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USPS-LR-J-17/R2001-1

JOINTLY SCHEDULED TESTS

LIBRARY REFERENCE USPS-LR-J-17/R2001-1

JOINTLY SCHEDULED TESTS

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This document is a Category 1 library reference. It updates and replaces Library Reference USPS-LR-SSR-58/MC96-3. It is referenced in the testimony of witness Pafford, USPS-T-3.

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JOINTLY SCHEDULED TESTS SYSTEM NARRATIVE

The purpose of the JOintly Scheduled tests (JOIST) system is to reduce day-to-day workload fluctuations by equalizing the number of tests scheduled each workday, while maintaining the integrity of the sample design. Five surveys are included in the JOIST program: ODIS, RPW, City Carrier Cost System (CCS) Rural Carrier Cost System (RCS), and Transportation Revenue and Cost System (TRACS). Testdates for TRACS and for Sunday and holiday tests for the other surveys are selected by the sample selection programs for each of those surveys, independent of the test schedules for the other surveys. Testdates for non-holiday, non-Sunday tests for ODIS, RPW, CCS, and RCS are random selected concurrently by this JOIST program, with the workload associated with TRACS tests considered simultaneously.

Each statistical program manager chooses one of three methods to equalize test dates within each of their base unit areas. Each Customer Service and Sales District (CSD of District) has one or two base unit areas. Their options for equalizing the test dates are 1) none, 2) by ODIS area (roughly equivalent to a 3-digit ZIP Code area), or 3) by statistical program (ie., ODIS, RPW, CCS, RCS). The sample units, which are randomly selected by the sample selection programs for each survey independently, are sequentially assigned from a randomized list of delivery dates within base unit area for the option selected. This assignment of test dates is conditioned on when TRACS tests are scheduled.

Beginning PQ 3, FY 2000, the JOIST was modified to eliminate scheduling tests for APO/FPO units in the New Jersey Bulk Processing Center on Saturdays and Sundays. This is because mail does not exit this facility on these days.

The JOIST system consists of a single program, which schedules all non-Sunday, non-holiday ODIS, RPW, CCS, and RCS tests.

JOINTLY SCHEDULED TESTS PROGRAM DOCUMENTATION

The program first loads all of the necessary control information to accomplish the Joint Scheduling operation. This includes inputting a list of available dates for the Postal Quarter, and all of the necessary information to determine Base Unit codes. Included with the tables of Base Unit codes, relating to facility Zip Code to the Base Unit area, are finance number lists which provide the exception criteria for those facilities where the ZIP Code does not allow determination of the correct Base Unit code.

Loaded in the arrays at program invocation are the selection of the method of allocating test dates, either by 1) none, 2) by ODIS area, or 3) by survey. Also loaded into arrays at program invocation are ODIS area codes, indexed by the first three digits of the facility Zip Code, for usage in classifying each sample record into an ODIS area.

After loading all of the necessary control data into arrays, the program concatenates the five sample files and randomly assigns testdates to each sample record, in turn. The initial processing classifies each sample record into the appropriate categories, appends a sort key to the data, and sorts the records for joint scheduling within Base Unit, ODIS Area/Program. The appended sort key consists of:

```

Base Unit code
Test type
    0 = (TRACS)
    1 = (RPW, ODIS, CITY CARRIER COST, and RURAL CARRIER COST)
ODIS area/
Survey code
    1 = RPW
    2 = ODIS
    3 = RURAL CARRIER COST
    4 = CITY CARRIER COST
    5 = TRACS
Strata code
  
```

All survey sample records are returned from the sort phase, sequenced by test type within Base Unit code. This sequencing allows all TRACS records (survey type ranking of zero) for a Sample Smoothing Area to be returned prior to any records for the other four surveys. These records merely contribute to daily counts, as no test date assignment occurs for the TRACS sample.

The other four survey sample records are returned intermixed by the sort key, since they are all given a survey type value of one. Because of the survey code value, RPW records are handled first within the sort key, followed by ODIS records, and finally by City Carrier Cost records.

After loading the available dates for the Postal Quarter, into Pay Period and Accounting

Period segments, the dates are randomized within Accounting Period and Pay Period. The randomization is to maintain a randomized sample, while the restriction of Pay Period and Accounting Period is to limit the movement.

