

Introduction

The Federation of Tax Administrators (FTA) has implemented a "10 Point Plan" to combat tobacco tax evasion, with Point 6 being the use of uniform electronic reporting standards for tobacco information. The Technology Subcommittee promotes compliance with this point for tax authorities and taxpayers at the federal, state/provincial, and local levels.

The FTA has established standards for electronic data interchange (EDI) using XML as the standard for reporting and codes for product type, entity identification, and tobacco tax information. The Technology Subcommittee is responsible for maintaining these codes and can be contacted for additions.

The adoption of uniform electronic reporting methods and standards improves efficiency in tax reporting and facilitates information sharing among tax authorities, leading to better compliance with tax authority requirements. The Tobacco Uniformity Committee also recommends state tax administrators adopt a standard internet interface for tobacco taxpayers, which is included in the guide.

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Section 1 - Electronic Filing

1. Implementation Guide Approval Procedures

The Federation of Tax Administrators (FTA) Tobacco Uniformity Technology Subcommittee has established a procedure for the approval of eFile Software Guides (XML Guides). The steps are as follows:

- 1. Contact the chair of the Technology Subcommittee early on with any preliminary questions or discussion to resolve issues before submitting a complete draft.
- 2. Submit an electronic copy of the proposed Guide to the chair of the Technology Subcommittee, along with any tax forms and schedules used by the State for proper mapping.
- 3. The Guide is distributed to the XML Implementation Review Team for review.
- 4. The Team members will submit comments on the Guide to the Team Leader. The Team will have approximately 3 weeks for review.
- 5. The Team will have a conference call with the Guide submitters to address any questions or changes. If mapping changes are required, the process restarts at the submission of the Guide.
- 6. The Guide is either preliminarily accepted or rejected.
- 7. The Guide is submitted for approval by the Technology Subcommittee at the next Uniformity meeting.
- 8. The Guide is approved.

Note: These procedures should be followed for new guide approvals and also for significant changes to existing guides.

2. Migration Strategies

As electronic filing becomes more prevalent in state agencies responsible for collecting filing information, there may come a time when a tax authority considers migrating to a new XML schema. It's important to have plans and strategies in place to minimize disruption to government agencies and industry partners during this process.

Mature Installments

As a tax authority becomes more experienced in collecting tax filing data from tobacco tax filers or information providers, the focus shifts from the initial setup of the program to efficiently moving new filers through the setup, testing, and production stages. Once a filer is certified by the tax authority and established in the production environment, monthly processing becomes routine.

Minimizing Risk

Managing a tax authority's assets is of strategic importance for both the tax authority and industry partners. Implementing changes that are not warranted, justified, or strategically planned can be risky. The following guidelines can help minimize risk:

 Make sure there is a strong business case for migrating to a new version of an XML schema and starting a new certification process.

- Implementing a new XML version should be well-planned, coordinated, and involve participation from trade associations representing the tobacco industry and other state departments such as the Attorney General's office and the Department of Health.
- Ensure that requirements are reasonable, easily understood, and simple to comply with, and provide a
 well-defined electronic implementation guide, adequate notification of implementation, and adequate
 testing opportunities.
- Provide a quick path to certification and feedback on tests promptly. Filers should need to test and file dual tax information in different XML schema formats for only a short period of time.
- The goal is to use the minimum number of resources to quickly certify the filer in the new XML schema format.

Implementation Guide Review:

Any new implementation guide should be submitted to the Federation of Tax Administrators Tobacco Uniformity Technology Subcommittee for review before implementation. Refer to Section 1, Implementation Guide Approval Procedures.

3. Tobacco Tax Web Pages

The Federation of Tax Administrators (FTA) Tobacco Uniformity Technology Subcommittee recommends that state tax administrators adopt a standard Internet interface for tobacco taxpayers. A standard interface will make it easier for taxpayers to access the forms and information they need, regardless of the number of states in which they do business. It will also help other states access comparable information. Each state's tobacco tax website will include a predictable number of links and a standard set of informational categories, while the look and feel of each site will remain specific to the state. This will also aid states in building websites that include all the information a taxpayer needs by providing a map for web developers.

Guidelines The standard interface will consist of a recommended set of links to relevant tobacco tax information, forms, and frequently asked questions. This set of links, or standard categories, with suggested subcategories, is:

- Frequently Asked Questions (FAQs)
- Forms and Publications
- Tobacco Tax Rates
- Laws, Regulations, and Notices
 - Current Laws
 - Legislation
 - Current Regulations
 - Proposed Regulations
 - Departmental Notices or Newsletters
- Licenses

- How to obtain a license
- Electronic Filing & Payment
 - Tobacco Electronic Filing Guide
 - XML Schema and reporting requirements
 - Electronic filing testing requirements
 - EFT
 - FAQs
- Contact Us
 - Email us
 - Write us
 - Call us

Under each of the category headings, states may include links to whatever types of information they require. The links will vary by state, but the category headings should remain standard. Taxpayers would then have the benefit of always knowing where to find certain types of information, no matter what state website they are using.

Taxpayers and administrators may have different needs, so the Technology Subcommittee also includes a list of suggested optional categories, which states may adopt and include as they see fit. These categories should be placed after the standard categories.

The Optional Categories are:

- Tobacco Tax Statistics
- Other Links
 - Marketers' Associations
 - IRS Forms and Publications
 - IRS Excise tax information

When each state develops its Tobacco Tax Web Interface, it should include the URL to section 11 of their Tobacco Tax Information by State responses. If you already have such a Web page, please add the URL to section 11 of your Tobacco Tax Information by State responses.

4. Web Services

Web services are a method of integrating web-based applications using open standards such as XML, SOAP, WSDL, and UDDI over an Internet protocol. These standards are used to tag data (XML), transfer data (SOAP), describe available services (WSDL), and list available services (UDDI). Web services are primarily used by businesses to communicate with each other and with clients, allowing organizations to share data without the need for in-depth knowledge of each other's IT systems.

Unlike traditional client-server models, such as a web server and web page system, web services do not provide a graphical user interface (GUI) to the user. Instead, they share business logic, data, and processes through a programmatic interface across a network. This allows developers to add the web service to a GUI, such as a web page or an executable program, to offer specific functionality to users.

Web services allow different applications from different sources to communicate with each other without the need for custom coding. Because all communication is in XML, web services are not limited to any specific operating system or programming language. This means that, for example, Java can communicate with Python, and Windows applications can communicate with Linux applications.

Web services do not require the use of browsers or HTML, and they can be accessed using various programming languages and protocols such as REST or GraphQL. They are widely used in modern software development as a means of connecting different systems and applications, and are often used in microservices architecture and cloud computing. Some popular examples of web services include Amazon Web Services (AWS) and Microsoft Azure, which provide a wide range of services such as storage, computing power, and databases that can be accessed and utilized by other applications.

5. Implementing Uniform Electronic Filing

The goal of uniform reporting is to provide tax authorities with a model to follow so that they do not have to reinvent the electronic filing process, also to provide industry a standard by which they can more easily report information that tax authorities need. The easier it is for industry to comply, the more likely the tax authority will get the information timely and error-free.

When implementing FTA schemas (XML), the tax authority should publish the entire uniform map or the sections of the uniform schema utilized by the tax authority. The tax authority should extract from the data the information they require. Once the uniform file is received, the tax authority can choose to ignore certain data fields. If tax authorities follow this recommendation, we can achieve uniform electronic filing and it will be easier for the filer to provide accurate and complete information.

XML EDI is a method of exchanging data using the Extensible Markup Language (XML) standard. XML is a markup language that describes data using tags, making it platform, software, and hardware independent. The Tobacco Uniformity Technology Subcommittee has developed a standard schema set for reporting, with the help of the Tax Information Group for EC Requirements Standardization (TIGERS), to support the uniformity effort.

XML schema provides a way to define and constrain the data contained in an XML document. It is the XML-based alternative to data tag definition (DTD). The use of XML for tobacco reporting is preferred as it is easy to read, understand, and implement. The tax authority can extract the data they need and ignore unwanted data fields.

For more information regarding XML, visit www.w3.org/standards/xml/. For additional XML resources visit www.StateMeF.com, TIGERS Best Practices and TIGERS Standards for FedState MeF.

The tax authority should allow at least 9-6 months to test and convert the current process to EDI. Sample data test for 1 or 2 months, production data test for 2 to 3 months, and after go-live, the paper and/or separate electronic submission via fax, email or website of summary reports contained in the EDI submission should no

longer be required. It is best not to change forms or codes at the same time as moving to EDI. Moving from paper to EDI is a complex process, and it's important to have a clear plan in place to ensure a smooth transition. The tax authority should provide a well-defined electronic implementation guide, adequate notification of implementation, adequate testing opportunities, and a guick path to certification.

The tax authority should also involve trade associations representing the tobacco industry in the planning, implementation, and communication process. Involve other state departments such as the Attorney General's office, Department of Health, etc. The tax authority should ensure requirements are reasonable, easily understood, and simple to comply with.

The Federation of Tax Administrators (FTA) has developed standards for the tax authority to follow when implementing electronic data interchange (EDI) for tobacco taxes. The technology subcommittee recommends that state tax administrators adopt a standard internet interface for tobacco taxpayers and that software guides for e-filing be approved by the FTA technology subcommittee.

In summary, the use of XML for tobacco reporting is preferred as it is easy to read, understand, and implement. The tax authority should provide a well-defined electronic implementation guide, adequate notification of implementation, adequate testing opportunities, and a quick path to certification. The goal of uniform reporting is to provide tax authorities with a model to follow so that they do not have to reinvent the electronic filing process, also to provide industry a standard by which they can more easily report information that tax authorities need.

6. Security

File Transfer Protocol (FTP)

File Transfer Protocol (FTP) is a widely used method for transferring files over the internet, particularly in government electronic filing applications. Its popularity stems from its operating system independence, low cost, and ease of implementation. To use FTP, government entities and trading partners establish a connection and configure an account and directory. Once this is done, data file exchange transactions can be completed easily using drag-and-drop functionality.

