

## **FED/STATE E-FILE DEVELOPMENT PROCESS**

### **January 2007**

The development of a Fed/State e-file program under the IRS Modernized E-File (MEF) architecture involves seven processes: Business Rules, Concept of Operations and Technical Design, State Master Schema, Funding and Participation, State-IRS Memorandum of Understanding (MOU), Implementation, and Production. Each of these processes was initially deployed in the development of the Fed/State 1120 e-file program, and much of that work is transferable to future programs. Each of these seven processes, plus notes on oversight, standards, and assumptions, is discussed below in relation to the FedState 1120 MeF Program, but is applicable to the 1065 and 1040 programs as well.

The publication FedState Modernized (MeF) E-File "101" (ModernizedFedState101.pdf) is designed as a companion to this guide; it should also be reviewed as it contains further technical details.

### **Oversight**

The IRS approached the FTA-IRS Tactical Advisory Group (TAG) in May 2003 to initiate the Fed/State 1120 project, and the TAG has continued in an oversight role for the project. Placing oversight in the TAG provides access to IRS executives to resolve issues such as funding and staffing, and ensures a continued high profile for the program within the IRS. FTA then provides a focal point for communication with the states, able to distribute surveys as needed or deliverable documents for state buy-in. The TAG will serve as oversight for future Fed/State e-file program development.

### ***For more information on the TAG:***

<http://www.taxexchange.org/member/projects/projects.html>

[Note: this site is password protected; if you do not have TaxExchange access (a private side of the FTA web site) contact your own state agency FTA liaison to provide it to you.]

### **Standards**

Since 1994, FTA has sponsored the Tax Implementation Group for E-commerce Requirements Standardization (TIGERS). TIGERS is chartered as a task group of the ANSI Accredited Standards Committee (ASC) X12, responsible for the development and maintenance of US standards for electronic data interchange.

Building on years of experience in the development of EDI standards, TIGERS has moved into XML development and has completed XML schema sets for FedState 1120 and 1065, Fed/State Employment Taxes (FSET) and Streamlined Sales Tax projects. It is currently creating the XML schema sets for FedState 1040 e-file that will be used by the states when this program is first deployed by the IRS, currently scheduled for the 2009 filing season.

TIGERS members include IRS, states, software developers and service providers, and the task group is open to all who wish to participate. In order to implement a cooperative project such as Fed/State e-file, all parties must agree to utilize the same technical standards. TIGERS has been designated by IRS and FTA as the body to develop those standards. TIGERS meets 6 times a year, approximately once every 60 days.

### ***For more information on ASC X12 and TIGERS:***

<http://www.x12.org/x12org/prdoc.cfm?Name=1007>

DISA/X12 website - FTA encourages all states to join ASC X12, since 3 TIGERS meetings a year are held at the X12 sessions (February, June, September), and attendance is far less expensive if your agency becomes a member. 35 state tax agencies have already joined.

<http://www.taxadmin.org/fta/edi/upcoming.html>

This is the link for information on the remaining 3 TIGERS meetings held during the year; additional info is sent out on these via the TIGERS Listserve. These meetings (held in March, August, and December – for a total of 6 per year including the TIGERS meetings held during the ASC X12 sessions) are conducted with FTA sponsorship and arrangement; a separate registration fee is necessary. Registration and announcements are posted on the FTA website.

<http://www.taxadmin.org/fta/edi/tigers1.html>

Background on TIGERS meetings, purpose, etc. to help educate your staff.

***How to keep up to date on issues, meetings, new XML schema releases:***

<http://www.taxadmin.org/fta/edi/listserv.html>

You must sign up for this public listserv - all TIGERS meeting announcements are sent out this way, as well as other material like new postings on the FTA web site, questions about how MeF works, etc.

**Assumption**

The IRS will develop the XML schema set for the Federal portion of each Fed/State e-file program. For example, IRS developed the XML schemas for 94X (FSET), 1120, and 1065 e-file programs. State schema development is able to draw on the general architecture established by the IRS schema sets.