As these records are returned from the sort routine, each record is first checked that it was not originally scheduled on a Sunday or holiday. If so, that record is passed on to the output dataset for testing on the originally scheduled date. When a non-Sunday, non-holiday sample record is processed, an available date is first selected from the randomized available date array. The existence of a current count for a TRACS sample makes a date not yet available: one is subtracted from the sample count for that date, and the next date's examined until a date is found either not having any scheduled TRACS samples or where that count was decremented to zero.

When the date is randomly selected for a survey sample record, the appended sort key and other fields, which are no longer useful, are removed from the survey sample record. The test date, and other relevant information such as day of week, are substituted at the appropriate positions in the survey sample record, and it is output to the output database for that survey. Survey sample record formats for each survey are identical to the input records, but date information has been updated to reflect the test date randomly selected by the JOIST program.

Once testdates have been put on sample records, and the sample records output to the appropriate files, the results of smoothing are checked. Frequencies of tests for each size group, each base unit code, each day, and each day of week are shown for each of the four surveys.

SMOOTH01/CLIST/SMOOTH.TXT is the clist program which executes the JCL program which executes JOIST. The JCL for each postal quarter is also named SMOOTH.TXT in directory SMOOTH01/JCL01/PQq. The JCL program calls the SAS code found in SMOOTHR4.SAS for Postal Quarters 1 and 2, and SMOOTHR5.SAS for Postal Quarters 3 and 4.

JOINTLY SCHEDULED TESTS
PROGRAM INPUTS

SITES DDNAME=SITEFILE
"HSDHQN.PS610D01.SITEFILE"

Identifies facilities to include in the JOIST program, and site selection of equalization of test dates by program, ODIS area, or none.

AVAILABLE DATES DDNAME=CARDATA
"HSF.HQ000D01.CARDATA(HSF020SA)"

Identifies holidays and those dates available for use in the JOIST program.

ODIS AREAS DDNAME=NEWATTRZ
"HSB. NEWATTRZ"

Identifies ODIS areas.

BASE UNIT AREAS DDNAME=ZIPTABLE
"HSFRAN.PS001D01.ZIPTABLE.ORFEO"

Relationship between the facility Zip Code and Base Unit Area code.

FINANCE NUMBERS DDNAME=FINFILE
"HSDHQN.PSO01D01.ODIS.FINFILE"

A list of facility finance numbers, for determining the Base Unit Area code for facilities where the first three digits of the Zip Code fails to provide the correct Base Unit Area Code.

RPW SAMPLE-- DDNAME=RPW
"HSF.HQ330T01.PQ0qFYyy"

Current RPW sample as selected through RPW Sample Selection System.

ODIS SAMPLE DDNAME=ODIS
"HSF.HQ134D01.FYyyq"

Current ODIS sample as selected through ODIS Sample Selection System.

CITY CARRIER COST SAMPLE DDNAME=CITY
"ALDRAN.PS400TO1.CITY.PQqFYyy"

Current CITY CARRIER COST sample.

RURAL CARRIER SAMPLE COST .. DDNAME=RURAL
"ALDRAN.PS400TO1.RURAL.PQqFYyy"

Current RURAL CARRIER COST sample.

TRACS..... DDNAME=TRACS
"TRACSSMN.CODE.SMPLMSTR.Pqqyy.SAS.DATA"

Current TRACS sample.

JOINTLY SCHEDULED TESTS
PROGRAM OUTPUTS

RPW SAMPLE..... DDNAME=RPWOUT
"HSF.HQ330T02.PqqqFYyy"

ODIS SAMPLE..... DDNAME=ODISOUT
"HSF.HQ134D02.Fyyyq"

RURAL CARRIER SAMPLE.....DDNAME=RURALOUT
"ALDRAN.PQ400T02.RURAL.PqqFYyy"

CITY CARRIER SAMPLE.....DDNAME=CITYOUT
"ALDRAN.PS400T02.CITY.PqqFYyy"

COMBINED SAMPLE OUTPUT.....DDNAME=COMBOUT
"HSF.COMBOUT.Fyyyq.DATA"

Combined sample output, containing all records for all surveys, except TRACS, including sorting and control information. This dataset is used to partition the sample to the base units for downloading. This process is known as partitioning.

