of dollars in revenue each year).

transfers of goods to fit an inherently non-physical product.<sup>103</sup> In doing so, the court may have eliminated an incentive for the legislature to develop more relevant and applicable laws for taxing technology moving forward.<sup>104</sup> Other states, therefore, should be wary of adjudicated taxability and instead promulgate comprehensive and predictive legislation.<sup>105</sup> Even though these types of amendments will be difficult and costly to enact, they will propagate the significant long-term benefits of ease and profit in the future.<sup>106</sup>

Most states have not even addressed all forms of currently available cloud computing technology, and merely updating regulations to address popular and readily obtainable technology alone is not sufficient.<sup>107</sup> Legislation that focuses merely on what is already available and mainstream only perpetuates the cur-

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<sup>103</sup> See *Citrix Sys., Inc.*, 139 N.E.3d at 301 (allowing Massachusetts to tax three cloud computing products as tangible personal property). The court relied, in part, on the intentions of the legislature in amending its statute to encompass more non-physical property. See *id.* (relying on more than solely statutory language to interpret the sales tax law). Many commentators condemn courts taking on the role of the legislature by altering or expanding law with the phrase “legislating from the bench.” See Bruce G. Peabody, *Legislating from the Bench: A Definition and a Defense*, 11 LEWIS & CLARK L. REV. 185, 190 (2007) (defining the term “legislating from the bench” as a court deciding on a matter that may be outside the scope of the duty of the courts).

<sup>104</sup> See Susson, *supra* note 2, at 312 (commenting on state reliance on sales tax revenue and profitability). States have an incentive to take action to tax profitably and generate revenue for themselves. See *id.* (signifying that taxes can account for a significant portion of the money available to states). In *Citrix Systems, Inc.* the court allowed Massachusetts to collect a sales tax on cloud computing without requiring the Legislature to undertake any action to amend the laws, thereby eliminating a potential incentive to do so. See 139 N.E.3d at 294 (affirming the tax assessment).

<sup>105</sup> See Susson, *supra* note 2, at 296–97 (recognizing that jamming current technology into the language of old law leads to flawed results). Additionally, some states will not be able to make a similar stretch of the law because the language of their sales tax statutes relies even more heavily on the physicality of the good than the Massachusetts statute. See, e.g., CAL. REV. & TAX. CODE § 6016 (1943) (providing California’s statutory definition of “tangible personal property” that focuses on the physical and perceivable elements of property). In comparison, Massachusetts has broadened its own definition of “tangible personal property” to include non-physical property, like the transfer of software. See 830 MASS. CODE REGS. 64H.1.3 (2006) (“Tangible personal property includes electricity, gas, steam, and prewritten computer software.”).

<sup>106</sup> See Susson, *supra* note 2, at 296–97 (noting the issues that states have previously encountered when trying to mesh the complexities of technology with the law). Although states may struggle to find the resources to make comprehensive sales tax amendments, the investment in such an amendment will be worthwhile because cloud computing is so profitable and has such a promising trajectory of growth. See Mazur, *supra* note 3, at 3 (predicting the bountiful future of cloud computing products).

<sup>107</sup> See *id.* at 9–10 (identifying the current problem that tax statutes built on changeable aspects of technology face); Lewis, *supra* note 1 (commenting that some states that do regulate cloud computing ignore PaaS and IaaS in the regulation). Current issues arise because technology develops faster than the law. See Mazur, *supra* note 3, at 10 (commenting that possessory interest in a cloud product is unclear and, thus, causes legal complication). In 1965, Gordon Moore predicted that technology would continue to grow at a rate that doubled its capability to size ratio each year. See David Rotman, *We’re Not Prepared for the End of Moore’s Law*, MIT TECH. REV. (Feb. 24, 2020), <https://www.technologyreview.com/2020/02/24/905789/were-not-prepared-for-the-end-of-moores-law/> [<https://perma.cc/KYV8-VKPJ>] (defining Moore’s Law). For over fifty years, this lofty prediction of advancement has held true. See *id.* (confirming the accuracy of Moore’s Law since its theorization).

rent issue of legislation falling behind the constant advances in technology.<sup>108</sup> Even where technology is innovative, it is not necessarily unpredictable.<sup>109</sup> Often products are in development and available for some length of time before some factor thrusts them into popular usage.<sup>110</sup> One way that legislatures could anticipate the future of the field is by scrutinizing available information about patents that tech companies are regularly filing.<sup>111</sup> By doing so, they could be proactive, rather than retroactive, in the language that they use to address technology in new legislation.<sup>112</sup>

Accordingly, to avoid the current predicament, new regulations cannot bind themselves to the current format of technology because the industry will quickly surpass that form.<sup>113</sup> To stop lagging behind, updated legislation must

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<sup>108</sup> See HELLERSTEIN ET AL., *supra* note 78, ¶ 15.12 (explaining that legislatures struggle to apply antiquated and well understood laws to innovative products); Mazur, *supra* note 3, at 9–10, 16 (observing that historic regulatory language tailored to innovative disk-based technology quickly created issues when that form of technology lost relevance).

