

# OFFICIAL TRANSCRIPT OF PROCEEDINGS BEFORE THE POSTAL REGULATORY COMMISSION

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In the Matter of: )

SIX-DAY TO FIVE-DAY STREET )  
DELIVERY AND RELATED SERVICE )  
CHANGES )

Docket No.: N2010-1

VOLUME 11

Pages: 3084 through 3350

Place: Washington, D.C.

Date: October 4, 2010

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APPEARANCES: (Continued)

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## C O N T E N T S

| <u>WITNESSES:</u>                                       | <u>DIRECT</u> | <u>CROSS</u> | <u>REDIRECT</u> | <u>RECROSS</u> | <u>VOIR<br/>DIRE</u> |
|---|---------------|--------------|-----------------|----------------|----------------------|
| <u>For the National Association of Letter Carriers:</u> |               |              |                 |                |                      |
| Peter Boatwright  |               |              |                 |                |                      |
| By Mr. Hollies  | 3108          | --           | 3308            | --             | --                   |
| By Mr. Dechiara   | --            | 3145         | --              | 3310           | --                   |
| Melissa Starr   |               |              |                 |                |                      |
| By Mr. Tidwell  | 3316          | --           | 3347            | --             | --                   |
| By Ms. Gallagher  | --            | 3328         | --              | 3348           | --                   |

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P R O C E E D I N G S

(9:32 a.m.)

1  
2  
3 CHAIRMAN GOLDWAY: Good morning, ladies and  
4 gentlemen. This hearing will come to order. I am  
5 Ruth Goldway, Chairman of the Postal Regulatory  
6 Commission. Joining me today on October 4th are Vice  
7 Chairman Hammond and Commissioners Acton, Blair, and  
8 Langley.

9 Today, the Commission will receive  
10 surrebuttal testimony concerning the Postal Service's  
11 plan to eliminate Saturday delivery and related  
12 service changes in Docket No. N2010-1. The Postal  
13 Service sponsored four surrebuttal witnesses. We  
14 received timely requests to conduct oral cross-  
15 examination of only two of these witnesses.

16 Our first order of business will be to enter  
17 into the record the testimony of the other two Postal  
18 Service surrebuttal witness. Does any participant  
19 have a procedural matter to discuss before we begin?

20 If not, Mr. Hollies or Mr. Tidwell, are you  
21 prepared to move the admission of the testimonies of  
22 Witnesses Moore and Pulcrano.

23 MR. TIDWELL: Good morning, Madam Chairman,  
24 Michael Tidwell for the Postal Service. I have two  
25 copies of the Surrebuttal Testimony of Alan Moore on

1       behalf of the United States Postal Service designated  
2       as USPS-RT-2. Attached to each copy is a declaration  
3       from Mr. Moore attesting to his contents of this  
4       testimony of penalty of perjury.

5               The Postal Service would move that it be  
6       admitted into evidence, and I would hand two copies to  
7       the reporter.

8               CHAIRMAN GOLDWAY: Any objections?

9               Hearing none, the testimony Alan Moore is  
10       received into evidence and should be transcribed.

11                       (The document referred to was  
12                       marked for identification as  
13                       USPS-RT-2, and was received  
14                       in evidence.)

15       //

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**USPS-RT-2**

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

SIX-DAY TO FIVE-DAY CARRIER DELIVERY  
AND RELATED SERVICE CHANGES, 2010

Docket No. N2010-1

**SURREBUTTAL TESTIMONY OF  
ALAN MOORE  
ON BEHALF OF THE  
UNITED STATES POSTAL SERVICE**

1    **Autobiographical Sketch**

2       My name is Alan S. Moore. I am the Manager of Labor Relations, Policy and  
3 Programs, for the United States Postal Service at its national headquarters at  
4 475 L'Enfant Plaza, SW, Washington DC. My office is responsible for negotiating  
5 and administering collective bargaining agreements with the National Association  
6 of Letter Carriers, AFL-CIO (NALC), and the Postal Police Officers Association. I  
7 am also responsible for national oversight of postal labor relations policies and  
8 programs.

9       I have been employed by the Postal Service since 1978 and in various  
10 positions involving labor relations since 1988. I have worked at Postal Service  
11 headquarters since 2002. On behalf of the Postal Service, I participated in  
12 collective bargaining with the NALC during the negotiations that culminated in the  
13 2001 and 2006 national collective bargaining agreements.

14       I received a Bachelor of Science degree in Human Resources  
15 Management from Strayer University, Alexandria, Virginia.

1     **I.     Purpose and Scope of Testimony**

2             The purpose of my testimony is to rebut the testimony of National  
3 Association of Letter Carriers witness William Young (NALC-T-2) insofar as it  
4 implies that the Postal Service failed to pursue an offer made during the 2006  
5 collective bargaining negotiations to achieve significant carrier cost savings.

6

7

8     **II.     The 2006 USPS-NALC Agreement Achieved Significant Savings**  
9     **And Workforce Flexibility**

10

11

12             During the collective bargaining negotiations that led to the current  
13 National Agreement between the United States Postal Service and the National  
14 Association of Letter Carriers, AFL-CIO (NALC), I served as a member of the  
15 bargaining team, attended all main table sessions, and was responsible for  
16 chairing a subcommittee.

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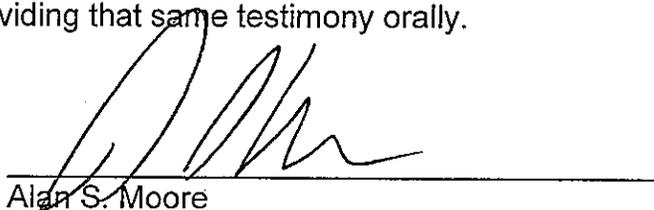
40

1 (1) conversion of all city letter carriers to an all regular, full-time, Monday  
2 through Friday workforce (regardless of office size), (2) establishment of  
3 "Saturday Carriers," for which retired city carriers would have preference,  
4 with Saturday Carriers to be covered by the collective bargaining  
5 agreement with limited exceptions appropriate to their status, (3) USPS  
6 and NALC to seek approval from OPM for an "early out" voluntary early  
7 retirement, and (4) prohibition against subcontracting any city letter carrier  
8 work.

9  
10 The parties did not reach agreement on this NALC proposal. Instead, the Postal  
11 Service was able to achieve cost savings and greater carrier workforce flexibility  
12 through increased ability to utilize Transitional Employees with the 2006 National  
13 Agreement. The agreement on Transitional Employees was at least as valuable  
14 to the Postal Service as the NALC's proposal.

**Declaration of Alan S. Moore**

I, Alan S. Moore, hereby affirm under penalty of perjury that my Postal Regulatory Commission Docket No. N2010-1 surrebuttal testimony (USPS-RT-2) filed with the Commission is true and accurate to the best of my knowledge, information and belief, and that if I were to appear before the Commission today, it would be for the purpose of providing that same testimony orally.



Alan S. Moore

October 4, 2010

1                   MR. TIDWELL: Madam Chairman, the Postal  
2 Service also has two copies of the Surrebuttal  
3 Testimony of Samuel Pulcrano on behalf of the United  
4 States Postal Service, and has been designated as  
5 USPS-RT-4. Attached to each copy is a declaration  
6 signed by Mr. Pulcrano attesting to the testimony  
7 under penalty of perjury. The Postal Service would  
8 move that it be admitted into evidenced as well.

9                   CHAIRMAN GOLDWAY: Are there any objections?

10                   Hearing none, the testimony of Samuel  
11 Pulcrano is received into evidence and should be  
12 transcribed. Thank you.

13   (The document referred to was  
14 marked for identification as  
15 USPS-RT-4 and was received in  
16 evidence.)

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**USPS-RT-4**

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

SIX-DAY TO FIVE-DAY CARRIER DELIVERY  
AND RELATED SERVICE CHANGES, 2010

Docket No. N2010-1

**SURREBUTTAL TESTIMONY OF  
SAMUEL PULCRANO  
ON BEHALF OF THE  
UNITED STATES POSTAL SERVICE**

1    **Autobiographical Sketch**

2           My name is Samuel M. Pulcrano. I am the Vice President of Sustainability  
3    for the United States Postal Service. I submitted direct testimony (USPS-T-1)  
4    that accompanied the Request filed by the United States Postal Service in this  
5    docket.

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1     **I.     Purpose and Scope of Testimony**

2           The purpose of this testimony is to rebut two specific assertions in the  
3 testimony of National Newspaper Association witness Maxwell Heath (NNA-T-1).  
4 First, I address Mr. Heath's characterization (reflected in Transcript Volume X at  
5 pages 2921 and 2954-57) of Postal Service communications to the mailing  
6 industry regarding the respective roles played by Congress and the Commission  
7 affecting the Postal Service's proposal to implement five-day delivery. Second, I  
8 present information responsive to Mr. Heath's claim (at Tr. Vol. 2958-60) that, in  
9 premature anticipation of five-day delivery's implementation, the Shelbyville KY  
10 Post Office has sought to impose improper mail acceptance conditions on a local  
11 publisher.

12           USPS Library Reference N2010-1/20 is associated with my testimony and  
13 is incorporated by reference herein.

14

15     **II.    Postal Service Consultations With The Mailing Industry Regarding**  
16     **Five-Day Delivery Have Emphasized The Important Roles Of**  
17     **Congress And The Commission**

18

19           As the postal executive charged with managing development of the  
20 operational concept and service change proposals under review in this docket, a  
21 primary responsibility of mine has been to direct the outreach performed by the  
22 Postal Service to the mailing industry. To that end, I have been responsible for  
23 the preparation of information for presentation by postal management in  
24 meetings attended by commercial, non-profit and government bulk mailers and  
25 bulk mail recipients, as well as mailing industry trade representatives, postal

1 union representatives, Congressional staff members, and representatives of the  
2 ~~General~~ <sup>Government</sup> Accountability Office. To ensure consistency of messaging, I have used  
3 standard decks of PowerPoint slides as the basis for each of the numerous oral  
4 presentations I have made. In conjunction with my rebuttal testimony, the Postal  
5 Service has filed USPS Library Reference N2010-1/20. Tabs A and B of that  
6 document contain illustrative pairs of such PowerPoint slide decks used in  
7 communications about five-day delivery in 2009 and 2010. I used these slide  
8 decks as the foundation for oral presentations to a broad range of stakeholder  
9 audiences -- from large mailer groups to very small audiences, such as the  
10 management team of a single printer, publisher or remittance processor, or the  
11 executive officers of a postal employee union, or a group of Congressional staff  
12 members. During such presentations, my consistent practice has been to  
13 present the slides to my audience, orally discuss the matters highlighted on each  
14 slide, and then take questions either during or after each presentation.

15 The August 13, 2009 MTAC "Strategic Day" PowerPoint presentation in  
16 Tab A of USPS Library Reference 20 was prepared during the development of  
17 the five-day concept and served as the basis for a presentation to the Mailers  
18 Technical Advisory Committee and various other audiences during that general  
19 time frame. Slide 10 of that presentation clearly emphasizes how critical the  
20 respective roles of Congress and the Commission are to any postal plan  
21 eliminating Saturday street delivery.<sup>1</sup> The same is true of Slides 5 and 48 of the  
22 April 2010 *Five Day Delivery Briefing* PowerPoint presentation that I gave at the

---

<sup>1</sup> Tab C of USPS Library Reference 20 consists of a copy of an August 16, 2009 e-mail message sent by witness Heath to me confirming his attendance at my MTAC presentation. See also Tr. Vol. X at 2921.

1 National Postal Forum in Nashville TN shortly after the Request in this docket  
2 was filed. See Tab B of USPS Library Reference 20.

3 Under my direction and contemporaneously with the filing of the Request,  
4 the Postal Service launched a micro-website to provide interested stakeholders  
5 with a ready source of information regarding the service changes currently under  
6 review. The following Internet links identify specific website pages that address  
7 directly the respective roles of Congress and the Commission in five-day  
8 delivery: <http://www.usps.com/communications/five-daydelivery/>,  
9 <http://www.usps.com/communications/five-daydelivery/ataglance.htm> and  
10 <http://www.usps.com/communications/five-daydelivery/regfiling.htm>.

11 As this testimony is filed, we remain uncertain whether the FY 2010 five-day  
12 delivery legislative prohibition will be followed by a similar FY 2011 prohibition.  
13 On the assumption that implementing five-day delivery some time during FY  
14 2011 will be tolerated legislatively, the Postal Service has exercised its discretion  
15 to wait until after the receipt of an advisory opinion from the Commission in this  
16 docket before determining whether to implement the service changes that  
17 opinion will address. I have affirmatively made this clear as a standard part of  
18 the numerous presentations I have given to the many audiences. It would be fair  
19 to characterize senior postal management as committed to pursuit of the service  
20 changes under review in this docket as necessary, if not inevitable, components  
21 of a strategy for closing the expected long-term gap between postal costs and  
22 revenues, and improving the financial stability of the Postal Service.  
23 Nevertheless, our communications to the mailing industry and the general

1 mailing public have consistently emphasized the critical roles played by  
2 Congress and Commission, and have shown appropriate deference to Congress'  
3 ability to pre-empt a change to five-day street delivery. Library Reference 20  
4 refutes the claim at page 2921 of Tr. Vol. X that virtually every mailing industry  
5 briefing talked in terms of "when" rather than "if." That Library Reference also  
6 refutes the claim at page 2921 that I acknowledged the roles of Congress and  
7 the Commission only when someone in the audience like witness Heath "pointed  
8 out that Congress had to make a decision." It puzzles me why such claims would  
9 be made when the Postal Service has consistently emphasized to the mailing  
10 industry the critical roles that the Congress and Commission play.

11

12 **III. Mail Acceptance Conditions Implemented By The Shelbyville KY**  
13 **Post Office Are Unrelated To The Prospect of Five-Day Delivery**

14

15 During oral cross-examination, NNA witness Heath embellished his claim  
16 that the Postal Service regards the service changes under review in this docket  
17 as a *fait accompli* by accusing the Shelbyville KY Post Office of having imposed  
18 mail acceptance conditions on a local newspaper publisher in anticipation of a  
19 formal determination to implement those changes. Tr. Vol. X at 2958-60. At my  
20 direction, a copy of witness Heath's testimony was forwarded to the Shelbyville  
21 KY Post Office and the Kentuckiana District Office to which it reports. Again,  
22 what emerges is a considerable gap between witness Heath's testimony and the  
23 proverbial "facts on the ground."

24

25 It is important to emphasize that no local postal managers have been  
authorized to implement or test any aspect of the service changes under review

1 in this docket. Neither the Kentuckiana District office nor the Shelbyville Post  
2 Office has received instructions related to the implementation of any service or  
3 operational changes currently under review in this docket, as no such instructions  
4 have been disseminated. After reviewing witness Heath's testimony, the District  
5 and Post Office management teams have asked me to make clear that, contrary  
6 to his assertion , they have taken no action or communicated to any customer  
7 any plan to take action in connection with the service changes currently being  
8 reviewed. On behalf of those managers, I am submitting the attached  
9 correspondence between local postal managers and representatives of the  
10 publisher in question for the Commission's review. It is only fair to the District  
11 and Post Office management teams, who have been maligned by witness  
12 Heath's testimony, that these documents be made a part of this docket's record.  
13 The attached correspondence unambiguously show<sup>S</sup><sub>A</sub> that the matter involving  
14 witness Heath's hometown Shelbyville KY Post Office and newspaper publisher  
15 is a mail acceptance Sarbanes–Oxley compliance issue and, contrary to the  
16 accusation of witness Heath, is not an imposition of conditions that bear any  
17 relation to the service changes under review in this docket. I will leave to the  
18 Commission any conclusions as to why there would be such a wide variance  
19 between the facts – as revealed in these documents – and witness Heath's  
20 testimony.

MANAGER, Post Office Operations  
KENTUCKIANA DISTRICT



April 23, 2010

Landmark  
ATTN: Diane  
PO Box 549  
Shelbyville, KY 40066-0549

Dear Diane,

The mission of The Postal Service™ is set forth in the opening paragraph of the 1970 Postal Reorganization Act: “The Postal Service™ shall have as its basic function the obligation to provide postal services to bind the Nation together through the personal, educational, literary, and business correspondence of the people. It shall provide prompt, reliable, and efficient services to patrons in all areas and shall render postal services to all communities.”

This fundamental mission has not changed and today is supported by a vision statement that The Postal Service™ products and services will be recognized as the best value in America; that The Postal Service™ will evolve into a premier provider of 21<sup>st</sup> century postal communications; and that The Postal Service™ will be the most effective and productive service in the Federal Government and markets that it serves. The organization defines its guiding principles—or values—as “People, Customers, Excellence, Integrity, and Community Responsibility.”

The Postal Service™ is constantly changing, but its mission remains the same – to DELIVER THE MAIL promptly, efficiently, and accurately, and to do so in a friendly manner. Today, the postal function has grown into a huge network of services and facilities for distributing and exchanging information, communicating feelings, advancing education and culture, and moving articles of commerce and industry.

As a courtesy we have been providing onsite verification at your facility prior to getting proper approvals from the appropriate offices. We have been advised by Headquarters that we can no longer perform onsite verifications at office that are not approved detached mail units. Effective May 29, 2010, you will have to present your Standard Mailing at the Shelbyville Post Office located at 401 4<sup>th</sup> Street, Shelbyville KY 40065 between the hours of 9:00am to 3:30pm Monday thru Friday for acceptance.

If you have any additional questions please feel free to contact the Postmaster Chris Deaton at (502) 633-1810 or Thomas Long, Manager of Business Mail Entry at (502) 375-8540.

Regards,

Rosemary Miller  
Manager Postal Operations

Attachment: DM-109 Section 2.3

**DM-109 Section 2.3****Site Requirements for DMU Authorization**

Prior to authorizing a plant load for DMU placement, a mailer must agree to provide the following:

- a. A safe working environment for all acceptance employees (see Employee and Labor Relations Manual (ELM) Chapter 8, Safety and Health).
- b. A secure location for acceptance employees to verify mailings and secure USPS equipment and records (e.g., a lockable room for work space and/or lockable cage or room for equipment and records).

*Note:* All DMUs established prior to July 1999 are exempt from the secure location requirement, but must ensure that all USPS resources are secure when acceptance employees are not on-site.

*Note:* Mail Evaluation Readability and Lookup Instruments

- c. Equipment needed to verify mailings and conduct USPS business, such as a telephone(s), desk, filing cabinets, chairs, and floor scales for weight verification.

*Note:* Mailers must provide a DMU Connectivity Telecommunications Line (i.e., high speed Internet connection) at their DMU sites. As deemed necessary, the Postal Service will provide MERLIN machines at the DMU location; in which case the Postal Service may choose to absorb the cost of installing and maintaining a connectivity line for USPS use.

- d. Scales calibrated and certified by an independent agency (see Exhibit 2-3, "Scales"). Acceptance employees are responsible for testing scales daily and recording test results to a daily DMU scale log.
- e. All New DMU's effective FY2010, the mailer must submit all required documentation and postage statements through one of the approved methods: Mail.dat, or Mail.xml.
- f. Observation space that allows DMU acceptance employees to monitor staged mail and cleared mail for loading onto USPS or third-party vehicles.

*Note:* If the mailer cannot meet any of the above specified conditions, the BME manager may choose not to authorize a DMU within the mailer's plant or place of operation. Additionally, the BME manager reserves the right to revoke an authorization for a DMU site and discontinue DMU verification and acceptance at that BMEU Operations site if a mailer fails to meet any of the above specified conditions at any time.

Manager, Marketing  
Kentuckiana District

USPS-RT-4 Attachment  
Page 3



July 14, 2010

Landmark  
Attn: Diana Olson  
P.O. Box 549  
Shelbyville KY 40066-0549

Dear Diana,

All customer inquiries deserve our prompt and conscientious attention.

The Marketing Department hears from thousands of customers through many types of communications each year: Internet, letter, telephone, to name a few. Some may voice service problems, others general questions, and still others a need for an interpretation of a specific rule or regulation. In compliance with focus groups and best business practices of many service organizations, we have made a commitment to provide each customer in our district the best possible customer service experience ever when possible. We make every effort to meet this standard on each inquiry.

However, if the response will require additional time to investigate, we let our customer know that we have received his or her letter, are addressing the issues, and will provide findings at the end of our effort. Your office received communications on April 23, 2010 from Rosemary Miller, Manager Postal Operations regarding the need to either formally establish a Detached Mail Unit within your facility or the current practice of onsite verification would be terminated.

Within that communications was a courtesy copy of the requirements to establish a Detached Mail Unit within your plant was provided to your office. While we realize that this onsite verification has been occurring for some time now, the Postal Service is now under more scrutiny than ever, due to the passage of Postal Reform Act of 2006, and the Sarbanes-Oxley Act of 2002, to ensure that we are adhering to the policies and procedures that we have established in our Domestic Mail Manual, and other related publications.

We would like to continue to offer you the same service that we have in the past, as we have communicated to your office numerous times, in order for us to perform onsite verifications in your facility and be in compliance with our policies, there are some requirements of you the mailer for us to continue to perform onsite verifications. Also please note that the Acceptance Hours at Shelbyville Post Office are 9am – 3:30pm Monday thru Friday and does not have any acceptance hours on Saturdays, therefore any weekend acceptance has to be done at the BME in Louisville located at 4440 Crittenden Drive, their hours of acceptance on Saturdays are 9am – 1pm. If you are interested in establishing a Detached Mail unit within your facility, please send your formal written request to Thomas Long, Manager, Business Mail Acceptance, 4440 Crittenden Drive, Louisville KY 40221-9998, no later than August 15, 2010. Otherwise onsite verification will end on September 30, 2010, and you will have to either bring your mail into Louisville BME on Saturdays between the hours of 9am – 1pm.

Thank you for taking the time to share your concerns with us.

Regards,

Alisa Zanetti  
Manager, Marketing

1420 Gardiner Lane  
LOUISVILLE KY 40221-9998  
502-454-1789

MANAGER Business Mail Acceptance  
KENTUCKIANA DISTRICT



August 26, 2010

Max M. Heath  
Landmark Community Papers  
PO Box 549  
Shelbyville KY 40066-0549

Dear Mr. Heath:

The mission of The Postal Service™ is set forth in the opening paragraph of the 1970 Postal Reorganization Act: "The Postal Service™ shall have as its basic function the obligation to provide postal services to bind the Nation together through the personal, educational, literary, and business correspondence of the people. It shall provide prompt, reliable, and efficient services to patrons in all areas and shall render postal services to all communities."

