

Santa Fe's System Approach to Intermodal Control

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The purpose of this paper is to show how Santa Fe Railway uses an integrated computer system to manage the physical operation of major intermodal ramps. The computer system was designed to perform many functions with the same source data. For instance, while the system has increased clerical efficiency in record keeping and billing areas, it also has provided a means for better damage and equipment control. The operating computer system is split into three basic systems: a waybilling system, a car and train movement system, and a van system. Although each of these particular areas has its own supervision and responsibilities, it is an integrated system in that the areas cannot be considered totally independent. The main benefit of this system is the ability to take information used predominantly to support one particular area of the operation and blend it with information gathered for other areas to support the entire intermodal facility.

The integrated computer system was designed to capture timely information to help manage the physical operation of 32 intermodal ramps across the 12,000-mi Santa Fe Railway system. The computer system facilitates handling of approximately 1.6 million intermodal units, trailers, and containers, ramped and deramped each year.

The objectives were to simplify the billing paperwork and to provide an accessible filing system, to increase the speed of handling units, to control costs at field locations, and to create an information center to assist management decision making.

Records created from the data collected at the initial checkpoint centralize information that helps to balance trailer flow and provide information on the repair costs of damaged units. These reports help manage the total system as well as the individual ramp. The centralized information also functions to standardize company policy, identify reporting problems, and provide a means for control of expenses.

First will be described the capturing of certain information for the three integrated computer systems, the van system, waybilling system, and the car and train system, and how the information helps manage the physical operation of the intermodal ramps. Then the application of the integrated system to the handling of damaged equipment, its movement, and payment for equipment repairs will be discussed. This area has been uniquely affected by the application of the information generated by the computer system. The creation of a central information source enhanced the management decision-making process by providing information on the expense of past practices, which, in turn, allowed effective change.

VAN SYSTEM: CHECKPOINT PROGRAM

The checkpoint program begins with the information gathered at initial check-in and inspection of the intermodal units at the gatehouse. The check-in procedure triggers the creation of several records.

Creation of Form 1202, Trailer Inspection Receipt (Figure 1), must occur quickly to prevent congestion and yet contain as much pertinent information as possible. Several pieces of information are needed to assure proper loading of the unit, and several more are needed to provide accounting and tracing needs.

When a unit arrives, the number, hazardous placarding and declaration, trucker identity, shipper, destination, interchange information, seal, length, chassis information, and refrigeration settings, if any, are captured. To speed up this operation, the terminal manager has local abbreviation tables, that is, a predetermined computer list, in which he can enter one-, two-, or three-character abbreviations for his most common trailer prefixes, shippers, truckers, and destinations.

For an empty unit, the program automatically checks all empties to determine if previous damage should be shown on Form 1202, whether a Trailer Damage Responsibility Report (Form J-2) is on file, or whether any stop orders exist on the unit. If any exceptions are noted, the console operator is notified, and the appropriate handling instructions are printed on Form 1202. Internal computer checks are made to determine if the empty is subject to per diem relief, and, if it is, appropriate interchange and Association of American Railroads (AAR) reportings are made and the owner is notified automatically. If Santa Fe is not responsible for the empty unit, the operator is notified immediately so that it may be rejected before being placed in the lot. Empty steamship containers are checked through a permit file and accepted only if authority has been previously granted by the Transportation Department.

If the unit is a load, outbound waybilling is checked; the equipment master, a Santa Fe listing of all equipment configured by type of equipment, is checked; and the length, width, and kingpin setting are placed on Form 1202, along with any pertinent waybilling information. In either case, the detention file is upgraded with all applicable arrival and waybilling information, and all real-time records are upgraded to reflect the unit on hand. Then

SPEED-BILLING

For customers who ship repetitive freight to the same consignees at the same destinations, there is a built-in speed-billing function to the checkpoint program. Based again on a table controlled locally by the terminal manager, these repetitive waybill patterns are established, and whenever a unit from a shipper on this list with a destination on this list is encountered at the gate, a waybill is automatically prepared. This is also annotated on Form 1202, and no further handling by waybill forces is needed. Waybills that are not speed-billed are entered manually at the terminal from information furnished by the shipper.

