Recent technological advancements have transformed how people conduct their daily activities. These changes are not only affecting how people live and work, but they are also redefining how people entertain and learn. Today, it is common to remotely access files stored in Dropbox, read e-books downloaded on Kindle, watch TV shows streamed from Netflix or Hulu, and listen to music through Spotify. These technological developments are making state tax authorities assess the taxability of digital products. This report reviews the current landscape of state sales tax on digital products, court cases, administrative actions, congressional proposals, and potential future developments in the taxation of digital products.

WHAT ARE DIGITAL PRODUCTS?

Before discussing the taxation of digital products, it is first important to understand what constitutes one. At present, there is no universally recognized definition of digital products. The most commonly cited definition comes from two publications by the Streamlined Sales Tax Governing Board (SSTGB), a multistate effort to simplify sales and use tax collection and administration. According to the Streamline Sales and Use Tax Agreement (SSUTA) and the SSTGB’s rules and procedures, “specified digital products” include digital audiovisual works, digital audio works, and digital books.

Digital audiovisual works are series of related images that, when shown in succession with accompanying sounds, impart an impression of motion. This category includes movies, music videos, news shows, entertainment programs, and recorded live events. The SSTGB documents specify that video greeting cards and video games are not included.

Digital audio works are the products resulting from the recording of musical, spoken, or other kinds of sounds. These include songs, music, audiobooks, speeches, ringtones, and other sound recordings. Audio greeting cards sent by e-mail are not part of this category.

Digital books are works that are generally recognized in the usual sense as “books.” This category includes novel–length works of fiction and nonfiction, as well as short stories. However, it does not include chat rooms, blogs, periodicals, magazines, newspapers, or other news or information products.

WHAT ABOUT SOFTWARE?

The SSUTA considers computer software as a separate category from digital products, which is partly why certain states treat transactions involving software differently from those involving digital products. In addition, the SSUTA specifically designates “prewritten computer software” as a type of “tangible personal property.” Prewritten computer software, in contrast to custom software, is generally canned or off-the-shelf computer software that is not developed for a specific buyer. By identifying prewritten computer software as tangible personal property, the SSUTA categorizes it as a type of personal property that “can be seen, weighed, measured, felt, or touched.
or that is in any other manner perceptible to the senses. This designation has significant tax implications.

States generally impose sales tax on transactions involving tangible personal property, whereas custom software is viewed as a service and only 10 states tax it. However, the SSUTA allows member states to exempt prewritten computer software delivered electronically from sales tax. As a result, 45 states and Washington, D.C., tax the transfer of prewritten software if it is loaded on a CD (which makes it “tangible”). However, 12 states exempt electronically delivered software from sales tax, leaving 33 states and Washington, D.C., that tax prewritten software that is delivered electronically.

Although classifying canned software as tangible personal property, or taxing software purchases when something tangible changes hands, seem like simple rules, the story does not stop here. The recent proliferation of cloud computing imposes new challenges on the taxability of software.

### CLOUD COMPUTING AND SALES TAX

In simple terms, cloud accessibility can roughly be thought of as the internet. As long as users have access to a computer with an internet connection, they can use cloud-based software. A cloud service provider, such as Amazon Web Services, Google Cloud, or Microsoft Azure, essentially hosts software applications on remote servers where they store and process data.

There are three distinct service delivery models for cloud computing: however, as technology and business models evolve, cloud service providers could integrate elements from all three models. Although cloud computing services continue to expand, states have been slow in addressing how sales taxes apply to the different service delivery models, as described below.

**Software as a Service (SaaS)** providers offer customers the ability to use software applications running on a cloud infrastructure. Customers generally do not manage or control the underlying cloud infrastructure, including the network, servers, operating systems, storage, or application capabilities. Examples of the SaaS delivery model include web-based email services, calendars, and digital photo applications.

Taxation of SaaS is the most commonly addressed service model by individual states due to its popularity and ease of use. However, the tax treatments vary between states. For example, Texas views SaaS as taxable data processing service but allows 20% of revenue to be exempted from tax; New York views SaaS transactions as sales of prewritten software that are therefore taxable as sales of tangible personal property; and Wisconsin does not consider SaaS as a taxable data processing service.

