# BEFORE THE POSTAL RATE COMMISSION WASHINGTON, D.C. 20268–0001

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POSTAL RATE COMMISSION OFFICE OF THE SECHETARY

POSTAL RATE AND FEE CHANGES, 2000

Docket No. R2000-1

### RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS KINGSLEY TO INTERROGATORIES OF DOUGLAS F. CARLSON (DFC/USPS-T10-11-16, 18-21, and 24-27)

The United States Postal Service hereby provides the responses of witness Kingsley to the following interrogatories of Douglas F. Carlson: DFC/USPS-T10-11-16, 18-21, and 24-27, filed on March 27, 2000. Objections to interrogatories DFC/USPS-10-17, 22 and 23 were filed on April 6, 2000.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr. Chief Counsel, Ratemaking

Susan M. Duchek

475 L'Enfant Plaza West, S.W. Washington, D.C. 20260–1137 (202) 268–2990 Fax –5402 April 10, 2000

**DFC/USPS-T10-11**. Suppose a large company receives mail at the following two addresses, both of which are assumed to be valid and correct for this interrogatory:

PO BOX 1000 NEW YORK NY 10001-1000 PO BOX 2000 LOS ANGELES CA 90001-2000

Suppose, further, that this recipient provides customers with pre-addressed courtesy-reply envelopes printed with FIM "A". A delivery-point bar code appears in the address block. Now, please consider two scenarios.

Scenario 1: The envelopes contain an address-block bar code corresponding to 10001-1000, but the envelopes are addressed as follows:

PO BOX 1000 LOS ANGELES CA 10001-1000

Scenario 2: The envelopes contain an address-block bar code corresponding to

10001-1000, but the envelopes are addressed as follows:

PO BOX 2000 LOS ANGELES CA 90001-2000

- a. Assuming that the mailer can receive mail at either of the two correct addresses listed at the beginning of this interrogatory, please confirm that, in both scenarios, letters that are sorted entirely on automation may be delivered to the address corresponding to the delivery-point bar code, 10001-1000, without delay and without additional costs to the Postal Service.
- b. Please confirm that some letters receive outgoing primary sortation in a manual operation because one of the following three situations exists: (1) Automated sorting equipment does not exist at the originating facility; (2) The letters rejected from automated sorting equipment; (3) The letters were damaged in processing, preventing further automated processing.
- c. Please confirm that some letters destined for addresses in New York and Los Angeles receive incoming sortation in a manual operation because the letters rejected from automated sorting equipment or because the letters were damaged in processing, preventing further automated processing.
- d. In scenario 1, please confirm that a letter sorted by an outgoing manual operation may be sorted to either New York or Los Angeles, depending on whether the clerk sorts the letter based on the city or the ZIP Code.

- e. In scenario 1, please confirm that a letter sorted by an outgoing manual operation to Los Angeles might be placed on automated sorting equipment upon arrival in Los Angeles.
- f. In (e), please confirm that the automated sorting equipment in Los
  Angeles may redirect the letter back to New York based on the preprinted
  bar code, causing a delay and additional processing cost.
- g. In scenario 1, please confirm that even letters sorted in automated operations may be delayed if an employee notices the discrepancy between the city and the ZIP Code and redirects the letter based on either the city or the ZIP Code. If you confirm, might this mail even become loop mail?
- h. In scenario 2, please confirm that a clerk in a manual operation in the originating city would sort the letter to Los Angeles.
- i. In (h), please confirm that the letter may be placed on automated sorting equipment upon arrival in Los Angeles, and automated sorting equipment in Los Angeles may direct the letter to New York based on the preprinted bar code, causing a delay and additional processing costs.
- j. In (h), please confirm that some letters sorted on automated equipment in the originating facility may be directed to New York based on the preprinted bar code, only to be redirected back to Los Angeles in a manual operation in New York if a clerk notices that the letters have a Los Angeles address.
- k. In general, would you expect scenarios 1 and 2 to cause some delay in delivery of these letters and some increase in postal processing costs?