SYSTEM INTEGRATION

The waybill information is correlated with the checkpoint transaction to ensure that both billing and operating personnel get the information they need. Trailer and container activities are recorded by the van system, and the waybill system provides important information about the equipment. The waybill will determine if a container goes with or without wheels. Information from the waybill program places the unit's release time in the detention/per diem file. By the same measure, the checkpoint record takes the length and seal information and places it in the waybill computer file. These two functions, the waybill and arrival records, produce the ramp load-out file.

The ramp load-out file contains every loaded or private empty unit on the property that has either arrived at the checkpoint or been waybilled, or both. When both transactions meld together, the unit is a candidate for loading. The load sheet contains the following information about the unit: initial and number, train block, length, trailer-on-flatcar/container-on-flatcar (TOFC/COFC) flag, width of tandem, kingpin setting, location of reefer unit, refrigeration instructions, hazardous placarding, destination, destination ramp type (either circus or mechanized operation), shipper, expedite codes, and hold codes. The loading coordinators can call up the units on this list in any manner; for example, by train or by block, as a summary only, by shipper, by units billed but not yet in, by units in but not yet billed, or by units holding.

Local routines are also available to cover situations in which units are neither on hand nor waybilled but are expected to arrive before cutoff time can be assigned for loading. Hold codes to prevent loading may be entered by various personnel. For example, refrigeration holds would be placed and removed by the Refrigeration Department, and oversize loads and flatbeds would be placed and removed from hold by the Mechanical Department. This information is also available to all operating supervisors in the terminal and at the System Operations Center in Chicago.

CAR AND TRAIN SYSTEM

At this point, the car and train system plays an important part. Inbound trains, in preparation for reloading, are spotted to the ramp. A program is used to record that the inbound units have been deramped. The stanchion direction and settings are entered and a computer-generated list of cars is prepared for the loading coordinator to plan for the next outbound train. This list shows not only the hitch settings as reported (and carried throughout the entire move), but also report dates when the car

inspectors cleared the cars (if cleared), and the types of trailers and containers the car will hold. This information is based on the car type as reported in the Umler Equipment Register and is augmented by a system table maintained by the Transportation Department.

For every car on the track the list will show whether the car can handle twin 45-ft units, nose-mounted reefers, 42-in. kingpins, various sizes of containers, and so forth. Now, displaying the loading sheet, the coordinator needs only enter the sequence number of the flatcar selected beside each unit for that car. The program will chain them together and create the final waybilling record. At this time, unit type, car type, and destination ramp type are compared. Any units not physically fitting on the car (e.g., containers on trailer-only cars and vice versa), or any cars not capable of being handled at the destination ramp are edited out for exception handling by the coordinator. Santa Fe is currently in the design and coding phase of automatically assigning each unit to a compatible flatcar on the basis of its physical characteristics. It is hoped that this task will be completed in the first half of 1986.

LOADING

By taking the applicable pieces of information from the waybill, car and train, and van systems, a loading list is prepared telling the ramp hostler the car number, the direction and setting of the hitches and pedestals, the unit number, the location of the parked unit by lot and row, the length of the unit, whether it is moving TOFC or COFC, and the seal number. This list is printed with double-size print so that it is more legible for the drivers. The seal number may be used to locate a unit if two units with similar numbers are in the same area of the yard, thus eliminating extra radio conversations.

YARD MANAGEMENT PROGRAM

At a ramp the size of Checkpoint Chico at Chicago's Corwith Yard with 4,200 parking spaces, a yard inventory system plays an important role. The location of units within the yard is maintained by several different means so that customers and hostlers can save time by driving to the exact location.

Some locations take a handwritten inventory and key it into the computer. Checkpoint programs have the ability to assign the location at the time the unit is checked in at the gate. If information on parking is available, the driver can be immediately told where to park the unit. Radio transmission is used in some areas, and ramp hostlers tell the inbound coordinator where individual units or groups of units will be parked. At larger facilities, a person drives the various lots on a schedule and records all unit numbers on a tape recorder and then keys this information into the computer.

At Los Angeles a bar-code system is being tested. Paper labels are applied to the units when they arrive at the facility via either rail or rubber. Critical parking areas can then be checked quickly and often with a laser bar-code scanner. The information can then be moved from the scanner memory to the main computer without keying. This allows ramp hostlers to have locations for about 90 percent of all units they are to load, even in areas of the yard that might turn over entirely three or four times a day.