This fundamental mission has not changed and today is supported by a vision statement that The Postal Service™ products and services will be recognized as the best value in America; that The Postal Service™ will evolve into a premier provider of 21<sup>st</sup> century postal communications; and that The Postal Service™ will be the most effective and productive service in the Federal Government and markets that it serves. The organization defines its guiding principles—or values—as "People, Customers, Excellence, Integrity, and Community Responsibility."

Thank you for contacting me on August 16, 2010 regarding the requirements to officially establish the Detach Mail Unit at the Landmark Community Papers. In summation of our conversation, be advised that HQ has tentatively approved this convenience DMU on the basis that the following guidelines are adhered to:

- A high speed internet connection must be provided for the DMU so that the clerk can access PostalOne.
- Your office has been given a 30 day extension from the date you were originally given of September 30, 2010 to have some form of electronic submission of your postage statements to the Postal Service. Your options are mail.dat, mail.xml or using the Postal Wizard service provided by the postal service. Your extension expires on October 30, 2010.

Thank you for the opportunity to address this matter with you

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas C. Long, Sr.", written over a horizontal line.

Thomas C. Long, Sr.  
Manager, Business Mail Entry  
Kentuckiana District

PO Box 31630  
LOUISVILLE, KY 40231-0631  
(502) 378-8640  
FAX: (502) 378-8648

**Declaration of Samuel Pulcrano**

I, Samuel M. Pulcrano, hereby affirm under penalty of perjury that my Postal Regulatory Commission Docket No. N2010-1 surrebuttal testimony (USPS-RT-4) as corrected and filed with the Commission is true and accurate to the best of my knowledge, information and belief, and that if I were to appear before the Commission today, it would be for the purpose of providing that same testimony orally.

A handwritten signature in black ink, appearing to read "S. Pulcrano", is written over a solid horizontal line.

Samuel M. Pulcrano

October 4, 2010

1 CHAIRMAN GOLDWAY: Mr. Hollies or Mr.  
2 Tidwell.

3 MR. TIDWELL: I was going to say I'll turn  
4 things over to Mr. Hollies.

5 CHAIRMAN GOLDWAY: Okay. Mr. Hollies, will  
6 you now identify your first witness so I can swear him  
7 in?

8 MR. HOLLIES: Good morning, Madam Chairman.  
9 Kenneth Hollies on behalf of the Postal Service, and  
10 the Postal Service calls Dr. Peter Boatwright to the  
11 stand.

12 CHAIRMAN GOLDWAY: Mr. Boatwright, would you  
13 stand?

14 Whereupon,

15 PETER BOATWRIGHT

16 having been duly sworn, was called as a  
17 witness and was examined and testified as follows:

18 CHAIRMAN GOLDWAY: Thank you.

19 DIRECT EXAMINATION

20 BY MR. HOLLIES:

21 Q Dr. Boatwright, in front of you are two  
22 copies of the documents entitled Surrebuttal Testimony  
23 of Dr. Peter Boatwright on behalf of the United States  
24 Postal Service. Are you familiar with that document?

25 A I am.

1 Q And was it prepared by you or under your  
2 direction?

3 A It was prepared by me.

4 Q And if you were to testify orally today,  
5 would your testimony be the same?

6 A Yes, it will.

7 Q You can just leave the microphone on. It  
8 will be okay. Thank you.

9 Are there any corrections to the testimony  
10 that came up at any point in your review?

11 A There were a few corrections. Do we want to  
12 run through those?

13 Q Would you please identify each?

14 A Okay. The first, I believe, is on page 1.  
15 Yes, page 1, line 7. The parenthesis should begin  
16 after the word "annually", so the savings is 3.1  
17 billion annually. That's the first correction, the  
18 open parenthesis should be moved over one word.

19 The second is on page 8, line 1. I will  
20 give you a minute to turn there. At the end of the  
21 line currently it says "expense that is an order of  
22 magnitude greater," but it is "orders of magnitude  
23 greater," So it should read, "expenses that are in  
24 orders of magnitude". So strike "is" and "an" and put  
25 in the word "are" and add an "s" to "order".

1           The last is in a footnote that has to do  
2 with the name in a citation. This would be page 16,  
3 Footnote No. 20. The second individual who wrote this  
4 are currently the first and last name appear  
5 identical. We need to change the first name to --  
6 I'll try to pronounce it, but P-R-I-Y-A.

7           And that completes the three corrections.

8           Q     Thank you. And have those changes been  
9 marked on the two copies in front of you?

10          A     Been marked on at least one. Should I  
11 double-check the second?

12          Q     If you would, please.

13          A     Yes, they have.

14          Q     So with those corrections I will amend my  
15 question, would your testimony be the same as  
16 reflected in those two copies were you to offer it  
17 orally today?

18          A     Yes.

19                MR. HOLLIES: Thank you. Madam Chairman,  
20 the Postal Service moves that the testimony of Dr.  
21 Peter Boatwright be made part of the evidentiary  
22 record.

23                CHAIRMAN GOLDWAY: Are there any objections?

24                Hearing none, I will direct counsel to  
25 provide the reporter with two copies of the corrected

1 testimony of Peter Boatwright. That testimony is  
2 received into evidence and should be transcribed.

3 (The document referred to was  
4 marked for identification as  
5 USPS-RT-1, and was received  
6 in evidence.)

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USPS-RT-1

BEFORE THE  
POSTAL REGULATORY COMMISSION  
WASHINGTON, DC 20260-0001

SIX-DAY TO FIVE-DAY STREET DELIVERY  
AND RELATED SERVICE CHANGES, 2010

Docket No. N2010-1

STATE REBUTTAL TESTIMONY

OF

DR. PETER BOATWRIGHT

ON BEHALF OF THE

UNITED STATES POSTAL SERVICE

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## BIOGRAPHICAL SKETCH

My name is Peter Boatwright. I am an Associate Professor of Marketing in the Tepper School of Business at Carnegie Mellon University, where I have been on the faculty since 1997. I have an M.S. in Statistics from the University of Wisconsin, Madison. My M.B.A. and Ph.D. are both from the University of Chicago's Booth School of Business.

My research focuses on product development methods, consumer response models, and Bayesian econometric modeling. In the area of product development, for example, I have formulated methods to assess customer needs and opportunities, and to translate those into product specifications early in the design process. I have also developed statistical models of consumer demand for products. My publications are found in the *Journal of the American Statistical Association*, *Marketing Science*, *Management Science*, *Journal of Marketing Research*, *Decision Analysis*, *Journal of Mechanical Design*, *Research in Engineering Design*, *Journal of Marketing*, and *Harvard Business Review*. Following is a list of my articles published in refereed journals:

Boatwright, Peter, Sharad Borle, and Joseph B. Kadane (2010) "Common Value/Private Value Categories in Online Auctions: A Distinction without a Difference," *Decision Analysis*, Vol. 7, No. 1, March, pp. 86-98.

Orsborn, Seth, Jonathan Cagan, and Peter Boatwright (2009) "Quantifying Aesthetic Form Preference in a Utility Function," *Journal of Mechanical Design*, Vol. 131, 061001-1-10.

Boatwright, Peter, Jonathan Cagan, Dee Kapur, and Al Saltiel (2009) "A Step by Step Process to Build Valued Brands", *Journal of Product and Brand Management*, 18, 1, 38-49.

Orsborn, Seth, Peter Boatwright and Jonathan Cagan (2008) "Identifying Product Shape Relationships Using Principal Component Analysis" *Research in Engineering Design*, 18, 4 (Jan), 163-180.

Orsborn, Seth, Jonathan Cagan, and Peter Boatwright (2008) "A Methodology For Creating A Statistically Derived Shape Grammar Composed Of Non-Obvious Shape Chunk", *Research in Engineering Design*, 18, 4 (Jan), 181-196.

Lu, Jiang, Joseph B. Kadane, and Peter Boatwright (2008) "The Dirt on Bikes: An Illustration of CART Models for Brand Differentiation", *Journal of Product and Brand Management*, 17, 5, 317-326.

Boatwright, Peter, Ajay Kalra, and Wei Zhang (2008) "Research Note: Should Consumers Use The Halo To Form Product Evaluations?" *Management Science*, 54, 1 (Jan), 217-223.

Boatwright, Peter, Suman Basuroy, and Wagner Kamakura (2007) "Reviewing the Reviewers: The Impact of Individual Film Critics on Box Office Performance", *Quantitative Marketing and Economics*, 5, 4 (Dec.), 401-425.

Boatwright, Peter, Sharad Borle, and Kirthi Kalyanam (2007), "Deconstructing Each Item's Category Contribution," *Marketing Science*, 26, 3 (May-June), 1-15.

Borle, Sharad, Peter Boatwright, and Joseph B. Kadane (2006) "The Private/Common-Value Continuum: An Empirical Investigation Using eBay Online Auctions", *Statistical Science*, 21, 2 (May), 194-205.

Kamakura, Wagner, Suman Basuroy, and Peter Boatwright (2006) "Is Silence Golden? An Inquiry into the Meaning of Silence in Professional Product Evaluations," *Quantitative Marketing and Economics*, 4, 2 (June), 119-141.

Kadane, Joseph B., Galit Shmueli, Tom Minka, Sharad Borle, and Peter Boatwright (2006) "Conjugate Analysis of the Conway-Maxwell-Poisson Distribution," *Bayesian Analysis*, 1, 2, 363-374.

P.B. Seetharaman, S. Chib, A. Ainslie, P. Boatwright, T. Chan, S. Gupta, N. Mehta, V. Rao, and A. Strijnev (2005) "Models of Multi-Category Choice Behavior." *Marketing Letters*, Volume 16, #3.

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Shmueli, Galit, Minka, Thomas P., Kadane, Joseph B., Borle, Sharad and Boatwright, Peter (2005), "A Useful Distribution for Fitting Discrete Data:

Revival of the COM-Poisson”, *Journal of the Royal Statistical Society, Series C*, vol. 54 (1), pp. 127-142.

Boatwright, Peter, Sanjay Dhar, and Peter Rossi (2004), “The Role of Retail Competition, Demographics, and Account Retail Strategy as Drivers of Promotions Sensitivity,” *Quantitative Marketing and Economics*, 2, 169-190.

Telang, Rahul, Peter Boatwright, and Tridas Mukhopadhyay (2004) “A Mixture Model for Internet Search Engine Visits,” *Journal of Marketing Research*, 41, 2 (May), 206-214.

Boatwright, Peter, Sharad Borle, and Joseph Kadane (2003) “A Model of the Joint Distribution of Purchase Quantity and Timing,” *Journal of American Statistical Association*, 98, 463, 564-572.

Lee, Jonathan, Peter Boatwright, and Wagner Kamakura (2003) “A Bayesian Model for Prelaunch Sales Forecasting of Recorded Music,” *Management Science*, 49, 2 (February), 179-196.

Nunes, Joseph and Peter Boatwright (2001) “Incidental Prices and Their Effect on Consumer Willingness to Pay”, *Journal of Marketing Research*, 41, 4, 457-466.

Boatwright, Peter, and Joseph Nunes (2001), “Reducing Assortment: An Attribute-Based Approach,” *Journal of Marketing*, 65 (July), 50-63.

Boatwright, Peter, Robert McCulloch, and Peter Rossi, (1999) “Account-Level Modeling for Trade Promotion: An Application of a Constrained Parameter Hierarchical Model,” *Journal of the American Statistical Association*, 94, 448, 1063-1073.

I have also published two business books on the topic of innovation: *Design of Things to Come*, and *Built to Love*.

I have worked with many companies pursuing innovation in their new product development, including Apple, Bayer Materials, Nissan, MSA, GlaxoSmithKline, among others.

## PURPOSE OF TESTIMONY

1  
2  
3       The Postal Service has proposed reducing the delivery of mail from the  
4 current six days per week to five days per week to street addresses (as is explained  
5 in the testimony of witness Samuel Pulcrano, USPS-T-1), referred to in this  
6 testimony as the "Five-Day Delivery" proposal. The positive financial impact of this  
7 proposal has been estimated to be about \$3.1 billion annually (USPS-T-7,  
8 attachment 3, page 2), or 4.5 percent of Postal Service operating revenues.<sup>1</sup> The  
9 Postal Service's loss from operations in 2009 was \$3.7 billion<sup>2</sup>, meaning that the  
10 Five-Day Delivery proposal would have significantly decreased that year's loss if it  
11 had been implemented.

12       The purpose of my testimony is to evaluate the estimates of the volume,  
13 revenue and contribution portion of the calculated \$3.1 billion annual financial  
14 benefit from moving to Five-Day Delivery. Although the estimation of the annual  
15 benefit entails numerous calculations (see for example USPS-T-6), the estimation  
16 process can be summarized as cost savings less contribution loss.

17       In Table 1, the cost savings is estimated to be \$3.3 billion (Line A). For the  
18 purpose of my testimony, I assume that this estimate of the gross annual (cost)  
19 savings, \$3.3 billion (Line A), is correct. As reflected in the oral cross-examination of

---

<sup>1</sup> Operating revenues used are reported in the Postal Service annual report for 2009, [http://www.usps.com/financials/\\_pdf/annual\\_report\\_2009.pdf](http://www.usps.com/financials/_pdf/annual_report_2009.pdf). The net financial savings in USPS-T-7 also uses FY 2009 figures.

<sup>2</sup> Postal Service annual report for 2009, [http://www.usps.com/financials/\\_pdf/annual\\_report\\_2009.pdf](http://www.usps.com/financials/_pdf/annual_report_2009.pdf)

1 witness Crew (Tr. VIII/2523, lines 6-11), witness Crew accepts the \$3.3 billion  
2 figure as well.

3  
4 **Table 1--Gross and Net Savings for Five-Day Delivery**

5 In FY 2009 Terms

6 Replicated from USPS-T-7, attachment 3, page 2 and Revised USPS-T-9, pp. 14-15

7  
8 (in millions of dollars)

9

|    |        |                   |    |       |
|----|--------|-------------------|----|-------|
| 10 | Line A | Gross Savings     | \$ | 3,300 |
| 11 | Line B | Revenue Loss      | \$ | (466) |
| 12 | Line C | Cost Reduction    | \$ | 260   |
| 13 | Line D | Contribution Loss | \$ | (206) |
| 14 | Line E | Net Savings       | \$ | 3,094 |

15  
16  
17  
18

19 Continuing with Table 1, the contribution loss due to reduced mail volumes  
20 has been estimated to be \$206 million (Line D, from revised testimony of United  
21 States Postal Service witness Gregory M. Whiteman, USPS-T-9, pp. 14-15). The  
22 contribution loss estimate reflects a volume loss estimate of 0.71 percent based on  
23 the Opinion Research Corporation (ORC) quantitative market research. The  
24 contribution loss is a sum of revenue loss of \$466 million (Line B) and a cost  
25 reduction of \$260 million (Line C), where the cost reduction occurs as a result of the  
26 lower volume of mail to process and deliver.

1 My testimony focuses on the reliability of the estimates of the mail volume  
2 reduction that would be triggered by Five-Day Delivery, the portion of the  
3 calculation that leads to the contribution loss of \$206 million (Line D).<sup>3</sup>

4 To the extent that the gross annual cost savings estimate of \$3.3 billion is not  
5 in question, the decision centers on the estimate of the contribution loss, \$206  
6 million. If the contribution loss is truly near \$200 million, then the financial benefit  
7 (*i.e.*, the net savings) of the Five-Day Delivery proposal will be \$3.1 billion. The  
8 word "near" in the prior sentence is the crucial word. How near is the true value to  
9 the estimate of \$206 million? For example, if "near" means somewhere in the range  
10 of \$100 million to \$300 million, financial benefit of the Five-Day Deliver proposal  
11 will exceed \$3 billion. This word "near" therefore can be thought of as summarizing  
12 the discussion surrounding the reliability and validity of estimates developed by the  
13 Postal Service based largely upon the market research conducted by ORC. To  
14 address this question, we need to assess the reliability of the volume loss estimate of  
15 0.71 percent.

## 16 EXECUTIVE SUMMARY

17 Based on an evaluation of the ORC research methodology and other witness  
18 testimony, I view the estimate of a contribution loss of approximately \$200M to be a  
19 reasonable estimate (Line D in Table 1). Added to the \$3.3B gross cost savings  
20 estimate (Line A in Table 1), I conclude that the Five-Day Delivery proposal will  
21 generate an estimated annual savings of \$3.1B for the Postal Service.

---

<sup>3</sup> Numerical figures in this paragraph were taken from USPS-T-7, attachment 3, page 2.

1 I see no reason why additional research and analyses would meaningfully  
2 change the estimates already in hand. Also, additional research and analyses would  
3 be expensive in itself especially due to a delay of implementation of the Five-Day  
4 Delivery proposal, for a delay could easily cost over \$1.5B.

5 After considering the market research, analysis, and the financial estimates  
6 Postal Service experts developed based on the ORC research and analysis, it is my  
7 conclusion that the Five-Day Delivery proposal offers compelling financial value.

## 8 **CONTEXT: PRODUCT DECISIONS AND UNCERTAINTY**

9 An evaluation of the financial consequences and whether to implement the  
10 Five-Day Delivery proposal is analogous to that of a firm considering whether to  
11 change one of its products. In the field of marketing, changed products are  
12 considered "new" products, where "new" denotes a potentially wide range of  
13 changes, from marginal changes in existing products to launches of products that  
14 are significantly different from others in a firm's current portfolio. For the firm, a  
15 new product has financial implications for the future of the organization that are  
16 critical to what I will call "the new product decision," whether to continue the firm's  
17 plans to develop, design and launch the new product.

18 Predicting the future involves some degree of uncertainty, including  
19 prediction of future costs, volumes, and revenues. To reduce the uncertainty  
20 surrounding a new product decision, firms conduct market research, forecast sales  
21 volumes, and analyze projected costs. Critically important, the purpose of gathering

1 and analyzing data is not to eliminate uncertainty but rather to reduce uncertainty,  
2 because in the end the future always retains some uncertainty.

3       When making decisions about changes to existing product or launching new  
4 products, market research is often conducted to support the basic “go” / “no-go”  
5 decision. I use the word “product” in its general sense, including services, software,  
6 systems, and technologies. Customer views constitute critical input to product  
7 decisions, so both qualitative and quantitative marketing research methods are  
8 typically employed to obtain customers’ perspectives.<sup>4</sup>

9       Goals of qualitative research include the identification and in-depth  
10 understanding of specific customer needs and desires. Popular methods of  
11 qualitative research are focus groups and individual in-depth interviews, methods  
12 that may result in a breadth of insights about a product change that can later be  
13 explored more precisely with quantitative research. Qualitative research is also  
14 often used to assist in the design of the quantitative research and to test statements  
15 describing the new product.

16       Although many different types of quantitative analyses, corresponding to  
17 various purposes, can be undertaken, the general goal of quantitative work is to use  
18 results from a sample of respondents to make inferences about the population  
19 (consumers and/or businesses).

20       Many different types of information are provided to potential respondents in  
21 qualitative and quantitative market research that help them make more precise and

---

<sup>4</sup> Urban, Glen L. and John R. Hauser (1993) *Design and Marketing of New Products*, Upper Saddle River: Prentice-Hall, pp. 182-85.

1 realistic assessments of likely future product usage. Once a product is launched into  
2 the marketplace, customers will have much information available and accessible,  
3 any of which may affect purchase decisions. Common market research techniques  
4 used to provide the information consumers would have available include:

- 5 1) usage scenarios, brief stories that illustrate how a product is intended to  
6 benefit the customer thereby providing a context for a buying decision  
7 and possible reasons for purchase;
- 8 2) product descriptions that provide details which allow customers to  
9 evaluate the product more carefully and respond to specific attributes;  
10 and
- 11 3) where relevant, customers may be given potential marketing details such  
12 as price, advertising copy, and promotions.

13 These techniques help respondents more realistically assess their own purchase  
14 likelihood in light of the information that would be available in the marketplace.

15 The information provided in the ORC customer research is typical of studies  
16 conducted by businesses worldwide for product decisions. Given that the USPS  
17 products (*i.e.*, First-Class Mail, Express Mail, Priority Mail, Periodicals Mail, Standard  
18 Mail, Parcel Select and Parcel Post) are already known to customers, study  
19 participants have less need for full product descriptions. Rather, study participants  
20 could be given information about the proposed product changes (*e.g.* changes to  
21 delivery days) as well as information pertinent to those changes (*e.g.*, Post Offices  
22 will remain open) or other contextual reasons for the change (*e.g.*, mail volumes  
23 have decreased). Respondents in the ORC research were also given a context for

1 product changes. The text of this context was extensively tested and refined during  
2 the qualitative research phase. This context provided them a scenario in which to  
3 consider their expected product usage. As such, the information provided to study  
4 participants by ORC follows marketing research standards designed to provide  
5 information needed by study participants to make informed decisions.

## 6 **SPECIFIC ISSUES RAISED BY NALC WITNESS CREW**

7 Below I analyze and explain the weakness or inapplicability of three  
8 criticisms lodged by National Association of Letter Carriers (NALC) witness Crew.  
9 The first criticism, ORC's use of a "likelihood scale," (NALC-T-4, pp. 5-7) fails to  
10 acknowledge or recognize that a "likelihood scale" is a market research industry  
11 standard tool supported by an extensive body of peer-reviewed literature. ORC's  
12 use of a likelihood scale is fully consistent with that body of knowledge and  
13 standard statistical approaches. Not using a likelihood or similar scale would result  
14 in biased results.

15 Next, I consider witness Crew's assertion that ORC's research approach  
16 introduces bias (NALC-T-4, pp. 4-5). ORC's research design overtly recognizes  
17 specific potential sources of bias common to customer research and uses industry  
18 standard approaches to constrain or eliminate bias.

19 Last, I examine the potential utility of other research or analytical methods  
20 that witness Crew suggests would have been better approaches, econometric  
21 analysis and discrete choice modeling. I conclude that while such methods may be  
22 useful for further reducing the uncertainty inherent in the decision, the cost of the

1 delay from using such methods now would lead to an expense that <sup>are</sup> is an order <sup>s</sup> of  
 2 magnitude greater (in billions of dollars) than any financial benefit of the new  
 3 information (in millions of dollars).