### Response:

- a) Not confirmed. During sweeping of the contents, the clerk may notice that the address is for Los Angeles, not New York as is indicated on the bin and the tray label, and correct the apparent error. If the scenarios you suggest were to occur, there would need to be extensive clerk training to ensure the contents would go to the correct destination given the seemingly conflicting city/state and ZIP Code/barcode information.
- b) Confirmed. Some letters receive outgoing primary processing in manual operations due to automation/RBCS rejects or the piece is non-machinable.
- c) Confirmed for a small portion of the volume.

- d) Not confirmed. A piece from scenario 1 that is in the manual operation would be assumed that the ZIP Code is incorrect and would most likely be sorted to Los Angeles. The manual clerk would also probably obliterate the wrong ZIP Code and/or wrong barcode in both scenarios to prevent any further "mis-handling".
- e) It is possible, but highly unlikely. If the piece was in manual at the originating office it is usually due to unmatchable results from RBCS or non-machinability.
- f) If a piece from scenario 1 ended up on automation equipment in Los Angeles, the piece could end up being rerouted back to New York, incurring a delay.

  However, on an incoming sort program, there would not be a bin for New York; the piece would be sorted to an "out of scheme" bin. Either, the piece will be captured and directed to the Los Angeles address during sweeping of this "out of scheme" bin, or sent to another automation sort program and redirected to New York.
- g) Confirmed. This could become loop mail.
- h) Confirmed.
- i) Confirmed.
- i) Confirmed.
- k) In general, for I would expect it to be a small portion of the volume, yes.

**DFC/USPS-T10-12** Please refer to your response to DFC/USPS-T10-2(a). Please explain why images processed through the OCR/ISS and RCR have a higher encode rate than images lifted on the AFCS/ISS with just the RCR. In your answer, please explain the difference in character-recognition technology and capability between the OCR and the RCR.

### Response:

The OCR has an opportunity to scan the address and look for the result with the finest depth of sort necessary. The OCR has a co-processor and a co-directory which improves the encode rate by providing parallel processing (to interpret the characters of the city, state, address and firm, if applicable) and parallel look up after the address has been interpreted (looking up the results in the directory using two different methods/paths). The OCR has a 5-digit unique ZIP Code and Automated Zone tables (indicating where only 5-digit is sufficient) it accesses. OCR also has a grey scale camera, which looks at the image in 256 shades of grey, not just black and white. This assists with distinguishing the print from colored backgrounds for improved read and encode rates. Any images not coded to the finest depth of sort on the OCR will be forwarded onto the RCR. The RCR uses different algorithms than the OCR and it gets more time to interpret and look up the address. However, it is not an unlimited amount of time, still only a few seconds. The RCR uses different algorithms because if the OCR could not resolve it, it tries a different approach and has software to interpret hand written addresses, unlike the OCR. If the RCR can not resolve it to the finest depth of sort, then the image will be sent to the REC to be keyed. Therefore, non-script images are less likely to require keying at the REC if they are run through the OCR first before the RCR since they have had multiple opportunities and multiple methods used for getting at the result.

**DFC/USPS-T10-13** Please provide a copy of documents supporting the policy described in your response to DFC/USPS-T10-2(b).

### Response:

The attached is the RBCS SOP from the latest training.

Attachment to DFCMSP5-T10-13
page 1 of 6

### **RBCS Recommended Operating Processing**

The Remote Bar Coding System (RBCS) is designed to efficiently generate and apply quality bar codes to the finest possible depth of code for the originating mail stream. While our intent is to encode all candidate volume at the earliest opportunity, the system may also be effectively used to process destinating mail.

While there are several operating modes available, Mode "A" is designated for normal operations. Other modes are authorized for contingency use only, i.e. in the event of equipment failure. When modes other than "A" are used, the efficiency of the network is compromised and the systems ability to perform as designed is reduced. As a result, the benefits of subsequent automated distribution are often lost, unplanned additional RBCS processing is necessary, and manual processing downstream may be required.

Many valuable system improvements such as RCR and HIP provide enhancements which have virtually eliminated the need to operate in modes other than "A". Each modification to the RBCS software or improvement to RCR and HIP upgrades the system to provide optimum performance while in the RBCS system processing policy. When we operate outside the recommended mode, we degrade the depth of code and limit our ability to correct miscoded mail pieces. We also increase our operating costs and impact service to the entire network.