YARD MANAGEMENT REPORTS

Yard inventory information allows several management reports to be generated by the local terminal operator. For example, the manager receives listings of units on hand over NN hours for corrective handling, such as determining why the units did not move or renotifying a customer. The manager also receives listings of units on hand in inventory but not on the yard check, and vice versa, and can police for omissions in reporting and incorrect reporting.

Reverse-routing based on ownership, per diem relief pool points, and reverse-route by shortest mileage is available for all empties in the ramp inventory. This information is displayed based on lot location, and may be further sorted and subsearched by the local manager for use in assigning empty units to customer orders or in loading out empty units. Empty units can be waybilled and moved from this listing directly to the load-out sheet in one step.

DERAMPING PROGRAM

The deramping function provides the easy ability to enter deramping information on an entire track, portions of a track, or individual units without rekeying unit numbers. This program sets up customer notification files and U.S. Customs files, reports empty rail controlled trailers for per diem relief, and sets up trailer train cars for contractual storage relief. At ports where units are moved directly from rail cars to port responsibility, the deramp function automatically closes all responsibility cycles and creates any interchange reporting required. The affected tracks and cars are updated to an empty status, the computer automatically applies car distribution to the empty flatcars, and system inventory adjustments affecting management reports are made.

CUSTOMER NOTIFICATION

Notification record is entered by creating a computer display for each customer and either telephoning the customer and relaying the information or printing the notification list and delivering it to the customer by telefax. Then by simply keying the company and person notified, date and time of notification, and name of the representative making the notification, the transaction is complete.

This transaction then opens the storage and detention, or truckers' interchange, cycle for the unit according to how the customer or drayman is listed in the customer table. Notification may also be made by automatically taking the information from this file and placing it in a TWX/Telex transmission directly to customers who desire this feature. Santa Fe is currently developing and testing a mechanism to do the same thing using computer-to-facsimile device transmission for those customers who do not use TWX/Telex. Both of these methods increase customer satisfaction and decrease the time needed to do the notification.

Customs files include the shipper's bill of lading information, the immediate transportation (IT) custom numbers for each shipment, and the unit identification. Tracing can be done on any of these identifiers. Reportings are made when the units are reported to customs and when released from customs. Notification of availability to the consignee or broker may be made and entered on release from customs, and all detention and storage records are modified. Stop-order holds are released, and if the

customer is not notified on release, the information is placed in the normal customer notification file for handling.

DETENTION AND STORAGE PROGRAM

Detention and storage billing is accomplished by a daily display of all closed cycles. These records are then compared with the customer master that validates the patron code, mailing address, and free-time allowances, and run through a rate master that checks the contract or shipping quotation for the applicable rate or rates. If charges are due, an extract of the bill is displayed for verification, along with all records and notations to the unit. The operator then verifies the bill or holds it for later correction. All verified bills are placed directly in accounts receivable and mailed the following morning from Topeka, and a station record is prepared locally. Trucker interchange billing is handled in a similar manner but without local review. These closed cycles are rated and billed directly from the accounting office in Topeka without local rating and without printing a station record.

CHECK-OUT PROGRAM

When a truck leaves a checkpoint, abbreviated information similar to the local arrival abbreviation tables is entered. The program verifies location, removes the unit (and applicable chassis) from the inventory, checks stop orders, and notifies operator if any exist. The inbound waybill is checked for hazardous material, and, if there is any, the description is placed on Form 1202 for use by the drayman en route to the final destination. Edits verify that the drayman has a valid contract with Santa Fe, and the appropriate detention and trucker interchange files are updated to reflect the transaction. Per diem relief is canceled if applicable, and all rail and AAR interchange reporting is accomplished. In the case of a pull-out, that is, a load tendered to Santa Fe by a shipper and removed to another carrier before loading, the loading coordinator is notified and loading instructions in the load sheet are canceled and a special file is opened for any charges in addition to regular detention and storage.

TRACING FUNCTION

Tracing of rail-controlled trailers is another area the van system has made it possible to automate. Open records are automatically closed on the basis of information furnished by the AAR TRUK program, and passings on other railroads' pull-trailer records and printed tracers to the customer or drayage firm are also prepared for mailing. Daily reports of units on the street for 10, 20, and 45 days allow effective telephone tracing by local personnel, and records closed by the central accounting office on the basis of per diem settlements also close the local tracing cycle. Periodic reports from this tracing mechanism trigger reports to contract management on customers and draymen who are not living up to their agreements.