#### 4 USE OF LIKELIHOOD SCALE

5 ORC uses a "likelihood scale" in its analysis of Five-Day Delivery's impact on  
 6 mail volume. The ORC likelihood scale measured purchase intent. Purchase intent  
 7 measures (measures of the likelihood that customers will purchase a given product  
 8 or service or, in this case, likelihood that customers would change their behavior if  
 9 Saturday street delivery is eliminated) are routinely used in market research,<sup>5</sup> for  
 10 forecasting in general<sup>6</sup> and for new product testing.<sup>7</sup>

11 Purchase intentions are commonly collected using verbal scales or with  
 12 combinations of verbal and probability scales. In verbal scales, answers are  
 13 grouped into categories such as "yes, definitely will buy," "yes, probably will buy",  
 14 and so forth.<sup>8</sup> A combination of verbal descriptions and numerical probabilities is  
 15 also used in market research. The Juster scale, for example, is an 11 point scale with  
 16 categories such as "Certain, practically certain (99 in 100)" "Almost sure (9 in 10)"  
 17 towards one end of the scale and "Very slight possibility (1 in 10)" "No chance,

---

<sup>5</sup> Morwitz, Vicki G., and Schmittlein, David. (1992). "Using Segmentation to Improve Sales Forecasts Based on Purchase Intent: Which "Intenders" Actually Buy?" *Journal of Marketing Research*, 29(4), 391-405.

<sup>6</sup> Infosino, William (1986). "Forecasting New Product Sales From Likelihood of Purchase Ratings," *Marketing Science*, 5 (Fall), 372-84.

<sup>7</sup> Silk, Alvin J. and Glen L. Urban (1978), "Pre-Test-Market Evaluation of New Product Goods: A Model and Measurement Methodology," *Journal of Marketing Research*, 15 (May), 171-91.

<sup>8</sup> Clawson, C. Joseph (1971), "How Useful Are 90-Day Purchase Probabilities?" *Journal of Marketing*, Vol. 35, No. 4 (Oct., 1971), pp. 43-47.

1 almost no chance (1 in 100)" towards the other end of the scale.<sup>9,10</sup> ORC used an 11-  
 2 point version of the verbal purchase intention scale to assess the likelihood that  
 3 users would change their mailing volume with the USPS (see USPS-T-8, p. 12 and  
 4 Appendices F and G). The Juster scale is very commonly used in market research  
 5 and its use has been well studied and documented in the academic literature.<sup>11</sup>

6 In economics, use of the Juster scale is not common (see question from  
 7 Chairman Goldway (Tr.VIII/2586, line 19)). However, some leading  
 8 econometricians are arguing for greater use of approaches like it. Northwestern  
 9 University Professor Manski has written a review article on the use of subjective  
 10 probabilities in the field of economics. After showing problems with the typical  
 11 approach, he writes

12 If choice data alone do not suffice to infer how persons make decisions with  
 13 partial information, one might anticipate that economists would ask persons  
 14 about their preferences and expectations. However, economists have been  
 15 deeply skeptical of subjective statements; they often assert that one should  
 16 believe only what people do, not what they say. As a result, the profession for  
 17 many years enforced something of a prohibition on the collection of subjective  
 18 data.<sup>12</sup>

19 After giving credit to Juster (1966) as the originator (for the field of  
 20 economics) of a scale measuring people's expectations in order to predict behavior,  
 21 Manski reviews past work and highlights recent research that has begun to

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<sup>9</sup> Urban, Glen L. and John R. Hauser (1993) *Design and Marketing of New Products*, Upper Saddle River: Prentice-Hall, p. 307.

<sup>10</sup> Juster, F. Thomas (1966) "Consumer Buying Intentions and Purchase Probability: An Experiment in Survey Design," *Journal of the American Statistical Association*, Vol. 61, No. 315 (Sep.), pp. 658-696.

<sup>11</sup> Brennan, Mike (2004) "The Juster Purchase Probability Scale: A Bibliography," *Marketing Bulletin*, <http://marketing-bulletin.massey.ac.nz>

<sup>12</sup> Manski, Charles F. (2004) "Measuring Expectations," *Econometrica*, Vol. 72, No. 5 (Sep.), p. 1337.

1 incorporate purchase intentions into econometric modeling. For marketers, the use  
2 of any of the scales above—including the one used by ORC here—is common.

3 It has been stated that “the single best predictor of an individual’s behavior  
4 will be a measure of his intention to perform that behavior.”<sup>13</sup> On both theoretical  
5 and empirical grounds, intention measures are believed to improve estimates of  
6 future actions.<sup>14</sup> Some benefits of purchase intentions are that they allow  
7 respondents to assess their own behavior after independently considering possible  
8 factors that may contribute to a purchase decision, including factors that are  
9 dynamic. Use of purchase intentions is prevalent for new product research to the  
10 extent that “the buying intention question appears in almost every concept test.”<sup>15</sup>

11 Witness Crew notes (NALC-T-4, pp. 5-6) that ORC used the likelihood factor  
12 to adjust the volume estimates given by customers, resulting in a question  
13 concerning how to interpret ORC’s “adjusted volume.” (See USPS-T-8, p. 36)

14 ORC’s use of the likelihood factor can be explained definitively using a  
15 common statistics equation. The “expected value,” also called the “arithmetic  
16 mean,” “mean,” or “average,” is a fundamental concept taught in statistics classes  
17 and is almost certainly the most prevalent statistic used for any estimation,  
18 including forecasts. In many contexts, it may be calculated as simply the sum of the  
19 outcomes divided by the total number. For example, to calculate the expected value

---

<sup>13</sup> Fishbein, M. and I. Ajzen (1975), *Belief, Attitude, Intention, and Behavior*. Reading, MA: Addison-Wesley Publishing Company, quoted on page 391 of Morwitz and Schmittlein (1992).

<sup>14</sup> Manski, Charles F. (2004) “Measuring Expectations,” *Econometrica*, Vol. 72, No. 5 (Sep.), pp. 1329-1376.

<sup>15</sup> Crawford, Merle and Anthony Di Benedetto (2008) *New Products Management*. Singapore: McGraw-Hill, p. 197.

1 of a roll of a standard die, one would sum the numbers 1 through 6 (because those  
2 are the numbers on the sides of the die), then divide by 6 (because the die has 6  
3 sides).

4 Notice that in the above example, each outcome (*i.e.*, number on the die) is  
5 equally likely to appear. When outcomes are not equally likely, the expected value  
6 formula explicitly accounts for their respective probabilities. The expected value is  
7 often described as the average value of a random experiment that is conducted a  
8 large number of times. For many, it might be most easily understood through use of  
9 an example. Consider a situation in which a person rolls a standard die. If a "3" is  
10 rolled on the die, the person receives \$100. If any other number is rolled, the person  
11 receives \$1. In this example, the person has 1/6 probability of receiving \$100 and  
12 5/6 probability of receiving \$1. If a large number of individuals play this game, say  
13 1200 people, the expected value is the average amount each receives. If 1/6 of the  
14 people (which is 200 people) received \$100, and 5/6 of the people (1000 people)  
15 receive \$1, then the average payout is  $(\$100 \cdot 200 \text{ people} + \$1 \cdot 1000 \text{ people}) / 1200$   
16  $\text{people} = \$16.83$ . Or, the same formula rewritten is  $(1/6) \cdot \$100 + (5/6) \cdot \$1 = \$16.83$ .

17 This formula, generalized, is the formula for expected value. If there are two  
18 outcomes A and B, and the probability of outcome A is  $p_A$ , and the probability of B is  
19  $p_B$ , then the expected value of these outcomes is  $A \cdot p_A + B \cdot p_B$ . Whether recognized or  
20 not, it is the general version of the formula used every time someone calculates an  
21 average. This formula is taught in statistics classes throughout the world, and it is,  
22 without any doubt in my mind, the most prevalent statistic used in forecasting.

23 ORC asked respondents the following question:

1 "If the service change described does happen, what is the likelihood that this change  
 2 would cause your organization to modify the number of individual pieces of mail and/or  
 3 packages your organization sends or the way you send it?" (USPS-T-8, Appendix F p. 104.)  
 4

5 This question concerns a probability, the probability that a respondent's mail  
 6 volume will be affected by implementation of the Five-Day Delivery proposal. If this  
 7 probability is  $p$ , then  $1-p$  is the probability that a respondent's usage of USPS will be  
 8 unaffected by the proposal's implementation. These probabilities, along with  
 9 respondents' volume usage estimates, allow us to calculate the expected value of  
 10 USPS volume by respondent:

$$11 \quad \text{Expected value of future USPS volume} = p * V_1 + (1-p) * V_2, \quad (1)$$

12 where

13  $V_1$  is the volume of mail given that the Five-Day proposal implementation  
 14 **will affect** mail volumes, and

15  $V_2$  is the volume of mail given that the implementation of the Five-Day  
 16 proposal **will not affect** mail volumes.

17 Now that we have established the expected value, we can compare this  
 18 calculation to that of ORC in order to assess whether they overestimated or  
 19 underestimated future volume. On page 31 of USPS-T-8, witness Elmore-Yalch  
 20 stated ORC's equation as "The difference between the next 12-month volume and  
 21 the volume in the first 12 months after institution of five-day delivery was  
 22 multiplied by this likelihood of change percentage, and the result was added back to  
 23 next 12-month volume." Note that "the next 12-month volume" in USPS-T-8 is the  
 24 ORC estimate of  $V_2$  above, and that "the volume in the first 12 months after  
 25 institution of five-day delivery" is the ORC estimate of  $V_1$  above. Using the same  
 26 notation as above, the ORC formula can be written as

$$27 \quad p*(V_1 - V_2) + V_2 \quad (2)$$

1 where  $p$  is the likelihood of change probability. This formula can be re-written as

2

$$3 \quad p*V_1 - p*V_2 + V_2 \quad (3)$$

4 or

$$5 \quad p*V_1 + (1-p)*V_2 \quad (4)$$

6

7 Note this equation (4) is identical to the expected value equation (1). As  
 8 stated before, the expected value is the statistic most commonly used for forecasts.  
 9 Apparently witness Crew did not recognize that ORC used the expected value when  
 10 stating that "As far as I can recall, I have never seen anything like this, and I believe  
 11 it is a serious flaw." This may be because it was not stated as the formula I use  
 12 above. I note that witness Crew is very familiar with the expected value formula, as  
 13 shown in his own work (*e.g.*, Crew and Kleindorfer, 1976).<sup>16</sup>

14 The calculations used by ORC are identical to the equation for expected value,  
 15 and thus ORC has used the most well accepted approach for estimation in the field of  
 16 statistics.

## 17 **POTENTIAL BIAS**

18 The USPS has invested time and money to assess both the benefits and the  
 19 costs of Five-Day Delivery. Every new product proposal entails some degree of  
 20 uncertainty; this includes the USPS Five-Day Delivery proposal. Witness Crew  
 21 expressed concern about this uncertainty in stating that the surveys such as that  
 22 performed by ORC may be subject to significant bias (NALC-T-4, pp. 4-5). Here I

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<sup>16</sup> Crew, Michael A. and Paul R. Kleindorfer (1976) "Peak Load Pricing with a Diverse Technology," *The Bell Journal of Economics*, Vol. 7, No. 1 (Spring, 1976), pp. 207-231.

1 consider how potential bias might influence the decision regarding Five-Day  
2 Delivery and how ORC considered these potential biases.

3       It is tautological that survey research entails many potential sources of bias,  
4 often referred to in the market research literature as measurement error. The  
5 literature on survey bias is not restricted to the academic realm but is well known to  
6 practitioners as well. Lists of potential sources of survey bias as well as approaches  
7 to address such bias may be found, for example, in market research textbooks as  
8 well as in peer reviewed literature.

9       For this and other reasons, companies hire professional market research  
10 firms that are well-versed about measurement error (bias) and accustomed to  
11 crafting surveys to avoid it.

12       A general procedure in such research is to identify sources of uncertainty,  
13 identify appropriate strategies that may help reduce that uncertainty, and analyze  
14 gathered information with the intent of reducing the uncertainty inherent in all  
15 business decisions—thereby improving the value of all information collected to  
16 inform the decision being considered. ORC took this exact approach to address  
17 potential bias; I give several examples taken from the testimony of witnesses  
18 Whiteman and Elmore-Yalch.

19       One potential source of bias, aggregation bias, would occur when  
20 heterogeneous markets are treated as homogeneous. As noted in USPS-T-8, page  
21 30, ORC and the Postal Service identified five market segments, thus identifying this  
22 as a potential source of bias. ORC gathered information on each individual segment,

1 and analyzed the data by segment and product to obtain separate estimates for each  
2 product and segment.

3 Another source of bias stems from the availability of information to the  
4 respondent when asked to estimate future purchase behavior. For example, if the  
5 product concept described in a survey significantly differs from the actual future  
6 product, respondents' estimates of their purchase behavior may be biased. As noted  
7 in USPS-T-9, pp. 15-16, the information made available to respondents about Five-  
8 Day Delivery differs from the current proposal, in that it was more restrictive than  
9 the operational concept currently proposed by the USPS. As such, ORC and USPS  
10 identified this potential source of bias and properly concluded that the research  
11 volume loss estimates would likely exceed volume loss estimates based on the  
12 current less restrictive proposal.

13 Similarly, if certain information respondents deem relevant to their future  
14 purchase context is not provided, they will make their own assumptions that can  
15 lead to "attribution bias." The degree to which assumptions are inaccurate can  
16 affect forecasts and bias results. For example, the reasoning behind Five-Day  
17 Delivery can be relevant to purchase behavior. Research has shown that when  
18 incomplete information is provided about a change, people are likely to supply their  
19 own inferences about why a change is occurring, thereby affecting their decisions  
20 and judgments.<sup>17</sup> An example of ORC's attempt to constrain potential attribution  
21 bias is found in the survey where ORC informed respondents that the Postal Service  
22 faces major financial challenges.

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<sup>17</sup> Gilbert, D. T., and Malone, P. S. (1995). The Correspondence Bias. *Psychological Bulletin*, 117, 21-38.

1           Witness Crew specifically addressed two additional areas of bias. The first is  
 2   that respondents may bias their responses in an effort to please the interviewer,  
 3   called social desirability bias. Tr. VIII/2514-15. Dr. Crew is correct in that this does  
 4   occur. This bias is less when surveys involve greater degrees of anonymity (*i.e.*, use  
 5   of telephone surveys instead of face to face interviews).<sup>18</sup> A strategy commonly  
 6   employed to address this bias is to decompose the questions – that is, asking  
 7   respondents to provide behavioral frequency responses to a series of questions  
 8   rather than a single overarching question. In a sociology study examining the  
 9   frequency and quantity of alcohol consumption, asking respondents to provide data  
 10   on consumption across 12 different drinking establishments indicated dramatic  
 11   increases in the frequency and amount of consumption than when asked about  
 12   consumption across a single month.<sup>19</sup>

13           Market researchers also recognize this potential bias when asking  
 14   respondents to provide behavioral frequency responses or volume estimates to  
 15   questions. Research has shown, for example, that employing *decomposition strategy*  
 16   (unbundling a total into subcategories) when asking customers to estimate past and  
 17   future credit card purchases helped customers recall their individual expenses,  
 18   thereby reducing sampling-based bias.<sup>20</sup> ORC did exactly this by asking respondents  
 19   to provide estimates of volume by application (*i.e.*, payments, correspondence, etc.)

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<sup>18</sup> Richman, Wendy L., Suzanne Weisband, Sara Kiesler, and Fritz Drasgow (1999) "A Meta-Analytic Study of Social Desirability Distortion in Computer-Aided Questionnaires, Traditional Questionnaires, and Interviews," *Journal of Applied Psychology*, 84, 5, 754-775.

<sup>19</sup> Mooney, Linda A. and Gramling, Robert, "Asking Threatening Questions and Situational Framing: The Effects of Decomposing Survey Items," *The Sociological Quarterly*, Vol. 32, No. 2 (Summer, 1991), pp. 289-300

<sup>20</sup> Srivastava, Joydeep and Raghurir, <sup>Ariya</sup> Raghurir, "Debiasing Using Decomposition The Case of Memory-Based Credit Card Expense Estimates," *Journal of Consumer Psychology*, 12(3), 253-264.

1 and then allocating those changes across products (*i.e.*, First-Class Mail, Priority  
2 Mail, Express Mail, *etc.*) rather than asking respondents to provide an overall  
3 estimate of impact for their business or household.

4         The final possible source of bias suggested by witness Crew concerns the  
5 time interval between when the research was conducted and implementation of the  
6 change because of the possibility that the environment may be very different in the  
7 future. This is always the case in forecasting and was addressed earlier in my  
8 testimony when I noted that there is uncertainty in most decisions. Clearly, the  
9 estimates are based on respondents' understanding of the proposed changes to  
10 their service in the current environment.

11         The objectives of the quantitative research were to estimate the change in  
12 volume resulting from a change to service in the current environment and to  
13 present to the PRC testimony within this environment to make a "go" / "no-go"  
14 decision, that is discontinue or continue six-day delivery of mail. This situation is  
15 analogous to product introduction decisions. By way of example, consider the  
16 pharmaceutical industry, where the time line between the initial decision to "go" /  
17 "no-go" and the actual introduction of a new drug involves years. To determine  
18 potential future demand, the pharmaceutical industry analyzes data that are  
19 concurrent with the "go" / "no-go" decision. The pharmaceutical industry also  
20 conducts extensive research with experts and consumers to estimate the need for a  
21 pharmaceutical product that offers a new treatment. Based on this information, a  
22 specific company within the industry may make the decision to invest the millions of  
23 dollars necessary to develop and test the drug. As the time for product introduction

1 approaches, these companies often conduct additional secondary and market  
2 research to determine if there are any changes in disease prevalence or physician  
3 and consumer behaviors that could affect their original estimates.

4         In the present case, the Postal Service has assembled data to assist in making  
5 an informed decision as to whether eliminating Saturday street delivery is an  
6 appropriate strategy to address its financial challenges. This is a classic business  
7 decision – should the Postal Service eliminate / not eliminate six-day delivery  
8 service. Depending on the length of time between this go / no-go decision and its  
9 implementation, a meaningful change in the marketing and operating environment  
10 may require further analysis and even new research to determine whether the  
11 projected impacts have varied enough such that one should consider modifying the  
12 operational strategies to mitigate any impacts. It is important to note that based on  
13 the analysis done here, any such change would have to be very substantial to  
14 warrant new research.

15         The potential for bias in survey research is well recognized in practice and  
16 provides a sound argument for using professional research firms such as ORC to  
17 design and implement such surveys. The methods used by ORC are consistent with  
18 those used in practice by other professional market research firms; the research  
19 protocol, procedures and materials are designed to address potential biases that  
20 exist in such studies. Properly designed research makes the results reliable, all of  
21 which explains why market research firms' results routinely inform the critical  
22 business decisions of those who hire them.

1           Because the Postal Service’s ultimate goals in studying Five-Day Delivery  
 2 included both refining its proposal and deciding whether to move forward with that  
 3 proposal—a major financial decision—the implications of any residual bias can also  
 4 be considered usefully in the context of that decision. We can suppose bias does  
 5 exist—in both directions, quantify it and then inquire whether its magnitude should  
 6 impact the ultimate financial picture. In other words, what if, even after ORC has  
 7 addressed well known biases, there remains some residual unrecognized bias that  
 8 leads to errors of a magnitude of +/- 1 percent, or +/- 2 percent, or even +/- 5  
 9 percent? Table 2 illustrates how potential bias of various magnitudes impacts the  
 10 overall financial benefit of the Five-Day Delivery proposal.

11  
 12           **Table 2 – Examples of Residual Bias, with Minimal Impact**  
 13           **on Financial Benefit of Five-Day Delivery Proposal**  
 14

| Example Bias Levels  | Contribution Loss | Financial Benefit |
|----------------------|-------------------|-------------------|
| -5%                  | \$196M            | \$3.1B            |
| -2%                  | \$202M            | \$3.1B            |
| -1%                  | \$204M            | \$3.1B            |
| <b>USPS estimate</b> | \$206M            | \$3.1B            |
| +1%                  | \$208M            | \$3.1B            |
| +2%                  | \$210M            | \$3.1B            |
| +5%                  | \$216M            | \$3.1B            |

15  
 16  
 17           Table 2 shows that even if bias approaches five percent, positive or negative,  
 18 it has essentially no impact upon the Postal Service’s calculation of the financial  
 19 benefits it calculates Five-Day Delivery would bring. The financial benefit remains  
 20 at about \$3.1 billion. Although amounts in millions of dollars are certainly  
 21 substantial, any possible impact of unconstrained bias would be dwarfed by the

1 overall cost savings. So, if the Five-Day Delivery decision were to be based on net  
2 cost savings alone, potential biases of these levels would seem unlikely to alter the  
3 decision.

#### 4 **ALTERNATIVE OR ADDITIONAL ANALYSES**

##### 5 **ORC Analysis Is Not Dominated by Alternatives**

6       Witness Crew notes that other research approaches could have been used to  
7 estimate mail volumes for Five-Day Delivery. Two specific approaches were  
8 brought up as alternatives, econometric and time series analysis (NALC-T-4, p. 7)  
9 and discrete choice models (Response to USPS/NALC-T4-17). I discuss each of  
10 these below, after clarifying that the ORC analytical approach embodies the industry  
11 standard, not an inferior alternative; ORC's general approach has even been found  
12 superior to model-based approaches in certain estimation problems similar to the  
13 one at hand here.

##### 14 ***ORC Used a Standard and Reasonable Estimation Method***

15       Forecasts of product sales volumes are important for firms' new product  
16 decisions, as such estimates have direct implications on profitability for a new  
17 venture or product change. Because predicting the future necessarily involves some  
18 degree of uncertainty, the purpose of gathering and analyzing data is not to  
19 eliminate uncertainty but simply to reduce it.

20       One task is to inform respondents sufficiently so that they consider a  
21 purchase context that is close to what the actual purchase context entails. As a  
22 guiding principle, customers should be informed of factors that influence their  
23 decisions. Such information will naturally vary depending on context such as what

1 respondents already understand about the new product. For example, respondents  
2 may be given usage or purchase scenarios (*i.e.*, descriptions of a purchase context),  
3 product features, and availability of competitive alternatives, as appropriate to the  
4 context.

5         The ORC research is typical of study conducted by industry for new product  
6 decisions. Given that the USPS products are already known to customers (*i.e.*, First-  
7 Class Mail, Express Mail, Priority Mail, Periodicals Mail, Standard Mail, Parcel Select  
8 and Parcel Post), respondents were reminded of those products and told of a usage  
9 scenario that provides context for their usage intent. After being given relevant  
10 information, respondents were requested to forecast their mail volume, a standard  
11 approach for obtaining volume estimates.

#### 12 ***Why Econometric and Time Series Models Are Not Best***

13         For some forecasting problems (vehicle sales in France, vehicle sales in the  
14 U.S., and U.S. wireless services), researchers documented that sales forecasts based  
15 on purchase intentions were more accurate than forecasts based on extrapolations  
16 of past sales.<sup>21</sup> So while it may seem at first glance that econometric models of  
17 empirically observed data may improve purchase intention data such as that  
18 gathered by ORC, the elegance of econometric models does not always translate into

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<sup>21</sup> Armstrong, J Scott, Vicki G Morwitz, & V Kumar (2000) "Sales forecasts for existing consumer products and services: Do purchase intentions contribute to accuracy?" *International Journal of Forecasting*, 16(3), 383-397.

