Appendix B. OPERATIONAL SCENARIOS AND FUNCTIONAL THREAD DIAGRAMS

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Operational Scenarios and Functional Thread Diagrams

- An “operational scenario” is a description of how a state intends that their customers and the state, or the state and core infrastructure systems should interact to accomplish key CVISN functions. An example was given in chapter 4. More examples are provided here.
- The operational scenario is shown as a list of sequential steps. To differentiate between different time schedules, numbers are used to show the interaction between the applicant and the state, and the state’s update of snapshots. Those interactions occur as soon as possible after the initial application is received by the state. Letters are used to show the state’s connections to the clearinghouses, since that occurs at a regular period instead of being triggered immediately by the carrier’s actions.
- Each operational scenario is illustrated by overlaying information onto the state system design template. The lines represent data flow between products, with arrows indicating the direction of flow. Each line is labeled with a number or letter. The complete set of lines constitutes a thread of activities that accomplish a function. Hence, the diagram is called a “functional thread diagram.”
- This appendix provides examples of operational scenarios and functional thread diagrams. They are included for reference, and as starting points for states that plan to implement similar processes.

CVISN Level 1 Credentials Administration Key Operational Scenarios

- **Accept and process electronic IRP credential applications for supplements (e.g., adding a vehicle to an existing account)**
  - ***Example 1*: VISTA/RS, PC-CAT, CVIEW**
  - ***Example 2*: Web Browser/Web Site, CVIEW**
- **Accept and process electronic IRP renewal applications**
- **Accept and process electronic IFTA credential applications for supplements (e.g., changing the carrier's address)**
- **Accept and process electronic IFTA renewal applications**
  - ***Example 3*: RPC, PC-CAT, CVIEW**
  - ***Example 4*: Web Browser/Web Site, CVIEW**

Accept and process electronic IRP credential applications for supplements **Example 1**: VISTA/RS, PC-CAT, CVIEW

1. Carrier enters an IRP credential application via a Carrier Automated Transaction (CAT) system which submits it to the Credentialing Interface (CI) as an EDI X12 TS 286.
2. The CI submits a query to its state database to perform preliminary checks as part of evaluating the application.
3. The state database reports the status, i.e., flags and condition to the CI.
4. If a satisfactory status is received, the application is sent to the IRP system (VISTA/RS) for processing via EDI X12 TS 286.
5. The IRP system processes the application and sends an invoice notice to the CI via EDI X12 TS 286.
6. The CI sends the invoice notice to the CAT via EDI X12 TS 286 and maintains archival/audit copies of all transactions.
7. The carrier reviews the invoice data and verifies that the application data matches the intent. The CAT sends payment method information to the CI via EDI X12 TS 286.
8. If a Temporary Authority (TA) is requested, the CI releases it to the CAT via EDI X12 TS 286.
9. If a TA was granted, the CI sends a vehicle snapshot segment update to CVIEW via EDI X12 285.
10. CVIEW sends updated snapshot data to SAFER via EDI X12 TS 285.
11. CVIEW sends updated snapshot data to Roadside via EDI X12 TS 285.
12. SAFER sends updated snapshot data to subscribers via EDI X12 TS 285.
13. The CI verifies payment method information (financial system interfaces are not shown)and passes payment approval to the IRP system via EDI X12 TS 286.
14. The IRP system validates payment amount and updates application status to indicate the permanent credential granted and notifies the CI via EDI X12 TS 286.
15. The CI passes the permanent credential to the CAT via EDI X12 TS 286. Cab Cards may be printed in the carrier's office or state office.
16. The CI updates CVIEW with permanent credential information via EDI X12 TS 285.
17. CVIEW sends updated snapshot data to SAFER via EDI X12 285.
18. CVIEW sends updated snapshot data to Roadside via EDI X12 285.
19. SAFER makes updated snapshot data available to subscribers via EDI X12 TS 285.

A. Periodically (daily), the IRP system sends updates to the IRP Clearinghouse on IRP registration information and fee payments (recaps).