**Infrastructure as a Service (IaaS)** providers offer customers computing resources so they can run software applications and operating systems. IaaS providers enable customers to outsource the equipment needed to support the cloud infrastructure. While consumers do not manage or control the underlying infrastructure, they do have control over the operating systems, storage, and applications. They may also have limited control of select networking components (e.g., firewalls). Examples of the IaaS model include web hosting and remote storage services.

A recent Iowa Department of Revenue ruling provides an example of IaaS. Iowa recently passed rules to impose taxes on digital goods and certain services, effective January 2019. Amazon requested clarification regarding whether its Amazon Elastic Compute Cloud Service (EC2) is subject to tax under the new rules. The ruling indicated that Amazon’s EC2 supplies storage space and processing power on a network that allows customers to run software, applications, and operating systems. Thus, the EC2 is classified as IaaS and is not taxable.

In New York, IaaS is also a nontaxable service. However, some practitioners describe this as counterintuitive because New York classifies SaaS (remotely accessed software) as tangible personal property that is taxable, but views IaaS (remotely accessed hardware that resembles something tangible) as a nontaxable service.
Platform as a Service (PaaS) providers offer customers hardware and software to launch their own applications on the cloud infrastructure. Consumers do not manage or control the underlying cloud infrastructure, but they do have control over the deployed applications and possibly the configuration settings for the application-hosting environment.\(^{20}\) For example, developers can use a PaaS platform to create applications and games using programming languages, tools, and computing power supplied by a cloud service provider. The taxability of PaaS is less clear than for SaaS or IaaS.

### THE CURRENT LANDSCAPE OF STATE TAX ON DIGITAL PRODUCTS

If the SSUTA were the sole agreement adopted nationwide, taxing digital products would be more straightforward. However, the SSUTA currently has only 24 member states, and several large states including California, Texas, New York, Florida, and Illinois are not members. Although member states have to adhere to the SSUTA’s definitions of digital products, the agreement does not require them to tax digital products or align taxability with the definitions provided by the SSUTA.\(^{21}\) In other words, member states may include or exclude certain products from taxation based on their own rules, further complicating the tax treatment of digital products.\(^{22}\)

This decentralization inherently means that the taxability of digital products varies greatly by state. Among the 45 states and Washington, D.C., that have state- or district-level sales taxes, 30 states and Washington, D.C., tax digital products (e.g., music, video, books), 22 tax streaming, and 17 states and Washington, D.C., tax cloud computing as of mid-2019.\(^{23}\) For companies that offer functionally similar digital products, the location of the transaction (45 states or Washington, D.C.), type of product (software, information, or services), form of ownership (permanently downloaded or rental),\(^{24}\) payment frequency (if the right to use a product is based on continued payment),\(^{25}\) and delivery method (CD, cloud-based software, download,\(^{26}\) or load-and-leave\(^{27}\)) may play a role in taxability.

Similar to the lag in taxing cloud computing, state tax laws are behind when it comes to taxing digital products. Furthermore, many digital products do not fit into current tax rules because the rules existed long before the digital economy. States are aware of this issue but have reacted differently, which contributes to the lack of uniformity across the U.S. Some states have not provided any guidance on taxing digital products, others have attempted to root digital product taxability in the existing tax codes or reinterpret current laws to apply to digital products, and still others have amended their tax laws to cover these products. Among these approaches, states that explicitly adopt legislation to tax certain products and services have been subject to less resistance and fewer legal challenges by merchants or consumers.\(^{28}\)

Despite the complex tax treatment of digital products, it is undeniable that the digital economy continues to encompass a larger share of economic activities. More consumers are streaming or downloading digital products as opposed to purchasing them through tangible means. From a tax revenue perspective, it is natural to expect states to expand their taxing power on digital products. In 2019 alone, more than 10 states expanded, considered, or proposed digital product taxes.\(^{29}\) Even in states that do not impose sales tax on digital products, there may be other assessments. For example, Florida generally does not levy sales tax on digital products, but it imposes a 7.44% Communication Services Tax on video and music streaming services.\(^{30}\) Chicago also imposes the Personal Property Lease Transaction Tax on cloud computing services at either 5.25% or 9%.\(^{31}\)