1 greater accuracy. In actuality, forecasts based on purchase intentions have  
2 sometimes been shown to be more accurate.<sup>22</sup>

3         Why might purchase intention data have yielded the more accurate  
4 forecasts? The answer is that while models have their strengths, so do humans. One  
5 of the strengths of models is their consistency, yet that is also their weakness when  
6 forecasting in a dynamic environment, for "Forecasters can use 'econometric'  
7 models effectively only if they have a built-in adjustment mechanism to capture the  
8 changing environment."<sup>23</sup> The economy itself was one possible dynamic in the  
9 environment at the time that the quantitative data were collected (October 2009),  
10 when economic uncertainties were frequent media topics.

11         Another important dynamic for new products is the potential for a  
12 competitor to enter the market. Although it is difficult for an econometric model to  
13 account in its forecasts for future competitive entry, human judgments are quite  
14 flexible in accommodating changing environments.<sup>24</sup> Because as witness Crew  
15 noted, market competition is well understood (Tr. VIII/2483, lines 6-8), it is quite  
16 likely therefore that a great many participants in the ORC quantitative research did  
17 already account for competitive entry, in which case the ORC estimate is one that  
18 incorporates possible future competition.

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<sup>22</sup> Armstrong, J Scott, Vicki G Morwitz, & V Kumar (2000) "Sales forecasts for existing consumer products and services: Do purchase intentions contribute to accuracy?" *International Journal of Forecasting*, 16(3), 383-397.

<sup>23</sup> Hoch, Stephen J. and Robert C. Blattberg (1990) "Database Models and Managerial Intuition: 50% Model + 50% Manager," *Management Science*, 36, 8 (August), p. 887.

<sup>24</sup> Hoch, Stephen J. and Robert C. Blattberg (1990) "Database Models and Managerial Intuition: 50% Model + 50% Manager," *Management Science*, 36, 8 (August), p. 887-899.

1           So even if an econometric model could be fit to empirical data in order to  
2 forecast mail volumes within Five-Day Delivery, it is not at all clear that model  
3 forecasts would be any more accurate than those already obtained by ORC. In truth,  
4 if an econometric model could have been used, I would suggest that both forecasting  
5 methods be used, yielding more information for the present decisions. However,  
6 given the lack of empirical data to use with an econometric model, I do not see that  
7 such an approach was an available option.

8 ***Why a Discrete Choice Model is Not Best***

9           Another analytical approach that has been discussed with the PRC is a  
10 discrete choice model (Response to USPS/NALC-T4-17). Discrete choice models  
11 have been employed by market researchers to quantify customer preferences for  
12 new product features. To gather data for the model, product features are  
13 experimentally varied, and research participants select their preferred product  
14 profile from a set. For example, an office manager may wish to assess employees'  
15 preferences for their company coffee vendor, querying about coffee brands, prices,  
16 and locations. Employee respondents would be presented with many choice sets,  
17 one example of which might be as shown in Table 3, where respondents would be  
18 instructed to select their preferred product. Each column in the table represents a  
19 single product.

1  
2  
3  
4

Table 3: Example of a Discrete Choice Question  
Products Shown by Column

|  |   |   |  |
|--|---|---|--|
| Seattle's Best<br>\$1.59 / 12 oz<br>Coffee Cart on<br>Your Floor | Starbucks<br>\$1.69 / 12 oz<br>Coffee Cart on<br>Your Floor | Starbucks<br>\$1.79 / 12 oz<br>Retail Counter in<br>Lobby | Seattle's Best<br>\$1.69 / 12 oz<br>Retail Location<br>Across Street |
|--|---|---|--|

5

6 Through a designed experiment that forces participants to make tradeoffs  
7 over product features, the analysis reveals their preferences for features such as  
8 product brand.

9 If ORC's objective was to quantify market preferences for Saturday delivery, a  
10 discrete choice model would serve well for doing so. However, the objective of the  
11 ORC quantitative analysis was to estimate volume, a task for which discrete choice  
12 models are not well suited. Discrete choice models directly estimate relative  
13 preferences, while volume estimates are absolute quantities. In the coffee example  
14 above, respondents are asked which product they prefer, not the quantity they will  
15 purchase in a given timeframe.

16 For volume forecasts using discrete choice models, relative preferences must  
17 be converted to absolute quantities, requiring some assumption about the  
18 relationship between relative and absolute values. Put differently, a company may  
19 be known to have 25 percent market share. To convert market share to sales  
20 volumes, additional information is needed.

21 The additional information might take the form of sales forecasts for one of  
22 the products. For example, if an analyst separately estimates a sales volume

1 forecast for one of the products, the relative measures from a discrete choice model  
2 will allow the analyst to estimate sales volumes for the remaining products studied.

3 In sum, discrete choice models are powerful for understanding relative  
4 preferences. Although discrete choice models do not yield sales volumes directly,  
5 model results may be used in conjunction with some additional volume estimates  
6 for at least one of the products. Such additional volume estimates would need to be  
7 estimated with some technique other than a discrete choice model, such as the  
8 approach taken by ORC.

#### 9 **Potential Benefit of Additional Research and Analysis is Dwarfed by Cost of Delay**

10 Every analytical approach has its strengths and weaknesses. Since new  
11 product forecasts are unable to eliminate the uncertainty of the future, decision  
12 makers always have an option to delay a decision and gather additional data and/or  
13 conduct additional analyses. As always, the goal of such additional analysis would  
14 be to reduce uncertainty further; it can not be eliminated.

15 So while additional analysis may further reduce uncertainty, additional  
16 analysis also comes with a cost, including that of the study itself and another that  
17 often looms large in new product contexts: cost of delay until "product launch." So,  
18 the decision to conduct additional research or analysis can be framed as a financial  
19 decision, the potential additional value of the new information versus the costs of  
20 the delay and study.

21 The benefits and costs of an additional study can be approximated rapidly  
22 with ballpark figures. Assume that an additional study would require six months.  
23 The cost of delayed implementation of Five-Day Delivery would be half the \$3.1B

1 annual cost savings of the proposal (USPS-T-7, attachment 3, page 2), or \$1.55B.  
 2 The costs of the study itself would increase that figure, so, as a ballpark figure, the  
 3 costs of conducting an additional study are “>\$1.55B.”

4 As for the value of the information, additional study would increase  
 5 information about revenue reductions from mail volume declines. Currently,  
 6 volume reduction estimates are estimated to be in the range from 0.35 percent to  
 7 1.06 percent,<sup>25</sup> with a mean of 0.71 percent (USPS-T-9, p. 2). Those volume  
 8 reductions translate into a contribution loss range of about \$102M to \$308M,<sup>26</sup> with  
 9 a mean of \$206M of contribution loss (USPS-T-7, attachment 3, page 2). As a  
 10 hypothetical example, an outcome of additional analysis combined with the ORC  
 11 study may narrow the contribution loss range to: \$130M to \$292M. Certainly, other  
 12 ballpark calculations would be plausible as well, for the purpose of ballpark  
 13 calculations is to assess the magnitude of results. Given this narrowing of a range,  
 14 which may not even reach a significant digit in the larger context, the costs of  
 15 additional study of “>\$1.55B” outweigh the gain of additional information.

16 In summary, alternative analytical approaches have been proposed in  
 17 hindsight. It is not clear whether alternative analyses would be more or less  
 18 accurate than the ORC study. A critical question at this point in analyzing the Five-

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<sup>25</sup> This 95% confidence interval was calculated using the standard asymptotic normal formula for percentages, where standard error is square root of  $pq/n$ . Here,  $p$  is 0.71%,  $q = 1-p$ , and  $n$  is the number of respondents. For  $n$ , I used the number of business respondents, 2152. This calculation is used solely as an example for a ballpark estimate. Other standard error estimates could be used in lieu of this one. Of those I considered, all yielded outcomes reasonably close to that given here.

<sup>26</sup> The contribution loss range of \$102M to \$308M is calculated from the \$206M expected loss from USPS-T-7, the 0.71% volume loss from USPS-T-9, and the volume range of 0.35% to 1.06%. Specifically,  $\$102M = \$206M \cdot (0.35\%) / (0.71\%)$ , and  $\$308M = \$206M \cdot (1.06\%) / (0.71\%)$ . These calculations assume a constant marginal contribution for mail volume.

1 Day Delivery proposal is the value of conducting an additional study. From a  
2 financial viewpoint, the costs of an additional study are quite large (>\$1.55B), and  
3 the financial benefits are, at best, very small relative to the costs. Hence, the answer  
4 is quite clear: financially speaking, the Five-Day Delivery proposal should not be  
5 delayed for additional estimation of future mail volumes.

6 I want to note that the estimates cited above are intended to provide a  
7 reasonable way to assess the benefits of undertaking additional analysis. They  
8 should not be considered as constituting such additional analysis.

## 9 **CONCLUDING REMARKS**

10 Throughout this testimony, I have maintained a neutral position on the Five-  
11 Day Delivery proposal itself. I have focused my analysis on the financial  
12 implications alone, knowing that such a decision is not entirely based on finances. If  
13 the decision were made on finances alone, I see the clear and compelling answer to  
14 be that the USPS will save multiple billions of dollars by adopting Five-Day Delivery.  
15 The results of the financial analysis definitively show that the cost savings to the  
16 USPS dwarf the revenue reductions.

17 I do wish to state that I agree with witness Crew (NALC-T4, p. 12) that, in the  
18 bigger picture, the Postal Service should consider these steps to be a near-term  
19 rather than a long-term solution. In the long term, the Postal Service is best served  
20 by a focus on additional ways to add value to customers and other stakeholders  
21 such as employees. Not only is the Postal Service valued by its customers (USPS-T-  
22 9, p. 4), but it also has expertise and extensive distribution networks in place, giving

1 it a solid basis from which to continue innovating for the benefit of all. I understand  
2 that the Postal Service intends to continue seeking ways to add value for its various  
3 stakeholders, as outlined in the Postal Service's "Delivering the Future" action plan.

1           CHAIRMAN GOLDWAY: And this brings us to  
2 oral cross-examination. One party has requested oral  
3 cross-examination, the National Association of Letter  
4 Carriers, AFL-CIO, Mr. Dechiara. Did I get the  
5 Dechiara.

6           MR. DECHIARA: Dechiara. Close enough.

7           CHAIRMAN GOLDWAY: It's been awhile. I had  
8 forgotten, Dechiara.

9           Is there any other party that wants to  
10 cross-examine Witness Boatwright?

11          Mr. Dechiara, will you please begin?

12          MR. DECHIARA: Thank you, Madam Chairman.  
13 Peter Dechiara from the law firm of Cohen, Weiss and  
14 Simons, LLP, for the National Association of Letter  
15 Carriers, AFL-CIO.

16                           CROSS-EXAMINATION

17          BY MR. DECHIARA:

18          Q     Good morning, Dr. Boatwright.

19          A     Good morning.

20          Q     Dr. Boatwright, do you believe it would be a  
21 good idea for the United States Postal Service to end  
22 Saturday delivery?

23          A     That's a pretty wide open question.

24          MR. HOLLIES: Objection. Madam Chairman,  
25 that question is totally unrelated to his testimony

1 and it is not an issue that he addresses.

2 MR. DECHIARA: I take issue with that, Madam  
3 Chairman. If you turn to page 27 of the witness's  
4 testimony, under "Concluding Remarks" he says on page  
5 27 at line 10, "Throughout this testimony I have  
6 maintained a neutral position on the five-day delivery  
7 proposal itself," and that paragraph continues in  
8 which he indicates that the decision is not entirely  
9 based on finances, and in the second paragraph of  
10 those concluding remarks talk about whether these  
11 steps, and I assume he means going to five-day  
12 delivery, would be a good or not a good idea in the  
13 near term or the long term.

14 So, clearly in these two paragraphs of his  
15 testimony he has addressed whether or not the Postal  
16 Service's proposal is something he agrees with, and I  
17 would like to explore that.

18 CHAIRMAN GOLDWAY: Perhaps you might ask him  
19 to clarify these last two paragraphs if there seems to  
20 be some misunderstanding rather than the direct  
21 question that you offered beforehand.

22 MR. DECHIARA: Sure.

23 CHAIRMAN GOLDWAY: Would that be acceptable?

24 MR. HOLLIES: Yes, given that the first  
25 sentence that was referred to by counsel specifically

1 states that the witness has a neutral position, I  
2 think that's a good fallback. Thank you.

3 CHAIRMAN GOLDWAY: Thank you.

4 BY MR. DECHIARA:

5 Q Dr. Boatwright, let me refer you to line 12,  
6 page 27 of your testimony. Actually, let me begin on  
7 the sentence that begins on line 11. It says, "I have  
8 focused my analysis on the financial implications  
9 alone, knowing that such a decision is not entirely  
10 based on finances."

11 Do you see that sentence?

12 A I do see that sentence.

13 Q Okay. And the decision they are referring  
14 there is the decision to go to five-day delivery?

15 A That is correct, yes.

16 Q Okay. What else, in your view, should that  
17 decision be based on other than finance?

18 MR. HOLLIES: Objection again, Madam  
19 Chairman. This is going beyond his testimony. His  
20 testimony is about the financial elements, and that is  
21 the breadth and scope of his testimony.

22 MR. DECHIARA: I believe, Madam Chairman, if  
23 one continues to read the concluding remarks, the  
24 witness does address other issues, including his  
25 statement, for example, the next paragraph that "In

1 the long term the Postal Service is best served by a  
2 focus on additional ways to add value to customers and  
3 other stakeholders."

4 So clearly the witness has views about these  
5 things, and I believe that it is fair -- it is  
6 entirely appropriate on cross-examination to allow the  
7 NALC to explore his testimony.

8 CHAIRMAN GOLDWAY: Mr. Hollies, I think the  
9 paragraphs speak for themselves and they do make  
10 references to other ideas, and this witness can  
11 explain them. I think the Commission can determine to  
12 what extent he might be expert on those comments that  
13 he's making in the paragraph.

14 MR. HOLLIES: I understand and agree with  
15 that largely, Madam Chairman. The focus of this  
16 witness's testimony is the financial elements, and if  
17 counsel cares to ask the witness specifically about  
18 language in his testimony, then I will have no  
19 objection.

20 CHAIRMAN GOLDWAY: I think we can ask him to  
21 explain --

22 MR. HOLLIES: Okay.

23 CHAIRMAN GOLDWAY: -- his comments.

24 MR. HOLLIES: Absolutely.

25 CHAIRMAN GOLDWAY: Written comments.

1 BY MR. DECHIARA:

2 Q Dr. Boatwright, page 27, the sentence that  
3 begins on line 11 continues onto line 12 of your  
4 testimony, "I have focused my analysis on the  
5 financial implications alone, knowing that such a  
6 decision is not entirely based on finances."

7 Do you know that this decision is not based  
8 entirely on finances?

9 A I know that -- excuse me. I know similar  
10 decisions in the context of businesses other than U.S.  
11 Post Office typically have other issues at hand other  
12 than finances alone. I have focused my testimony on  
13 solely the financial aspects. This was written with  
14 the recognition that the Commissioners probably have  
15 other affects to deal with as well.

16 This was an acknowledgement that I do not  
17 explore those other issues at all, and so I can't  
18 comment on what those might be because I don't know  
19 what they would be.

20 Q Okay. Now you go on to say that you think  
21 going to five-day delivery would save the Postal  
22 Service a fair amount of money, correct?

23 A Yes. I believe that according to the  
24 documents that I considered the net savings is  
25 estimated to be \$3.1 billion.

1           Q     Okay.  But despite your view that going to  
2     five-day delivery would save the Postal Service a fair  
3     amount of money, you are nonetheless, as you say in  
4     your testimony, you have maintained a neutral position  
5     on the five-day proposal.

6                     Why have you maintained a neutral position  
7     if this proposal, in your view, would save the Postal  
8     Service a lot of money?

9           A     Why have I maintained a neutral position.  I  
10    have evaluated the finances and the testimony.  The  
11    finances are very clear in terms of dollar savings.  
12    However, because I have acknowledged that there might  
13    be or typically there are other issues I have not  
14    brought those into bear, and so I cannot make a  
15    statement in the aggregate about what the  
16    Commissioners should or should not be thinking in  
17    grand total.

18           Q     Well, can you tell us what those other  
19    issues either typically are in other cases or are in  
20    particular in this case?

21           A     Well, since I have not studied the broad set  
22    of issues involved here with each individual company  
23    or entity the particulars might vary from company to  
24    company, I won't begin to list what they might be with  
25    you because, again, that does not really serve any

1 purpose to provide casual observant opinion.

2 Q No, I'm not asking for casual observation,  
3 but based on your expertise can you share with us any  
4 views you may have about other factors that an  
5 enterprise would look at when undertaking a proposal  
6 like this other than financial ones?

7 A One broad consideration that companies might  
8 take would be the perception or value of that  
9 company's brand. There is one example, and that may  
10 carry over here in some form or another, but there  
11 again that's not something I have explored in terms of  
12 the Postal Service.

13 Q So you're saying that one factor that a  
14 company may look at when undertaking something like  
15 this is to look at how the proposed change might  
16 impact its brand?

17 A Yes. They may or may not consider those  
18 implications, and some of the implications may  
19 ultimately be financial and may be included in some  
20 kind of financial analysis. Here, as I stated before,  
21 I have looked at one very -- one particular portion of  
22 the testimonies in addressing primarily Witness Crew's  
23 testimony.

24 So these concluding remarks to a great  
25 extent are narrowing my focus and reminding me that

1 I'm not taking a position at all on the grand  
2 question, the big question. I am particularly  
3 focusing on one, I believe, fairly clearly portion of  
4 the overall decision that might be made.

5 Q Okay. Well, let's look at the paragraph  
6 that begins on page 27, line 17. You say that you  
7 agree with Witness Crew that "In the bigger picture  
8 the Postal Service should consider these steps to be a  
9 near-term rather than a long-term solution."

10 Do you see that sentence?

11 A I do see that sentence.

12 Q Okay. And just to clarify, the word "steps"  
13 in that sentence, is steps a reference to the Postal  
14 Service's proposed service changes in this proceeding?

15 A This is a reference to the five-day delivery  
16 proposal in particular, yes.

17 Q Okay. Am I reading this sentence correctly  
18 that it's your view that going to five-day delivery  
19 should not be part of the long-term solution for the  
20 Postal Service?

21 A I would -- no, that is not the intended  
22 meaning of the sentence. The intended meaning of --  
23 the five-day deliver here is, I would say, under  
24 consideration in the immediate term, and I was  
25 addressing the five-day delivery proposal in the

1 immediate term. There may be other issues on the  
2 table for Commissioners for a longer term type of  
3 plan. Anything mentioning longer term in this final  
4 paragraph does not refer to the five-day delivery.

5 Q Are you saying that you don't have a view as  
6 to whether or not in the long term the Postal  
7 Service's proposed proposal to go to five-day delivery  
8 is a good idea or a bad idea?

9 A I have focused -- to take a step back. My  
10 testimony is focused on a decision that needs to be  
11 made, a decision that is on the table to be made in  
12 the short term. It certainly does have long-term  
13 implications in that the \$3.1 billion savings is  
14 annual, and there is not an ending point in terms of  
15 that will apply for the first 10 years and suddenly  
16 cease to grow, so the magnitude is that, as far as I  
17 know, over the long term has not been projected, and  
18 I'm not evaluating those projections because they do  
19 not exist, to my knowledge.

20 So, in that sense certainly the current  
21 financial decision has longer term implications, but  
22 this final paragraph is in no way addressing the long-  
23 term implications because I am focusing on a current  
24 decision in the current term, and that's what all my  
25 testimony is focused on.

1           MR. DECHIARA: Madam Chairman, if I may  
2 approach the witness and provide him a copy of a  
3 document.

4           CHAIRMAN GOLDWAY: Yes, but we would like  
5 copies.

6           MR. DECHIARA: It is the testimony of Dr.  
7 Crew. I do not have sufficient copies for the entire  
8 panel unfortunately. I do have a copy for the Postal  
9 Service counsel.

10          CHAIRMAN GOLDWAY: We don't have Mr. Crew's  
11 testimony with us on the dias at the moment.

12          MR. DECHIARA: And I apologize for not  
13 having sufficient copies, but I will read into the  
14 record whatever in Dr. Crew's testimony that I refer  
15 to.

16          CHAIRMAN GOLDWAY: Okay. I hope it's not  
17 too long or complicated.

18          MR. DECHIARA: Well, at the moment it's just  
19 one sentence.

20          CHAIRMAN GOLDWAY: Thank you. And  
21 Commissioner Langley has just notified me that she in  
22 her due diligence does have a copy hand that she can  
23 pass on to the other Commissioner if we need it.  
24 Thank you.

25          BY MR. DECHIARA:

1 Q Dr. Boatwright, if you could turn to Dr.  
2 Crew's written testimony which is in the record as  
3 NALC-T-4.

4 In your testimony on page 27, line 17, when  
5 you say you agree with Witness Crew, and you have a  
6 reference to page 12 of Dr. Crew's testimony, could  
7 you tell me what sentence on page 12 of Dr. Crew you  
8 agree with?

9 A It will take me a moment. I'm sorry you  
10 didn't have line numbers to refer to.

11 Q Let me point to you out the sentence and  
12 maybe you can tell me --

13 A Let me go through it first just because I  
14 need to refresh my memory on that.

15 (Pause.)

16 In refreshing my memory, counsel, how do I  
17 refer to you? Sorry.

18 Q You can refer to me as counsel.

19 A Okay. There actually is no entire sentence  
20 that I would be referring to here. There are portions  
21 of sentences which I would agree with.

22 Q Well, could you read aloud into the record  
23 what portions of sentences by Dr. Crew you agree with?

24 A Yes. Sure. So on page 12, the fourth line  
25 up from the very bottom of the paragraph there is a

1 clause on meeting the needs of its customers. Now in  
2 the context he is proposing, a proponent of the Postal  
3 Service meeting the needs of its customers.

4 Q Is there a portion of the sentence that you  
5 could read verbatim into the record that you agree  
6 with?

7 A In terms of the context of the sentence, I  
8 would have to edit it significantly to do so. So no,  
9 I couldn't read it verbatim because I don't agree with  
10 all portions of the sentence.