MANAGEMENT REPORTS

The yard and van inventory system created and maintained by these transactions provides a solid basis

for all types of management report programs and ad hoc inquiries. "TOFCSTATUS" provides an intermodal summary of all units en route on cars and on the ground. Further breakdowns of this report allow the terminal manager to determine by type, special equipment, and box width and height which empties are or will be available.

Bad orders are broken out separately to allow shop schedules to be adjusted to repair the types of equipment needed ahead of other repairs. Containers moving flat on the deck are also identified by length of trains and tracks. En route and in-yard reports allow the terminal manager to determine on hand and en route units to better coordinate the availability of chassis for these boxes.

Flatcar reports for the yard are used to list all tracks containing flats and whether they are loaded or empty or carrying empty units. This report also identifies the cars by whether they are multipurpose, COFC only, TOFC only, rigid hitch, or collapsible hitch. This knowledge allows the terminal manager to request the cut of cars best fitting the current loading or unloading plan to eliminate extra switching whenever possible.

Checkpoint summaries giving an hour-by-hour listing of gate activities are used to determine shifts in traffic flows and adjust manpower requirements. Monthly loading and unloading reports are also prepared, and other statistics concerning types of loads shipped and received allow the manager to see changes in business patterns occurring at the ramp. Daily forwarding reports for the previous 24 hr are printed for distribution to customers to give them their forwarding information. This data base is kept on line for a year and is used extensively by operating, transportation, and marketing personnel to study shipper, destination, and equipment matters.

Other ad hoc inquiries can be addressed to the inventory and forwarding files by using an easy-to-use computer query language. Local terminal managers have their own data bases into which they may place information from these ad hoc inquiries. This information can be further processed into reports and models needed to better operate the facilities.

CASE STUDY

Let us examine the impact of centralizing the integrated information on the Santa Fe's intermodal damage and inspection procedure.

Before information was available from the integrated computer system, empty damaged trailers were routed to Chicago for repair. The railroad not only incurred the cost of empty shipping miles, but reports indicated that after repair the units were usually returned to the West Coast for loading.

After analyzing this pattern, the five Santa Fe intermodal shops were augmented by contracting with outside repair facilities, allowing repairs to be made where the unit was needed. In effect this decision reversed the movement of damaged trailers for repair and made them more readily available for loading.

INSPECTION REPORTS

As mentioned, many reports are triggered with the gatehouse program. The damage and inspection procedure begins at check in when Form 1202 (Figure 1) is generated. Trailer inspectors are trained to inspect and record damage that is the responsibility of the handling carrier or trucker. Trailers are inspected for damage and tires are checked for run-flats, flats, caps off, or blowouts. Inspectors are in-

structed to make an extra effort on high-claim-sensitive equipment such as refrigerated trailers or tank trailers because repair costs are greater for this equipment than for general service trailers. Also, inspectors are aware of high-claim damage areas on trailers, such as top rails and front headers. As the trailer is inspected, damage is noted on the Form 1202 Inspection Receipt.

DAMAGE REPORTS

If a trailer, such as a privately owned unit, has not been on the Santa Fe before and has damage, a Santa Fe Form TSI-2, Trailer Damage Responsibility Report (Figure 2) is completed noting the damage. The trucking company is notified that this unit is at the facility with damage. This is done for two reasons:

1. If Santa Fe must repair the trailer, it aids in recouping the money for the repairs from the trucker or equipment owner.
2. If a trailer comes into the yard damaged, in many cases the trucking company's dispatcher is not aware that that unit is damaged and that his company will be held responsible for the damage. This gives the trucker a chance to come to the facility and inspect the equipment and allows the trucker to get his insurance company involved.

When a trailer is taken from Santa Fe and has damage that does not need repairs before departing, a Damage Input Computer Program (Figure 3) is used. This information will be printed out on Form 1202 when the unit is returned. This indicates that the trucker is not responsible and directs the unit to the shop for repairs eliminating unnecessary billing research and telephone calls.