### NEXUS, CHARACTERIZATION, AND SOURCING IN THE DIGITAL WORLD

Besides the complex state rules that determine the taxability of digital goods, three overarching concepts govern sales tax applications: nexus, the characterization of transactions, and sourcing.\(^{32}\)

**Nexus** generally refers to the level of connection required between the state and
taxpayers so that the state can impose taxes. In the context of sales tax, this means requiring sellers to collect sales taxes for the state. As such, a business only needs to pay sales tax if it has nexus in that state. Historically, nexus referred to the physical presence of business operations (such as employees, inventory, or office buildings), but that standard was overturned after the U.S. Supreme Court ruling of South Dakota v. Wayfair, Inc., et al. (Wayfair) in 2018. After Wayfair, nexus can be established without any physical presence in a state. Instead, significant economic presence, such as revenue or the number of transactions, is sufficient to establish nexus. In addition, to the extent that states view digital products as tangible personal property, the changes generated by Wayfair also directly affect the nexus for sales of digital products.

The Wayfair ruling not only changed the sales tax landscape for online retailers—it also ignited state interest in taxing digital products. Digital goods and cloud computing service providers have been able to fly under the state tax authorities' radars because states were focusing on collecting sales taxes from online retailers; after Wayfair, these providers are now targets for state tax authorities.

Characterization: Currently, states characterize digital products as either tangible personal property, services, or intangible property. If a state decides that digital products are taxable, the most common approach is to characterize them as tangible personal property because such association allows states to connect digital products with existing state tax rules, thereby requiring limited administrative or legislative actions.

On the other hand, some states—such as Florida, Connecticut, Illinois, and Missouri—specifically indicate that digital products are not tangible personal property. However, the tax treatment of digital products is different across these four states. In Florida, video and music streaming are not subject to sales tax but are subject to the Communication Services Tax. In Connecticut, digital goods are taxable at 1%, the same rate as data processing services. Illinois considers the sale of digital products as a transfer of intangible goods, which is not taxable. Missouri simply says digital goods are not tangible personal property and are therefore exempt from tax.

Elsewhere in the U.S., companies like Netflix and Automatic Data Processing (ADP) have filed lawsuits against the Arizona Department of Revenue. Netflix disagrees with the state’s decision that its streaming services are taxable as rentals of tangible personal property, whereas ADP challenges the state’s position that cloud-based software is tangible personal property. The companies generally do not oppose a properly enacted tax, so they primarily file lawsuits either because the laws are not clear, or because they do not believe existing laws characterize their services appropriately.

In contrast, digital products that are characterized as taxable services are more likely to be defined as data processing services than information services. For example, Texas has a broad definition of taxable tangible personal property; it also taxes information services and data processing services. A 2019 Texas comptroller ruling reveals the difference between data processing services and information services. At a high level, information services handle data that are more general in nature, whereas data processing services deal with more customer-specific or proprietary information.

One issue for states that characterize digital products as services is that they have to comply with the Internet Tax Freedom Act (ITFA). The ITFA prohibits states from imposing tax on an online version of a transaction if its similar offline version is not subject to tax; it also prohibits states from imposing different tax rates or collection obligations for online and offline service providers. For example, a state cannot tax an online tax return preparation service without also taxing the fees an accountant would charge for providing similar services in person. Since most states are not eager to expand the scope of their sales tax base to include the performance of personal services, navigating the delicate balance between characterizing digital products as services and following the ITFA remains a challenge.

Merchants mostly react to the lack of uniformity across the U.S. by adopting sales tax automation software, referencing or requesting private letter rulings, or resorting to litigation. None of these solutions are perfect.
Sourcing: For state sales taxes, sourcing refers to the location where a transaction takes place and how the tax rules apply. Most states and Washington, D.C., apply sales tax according to destination-based sourcing, meaning the location of the purchaser determines what sales tax rates and rules apply to the transaction. For 11 states, origin-based sourcing applies, meaning the sales tax rules at the location of the seller determines the sales tax.