11 Q Okay. Well, if you could restate it in a  
12 way that you're comfortable with.

13 A Sure. The Postal Service should focus on  
14 meeting the needs of its customers.

15 Then in similar spirit on page 13, the  
16 beginning of the first full paragraph, again there is  
17 a partial sentence, and I'll read that partial  
18 sentence. It's the latter portion of the first  
19 sentence of that paragraph. It states, "The Postal  
20 Service should seek to make its services more  
21 successful and more attractive."

22 These are to comment on the context in my  
23 own testimony where I say, "In the long term, the  
24 Postal Service is best served by a focus on additional  
25 ways to add value to customers and other stakeholders,

1 such as employees."

2           This, I believe, is probably not a  
3 difficult position to be a proponent of in a world  
4 that is constantly dynamic. It's an emphasis on if  
5 prices stay the same, that could very likely will lead  
6 to a problematic long-term situation for them.

7           So, the say to be dynamic in a dynamic world  
8 is to continue to look -- businesses should be adding  
9 value to customers, and so continue to seek ways to  
10 add value to customers continues to keep that  
11 organization aligned with the way the markets are  
12 moving.

13           Q     What does it mean to add value to customers?

14           A     What does it mean to add value to customers?  
15 Businesses and organizations perform services and  
16 provide products to customers, possibly saving them  
17 time. For instance, since I could make my own ketchup  
18 at home, but Pittsburgh is home to Heinz, and it saves  
19 me quite a bit of time that they prepare and package  
20 that and pretty efficiently deliver it to places that  
21 I can pick it up. So that's adding value to me that I  
22 don't have to make my own ketchup.

23           And the Postal Service does do a lot of work  
24 that would be costly to me and effortful to do. So  
25 that's what I mean. You are performing services or

1 providing products that although in some cases  
2 customers could do they gain value by using those that  
3 organization.

4 Q Okay. And the sentence that begins on page  
5 19 of page 27 you says, "In the long term, the Postal  
6 Service is best served by a focus on additional ways  
7 to add value to customers and other stakeholders such  
8 as employees."

9 Do you have any views about the additional  
10 ways that the Postal Service in the long term should  
11 add value to customers?

12 A As I stated in line 11 on the same page, and  
13 I focused my analysis on the financial implications  
14 alone, so I have not reviewed market research. That  
15 is, I have not analyzed the types of materials that  
16 would be needed to have such views, so no.

17 Q Okay. And then also in the sense I just  
18 quoted, is it correct that it's your view that the  
19 Postal Service should add value to employees? Am I  
20 reading that right?

21 A You are correct. The word "stakeholders" is  
22 often -- I teach courses on new products and in  
23 particular innovation, and my students and teams  
24 develop concepts for sponsoring organizations. At the  
25 outset of such courses, semester-long courses, I have

1 no idea what they are going to end up with. That's  
2 consistent with here, I do not know the research --  
3 since I had some initial research, it's hard to know  
4 where that would lead to. At the end of said work  
5 many companies end up patenting the concept and moving  
6 forward with the concept from the students, but part  
7 of the implication here, part of the importance of the  
8 work of what we're teaching the students to do is to  
9 not be so narrow-minded to focus on one group or  
10 another to the exclusion of very important  
11 stakeholders.

12 We often use the word "stakeholders" in this  
13 classroom situation rather than a customer because  
14 there are many groups or individuals who can all  
15 benefit from a properly designed product or service.

16 So, yes, stakeholders here, I called out  
17 employees just to help to define the term  
18 "stakeholders" goes beyond customers.

19 Q No, I understand that. My question was more  
20 specific. What does it mean to add value to  
21 employees?

22 A It means the same thing that it means to add  
23 value to customers. It means that -- you're looking  
24 at me with a pregnant look waiting for more.

25 Q Right. I understood your Heinz Ketchup

1 example. I understood how that saves the customer  
2 time from having to make their own ketchup, but maybe  
3 you could give an illuminating example of how you add  
4 value to an employee.

5 A Sure. I don't know the organization, the  
6 working environment, I have not studied the Postal  
7 Service's working environment, but I think all of us  
8 could think of a hypothetical organization where in  
9 order for that -- the company might adopt very  
10 unpleasant working conditions -- low light, natural  
11 light, okay, no breaks. So this is an extreme  
12 scenario, I think, on purpose. But as far as bringing  
13 out a product or a service generally an entity has  
14 multiple different ways they can create that solution,  
15 and creating that solution in a way that is to the  
16 exclusive benefit of one group to the detriment of  
17 another probably isn't a viable solution.

18 Exclusive and detriment, again chosen the  
19 extreme terms, because their final sum -- often there  
20 might be compromises that would bring -- the goal is  
21 to bring together and find ways to add value to  
22 everyone, not necessarily optimizing the value for  
23 any one particular group.

24 Q Let me refer you to the sentence that begins  
25 on line 21 of page 27. It says, "Not only is the

1 Postal Service valued by its customers," and I'll skip  
2 the citation, "but it also has expertise and extensive  
3 distribution networks in place, giving it a solid base  
4 from which to continue innovating for the benefit of  
5 all."

6 Do you see that sentence?

7 A I do see that sentence.

8 Q The reference to extensive distribution  
9 networks, is that a reference to the Postal Service's  
10 networks by which it delivers mail?

11 A Well, it's again a -- this is my layman's  
12 choice of words to refer to, yes, their delivery  
13 service. Don't take it as a technical word in any  
14 sense, referring to a portion, it's a vague general  
15 reference to the vast distribution networks.

16 Q Right, and that's how I took it. I just  
17 wanted to clarify that I was understanding correctly  
18 what you were saying.

19 And is it fair to say that that vast  
20 distribution network that the Postal Service has -- is  
21 it fair to say that much of the value of the Postal  
22 Service lies in that vast distribution network that it  
23 has?

24 A Much of the value. So what do you mean by  
25 much of the value? How do we quantify the value of

1 the Postal Service?

2 Q Well, I'm not putting a specific percentage  
3 value. I'm just saying is it not true that a large  
4 portion of the value of the Postal Service lies in  
5 that distribution network.

6 A Well, if you're not going to put a  
7 percentage value, I'm not going to put a percentage  
8 value.

9 Q No, I'm not asking you to.

10 A Okay. I don't have a way to answer that  
11 question. I mean, given your vagueness of definition,  
12 I don't know how. I can't respond with any  
13 specificity.

14 Q Could you agree with me that a substantial  
15 amount of the value of the Postal Service lies in its  
16 distribution network?

17 A Okay, so the word "substantial amount",  
18 that's referring to a portion of the total. And since  
19 the total you've recognized you're unwilling to  
20 define, I can't then tell you the portion of -- in the  
21 middle because it's hard to define that in the first  
22 place. So I don't know how to answer your question.

23 Q Okay, I'm struggling with why you don't know  
24 how to understand it, but let me just try one more.

25 A Okay.

1 Q Once more, and then we can move on if you  
2 still can't answer it.

3 Are you saying you need me to give you a  
4 precise percentage of the total before you can answer  
5 my question?

6 A It sounds like your question is asking me  
7 for a percentage of the total.

8 Q No, it's not.

9 A I don't know what the total is.

10 Q Okay.

11 MR. HOLLIES: Madam Chairman, if both the  
12 witness and counsel could be directed to speak words  
13 rather than nonverbal communication the transcript  
14 will better reflect the communication. Thank you.

15 BY MR. DECHIARA:

16 Q Dr. Boatwright, are you principal with one  
17 of your Carnegie Mellon colleagues of a company called  
18 Carnegie Strategies, LLC?

19 A I am. My colleague for the record in  
20 Carnegie Strategies is Professor Jon Cagan. He is a  
21 professor in the mechanical engineering. He's one of  
22 the co-professors of the course I briefly mentioned  
23 which we have students work on innovation ideas for  
24 organizations who request it with Carnegie Mellon.

25 MR. DECHIARA: Madam Chairman, I have a

1 document, multi-page document, it's entitled "Carnegie  
2 Strategies: Era of Change," which I do have sufficient  
3 copies for the panel and counsel and the witness, and  
4 I would like to have this entered into the record, not  
5 necessarily into evidence, but just into the record as  
6 an NALC cross-examination exhibit.

7 CHAIRMAN GOLDWAY: That's fine. Do we have  
8 a number for it?

9 MR. DECHIARA: I don't have a number but I'm  
10 more than happy to give it a number. I can choose a  
11 number at random like NALC Cross-Examination Exhibit  
12 1. Okay, that's what I will do. And just for clarity  
13 of the record NALC Cross-Examination Exhibit 1 is a  
14 multi-page document entitled "Carnegie Strategies,  
15 LLC." It's actually a seven-page document, and I'll  
16 represent that it's a printout of a website.

17 (The document referred to was  
18 marked for identification as  
19 NALC-XE-1.)

20 BY MR. DECHIARA:

21 Q Dr. Boatwright, can you identify what is  
22 NALC Cross-Examination Exhibit No. 1?

23 A It's at least some pages from a website for  
24 Carnegie Strategies. Does that answer your question?

25 Q Yes, it does.

1                   Can you turn to the third page in, the one  
2                   that has the heading "Our Philosophy and Approach"?

3                   A     I'm there.

4                   Q     Okay. And the second paragraph has the  
5                   heading "The Problem". Do you see that?

6                   A     I see that.

7                   Q     Okay. I'm just going to read into the  
8                   record that text under the heading "The Problem", and  
9                   then I want to ask you a couple of questions about it.

10                   It says, "The Problem: When visiting and  
11                   designing new products firms often hope the answer is  
12                   to produce the latest high-technology devices only to  
13                   find that the better capabilities fail to capture  
14                   enduring market share because they miss the experience  
15                   that customers truly want. Technology alone is not  
16                   enough. Or for those firms that seek to excite the  
17                   market, they rely on ads that overstate or mislead,  
18                   leaving the customer disappointed or disillusioned.  
19                   Instead, a deeper emotional engagement between the  
20                   customer and product is required regardless of whether  
21                   the products are physical products, services,  
22                   technologies, software systems, or brands."

23                   Do you subscribe to the text that I just  
24                   read?

25                   A     Yes. The context of the text is on the

1 implied side of what I do. So in researching and in  
2 teaching and in consulting in terms of new products,  
3 new product decisions, in working with statistics of  
4 analyzing past sales information or in the market  
5 research for gathering and understanding of what  
6 customers' needs are, we not only publish in peer-  
7 reviewed journals but we also work to help companies  
8 also understand what customer needs are, and translate  
9 those into specifications for products and services  
10 that would be meeting their needs.

11 This particular paragraph actually is our  
12 own way of we're differentiating the paragraph in the  
13 above section, we would like companies which  
14 approaches differentiate themselves. We also have to  
15 apply our own principles to us. And so there are  
16 plenty of people who could guide companies in terms of  
17 developing new performance levels for the  
18 technologies, and we are reminding companies that  
19 that's not enough, and so we have some process that  
20 they could do to address the needs to go beyond  
21 technology.

22 Q Okay. I would like to focus on the last  
23 sentence I read, the one that has the phrase  
24 "emotional engagement".

25 Is it your view that to achieve success in

1 the marketplace that it's required that a company  
2 develop products that establish an emotional  
3 engagement with its customers?

4 MR. HOLLIES: Objection Madam Chairman.  
5 This line of questioning now proves that exceeds an  
6 examination of new product introductions which is not  
7 at all related to the subject of five-day delivery,  
8 which is a change to an existing suite of products.  
9 As such, it does not appear to be relevant, although  
10 if counsel can make a proffer illustrating the  
11 relevance I would withdraw my objection.

12 CHAIRMAN GOLDWAY: Mr. Dechiara?

13 MR. DECHIARA: Madam Chairman, the witness's  
14 testimony repeatedly refers to the Postal Service's  
15 proposal to go to five-day delivery as a product  
16 change, as the launching of a product change, and I  
17 can cite to examples where the testimony does that.

18 For example, on page 4 of the testimony --

19 CHAIRMAN GOLDWAY: I see. It's under  
20 quotes. That's on line 16.

21 MR. DECHIARA: If I can have a moment, Madam  
22 Chairman. I seem to have misplaced my copy of the  
23 witness' testimony. I'm not sure how I did that.  
24 Page 4, line 9 through 11, says an evaluation of the  
25 financial consequences and whether to implement the

1 five day delivery proposal is analogous to that of a  
2 firm considering whether to change one of its  
3 products. Page 13, line 19, says every new product  
4 proposal entails some degree of uncertainty. This  
5 includes the USPS five day delivery proposal. I can  
6 go on.

7 CHAIRMAN GOLDWAY: I don't think you need  
8 to. I think you've asked enough questions that are  
9 relevant.

10 MR. DECHIARA: Thank you.

11 BY MR. DECHIARA:

12 Q Dr. Boatwright, is it your view that to  
13 achieve success in the marketplace it's required that  
14 a company develop products that establish an emotional  
15 engagement with its customers?

16 A If we go back to what my testimony focused  
17 on, it's really not focused on the design of the  
18 services. That final paragraph you began much of the  
19 morning on where the post office could have in terms  
20 of adding value to its customers, and I stated then  
21 that I have not explored that variety of ways. What I  
22 have focused on here are the calculations of volume  
23 and aligning those in considering the decision of the  
24 proposal currently, which is, you know, \$3.3 billion  
25 in cost savings on page 2. I've looked at the market

1 research to evaluate whether the estimate of impact on  
2 revenue would be reasonable and resulting in a net  
3 savings of \$3.1 billion. Because I focused on the  
4 financial aspects that were in this particular  
5 testimony, that's all I have looked at to date.

6 Q Okay. I understand, Dr. Boatwright, that  
7 you want me to focus on the finances, and I assure you  
8 I will be happy to comply and we will get there.  
9 However, Dr. Boatwright, I am conducting cross-  
10 examination. The Madam Chairman of this Commission  
11 has allowed me to pursue this line of questioning, and  
12 I would ask you to please answer my questions. My  
13 question does not concern the postal service. My  
14 question is is it your view that to achieve success in  
15 the marketplace it is required that a company develop  
16 products that establish an emotional engagement with  
17 its customers?

18 A And my job here is to testify to --

19 CHAIRMAN GOLDWAY: Your job is to answer his  
20 question.

21 THE WITNESS: Okay. See, the metrics of  
22 success, to answer your question holistically,  
23 measures the success very tremendously for companies.  
24 If the metric is profit alone, even their success and  
25 failure is hard to quantify because we take an example

1 of a premium vehicle, such as Ford brought out a  
2 premium truck, a certain number of units, it was a  
3 reduced number of units to keep premium. I haven't  
4 seen the figures, but let's propose that the truck by  
5 itself didn't have great volume, sales volume,  
6 however, many people came to look at that truck and  
7 they bought a lesser model, so it might have increased  
8 the volume of a related product.

9 So is that truck a failure because it, by  
10 itself, didn't have the profitability or is a success  
11 because the company performed well during that year  
12 that the truck was brought out? So your word success,  
13 is success required, we have to start with the  
14 definition of success. The context of that sentence,  
15 of course I agree with the sentence that I wrote, but  
16 I need to explain the context. The context is if  
17 you're providing greater value to customers, you're  
18 going to have greater success. In that problem, many  
19 companies actually, you could call them successful,  
20 they're viable in the marketplace with technology  
21 alone, but they're missing out on even potentially  
22 greater success because they haven't captured even  
23 greater value that they could have provided. That's  
24 the context of that paragraph. When you're bringing  
25 this over to the context of this particular case --

1 MR. DECHIARA: Well, I didn't ask you about  
2 that. I'm just stating in the general. We'll get to  
3 this particular case. Would greater success flow  
4 from, in your words, "a deeper emotional engagement  
5 between the customer and the product"?

6 THE WITNESS: Greater success flows from  
7 adding greater value to customers. Customers value  
8 having emotional engagement that's appropriate for a  
9 product and service. They value that, just like they  
10 value the services itself.

11 BY MR. DECHIARA:

12 Q I'd like to read you a piece of testimony  
13 that is from the direct written testimony of Samuel  
14 Pulcrano, USPS-T1 in this proceeding, and, for the  
15 record, I'm reading from page 3, beginning on line 6.  
16 Mr. Pulcrano says: "There are mail recipients whose  
17 primary interaction with the postal service is in the  
18 form of a Saturday encounter with their postal  
19 carrier. The postal service is fortunate to employ  
20 delivery personnel who, like their counterparts at the  
21 retail window, provide customer service in a manner  
22 that makes them excellent ambassadors in promoting the  
23 agency's image." Would you agree, Dr. Boatwright,  
24 that one way that the postal service creates an  
25 emotional engagement with its customers is through its

1 delivery personnel who customers see delivering the  
2 mail and may have a chance to say hello to or chat  
3 with?

4 A The emotional engagement would come through  
5 any touch point, including postal service personnel,  
6 so that would be one of many potential ways, yes, that  
7 customers could receive emotional value.

8 Q Okay. Well, let's assume that many people  
9 work during the week and that they generally only see  
10 their letter carriers on Saturday, and so, to use Mr.  
11 Pulcrano's words, their primary interaction with the  
12 postal service is in the form of a Saturday encounter  
13 with their postal carrier, and then let's further  
14 assume that Saturday mail delivery were eliminated and  
15 that customers who work during the week would rarely,  
16 if ever, have a chance to see their letter carrier  
17 when there was no longer Saturday delivery. Would you  
18 agree with me, if those assumptions that I just set  
19 out were true, that ending Saturday delivery would not  
20 help the postal service maintain an emotional  
21 engagement with its customers?

22 A Again, there are many ways to have touch  
23 points, many potential. If we assume a world where  
24 this was the exclusive only touch point, then the  
25 costs of eliminating that could be, would be much

1 greater than in a world where that's one of many  
2 potential touch points.

3 Q Well, let's assume that that's not the only  
4 touch point, but let's say it's one, one significant  
5 touch point. Assuming that, I'm not asking you to  
6 agree with that, but let's assume that's one  
7 significant touch point, and that seems to be Mr.  
8 Pulcrano's view as well, would eliminating Saturday  
9 delivery to that extent lessen the postal service's,  
10 using your phrase, emotional engagement with its  
11 customers?

12 A Well, if we assume, the more significant we  
13 assume it is, the greater the loss of eliminating it,  
14 so it's clear. Sure.

15 Q Thank you. Let me refer you back to your  
16 testimony. I'd like to, starting on page (iii) going  
17 through (v), there's a list of your publications, and  
18 the one listed on the top of (iv), page (iv), is an  
19 article that you co-authored last year entitled *A Step*  
20 *by Step Process to Build Valued Brands*. Do you see  
21 that?

22 A I do see that.

23 Q Can you tell us briefly what that article is  
24 about.

25 A The title is a pretty good summary. It's,

1 going through here, a case study of working with a  
2 company, in particular, this is Navistar's  
3 International Truck Company, and how to identify some  
4 of what customers are looking for more broadly and  
5 deliver that not through a single touch point, like  
6 just the postman or just the postman on Saturdays, but  
7 to do so in as comprehensive a manner as possible to  
8 provide as great a value as possible. So that is the  
9 context of that particular article. Yes.

10 Q Well, is it important, in your view, for the  
11 long-term success of a company to build a valued  
12 brand?

13 A It depends on what you mean by brand. So  
14 brand is pretty new, really, in our world of  
15 marketing. It's certainly familiar to everyone, and  
16 so we often forget its newness. For many, brand is  
17 more of a communication device, and that, to me, is  
18 less important. For the technical definition, it's a  
19 trademark. So the definition of a brand on the books  
20 is a legal definition. It's identifying a particular  
21 company and differentiating it. That, by itself, hey,  
22 we are specific, may not have any value if left at  
23 that definition.

24 Q Well, I'm using the term brand in the sense  
25 that you used it in your article.

1           A     So, I --

2           Q     Let me finish my question.  So that's what I  
3 mean by brand.  I'm using your definition in your  
4 article.  I'm asking you, using your understanding of  
5 the word brand in your article, is it important for  
6 the long-term success of a company to build a valued  
7 brand?

8           A     So the reason I started with a definition,  
9 so forgive the long-winded answer, but the reason I  
10 started with a definition is I didn't want there to be  
11 a mistake.  I don't know what the Commissioners might  
12 be thinking of of brands.

13          Q     Well, why don't you tell us what you mean by  
14 brands, and, in particular, what you meant by brand in  
15 that article.

16          A     So the word valued we put in front of brand  
17 and it gets back to what we've been discussing already  
18 of providing value to people.  That is the intent here  
19 of Navistar.  For context, Navistar had been working  
20 at being a low cost provider and providing a  
21 utilitarian truck that moves product across the  
22 nation.  They, due to legacy costs, were not  
23 successful in being a low cost provider, and so they  
24 began on a different strategy.  Truckers, although  
25 many are small businessmen, they don't necessarily

1 have the respect in society of small businessmen, and  
2 so providing respect and dignity to truckers was part  
3 of the value proposition of Navistar in the work that  
4 we were doing here, in particular, in their brand.

5 So this particular respect and dignity is  
6 echoed most strongly in the products they're bringing  
7 out now where, for instance, in the interior of a  
8 vehicle named the Lone Star, instead of being and  
9 spartan and all about moving packages and moving  
10 things from city to city now and having just enough  
11 space to rest so you can get back on the road as a  
12 trucker, again, lacking the respect for the humanity  
13 of that particular trucker or the dignity of their  
14 profession, the interior of this new vehicle is much  
15 more professional. It would be more like a  
16 professional office or living space and providing a  
17 sense of pride. So that provides value. That  
18 provides value to truckers in their profession, and  
19 that now gets reflected in the stance of the company,  
20 that becomes part of their brand.

21 Q Okay. My question was is it important to  
22 the long-term success of a company to build a valued  
23 brand?

24 A Well, let's take the converse. If you don't  
25 have value -- remember, I'm bringing here, I'm talking

1 about providing true value. If you don't provide true  
2 value to people, that's a problem for the long-term.

3 Q Is the answer to my question yes?

4 A Yes, it is, because it's sort of the  
5 converse is I hope pretty obvious.

6 Q I thought it was an obvious question, too,  
7 but it seemed to take you a long time to get to the  
8 answer yes, but I'll accept that you got there. Let  
9 me refer you back to your statement of philosophy and  
10 approach on the Carnegie Strategies, LLC website. In  
11 the paragraph that I read into the record you have  
12 certain comments about ads, about advertising. Do you  
13 see that?

14 A Okay. So ads that overstate. So some firms  
15 basically, we'll just paraphrase, some firms rely on  
16 ads that overstate or mislead.