Local site management teams must fully understand the potentially negative service and cost impacts that result for any divergence from the national operating processing policy. In order for us to attain complete system-wide benefits the attached identifes the national RBCS operating policy. Also attached is an explanation of the RBCS operating strategies. This information will assist site management in understanding the effective utilization of these strategies.

Attachment DFC/USPS-T10-13 Mag 2086

### Remote Bar Coding System Operating Policy

IPSS Processing: Mode "A"	Enabled
RCR Processing:	
RCR Processing	Enabled
Wait Mode	Enabled
5-Digit Partial Settings	
Handwriting Improvement Program	Non-Local SCFs 2 Enabled

### **AFCS Processing [POLICY]**

### Image Lift Script Only

- Enriched or readable to ISS (Coding on MLOCR/ISS)
- Script or non-readable to OSS (Image Lift on AFCS/ISS)

### **AFCS Processing Options** [CONTINGENCY USE ONLY]

#### Image Lift All

- Enriched or readable to OSS (Image Lift on AFCS/ISS)
- Script or non-readable to OSS (Image Lift on AFCS/ISS)

### Cancel Only

• Enriched and Script to ISS (Coding on MLOCR/ISS)

Attachment DFC/USPS-T10-13
page 386

### **RBCS Operating Strategies**

One of the key issues for successful automation operations is the effective utilization of the following mail processing strategies:

Image Management is the Operational oversight necessary to maintain control of the amount of images lifted, stored and sent to the RCR and IPU for processing, and the successful application of the results applied to the physical mail at the P&DC, finalized and dispatched by Dispatch of Value (DOV).

Image flow on the other hand, involves the steps the RCR and IPSS take to send images to and from the REC to reach its final conclusion. Understanding the function of both is critical to a successful operation.

### **AFCS / ISS Mail Processing Options**

- Image lift Operating Strategies
  - Script or non-readable to OSS (image lift)
  - Enriched or readable (non-lift) to ISS (Coding on MLOCR/ISS)

The major P&D operational considerations, in regard to AFCS image lift, reside in RCR, IPU and OSS processing capacities. P&DCs must process image volumes by type and machine. Script images must be lifted by the AFCS ISS. Enriched volumes should be processed through MLOCR ISS. MLOCR finalized enriched volumes can be advanced to downstream distribution or bullpen / dispatch operations.

Failure to maintain proper lift options will significantly increase processing costs and reduce RBCS system efficiencies. Enriched images will unnecessarily compete with handwritten images, causing excessive handling at IPU and lost potential at ICU.

Care must be given to ensure sufficient IPU processing capacity exists to support any deviation from the above. The potential risk to exceeding image throughput levels also must be mitigated.

RCR processing capacities must also be considered. Lifting the enriched portion at AFCS will, in some cases, overburden RCR.

### **RCR Image Processing Options**

Walt - All Non-Final ISS images go to RCR

Wait Mode is the standard recommended component configuration. When the Transfer Mode is Wait, all Non-Final images from the ISS are buffered in the Image Control Unit (ICU) and wait for RCR processing prior to transfer to the Remote Encoding Center (REC). This option affords all images the opportunity at RCR processing.

Attachment DFC/USPS-TIO-13
page 42F6

#### No Wait

Current IPSS software transfers images to the RCR and IPU simultaneously based upon image requests at the approximate rate of 50% (RCR) and 50% (IPU). No Wait Mode increases image traffic (and costs) to RECs and should be avoided. Situations that contribute to any operational deviations from the Wait Mode must be investigated. The No Wait mode should be used as a contingency only in the event that the facility is incurring trouble with image generation or transfer. Technical and maintenance factors that contribute to this operational deviation should be elevated to the appropriate officials. Current RCR image processing capacities eliminate the need for No Wait configuration changes.

#### **RCR / HWAI Control**

HWAI processing is always **enabled**. The HWAI **Options** menu controls the mode of HWAI.

NORMAL - If Normal is selected throughput will be at approximately standard advertised levels. Finalization rates should also perform at standard levels. Normal is the default setting for RCR / HWAI Control.