When it comes to digital products or cloud computing, sourcing depends on how transactions are characterized. For instance, if cloud computing is characterized as tangible personal property, it would generally be sourced based on its destination or location of use. However, defining use is not without challenges—for remote storage like IaaS, “use” could arguably be defined as where the data is stored, where the equipment or server is located, or where the user retrieves data. In the case of PaaS, it can be argued that the location of hardware should be considered.

On the other hand, if cloud computing is characterized as a service, it would generally be sourced based on where the benefit of the service is derived, which could include more than one state. When a customer downloads music on their phone and listens as they travel, it is difficult to ascertain where they derive benefit. To complicate the issue further, there needs to be a profit apportionment when a transaction involves multiple states, and companies could arguably use the expected usage, actual usage, or a pro-rata split based on time to apportion profits.

The Multistate Tax Commission (MTC) recognizes the complexity and uncertainty around the various approaches to sourcing digital goods and services for the purpose of sales taxes. As such, the MTC is currently studying the issue with the goal of developing a model sourcing statute. The MTC believes that a statute generated by state-led efforts would be superior to a federal preemption, which typically takes a long time to accomplish and even longer to revise.

COMPANY RESPONSE

Merchants mostly react to the lack of uniformity across the U.S. by adopting sales tax automation software, referencing or requesting private letter rulings, or resorting to litigation. None of these solutions are perfect; tax automation software can be costly, and the path to obtain a revenue or court ruling could take years. In the meantime, practitioners reference state private letter rulings to understand each state revenue department’s perspective in taxing new technologies. Below are a few recommendations for coping with the lack of clear and consistent state guidance in taxing digital goods.

The most common suggestion is unbundled billing, meaning listing different services as separate line items for billing purposes to avoid tax on the entire bundled transaction. For instance, California has generous unbundle rules in which software sold with other taxable items is exempt unless it is sold in a tangible form. Nevertheless, certain states have strict unbundle rules where separate line items on invoices do not necessarily prevent states from taxing everything on the bill. For example, a Tennessee ruling indicates that although a company provides both cloud-based employment scheduling software and subsequent programming and support services, the “true object” is to use the software instead of the services. Without the software, the services would have no value to customers. The Tennessee ruling states that when a transaction involves taxable and nontaxable components and the transaction’s true object is subject to tax, the entire transaction is taxable.

Another suggestion is that companies should provide appropriate product and transactional descriptions consistently across different departments. Contracts drafted by a legal department, software functionality descriptions prepared by an R&D department, sales brochures designed by a marketing department, and invoices generated by an accounting department should have consistent language delineating the products and services provided.

Congress recognizes the complexity of digital goods taxes across the U.S., and it has attempted to provide a solution, which designates the consumer state of residence as the taxing authority for their digital purchases. Despite being introduced multiple times, this bill has not gained much attention.
Some words such as “platform, solution, applications, or data processing” may be desirable for marketing purposes; however, without clear descriptions, these terms may attract the attention of tax authorities.\footnote{A recent Texas private letter ruling reviews the case of a company that sells subscriptions of a cloud-based customer relationship management (CRM) platform to clients, which is SaaS and a taxable data processing service. Besides the platform, the company also provides advisory services, which are usually nontaxable services in Texas. The Texas comptroller states that when a nontaxable service is provided with taxable services, it will be considered nontaxable only if the two service are unrelated. The ruling cites the company’s executed contracts—which specify that the advisory service ends when the CRM subscription ends—as evidence that the advisory service is not offered independently from the sale of the CRM platform.\footnote{The comptroller also points out that the company’s website stipulates that an integral part of the advisors’ role is CRM platform optimization. As a result, the ruling decided that the company’s services are not provided on a stand-alone basis, and both transactions are therefore taxable.\footnote{There are many parallels between the ongoing development of digital goods taxation and the seemingly settled taxation of online sales; however, for digital goods, the complexity is multiplied by more granular variations in terms of the products, delivery methods, and the length of ownership.}}