17 Q Right.

18 A So the ads aren't aligning with really what  
19 they're delivering.

20 Q Right.

21 A Okay.

22 Q Okay. And I'm not going to ask you  
23 precisely about that statement, but I just want to ask  
24 you a more general question which you may or may not  
25 be able to answer. Do you have a view as to the

1 relative importance when building a brand as between,  
2 on the one hand, advertising, say a TV ad where an  
3 actor is pretending to be an employee of the company  
4 that's doing the advertising, versus, on the other  
5 hand, the actual services and products that the  
6 company provides to its customers? Do you have any  
7 view as to the relative importance between those two  
8 things in terms of building a brand?

9 A You can see the same phrase coming back to  
10 this creating value and meeting customer needs. My  
11 view is doing so for real is a whole lot more  
12 important than claiming you're doing so. So, yes, I  
13 have a view, I have a strong view on really helping  
14 people, and that comes through your products and  
15 services.

16 Q Okay. Thank you. I'd like to now show you  
17 a document that was previously entered into the record  
18 in this proceeding as United States Postal Service  
19 Library Reference 1/16, and it's entitled Section 3,  
20 Marketplace. Have you ever seen this document before?

21 A I've not.

22 Q Okay. Let me represent to you what it is,  
23 or at least my understanding of what it is. My  
24 understanding is that this is a document provided, put  
25 into the record in this case by the United States

1 Postal Service. It's a report prepared by certain  
2 postal service personnel concerning market research  
3 that was done by Opinion Research Corporation about  
4 the possibility of going to five day delivery, Opinion  
5 Research Corporation being the same outfit whose  
6 market research you studied for this proceeding.  
7 You'll see, if you look through the document, there  
8 are lots of blackened out parts, a lot of redactions,  
9 and those were parts of the document that the postal  
10 service did not want us to see. So with those  
11 representations, let me ask you a couple of questions  
12 about this document. First of all, let me just ask  
13 you, am I correct that the postal service did not show  
14 you any documents concerning ORC research that were  
15 done concerning five day delivery that were done prior  
16 to 2009?

17 A I'm just thinking through to make sure that  
18 I answer you without missing something that I might  
19 have seen. I can't think of any documents that I've  
20 seen, other than -- no, I've only seen testimony  
21 that's already filed in this case, and this is not  
22 something I've, I don't think this is filed. I don't  
23 remember -- well, it might be filed. I don't remember  
24 seeing this, but they've not passed me any particular  
25 information other than that.

1 Q Okay. Well, did the postal service ever  
2 tell you that the ORC did market research concerning  
3 five days on occasions prior to the market research  
4 that you reviewed?

5 A I remember talking about the qualitative  
6 research, and the quantitative as well, but the  
7 qualitative research here to truly understand the  
8 market needs in five day for this round so that they  
9 could not only communicate effectively, but make sure  
10 that the five day is something that is adding value to  
11 stakeholders. So the qualitative research as a part  
12 of this, of, that was entered in this case as part of  
13 Whiteman, and also Elmore Yauch's testimony, I've  
14 reviewed, yeah, but no, I have not seen this  
15 particular --

16 Q But in previous, you were either shown or  
17 told that ORC, shown documents concerning ORC's  
18 research from prior years, were you?

19 A I wasn't told that this existed. I have not  
20 seen this.

21 Q Okay. If I can ask you to turn to page 58.  
22 I'm going to read the second paragraph on page 58 into  
23 the record. It says, "In the five day delivery ORC  
24 surveys of business mailers and the public, there was  
25 a similar level of satisfaction at the excellent level

1 with overall performance. However, given the number  
2 of businesses, in particular, which considered moving  
3 postal businesses to alternatives, curtailment of  
4 delivery service would most likely erode customer  
5 loyalty. This erosion in satisfaction is evident and  
6 highlighted in comments from interviews with business  
7 mailers." Do you agree that a curtailment of delivery  
8 service would most likely erode customer loyalty?

9 A Again, without having reviewed this, I don't  
10 know all the context. As a hypothetical context, for  
11 instance, it may have been proposed to move to a five  
12 day delivery in this research without the recognition  
13 of the current financial crisis. Don't know. In the  
14 research conducted in 2009, the similar types of  
15 comments that I saw in qualitative responses, you  
16 know, who wants to lose Saturday delivery, all else  
17 equal? *Ceteris paribus*. I mean, I certainly would  
18 prefer, all else equal, to have Saturday delivery,  
19 personally, as well.

20 Q You're speaking as a -- I'm sorry.

21 A I'm speaking as a consumer in that case.  
22 That kind of context of all else equal may be the  
23 context of this research. If we recognize the fiscal  
24 issues that exist, if, as I as well presented in the  
25 qualitative research in 2009, customers really have a

1 realistic, I mean, they were presented with more of a,  
2 some alternatives. You know, like, for instance,  
3 price increases was one alternative to a six day, or a  
4 five day delivery proposal, and they were much more  
5 receptive, or even volunteered, many volunteered that  
6 they prefer the five day proposal in the context of  
7 either/or. But in a vacuum, ceteris paribus, I think,  
8 again, sure people lose a day of delivery without  
9 compensation, any other compensation. So, yes. I  
10 don't know the context of this, I haven't reviewed  
11 this document, but ceteris paribus, if you eliminate a  
12 day of delivery for no reason, that's going to be a  
13 loss of equity.

14 Q Well, okay. Let me see if I can clarify my  
15 question. I'm not talking about people who either  
16 were respondents in the quantitative research nor  
17 focus group participants. I'm just talking about  
18 people out there in the American population who may  
19 know nothing of the postal service's finances, but who  
20 are nonetheless postal customers. Would you agree,  
21 everything else being equal, that if Saturday delivery  
22 were eliminated, that you would lose, or that the  
23 loyalty of those customers would be eroded?

24 A The hypothetical is hard to accept in that  
25 the number of, the publicity that already exists

1 around this particular issue is fairly, my guess is  
2 that it's widespread and pretty commonly known. In  
3 the future, were this adopted, I would imagine that  
4 the postal service would make, you know, do their  
5 best, in fact, I would propose they should do their  
6 best to make it clear in terms of why so the customers  
7 aren't reaching their own conclusions. So  
8 hypothetical, there still may be somebody who has no  
9 idea, went to their, you know, mailbox on Saturday and  
10 no mail and is shocked, and if that person exists,  
11 yes, their reaction is going to be negative rather  
12 than positive.

13 Q Let me refer you back to page 58. There's a  
14 line after the paragraph that I read that says the  
15 comments below are indicative of many of the comments  
16 we heard. I'm not going to read all of the comments  
17 set out there underneath, but I want to refer you to  
18 the last one. It says, "This is a part of your core  
19 franchise. Don't cut it. Leverage your assets and  
20 capacity." Now, obviously you don't know who wrote  
21 this and I'm not asking you to read the mind of the  
22 person who wrote that, but just as a reader, just  
23 reading that, do you have any understanding of what  
24 that sentence may mean?

25 A I certainly do, and I've read similar, I've

1 read these kinds of quotes from 2009 as well. There's  
2 a shift from 2001 comments here and 2009 comments that  
3 I've seen. That shift may be due to the passage of  
4 time, it might be due to the presentation of the  
5 fiscal problem and the recognition that, you know,  
6 lots has probably changed in eight years, as I think  
7 about it. So I don't know the reason for the shift,  
8 but back in 2001, the person who stated this had a  
9 view that they would lose equity if Saturday delivery  
10 were eliminated.

11 Q What does that mean, lose equity?

12 A Lose value. They apparently value, this  
13 particular individual who said this, they valued  
14 Saturday delivery in 2001.

15 Q Okay. And you said you've seen comments  
16 like this in the 2009 research?

17 A Good point. Like this, I need to clarify.  
18 I've seen quotations from the qualitative survey from  
19 2009. That's what I mean by like this. I've seen  
20 quotations. You have quotations here. I've seen  
21 quotations.

22 Q Right, but did you see quotations that said  
23 similar things?

24 A Actually, I saw more the opposite.

25 Q Well, but my question is did you see

1 comments that said similar things in 2009?

2 A I scanned through this and I didn't see  
3 anything that was this extreme, but I'd be shocked if  
4 it's not there. I mean, there's going to be somebody  
5 who says don't get rid of Saturdays. There will be.  
6 So it's got to be there on record, but I've not seen  
7 it.

8 Q Okay. Just to clarify, have you, in your  
9 review of the 2009 research, seen statements that were  
10 similar to this statement that I read?

11 A To clarify, I have not seen any statement  
12 that said Saturday delivery is part of the core  
13 franchise of the post office.

14 Q Did you see any statements that expressed a  
15 similar sentiment?

16 A People value Saturday delivery. There's a  
17 sentiment of yes, I really like Saturday.

18 Q Okay. Let me refer you back to your  
19 Carnegie Strategies, LLC website page. The last line  
20 refers to, I'm not going to read the last sentence  
21 again of that third paragraph, but there's a reference  
22 to the word products, and it says regardless of  
23 whether the products are physical products, services,  
24 technologies, software, systems or brands. Do you see  
25 that language?

1           A     I do.

2           Q     Okay.  And so is it fair to say in your  
3 understanding that when you use the word product, you  
4 refer to it broadly to include things like services?

5           A     I do.  Sorry.

6           Q     Dr. Crew, in his testimony, says that -- and  
7 for the record, this is on top of page 3 -- frequency  
8 of delivery is one of a number of attributes that  
9 constitute the quality of a mail service.  Do you  
10 agree with that?

11          A     I'll emphasize one of a number of  
12 attributes.  Again, it's very important to recognize  
13 multiattribute or multifaceted nature of any product  
14 and service because they compensate for one another.

15          Q     Right, but that's not my question.

16          A     I agree with it, but I'm putting emphasis on  
17 it's one of a number of attributes.

18          Q     Okay.  But you agree with the sentence?

19          A     Sure.

20          Q     Okay.  Do you agree with the next sentence  
21 that reducing frequency therefore represents a  
22 reduction in quality?  Let me just put a qualifier on  
23 that, which is everything else being equal.

24          A     I will make this easy.  Yes.

25          Q     Thank you.  By the way, and I probably

1 should have done this at the outset of my cross-  
2 examination, let me ask you, are you an expert in the  
3 United States Postal Service?

4 A The expertise I bring to bear today is in  
5 new products for organizations, new products, as we  
6 talked about earlier, changes in products and  
7 statistics, so analyzing empirical work, and in market  
8 research, primarily the market research. I enjoy  
9 doing those for new products because that's  
10 particularly something I, it's a part of the field  
11 that I like doing. The postal service is not one of  
12 the organizations I've worked for in the past. Am I  
13 an expert in organizations? I've worked with consumer  
14 to B to B decisions, I've worked with large, global  
15 organizations, small entrepreneurial firms. The  
16 decision concerning a new product are very similar  
17 across organizations in terms of the structure. So  
18 I'm an expert in this kind of decision? No. I'm not  
19 an expert in all the workings of a postal service.

20 Q Have you ever before your participation in  
21 these proceedings worked for the postal service?

22 A I have not.

23 Q Okay. Have you ever worked for any other  
24 postal service other than the United States Postal  
25 Service?

1           A     I have not.

2           Q     Have you ever done any scholarly studies  
3 involving either the United States Postal Service or  
4 any other postal service?

5           A     Lots of scholarly studies for organizations,  
6 but not the postal service.

7           Q     Not for the United States Postal Service?

8           A     No.

9           Q     Not for any other postal service?

10          A     Not for any other postal service.

11          Q     Are you aware that there are a group of  
12 economists who specialize in postal economics?

13          A     I have become aware during these proceedings  
14 of such a group.

15          Q     And are you a member of that elite group of  
16 people?

17          A     I am not a member of that group of people.

18          Q     And are you aware that there is a body of  
19 scholarly literature on postal economics?

20          A     I am aware of that scholarly body of  
21 literature.

22          Q     And are you conversant in that body of  
23 literature?

24          A     I have not read, other than scanning one of  
25 Professor Crew's articles to confirm that, yes, he,

1 like all other economists and academics, use expected  
2 value equations, and so I found his expected value  
3 equation. That's the only article I've read in postal  
4 economics.

5 Q Okay. So let me go back to the question I  
6 was asking you before. I think you had agreed with  
7 Dr. Crew that the frequency of delivery is one of the  
8 attributes that constitute the quality of mail  
9 delivery and that everything else being equal,  
10 reducing frequency represents a reduction in quality.  
11 So my next question is do you agree, as a general  
12 matter, everything else being equal, including price,  
13 that when the quality of a product falls, demand for  
14 that product falls?

15 A Every question is preceded by the all else  
16 equals which, frankly, in this particular case is not  
17 really the question at hand. So, your assumption, I  
18 agree with that.

19 MR. DECHIARA: Madam Chairman, I have to ask  
20 that the witness be instructed to answer the question.  
21 The question was in general, all else being equal,  
22 when the quality of a product falls, does demand fall?  
23 The witness answers not in general, but in this  
24 particular case, and then he rejects the assumption.  
25 I'm happy to engage in this sort of back and forth.

1 We may be here much longer than we need to be. I  
2 would ask the witness to please answer the questions.

3 THE WITNESS: Do I have to accept the  
4 assumptions? Can I question the assumptions?

5 MR. HOLLIES: Madam Chairman, we would like  
6 the witness to be able to explain his responses. If  
7 it has to be prefaced with a yes or a no, that's okay,  
8 too.

9 CHAIRMAN GOLDWAY: I agree with the NALC  
10 representative that the questions and responses would  
11 be beneficial to be briefer. On the other hand, I  
12 don't think I can restrict you from giving what you  
13 feel is an appropriate answer to the question.

14 THE WITNESS: Okay.

15 CHAIRMAN GOLDWAY: If you can be briefer,  
16 that would help all of us.

17 THE WITNESS: Okay. Understood.

18 CHAIRMAN GOLDWAY: Thank you, Madam  
19 Chairman. I'm not necessarily looking for brevity. I  
20 don't care about how long the answer is, I just want  
21 it to be responsive to the question. So let me try  
22 again with my question.

23 BY MR. DECHIARA:

24 Q As a general matter, and this is not a  
25 question about this particular case, as a general

1 matter, assuming all else being equal, and I recognize  
2 that not in every instance will all things be equal,  
3 but let's assume, as economists often do, that all  
4 else is equal, that when the quality of a product  
5 falls, demand for that product falls.

6 A Yes, all else equal, and under that  
7 hypothetical, sure.

8 Q Thank you. In your testimony, you  
9 repeatedly make the analogy of going to five-day  
10 delivery as the introduction of a change in product by  
11 the Postal Service, is that a fair characterization of  
12 your testimony?

13 A That is correct.

14 Q Okay. And you agree that the reduction in  
15 frequency is, all else being equal, is a reduction in  
16 quality. Would it be fair to say that if we analogize  
17 going to five-day delivery as the launching of a  
18 changed product that what the Postal Service is  
19 proposing here is proposing to launch an inferior  
20 product in terms of quality?

21 A So this is why I -- okay, I repeatedly also  
22 in this oral testimony brought the question back to  
23 the multiple attribute nature of any product and  
24 service. So if we oversimplify and we assume all else  
25 equal that the world is static and this is the only

1 attribute we're considering and all else is the same,  
2 yes, yes, yes, this is a loss of quality. But it's  
3 only in that particular context, that hypothetical  
4 situation, that these answers are relevant. My  
5 testimony is trying to address the actual issues  
6 facing us right now, which is broader than this what  
7 I'm characterizing as an oversimplification.

8 Q Well I understand --

9 A Right, so I --

10 Q I understand that it's your view that there  
11 are financial issues, and I think we all recognize  
12 there are -- let me finish my -- and I think we all  
13 recognize there are financial issues in this case.  
14 But just focusing on the question of quality, isn't  
15 what the Postal Service is proposing is to launch an  
16 inferior product?

17 A Well it's not just the financials of this  
18 cost savings that I'm thinking of in terms of the  
19 multi attribute. When I'm thinking about the actual  
20 reality facing the customer, many of them have in mind  
21 either a price increase or some kind of change in  
22 nature of the cost structure of the Postal Service.  
23 So if we rarefy this and and take it out of the  
24 reality of a price increase, all else equal price is  
25 the same and now I eliminate a day of service, granted

1       there is a loss in quality of service.

2               Q     Do you know whether this Commission has  
3       recently ruled on a request by the Postal Service to  
4       raise prices?

5               A     I saw it on a television monitor in an  
6       airport recently.

7               Q     So you know that prices are not going to be  
8       changed?

9               A     I know in this particular round prices  
10      aren't changed. Also as a consumer, now again I'm  
11      speaking as a consumer, my recollection is prices have  
12      increased frequently over my lifetime, and so I would  
13      not be surprised if there were a price increase in the  
14      future, in fact I'd be surprised if there weren't.

15              CHAIRMAN GOLDWAY: Were you informed by the  
16      Postal Service when you were viewing this information  
17      about the status of the law with regard to price  
18      increases?

19              THE WITNESS: Status of the law?

20              CHAIRMAN GOLDWAY: The current law with  
21      regard to price increases that the Postal Service is  
22      allowed to implement.

23              THE WITNESS: My recollection is that --  
24      well, I think they informed me. Do I remember exactly  
25      of the details? My recollection is it has to be

1 approved by you, any price increase, and I believe by  
2 Congress as well. Is that correct?

3 CHAIRMAN GOLDWAY: No, that's not correct.

4 THE WITNESS: Okay, so my --

5 CHAIRMAN GOLDWAY: The law that we operate  
6 under now allows the Postal Service to raise rates  
7 only if they are the same as the rate of the consumer  
8 price index.

9 THE WITNESS: Okay, that does sound  
10 familiar, they did tell me that, sorry.

11 CHAIRMAN GOLDWAY: Okay. So but I'm not  
12 sure when you were discussing your context that you  
13 understand that if we haven't raised this rate under  
14 an exceptional circumstance, which is what the Postal  
15 Service proposed, that they go back to the normal law  
16 which is rates simply follow the rate of inflation.  
17 So that's what a customer should anticipate.

18 THE WITNESS: Okay. And that's perfect.  
19 What year might -- I would guess anticipate future  
20 price increases, so when they're responding and  
21 thinking about the service cuts, the reduction in  
22 quality, and they are primed that this might be, well  
23 they wouldn't even have to be primed, they may  
24 anticipate this as an alternative to some of the  
25 future price increases.

1                   CHAIRMAN GOLDWAY: It wouldn't be, well  
2 maybe --

3                   THE WITNESS: Well they may not.

4                   CHAIRMAN GOLDWAY: Okay, we'll discuss the  
5 accuracy of some of the theoreticals that are provided  
6 to customers later, but I'm concerned that you simply  
7 think that the Postal Service can come back in a few  
8 months and propose another 5 percent increase, that's  
9 not necessarily the way the law works.

10                  THE WITNESS: And I'm, I guess I'm trying to  
11 anticipate the various ways that consumers might be  
12 thinking of price increases and I'm uneasy with the  
13 notion of ceteris paribus that the consumers think all  
14 is going to be constant and this is the only proposed  
15 change.

16                  CHAIRMAN GOLDWAY: Okay.

17                  MR. DECHIARA: Madam Chairman, I'd like to  
18 put into the record just for purposes of, not for  
19 admission into evidence, a second document which I'll  
20 mark as or ask to have marked as NALC Cross-  
21 Examination Exhibit 2. And it's a multi-page website  
22 printout which I'll have the Witness identify.

23                  //

24                  //

25                  //

1 (The document referred to was  
2 marked for identification as  
3 NALC Cross-Examination  
4 Exhibit 2.)  
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Why do some companies create captivating products, while other companies create products that fail to generate enthusiasm, or even just flop?

Built to Love reveals why product emotions are critical to the long-term success of a product, whether the product is service or physical or software, business-to-business or consumer. Built to Love also describes how to create products that people love so much they can't see themselves without them.

Praise for Built to Love

"Boatwright and Cagan present an engaging and compelling argument why product emotions drive product success. Built to Love uncovers the science of product emotion, rigorously proving the value of emotion to customers and showing how any firm can design captivating products and services."

- Daniel H. Pink. Author of Drive and A Whole New Mind

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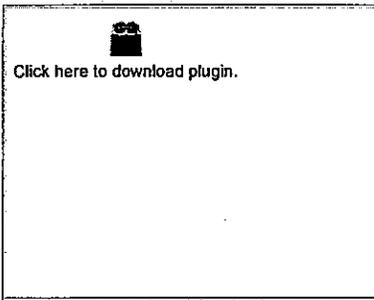
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Peter Boatwright(L) and Jonathan Cagan(R), Professors at Carnegie Mellon University

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## Built to Love: What's Inside

### Summary of Book

Built to Love reveals how companies can create captivating products that energize the marketplace and set the standard for what customers want and expect. Firms often hope the answer is to produce the latest high technology devices - only to find that they fail to light up the marketplace. Or firms rely on ads that overstate or mislead, leaving the customer disappointed and disillusioned. Instead, a deeper emotional engagement between the customer and product is required, regardless of whether the products are physical products, services, technologies, software, systems, or brands.

Using a combination of industry-based research and laboratory experiments, Boatwright and Cagan demonstrate that customers will richly pay for products that authentically provide emotional fulfillment. They uncover the science behind successful products that create an avid and loyal following, and they present evidence that product emotions increase a product's success in the marketplace as well as a firm's success in the stock market (even when the economy is down!).

A practical how-to guide, the book next shows how to analyze customers' emotional needs and translate those needs into features that galvanize those customers. Throughout, the book uses revealing case studies that show how to energize customers in both consumer and business-to-business worlds, in both large and small firms.



### List of Chapters

Introduction: Energizing the Marketplace

Chapter 1: Product Emotions

Chapter 2: Profitability of Emotions

Chapter 3: The High Emotion Index: Stock Market Gains from Emotion

Chapter 4: The Paths to Emotion

Chapter 5: Supported Emotions: The Key to Today's Leading Products

Chapter 6: Product Emotion Strategy

Chapter 7: The Emotion of Form and Touchpoints to Create It

Chapter 8: Meeting Societal Needs: Positive Roles for Emotion

Chapter 9: Emotion's Role in Technology Products

Chapter 10: Taking Action: Transform Your Products and Brands to Captivate Customers

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## About the Authors

Globally known for their rigorous and effective approach to product innovation, Professors Peter Boatwright and Jonathan Cagan collaborate in corporate consulting, research on innovation processes and tools, teaching and leading innovation teams, and speaking engagements on the topic of innovation. Peter Boatwright is an Associate Professor of Marketing at the Tepper School of Business and Jonathan Cagan is the George Tallman and Florence Barrett Ladd Professor in the Department of Mechanical Engineering at Carnegie Mellon University. In the Carnegie Mellon tradition, Boatwright also has an appointment in the Department of Mechanical Engineering, and Cagan in the Schools of Design and Computer Science.