FTP is network independent, allowing organizations to use the same tools and techniques for internal and external data exchange. It is also commonly used internally between corporate and government computing platforms. Batch files can be used to create multi-platform job-sets for unattended program execution, resulting in significant cost savings for organizations.

The most common medium for trading partner FTP exchange is the internet, which requires a government entity to configure an internet FTP server and the trading partner to have internet access. Extranet networks also provide an ideal environment for FTP data exchange. However, one significant drawback of FTP is that it does not provide any security during the electronic filing process. To address this, many organizations implement encrypted extranet networks for increased security.

The adoption of FTP as a common method for electronic filing is facilitated by security programs that protect data during transmission. Two main security concerns when using FTP over the internet are protecting the data file during transmission and securing the trading partner login and directory mapping process. The common solution is to encrypt the data file before sending it via FTP. Strategies for securing the login process include basic password management and establishing secure communications using Secure Socket Layer (SSL) encryption.

Encryption

Encryption is a widely used method for protecting sensitive data during electronic filing through FTP. By encrypting the data before transmission, it ensures that the data is secure and unreadable to unauthorized entities. Government organizations and trading partners can exchange encryption keys to encrypt and decrypt the data. Once the data is transmitted, the government entity should quickly collect and move it to a secure location to further reduce the risk of data compromise.

In addition to encrypting data, securing the account and directory mapping process is also crucial to ensure the security of FTP transactions. The use of Secure Socket Layer (SSL) and Virtual Private Network (VPN) is becoming increasingly popular for this purpose. However, some of these solutions may require the use of proprietary software, which may be a barrier for trading partners to adopt.

The security of FTP for electronic filing is also being improved through the use of Public Key Infrastructure (PKI). As government organizations establish PKI capabilities, trading partners will have a standard set of tools to authenticate themselves and protect their data. Additionally, regularly changing login credentials and passwords can also help to reduce the risk of data compromise.

Secured Transmission (SSL, HTTPS)

SSL (Secure Socket Layer) is a widely used protocol for secure data transmission over the Internet. It is built on top of private key encryption technology and provides various security features such as data encryption, server authentication, message integrity, and client authentication for any TCP/IP connection. This makes it an ideal choice for organizations that need to transmit sensitive information over the Internet, such as online banking, e-commerce, and other financial transactions.

Web server certificates are a key component of SSL-based security. These certificates are used to authenticate the identity of a website to visiting browsers. When a user wants to send confidential information to a web server, the browser will access the server's digital certificate. The certificate contains the web server's public key, which is used by the browser to authenticate the identity of the web server and encrypt the information for transmission. Since the web server is the only entity with access to its private key, only the server can decrypt the information, ensuring that it remains confidential and tamper-proof while in transit across the Internet.

The strength of encryption is measured by the length of the encryption key used. In the past, 40-bit encryption was commonly used, but it is considered relatively weak in terms of security. Many banks and other organizations now require at least 128-bit encryption for online transactions, as it is much stronger and offers a much higher level of security. 128-bit encryption is about 309 septillion times stronger than 40-bit encryption, making it much more difficult for an attacker to crack.

Using SSL/HTTPS can provide several benefits for web security, such as:

- Encrypting the data transmitted between the user's browser and the website's server, which helps to protect against eavesdropping and man-in-the-middle attacks.
- Authenticating the website's identity to the user, which helps to prevent phishing attacks and ensure that the user is communicating with the intended website.
- Providing integrity protection for the data transmitted, which helps to detect any tampering or modification of the data in transit.

However, there are also some issues that can arise when using SSL/HTTPS:

- SSL/HTTPS can add latency and overhead to the web page loading process, which can negatively impact website performance.
- SSL/HTTPS can also put additional load on the web server, which can impact scalability and availability.
- SSL/HTTPS also requires the website to have a valid SSL/TLS certificate, which can be an additional cost for the website.
- There may also be compatibility issues between older browsers and SSL/HTTPS, which can cause issues for users trying to access the website.
- SSL/HTTPS is not a guarantee of security, it just encrypts the channel, it does not mean that the website is safe to use or that it cannot be exploited.

There are several recommended best practices for securing web services, including:

- 1. Using HTTPS/SSL for encrypting communications between the client and server.
- 2. Implementing a web application firewall (WAF) to protect against common web-based attacks such as SQL injection and cross-site scripting (XSS).
- 3. Regularly updating and patching web applications and web server software to protect against known vulnerabilities.
- 4. Using strong authentication methods, such as multi-factor authentication, to protect against unauthorized access.
- 5. Regularly monitoring web server and application logs for signs of malicious activity.
- 6. Conducting regular vulnerability assessments and penetration testing to identify and address security weaknesses.
- 7. Having a incident response plan in place, including regular backup and disaster recovery procedures in case of a security breach.
- 8. Regularly educating employees and users about safe online practices, including how to recognize and avoid phishing attempts and other social engineering tactics.
- 9. Using a Content Distribution Network (CDN) service to distribute your web pages and assets to multiple locations, so that the load is not only on one server.
- 10. Using a DNS firewall service to protect your domain name system (DNS) and block access to malicious sites.

It's important to note that security is an ongoing process and not a one-time event, so it's important to regularly review and update your security measures as new threats and vulnerabilities emerge.

7. Sample Trading Partner Agreement

Trading Partner Agreement for Electronic Data Exchange (XML)

This Agreement (the "Agreement") is entered into on the date of execution by both parties, by and between the [State Agency] (the "Department") and [Licensee] (the "Licensee").

The Department and the Licensee wish to provide a means for the Licensee to file its [State Name] Tobacco report(s) electronically, in substitution for conventional, paper-based documents, and to assure that such reports are legally valid and enforceable. In order to achieve this goal, the parties agree as follows:

- 1. Terms and Amendments: This Agreement shall be effective on the date of execution and shall continue until terminated by either party. A party may terminate this Agreement by giving thirty (30) days written notice to the other party or by canceling their Tobacco License. This Agreement may be amended at any time by executing a written addendum signed by both the Licensee and the Department.
- 2. Standards: The Licensee will electronically transmit reports to the Department according to the Department's standards and instructions, which may be revised and updated by the Department from time to time. The Department will provide these standards and instructions to the Licensee in a reasonable time frame in advance of due dates to allow compliance with filing requirements.
- 3. Transmission: [This section should specify the state's requirements for data transmission, such as through a VAN, Direct Dial, Internet, etc.]
- 4. System Operations and Security Procedures: The Licensee, at its own expense, shall provide and maintain the equipment, software, services, and testing necessary for the Licensee to transmit the electronic reports. The Department, at its own expense, shall provide and maintain the equipment, software, services, and testing necessary for the Department to receive the electronic reports. Each party shall use security procedures that are reasonably sufficient to ensure that all transmissions of the reports are authorized and to protect its business records and data from improper access. [Additional procedures may be defined by each state.]
- 5. Signatures: The name of the Licensee's authorized agent, or the Licensee's identification number, when included as part of the report filed pursuant to this Agreement, shall constitute the signature of the Licensee on the report as if such report were actually signed by the Licensee.
- 6. Receipt of Transmission: A report shall be deemed to have been filed with the Department when the report, in the stipulated format, is accessible to the Department or the Department's third-party service provider and meets the requirements of the taxing authority. If the Licensee attempts to file and is unable to do so because the Receipt Computer is not available to receive a filing, the Department will not impose late filing penalties or interest, provided the Licensee contacts the Department immediately when an access problem is identified.
- 7. Acknowledgement of Transmission: Upon receiving a successfully transmitted report from the Licensee, the Department or the Department's third-party service provider will transmit an acknowledgement in return within three (3) business days from receipt of the Licensee's report. The acknowledgement will communicate only that the Department has received the Licensee's transmission. An acknowledgement does not imply any findings by the Department about the correctness of the report. A transmission that is received by the Department but is not in the stipulated format will not constitute a valid report.

- 8. Garbled Transmissions: If any transmission is received in an unintelligible or garbled form, and the Department cannot identify the Licensee, no acknowledgement will be transmitted. The absence of an acknowledgement shall be treated as notice to the Licensee that the report was not received by the Department in the required format.
- 9. Record Retention: The Licensee shall retain all records, including electronic records, of the information reported to the Department for a period of [insert number of years] years from the date of filing the report. The Licensee shall make such records available to the Department upon request.
- 10. Admissibility of Returns/Reports as Evidence: Any report or return filed electronically in accordance with this agreement shall be admissible in any administrative or judicial proceeding as evidence of the information contained in such report or return.
- 11. Payments: [Define state's method of payment]
- 10. Governing Law: This agreement shall be governed by and construed in accordance with the laws of the [insert state name].
- 11. Unique Identifiers: To ensure accurate identification of electronically transmitted reports, the parties will exchange the identifying codes and numbers listed below. Any changes to these identifiers must be communicated to the other party before any transmission using the updated identifiers is sent.
- 12. Entire Agreement: This agreement constitutes the entire agreement of the parties with respect to the subject matter hereof and supersedes all prior agreements and understandings, whether oral or written.
- 13. Confidentiality: The Department shall not disclose any of the Licensee's confidential information to any third party, except as required by law or as necessary to carry out the purposes of this Agreement. The Licensee shall not disclose any of the Department's confidential information to any third party, except as required by law or as necessary to carry out the purposes of this Agreement.
- 14. Headings: The headings of the paragraphs in this agreement are for convenience only and shall not affect the interpretation of this agreement.

This agreement is executed by the Department and the Licensee on the date first above written.

Department:	
Authorized Agent:	_
Licensee:	
Authorized Agent:	

Section 2 - XML EDI

1. Implementation Guide Approval Procedures

What is XML EDI? XML EDI (Electronic Data Interchange) is a method of exchanging business documents between organizations in a standardized format, using the Extensible Markup Language (XML) as the encoding format. It is a way to electronically exchange business documents between different organizations, such as purchase orders, invoices, and shipping notices.

