

Special Report

Department of Human Services Food Stamps Automated Client Tracking System

Information System Controls Audit



ARKANSAS DIVISION OF LEGISLATIVE AUDIT

November 7, 2002



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Charles L. Robinson, CPA, CFE
Legislative Auditor

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Members of the Legislative Joint Auditing Committee:

We have performed an audit of the Food Stamps Automated Client Tracking System (FACTS) in use from February 4, 2002 to April 17, 2002, the last day of our audit fieldwork. We conducted our audit in accordance with generally accepted governmental auditing standards.

Our objectives were to examine and evaluate the adequacy of the operating and administrative procedures, practices and policies to obtain reasonable assurance that sufficient controls exist over FACTS to: protect the application and database from unauthorized access; provide for the continuation of computer processing capabilities; ensure proper management of program change requests; ensure the accurate and complete transfer of all files into and out of FACTS; and ensure that the input, processing and output of data is accurate and complete.

Our audit procedures consisted of designing, performing and evaluating the results of tests of these controls. We believe our audit provides a reasonable basis for our opinion.

Because of inherent limitations of controls, errors or fraud may occur and not be detected. Also, projection of this evaluation to future periods is subject to the risk that audit procedures performed may become inadequate because of changes to these controls.

The **conclusions and recommendations** resulting from our review are contained in the attached report. We trust the information in this report will assist you in your legislative decision-making process.

DIVISION OF LEGISLATIVE AUDIT

Handwritten signature of Charles L. Robinson in blue ink.

Charles L. Robinson, CPA, CFE
Legislative Auditor

April 17, 2002
IS0000101

EXECUTIVE SUMMARY

This report includes our evaluation of the controls over the Food Stamps Automated Client Tracking System (FACTS). The Department of Human Services (DHS) uses FACTS to collect applications for Food Stamps on-line, determine eligibility, interface with EBT (Electronic Benefits Transfer), and provide reporting. Federally mandated reporting must be done in a timely and accurate manner to avoid sanctions. During our audit, we reviewed policies and procedures relating to ensuring appropriate input, processing and output of data; managing system development and program changes; providing data access security; proper system backup procedures are in place and utilized; and ensuring appropriate measures are in place for disaster recovery.

The report includes recommendations to improve management of FACTS. Priority items needing attention include developing a contingency plan for this application, improving controls over data access security and encryption of passwords.

DHS management generally agrees with our recommendations. The purpose of this report is to provide our analysis, findings, and recommendations regarding our audit of the FACTS application. Our audit resulted in the following significant findings:

- Programmer with update ability in FACTS.
- Terminated employees with data file access.
- Passwords stored in clear text.
- No contingency plan in place.
- Lack of balancing controls for application input/output files.

I. BACKGROUND

FACTS is the application software used by the Department of Human Services (DHS) to collect applications for Food Stamps on-line, determine eligibility, produce EBT (Electronic Benefits Transfer) files and provide various reporting on Food Stamps. FACTS sends recipient benefit information to the EBT processor monthly. The EBT system produces benefit cards on new recipients and loads benefit values for new and continuing recipients. Facts was developed in-house by the Office of Program, Planning and Development in 1987. FACTS was maintained by DHS until 1996, when program maintenance and future enhancements were outsourced to Thompson-Ramo-Woolridge Inc. (TRW), an independent contractor. TRW's workforce consists of approximately 63 programmers, quality assurance and administrative personnel.

The application resides on the Department of Information System's (DIS) mainframe. The system is composed of 10 subsystems servicing approximately 106,000 Food Stamps cases.

II. OBJECTIVES

Our objectives were to examine and evaluate the adequacy of the operating and administrative procedures, practices and policies to obtain reasonable assurance that sufficient controls exist over FACTS to:

- Protect the application and database from unauthorized access
- Provide for the continuation of computer processing capabilities
- Ensure proper management of program change requests
- Ensure the accurate and complete transfer of all files into and out of FACTS
- Ensure that the input, processing and output of data is accurate and complete.

III. SCOPE AND METHODOLOGY

Our audit focused on the daily operations of DHS and TRW and the responsibility of each regarding FACTS. Our audit procedures included interviewing key personnel, reviewing relevant policy and procedure documentation, identifying and assessing the adequacy of general and application controls, and testing the relevant controls.

General controls comprise the processing environment including management of computer resources, file access, change control, contingency planning and backup of critical files. Application controls are specific to an application and ensure only authorized data is processed, processing is complete and accurate and output is reliable. Effective general controls form the foundation for effective application controls.

Because of inherent limitations of controls, errors or fraud may occur and not be detected. Also, projection of this evaluation to future periods is subject to the risk that audit procedures done may become inadequate because of changes to these controls. We believe that our audit provides a reasonable basis for our opinion.

IV. CONCLUSION

As a result of our examination and testing, several significant deficiencies in controls were identified. These deficiencies along with our recommendations are listed in the remainder of this report. In our opinion, these deficiencies should be addressed to ensure the integrity of the system.

...these deficiencies should be addressed to ensure the integrity of the system.

V. FINDINGS AND RECOMMENDATIONS

1. Programmers with update ability in FACTS.

A FACTS application programmer has the ability to initiate financial transactions in FACTS. Sound information system controls dictate that proper segregation of functions should be maintained between users of FACTS and the information system personnel responsible for the development and

A FACTS application programmer has the ability to initiate transactions in FACTS.

maintenance of the system. Segregation of functions is not achieved if application programmers have the ability to initiate transactions in the FACTS system.

We recommend that controls be installed to prevent application programmers from having the ability to create or change transactions in the FACTS system.