<sup>109</sup> See Won Sang Lee et al., *Predicting the Pattern of Technological Convergence Using Big-Data Technology on Large-Scale Triadic Patents*, 100 TECH. FORECASTING & SOC. CHANGE 317, 317–18 (2015) (explaining that looking to existing technologies can help to predict new ones). Technology is not necessarily as disruptive as it may appear to the general public. See *id.* at 318 (providing one current technique that experts use to predict how upcoming innovations will perform). One way that experts can predict the future of the tech space is by analyzing patent data to see what ideas companies are developing. See *id.* (indicating that administrative and commercial entities frequently survey patent data to better understand the outlay of the market). This sort of analysis can provide helpful and often accurate guidance as to the direction in which the field is moving. See *id.* (citing patent analysis as a way to stay ahead of technological shifts).

<sup>110</sup> See, e.g., Jonathan Coopersmith, *Pornography, Videotape, and the Internet*, IEEE TECH. & SOC'Y MAG., Spring 2000, at 27–30 (explaining the role of pornography in popularizing an already available form of technology). The videocassette recorder (VCR) technology was available for some time before society integrated and popularized it. *Id.* But once the VCR made pornography readily distributable, there was an abrupt spread of the technology into general use. *Id.*

<sup>111</sup> See Lee, *supra* note 109, at 318 (detailing the method some field experts use to predict the future of technology). Corporations have incentives to patent the technologies they develop sooner rather than later due to the United States' patent priority rules. See Wendell Ray Guffey & Kimberly Schreiber, *America Invents Act: The Switch to a First-to-File Patent System*, 68 J. MO. BAR 156, 156 (2012) (explaining that the United States uses a “first-to-file” rather than a “first-to-invent” model for patenting products). Although companies or individuals may patent a new technology for their own gain, the patent itself contains valuable information about what it potentially introduces to the market. See Christopher A. Cotropia & David L. Schwartz, *The Hidden Value of Abandoned Applications to the Patent System*, 61 B.C. L. REV. 2809, 2855 (2020) (assessing both Sharp Corp. and Georgia Tech.'s unsuccessful patent applications for a solar energy product and concluding that even failed patents can show the relevance of a new technology); see also *General Information Concerning Patents*, USPTO (Oct. 2015), <https://www.uspto.gov/patents-getting-started/general-information-concerning-patents#heading-12> [<https://perma.cc/8T3Z-MFMW>] (explaining what information patentors must include in an application for a patent).

<sup>112</sup> See Lee, *supra* note 109, at 318 (suggesting that there is some length of time in which seemingly disruptive technology is anticipable); Farmer, *supra* note 74 (suggesting that it is the responsibility of states to stay on pulse with changing times).

<sup>113</sup> See Mazur, *supra* note 3, at 9–10 (setting up the current problem in which states tie legislation heavily to an aspect of technology that is now irrelevant, its physical form).

predict up-and-coming advances in the market so that states may not only tax cloud computing, but also the next generation of software.<sup>114</sup> As a result, states could avoid needing a court decision like *Citrix Systems, Inc.* to clarify whether the next innovation is taxable.<sup>115</sup>

### CONCLUSION

States are unclear and inconsistent on whether to assess sales tax on cloud computing products. Most states do not tax the industry on the basis that the products are non-taxable services rather than tangible personal property. These states miss out on revenue from an incredibly lucrative innovation. Some states, however, do impose their sales taxes on cloud computing transactions by finding that they involve tangible personal property. As the first instance of a state's highest court ruling on cloud taxability, the Massachusetts Supreme Judicial Court in 2020, in *Citrix Systems, Inc. v. Commissioner of Revenue*, shed light on how states may be able to apply their own statutes to tax the cloud. In this case, the court found that cloud computing products were subject to sales tax because there was a transfer of tangible personal property. Because different states define property on a spectrum of physicality, however, the ruling cannot necessarily help states to tax the cloud unless they amend their respective statutes. To avoid technology constantly surpassing the language of the law, legislatures must look forward to the future of the industry and avoid tying legislation to the format of current products. In this way, the law may be able to run parallel to and not lag behind the rapid pace of technological development.

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<sup>114</sup> See *id.* (exemplifying that the law lagging behind technology has caused applicability issues in the past); Susson, *supra* note 2, at 295 (commenting that states need to find new ways to continue their inflow of revenue).

<sup>115</sup> See *Citrix Sys., Inc. v. Comm'r of Revenue*, 139 N.E.3d 293, 301 (Mass. 2020) (upholding the sales tax assessed on cloud computing products).