The basic components and key concepts of XML EDI include:

- 1. Standardized format: XML EDI uses a standardized format for encoding business documents, which allows for easy integration and automation of business processes between different organizations.
- 2. Document types: XML EDI supports a wide range of document types, including purchase orders, invoices, shipping notices, and more. Each document type is defined by a set of standard elements, such as sender, recipient, and item details.
- 3. Message structure: XML EDI messages have a specific structure, which includes a header, body, and footer. The header contains information about the sender and recipient, the body contains the actual data, and the footer contains a summary of the message.
- 4. Validation: XML EDI messages are validated against a set of rules and standards to ensure that they are structured correctly and contain the required data.
- 5. Data mapping: XML EDI requires mapping of data between different systems, which can be challenging. Data mapping is the process of transforming data from one format to another, so that the data can be understood by the receiving system.
- 6. Security: XML EDI messages can be protected using standard security mechanisms such as encryption, digital signatures, and access controls.
- 7. Data integration: XML EDI allows integration of data between different systems, enabling the automation of business processes and the elimination of manual data entry.

EDI is made up of many different methods of sharing data electronically between parties. The FTA has developed standards for the tax authority to follow when implementing electronic data interchange (EDI).

Electronic data interchange (EDI) is the structured transmission of data between organizations by electronic means, which is used to transfer electronic documents or business data from one computer system to another computer system, i.e. from one trading partner to another trading partner without human intervention.

The XML EDI Process – Basic Components

Header

Information about Taxpayer/Company

- Tax Type and Filing Period
- Contact Info
- Address Info
- Check Values (Amount Due)
- Schedules

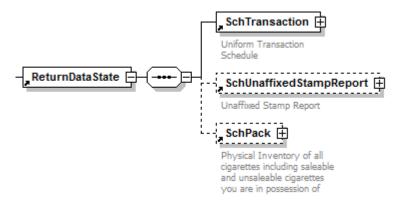
Information about the individual transactions and inventory amounts

- · Receipts and Disbursements
- Information about Buyer, Seller, and Carriers

Key Design Concepts

- Generic data elements shared across returns
- Separate schema per return type
- Allow tax authority to restrict most enumerated lists

High Level diagram of XML Cigarette Filing



Tobacco Uniformity & Extensible Markup Language (XML)

XML is a language much like HTML that is designed to describe data by using "tags." XML is a platform, software, and hardware independent tool for storing, carrying, and exchanging information.

Tags are not predefined in XML, but the Tobacco Uniformity Committee through the assistance of Tax Information Group for EC Requirements Standardization (TIGERS) has designed a standard schema set to be used for reporting return information supported by the Uniformity effort. The tags are considered self-describing.

A key XML design concept incorporates the use of "simple" and "complex" element definitions or "eFile types." A simple type, such as amount quantity, stands alone. The complex type consists of a parent element and child sub-elements, such as a taxpayer address with separate address, city, state, and zip code child elements. Multi-layer complex types are used to represent the various table structures that often appear in tax forms and schedules. We also created generic complex types that provide a defined data structure, but allow states to use

their own field names to describe the data. Credits, dollar amounts, and quantity totals are an example of the information captured by these complex types. Reducing the XML maintenance overhead was an important underlying design principal.

Tobacco XML has 3 major components. The messaging protocol, the XML package, and acknowledgement process. The message contains information needed to transmit the XML file from the taxpayer to the tax authority. The technical instructions concerning how this is accomplished are up to the individual state. Those states with an active Modernized eFiling (MeF) Web Services program will likely utilize that infrastructure. You can visit the State MeF website at www.statemef.com to get a better understanding of how the MeF process works.

The XML package consists of the header and return data. The header provides high-level information about the company and filing. The Tobacco Header is based on the MeF generic header which is used by Corporate, Personal Income, Payroll and Streamlined Sales Tax. This is part of the FTA vision to provide a standard taxpayer interface/portal that can be shared across the taxes administered by state agencies. This "standardized" look and set of technologies will ultimately reduce implementation cost for both the government and private sectors. The Tobacco Header has been revised to include those data elements that are unique to our program. Many of the "shared" header data elements won't be used in the tobacco filing.

The return data has the state-required information to ensure the filing obligation will be satisfied. This includes information about the return, schedule detail, and summary level return data. This set of data constitutes a return for a period of time.

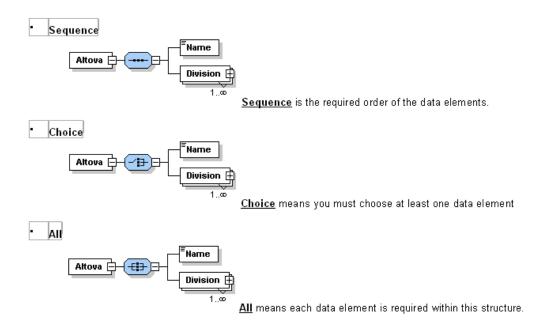
The Acknowledgement process is designed to provide the taxpayer with an electronic notification that their return has been received and processed and also to inform the taxpayer of any errors that would cause their electronic filing to be rejected. States with an active MeF program will likely utilize the Acknowledgement methodology. The details included in the XML errors are determined by the functionality of the individual state's backend application.

The XML schema diagrams used in this guide were generated by Altova XMLSpy 2018 Enterprise Edition.

Explanation of XMLSpy Terms and Symbols

We will now present a brief explanation of XMLSpy terms and flow charting symbols needed to understand the graphical output generated by the software. These diagrams provide a "user friendly" view of the basic "building blocks" used to create the tobacco schemas. The graphical representation of the component provides detailed information about the component's type and structural properties.

XML Basic Components



Mandatory single element

ment Country

The rectangle indicates an element and the <u>solid border indicates that the element is required</u>. The absence of a number range indicates a single element (i.e. minOcc=1 and maxOcc=1).

Single optional element

The rectangle indicates an element and the <u>dashed border means the element is optional</u>. The absence of a number range indicates a single element (i.e. minOcc=0 and maxOcc=1).

le element 1..5

Mandatory multiple element

The rectangle indicates an element and the solid border indicates that the element is required. The <u>number range 1..5 means that minOcc=1 and maxOcc=5.</u>

Division ⊕

Mandatory multiple element containing child elements

The rectangle indicates an element and the solid border indicates that the element is required. <u>The number range 1..infinity means that minOcc=1 and maxOcc=unbounded.</u> The <u>plus sign means complex content</u> (i.e. at least one element or attribute child).

- minOcc = Minimum Occurrence for the specific element.
- maxOcc = Maximum Occurrence for the specific element.

2. XML Recommendations

XML Guide

The tax authority should make an XML Guide available to all software providers and filers four to six months before the implementation of an XML mandate. This guide should include all necessary information regarding data format requirements and reporting transactions, such as the fact that punctuation is not allowed in names. It should also provide clear explanations of which data elements are required and how to determine the types of transactions that belong on each schedule. Simply providing the schedule name is not enough, the guide should be as detailed as possible to make the transition to electronic reporting as smooth as possible for software providers and filers. It is important to note that when transitioning from paper to XML, the reporting requirements should remain the same. Any new requirements must be clearly documented in the implementation guide and communicated to filers in advance. The tax authority should also work with filers before implementing changes to gather valuable feedback and prevent the need for after-implementation programming changes and workarounds.

Testing Procedures

The tax authority should conduct testing for both software providers and individual filers. It is essential to test both parties to ensure successful filing. Even if using an approved software provider, the filer's data may need to be refined to prevent unsuccessful filing. Each filer should submit three months' worth of returns for testing, using both the current method and the new XML method. Once all three months are accepted, the tax authority can allow the filer to file in XML production and discontinue the use of the previous filing method. Filers using a software provider should be tested after their software provider is approved and accepted.

Error Reporting

When a tax authority returns an error to the filer, they should, whenever possible, fully analyze the submitted file and identify all errors and types of errors. Not doing so may result in the filer submitting multiple files, addressing each error as it arises, only to receive another type of error in return. This could prolong the process of getting a final accepted return and may result in submitting it late.

Validation or Confirmation Report

The tax authority should provide a confirmation report to the filer as promptly as possible upon receipt of an acceptable file. The report should, at the minimum, include the total tax due, so the filer can verify it against their return and ensure that the return submitted to the tax authority is correct.

3. XML Questions and Answers

Question: The FTA XML schema includes elements and options that may not be required by your state. If the state chooses to adopt the FTA schema, can it specify that these elements be left blank?

Answer: The schema is designed to allow states to select only the elements that they need to meet their specific requirements. However, in order to share information with other states, the FTA recommends that all information on a transaction be collected. This is because without sufficient information, the transaction may not be useful to the other tax authority it is shared with. The FTA has always believed that "more information is better than less information." For example, if your state only requires filers to provide your state license numbers, the other state you share with won't be able to identify the filer because they don't have your license. When designing your eFiling system, please keep this in mind for data sharing purposes.

Question: When a filer's return includes one or more errors, is it considered filed when initially submitted or only after all issues have been resolved? Will a return that is mostly complete be considered as filed on time, even though minor corrections are still needed?

Answer: It is recommended that a return that is substantially compliant should be considered as filed on time and late filing penalties should not be imposed. It is up to each tax authority to establish their own policies for determining timely filing and to clearly outline the criteria for making that determination.

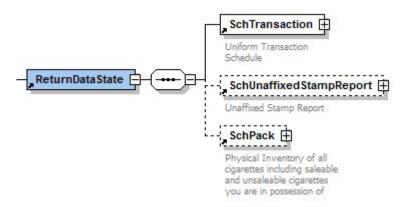
Imagine the return contains one incorrect FEIN or an invalid code, but has hundreds or even thousands of correctly reported transactions. Should the tax authority penalize the filer for such a minor error? The legal authority to impose late filing penalties may include a provision for waiver.

4. Implementing Cigarette/Tobacco XML

High Level Filing Overview

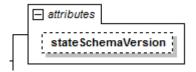
This section will provide an overview of the flow of information within XML and the fundamental components used to transmit the data. It will show how the filing is organized and how the individual pieces of data are defined within the schema structure. The aim is to present sufficient information to help you comprehend the design of the XML, but in a manner that is not overly technical for non-IT individuals.