Agency Response:

“The agency will implement a process where all individuals on the ACES/FACTS/WISE security file will be matched against a file of current State employees. Individuals not found on the State employee file will be deleted.”

2. Terminated employees with data file access.

There are several active logon ids belonging to users who are terminated employees of DHS. This situation will allow these terminated employees the ability to create and view transactions in FACTS. Sound security principles dictate that terminated employees’ access abilities be removed in a timely manner.

We recommend that DHS do a periodic review of all user accounts to ensure that only authorized individuals have the ability to access FACTS.

Agency Response:

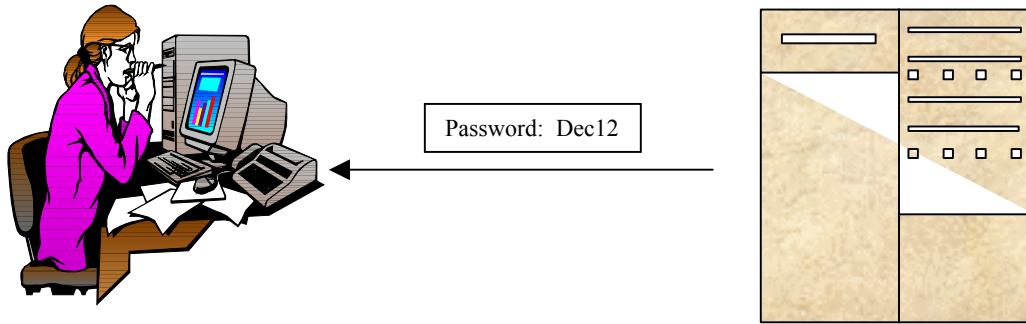
“The agency will initiate a process to match the State employee file against the FACTS security file. Terminated employees will be deleted. It should be noted that access to the system requires two passwords and ID, an ACF/2 ID and an application id. The ACF/2 ids are being compared to the employee file routinely and terminated staff deleted.”

3. User passwords are stored in clear text.

Data stored in clear text format can be read by an individual with access to the data as illustrated on the next page.

There are several active logon ids belonging to users who are terminated employees of DHS.

User viewing password in clear text



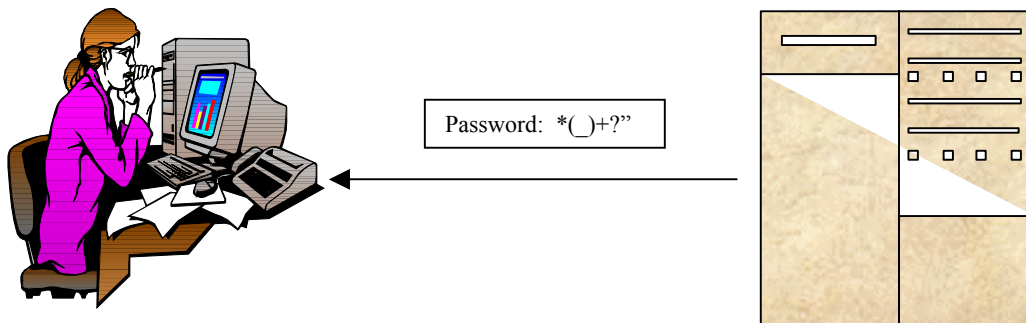
DIS Mainframe Computer

Data that is encrypted is transformed into an unreadable form that can only be deciphered by an authorized individual with an electronic key. FACTS stores passwords and other pertinent user data in a clear text format in the security master file. This situation will allow TRW programmers with access to the security master file the ability to obtain passwords for all user accounts. Proper security over FACTS cannot be assured if there are methods to gain knowledge of other users' passwords.

FACTS stores passwords and other pertinent user data in a clear text format in the security master file.

We recommend DHS establish procedures to have the system passwords encrypted or otherwise protected against disclosure. An example of a user viewing encrypted data is illustrated below.

User viewing password in encrypted format



DIS Mainframe Computer

Agency Response:

“The agency will analyze the scope of the problem and determine the most cost effective solution. However, it should be noted, as above, that there is a second level of security imposed by ACF2, which does use encrypted passwords.”

4. No contingency plan.

A contingency plan includes procedures for providing hardware, software, supplies and personnel to operate the backup computer facilities or restore the primary computer facilities in the event of a major interruption or disaster. The FACTS application, which is processed at the DIS Data Center, relies upon DIS's Contingency Plan. DIS's Contingency Plan contains emergency call lists, organizational charts and procedures, but does not address recovery of computer processing or backup computer facilities. This situation could cause the state to be without FACTS computer processing for an extended period of time in the event of a disaster or major interruption.

We recommend that DHS management work with DIS management to develop computer recovery procedures in the Contingency Plan and that the plan be periodically tested.

Agency Response:

“DHS management will work with DIS to develop an appropriate Contingency Plan.”

5. No balancing controls on files received from or sent to other applications.

The FACTS system interfaces (transmits data) with various other applications. Balancing procedures should be performed to ensure the accuracy and completeness of these transmissions of data between applications. The balancing process is normally performed as follows:

DIS's Contingency Plan...does not address recovery of computer processing or backup computer facilities.

- a) The data from the sender contains a totals control record that has the quantity and dollar amount for the data being transmitted.
 - b) The receiver recalculates the quantity and dollar amount of the data and accepts the data if these amounts equal the totals control record amounts.
- There are no balancing controls at any interfacing points between FACTS and other applications.

We recommend that DHS management develop some method that would guarantee the accurate and complete interface of files.

Agency Response:

“The agency will work with TRW to identify interfaces where such a balancing process is appropriate and implement these processes when feasible.”

There are no balancing controls at any interfacing points between FACTS and other applications.
