TRAINING AND EMPLOYMENT NOTICE	NO. 36-08
	DATE March 23, 2009

TO: STATE WORKFORCE AGENCIES

FROM: CHERYL ATKINSON /s/
                 Administrator
                 Office of Workforce Security

SUBJECT: Plans to Upgrade the Unemployment Insurance Interstate Connections Network (UI-ICON)

1. **Purpose.** To inform state workforce agencies (SWAs) about plans and the timetable for upgrading the UI-ICON to take advantage of new technologies and better support more diverse state information technology (IT) architectures.

2. **Background**. UI-ICON is a national telecommunications network supporting data exchange between/among state workforce agencies and others for UI claims processing and related purposes. The technology supporting UI-ICON is decades old and in need of updating to accommodate new technologies and programming languages being adopted by states that have developed new/modern UI benefit systems. The UI Information Technology Support Center (ITSC) initiated an assessment of UI ICON, solicited state agencies' input, and made recommendations for updating ICON to take advantage of newer technology, simplify interface requirements for states with new/modern benefit systems, minimize the need for proprietary solutions, reduce costs and improve overall efficiency. Our plans were informed by these recommendations

3. **Planned Improvements**.

   a. **Telecommunications**. The current "hub and spoke" structure of communications will remain the same—each state will link to a telecommunications hub that will route information to the appropriate states/entities. Each state will be provided with a new and upgraded router.

   b. **Applications Conversion**. Each of the ICON applications will be rewritten in new web-based programming languages. States will be provided with templates for conversion to the new web services format and may implement them at anytime after the date that the application is ready at the hub; a schedule showing these dates is included in the attached document, Appendix A. The hub will continue to support the existing applications indefinitely in order that states can make the conversion when their information technology plans permit.

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U.S. DEPARTMENT OF LABOR
WASHINGTON, D.C. 20210

Further information on implementation of modernized technologies is provided in the attached document, Appendix A.

4. **Action Required.** SWA Administrators are requested to:
   - Provide this information to appropriate staff.
   - Identify a contact within the SWA for the UI-ICON modernization, and provide the contact's name and telephone number to Martha Stephens at Affiliated Computer Services, Inc (UI-ICON contractor), who can be reached at 407-306-7228.

5. **Inquiries.** All inquiries should be directed to the appropriate Regional Office.

6. **Attachments.** Appendix A

Appendix A

Assessment Results. The consensus from the responding states was to maintain the current design methodology for the UI-ICON data exchange router and hub network. In addition, the hub will continue to support the traffic and routing of requests to and from the states and approved Federal agency data exchanges using the UI-ICON infrastructure (e.g., Social Security Administration). States confirmed that the security guidelines as recommended and published through the National Institute of Standards and Technology (NIST) and the Federal Information Security Management Act (FISMA) are sufficient to cover any individual state security requirements.

The results indicated an increase in the diversity of the state architectures and emphasized the need for the hub infrastructure to accommodate that diversity. The following list highlights the components of the future UI-ICON hub infrastructure that address these needs:

- The target architecture will leverage Web Service Design Language (WSDL) and Open Systems communications for data exchange, e.g., web service-standards and Simple Object Access Protocol (SOAP).

- The hub will move from frame relay to the following, based on application:
  - Multi Protocol Label Switching (MPLS)
  - Secure Virtual Private Network (VPN)
  - HyperText Transfer Protocol Secure (HTTPS).

- Open systems design and standards for the modernized hub will minimize the need for proprietary solutions, unless no other alternative is available.

- The hub will provide a temporary conversion capability to support the transition between Common Carrier formats and the new WSDL formats and schemas.

Because of the diversity of modernization approaches in the states, WSDL data exchange instructions/schemas will replace the model code provided by the hub.

Throughout the assessment, technical solutions were considered on their ability to reduce costs and increase overall efficiency. Using open standard solutions and converting to an MPLS framework will help USDOL and the states meet this objective. Costs will also be contained by providing a platform-independent solution that will prevent states from having to purchase specific platforms to use the network.

There are currently several applications that exchange data on the UI-ICON network. Each application will have a separate migration plan and schedule prioritized by the states and USDOL.

- States will have the modernization plan for each application available to incorporate in the state information technology planning schedules.

- An adequate transition schedule will be included to allow non-modernized states to build data interfaces/translation capability to exchange data with the modernized state system framework.

- Modernized states may provide samples of web services code as examples for other states planning to use a similar architecture.

- The hub will develop and test the new WSDL formats for each application during the first year working with representative states. Some applications that include changes to the record formats will need to be completed by all states at the same time.

Implementation Plan.

State Requirements for Support of the Frame Relay MPLS Conversion

Affiliated Computer Services (ACS) will schedule each state conversion project in coordination with the state points of contact for the UI-ICON applications and network to minimize any impact to the state. The conversion from Frame Relay to MPLS for each state will take approximately forty-five days from the time the circuit order is placed with AT&T until the time the Frame Relay circuit is disconnected.

The amount of time required by the state network support staff is estimated at approximately five hours to support the following three tasks:

1. Replace Cisco 2600 router with a Cisco 2801 router— one hour
   - This is already completed for twenty-seven states as of November 2008.
2. Provide network information for the MPLS circuit order—two hours
   - Site address where the MPLS circuit will terminate
   - Main listed phone number
   - Two local contacts (phone/email) responsible for the Local Exchange Carrier (LEC) access into the site—usually state network staff
   - Location of termination point for circuit (room/floor/suite)
     - NOTE: this should be close to the same location as that used for the current frame relay circuit.
     - NOTE: Verify existing frame relay wiring is sufficient to connect to location of new MPLS circuit. If additional cabling is required, new cabling must be arranged by the state and LEC. New cabling cost is estimated at approximately $200.
3. Move frame relay circuit cable to MPLS circuit and test connectivity—two hours
   - State and ACS will activate system connections
     - NOTE: Requires support from Interstate Program Coordinator (IPC) / ICON Programmer to test data exchange.
   - Verify Connectivity—run in production for at least one week before issuing disconnect.
   - Go/No Go decision
     - NOTE: No Go decision/back out plan will be to reconnect the frame relay circuit at any point in the testing if not successful.