INTERCHANGED DAMAGED TRAILER REPORTS

If a damaged trailer is interchanged from another railroad, Form J-2, Trailer Damage Responsibility Report, is prepared or secured from the delivering carrier. The delivering carrier prepares the Form J-2 unless local procedures and agreements dictate otherwise. In Chicago, the Chicago Car Interchange Bureau (CCIB) governs and Santa Fe or the receiving carrier writes the Form J-2 on a loaded Santa Fe or foreign unit, but an owned or leased empty unit must be held for inspection by the CCIB at which time they prepare a Form J-2. At other locations, Santa Fe inspects trailers on flatcars received in rail interchange and prepares Form J-2s in accordance with interchange rules or contracts with other rail carriers on run-through trains.

At all locations, when a trailer on flatcar arrives at a terminal with damage, a Form TSI-2, Trailer Damage Responsibility Report, is prepared. The purpose is to inform the local people about who is responsible or where the problem happened or was discovered. This information is then sent to a central office, the Equipment Accounts Office, which maintains all Form J-2s, Form TSI-2s, Form 1202s with damage, and all repair orders. This makes it possible to investigate and determine origin of damage and responsibility for damage. This reduces effort expended in trying to determine who caused the damage. The TSI-2 is also used in local terminals to document damage sustained in the yard.

When a Form J-2 is written at an interchange point, against another railroad, the information is input into a computer program available at all locations systemwide (Figure 4). Then when a trailer

SECTION 1
(Inbound Damages Through Checkpoint)

SECTION 2
(Inbound Damage on Flatcar, Yard Damages, Etc.)

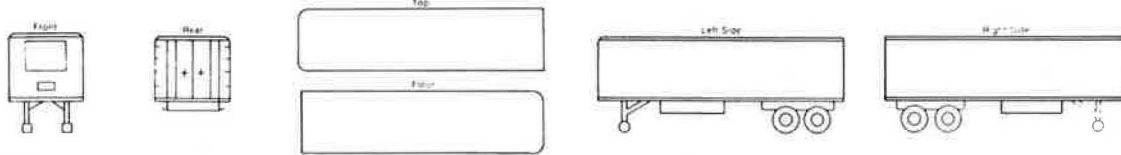
Trailer or Container Owner or Initials _____
Trailer or Container No. _____ Type _____
Chassis or Bogie Owner or Initials _____
Chassis Bogie No. _____
Delivered by _____ to **SANTA FE**
at (Station) _____ on (Date) _____ 19__ Load ___ Empty ___

Location _____ Trailer or Container No. _____
Date _____ Chassis No. _____
Time Set _____ Car No. _____
Shipper _____ Load _____ Empty _____
Received From (Rail) _____ Station _____

SECTION 3 — Describe Damage: _____

SECTION 4

Trailer Diagram



SECTION 5 Inspected by _____ Employed by **Santa Fe**
Damage Reported to (Name) _____ Title _____ Phone _____
Repairs Authorized by (Name) _____ Title _____ Phone _____
Send Bill for Repairs to (Attention) _____ Company _____
Address _____ City _____ State _____ Zip _____
Remarks _____

NOTE

Complete sections 1, 3, 4, and 5 for trailers received through checkpoint in a damaged condition, not subject to J-2 provisions. Mail copies as follows: original to Manager TOFC Repair Billing, copy responsible party, and trailer ID box.

Complete sections 2, 3, 4, and 5 (if applicable) for inbound damage on flatcars, yard damages, etc. Show responsibility in remarks column if known. Send original to Manager TOFC Repair Billing, and place copy in manifest box on trailer.

REMARKS COLUMN _____

FIGURE 2 Trailer damage responsibility report.

```
.DATE 10 DEC 85 11:25:47 REPORT GENERATION GDE
> 1 , > 6 , ENTER TRAILER INITIAL, NUMBER

DAMAGE LOCATION      DAMAGE CODE      COMMENTS
> ,                  > ,             > ,
> ,                  > ,             > ,
> ,                  > ,             > ,
> ,                  > ,             > ,
> ,                  > ,             > ,

ENTER BELOW AMOUNTS OF EQUIPMENT MISSING FOR WHICH UNIT IS STENCILED
CHAINS  BINDERS  TARPS  BOWS
> ,    > ,    > ,    > ,
ENTER ADDITIONAL COMMENTS ON THE LINE BELOW
> ,                                     ,.

..... END REPORT .....
```

FIGURE 3 Damage input computer program.

arrives at another terminal, a search in the computer indicates whether there is a J-2 against the trailer and describes the damage. This is a tremendous aid in determining who is responsible for the repairs and in initiating repairs or authorization to repair if the trailer is not going to be returned home to the owner.

