ODIS-RPW MERGER

Postal Rate Commission Briefing
September 17, 2003
ODIS-RPW MERGER BRIEFING

- Introduction and Agenda
- ODIS and RPW – History/Background
- Rationale for Merger
- ODIS-RPW Development
ODIS and RPW - History/Background

• ODIS – Origin-Destination Information System

  • Currently collects mail characteristics data with emphasis on mail transit information.

  • Originally established in 1968-70 to focus on mail volume flows between postal facilities.
ODIS and RPW - History/Background

• ODIS – Origin-Destination Information System
  • ODIS developers also decided to measure service performance.
  • In 1971, ODIS was selected to measure service achievement for First-Class Mail and airmail.
ODIS and RPW - History/Background

• ODIS – Origin-Destination Information System
  
  • External First Class Measurement (EXFC) replaced ODIS for service measurement in 1990.
    • ODIS is still used by some non-EXFC offices for service measurement.
  
  • ODIS has limited rate case involvement.
    • Service performance interrogatories.
    • Some mail characteristics distribution keys used.
    • Basic systems documentation.
ODIS and RPW - History/Background

• ODIS – Origin-Destination Information System
  • Basic sampling unit is a Mail Exit Point (MEP).
    • Example: “All letters being made available for delivery at one Associate Office.”
  • Two-stage sample design
    • First Stage – Select a MEP for a given day.
    • Second stage – Sub sample (“skip sample”) the MEP-day volume.
  • About 129,000 ODIS samples taken per year.
ODIS and RPW - History/Background

- RPW – Revenue, Pieces and Weight System
  - Known as the *Domestic Probability Sampling System* in rate case documentation.
  - Started in 1965.
  - Primarily collects information on single piece rated mail categories.
    - Accounting data captures postage payment methods (e.g. stamp revenue), not revenue and volume by mail class.
ODIS and RPW – History/Background

• **RPW** – Revenue, Pieces and Weight System

  • Focuses on per piece revenue and weight, special services, zone measurement, and Parcel Post dimensions.

  • The **RPW sample** is the primary input for single piece rate items in the RPW **Report**.
ODIS and RPW – History/Background

- RPW – Revenue, Pieces and Weight System
  - Substantial rate case involvement
    - Primary driver of RPW statistical variance calculations for single piece items.
    - Main source of inputs for Billing Determinants.
ODIS and RPW – History/Background

• RPW – Revenue, Pieces and Weight System
  • Substantial rate case involvement
    • Used for analysis involving distributions by shape, additional ounce rate, cubic pounds, etc.
    • Substantial systems documentation.
ODIS and RPW – History/Background

• RPW – Revenue, Pieces and Weight System
  
  • RPW has two basic sampling units
    • Mail Exit Points
      • Identical to ODIS.
    • Consolidated Originating Units (COUs)
  
  • COUs are used to sample originating registered, insured and COD Mail as well as Certificates of Mailing.
ODIS and RPW – History/Background

• RPW – Revenue, Pieces and Weight System

  • RPW has a three stage sample design.
    • First Stage
      • A panel of post offices for each CAG (D through L) is randomly selected.
      • RPW samples are randomly selected from these panels.
    • Second & Third stages – *Identical to ODIS First & Second stages.*

  • About 51,500 RPW samples are taken per year (45,000 at MEPS; 6,500 at COUs.)
Rationale for Merger

• Why Merge ODIS and RPW
  • ODIS and RPW MEP sampling units are identical.
    • (COUs would still need to be sampled in any merged system.)
  • ODIS and RPW sample designs are almost identical.
    • Eliminate RPW First-Stage and they are identical.
Rationale for Merger

• Why Merge ODIS and RPW
  
  • ODIS and RPW collect almost the same information from the same mail categories.
    
    • Both measure volume and collect information on rate category, shape, and indicia.
    
    • Both collect data for the same mail categories.
      • Although depth of collected information varies.
Rationale for Merger

• Why Merge ODIS and RPW

• Field staff have long asked

“On different days I go to the same Mail Exit Point and collect almost the same information from the same mail. Can’t the two systems be combined?”
Rationale for Merger

• Advantages of ODIS-RPW Merger
  
  • Capture efficiencies inherent in the existing overlap of the two systems.
  
  • New system could ask RPW questions on all ODIS samples and provide substantially more RPW data.
  
  • Effectively increase RPW sample by a factor of 2.8.
Rationale for Merger

• Advantages of ODIS-RPW Merger

• Eliminate First Stage RPW Panel
  • First Stage approach was criticized in 1985 by WESTAT and its removal was recommended.
  • First Stage panel effects have been an object of concern at the Postal Rate Commission.
  • Recommended by the 1999 Data Quality Study sponsored by USPS, the PRC and the General Accounting Office.
Rationale for Merger

• Advantages of ODIS-RPW Merger

  • Improved statistical precision due to
    • More observations
    • Removal of First Stage Panel
ODIS-RPW Development

• Merger to Date

• In the 1998-99 period Postal Service staff decided to pursue the merger.

• Data Quality Study in April 1999 gave the merger additional impetus due to the study’s call for the elimination of the RPW panel.
ODIS-RPW Development

• Merger to Date

• Between 1999-2002, steps were taken to align the two systems to facilitate a merger.
  • Key system characteristics were made identical.
    • Sub sampling rules
    • Mail shape definitions
    • Mail identification rules
  • Training materials were brought in concordance.
ODIS-RPW Development

• Merger to Date

  • Characteristics RPW (CRPW) was introduced in September 2001.
    • This new data collection approach replaced traditional RPW as a necessary step before the ODIS-RPW merger.
    • Traditional RPW depended heavily on data collector judgment to determine rate categories.
    • This differed from ODIS which has a “key what you see” approach.
ODIS-RPW Development

• Merger to Date

• Characteristics RPW (CRPW)
  • The ODIS-RPW merger required an ODIS-like RPW data collection instrument so staff who had never done RPW samples could be more easily trained.
  • By moving mail classification decisions from data collectors to computer algorithms, a potential source of nonsampling error was eliminated.
ODIS-RPW Development

• Merger to Date

• A cross functional USPS Finance team was put together to pursue the merger.

• Data requirements for a merged software were produced in early 2002.

• A user group was held in June 2002 to examine the requirements.

• Laptop data collection software was produced and software validation conducted.
ODIS-RPW Development

• Merger to Date

• ODIS-RPW software replaced ODIS at 8 Districts in FY 03 in order to provide assessment data.
  • The two systems’ estimates of revenue per piece and weight per piece, for major items of interest, have overlapping 95% confidence intervals.
  • The historical relationship, for major items of interest, between ODIS and RPW volumes appear to be preserved between RPW and ODIS-RPW.
ODIS-RPW Development

• Merger to Date

• Training requirements were determined and training materials produced.

• In August 2003, national Statistical Programs training was held in Norman, OK.
• Merger To Date

  • Field Statistical Programs managers are currently training staff unable to attend the Norman training.

  • Quarter 1 FY 04 ODIS-RPW sample has been drawn and released to the field.

    • Note: Quarter 1 FY 04 starts October 1, 2003.
ODIS-RPW Development

• Merger To Date

• New scales are being distributed to the field.

• Work continues on updating statistical estimation and data reporting software.

• Data collection starts on October 1, 2003.

• Quarter 1 reports are due in early January 2004.