The first diagram provides the complete Cigarette Filing package containing SchTransaction, SchUnaffixedStampReport, and SchPack.



Attributes

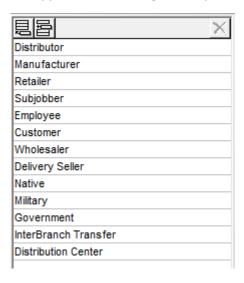
Attributes provide additional information about elements and often provide information that is not part of the data. The attributes at this level declare the version of the schema expected in this filing.



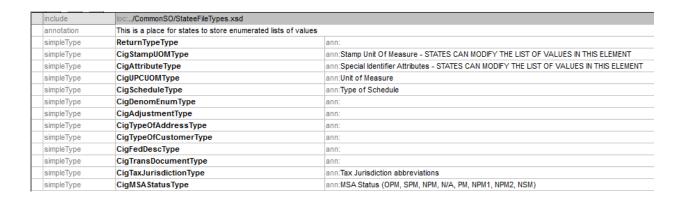
5. Schema Design Principles

Enumerated Lists

Enumerated lists are included in the schemas to establish a list of acceptable values, ensuring uniform reporting requirements. For example, the following enumerated list for Type of Customer. Codes can be removed from the approved lists to align with specific reporting requirements.



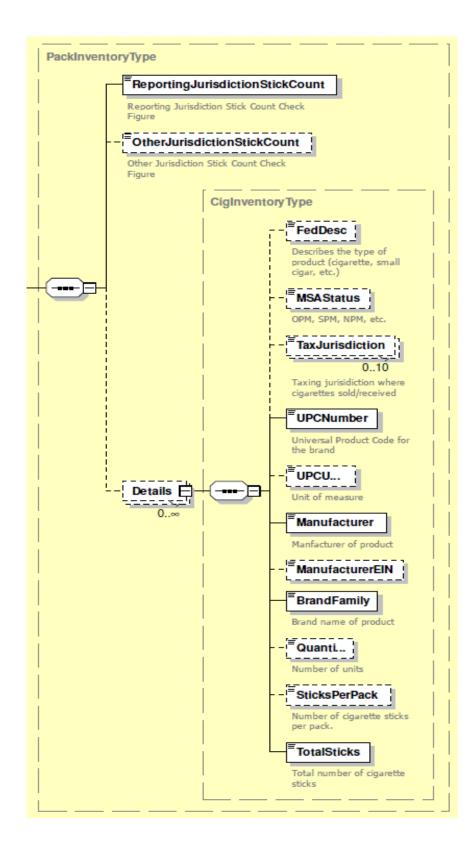
These are the Enumerated types (list) that were provided for tobacco. Some may have as few as 2 values, while other values may have hundreds. The schema will use the list to validate if provided.



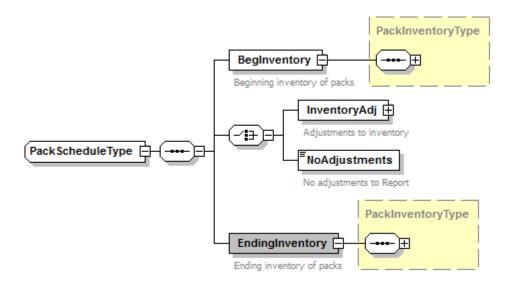
Complex Type Elements

ComplexType elements are a pre-defined set of elements that are used in multiple parts of a schema. They are easier to maintain as changes can be made in one place rather than each time the data is used throughout the schema.

For example, PackInventoryType is used for inventory information in both beginning and ending inventories, as well as inventory adjustments because the same information is needed in all. Using one XML structure for all eliminates the need for multiple structures. The structure also allows for providing both a total stick count and detailed information.



Shared elements that use the PackInventoryType.



6. Use of Business Rules in the Schema

One of the advantages of XML is that much of the logic for accepting or rejecting a return can be included in the schema. This makes it clear what the acceptance or rejection criteria are. The business rules should be:

- Only one reason for the rule
- Clearly written
- Properly organized by category
- The rule number should indicate the form it applies to
- Should not be able to be prevented by a schema validation error

The downside of validation errors is that they can occur in an endless number of ways and can be challenging to explain to taxpayers when they do happen. Therefore, states should aim not to be too restrictive compared to their legacy e-file application.

Other best practices for schema related to business rules:

- Provide your business rules in the comment section of the XPath Document
- Do not require information in the schema that is not on the form. This depends solely on the form/system requirements
- Any restriction or unique characteristics for an element should be included in the business rule document
- States should write business rules that are easily understandable by taxpayers
- Avoid using tag names in the business rule text; use line numbers on the tax forms instead.

7. Getting your Schema approved by the Uniformity Committee

To ensure compliance with the standards set by the FTA Tobacco Uniformity Committee, please follow these general guidelines:

- The FTA Tobacco Uniformity Committee will maintain the Uniform XML Schema.
- States cannot add elements that are not in the master schema but can choose to use a subset of the FTA
 defined elements.
- States cannot rename elements that are in the master schema.
- States cannot alter the schema structure from the master schema.
- States can restrict data, but cannot expand it (reduce field length, but not increase). In summary, any
 XML instance document that validates against the state-specific schema must also validate against the
 master schema. To check for compliance with the Uniformity standards, please visit XML.

8. XPath Documentation

Explanation of XPath Document

The previous section provided an explanation of the fundamental components of the XML schema and the rules that govern their use by the individual states. This section will demonstrate how states may use the XPath document to connect the paper form to the XML. The XPath document also includes additional information about how the individual data elements are used within the specific XML schema. In this case, we have expanded the Excel spreadsheet to include information about the form (Uniformity and State), field attributes, and field-specific business rules. The XPath spreadsheets are named Cigarette XPath V2 and Tobacco XPath V1 and can be found on https://www.statemef.com/tobacco.shtml.

9. Security

XML digital signature

The XML Signature specification is a collaboration between the World Wide Web Consortium (W3C) and the Internet Engineering Task Force (IETF). It provides integrity, message authentication, and/or signer authentication services for data of any type, whether it is located within the XML that contains the signature or elsewhere.

XML Encryption

The XML Encryption specification from W3C addresses the issue of data confidentiality using encryption techniques. Encrypted data is enclosed within XML tags defined by the XML Encryption specification.

XKMS (XML Key Management Specification)

The XML Key Management Specification (XKMS) is made up of the XML Key Information Service Specification (X-KISS) and the XML Key Registration Service Specification (X-KRSS). The X-KISS specification defines a protocol for a trust service that resolves public key information contained in XML-SIG elements. The X-KISS protocol enables a client of such a service to delegate part or all of the tasks required to process elements. The X-KRSS

specification defines a protocol for a Web service that accepts the registration of public key information. Once registered, the public key can be used in conjunction with other Web services, including X-KISS.

SAML (Secure Assertion Markup Language)

SAML is an XML-based framework that facilitates the communication of user authentication, entitlement, and attribute information. As the name suggests, SAML allows entities to make statements about the identity, attributes, and entitlements of a subject (often a human user) to other entities, such as a partner company or another enterprise application. The OASIS Security Services Technical Committee is responsible for defining, improving, and maintaining the specifications that define SAML.

Section 3 - XML Schemas

1. Cigarette and Tobacco Schemas – Schedules and Code Tables

The following schedules and code tables are shared among the cigarette and tobacco schema.

Type of Transaction Document Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Type of Transaction Document Codes
Invoice
Purchase Order
Credit Memo
Affidavit
Returned Goods Authorization
Confirmation
Bill of Lading
Other

Type of Customer Codes

Type of Customer Codes	
Distributor	
Manufacturer	
Retailer	

Subjobber
Employee
Customer
Wholesaler
Delivery Seller
Native American
Military
Government
InterBranch Transfer
Distribution Center

Type of State Abbreviation Codes

Code	State	Code	State	Code	State
AL	Alabama	MD	Maryland	SC	South Carolina
AK	Alaska	MA	Massachusetts	SD	South Dakota
AZ	Arizona	MI	Michigan	TN	Tennessee
AR	Arkansas	MN	Minnesota	TX	Texas
CA	California	MS	Mississippi	UT	Utah
СО	Colorado	МО	Missouri	VT	Vermont
СТ	Connecticut	MT	Montana	VI	Virgin Islands
DE	Delaware	NE	Nebraska	VA	Virginia
DC	District of Columbia	NV	Nevada	WA	Washington
FL	Florida	NH	New Hampshire	WV	West Virginia
GA	Georgia	NJ	New Jersey	WI	Wisconsin
GU	Guam	NM	New Mexico	WY	Wyoming

Code	State	Code	State	Code	State
HI	Hawaii	NY	New York	Armed F	orces
ID	Idaho	NC	North Carolina	AA	APO/FPO [Americas]
IL	Illinois	ND	North Dakota	AE	APO/FPO [Europe]
IN	Indiana	ОН	Ohio	AP	APO/FPO [Pacific]
IA	Iowa	ОК	Oklahoma	Territori	es
KS	Kansas	OR	Oregon	AS	American Samoa
KY	Kentucky	PA	Pennsylvania	FM	Fed St of Micronesia
LA	Louisiana	PR	Puerto Rico	МН	Marshall Islands
ME	Maine	RI	Rhode Island	MP	N Mariana Islands
				PW	Palau

Type of Address Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Type of Address Codes		
Mailing		
Location		
Billing		
Delivery		

Type of Country Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Note: The following table is for illustration purposes. The Country Codes will be follow current standards and updated when needed.