JOINTLY SCHEDULED TESTS
FILE DOCUMENTATION

SITE FILE (SITEFILE)

POSTIONS	LENGTH	FORMDESCRIPTION
01-03	03	NUM Base Unit code
04-36	33	EBC Not used in JOIST
37-37	01	NUM Action (1-none, 2-ODIS area, 3-program)
38-80	43	EBC Not used in JOIST

AVAILABLE DATES – CARDATA(HSF020SA)

POSTIONS	LENGTH	FORMDESCRIPTION
01-03	03	EBC Numerical sequence
04-04	01	EBC Sunday/Holiday Switch
05-11	07	EBC Date MMMDDYY
12-14	03	EBC Day of Week (1-Sun,... 7-Sat)

ODIS AREAS – NEWATTRZ

POSTIONS	LENGTH	FORMDESCRIPTION
01-03	03	NUM ODIS Area code
04-32	29	EBC Not used in JOIST
33-35	03	NUM First three digits of ZIP Code
36-80	45	EBC Not used in JOIST

BASE UNIT AREAS – ZIPTABLE

POSTIONS	LENGTH	FORMDESCRIPTION
01-03	03	NUM First three digits of ZIP Code
35-37	03	NUM Current Base Unit area code

FINANCE NUMBER EXCEPTIONS

POSTIONS	LENGTH	FORMDESCRIPTION
01-06	06	NUM Facility Finance number
07-09	03	NUM Base unit code for this finance number.

RPW SAMPLE

POSTIONS	LENGTH	FORMDESCRIPTION
001-003	003	EBC Base Unit Code
001-120	120	EBC Full record character block 1
015-017	003	EBC first three digits of ZIP Code
040-047	008	EBC Testdate (MMDDYYYY)
048-050	003	EBC Strata Code
121-151	130	EBC Full record character block 2
203-205	003	EBC CSD (district) code

ODIS SAMPLE

POSTIONS	LENGTH	FORMDESCRIPTION
001-003	003	EBC Base Unit Code
001-120	120	EBC Full record character block 1
031-033	003	EBC ODIS Area
040-047	008	EBC Testdate (MMDDYYYY)
048-050	003	EBC Strata Code
121-151	130	EBC Full record character block 2
167-169	003	EBC Sample Cell/PDC Area

CITY CARRIER COST SAMPLE

POSTIONS	LENGTH	FORMDESCRIPTION
001-120	120	EBC Full record character block
003-008	09	EBC Finance number
046-048	Zip Code	EBC first three digits of ZIP Code
060-068	08	EBC Testdate (MMDDYYYY)

RURAL CARRIER COST SAMPLE

POSTIONS	LENGTH	FORMDESCRIPTION
001-120	120	EBC Full record character block
003-008	09	EBC Finance number
046-048	Zip Code	EBC first three digits of ZIP Code
060-068	08	EBC Testdate (MMDDYYYY)

TRACS SAMPLE

SAS data Set – SAS program logic to read this data set:

```
DATA TRACS;
```

```
  SET TRACS.SMPLMSTR(RENAME=(ZIP3=ZIPCODE)
```

```
    DATETEST=SUBSTR(TESTDAY8,5,4) || SUBSTR (TESTDAY8,1,2)  
      || SUBSTR(TESTDAY,8,3,2);
```

```
  KEEP FINANCE DATETEST ZIPCODE;
```

SORT FILE DESCRIPTION – COMBOUT

POSTIONS	LENGTH	FORMDESCRIPTION
001-003	003	EBC Base Unit Code
004-004	001	EBC Test Type
007-009	003	EBC ODIS Area
010-012	003	EBC Strata
013-013	001	EBC Survey
017-025	008	EBC Testdate (MMDDYYYY)
025-144	120	EBC Full record character block 1
145-274	130	EBC Full record character block 2

APPENDIX I: LIST OF SOURCE CODE AND DATA ON CD-ROM

<i>Description</i>	<i>Directory</i>	<i>File</i>
SAS SMOOTHING PROGRAMS	SMOOTH01	SMOOTH04.SAS SMOOTH05.SAS
CLIST	SMOOTH01/CLIST01	SMOOTH.TXT
JCL	SMOOTH01/JCL01/PQ1 SMOOTH01/JCL01/PQ2 SMOOTH01/JCL01/PQ3 SMOOTH01/JCL01/PQ4	SMOOTH.TXT SMOOTH.TXT SMOOTH.TXT SMOOTH.TXT

INPUT FILES*

* Input files contain facility specific information such as finance number, and are not included.