SHOP PROCEDURES

Santa Fe has shops at five locations and outside repair services for both trailer and tire repairs at

other ramps to perform owner-responsibility and handling-carrier repairs.

Each shop location prints a daily list of empty J-2 Trailers on Hand (Figure 5). Shop personnel go into the yard, inspect for damage knowing what is written on the Form J-2, and repair Santa Fe trailers immediately. This enables Santa Fe to reduce the cost of idle, damaged trailers and speeds rebilling against the responsible party.

At smaller ramps, trailers with J-2s are located and directed to repair locations daily. When J-2 repairs have been made by the shops or by contracted outside firms, the J-2 is deleted from the computer

.DATE 10 DEC 85 13:40:21 REPORT GENERATION MRM
1 FORM J-2 FOUND

FORM 1202-A STD. SANTA FE

TRAILER DAMAGE RESPONSIBILITY REPORT

TRAILER SFTZ 630020 CHASSIS/BOGIE

DELIVERED BY BO VIA STREET TO ATSF AT (STATION) CHICAGO IL
ON 12/06/85 EMPTY.

THE BO IS RESPONSIBLE FOR THE FOLLOWING DEFECTS -

R & L REAR DOORS AND 5 DOOR HINGES BENT 3 RIGHT AND 2 LEFT.

.FRONT.		LEFT SIDE		.REAR .		RIGHT SIDE	
I	I	I	I	XXXXXXX	I	I	I
I	I	I	I	XXXXXXX	I	I	I
I	I	I	I	XXXXXXX	I	I	I
		0	00			00	0
TOP				FLOOR			
		I	I			I	I
		I	I			I	I

INSPECTED BY D. E. MCGRAIL EMPLOYED BY CCIB

..... END REPORT

FIGURE 4 Form J-2.

and a message is directed to the Equipment Accounts Office. J-2s are monitored and offset J-2s are requested from the Interchange Bureaus. J-2s are matched with the shop work order or outside vendor invoice for rebilling the responsible party.

Before any of the terminals perform owner-responsibility repairs on a unit, they run a program called VANCHK, which informs the shops if repairs are authorized on a particular unit identified by the reporting marks. This allows shop personnel to secure authorization and billing information on all equipment not covered by contract. It also eliminates disputes in collecting for repairs performed. Handling-carrier repairs are performed without this check to keep freight moving.

Santa Fe repairs tires according to the AAR rules and also uses AAR interchange rules for TOFC/COFC service as a guideline for owner-responsibility and handling-carrier repairs. Repairs are performed at all locations depending on responsibility for damage, need for the equipment, and ability of that facility to perform the necessary repairs properly.

WORK ORDER PROCEDURE

When repairs are made at Santa Fe shops, the mechanic completes a work order showing the type of work, labor, hours, and materials and turns it in to his supervisor. The same procedure is followed for tire repairs and replacements. The work order is then coded by job code and input to the computer. This input performs many functions. It accounts for the tireman or mechanic's time, relieves inventory, records the cost, debits the budget, updates the costs of that shop and, on a system basis, of that type of equipment. By using job codes, it is determined if the work is for owner-responsibility repairs or damage.

Work performed outside by independent vendors is handled in a similar manner. The tire vendor places a copy of the invoice between the rim and the tire so it protrudes for easy viewing. This is done so the tire will have to be dismantled from the rim in order to install the copy of the invoice. When repairs have been made, a supervisor inspects the repaired tires to ensure the work is completed. Only then will invoices be approved for payment. A Santa Fe Form 552 (Figure 6), Authorized Request for Payment, is prepared. Function codes are used to identify the type of equipment and the type of work performed, whether it involves tires, and whether it is owner-responsibility repairs or damage. These codes ensure charges are directed to proper areas of the budget.

When owner-responsibility repairs are performed on foreign equipment and costs are recovered through AAR billing, the credit that is received goes to the shop that performed the work. This determines the amount of rebill work performed at each shop and the actual cost of running the shop. The credit pyramids on a systemwide basis on all equipment so that debits and credits are determined for the type of repairs that are made. This is accomplished internally within the program. Budget codes are assigned by type of work performed and equipment repaired.