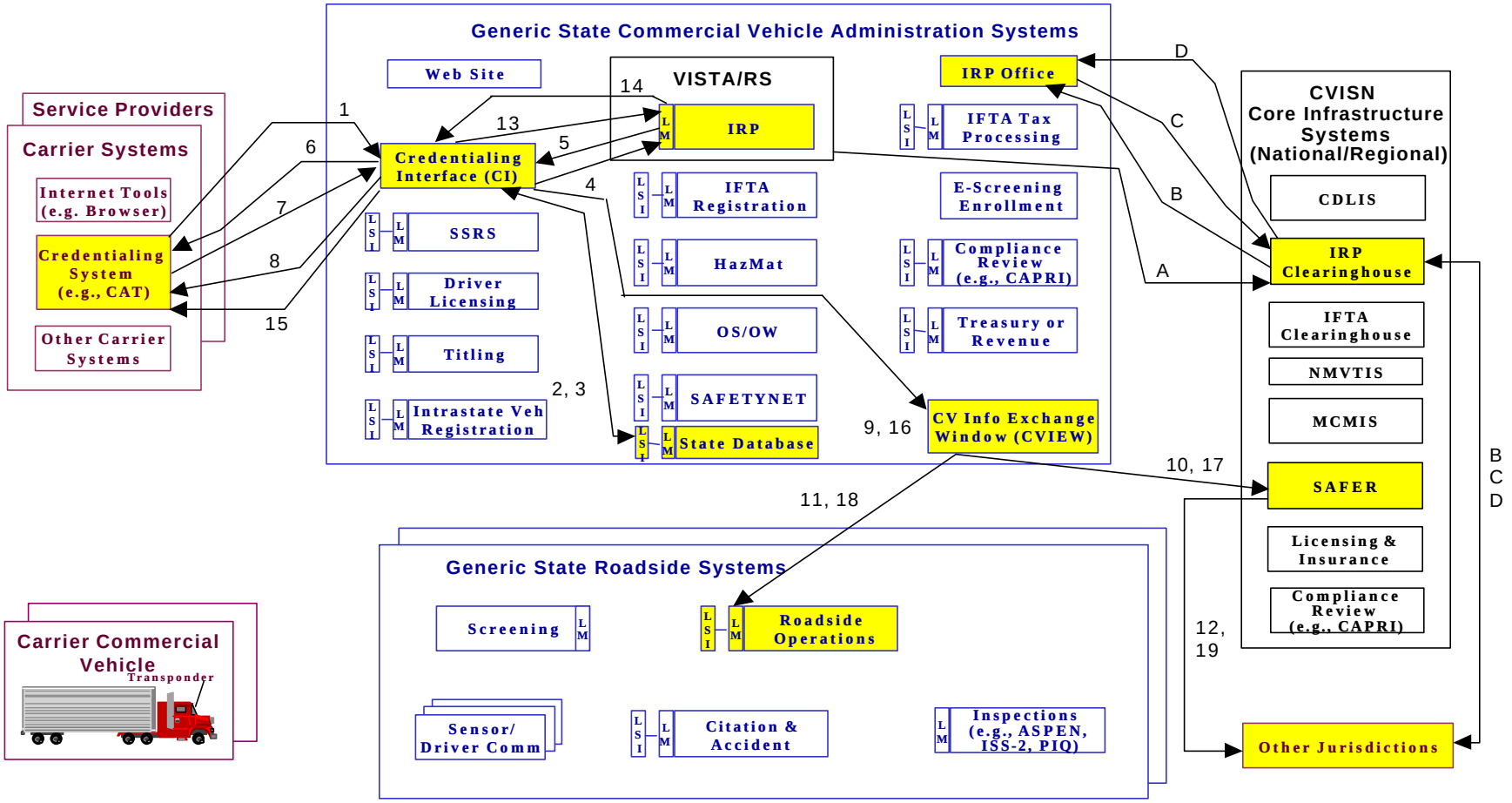
B. Monthly, the IRP Clearinghouse makes available the fee information (pre-netting transmittals) to the participating jurisdictions for approval and/or correction. Today, the states review the information interactively using terminals.