Boatwright and Cagan actively consult with companies ranging from Fortune 100 to entrepreneurial start-ups, with a focus on product strategy and innovation as well as brand strategy. Their formal approaches to opportunity identification and problem solving have been integrated into a diverse range of companies including International Truck/Navistar, Apple, P&G, Dormont Manufacturing, Bayer Materials, Respiroics, MSA, Whirlpool, Lubrizol, Kennametal, Alcoa, RedZone Robotics, DesignAdvance Systems, Industrial Scientific, and Giant Eagle.

Boatwright and Cagan co-lead executive training sessions and practice-based courses at the university. They co-teach an annual course on new product innovation and have co-run other product strategy courses, resulting in multiple patents for corporate sponsors. They also actively collaborate on research in innovation methods and have co-authored a previous book (*The Design of Things to Come: How Ordinary People Create Extraordinary Products*). Between their consulting, corporate projects, and innovation courses they have advised over 200 product innovation teams.

Prof. Boatwright's expertise and teaching focuses on innovation, new product marketing and brand strategy, and marketing research methods. Through research, Boatwright has both developed new statistical methods as well as additional theories of consumer behavior, spanning qualitative and quantitative methodologies, studying consumer response, product assortment, and early product research methods. Dr. Boatwright has an M.S. in Statistics from University of Wisconsin, and both his M.B.A and Ph.D are from University of Chicago's Booth School of Business. Boatwright's scholarly articles appear in leading research journals in the fields of marketing, statistics, and management.

Prof. Cagan is an expert in product development and innovation methods for early stage product development, computational design, and cognitive mechanisms for innovation. Both his design methods and computer-based design research have been applied in a variety of industries. He co-founded and served as Chief Technologist of DesignAdvance Systems, Inc., a company focused on developing CAD software for the early synthesis processes. Cagan has authored over 150 publications. He is the co-author of a third book (*Creating Breakthrough Products: Innovation from Product Planning to Program Approval*). He co-founded and co-directs the Masters in Product Development program at Carnegie Mellon. Cagan has 5 issued and 2 pending patents, is a licensed Professional Engineer, and is a Fellow of the American Society of Mechanical Engineers. Cagan received his Ph.D. from the University of California at Berkeley after working for the Eastman Kodak Company. He has been on the faculty of Carnegie Mellon since 1990.



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## Upcoming Engagements

We are beginning to talk about Built to Love. Here are some of the locations we will be visiting around the country during the month of September:

*September 15* Pittsburgh (private event)

*September 22 (a.m.)* San Francisco (private event)

*September 22 (p.m.)* Silicon Valley (private event)

*September 23* Seattle (private event)

*September 29* Washington D.C. (private event)

*September 30* New York City (private event)

## Speaking Engagements

Boatwright and Cagan are available to speak on the topics of product emotion and product innovation. Their presentations are broadly appealing, and they can also be targeted to specific company contexts.

To book Boatwright and Cagan for a speaking engagement contact:

*Matt Jones at Leading Authorities:*  
[matt@leadingauthorities.com](mailto:matt@leadingauthorities.com)  
1-800-SPEAKER or (202) 783-0300

## Company Engagements

Boatwright and Cagan work with companies in various types of engagements:

1. Leading companies in the development of actionable strategies that result in emotion and performance valued by customers.
2. Guiding internal teams through innovation projects ranging from clean sheet design to product revision.
3. Training employees using interactive executive education seminars in product innovation process and methods.
4. Speaking engagements to inspire employees to rethink the way they deliver value to their customers.

They have applied their methods to large and small companies in a variety of physical product, brand, software, service, and business contexts.

To hire Boatwright and Cagan for consulting engagements email:

[boatwright@carnegiestrategies.com](mailto:boatwright@carnegiestrategies.com), [cagan@carnegiestrategies.com](mailto:cagan@carnegiestrategies.com),  
or go to [carnegiestrategies.com](http://carnegiestrategies.com)





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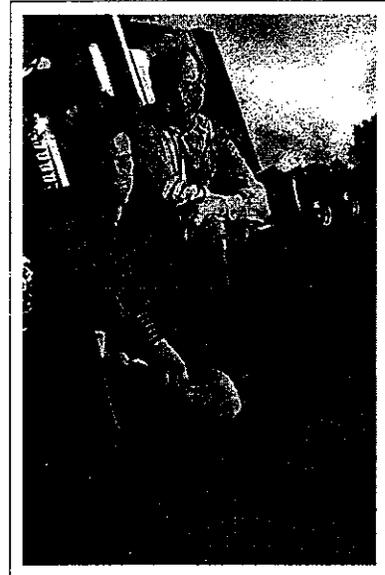
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*Peter Boatwright at boatwright@cmu.edu*  
*Jonathan Cagan at cagan@cmu.edu*



1 BY MR. DECHIARA:

2 Q Dr. Boatwright, NALC Cross-Examination  
3 Exhibit 2 is a printout of a webpage, the heading on  
4 the -- I'm sorry. It's a document that's a printout  
5 of a webpage, the heading on the first page says  
6 "Built to Love, creating products that captivate  
7 customers". Can you please identify what this  
8 document is?

9 A This is a webpage for a book that I co-wrote  
10 that came out three weeks ago.

11 Q And let me read into the record the first  
12 two paragraphs of the first page of NALC Cross-  
13 Examination Exhibit 2. It says "Why do some companies  
14 create captivating products while other companies  
15 create products that fail to generate enthusiasm or  
16 even just flop? Built to Love reveals why product  
17 emotions are critical to the long term success of a  
18 product, whether the product is service or physical or  
19 software, business to business or consumer. Built to  
20 Love also describes how to create products that people  
21 love so much they can't see themselves without them."  
22 Dr. Boatwright, you use the phrase "product emotions".  
23 What are product emotions?

24 A Product emotions is a phrase to represent  
25 emotions that are evoked by products and services.

1           Q     And how are product emotions affected if a  
2     company introduces an inferior product, a new and in  
3     terms of quality inferior product?

4           A     Well it depends if they're compensated for  
5     that. So some might -- it may be perceived as a great  
6     service. Many third-world countries right now are so  
7     pleased that they have very low cost products given to  
8     them at prices they can afford, otherwise they  
9     wouldn't have the product at all.

10          Q     How are product emotions affected if a  
11     company has a product on the market and then  
12     subsequently offers at the same price a product that  
13     is inferior in terms of quality?

14          A     The clause "at the same price" is a very  
15     important clause. Yes, that takes away, all else  
16     equal again, our assumption here, that takes away some  
17     of the value.

18          Q     That takes away some of the product  
19     emotions?

20          A     Well it may even be worse than that, it may  
21     be even negative product emotion.

22          Q     Okay. Let me give you a hypothetical. I'm  
23     not asking you to agree with the hypothetical but let  
24     me lay it out there and then I'm going to ask you a  
25     question at the end of the hypothetical. Let's assume

1 I'm a postal customer, I work Monday through Friday,  
2 and I shop online and I order products, and I enjoy  
3 the convenience of having those products delivered to  
4 me by the United States Postal Service when I'm home  
5 on Saturday.

6 And let's assume that after five-day  
7 delivery is launched, rather than receiving the  
8 packages at home on Saturday I have to shlep down to  
9 the local post office and wait in line for my package.  
10 That's my hypothetical. In that instance would five-  
11 day delivery be a product change that for that  
12 customer would be "built to love"?

13 Q So again because of its multi-attribute,  
14 ceteris paribus, they may at the same time that  
15 they're waiting in line and with some negative  
16 emotions they have to take time, they might have some  
17 other positive emotions due to the same experience.  
18 Positive emotions might be, finally a government cut  
19 some costs. Many people have, might have positive  
20 emotions over cost cutting and that may compensate  
21 some of the negative emotions. And so again, multi-  
22 attribute nature here is critical.

23 Q Have you ever heard people waiting in line  
24 at the post office having those conversations?

25 A I've heard many conversations wishing for

1 cost cutting. I have also heard many grumblings in  
2 waiting in line. So again both are true.

3 Q You say that in the first paragraph of the  
4 first page of NALC Cross Examination Exhibit 2, you  
5 refer to, you use the word "flop". Is it true that  
6 sometimes the company, and I'm speaking in general  
7 here, launches a new product and it flops?

8 A It's actually, if we speak in general and we  
9 look at statistics on commercialization of new  
10 products, more fail than succeed.

11 Q So most are flops?

12 A Again using "flop" in the way you did, sure.

13 Q Okay. If a company launches a new product  
14 or changes a product and the launch is a flop does the  
15 company in many instances go back to the original  
16 product?

17 A Well I mean what was the original product in  
18 the first place --

19 Q Well let me give you --

20 A So -- sure, give me an example, that would  
21 be good.

22 Q Okay, let's take a world famous soft drink  
23 company headquartered in Atlanta, Georgia. And for a  
24 century it's had great success, and it decides to  
25 change its formula for its soft drink. And it turns

1 out the consumers prefer the original version. Could  
2 in that instance the company go back to the original  
3 product?

4 A Well that instance is a highly exalted one  
5 in that the company overall claims that that was  
6 wonderful for the company that they flopped with the  
7 new Coke -- oh, I mentioned the company. But there  
8 was so much endearment over them returning to the  
9 original that that is a case that is often discussed  
10 maybe because it's unusual or maybe because it was  
11 public, publicly recognized.

12 Q Okay. Well let's talk about this case. Dr.  
13 Crew in his testimony had testimony that based on his  
14 expertise with the Postal Service that as a practical  
15 matter if five-day delivery is a flop in terms of it  
16 producing less in savings than anticipated or  
17 producing more in lost business than anticipated, that  
18 as a practical matter going back, that the change  
19 would be irreversible. And I've read your testimony,  
20 your written testimony carefully, and let me just ask  
21 you to make sure I'm correct, you don't in your  
22 written testimony address Dr. Crew's point that going  
23 to five-day delivery would be irreversible. Am I  
24 correct in my reading of your written testimony?

25 A I do not address that statement.

1           Q     Okay.  And did you in preparation of your  
2     testimony, your written testimony or your testimony  
3     here today, did you undertake any analysis of Postal  
4     operations to determine whether Dr. Crew was right on  
5     that point?

6           A     No I did not.

7           Q     Okay.  Let me now turn you to the first page  
8     of your testimony, in particular line 17, in which,  
9     lines 17 through 19, in which you say "for the purpose  
10    of my testimony I assume that this estimate of the  
11    gross annual (cost) savings, \$3.3 billion (line A), is  
12    correct".  When you say you assume that the Postal  
13    Service's estimate that it would have gross annual  
14    savings of \$3.3 billion from going to five-day  
15    delivery, did you do any independent, undertake any  
16    independent analysis to determine whether that \$3.3  
17    billion figure was correct?

18          A     No, I'm using the word "assume" with that  
19    context that I'm, like Dr. Crew indicated in oral  
20    testimony, I'm just accepting that and not looking  
21    into it.

22          Q     Okay, all right, I just wanted to clarify  
23    that.  And then I did want to ask you about the next  
24    sentence that goes, starts on the bottom of page 1 and  
25    goes to the top of page 2 where you say "Witness Crew

1 accepts the \$3.3 billion figure as well", when you say  
2 "accepts" I just want to clarify that what you mean  
3 there is that in your view Dr. Crew assumed it in the  
4 same way that you assumed it, but not that he  
5 independently endorsed it as accurate, am I correct?

6 A Well let's look at what he said because  
7 that's better than me stating what he was thinking or  
8 not thinking. So I'm turning to his oral testimony,  
9 page 2,523, and I didn't bring extra copies, lines 6  
10 through 11. And I will read his response. The  
11 question is, looks like multi-part type question.  
12 Anyway, I'll read his response and hopefully the  
13 question is clear, if it's not we can go back.

14 Q What line are you reading?

15 A I'm on line 6 on page 2,523. "Well the cost  
16 save assessment, I looked at some of the testimony and  
17 basically I decided along with a discussion with Paul  
18 Kleindorfer and" -- how do you pronounce your name?

19 Q Dechiara.

20 A Dechiara, thank you. "That we had enough  
21 here on our plate with these ORC estimates that we  
22 were not going to get into the details of critiquing  
23 them." So I'll stop there. Based on that, it doesn't  
24 look like he analyzed that number.

25 Q Okay. And along those lines, as long as

1 we're quoting Dr. Crew's testimony, let me refer you  
2 to his redirect testimony on page 2,590, starting on  
3 line 6, where I asked Dr. Crew, "You testified on  
4 cross-examination that you did not contest the cost  
5 savings estimates in these proceedings by the Postal  
6 Service. To what extent did you undertake a detailed  
7 study of that cost savings analysis by the Postal  
8 Service?" Dr. Crew, "I didn't undertake a detailed  
9 study." Mr. Dechiara, "Okay. So to what extent  
10 should your testimony that you don't contest the cost  
11 savings estimate be interpreted as an endorsement by  
12 you that the estimate is accurate?" Dr. Crew, "I  
13 don't endorse the estimate as accurate because I  
14 didn't do a detailed study." Do you see that?

15 A I see that.

16 Q Okay. And based on that would you agree  
17 with me that Dr. Crew is not endorsing the \$3.3  
18 billion figure?

19 A I agree "endorsement" would be a strong  
20 word.

21 Q Okay. Let me now refer you to page 2 of  
22 your testimony. There's a table on that page, Table  
23 1. Is there anywhere in the figures in this chart  
24 that takes into account the transition costs of  
25 implementing five-day delivery?

1           A     I would have to go through the testimonies  
2     that produced this.  And I otherwise skimmed through  
3     them, I do not know, I'm ignorant to the degree to  
4     which they accounted for transition costs.

5           Q     Okay.

6           A     I did read Dr. Crew's rebuttal and his  
7     concern that the transition costs may not have been  
8     accurately reflected, but that is, I have not analyzed  
9     that piece.

10          Q     Okay, all right.  So just to be clear about  
11     this let me point you to page 9 of Dr. Crew's  
12     testimony where he says, and this is the last  
13     paragraph on the page, the first line of that  
14     paragraph, he says "First, the Postal Service may be  
15     grossly underestimating the transition costs related  
16     to a reduction in delivery frequency."  So let me just  
17     ask you, again I've read your testimony, Dr.  
18     Boatwright, I've read your testimony carefully, I  
19     didn't see anything in your written testimony that  
20     took issue with Dr. Crew's statement on transition  
21     costs.  Am I correct that there's nothing in your  
22     written testimony on that issue?

23          A     Well it's hard to disagree with this because  
24     they may not be grossly underestimating either.  The  
25     "may" is pretty wide open, and so they may or may not

1 be, you know, correctly estimating, I can accept that.

2 Q Okay, that's fine and I thank you for  
3 accepting that, but that wasn't my question. My  
4 question was, is there anything in your written  
5 testimony that even addresses this issue?

6 A The transition costs there is nothing in my  
7 testimony addressing transition costs.

8 Q Okay. And you maybe have already answered  
9 this but just for the clarity of the record, you  
10 didn't undertake any independent analysis to determine  
11 whether or not the Postal Service was, in Dr. Crew's  
12 words, grossly underestimating transition costs?

13 A I did not.

14 Q Okay. Now ORC --

15 A Although, is that what he said? I mean you  
16 just said they were grossly underestimating and he  
17 wrote they may be grossly underestimating. So I just  
18 want to be clear, was there somewhere else where he  
19 said they were grossly underestimating?

20 Q No, I appreciate that clarification. Let me  
21 make my question more general.

22 A Okay.

23 Q Is it true that you did not undertake any  
24 analysis to address the question of transition costs?

25 A Yeah, I did not take any analysis on that

1 subject.

2 Q Thank you. Now ORC's market research  
3 determined that if the Postal Service went to five-day  
4 delivery it would experience a drop in mail volume of  
5 .71 percent, right?

6 A Yes.

7 Q And in your testimony you discuss various  
8 ways in which in general survey research results can  
9 suffer from bias, correct?

10 A Sure.

11 Q Okay. And one of the ways in which survey  
12 research can suffer from bias is if there's a  
13 significant lag time between the time this market  
14 research is done and when the product is launched,  
15 correct? Isn't that a potential source of bias?

16 A Well the word "bias" in that context is, I  
17 would --

18 Q All right, maybe I'm using the wrong word.

19 A Uncertainty. The further out you're  
20 forecasting the greater the uncertainty because there  
21 is a recognition that more may happen in the  
22 intermediate time. And so forecasts that are further  
23 in the future are more uncertain. So in that sense,  
24 if you want to use the word "bias" which is the way I  
25 understood it being used in that particular portion,

1 then I'm content with your statement that there's  
2 greater uncertainty or bias the further you are out or  
3 that you're forecasting out.

4 Q And as an example of that you give the  
5 example that in the pharmaceutical industry where it  
6 might take years for a drug to come to market, a drug  
7 company might do market research at one point and  
8 because of the significant lag time before the product  
9 is actually launched they may do additional or  
10 supplemental market research to make sure that the  
11 results of its market research are still good, is that  
12 a fair characterization?

13 A So backing up with the decision, whenever  
14 money is on the line and you're estimating, I mean any  
15 forecasts for new products the whole intent of the  
16 market research is to reduce the uncertainty. And as  
17 you approach that date if the initial decision was  
18 borderline you definitely need to do conduct some  
19 additional research. They may or may not find they  
20 need to conduct additional research later depending on  
21 how close the decision was or they anticipate it to  
22 be.

23 Q Right, I'm just using your example of the  
24 drug companies. Is it true that drug companies  
25 sometimes for that reason do additional research?

1           A     All companies, not just drug companies, all  
2     companies have a sequence of decision points, and at  
3     each decision point they evaluate what's the cost of  
4     the additional research, what am I going to gain from  
5     the additional research, and they make their judgment  
6     accordingly on do I perform additional research.

7           Q     And they sometimes --

8           A     And they finally reach --

9           Q     Let me finish my question. And they  
10    sometimes decide to do the additional research, no?

11          A     When the benefits outweigh the costs they  
12    hopefully decide to conduct additional research.

13          Q     And sometimes in fact they do?

14          A     And sometimes in fact they do.

15          Q     Thank you. The market research that was,  
16    the quantitative market research that was done by ORC  
17    in this proceeding or for purposes of this proceeding  
18    was completed in October 2009, correct?

19          A     Yes, correct.

20          Q     So we're talking about roughly a year ago,  
21    correct?

22          A     Yes, correct.

23          Q     Do you have any idea about when the Postal  
24    Service may be allowed to implement five-day delivery  
25    if it is allowed?

1           A     No I do not have a date in mind.

2           Q     Okay. Do you have any general notion?

3           A     Well generally I would expect it to be  
4     within five years instead of within ten.

5           Q     Okay. And do you have any either specific  
6     or general notion of how long it would take the Postal  
7     Service to actually do the implementation after being  
8     permitted to do so?

9           A     I do not. I mean general notion is that  
10    this is an extensive organization and it wouldn't be  
11    overnight as an extreme, so it would take some time.  
12    But again I have not looked into the details so I  
13    haven't worried about having to forecast how much  
14    time.

15          Q     Okay. Is it fair to say that it could be  
16    years between October 2009 and the time that the  
17    Postal Service implements a decision to go to five-day  
18    delivery?

19          A     Well the words "could be", many things could  
20    be and could be years, but I don't know if that's a  
21    more probable notion than could be one year, I don't  
22    know.

23          Q     Well we already know it's more -- sitting  
24    here today we're one year from when ORC completed its  
25    quantitative research, correct?

1           A     So if you're referring to originally from  
2     the time point of that research, sure, I can say high  
3     probability it's not one year.

4           Q     Okay.  Would you say it's a good  
5     probability, a substantial probability, that it could  
6     be additional years?

7           MR. HOLLIES:  Objection, the question has  
8     both been asked and answered, and it overtly calls for  
9     speculation, that's all it can elicit.

10          BY MR. DECHIARA:

11          Q     Well then let me clarify the question, I'm  
12     not asking you to speculate, Dr. Boatwright.  Do you  
13     have any basis to give an estimate of how long it  
14     might be before the Postal Service -- let me finish --  
15     how long after October 2009 that it might be before  
16     the Postal Service implements five-day delivery?

17          A     I said earlier I don't have any basis to  
18     make that judgment.

19          Q     Okay.  Do you know whether the Postal  
20     Service has any plans to conduct additional market  
21     research --

22          A     I --

23          Q     Let me finish the question.  As it  
24     approaches a possible day for launching five-day  
25     delivery?

1           A     I don't know of any plans to do so or to not  
2 do so.

3           Q     Okay, the Postal Service hasn't informed you  
4 that it intends to do so, has it?

5           A     They have neither informed me they intend to  
6 or don't intend to, I don't have any information on  
7 that.

8           Q     Okay.

9           A     Again --

10          Q     Would you agree that because of the passage  
11 of time since October 2009 or because of changes in  
12 things such as the macroeconomic climate that if it is  
13 years before the Postal Service implements five-day  
14 delivery that it would be warranted to conduct  
15 supplemental research?

16          A     Well again the decision, when should you  
17 conduct supplemental research, it's an issue at least  
18 the financials here are if the gained information is  
19 more financially benefit than the cost of acquiring  
20 the information, then that's the right idea to conduct  
21 additional research. Right now there is a vast  
22 disparity between the cost of acquiring information if  
23 it imposes further delays in implementation of the  
24 proposal and the potential benefit of that  
25 information.

1 Q Okay, well --

2 A Now and for that disparity to close would  
3 probably take some substantial changes in the  
4 marketplace. So I think it reasonable to forecast  
5 right now that the financials are not going to shift  
6 so much that the revenue loss is going to come  
7 anywhere close to the cost gains of the proposal.

8 Q I'm sorry, I'm not sure I understood your  
9 answer. You said the financial shifts?

10 CHAIRMAN GOLDWAY: He's presuming that the  
11 market research will delay implementation of the plan.  
12 You're presuming that the Postal Service knows in  
13 advance what its implementation date would be and can  
14 do market research in the interim. I believe that's,  
15 I'm trying to sort this out.

16 THE WITNESS: Thank you.

17 CHAIRMAN GOLDWAY: If the Postal Service  
18 knew because Congress acted and said they could do it  
19 at a certain time, the Postal Service would have  
20 notification.

21 THE WITNESS: So there's, right now the cost  
22 estimates -- cost estimates typically can be estimated  
23 much more precisely than demand estimates, here are  
24 the influence on the mail volume. And so the cost  
25 estimates right now are \$3.3 billion, and possibly the

1 post office economics can forecast what those cost  
2 estimates would be updated to if we were doing 2010,  
3 2011. Right now the impact on demand is substantially  
4 smaller than \$3.3 billion. A lot would have to change  
5 for the volumes to be shifting to be greater than \$3.3  
6 billion. So that's what I was thinking about in  
7 response even was, does it look like it's going to be  
8 necessary to conduct additional research? And at  
9 least given the numbers now it doesn't look like you  
10 need additional information for the financials alone.