CENTRALIZED INFORMATION

All original work orders from Santa Fe shops and copies of all invoices for work performed by outside vendors are sent to the Equipment Accounts Office. This is Santa Fe's central office for information. All these documents are microfilmed by date and type code to identify the document and expedite the matching of repair orders and damage responsibility

SFTZ 630230 V1G R E INCIHKPT 12144 85331 1750 1 B0 15 85343 1935
 VTRZ 208263 V15 R E INCHKPT 12144 85325 1009 3 1 47 85327 2231
 SFTZ 251453 V17 R E INCHKPT 12144 85319 1446 3 1 89 85320 2237
 SFTZ 801153 V85 R E INCHKPT 12144 85298 0942 7 AL 7 85337 2100
 MARZ 4986 V N E INCHKPT 12144 85344 0051
 SFVZ 202711 V45 R E DERAMPED 12268 85334 0900
 SFTZ 730042 V70 R E INCHKPT 12268 85318 1517
 SFTZ 251047 V17 R E INCHKPT 14194 85339 1507 01 01S 34 85344 0138
 SFTZ 954899 V27 R E INCHKPT 14194 85338 1235 01 01S 86 85344 0138
 SFTZ 954899 V27 R E INCIHKPT 14194 85338 1235 01 01S 86 85344 0138
 SFTZ 204859 V25 R E DERAMPED 25100 85340 0930
 SFTZ 255423 V17 R E DERAMPED 25233 85343 1345
 ***** END REPORT *****

FIGURE 5 continued

FORM 552 SPL (Rev 6-78) **SANTA FE TERMINAL SERVICES, INC.** AUDIT NO. **T 18800**

MAIL TO: **MANAGER - DISBURSEMENT ACCOUNTING ACCOUNTS PAYABLE DEPT. TOPEKA, KANSAS** REFER TO MECHANIZED DRAFT PAYMENT PROCEDURES - FORM 599

DATE _____

2 VENDOR CODE 14 19				3 SPECIAL DATA 20 25				4 AREA CODE 26 32			
------------------------	--	--	--	-------------------------	--	--	--	----------------------	--	--	--

5 INVOICE

MONTH 33 34	DAY 35 36	YEAR 37 38	NUMBER 39 53					STATE 54 55	CLS 56
----------------	--------------	---------------	-----------------	--	--	--	--	----------------	-----------

7 WORKING FUND TYPE PAYMENT CODE 600
 A. AMOUNT AUTHORIZED _____
 B. CURRENT EXPENSE _____
 C. CASH ON HAND _____

8 TYPE OF PAYMENT CODE 57 61		9 QUANTITIES FOR OIL LUBRICANTS & FUEL 62 66		10 PAY THIS AMOUNT 67 74		11 RELEASE NUMBER 75 77		12 78 80	
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13 DISTRIBUTION											
AREA CODE		FUNCTION CODE			AUTHORITY				SF4		
PAYROLL	LOCATION	ACCOUNT	ACTIVITY	CLS	STATE	TYPE	NUMBER	YEAR	SPECIAL DATA	SRC	AMOUNT

14 TREASURER _____ (CITY) _____ (COUNTY) _____ (STATE)

C/O _____ A.T. & S.F. RY. CO.

 (STREET) _____ (CITY) _____ (STATE) _____ (ZIP)

VEHICLE IDENTIFICATION NO _____

THIS IS IN PAYMENT OF (CHECK ONE)

STATE LICENSE
 CITY, COUNTY, OR STATE PERMIT
 ICC PERMIT

15 SIGNED _____ APPROVED _____
 _____ TITLE _____
 _____ LOCATION _____
 _____ FINAL APPROVAL _____

ACCOUNTS PAYABLE COPY

FIGURE 6 Form 552.

reports, Form 1202s, and J-2s by employees using a CRT at their desks. This also makes the information immediately available to the field.

Copies of all Form J-2s prepared at checkpoints and interchange points are furnished to the Equipment Accounts Office. Also furnished are all Form 1202 interchange receipts that denote damage or, in the case of refrigerated trailers, special equipment and all Form TSI-2s for equipment arriving at the gate or on a car with damage. These forms are also microfilmed and used to determine responsibility for billing.

This office determines responsibility for damage, demand for the equipment, home route, cost, and authorization, if necessary, and interprets any contract obligations to determine if a repair point is qualified to make the repairs.