C. The IRP Office and also other participating jurisdictions report back to the IRP Clearinghouse the approvals or corrections. Today, the approvals/corrections are made via terminals.

D. The IRP Clearinghouse performs the actual netting and makes available corrected/approved vehicle and fee actions (post-netting transmittal) and netting results (remittance netting reports) to the participating jurisdictions. Today, the information is reviewed via terminals.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

Accept and process electronic IRP credential applications for supplements
Example 1: VISTA/RS, PC-CAT, CVIEW

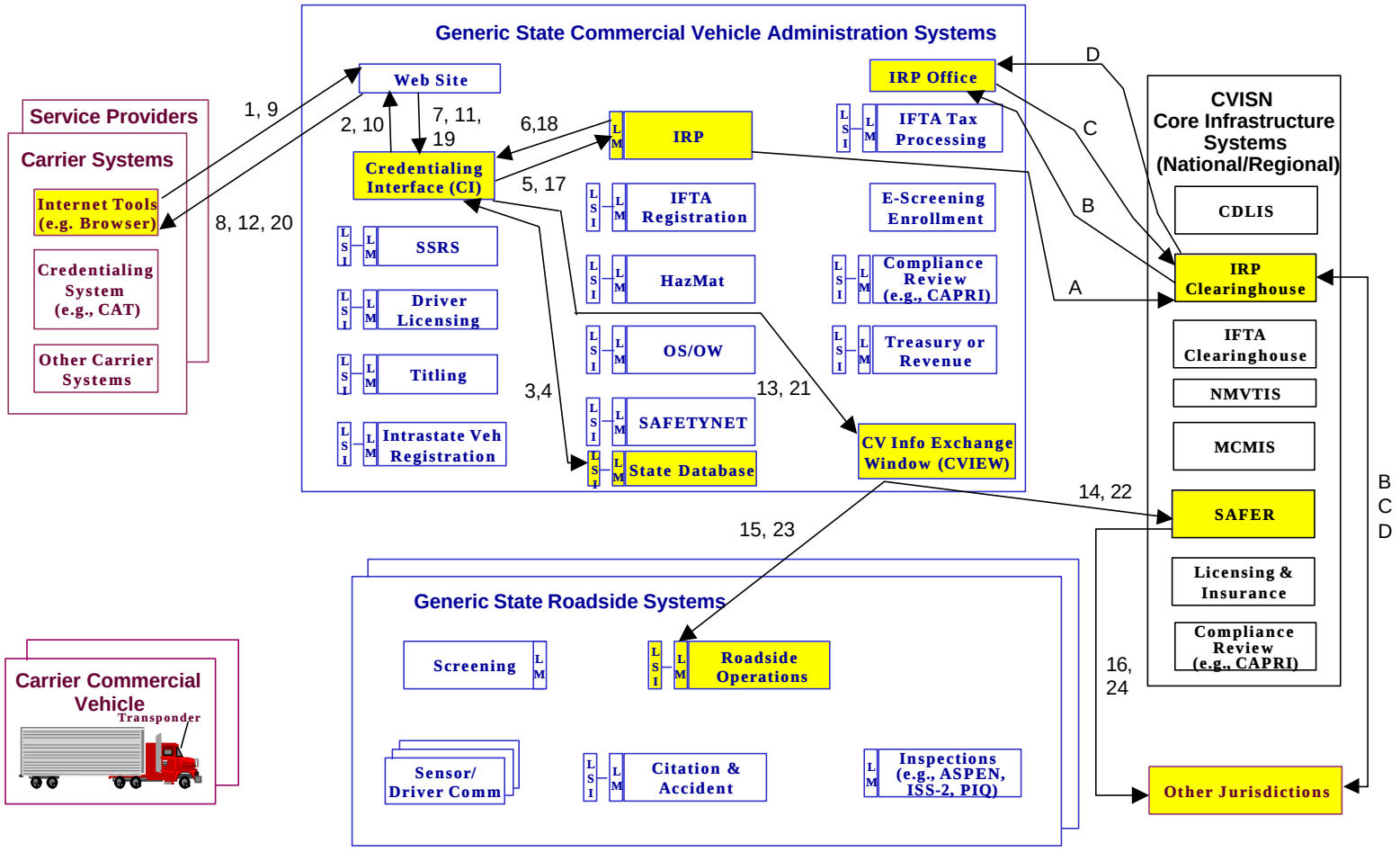


Accept and process electronic IRP credential applications for supplements **Example 2**: Web Browser/Web Site, CVIEW (1 of 2)

1. Carrier enters an IRP credential application via a Web browser to a state-based Web Site.
2. The Web Site passes it to the Credentialing Interface (CI).
3. The CI submits a query to its state database to perform preliminary checks as part of evaluating the application.
4. The state database reports the status, i.e., flags and condition to the CI.
5. If a satisfactory status is received, the application is sent to the IRP system for processing via EDI X12 TS 286.
6. The IRP system processes the application and sends an invoice notice to the CI via EDI X12 TS 286.
7. The CI sends the invoice notice to the Web Site and maintains archival/audit copies of all transactions.
8. The carrier retrieves the invoice notice from the state Web Site using a Web Browser.
9. The carrier reviews the invoice data and verifies that the application data matches the intent. The carrier indicates payment method information via the Web Browser to the Web Site.
10. The Web Site passes it to the Credentialing Interface (CI).
11. If a Temporary Authority (TA) is requested, the CI releases it to the Web Site.
12. The carrier prints the TA from the Web Site.
13. If a TA was granted, the CI sends a vehicle snapshot segment update to CVIEW via EDI X12 285.
14. CVIEW sends updated snapshot data to SAFER via EDI X12 TS 285.
15. CVIEW sends updated snapshot data to Roadside via EDI X12 TS 285.