FAST - If Fast option is selected, image processing throughputs will increase by approximately 4 %. Script finalization rates can be expected to degrade by approximately 8 %. Enriched finalization rates can also be expected to degrade slightly.

If image generation throughputs exceed RCR processing capacities, then Fast mode is the recommended option. At no time should RCR **NO WAIT** be utilized to compensate for RCR processing shortfalls.

#### 5-Digit RCR partial settings

Similar to ISS processing, an image run through RCR will receive any of three main actions based on the completeness of the RCR ZIP Code matching result.

- 1. The image may be Finalized and the result sent to the Decision Storage Unit.
- 2. It may receive no RCR result beyond what was known from the ISS.
- 3. RCR may provide some additional ZIP Code data, but not sufficient information to finalize the image. This category is referred to as an "RCR Applied Partial".

Separate controls are provided for Local SCF and Non-Local SCF partial settings.

Up to twenty (20) local SCFs can be entered.

Images for ISS unresolved that do not receive any "RCR Applied Partial" data are automatically sent to the REC. The local site can choose whether or not to have "RCR Applied Partial" data added to the image data being sent to the REC. The following set of parameters are used to reflect that choice:

Current RCR software allows the P&DC to select the SCFs they desire to flow as non-finalized (partials) results. The RCR design permits 5 and 9-Digit Partial information which is not of 100% confidence to be passed to the REC, with the expectation that processing in A Mode will correct any errors in these images (due to RCR induced errors).

The RCR assigns threshold values of zero (0) to sixteen (16) for each non-finalized result. Lower settings reduce the quantity of partial results returned, but increase confidence that results returned are correct. A setting of zero turns off the partial results. The default settings of 2 for non-local and 3 for local mail provide, on average, the best tradeoff between quantity of partial results and error rates.

If a local site sending "RCR Applied Partials" to the REC switches to B or D Mode, any potential errors in images going outside the Local Service Area (LSA) Table/Delivery Point Table (DPB) in Mode B or the Local Service Area (LSA) in Mode D, would not receive the additional keying to correct the result. Care should be given that the SCFs selected do not exceed those zones identified in the IPSS Local Service Area (LSA). All of the local SCFs identified in the RCR should be included, at a minimum, in the base LSA tables. During degraded IPSS operations, the non-local 5-digit partial RCR setting should be set at 0. This configuration will reduce the instances of potentially erred ESA finalized automated partials

### **IPSS Image Processing Options**

#### Mode A

All images are coded to the greatest depth. Mode A is the standard operating requirement and should be utilized at all times.

#### Mode B

Prior IPSS operating software incorporated a change to check the Delivery Point (DPB) table, in addition to the Local Service Area (LSA) table while in processing Mode "B". Now if a ZIP is found to be a DPS zone or resident in the LSA table, during N or C coding, the software will prompt for inward coding. This additional best depth encoding requirement affects image processing productivity increases. It is recommended that facilities validate mode "B" impacts prior to the holiday season. Samples conducted during Beta testing identified an approximate 9% increase to REC productivity. Given theses significant increases, *Mode B should be the initial selection if degraded operations are necessary*. RCR and IPU images finalized to less than the desirable depth will vary depending upon LSA table size.

#### Mode C

All images are coded to the 5-Digit ZIP only. Mode C usage should be non-existent based upon RCR enhancements.

#### Mode D

Mode D has been redesigned. Mode D now finalizes all 5 digit Zones that do not appear in the LSA table. Only 5 digit Zones that appear in the LSA can be processed to their finest depth of sort. The DPS table is not consulted while in Mode D. Samples

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Ottoch ment DFC/USPS-770-1:

conducted during Beta testing identified an approximate 25% increase to REC productivity. *Mode D should be utilized only in Instances where service performance is at risk.* RCR and IPU images finalized to less than the desirable depth will vary depending upon LSA table size.