C	ode	Country	Code	Country
U	S	United States of America	CA	Canada

Type of MSA Status Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

MSA Status Codes	Description
ОРМ	Original Participating Manufacturer
NPM	Non-Participating Manufacturer
SPM	Subsequent Participating Manufacturer
N/A	Not Applicable
PM	Participating Manufacturer
NPM1	Non-Participating Manufacturer 1
NPM2	Non-Participating Manufacturer 2
NSM	Texas

Type of Account Holder Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Account Holder Codes	Description
1	Business
2	Personal

Type of Process Type Codes

Process Type Codes	Description
Т	Test
Р	Production

2. Cigarette Schema – Schedules and Code Tables

The following sub-schedules are unique to the reporting of cigarettes

Schedule 1 – Uniform Transaction Schedule

Sub-Schedules

Schedules of Receipts

Schedules of Disbursements

<u>Schedule 2 – Uniform Stamp Schedule</u>

Sub-Schedules

Beginning Inventory

Purchases

Adjustments

Ending Inventory

Stamps Affixed

<u>Schedule 3 – Uniform Cigarette Inventory Schedule</u>

Sub-Schedules

Beginning Inventory

Adjustments

Ending Inventory

Type of Schedule Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Type of Schedule Codes 1A – Cigarettes received from manufacturer or first importer 1B – Cigarettes received from a person other than a manufacturer or first importer 1C – Cigarettes received from a retailer or end user 1D – Cigarettes received by manufacturer or first importer from a person other than a manufacturer or first importer 2A – Cigarettes disbursed by a manufacturer or first importer 2B – Cigarettes disbursed to a person other than a manufacturer or first importer 2C – Cigarettes disbursed to a retailer or end user 2D – Cigarettes returned to the manufacturer

Note: Cigarettes and OTP are reported separately however the schemas have similar types of schedule codes to report receipts and disbursements.

Type of Fed Desc Codes

Fed Desc Codes	
Cigarette	
Small Cigar	

Type of Tax Jurisdiction Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Note: The following table is for illustration purposes. The Tax Jurisdiction Codes will be determined and maintained by each State.

Code	Tax Jurisdiction	Code	Tax Jurisdiction
AA	Military American	ALASV	Alabama Ashville
AE	Military European	ALATH	Alabama Athens
AL	Alabama	ALATT	Alabama Attalla
ALABB	Alabama Abbeville	ALAUB	Alabama Auburn
ALADD	Alabama Addison	ALAVN	Alabama Avon
ALALB	Alabama Alabaster	ALBWC	Alabama Baldwin County
ALABV	Alabama Albertville	ALBNK	Alabama Banks
ALAXC	Alabama Alexander City	ALBRB	Alabama Barbour County
ALALV	Alabama Aliceville	ALBYM	Alabama Bay Minette

Type of UPC Unit of Measure Codes

UPC Unit of Measure Codes	Description
CAR	Carton
CSE	Case
PAK	Pack
STK	Stick

Type of Stamp Unit of Measure Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Stamp Unit of Measure Codes	
10	
20	
25	

Type of Adjustment Codes

Type of Adjustment Codes
Damaged
Destroyed
Floor Stock
Small Cigar
Counting Error
Returned
Shipment Error
Stolen
Transfer
Shrinkage
Timing

Brand Code Table

The Brand Code Table is a compilation of information from cigarette manufacturers that includes the brand family, brand style, and known UPC codes for the various products available for sale. Codes have been created for each manufacturer and brand family to standardize the abbreviations and promote uniform reporting. This list will be updated when manufacturers introduce new products or make changes to existing products already on the market.

Note: The following table is for illustration purposes only. The Brand Code Table will be hosted on the FTA's website: https://www.taxadmin.org/tobacco-tax-uniformity-project.

Manufacturer	BrandManuf Code	Brand Family	BrandFam Code	Carton UPC	Case UPC	Pack UPC	Brand Style
Dosal Tobacco Corporation	DOSAL	305'S	30580	7 09215 20186 7	7 09215 20187 4	7 09215 20185 0	305'S Full Flavor King Box
Farmers Tobacco Co. of Cynthiana	FARME	Baron American Blend	BARON	8 14602 00412 6	8 14602 00423 2	8 14602 00402 7	Menthol King Box
King Mountain Tobacco Company	KINGM	King Mountain	KINGM	8 54393 00144 7	108 54393 00144 4	8 54393 00139 3	Red 100 Regular
Konci Group (USA) Inc.	KONCI	Golden Deer	GOLDE	8 79982 00203 2	8 79982 00212 4	8 79982 00200 1	Silver King Box
Kretek International, LLC	KRETE	Dreams	DREAM	7 51667 00101 4	107 51667 00101 8	7 51667 00102 1	Dreams California
Nasco Products	NASCO	Red Sun	REDSU	0 09537 77778 2	0 09537 77776 8	00953795	Red Sun Menthol
RJ Reynolds	RJREY	Vantage	VANTA	0 12300 36758 5	0 1230036759 2	0 12300 36757 8	Classic Silver 100 Box
S & M Brands, Inc.	SMBRA	Riverside	RIVER	00000710410038	00000710410035	00000710405034	Riverside Blue Kings Box FSC
Santa Fe Natural Tobacco Co	SANTA	Natural American Spirit	NATUR	0 47995 85606 9	100 47995 85606 6	0 47995 85605 2	100% US Grown Mellow King Hard Pack 6M

3. Tobacco Schema – Schedules and Code Tables

The following sub-schedules are unique to the reporting of OTP

<u>Schedule 1 – Uniform Transaction Schedule</u>

Sub-Schedules

Schedules of Receipts

Schedules of Disbursements

Type of Schedule Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Type of Schedule Codes
1A – OTP received from manufacturer or first importer
1B – OTP received from a person other than a manufacturer or first importer
1C – OTP received from a retailer or end user
1D – OTP received by manufacturer or first importer from a person other than a manufacturer or first importer
2A – OTP disbursed by a manufacturer or first importer
2B – OTP disbursed to a person other than a manufacturer or first importer
2C – OTP disbursed to a retailer or end user
2D – OTP returned to the manufacturer

Note: Cigarettes and OTP are reported separately however the schemas have similar types of schedule codes to report receipts and disbursements.

Type of Fed Desc Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Fed Desc Codes
Chewing Tobacco
Cigarette
Cigarette Paper
Cigarette Tube
Large Cigar
Pipe Tobacco
Roll Your Own
Small Cigar
Snuff
Alternative Nicotine Product
E-liquid Product
Vapor Products
Other

Type of State Desc Codes

The FTA Tobacco Tax Section Uniformity Committee has adopted the following category codes to be used in determining the state-specific codes for the tobacco schemas. While some states have general categories, others are very specific in identifying and taxing various tobacco products. The review committee will work with individual states when determining their codes.

Code-XX	(JURISDICTION NAME)
	(Statutory Citation of Authority)
ТОВАССО	
PRODUCTS	
XX-TP1	Reserved "Tobacco Products" (TP) (Not Defined in Statute)
XX-OTP-1	Reserved "Other Tobacco Products" (OTP) (Not Defined in Statute)

(JURISDICTION NAME)
(Statutory Citation of Authority)
Reserved "Smoking Tobacco Products" (Not Defined in Statute)
Reserved "Smoking Tobacco" (Not Defined in Statute)
Reserved "Smoking Tobacco" (Not Defined in Statute)
Reserved "Small Cigar" by the Federal Definition) (Not Defined in Statute)
Reserved "Little Cigars" (Not Specifically Defined in Statute)
Reserved "Filtered Cigars" (Not Specifically Defined in Statute)
Reserved "Class 1 Cigars" (Cigars under the Cap) (Cigar is Not Defined in Statute) The tax imposed under this subsection on cigars shall not exceed an amount equal to XX cents for each cigar.
Reserved "Class 2 Cigars" (Tax Capped) (Cigar is Not Defined in Statute) The tax imposed under this subsection on cigars shall not exceed an amount equal to XX cents for each cigar.
Reserved "Class 3 Cigars" (Not Defined in Statute)
Reserved "Class 4 Cigars" (Not Defined in Statute)
Reserved "Class 5 Cigars" (Large Cigars) (Not Specifically Defined in Statute)
Reserved "Class 6 Cigars" (Premium Cigars) (Not Specifically Defined in Statute)
Reserved "Pipe" (Not Defined in Statute)
Reserved "Roll Your Own" (Not Defined in Statute)
Reserved "Cigar Wrap" (Not Defined in Statute)
Reserved "Cigarette Papers" (Not Defined in Statute)
Reserved "Cigarette Tubes" (Not Defined in Statute)
Reserved "Smokeless Tobacco Products" (Not Specifically Defined in Statute)
Reserved "Chewing Tobacco" (value based) (Not used in Statute)

Code-XX	(JURISDICTION NAME)
	(Statutory Citation of Authority)
XX-DS1	Reserved "Dry Snuff" (Not Specifically Defined in Statute)
XX-LL1	Reserved "Loose Leaf Chewing tobacco" (Not Defined in Statute)
XX-LL2	Reserved "Loose Leaf Chewing tobacco" (Not Defined in Statute)
XX-LL3	Reserved "Loose Leaf Chewing tobacco" (Not Defined in Statute)
XX-LL4	Reserved "Loose Leaf Chewing tobacco" (Not Defined in Statute)
XX-MS1	Reserved "Moist Snuff" (Not Defined in Statute)
XX-MS1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-MS1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-MS2	Reserved "Moist Snuff" (Not Defined in Statute)
XX-MS2-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-MS2-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-MS3	Reserved "Moist Snuff" (Not Defined in Statute)
XX-MS3-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-MS4-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-MS4	Reserved "Moist Snuff" (Not Defined in Statute)
XX-MS4-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-MS4-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-PL1	Reserved "Plug Chewing tobacco" (Not Defined in Statute)
XX-PL2	Reserved "Plug Chewing tobacco" (Not Defined in Statute)
XX-PL3	Reserved "Plug Chewing tobacco" (Not Defined in Statute)
XX-PL4	Reserved "Plug Chewing tobacco" (Not Defined in Statute)
XX-SS1	Reserved "Snus" (Not Defined in Statute)
XX-SS1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-SS1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
1	1