16. SAFER sends updated snapshot data to subscribers via EDI X12 TS 285.
17. The CI verifies payment method information (financial system interfaces are not shown)and passes payment approval to the IRP system via EDI X12 TS 286.
18. The IRP system validates payment amount and updates application status to indicate the permanent credential granted and notifies the CI via EDI X12 TS 286.
19. The CI passes the permanent credential to the Web Site via EDI X12 TS 286.
20. The carrier prints the Cab Cards from the Web Site.
21. The CI updates CVIEW with permanent credential information via EDI X12 TS 285.
22. CVIEW sends updated snapshot data to SAFER via EDI X12 285.
23. CVIEW sends updated snapshot data to Roadside via EDI X12 285.
24. SAFER makes updated snapshot data available to subscribers via EDI X12 TS 285.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

Accept and process electronic IRP credential applications for supplements
Example 2: Web Browser/Web Site, CVIEW



Accept and process electronic IRP credential applications for supplements
Example 2: Web Browser/Web Site, CVIEW (2 of 2)

A. Periodically (daily), the IRP system sends updates to the IRP Clearinghouse on IRP registration information and fee payments (recaps).

B. Monthly, the IRP Clearinghouse makes available the fee information (pre-netting transmittals) to the participating jurisdictions for approval and/or correction. Today, the states review the information interactively using terminals.

C. The IRP Office and also other participating jurisdictions report back to the IRP Clearinghouse the approvals or corrections. Today, the approvals/corrections are made via terminals.

D. The IRP Clearinghouse performs the actual netting and makes available corrected/approved vehicle and fee actions (post-netting transmittal) and netting results (remittance netting reports) to the participating jurisdictions. Today, the information is reviewed via terminals.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

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Accept and process electronic IFTA renewal applications
Example 3: RPC, PC-CAT, CVIEW