### LSA Guidelines for Contingency Planning

Current processing strategies also provide for individualized local/area LSA table development. In an effort to maximize network opportunities, in addition to protecting service commitments, it is recommended that LSA tables be carefully developed. LSA tables should be configured to maximize network opportunities. Examples:

- All Next Day Delivery service destinations: If all overnight service commitments are included in NDD originating LSA tables and reciprocated by all NDD originating facilities within a geographic area, then all overnight service committed volumes need not incur additional image lift processing at destination. The ability to by-pass ISS/IPU/OSS processing during the shrinking incoming committed operating window, should increase service performance. Further, destinating overnight service committed volumes requiring secondary handling (5-digit non-improved XXXXX-9999-55) can be trapped and segregated at incoming primary automated distribution operations, advancing the arrival time at secondary mechanized/manual distribution operations.
- ALL automated zones for a given Cluster/Metro Area/Geographic Area
- or entire Area or Area EXFC destinations

All AADC Processing Facilities should include their servicing ADC delivery destinations in base LSA tables.

DFC/USPS-T10-14 Please refer to your response to DFC/USPS-T10-2(d).

- a. Please explain the timetable for adding an OCR to the AFCS and provide documents explaining the reasons for this modification.
- b. If an OCR were added to the AFCS, would the OCR stackers be attached to the AFCS?

### Response:

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- a. Plans are currently being evaluated to add OCRs to the AFCS machines. No timetable is available.
- b. No.

DFC/USPS-T10-15 Do any Low-Cost MLOCRs have ISS or OSS?	If yes, please
explain and provide the locations.	

Response:

No.

**DFC/USPS-T10-16**. Please refer to the attachment to DFC/USPS-T10-6(a).

- a. Please explain the meaning of the "1" next to some city names.
- b. Please explain the meaning of boldface city names.
- c. For the "Master REC Closing Synopsis," please provide a version that indicates which plants have moved (the footnote indicates that this information was in red in the original, but the copy is in black and white).

#### Response:

- a. I am told that the numbering indicates which facilities share an image processing system in that REC. If there is no number proceeding the facility name, this indicates the facility has a dedicated image processing system in the REC.
- b. The boldface type is related to the REC Closing Synopsis.
- c. The plants currently listed in red are:

Oakland, CA, Carol Stream, IL, Saginaw, MI, Grand Rapids, MI, Fox Valley, IL, Detroit, MI, Mid-Hudson, NY, Hackensack, NJ, W. Nassau, NY, JFK, NY, Rock Island, IL, Minneapolis, MN, Rochester, MN, Springfield, MO, Cape Girardeau, MO, Sioux City, IA, Cedar Rapids, IA, Duluth, MN, St. Cloud, MN, Brockton, MA, Manchester, NH, Bridgeport, CT, Burlington, VT, Lincoln, NE, Wausau, WI, Milwaukee, WI, Omaha, NE, Green Bay, WI, Mid-Florida, FL, Jackson, MS, Pensacola, FL, Wilmington, DE, South Jersey, NJ, Brooklyn, NY, Lexington, KY, Marina, CA, Pasadena, CA, Jackson, MS, Mobile, AL,

Manasota, FL, Savannah, GA, Peoria, IL, South Bend, IN, Kokomo, IN, Springfield, IL, Tulsa, OK, N Metro, GA, and Wilmington, DE.

#### DFC/USPS-T10-17

- a. Please confirm that the fluorescent RBCS ID tag contains four digits that correspond to the AFCS or OCR machine number.
- b. Please confirm that two of the four digits in the RBCS ID tag are a number that corresponds to the performance cluster in which the machine is located.
- c. Please provide a list indicating the number of each performance cluster for purposes of machine numbers in RBCS ID tags. (For example, machines in the Oakland performance cluster use performance cluster number "05.")
- d. Please provide any documents that explain how to read or decode RBCS ID tags or explain the concept underlying derivation of the bar code. (For example, Postnet bar codes are binary codes using the 74210 sequence.)

### Response:

Objection filed April 6, 2000.

#### DFC/USPS-T10-18

- a. Please confirm that CSBCS machines require three passes to place mail in walk-sequence order.
- b. Please explain the type and level of sortation that is performed on each of the three passes.

### Response:

- a) Confirmed.
- b) Sorts 1 and 2 provide no worthwhile sort to a carrier; they get the mail "lined-up" for the third pass, which provides letters in walk-sequence. A simplistic model of the 3 passes is attached. The first pass sorts on the last digit (unit number) of the delivery point, the second pass sorts on the tenth number, and the third pass sorts on the hundredth number.