Code-XX	(JURISDICTION NAME)
- 3	(Statutory Citation of Authority)
	(Statutory Citation of Authority)
XX-TW1	Reserved "Twist Chewing tobacco" means any leaf tobacco that is not intended to
	be smoked, but "twist chewing tobacco" does not include loose leaf chewing tobacco, plug chewing tobacco, snuff, dry snuff, or snus.
)	
XX-TW2	Reserved "Twist Chewing tobacco" (Not Defined in Statute)
XX-TW3	Reserved "Twist Chewing tobacco" (Not Defined in Statute)
XX-TW4	Reserved "Twist Chewing tobacco" (Not Defined in Statute)
NEXT	
GENERATION PRODUCTS	
XX-SNP1	Reserved "Smokeless Nicotine Product" (Not Defined in Statute)
XX-SNP1-MRT1	· · · · · · · · · · · · · · · · · · ·
	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-SNP1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-ANP1	Reserved "Alternative Nicotine Product" (Not Defined in Statute)
XX-ANP1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-ANP1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-VAP1	Reserved "Vapor Product" (Not Defined in Statute)
XX-VAP1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-VAP1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-VAP2	Reserved "Vapor Product" (Not Defined in Statute)
XX-VAP2-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-VAP2-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
WI-ELIQ1	Reserved (E-liquid" and "E-liquid Product (closed systems) (Not Defined in Statute)
XX-ELIQ1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
WI-ELIQ1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
XX-ELIQ2	Reserved (E-liquid" and "E-liquid Product" open systems) (Not Defined in Statute)
XX-ELIQ2-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
XX-ELIQ2-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
	1

Code-XX	(JURISDICTION NAME)
	(Statutory Citation of Authority)
XX-NT1	"NON-TAXABLE PRODUCTS" (not taxable by definition)

- XX is the State Abbreviation
- YYY is the Category Code

Note: The following table is for illustration purposes. It a representative sample of the approved codes being used at this time. The State Description Codes will be determined and maintained by each State.

Code	State Desc Code
KY-NT1	"NON-TAXABLE PRODUCTS" Not Taxable by Definition including "Reference Tobacco", Vapor Products, E-liquid and e-liquid products, Alternative Nicotine Products and Smokeless Nicotine Products.
TOBACCO PRODUCTS	
KY-TP1	"Tobacco Products" (TP) "Tobacco products" means any smokeless tobacco products, smoking tobacco, and any kind or form of tobacco prepared in a manner suitable for chewing or smoking, or both, or any kind or form of tobacco that is suitable to be placed in an individual's oral cavity, except: cigarettes, reference tobacco, moist snuff, loose leaf chewing tobacco and plug chewing tobacco. (All things taxed on value by definition).
KY-OTP-1	Reserved "Other Tobacco Products" (OTP) (Not Defined in Statute)
SMOKING TOBACCO	
KY-STP1	Reserved "Smoking Tobacco Products" (are Not Defined in Statute) Smoking Tobacco Products are included in the definition of "Tobacco Products" and are taxed on value by definition.
KY-STP2	Reserved "Smoking Tobacco" (Not Defined in Statute)
KY-STP3	Reserved "Smoking Tobacco" (Not Defined in Statute)
KY-SMCGR1	Reserved "Small Cigar" by the Federal Definition) (Not Defined in Statute)

Code	State Desc Code
KY-LTLCGR1	Reserved "Little Cigars" (Not Specifically Defined in Statute)
KY-FTRCGR1	Reserved "Filtered Cigars" (Not Specifically Defined in Statute)
KY-CGR1	Reserved "Class 1 Cigars" (Cigars under the Cap) (Cigar is Not Defined in Statute) The tax imposed under this subsection on cigars shall not exceed an amount equal to XX cents for each cigar.
KY-CGR2	Reserved "Class 2 Cigars" (Tax Capped) (Cigar is Not Defined in Statute) The tax imposed under this subsection on cigars shall not exceed an amount equal to XX cents for each cigar.
KY-CGR3	Reserved "Class 3 Cigars" (Not Defined in Statute)
KY-CGR4	Reserved "Class 4 Cigars" (Not Defined in Statute)
KY-LCGR5	Reserved "Class 5 Cigars" (Large Cigars) (Not Specifically Defined in Statute)
KY-LCGR6	Reserved "Class 6 Cigars" (Premium Cigars) (Not Specifically Defined in Statute)
KY- PIP-1	Reserved "Pipe" (Not Defined in Statute)
KY- RYO-1	Reserved "Roll Your Own" (Not Defined in Statute)
KY-CGRW1	Reserved "Cigar Wrap" (Not Defined in Statute)
KY-CP-1	Reserved "Cigarette Papers" (Not Defined in Statute)
KY-CT-1	Reserved "Cigarette Tubes" (Not Defined in Statute)
SMOKELESS TOBACCO	
KY-SMKL1	Reserved "Smokeless Tobacco Products" (Not Specifically Defined in Statute)
KY-CH1	Reserved "Chewing Tobacco" (value based) (Not used in Statute)
KY-DS1	"Dry Snuff" (Not Specifically Defined in Statute)

Code	State Desc Code
KY-LL1	"Loose Leaf Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "loose leaf chewing tobacco" does not include plug chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	Single unit" means a consumer-sized container, pouch, or package:
	(a) Containing less than four (4) ounces of chewing tobacco by net weight;
	(b) Produced by the manufacturer to be sold to consumers as a single unit and not produced to be divided or sold separately; and
	(c) Containing one (1) individual container, pouch, or package;
KY-LL2	"Loose Leaf Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "loose leaf chewing tobacco" does not include plug chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	Half-pound unit" means a consumer-sized container, pouch, or package:
	(a) Containing at least four (4) ounces but not more than eight (8) ounces of chewing tobacco by net weight;
	(b) Produced by the manufacturer to be sold to consumers as a half-pound unit and not produced to be divided or sold separately; and
	(c) Containing one (1) individual container, pouch, or package;
KY-LL3	"Loose Leaf Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "loose leaf chewing tobacco" does not include plug chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	"Pound unit" means a consumer-sized container, pouch, or package:
	(a) Containing more than eight (8) ounces but not more than sixteen (16) ounces of chewing tobacco by net weight;
	(b) Produced by the manufacturer to be sold to consumers as a pound unit and not produced to be divided or sold separately; and
	(c) Containing one (1) individual container, pouch, or package.
KY-LL4	"Loose Leaf Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "loose leaf chewing tobacco" does not include plug chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	"Over a Pound Unit" means the container, pouch, or package contains more than sixteen (16) ounces by net weight, the rate that shall be applied to the unit shall equal the sum of the pound unit plus the sum for each increment of four (4) ounces or portion thereof exceeding sixteen (16) ounces sold.

Code	State Desc Code
KY-MS1	"Moist Snuff" " means tobacco that is finely cut, ground, or powdered and is not for smoking. Each one and one-half (1-1/2) ounces or portion thereof by net weight sold; but "Moist Snuff" does not include loose leaf chewing tobacco, plug chewing tobacco, twist chewing tobacco, snuff, or dry snuff.
KY-MS1-MRT1	Modified Risk Tobacco – Designation issued under 21 U.S.C. sec. 387k(g)(1)
	"Moist Snuff" " means tobacco that is finely cut, ground, or powdered and is not for smoking. Each one and one-half (1-1/2) ounces or portion thereof by net weight sold; but "Moist Snuff" does not include loose leaf chewing tobacco, plug chewing tobacco, twist chewing tobacco, snuff, or dry snuff.
KY-MS1-MRT2	Modified Risk Tobacco – Designation issued under 21 U.S.C. sec. 387k(g)(2)
	"Moist Snuff" " means tobacco that is finely cut, ground, or powdered and is not for smoking. Each one and one-half (1-1/2) ounces or portion thereof by net weight sold; but "Moist Snuff" does not include loose leaf chewing tobacco, plug chewing tobacco, twist chewing tobacco, snuff or dry snuff.
KY-MS2	Reserved "Moist Snuff" (Not Defined in Statute)
KY-MS2-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-MS2-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
KY-MS3	Reserved "Moist Snuff" (Not Defined in Statute)
KY-MS3-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-MS4-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
KY-MS4	Reserved "Moist Snuff" (Not Defined in Statute)
KY-MS4-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-MS4-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)

Code	State Desc Code
KY-PL1	"Plug Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "plug chewing tobacco" does not include loose leaf chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	Single unit" means a consumer-sized container, pouch, or package:
	(a) Containing less than four (4) ounces of chewing tobacco by net weight;
	(b) Produced by the manufacturer to be sold to consumers as a single unit and not produced to be divided or sold separately; and
	(c) Containing one (1) individual container, pouch, or package;
KY-PL2	"Plug Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "plug chewing tobacco" does not include loose leaf chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	Half-pound unit" means a consumer-sized container, pouch, or package:
	(a) Containing at least four (4) ounces but not more than eight (8) ounces of chewing tobacco by net weight;
	(b) Produced by the manufacturer to be sold to consumers as a half-pound unit and not produced to be divided or sold separately; and
	(c) Containing one (1) individual container, pouch, or package;
KY-PL3	"Plug Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "plug chewing tobacco" does not include loose leaf chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	"Pound unit" means a consumer-sized container, pouch, or package:
	(a) Containing more than eight (8) ounces but not more than sixteen (16) ounces of chewing tobacco by net weight;
	(b) Produced by the manufacturer to be sold to consumers as a pound unit and not produced to be divided or sold separately; and
	(c) Containing one (1) individual container, pouch, or package.
KY-PL4	"Plug Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "plug chewing tobacco" does not include loose leaf chewing tobacco, twist chewing tobacco, snuff, dry snuff, or snus.
	"Over a Pound Unit" means the container, pouch, or package contains more than sixteen (16) ounces by net weight, the rate that shall be applied to the unit shall equal the sum of the pound unit plus the sum for each increment of four (4) ounces or portion thereof exceeding sixteen (16) ounces sold.