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RECENT COURT CASES

In 2015, Chicago’s Department of Finance issued a ruling and determined that its 9% amusement tax applies to internet-based video, music, and game streaming services such as Netflix, Apple, Spotify, Xbox Live, and Hulu.\footnote{It has become known as the “Netflix Tax,” and Chicago became the first major city in the U.S. to impose such a tax on streaming activities.} Critics argue that the tax is unfair because it distinguishes between streaming entertainment and downloaded movies and music. The ruling considers streaming services as rental activities involving only temporary ownership that are therefore subject to the 9% tax, whereas downloads are sales involving permanent ownership that are not taxable.\footnote{A civil rights organization filed a lawsuit against Chicago over this tax (\textit{Labell v. Chicago}). The plaintiffs believe it violates the ITFA, the U.S. Commerce Clause (which forbids discrimination against interstate commerce), and the Illinois Constitution (which requires state and local governments to tax similar items at the same rates). A circular court ruled in favor of Chicago in May 2018,\footnote{arguing that the city only applies the tax to activities with a substantial nexus in the city. The court also stated that Chicago does not discriminate against interstate commerce. Furthermore, the ruling noted that there are substantial differences between streaming and other forms of entertainment; as such, it is justifiable for streaming products to be classified differently. The plaintiffs appealed the case before the First District Appellate Court, and a decision is pending.} arguing that the city only applies the tax to activities with a substantial nexus in the city. The court also stated that Chicago does not discriminate against interstate commerce. Furthermore, the ruling noted that there are substantial differences between streaming and other forms of entertainment; as such, it is justifiable for streaming products to be classified differently. The plaintiffs appealed the case before the First District Appellate Court, and a decision is pending.\footnote{Apple also sued Chicago for the same amusement tax ruling using similar arguments.\footnote{Because of the similarities between the two cases, it is pending until the appellate court decides on \textit{Labell v. Chicago}.}}}

A FEDERAL PROPOSAL FOR A DIGITAL GOODS AND SERVICES TAX

Congress recognizes the complexity of digital goods taxes across the U.S., and it has attempted to provide a solution. The Digital Goods and Services Tax Fairness Act (S. 765/H.R. 1725)\footnote{was introduced in March 2019. The bill provides a national framework for digital goods taxes and designates the consumer state of residence as the taxing authority for their digital purchases. The bill also requires that states tax digital goods and services at the same rate as similar tangible goods and services.} was introduced in March 2019. The bill provides a national framework for digital goods taxes and designates the consumer state of residence as the taxing authority for their digital purchases. The bill also requires that states tax digital goods and services at the same rate as similar tangible goods and services.

Opponents are concerned that this framework is overly wide, does not provide guidance for individual states, and—considering the evolving and amorphous scope of the digital economy—may require frequent revisions. However, federal preemptions are usually difficult to revise. Furthermore, there are disagreements as to whether Congress is the appropriate authority to address the issue, or if the taxation of digital goods falls within states’ rights.\footnote{There are many parallels between the ongoing development of digital goods taxation and the seemingly settled taxation of online sales; however, for digital goods, the complexity is multiplied by more granular variations in terms of the products, delivery methods, and the length of ownership.}
Considering the bill has been introduced four times and has not gained much attention, the lack of uniformity in digital goods taxes will persist for the near future.

CONCLUSION

The digital economy has experienced unprecedented growth that has not gone unnoticed by state and local governments in search of sustainable tax revenue. There are many parallels between the ongoing development of digital goods taxation and the seemingly settled taxation of online sales, such as how antiquated state laws should evolve to tax the digital economy and what the best method is to alleviate the undue burden for small businesses.

However, one issue surrounding digital goods taxation is more complex than the debate involving online merchants: in Wayfair, the main challenge centers on how different states define nexus. For digital goods, the complexity is multiplied by more granular variations in terms of the products, delivery methods, or even differences in the length of ownership. In addition, digital products and services increasingly incorporate a wider range of components that are not easily distinguishable from a taxability perspective, which means that the complexity will only increase over time.

The future is clear: more states are going to tax digital products at a much broader level. The consequences for the lack of consistency in state tax laws and the absence of national guidelines are also clear: state governments would experience reduced compliance and decreased revenue. Federal guidance is unlikely, so states should address issues related to the taxability of digital goods through legislative actions instead of simply fitting new products and services into outdated rules.