## CSBCS DPS sortation

1st pass	S	ort On L	Jnit#						
1	2	3	4	5	6	7 .	8	9	10
010	001	002	003	024	005	056	087	108	009
200	011	132	013	214	055	086	017	068	079
	021	022	223	034	135	046	257		099
	101	102	123	124	125		237		
	201								
	111								
	211							••	

2nd pass	S	ort On T	enth#		7 77 7				
1	2	3	4	5	6	7	8	9	10
200	010	021	132	046	055	068	079	086	099
001	011	022	034		056			087	
101	111	223	135		257				
201	211	123	237						
002	013	024							
102	214	124							
003	017	125							
005									
108									
009									_

pass		ort On F	luliuleu	u 1 <del>11</del>					
1	2	3	4	5	6	7	8	9	10
001	101	200							
002	102	201							
003	108	211							
005	111	214							
009	123	223							
010	124	237							
011	125	257							
013	132								
017	135								
021									
022	•								
024									
034									
046									
055									
056									

DFC/USPS-T10-19	Please refer to you	ir response to DFC/	USPS-T10-8(d).	Are
certified flats sorted	to a separate hold	out during outgoing	primary sortation.	too?

Response:

No.

DFC/USPS-T10-20 Please refer to your response to DFC/USPS-T10-8.

- a. Please confirm that Postal Service stamped cards typically do not need to go to an LMLM machine to prepare the card surface for application of an RBCS ID tag. If you do not confirm, please explain.
- b. Please confirm that glossy post cards often need to go to an LMLM machine to prepare the card surface for application of an RBCS ID tag. If you do not confirm, please explain.

### Response:

- a) Confirmed for application of an ID tag 7.
- b) Confirmed.

**DFC/USPS-T10-21**. Please refer to your response to DFC/USPS-T10-9(f). Please note that the question did not specify that the letters were stale-dated. Therefore, please provide a response to the original question with the understanding that the metered letters may either be correctly dated or stale-dated.

### Response:

The AFCS is normally run with cancellation inhibited for metered mail as you describe in DFC/USPS-T10-9e. A few containers of loose metered mail would generally be run in normal mode. I am told that if a stale-date problem was noted, the mail would probably be run on a different model of cancellation machine to correct the date, instead of resetting the AFCS.

DFC/USPS-T10-22 Please provide a list of facilities that have the TMS.

Response:

Objection filed April 6, 2000.

**DFC/USPS-T10-23** Please provide a list of offices using the ES-3 bar-coding platform.

### Response:

Objection filed April 6, 2000.

DF	C/USF	2S-T1	0 - 24	Please	describe	plans to	deploy the	"integrated	buffer s	vstem."
•				1 1000	40001100	PICITO 10	ACDIC! HIS	11110000000		,

### Response:

There are currently no plans to deploy the integrated buffer system.

**DFC/USPS-T10-25** Please discuss the plans for adding ISS to Low-Cost MLOCR's at sites that currently do not have RBCS.

### Response:

There are no plans to add ISS to Low-Cost MLOCRs.

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**DFC/USPS-T10-26** Please refer to p. 10 of the response to POSTCOM/USPS-T10-4(a). Please describe the type and location of the facility listed as "Totowa (Annex)."

### Response:

The Totowa Annex is located in Paterson, NJ and used to process Periodicals Mail, Standard Mail (A), and some Standard Mail (B).

DFC/USPS-T10-27 Please define "managed mail."

### Response:

Managed mail refers to mail sorted to and received at an area distribution center (ADC) or automated area distribution center (AADC). This is volume coming into an ADC or AADC facility, usually during tour 2, from across the country that is not committed for over night delivery.

#### DECLARATION

I, Linda Kingsley, declare under penalty of perjury that the foregoing answers are true and correct to the best of my knowledge, information, and belief.

Date: 4 = 10 = 7 (777)

### **CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

Susan M. Duchek

475 L'Enfant Plaza West, S.W. Washington, D.C. 20260–1137 (202) 268–2990 Fax –5402 April 10, 2000