Code	State Desc Code
KY-SS1	"Snus" (Is Not Defined in KY Statute) The definition of Moist Snuff includes Snus meaning tobacco that is finely cut, ground, or powdered and is not for smoking. Each one and one-half (1-1/2) ounces or portion thereof by net weight sold;
KY-SS1-MRT1	Modified Risk Tobacco – Designation issued under 21 U.S.C. sec. 387k(g)(1)
	"Snus" (Is Not Defined in KY Statute) The definition of Moist Snuff includes Snus meaning tobacco that is finely cut, ground, or powdered and is not for smoking. Each one and one-half (1-1/2) ounces or portion thereof by net weight sold;
KY-SS1-MRT2	Modified Risk Tobacco – Designation issued under 21 U.S.C. sec. 387k(g)(2)
	"Snus" (Is Not Defined in KY Statute) The definition of Moist Snuff includes Snus meaning tobacco that is finely cut, ground, or powdered and is not for smoking. Each one and one-half (1-1/2) ounces or portion thereof by net weight sold;
KY-TW1	"Twist Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "twist chewing tobacco" does not include loose leaf chewing tobacco, plug chewing tobacco, snuff, dry snuff, or snus.
	"Single unit" means a consumer-sized container, pouch, or package: (a) Containing less than four (4) ounces of chewing tobacco by net weight; (b) Produced by the manufacturer to be sold to consumers as a single unit and not produced to be divided or sold separately; and (c) Containing one (1) individual container, pouch, or package;
XX-TW2	"Twist Chewing tobacco" " means any leaf tobacco that is not intended to be smoked, but "twist chewing tobacco" does not include loose leaf chewing tobacco, plug chewing tobacco, snuff, dry snuff, or snus.
	"Half-pound unit" means a consumer-sized container, pouch, or package: (a) Containing at least four (4) ounces but not more than eight (8) ounces of chewing tobacco by net weight; (b) Produced by the manufacturer to be sold to consumers as a half-pound unit and not produced to be divided or sold separately; and (c) Containing one (1) individual container, pouch, or package;
XX-TW3	"Twist Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "twist chewing tobacco" does not include loose leaf chewing tobacco, plug chewing tobacco, snuff, dry snuff, or snus. "Pound unit" means a consumer-sized container, pouch, or package: (a) Containing more than eight (8) ounces but not more than sixteen (16) ounces of chewing tobacco by net weight; (b) Produced by the manufacturer to be sold to consumers as a pound unit and not produced to be divided or sold separately; and (c) Containing one (1) individual container, pouch, or package;

Code	State Desc Code
XX-TW4	"Twist Chewing tobacco" means any leaf tobacco that is not intended to be smoked, but "twist chewing tobacco" does not include loose leaf chewing tobacco, plug chewing tobacco, snuff, dry snuff, or snus. "Over a Pound Unit" means the container, pouch, or package contains more than sixteen (16) ounces by net weight, the rate that shall be applied to the unit shall equal the sum of the pound unit plus the sum for each increment of four (4) ounces or portion thereof exceeding sixteen (16) ounces sold.
NEXT GENERATION PRODUCTS	
KY-SNP1	Reserved "Smokeless Nicotine Product" (Not Defined in Statute)
KY-SNP1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-SNP1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
KY-ANP1	Reserved "Alternative Nicotine Product" (Not Defined in Statute)
KY-ANP1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-ANP1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
KY-VAP1	Reserved "Vapor Product" (Not Defined in Statute)
KY-VAP1-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-VAP1-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
KY-VAP2	Reserved "Vapor Product" (Not Defined in Statute)
KY-VAP2-MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-VAP2-MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
KY-ELIQ1	Reserved (E-liquid" and "E-liquid Product (closed systems) (Not Defined in Statute)
KY-ELIQ1- MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-ELIQ1- MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
KY-ELIQ2	Reserved (E-liquid" and "E-liquid Product" open systems) (Not Defined in Statute)

Code	State Desc Code
KY-ELIQ2- MRT1	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(1)
KY-ELIQ2- MRT2	Reserved Modified Risk Tobacco – Issued under 21 U.S.C. sec. 387k(g)(2)
	All tobacco products tax (excluding moist snuff, chewing tobacco, and cigars) taxed by Value (wholesale price).
OR-TP1	ORS 323.500(14) "Tobacco products" means cigars, cheroots, stogies, periques, granulated, plug cut, crimp cut, ready rubbed and other smoking tobacco, snuff, snuff flour, moist snuff, cavendish, plug and twist tobacco, fine-cut and other chewing tobaccos, shorts, refuse scraps, clippings, cuttings and sweepings of tobacco and other kinds and forms of tobacco, prepared in such manner as to be suitable for chewing or smoking in a pipe or otherwise, or both for chewing and smoking, but shall not include cigarettes as defined in ORS 323.505(2)(c) Sixty-five percent of the wholesale sales price of all tobacco products that are not cigars or moist snuff.
OR-MS1	Moist snuff (definition A) tax on units at or below floor. Taxed by number of units. ORS 323.500(9)(a) Any finely cut, ground or powdered tobacco that is not intended to be smoked or placed in a nasal cavity ORS 323.505(2)(b) One dollar and seventy-eight cents per ounce based on the net weight determined by the manufacturer, in the case of moist snuff, except that the minimum tax under this paragraph is \$2.14 per retail container.
OR-MS2	Moist snuff (definition A) tax on units above floor. Taxed by number of ounces. ORS 323.500(9)(a) Any finely cut, ground or powdered tobacco that is not intended to be smoked or placed in a nasal cavity ORS 323.505(2)(b) One dollar and seventy-eight cents per ounce based on the net weight determined by the manufacturer, in the case of moist snuff, except that the minimum tax under this paragraph is \$2.14 per retail container.

Code	State Desc Code
	Moist snuff (definition B) tax on units at or below floor. Taxed by number of units.
OR-MS3	ORS 323.500(9)(b) Any other product containing tobacco that is intended or expected to be consumed without being combusted ORS 323.505(2)(b) One dollar and seventy-eight cents per ounce based on the net weight determined by the manufacturer, in the case of moist snuff, except that the minimum tax under this paragraph is \$2.14 per retail container.
	Moist snuff (definition B) tax on units above floor. Taxed by number of ounces.
OR-MS4	ORS 323.500(9)(b) Any other product containing tobacco that is intended or expected to be consumed without being combusted ORS 323.505(2)(b) One dollar and seventy-eight cents per ounce based on the net weight determined by the manufacturer, in the case of moist snuff, except that the minimum tax under this paragraph is \$2.14 per retail container.
	Cigar tax on cigars subject to cap (cigars purchased for 77¢ or more each) by number (Quantity) of units.
OR-CGR1	ORS 323.500(2) "Cigar" means a roll for smoking that is of any size or shape and that is made wholly or in part of tobacco, irrespective of whether the tobacco is pure or flavored, adulterated or mixed with any other ingredient, if the roll has a wrapper made wholly or in greater part of tobacco and if 1,000 of these rolls collectively weigh more than three pounds. "Cigar" does not include a cigarette, as defined in ORS 323.010. ORS 323.505 (2)(a) Sixty-five percent of the wholesale sales price of cigars, but not to exceed 50 cents per cigar;
OR-CGR2	Cigar tax on cigars below cap (cigars purchased for less than 77¢ each) taxed by value wholesale price.
	ORS 323.500(2) "Cigar" means a roll for smoking that is of any size or shape and that is made wholly or in part of tobacco, irrespective of whether the tobacco is pure or flavored, adulterated or mixed with any other ingredient, if the roll has a wrapper made wholly or in greater part of tobacco and if 1,000 of these rolls collectively weigh more than three pounds. "Cigar" does not include a cigarette, as defined in ORS 323.010. ORS 323.505 (2)(a) Sixty-five percent of the wholesale sales price of cigars, but not to exceed 50 cents per cigar.

Code	State Desc Code
WI-TP1	"Tobacco products" means cigars; cheroots; stogies; periques; granulated, plug cut, crimp cut, ready-rubbed and other smoking tobacco; snuff, including moist snuff; snuff flour; cavendish; plug and twist tobacco; fine cut and other chewing tobaccos; shorts; refuse scraps, clippings, cuttings and sweepings of tobacco and other kinds and forms of tobacco prepared in such manner as to be suitable for chewing or smoking in a pipe or otherwise, or both for chewing and smoking; but "tobacco products" does not include cigarettes, as defined under s. 139.30 (1m) Tobacco products includes vapor products as defined in WIVAP1.
WI-CGR1	"Class 1 Cigars" (Cigars under the Cap) (Cigar is Not Defined in WI Statute) The tax imposed under this subsection on cigars shall not exceed an amount equal to 50 cents for each cigar. (see the tobacco products tax rate WI-TP1)
WI-CGR2	"Class 2 Cigars" (Tax Capped) (Cigar is Not Defined in WI Statute) The tax imposed under this subsection on cigars shall not exceed an amount equal to 50 cents for each cigar. (see the tobacco products tax rate WI-TP1)
WI-RYO1	"Roll your own" from Tax 9.69(2)(a)"Cigarette" has the same meaning as in s. 995.10 (1) (d), Stats., and includes "roll-your-own" cigarette tobacco. ("Role Your Own" is not Specifically Defined in Statute) (Roll your own is taxed as a "tobacco product" and as part of WI-TP1) (This code and definition are active for MSA reporting purposes only)
WI-MS1	"Moist Snuff" means any finely cut, ground, or powdered smokeless tobacco that is intended to be placed or dipped in the mouth.
WI-VAP1	"Vapor Product" means as a non-combustible product that produces vapor or aerosol for inhalation from the application of a heating element, regardless of whether the liquid or other substance contains nicotine.

Type of Tax Jurisdiction Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

Note: The following table is for illustration purposes. The Tax Jurisdiction Codes will be determined and maintained by each State.

Code	Tax Jurisdiction	Code	Tax Jurisdiction
AA	Military American	ALASV	Alabama Ashville
AE	Military European	ALATH	Alabama Athens
AL	Alabama	ALATT	Alabama Attalla
ALABB	Alabama Abbeville	ALAUB	Alabama Auburn
ALADD	Alabama Addison	ALAVN	Alabama Avon
KY	Kentucky	UNSTP	Unstamped (Untaxed)

Type of Unit Description Codes

FTA Tobacco Tax Section Uniformity Committee has adopted the following codes for the codes to be used on the Uniform Forms.

