

ORIGINAL

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

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POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

MAILING ONLINE SERVICE

Docket No. MC98-1

REVISED RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS STIREWALT TO OFFICE OF THE CONSUMER ADVOCATE
INTERROGATORY OCA/USPS-T5-35
(November 6, 1998)

The United States Postal Service hereby provides the revised response of witness Stirewalt to Office of the Consumer Advocate interrogatory OCA/USPS-T5-35, filed on September 24, 1998. The only change is to part (e). The original response to part (e), filed on October 5, 1998, stated that "[t]he current Mailing Online system transmits all jobs to the print site in Postscript format." The revised response corrects this format to "PDF" format, as discussed in the response of witness Stirewalt to interrogatory OCA/USPS-T3-80, which is also being filed today.

The interrogatory is stated verbatim and is followed by the revised response.

Respectfully submitted,

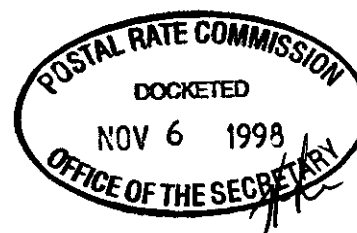
UNITED STATES POSTAL SERVICE

By its attorneys:

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November 6, 1998



RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS STIREWALT
TO INTERROGATORY OF THE OFFICE OF THE CONSUMER ADVOCATE

REVISED NOVEMBER 6, 1998

OCA/USPS-T3-35. Please refer to Tr. 3/719-37, 767-75. The first group of transcript pages contains the attachments to your response to interrogatory OCA/USPS-T3-1, which constitutes an expansion of your library reference USPS-LR-1/MC98-1. The second group of transcript pages contain oral cross-examination of you relating to the first group of pages.

- a. At page 767 of the transcript you state, "I believe in my calculation I used postscript for both mail merge and non-mail merge jobs]" Is this a correct statement with respect to page 722 of the transcript? If not, what should the correct statement be? Does the calculation of "Number of Bytes per Business Day" appearing at page 721 reflect current practice? If not, please conform your cost model to current practice.
- b. Please confirm that the actual calculation in your electronic spreadsheet of "Number of Bytes per Business Day" appearing at page 721 reflects the following formula:
$$\text{PCS/DAY} * \text{BYTES/PAGE} * \% \text{ MAIL MERGE} * \text{COMP FACT} * \text{SESSIONS/DAY} * \text{BYTES/PAGE} * 5 \text{ NON MAIL MERGE} * \text{COMP FACT} = 1.15721\text{E}+15.$$

If you do not confirm, please state the formula you used in words and provide a rationale for that formula.
- c. Please confirm that the formula you used to calculate "Number of Bytes per Business Day" is incorrect. In particular, the factor "SESSION/DAY" is unnecessary, the "*" following the first "COMP FACT" should be "+", there should be a factor called "PAGES/PC" on the first line shown above, there should be a separate "BYTES/PAGE" for mail merge and non-mail merge jobs, and there should be a factor "PCS/DAY * PAGES/PC" in the second line above yielding a value for "Number of Bytes per Business Day" of 8.12851E+9. If you do not confirm, please show that the units associated with your figure of 1.15721E+15 are inn fact PCS/DAY and not $(\text{PCS} * \text{BYTES}^2 * \text{SESSIONS}) / (\text{DAY}^2 * \text{PAGES}^2)$.
- d. At page 768 of the transcript you state, "I don't have a complete understanding of all the processing steps that occur within the processor; that is, what the software performs upon the data. But I do know that . . . the files could be in a PDF format or a postscript format." For purposes of your cost model, have you properly accounted for all situations in which different file formats may be used? If not, please correct your library reference.
- e. At page 772 of the transcript you state, 'At one part of the process they're both in PDF format, and at a later point in the process, they are both in Postscript format.' Please confirm that in your cost model (e.g., Tr. 3/722-23), mail merge jobs are in PDF format while non-mail merge jobs are in Postscript format at the *same* "point in the process". Please state what the current actual practice is with respect to the format used to store files associated with mail merge and non-mail merge jobs. Please conform your cost model to current actual practice.
- f. At page 773 of your transcript you state, 'The PDF should be non-mail merge job. And the Postscript should be mail merge jobs It's an error in the heading.' Please confirm that if one changes the heading at page 723 of the transcript from "Postscript Files For Non-Mail Merge Jobs" to PDF, then one must also change the line "Average Bytes per Page in Postscript format" (30720) to PDF (5020). Please

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conform your cost model to your statement at page 773 or explain what the correct headings and values should be.

RESPONSE:

a. My statement at page 767 does not apply to my calculations for data storage on page 722. My statement should read: "In my testimony, Mail Merge Jobs are stored in Postscript format. Non-mail-merge jobs are stored in PDF format." I have verified that the currently operating Mailing Online system stores all files in PDF format. I have applied this information, in addition to other changes noted in my responses to parts (c), (d), and (f). The effect is to delete the two Postscript file sections from pages 9 and 10 of Attachment 1 to USPS-LR-1/MC98-1, and to modify the "Telecommunications - FTP Servers" section on pages 7 and 8 of Attachment 1, as shown in the attachment to this response. The effect of these changes is to reduce the telecommunications capacity requirements presented in Attachment 1 as shown below.