***For information on IRS MeF Schemas:***

<http://www.irs.gov/taxpros/providers/article/0,,id=101145,00.html>

**Business Rules Development**

The first step taken by the TAG in the initiation of the Fed/State 1120 project was to assemble a state team to develop the business rules for the program. After several brainstorming sessions, the team agreed on eight basic requirements, covering everything from payment processing to test facility. The intent of these business rules has been that while they were developed for Fed/State 1120, they are sufficiently generic to apply to future Fed/State e-file programs as well. The first step of each new Fed/State development effort, therefore, will be the formation of a state team to revalidate the basic business rules and to determine whether any changes are required, and whether any new business rules must be defined for the new tax type. This has been done for each tax type so that more detailed development can follow.

***To access the business rules:***

<http://www.statemef.com/>

For example, click on "Work Products" then on "1040 Project" for the business rules applicable to that MeF program.

[NOTE a User/ID password is not necessary to access the information. Simply click the menu titles. This site is maintained by an FTA contractor - site domain ownership is in the process of being transferred to FTA; you will be notified via the TIGERS public listserv when it is complete.]

**Concept of Operations and Technical Design Development**

Because the MeF platform is new for IRS e-file programs, many issues concerning the transmission technology and operational process model have had to be worked out. TIGERS serves as the forum for that effort.

Issues such as the use of web services, Zip Archive packaging, and the flow of transactions between the transmitter, IRS, and states have all been documented by IRS in a Concept of Operations white paper and detailed in a Technical Design (Interface Control) document. As with

the business rules, the Concept of Operations and Technical design developed for Fed/State 1120 is applicable to all future Fed/State e-file programs on the MeF platform with only minor modifications.

Each new IRS Fed/State project schedules time on the TIGERS agenda for IRS, states, software developers and service providers to review the Concept of Operations and Technical Design documents and to determine by mutual agreement whether any changes are required for the new program.

***The contact to obtain Concept of Operations and Technical Design (Interface Control) documents:***

Carol McLaughlin, IRS - [Carol.M.McLaughlin@irs.gov](mailto:Carol.M.McLaughlin@irs.gov)

**State Master Schema Development**

TIGERS pioneered the concept of the Master Schema with the FSET program. It is a schema set which contains all of the data elements utilized by all participating states in the filing of the tax type in question. A state may disregard optional data elements not used by that state, but may not alter the schema structure or add additional data elements except through the TIGERS change control process. The development of a Master Schema is a complex and laborious process. This process, coordinated by TIGERS, will comprise the majority of the effort of any new Fed/State e-file project.

States provide all of the data elements from the relevant tax forms in a spreadsheet format. The data elements are organized by TIGERS into "categories" which can be developed into individual schemas. Each category is then "boiled down" by consolidating common data elements across multiple states. Standardized names are assigned to the consolidated elements. The spreadsheets are then converted to XML schema code.

The building and consolidation of the spreadsheets must be performed by the states, due to the need for detailed knowledge of state data and business rules. An XML "SWAT Team" comprised of a smaller working group of states reviews the state data element submissions; their process is then reviewed by the TIGERS group as a whole before addition to the master schema.

***To access the various FedState MeF Program Master XML Schemas:***

<http://www.statemef.com/>

[NOTE a User/ID password is not necessary to access the information.]

This site is where schema work in progress (drafts) and final Master XML schemas (including various versions) are posted, as well as a variety of other information.

**Funding and State Participation**

The coding of the XML schemas, however, is FTA-contracted under TIGERS review, since there is a need for a dedicated, technically skilled central resource. This is also the reason for a FedState MeF state participation fee. Your state will be invoiced by FTA for initial implementation and annual maintenance for each MeF program, for that program's fee, after you indicate by responding to FTA that you wish to implement a new Modernized e-file program. Following that, you will be invoiced each year for maintenance.