UPC Unit of Measure Codes	Description
PAK	Pack
STK	Stick
вох	Box
ECH	"Eaches" (each defined unit of taxable product)
BAG	Bag
TIN	Tin
FOI	Foil
CAN	Can
BUL	Bulk
TUB	Tub
PCH	Pouch
BUN	Bundle
PLG	Plug
CUT	Cut
BOT	Bottle
JAR	Jar
ОТН	Other

Section 4 - Appendices

Appendix A - Glossary of Terms

<u>Application</u> - An application is a program, or group of programs, that is designed for the end user. Application software can be divided into two general classes: systems software and applications software. Applications software (also called end-user programs) include such things as database programs, word processors, Web browsers, and spreadsheets.

<u>Backbone</u> - Another term for bus, the main wire that connects nodes. The term is often used to describe the main network connections composing the Internet.

<u>Browser</u> - Short for Web browser, a browser is a software application used to locate, retrieve, and display content on the World Wide Web, including Web pages, images, video, and other files. As a client/server model, the browser is the client run on a computer that contacts the Web server and requests information. The Web server sends the information back to the Web browser which displays the results on the computer or other Internet-enabled device that supports a browser.

<u>CGI</u> - Abbreviation of Common Gateway Interface, CGI is a specification for transferring information between a World Wide Web server and a CGI program. A CGI program is any program designed to accept and return data that conforms to the CGI specification. The program could be written in any programming language, including C, Perl, Java, or Visual Basic.

<u>Client/Server</u> - Client-server architecture (client/server) is a network architecture in which each computer or process on the network is either a client or a server. Servers are powerful computers or processes dedicated to managing disk drives (file servers), printers (print servers), or network traffic (network servers). Clients are PCs or workstations on which users run applications. Clients rely on servers for resources, such as files, devices, and even processing power.

<u>Firewall</u> - A firewall is a system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both. Firewalls are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.

<u>GUI</u> - Pronounced GOO-ee. Acronym for graphical user interface.

<u>HTML</u> - Short for HyperText Markup Language, the authoring language used to create documents on the World Wide Web. HTML is similar to SGML, although it is not a strict subset. HTML defines the structure and layout of a Web document by using a variety of tags and attributes. The correct structure for an HTML document starts with <HTML><HEAD>(enter here what document is about)<BODY> and ends with </BODY></HTML>. All the information you'd like to include in your Web page fits in between the <BODY> and </BODY> tags.

<u>Java</u> – Java is a general purpose, high-level programming language developed by Sun Microsystems. The small team of engineers, known as Green Team, initiated the language in 1991. Java was originally called OAK, and was designed for handheld devices and set-top boxes. Oak was unsuccessful so in 1995 Sun changed the name to Java and modified the language to take advantage of the burgeoning World Wide Web. Later, in 2009, Oracle Corporation acquired Sun Microsystems and took ownership of two key Sun software assets: Java and Solaris.

Open - Accessible. When used to describe designs or architectures, open means public.

<u>Operating System</u> - The operating system is the most important program that runs on a computer. Every general-purpose computer must have an operating system to run other programs and applications. Operating systems

perform basic tasks, such as recognizing input from the keyboard, sending output to the display screen, keeping track of files and directories on the disk, and controlling peripheral devices such as disk drives and printers. For large systems, the operating system has even greater responsibilities and powers. It is like a traffic cop; it makes sure that different programs and users running at the same time do not interfere with each other. The operating system is also responsible for security, ensuring that unauthorized users do not access the system.

<u>Perl</u> - Short for Practical Extraction and Report Language, Perl is a programming language developed by Larry Wall, especially designed for processing text. Because of its strong text processing abilities, Perl has become one of the most popular languages for writing CGI scripts. Perl is an interpretive language, which makes it easy to build and test simple programs.

<u>Programming Language</u> — A vocabulary and set of grammatical rules for instructing a computer to perform specific tasks. The term programming language usually refers to high-level languages, such as BASIC, C, C++, COBOL, FORTRAN, Ada, and Pascal. Each language has a unique set of keywords (words that it understands) and a special syntax for organizing program instructions. High-level programming languages, while simple compared to human languages, are more complex than the languages the computer actually understands, called machine languages. Each different type of CPU has its own unique machine language.

<u>Protocol</u> - An agreed-upon format for transmitting data between two devices. The protocol determines the following:

- •the type of error checking to be used
- •data compression method, if any
- •how the sending device will indicate that it has finished sending a message
- •how the receiving device will indicate that it has received a message

There are a variety of standard protocols from which programmers can choose. Each has particular advantages and disadvantages; for example, some are simpler than others, some are more reliable, and some are faster. From a user's point of view, the only interesting aspect about protocols is that your computer or device must support the right ones if you want to communicate with other computers. The protocol can be implemented either in hardware or in software.

<u>Server</u> - A computer or device on a network that manages network resources. There are many different types of servers. For example:

- File server: a computer and storage device dedicated to storing files. Any user on the network can store files on the server.
- Print server: a computer that manages one or more printers, and a network server is a computer that manages network traffic.
- Database server: a computer system that processes database queries.

Servers are often dedicated, meaning that they perform no other tasks besides their server tasks. On multiprocessing operating systems, however, a single computer can execute several programs at once. A server in this case could refer to the program that is managing resources rather than the entire computer.

<u>SGML</u> - Short for Standard Generalized Markup Language, a system for organizing and tagging elements of a document. SGML was developed and standardized by the International Organization for Standards (ISO) in 1986. SGML itself does not specify any particular formatting; rather, it specifies the rules for tagging elements. These

tags can then be interpreted to format elements in different ways. SGML is used widely to manage large documents that are subject to frequent revisions and need to be printed in different formats. Because it is a large and complex system, it is not yet widely used on personal computers. However, the growth of Internet, and especially the World Wide Web, is creating renewed interest in SGML because the World Wide Web uses HTML, which is one way of defining and interpreting tags according to SGML rules.

SOAP - Short for Simple Object Access Protocol, a lightweight XML-based messaging protocol used to encode the information in Web service request and response messages before sending them over a network. SOAP messages are independent of any operating system or protocol and may be transported using a variety of Internet protocols, including SMTP, MIME, and HTTP.

<u>Standards</u> - A definition or format that has been approved by a recognized standards organization or is accepted as a de facto standard by the industry. Standards exist for programming languages, operating systems, data formats, communications protocols, and electrical interfaces. From a user's standpoint, standards are extremely important in the computer industry because they allow the combination of products from different manufacturers to create a customized system. Without standards, only hardware and software from the same company could be used together. In addition, standard user interfaces can make it much easier to learn how to use new applications.

<u>Tag</u> - A command inserted in a document that specifies how the document, or a portion of the document, should be formatted. Tags are used by all format specifications that store documents as text files. This includes SGML and HTML.

<u>UDDI</u> - Short for Universal Description, Discovery and Integration. A Web-based distributed directory that enables businesses to list themselves on the Internet and discover each other, similar to a traditional phone book's yellow and white pages.

<u>UNIX</u> - Pronounced yoo-niks, a popular multi-user, multitasking operating system developed at Bell Labs in the early 1970s. Created by just a handful of programmers, UNIX was designed to be a small, flexible system used exclusively by programmers. UNIX was one of the first operating systems to be written in a high-level programming language, namely C. This meant that it could be installed on virtually any computer for which a C compiler existed. This natural portability combined with its low price made it a popular choice among universities. (It was inexpensive because antitrust regulations prohibited Bell Labs from marketing it as a full-scale product.) Bell Labs distributed the operating system in its source language form, so anyone who obtained a copy could modify and customize it for his own purposes. By the end of the 1970s, dozens of different versions of UNIX were running at various sites.

<u>W3C</u> - Short for World Wide Web Consortium, an international consortium of companies involved with the Internet and the Web. The W3C was founded in 1994 by Tim Berners-Lee, the original architect of the World Wide Web. The organization's purpose is to develop open standards so that the Web evolves in a single direction rather than being splintered among competing factions.

<u>Windows</u> - A family of operating systems for personal computers. Windows dominates the personal computer world, running, by some estimates, on 90% of all personal computers. The remaining 10% are mostly Macintosh computers. Like the Macintosh operating environment, Windows provides a graphical user interface (GUI), virtual memory management, multitasking, and support for many peripheral devices.

<u>WSDL</u> - Short for Web Services Description Language, an XML-formatted language used to describe a Web service's capabilities as collections of communication endpoints capable of exchanging messages. WSDL is an integral part of UDDI, an XML-based worldwide business registry. WSDL is the language that UDDI uses. WSDL was developed jointly by Microsoft and IBM.

<u>XML</u> - Short for Extensible Markup Language, a specification developed by the W3C. XML is a pared-down version of SGML, designed especially for Web documents. It allows designers to create their own customized tags, enabling the definition, transmission, validation, and interpretation of data between applications and between organizations.

<u>Section 5 – Technology Subcommittee</u>

The main objectives of the technology subcommittee will be:

- To conduct an initial examination of the XML schemas and guides for uniformity
- To keep up to date the XML schema for cigarettes and tobacco.
- To examine the use of XML for inter-state data exchanges.
- To discuss future topics related to XML such as migration plans, common implementation tactics, and translation software.

If you are interested in transitioning to uniform electronic reporting standards, please contact us for guidance, direction and support.

Technology Subcommittee

Current Committee Co-Chairs

- Mike Hanson, California Department of Tax and Fee Administration (State Representative)
 michael.hanson@cdtfa.ca.gov
- Raymond Chu, Core-Mark International, Inc. (Industry Representative)
 rchu@core-mark.com

Current Work Group

- Jason Kraemer, Wisconsin Department of Revenue
- Steve Thimsen, FTA Advisor Idaho Department of Revenue
- Kara Parga, Sicpa Product Security LLC
- Jacob Dubreuil, FTA Advisor
- Scott Fitzgerald, Iowa Department of Revenue