This office also handles all correspondence about trailers that are stolen, abandoned, or damaged by truckers. The Universal Machine Language Equipment Register (UMLER) is maintained and the Intermodal Equipment Register is updated by having the terminals furnish this office copies of all interchanges on equipment that is new, terminated, stretched, sold, or modified.

Also, a computerized permanent equipment register is maintained for all equipment containing license and registration information, year, manufacturer, empty weight, and original cost. All information can be determined even if only one identifier is available. Any equipment changes are noted in all the reports.

This office is responsible for licensing all equipment and furnishes registration information and obtains replacement license plates and registrations systemwide for all owned, leased, or foreign equipment in order to keep equipment moving without delay.

INVOICE PROCEDURES

The Equipment Accounts Office also processes invoices systemwide from truckers under the Truckers Interchange for repairs that are performed on the highway. Handling these invoices on a central basis rather than on a local level assures that all invoices are proper according to contracts and that Santa Fe's responsibility is documented to protect

the integrity of the Santa Fe and rebilling to another carrier if the equipment is foreign.

Invoices and repair orders submitted to the Santa Fe by other railroads, leasing companies that are governed by AAR rules, and private contracts are also handled in the central office. When bills are received from other railroads, invoices for owner-responsibility repairs to Santa Fe equipment are processed for payment. Invoices for damage are researched for rebilling capability or to determine responsibility using the microfilm system that has a recall of approximately 12 months.

This office initiates billing to other owners or private carriers on the basis of contracts for repairs governed by the VANCHK program (Figure 7). Other companies are rebilled for damage when responsibility is determined from Form J-2s, TSI-2s, or 1202s. When rebilling for work performed in Santa Fe shops, the shop is debited or credited, relieved of the inventory, and charged for the mechanic's time; records are accumulated as if these were shop inputs. At the same time, a bill is prepared according to AAR billing procedures. A machine billing program automatically makes all calculations on labor and parts and accumulates budget information and all other related statistics. The billing is printed in the Equipment Accounts Office once a month and a copy is passed to the Accounting Department. The bill is mailed along with all supporting documents as required by contracts with individual companies. This office handles and pays equipment claims but not lading claims.

COLLECTIONS

A copy of the AAR billing is retained by this office for collections. Collections are handled by the Accounting Department for the first 60 days and then revert back to the office to be pursued through personal contact by telephone and a letter. If the bill is not paid or disputed, it is then turned over to the Law Department or a collection agency for further collection effort at which time a determination is made whether Santa Fe will continue to perform repairs on this equipment.

All derailments are reported to the Equipment Accounts Office. When piggyback equipment is destroyed or heavily damaged in a derailment, this office im-

.DATE 29 AUG 85 09:40:31 REPORT GENERATION JTW

UNITS MARKED ARE HANDLED BY
AND ARE NOT RAIL CONTROLLED .
REPAIRS ON THESE UNITS ARE -
<<AUTHORIZED UP TO \$150.00 ONLY >>
FOR AUTHORIZATION OF A GREATER AMOUNT -
CONTACT -

*

ENTER NEXT PREFIX YOU DESIRE TO CHECK
..... END REPORT

.DATE 10 DEC 85 14:57:11 REPORT GENERATION JTW

UNITS MARKED ARE HANDLED BY
AND ARE RAIL CONTROLLED .
HOME POINT IS CLOSEST JUNCTION WITH CONNECTING ROADS
(RUN 'INQ LR' IF NO DIRECT CONNECTION WITH OWNER)
(AUTOMATED CHECKPOINTS SHOULD USE 'INQ LR' & 'TMS HOME' TO DETERMINE
CLOSEST HOME POINT)
REPAIRS ON THESE UNITS ARE -
<<AUTHORIZED - AAR >>

>>

ENTER NEXT PREFIX YOU DESIRE TO CHECK
..... END REPORT

FIGURE 7 VANCHK program.

mediately notifies the owner of the equipment as determined by the reporting marks. This office pays all claims for equipment as a result of a derailment. This office assists in determining equipment value and procedures to be used in the salvaging of the equipment. This firsthand knowledge also assists in determining whether to sell, repair, or dispose of the equipment at the site.

In conclusion, the control of outside vendors under the direction of this office and the complete repair program for the system controlled and coordinated through one central office where all information and documentation are maintained produces efficient, cost-effective intermodal operation.