1. The IFTA Registration System sends a registration renewal notification to the Credentialing Interface (CI) via EDI X12 TS 286.
2. The CI sends the notification to the Carrier Automated Transaction (CAT) via EDI X12 TS 286.
3. The carrier enters an IFTA registration application using a Carrier Automated Transaction (CAT) system, and sends it to the Credentialing Interface (CI) via EDI X12 TS 286. The carrier pays for the application (through EFT, credit card, debit card,…)
4. The CI checks the carrier's status (delinquent, non payment etc.…) with the IFTA Registration System and IFTA Clearinghouse via Regional Processing Center (RPC).
5. The CI sends the application to the IFTA Registration System via EDI X12 TS 286.
6. Once the application is processed by the IFTA Registration System, a message is returned to the CI via EDI X12 TS 286. If processing was completed successfully, credential information is returned. If problems were found, an error message is returned.
7. The IFTA Registration System also proactively updates the CI whenever the carrier's status changes, (e.g., from Active to Inactive, Active to Revoked).
8. The CI sends a return message to the CAT via EDI X12 TS 286.

A. Periodically (no more than daily), the IFTA Registration System creates a file reflecting IFTA credential renewals, additions, and changes. The information is sent to RPC in RPC proprietary format.

B. Daily, RPC updates new or changed IFTA credential information (Demographic) and sends it to the IFTA Clearinghouse, for all client jurisdictions, via EDI X12 TS 286.

C. The IFTA Clearinghouse database is updated with registration information (Demographic) received from participating jurisdictions. Jurisdictions can query the IFTA database using reporting tools. Jurisdictions may be able to download an "extract" file containing all demographic data submitted by participating jurisdictions in EDI X12 TS 286 format.

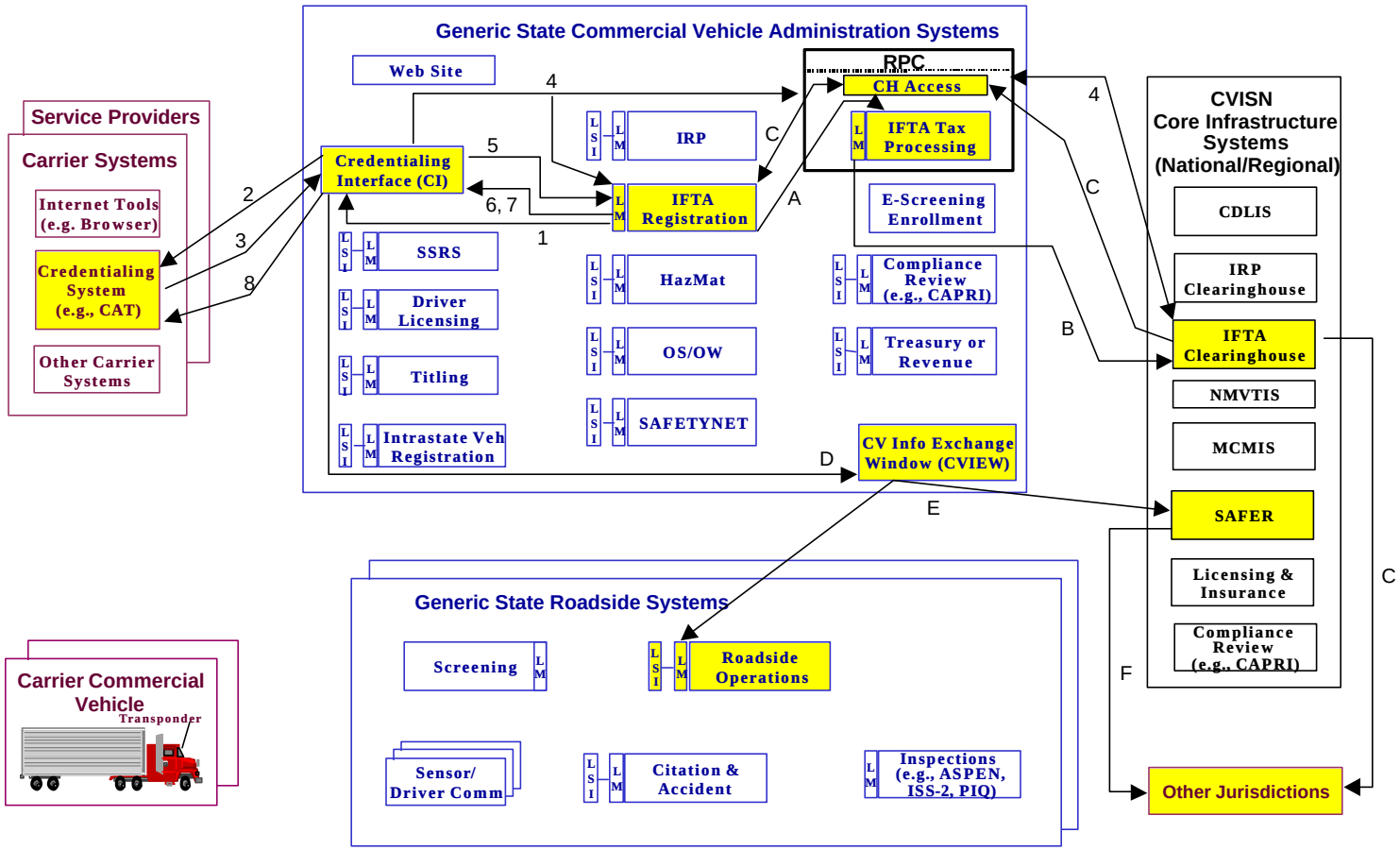
D. Nightly, the CI generates a new or modified carrier snapshot IFTA segment and sends it to CVIEW via TS 285.