CATEGORY / COMPONENT Description, Item #	YR 1999 Estimate	YR 2000 Estimate	YR 2001 Estimate	YR 2002 Estimate	YR 2003 Estimate	SOURCE
TELECOMMUNICATIONS - FTP SERVERS Data Sent from USPS to Print Sites						
Number of Printers	10	17	25	25	25	PRICE WATERHOUSE LIBRARY REFERENCE Exhibit A, Table 9, Item 20, page 15
Number of Mail Pieces Per Year	295,665,000	516,015,000	804,531,000	1,127,826,000	1,317,404,000	Library Reference USPS-LR-2/MC98-1, Section E, Table 12
Number of Mail Pieces Per Business Day	947,644	1,653,894	2,578,625	3,614,827	4,222,449	Calculated (pieces per year / 312 business days in a year, 6 day work week assumed as per marketing plan)
Average Bytes Per Page in Postscript format	30720	30720	30720	30720	30720	Estimate based on observation of file sizes generated by the Mailing Online software during the pilot.
Percentage mail merge jobs	0.5	0.5	0.5	0.5	0.5	Both mail-merge and no mail-merge are available with Mailing Online. There is no data to indicate what percentage of customer orders require mail merge and since file size varies greatly between the two options, they both must be considered
Percentage non mail merge jobs	0.5	0.5	0.5	0.5	0.5	in this analysis. A 50%-50% split is assumed here.
Compression factor using ZIP	0.15	0.15	0.15	0.15	0.15	Files are compressed using a data compression utility. .15 is an estimate of the average compression factor using any of several data compression utilities used by the Postal Service and industry.
Number of Bytes Per Business Day	6988549205	12196853353	19016363281	26657927362	31138888820	(pieces per day*bytes per postscript page*pgs per doc*mail merge factor* comp factor)+(docs per day*bytes per postscript page*pages per doc*non- mail-merge factor * comp factor)-(documents per day * bytes per mailing list*non-mail-merge factor*comp factor)
Percentage usage during daily peak period	0.75	0.75	0.75	0.75	0.75	A Peak Period of Usage is required to plan for maximum capacity. % of users expected during such a period is unknown, 75% usage is therefore assumed.
Number of bytes during daily peak period	5241411904	9147640015	14262272461	19993445522	23354166615	Calculated (Total bytes per day * peak usage percentage)
Peak Usage Period Hours	4	4	4	4	4	1PM-5PM EST assumed
Peak Usage Period Seconds	14400	14400	14400	14400	14400	Calculated (hours / 3600)
#4 Peak Usage Throughput Per Second to each Print Site	36398.69377	37367.81052	39617.4235	55537.34867	64872.68504	Calculated (bytes during peak period / total seconds in period/ no. of printers)

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b. Confirmed.

c. Confirmed that the "*" following the first "COMP FACT" should be "+". Not confirmed that the factor "SESSIONS/DAY" is unnecessary. In my calculation, I equate the number of documents with the number of transactions which in turn equals the number of customer sessions. For non-mail-merge jobs, the document is not parsed into pieces before being transmitted to a print site. Therefore, for non-mail-merge jobs the number of documents, rather than pieces, is relevant. A calculation for total number of bytes associated with mailing lists sent with non-mail-merges jobs was not included. In addition, BYTES/PAGE should multiplied by the average number of pages per document. Per all of the above, the calculation should be as follows: For the total number of mail merge document bytes; Number of Mail Pieces per Business Day * (estimated) Number of Pages Per Document * Average (number of) Bytes Per Page in Postscript format * Percentage mail merge jobs * compression factor. For the total number of non-mail-merge document bytes; Customer sessions per business day (as stated above this is equivalent to the number of documents per day) * (estimated) Number of Pages Per Document * Average (number of) Bytes Per Page in Postscript format * Percentage non-mail-merge jobs * compression factor. For the total number of mailing list data bytes sent with non-mail-merge jobs: Customer sessions per business day (as stated above this is equivalent to the number of documents per day) * Number of bytes Per mailing list * Percentage non-mail-merge jobs * the compression factor. The total number of bytes for mail-merge pieces, non-mail-merge documents, and non-mail-merge mailing lists are added together to arrive at total number of bytes per Business Day to be transmitted to the print sites. I have applied this correction, in addition to other changes noted in my responses to parts (a), (d), and (f), as explained in part (a) above.

d. I consulted with the Mailing Online software developers and learned that mail merge documents are not stored in Postscript format in the current Mailing Online system . Based on this information the sections of the analysis titled "PROCESSING CENTER -

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DATA STORAGE Postscript Files For Non(sic)-Mail Merge Jobs", and "PROCESSING CENTER - APPLICATION SERVER Backup Postscript Files For Non(sic)-Mail Merge Jobs (Night Only)", are not relevant and should be removed from the analysis. I have applied this change, as explained in part (a) above.

e. Confirmed. I have verified that the current Mailing Online system stores both mail merge and non-mail-merge jobs in PDF format. See my response to part (d) above for more detail. The current Mailing Online system transmits all jobs to the print site in PDF format.

f. Not confirmed. The heading "Postscript Files For Non-mail-merge Jobs", should read "Postscript Files for Mail Merge Jobs". Only the heading is incorrect. The file format and calculations remain the same. However, as I noted in my response to part (d) above, the current Mailing Online system does not store files in Postscript format, nor is there a requirement to do so. As explained in part (a) above, I have applied this change to my analysis.

DECLARATION


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



Dated: NOVEMBER 6, 1998

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.



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