State Requirements for Support of the Frame Relay to VPN Conversion

The specific configuration requirements for establishing VPN connections between the state and the hub are being finalized as part of a VPN pilot with New York and Washington DC. Additional information will be available to states interested in pursuing this option in July 2009.

State Requirements for Support of the HTTPS Web Services Conversion from Frame Relay

The specific configuration requirements for establishing HTTPS web services connections between the state and the hub will be established and piloted as part of the web services modernization activity between July and December 2009. Additional information will be available to states interested in pursuing this option in December 2009.

State Requirements for Conversion to Web Services

New web services formats for the UI-ICON applications will be available to states wanting to modernize the state systems beginning in July 2009 per the schedule below. Following development of the web services formats and the web services infrastructure at the hub in July 2009, ACS will be prepared to begin testing with states preferring to implement the web services data exchange formats. For each application, there will be a translation or conversion facility at the hub to support the data exchange between the modernized states and those states still using the common carrier format for data exchange. The conversion facility at the hub will provide the state with maximum flexibility in planning the state schedule for modernizing the UI-ICON applications. The draft schedule below was developed to accommodate the states modernizing during the next year.

Schedule

Application	Hub available for testing and implementation
IB1 – Initial Interstate Claims Data	July 2009
IB4 – Request Wage Transfer Data/Response with Wage Response Wage Transfer Data	July 2009
IB5 – Report on Determination of Combined Wage Claim	July 2009
IB6 – Quarterly Combined Wage Claim Charge Data	July 2009
IB13 – Free-form Memorandum – Application Updates (IB6, UCFE, UCFA, HCTC)	Each Application Conversion Schedule
WIC – Withdrawal/Invalid Claims	July 2009
Handbook – Handbook for Interstate Claimstaking	July 2009
Vessels	July 2009
Overpayment Recovery Handbook	July 2009
UCFE - Unemployment Compensation for Federal Employees and UCFA - Unemployment Compensation for Federal Addresses	January 2010

SID – State Identification Inquiry	July 2009
IBIQ – Interstate Benefits Inquiry	July 2009
WRIS – Wage Record Interchange System	January 2010
Crossmatch – Quarterly Crossmatch	July 2009
UCX – Unemployment Compensation for Ex-service members	July 2009
HCTC – Health Care Tax Credit	January 2010
LADT – Interstate Liable/Agent Data Transfer	July 2009
UIQ – Unemployment Insurance Query	January 2010
Reemployment Crossmatch	Retire in future
HUB INFRASTRUCTURE	**Completion Date**
Network Hub (Increase Internet Bandwidth at Hub)	July 2009
Data Exchange Application Infrastructure	July 2009
Establish Test Infrastructure	July 2009
Evaluate Cost Benefit of Migrating Mainframe Hosted Hub Services (WRIS, Traffic Routing, UCX)	July 2009

Glossary of Terms

Term	Definition
Common Carrier	Common Carrier Format is the term used to describe the standard record format that all states use in the sending/receiving of data across the Unemployment Insurance (UI) – Interstate Connection Network (ICON). These record formats are defined by the states and participating federal agencies for each application and are based on non-proprietary data exchange definitions.
HTTP	**H**yper**T**ext **T**ransfer **P**rotocol, the underlying protocol used by the World Wide Web. It is the underlying protocol used by the World Wide Web (internet) which covers how Web pages are formatted and displayed.
HTTPS	**H**yper**T**ext **T**ransfer **P**rotocol **S**ecure is a combination of the Hypertext Transfer Protocol (HTTP) and a network security protocol like SSL.
MPLS	**M**ulti**p**rotocol **L**abel **S**witching. MPLS gives network operators a great deal of flexibility to divert and route traffic around link failures, congestion, and bottlenecks.
Open System	Open systems are computer systems that provide some combination of interoperability, portability, and are publicly available (royalty-free) and have various rights to use associated with it.
SOAP	**S**imple **O**bject **A**ccess **P**rotocol is a protocol specification for exchanging structured information in the implementation of Web Services in computer networks
SSL	**S**ecure **S**ockets **L**ayer, a protocol developed for transmitting private documents via the Internet. SSL uses a cryptographic system that uses two keys to encrypt data – a public key known to everyone and a private or secret key known only to the recipient of the message to obtain confidential user information.
VPN	**V**irtual **P**rivate **N**etwork A VPN is a network that is constructed by using public wires to connect nodes. However, these systems use encryption and other security mechanisms to ensure that only authorized users can access the network and that the data cannot be intercepted.

Web Services	A **Web service** is defined as a software system designed to support interoperable machine-to-machine interaction over a network.
WSDL	**W**eb **S**ervices **D**escription **L**anguage is an XML-based language that provides a model for describing Web services.
XML	E**x**tensible **M**arkup **L**anguage. XML is a general-purpose specification for creating custom markup languages. XML's purpose is to aid information systems in sharing structured data, especially via the Internet, to encode documents, and to serialize data. XML provides a basic syntax that can be used to share information between different kinds of computers, applications, and organizations without needing to pass through many layers of conversion.