E. CVIEW updates the carrier snapshot with IFTA credential data and forwards it to subscribers, including SAFER and the State roadside sites via EDI X12 TS 285.

F. SAFER updates (or creates) a carrier snapshot with IFTA credential data and forwards it to subscribers via EDI X12 TS 285.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

Accept and process electronic IFTA renewal applications
Example 3: RPC, PC-CAT, CVIEW



Accept and process electronic IFTA renewal applications
Example 4: Web Browser/Web Site, CVIEW

1. Carrier enters an IFTA registration application via a Web Browser to a state-provided Web Site. The carrier pays for the application (through EFT, credit card, debit card,…).
2. The Web Site passes it to the Credentialing Interface (CI) via EDI X12 TS 286.
3. The CI sends the application to VISTA/TS via EDI X12 TS 286 for processing.

   Note:

   The Web Site and/or the CI validates the application data to determine completeness, format, agreement with business rules, payment status, and whether to grant or deny the credential.
4. Once the application is processed by the IFTA Registration System, a message is returned to the CI via EDI X12 TS 286.
5. If processing was completed successfully, credential information is returned to the Web Site via EDI X12 TS 286.
6. The carrier retrieves the credential information from the Web Site using a Web Browser.

A. Nightly, the IFTA Registration System updates new or changed IFTA credential information (Demographic) and sends it to the IFTA Clearinghouse via EDI X12 TS 286.

B. The IFTA Clearinghouse database is updated with registration information (Demographic) received from participating jurisdictions. Jurisdictions can query the IFTA database using reporting tools. Jurisdictions may be able to download an “exact” file containing all demographic data submitted by participating jurisdictions in EDI X12 TS 286 format.

C. Nightly, the IFTA Registration System generates a new or modified carrier snapshot IFTA segment for all VISTA/TS clients and sends it to CVIEW via TS 285. (Alternatively the IFTA Registration System could generate a new or modified carrier snapshot IFTA segment and provide it to the CI and then CI sends it to CVIEW).

D. CVIEW updates the carrier snapshot with IFTA credential data and forwards it to subscribers, including SAFER and the State roadside sites via EDI X12 TS 285.

E. SAFER updates (or creates) a carrier snapshot with IFTA credential data and forwards it to subscribers via EDI X12 TS 285.

NOTE: Functional acknowledgment for all EDI messages (except TS 997) is made by responding with a TS 997. Content errors in a received TS 286 are noted by also replying with a TS 286. The results of processing an incoming TS 285 are reported via TS 824.

Accept and process electronic IFTA renewal applications
Example 4: Web Browser/Web Site, CVIEW