ENDNOTES


2. When a buyer purchases taxable goods from a seller without paying sales tax, the buyer is required to remit a use tax on taxable goods to the state. Essentially, use taxes shift the responsibilities for tax remittance from the seller to the buyer in cases where the tax is not collected by the seller. See Joyce Beebe, E-Commerce: Recent Developments in State Taxation of Online Sales, Issue Report no. 07.13.17. Rice University’s Baker Institute for Public Policy, Houston, Texas, https://www.bakerinstitute.org/research/state-taxation-online-sales/.


5. SSTGB, Streamline Sales, Section 332.A, 57.


Federal guidance is unlikely, so states should address issues related to the taxability of digital goods through legislative actions instead of simply fitting new products and services into outdated rules.
8. SSTGB, Streamline Sales, Appendix C. II, 107.

9. New Hampshire, Oregon, Montana, Alaska, and Delaware do not have sales taxes; they are sometimes referred to as NOMAD states.


11. NIST (the National Institute of Standards and Technology) formally defines cloud computing as “a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources, which could be networks, servers, storage, applications and services, that can be rapidly provisioned and released with minimal management effort or service provider interaction.” See NIST, *Final Version of NIST Cloud Computing Definition Published*, NIST, October 25, 2011, https://www.nist.gov/news-events/news/2011/10/final-version-nist-cloud-computing-definition-published.

12. In a non-cloud-based system, companies must maintain their own servers and hardware, and users must physically install programs on their personal computers via CDs. A cloud-based system therefore relieves companies from the burden of operating and owning their own hardware and software systems. Jillian Hufford, “Cloud vs. SaaS: What is the Difference?” *Multichannel Insights* (blog), nChannel, February 6, 2018, https://www.nchannel.com/blog/cloud-vs-saas/.


specified digital products where consumers have the right of permanent use that is not conditioned on continued payments. Other states, such as South Dakota and New Jersey, impose sales tax regardless of payment type.


27. “Load-and-leave” means the vendor travels to the customer’s location and installs the software directly onto the customer’s computer using tangible storage media. Once the installation is complete, the tangible media is returned to the seller.


32. The current discussion of state sales tax on digital products is parallel to the international effort of taxing digital activities. The focus of the international discussion is to give more taxing rights to the jurisdictions where consumers are located. However, the effort also focuses on redefining the taxable presence, thereby allowing companies that do not have a physical presence to share taxable profits. See Joyce Beebe, Recent Developments on the E.U.’s Digital Tax Proposal Issue Report no. 01.09.19. Rice University’s Baker Institute for Public Policy, Houston, Texas, https://www.bakerinstitute.org/research/recent-developments-eus-digital-tax-proposal/.


39. Texas Tax Code § 151.0101(a)(10) and (12).

40. Texas Comptroller of Public Accounts, Private Letter Ruling No. 20180411151546, February 22, 2019. https://star.comptroller.texas.gov/view/201902014L?q1=SaaS. Information service means “furnishing general or specialized news or other current information, including financial information or electronic data retrieval or research.” Rule 3.342(a)(1) states that “processing, reformatting, or manipulating data provided by the customer is data processing and is
not included in the definition of information services." Data processing services include “word processing, data entry, data retrieval, data search, information compilation . . . and other computerized data and information storage or manipulation.” Section 151.0035.

41. There are 11 origin-based sourcing states: Arizona, California, Illinois, Mississippi, Missouri, New Mexico, Ohio, Pennsylvania, Tennessee, Texas, Utah, and Virginia.

42. Hamer, Sourcing Digital Goods.

43. Lutz, “A Multistate Perspective.”


46. One issue worth noting is that tax authorities generally consider the substance of a transaction as more important than the form. Generally, cloud computing contracts are executed through either a service agreement or software license agreement. Parties may enter into a contract called a service agreement, but the underlying terms, conditions, provisions, and rights conferred are more similar to a license agreement. State tax authorities often review the contracts to determine the substance of a transaction.


49. Buhl, “Chicago’s Netflix Tax.”


52. Apple Inc. v. Chicago, Ill. Cir. Ct., No. 2018-L-050514. (most recently: motion to stay granted February 1, 2019)


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