Also, annually FTA will send out a bulletin soliciting participation of new states in State MeF and requesting a response, enabling new entrants to join the various programs. **[NOTE: Until your agency responds to an FTA Bulletin inviting your participation in an MeF program (FS1120/FS1065/FS1040), you are not a participant in Modernized e-file. You must indicate your intent to implement MeF to FTA and supply a business and a technical contact via this response, to be considered a part of Fed/State MeF.]**

***For background on the state funding component of participation in FedState MeF:***  
<http://www.taxadmin.org/fta/edi/1120project/B-2305.pdf>

### **Memorandum Of Understanding**

The MOU is an addendum to the Implementing Agreement between the IRS and each individual state. It spells out the terms of participation in a particular Fed/State program. The MOU refers to the business rules, the Concept of Operations and Technical Design, and the use of the Master Schema as requirements binding on both the IRS and the state. It is anticipated that an MOU will be required for each Fed/State e-file program. A standard MeF program MOU is developed by the IRS through its Governmental Liaison program, reviewed by TIGERS, and provided to the TAG for review before execution by the IRS with each participating state.

### ***The contact for FS1120-1065-1040 MOU execution (and other necessary setup preparations):***

Carol McLaughlin, IRS - [Carol.M.McLaughlin@irs.gov](mailto:Carol.M.McLaughlin@irs.gov)

### **Implementation**

The term "implementation" includes a number of steps that follow the publication of the Fed/State XML schemas, the transmission packaging specifications, and the Concept of Operations. The first of these steps is the publication by each state of its own business rules for the program, for use by software developers.

Since the XML schema set is organized by category of data, rather than by forms and schedules, the state must provide a mapping from its tax forms to the schema structures. Moreover, any restrictions on the data which are unique to that state, such as that a particular monetary amount cannot be negative, must be specified. TIGERS has developed a common outline format for the publication of state business rules that can be adopted by all participating states, in order to make it easier for software developers supporting multiple states to work with the multiple sets of business rules.

### ***For more information:***

See the publication [ModernizedFedState101.pdf](#) at <http://www.statemef.com/index.php?id=126> for a sample state specifications outline format.

The states must then recruit and work with software developers to develop software to support the state. States must also develop their internal systems to receive and process the XML data. During the development process, both software companies and states may determine that one or more items within the XML schema set do not function as intended.

Since the published schema set is tightly version controlled, a state or software developer identifying a problem and needing a modification to the schema set must follow the TIGERS change control process.

Changes are submitted using the Change Control Request form, and are discussed at the next TIGERS meeting. Changes may be approved or rejected by TIGERS, or an alternate solution to the one requested may be identified. If a change is needed on an emergency basis, the process is carried out via e-mail and if necessary, by conference call.

Finally, the new program must be tested before live production. There are several stages in testing. The software developer will test directly with the state, to ensure that state data is correctly coded. There will be testing between the IRS and the states, to ensure that connectivity and message flow work according to specifications. Finally, there will be testing, under IRS control, of the total end to end process model, with returns flowing from the originator

to transmitter to IRS to the states, and acknowledgements flowing in reverse. Any technical issues discovered during any of the testing phases which impact the master XML schema set or the Concept of Operations will again be channeled through TIGERS for resolution.

**Production**

The nature of the program will determine whether states wishing to participate can join the program at any time, or whether there will be staged implementation. IRS will only transmit returns to states certified to be in production status. Once the program is implemented in production, the XML schema set will remain under TIGERS control. As changes to the schema set are needed, such as those due to legislated changes in the states, the TIGERS change control process will be followed. New versions of the schema set will be published as needed or on an annual basis, depending on the nature of the program. Released versions of the Fed/State XML schemas will be posted on the stateMeF.com website.

Please familiarize yourself and your staff with this description of the Fed/State MeF development process and the material on the web page links, and good luck on your FedState Modernized e-File program!