11 BY MR. DECHIARA:

12 Q Well just looking at how much volume would  
13 drop if five-day delivery were implemented, is it not  
14 true that with the passage of time or a shift in the  
15 macroeconomic climate that those estimates could  
16 change?

17 A Well one of the beauties of using consumer  
18 intention data rather than economic modeling in this  
19 case is that the -- I said consumer but I should have  
20 said customer because that would, I need to include  
21 the businesses. The businesses are not necessarily,  
22 the economic model is ceteris paribus. The business,  
23 whoever's responding has the ability to make their own  
24 judgments about the dynamic climate. So they are  
25 forecasting next year, they're including some dynamics

1 in their response already, so it already accounts for  
2 some of the changes in the marketplace that they  
3 anticipated. So your question was is it true that  
4 things might change? And what I'm saying is the  
5 numbers already have accounted for change.

6 Q You're saying the respondents when they  
7 answered the responses in October 2009 knew, somehow  
8 knew, how many years in the future it would take for  
9 the Postal Service to implement, first to be allowed  
10 to implement five-day delivery, and then how long it  
11 would take to implement, and those respondents also  
12 knew both what the economic climate would be and also  
13 what the competitive options would be, and they took  
14 all of that data and baked that into their responses,  
15 is that your testimony?

16 A That's what you have to do with economic  
17 modeling. And I am a statistician and I do that, you  
18 have to in essence if you're going to forecast certain  
19 conditions and give estimates for those conditions you  
20 do have to build those in.

21 Q I'm not talking about the economists, I'm  
22 talking about the --

23 A Right, well --

24 Q The lay respondent, the customer or the  
25 business person who operates a mail room or a mailing

1 department of a company who was a respondent in this  
2 survey. Is it your --

3 A Well the response --

4 Q Dr. Boatwright, let me ask my question.

5 A Well you already asked -- go ahead, ask it  
6 again.

7 Q Thank you. Is it your testimony that those  
8 respondents when they were asked questions in October  
9 2009 were able to somehow know or accurately project,  
10 (a) how long would it be before the Postal Service was  
11 allowed to implement five-day, (b) how long it would  
12 take them after that to implement five-day, (c) what  
13 the macroeconomic climate would be at that future  
14 point that they implemented five-day, and (d) know  
15 what other competitors may or may not have sprung up  
16 in the mean time that would have offered them other  
17 options? Is it your testimony that those respondents  
18 somehow knew all of that and somehow took that into  
19 account when they gave their responses?

20 A Well there's many particulars in your  
21 statement which would require me to say no. I don't  
22 know if you want a lengthy answer to address each one,  
23 but --

24 Q But you could just say no.

25 A No.

1           MR. DECHIARA: Thank you. Thank you. Let's  
2 look at the method that the ORC used to come up with  
3 its .71 percent estimate of drop in mail volume. And  
4 to do that I'd like to refer you to two sets of  
5 documents. One is Appendix E to the testimony of  
6 Rebecca Elmore Yalch, who is USPS Witness T8. And  
7 Appendix E concerns business segment questionnaires.  
8 And then I'd also like to refer you to an excerpt from  
9 Ms. Elmore Yalch's testimony, and in particular I'm  
10 going to be referring to pages 30 and 31. So if I  
11 may, Madam Chairman, if I may pass out those two sets  
12 of documents?

13           CHAIRMAN GOLDWAY: Yeah, while you're doing  
14 it I will announce that we're going to take a lunch  
15 break from 12 to 12:30. I'm selfishly scheduling a  
16 short lunch so that I can get back here for at least  
17 an hour and a half of afternoon testimony. I will  
18 have to leave at approximately 2 and Vice Chairman  
19 Hammond will take over the chairmanship of the hearing  
20 at that time.

21           BY MR. DECHIARA:

22           Q     If you could turn to page 104 of Appendix E  
23 to Ms. Elmore Yalch's testimony -- I'm sorry, yes, to  
24 Appendix E of the testimony. And the bottom half of  
25 the page, page 104, makes reference to a Q7, do you

1 see that, on the left side?

2 A What I see is a question that's numbered Q7.

3 Q Right, right. And then the words after Q7  
4 say "Now I am going to read to you the number of  
5 pieces you said your organization will send in the  
6 next 12 months," and I'm going to stop reading there.

7 A Okay.

8 Q Is it your understanding that ORC asked  
9 respondents to estimate the number of pieces they  
10 would mail in the next 12 months after the survey?

11 A Yes, this is very typical for forecast and  
12 purchase intentions to give people dates that they can  
13 forecast like in the near term. So yes, this is what  
14 companies do just as ORC did.

15 Q Okay, this is going to take a lot longer. I  
16 don't need the commentary unless you feel it necessary  
17 to answer my question, but I'm just asking you, is  
18 that what they were asked in this case?

19 A Yes in this case and in typical cases. The  
20 commentary is necessary to put this in context. This  
21 is not unusual for them to have asked that, this is  
22 quite usual and customary.

23 Q Okay. Let me just give you a view of where  
24 I'm going to.

25 A Okay.

1           Q     I'm going to ask you a series of questions  
2     about what ORC did and I just want you to confirm  
3     whether I'm correct in understanding what they did.

4           A     Okay.

5           Q     If you insist on giving me commentary on  
6     every answer we're going to be here a lot longer than  
7     I think we need to be. The sentence at Q7 goes on and  
8     it says, after the words "next 12 months" it says "I  
9     would like for you to tell me in the first 12 months  
10    after the change in service is implemented how many  
11    individual pieces of each of the following do you  
12    anticipate your organization would send." Do you see  
13    that?

14          A     I see that.

15          Q     Okay, so just so I understand it's, so first  
16    respondents were asked, how many pieces of mail do you  
17    anticipate mailing in the next 12 months with five-day  
18    delivery, and then they were asked to give an estimate  
19    --

20                   CHAIRMAN GOLDWAY: You mean with six-day  
21    delivery.

22                   THE WITNESS: Yes, I think --

23                   MR. DECHIARA: Yes, thank you, Madam  
24    Chairman, with six-day delivery.

25                   BY MR. DECHIARA:

1           Q     And then they were asked to give an estimate  
2 of how many pieces they would mail in five-day  
3 delivery after, in the 12 months after five-day  
4 delivery was implemented, is that correct?

5           MR. HOLLIES:  Madam Chairman, inasmuch as  
6 the question that was asked is itself in the  
7 evidentiary record, do we really need to go through  
8 and judge whether or not counsel is able to accurately  
9 paraphrase it?

10          MR. DECHIARA:  It would go very quickly, I  
11 just want to confirm that we're all on the same page.

12          THE WITNESS:  Well I'm pausing.  That is  
13 what it says.

14          CHAIRMAN GOLDWAY:  That's what it says.

15          THE WITNESS:  What it says.

16          BY MR. DECHIARA:

17          Q     Okay.  All right, so let's look at page 31  
18 of Ms. Elmore Yalch's testimony, and in particular  
19 Figure 13 on page 31.  Do you see Figure 13?

20          A     I do see Figure 13.

21          Q     Okay, and then Figure 13 gives an example of  
22 how ORC conducted its calculation.  In the first  
23 column where the number 100,000 is given, that's in  
24 response to the first question that was referred to in  
25 Q7, correct?

1           A     Yes, correct.

2           Q     And the second column, the 90,000, that's in  
3 response to the second question, correct?

4           A     Correct.

5           Q     Okay. All right, I'm going to refer to the  
6 difference between the 100,000 and the 90,000 as the  
7 delta, okay? Just for the sake of my questioning.

8           A     Okay.

9           Q     Okay, and the delta here is 10,000, correct?

10          A     Correct.

11          Q     Now let me refer you back to page 104 of  
12 Exhibit E, and now I'm going to refer you to the top  
13 half of the page. There's a reference at the very top  
14 to Q10(k), do you see that?

15          A     Yes I see that.

16          Q     Okay. And that has a question that says "If  
17 the service change described does happen what is the  
18 likelihood that this change would cause your  
19 organization to modify the number of individual pieces  
20 of mail and/or packages your organization sends or the  
21 way you send it?" Do you see that question?

22          A     I see that question.

23          Q     Okay, and then there's a scale that goes  
24 from 0 to 10?

25          A     Yes.

1 Q And then based on the response that the  
2 respondent gave to Q10, that number between 0 and 10  
3 was converted into a percentage, correct?

4 A Correct.

5 Q So going back to Figure 13 in the example on  
6 Figure 13 the respondent gave 5 on what I'll call the  
7 likelihood scale.

8 A Okay.

9 Q And then 5 was, then ORC multiplied 5 by the  
10 delta and came up with an adjusted delta of 5,000,  
11 correct?

12 A Correct.

13 Q So using the likelihood scale ORC adjusted,  
14 essentially cut in half the delta that was given based  
15 on the respondent's answer, correct?

16 A Correct.

17 Q Okay. Do you know whether when ORC did this  
18 calculation process whether they told the respondents  
19 that that is what they were going to do? Let me  
20 explain.

21 A What's that? Yeah, explain please.

22 Q Okay, sorry. Did ORC say to the  
23 respondents, look we want you to give us your best  
24 estimate of your mail use in the next 12 months under  
25 six-day delivery, and then we want to give you your

1 best estimate of what your mail usage would be in the  
2 12 months after implementation of five-day delivery,  
3 and then we're going to take the difference between  
4 those and then we're going to adjust it downward to  
5 some degree. Do you know whether ORC told the  
6 respondents that that's what it was going to do with  
7 their answers?

8 A It would be strange for an organization to  
9 tell people the calculations that they're going to be  
10 doing with their answers. So I do not know. As  
11 you've seen in my testimony they should do the  
12 expected value formula, and I won't go into more  
13 detail because you've read that. But you wouldn't go  
14 through that, you wouldn't go through for instance the  
15 expected value formula with the respondents to let  
16 them know what you're doing.

17 Q Okay, so it would not be standard practice  
18 for a survey taker to walk, and I'm talking about all  
19 of the respondents, but even a subset of the  
20 respondents to say, look this is the calculations  
21 we're going to go through, that would not be standard?

22 A That would not be standard. I don't know if  
23 ORC did that, but.

24 Q Okay, all right. Now going back to the  
25 likelihood scale, the lower the number on the scale

1 the lower the percentage, correct?

2 A Yes, because it's a likelihood of change and  
3 they're multiplying by a change or a delta, so those  
4 two move together.

5 Q So if a respondent gave a 2 on the  
6 likelihood scale instead of an 8, the respondent  
7 giving a 2 would mean that the delta would be, the  
8 adjusted delta would be smaller?

9 A As it should be because that's the way the  
10 expected value works.

11 Q But it would be, correct?

12 A It would be and it should be.  
13 Mathematically so, it has to be, yes.

14 Q Yes, okay. Do you have any way of or do you  
15 know how many respondents gave low responses on the  
16 likelihood scale versus high responses on the  
17 likelihood scale?

18 A I have not looked at the distribution of  
19 answers here, so no.

20 Q Okay. So it could be that many respondents  
21 gave responses that produced a big delta that were,  
22 because of many low responses on the likelihood scale,  
23 significantly reduced, significantly adjusted downward  
24 those deltas, correct?

25 MR. HOLLIES: Objection, calls for

1 speculation. The first previous question asked  
2 whether the Witness knew what those adjustments were,  
3 he said he did not. This next question is simply  
4 another version of that same --

5 CHAIRMAN GOLDWAY: Well I would argue, Mr.  
6 Hollies, it is not the same question.

7 THE WITNESS: Could you restate the question  
8 for me?

9 MR. HOLLIES: I was not saying that it was.

10 CHAIRMAN GOLDWAY: It's a question about the  
11 delta, which is an important part of the Witness's  
12 testimony.

13 BY MR. DECHIARA:

14 Q Do you have any way of knowing whether many  
15 of the respondents gave responses that produced a big  
16 delta but because they gave also low responses on the  
17 likelihood scale the adjusted delta was small?

18 A My answer --

19 Q And if you don't know the answer's you don't  
20 know.

21 A With any probability the less, if we're  
22 flipping -- could I give a longer answer? Well, sure.  
23 So if we're flipping a coin, and it's a typical coin,  
24 50/50, and I give you a dollar each time you get a  
25 heads and you're the one flipping, on average you're

1 getting 50 cents each time you play, right? I  
2 shouldn't be questioning, sorry, I'll keep going. So  
3 we're flipping a coin, 50/50 chances of getting a  
4 dollar and we keep playing over and over and on  
5 average every time you flip you get 50 cents.

6 50 cents is lower than a dollar. So you've  
7 adjusted the dollar downward based on the probability  
8 of the coin flip. Now if we have a spinner which has  
9 20 percent probability of winning, that's a lower  
10 probability, now instead of getting 50 cents on  
11 average you're getting 20 cents on average for every  
12 turn of the spinner. So now I'm adjusting it down  
13 even further because the likelihood of you winning is  
14 even lower. The same is true here to bring it back to  
15 your question.

16 Q But I don't think you're answering my  
17 question, Dr. Boatwright.

18 A With the probability that they are  
19 changing -- I am, I believe I'm answering your  
20 question.

21 Q Let me just ask it again because I think  
22 maybe you're misunderstanding. I'm not asking you  
23 whether what was done was correct, I'm asking you a  
24 factual question. As a matter of fact in this  
25 particular case, regardless of what ORC was right or

1 wrong, do you know as a matter of fact whether many of  
2 the respondents gave low likelihood figures, low  
3 numbers on the likelihood scale?

4 A Well that was the same question as before,  
5 do I know the distribution of the answers on this  
6 probability scale?

7 Q That's my question.

8 A I do not know the distribution, so the same  
9 answer as before.

10 Q The answer is you do not know?

11 A I do not know the distribution of answers on  
12 this likelihood.

13 Q Thank you, that was my question. Let me go  
14 back --

15 CHAIRMAN GOLDWAY: Could I interrupt and  
16 just ask a question of my own? Since you were  
17 describing the statistics. I don't quite -- I would  
18 say if you're going from extremely likely to extremely  
19 unlikely wouldn't you put a 0 in the middle and 5 at  
20 the top and minus 5 at the bottom? Because if  
21 somebody says, I'm unlikely to do this, you're still  
22 giving them a discount, you know, every figure is  
23 going to reduce the number, you don't have any chance  
24 statistically for the number to go higher than what  
25 somebody proposes. I would think the correct answer

1 would, the correct statistical analysis would be 0 in  
2 the middle, 5 on the top, and minus 5 on the bottom.  
3 Why isn't that the case?

4 THE WITNESS: Well if we use the coin flip  
5 as our example again, the respondents here, let's  
6 simplify the scale to two situations, I'm either going  
7 to change or not change. And here they're telling us  
8 the probability they're going to change the volume.

9 CHAIRMAN GOLDWAY: But I get that to some,  
10 but --

11 THE WITNESS: So if they don't change their  
12 volume -- there's some probability they're not going  
13 to change their volume, that means there's zero  
14 change. There's some probability they will change  
15 their volume, and that means that they're discounting  
16 all the way. And so the real truth, kind of like  
17 multiplying the dollar figure by 50 percent and giving  
18 50 cents --

19 CHAIRMAN GOLDWAY: But what do you do with  
20 people who might actually do more than they estimate,  
21 how do you measure that? You're not --

22 THE WITNESS: What do you mean by "do more"?

23 CHAIRMAN GOLDWAY: Well if somebody says,  
24 I'm going to cut my volume by 10,000 copies but in  
25 fact they decide to cut it to 12,000?

1 THE WITNESS: Ah, good point.

2 CHAIRMAN GOLDWAY: So how do you measure  
3 that?

4 THE WITNESS: All this, well that's why  
5 we're using probabilities. Partially that's covered  
6 because we have a whole bunch of different people  
7 answering and each of them is estimating so we're  
8 getting a distribution.

9 CHAIRMAN GOLDWAY: Not if you're giving  
10 them, not that option.

11 THE WITNESS: Well we're getting a  
12 distribution. The respondents isn't telling us a  
13 distribution but you're analyzing across lots of  
14 people, the answers can get a distribution, and then  
15 there's some uncertainty, some range that was given in  
16 the testimony of, this .71 percent had some variance  
17 that was calculated that it could be a little bit  
18 above, it could be a little below in reality. Because  
19 in the end the market research isn't giving us a final  
20 exact number, it's reducing our uncertainty of this  
21 answer. I'm sorry, does that answer your question?

22 CHAIRMAN GOLDWAY: No, it doesn't answer the  
23 question of the likelihood of somebody cutting volume  
24 more than what they say in a question.

25 THE WITNESS: Well what I'm saying is --

1           CHAIRMAN GOLDWAY: I mean you're saying lots  
2 of people will answer the questions and some of them  
3 may be more optimistic and some of them more  
4 pessimistic so you're getting -- but if you then  
5 multiply all of those by a formula that says there's  
6 going to be some reduction in it you're assuming a  
7 reduction, you're never giving an opportunity for  
8 somebody to have actually done more than what they  
9 say.

10           THE WITNESS: Right, so I think part of this  
11 is, I feel like the characterization in the, I've  
12 forgotten which testimony, talked about this  
13 adjustment only due to overstatement. My view is that  
14 characterization leads to misunderstanding because it  
15 sounds like we're always adjusting these downwards.  
16 And so in my testimony I tried to be clear that the  
17 purpose here is for getting the appropriate  
18 statistics, the expected value, the mean, the average,  
19 all those words apply to the same thing, that we're  
20 not trying to adjust this in one direction, you're  
21 trying to get the best estimate. And so I'm sorry for  
22 -- so I feel like the confusion that you're presenting  
23 comes from the characterization in previous testimony  
24 that this was trying to adjust for overestimates,  
25 which really --

1           CHAIRMAN GOLDWAY: I'm not characterizing  
2 it, it just seems to me that there is no opportunity  
3 in the analysis you're providing to plan for somebody  
4 doing more than what they say they're going to do.

5           THE WITNESS: Well the calculation that they  
6 did, getting an expected value, is the midpoint. And  
7 there's probability that it would be above that or  
8 probability that it would be below, which then you  
9 then capture with some uncertainty bounds.

10          CHAIRMAN GOLDWAY: Well then there should be  
11 an uncertainty of the other way as well as --

12          THE WITNESS: Well there is uncertainty on  
13 both sides. This calculation isn't skewing it just  
14 one direction. Going back to the coin flip in the  
15 dollar that I'd be giving counsel, he's always getting  
16 on average less than a dollar across all the coin  
17 flips because he doesn't get a dollar every time and  
18 if it's a real coin on average he's getting 50 cents.  
19 So it is always going downward in that direction  
20 because sometimes you get zero. The same conceptual  
21 thing here.

22          CHAIRMAN GOLDWAY: But what you're not  
23 conceptualizing is that somebody's deciding whether  
24 it's one dollar or two dollars to put in the pot to  
25 begin with, or 50 cents instead of a dollar.

1           THE WITNESS: So here if you use your  
2           example if they're deciding between one dollar and two  
3           dollars, the real answer is either at one extreme  
4           going to one, another extreme going to two, or  
5           probabilistically somewhere in the middle. And so  
6           you're going to go between one and two. Here the same  
7           thing's true, they're going between the estimates of  
8           no change and change. And so the between here is  
9           going between those two estimates.

10           CHAIRMAN GOLDWAY: I get it for this  
11           example, but I think there's got to be something else  
12           in the analysis that covers at least the occasion in  
13           which a person who predicts that they're going to  
14           reduce their mailings by 10,000 actually decides to  
15           reduce them by 20,000.

16           THE WITNESS: So this calculation by itself  
17           initially conditions on the information that you have.  
18           "Conditions" is a fancy way of saying we're using  
19           their numbers to build our estimate and then in the  
20           analysis you're going to have to create the  
21           uncertainty bounds separately. But that's not saying  
22           it's always going in one direction, this calculation  
23           is actually the mid point, it's your best estimate  
24           according to statistical practice. It's your best  
25           estimate, recognizing it could be higher, it could be

1 lower, and that's why there is some uncertainty bounds  
2 around it.

3 CHAIRMAN GOLDWAY: Well I'm not going to  
4 argue with you, I just find the process is lacking. I  
5 understand the statistics you're talking about, but I  
6 don't think it conforms with the process that has to  
7 be analyzed here. I'll defer to the counsel here.  
8 I've used up his time and I'm going to call a break in  
9 ten minutes.

10 BY MR. DECHIARA:

11 Q Let me refer you back, Dr. Boatwright, to  
12 page 104, question 7.

13 A Sure.

14 Q And we've already discussed how in question  
15 7 it indicates that the respondents were asked two  
16 questions about future estimated mail use, the first  
17 question being mail number of pieces estimated to be  
18 sent in the 12 months, in the next 12 months.

19 A Yeah.

20 Q So the time frame for the estimate that is  
21 being asked of the respondent is 12 months after the  
22 research was conducted. So if the question was asked  
23 in October 2009 that 12-month period would be October  
24 '09 to October '10, correct?

25 A I'm sure it's correct, I wasn't worried

1 about the exact details of the shift in time, but yes  
2 -- well, go ahead and restate it and then I can say  
3 yes definitively.

4 Q Okay. The first question, for example the  
5 one that produced the 100,000 in Figure 13, the time  
6 period that was being asked about was --

7 A Next 12 months.

8 Q The next 12 months.

9 A Right.

10 Q Which could have been or probably was  
11 October '09 to October '10, correct?

12 A Next 12 months, I'm going to guess that that  
13 is what customers were thinking. The next 12 months  
14 literally, you know, there is some uncertainty always  
15 if they maybe were thinking their next fiscal year in  
16 some cases, but I hope they were thinking next 12  
17 months to align all the answers.

18 Q Okay, well so your answer is --

19 A It's hard to get in the mind of --

20 Q Let me see if I can summarize your answer.  
21 It may be unclear but your reading is that it would be  
22 in, the time frame being referred to is October '09 to  
23 October '10?

24 A So yes, October of '09 to October '10, sure.

25 Q Okay. Let's look at the question that

1 elicited the 90,000 in Figure 13, which is the second  
2 question. Now that asks for the respondent to  
3 estimate what their, how many pieces of mail they  
4 would send in the first 12 months after the change to  
5 five-day, correct?

6 A Correct, and they may or may not implicitly  
7 assume that that's implemented immediately.

8 Q Well do you have any knowledge as to what  
9 the respondents understood about when five-day would  
10 be implemented?

11 A I do not know --

12 Q Okay, and --

13 A I do not know in the context here how much  
14 they were pulled by the context of the question to  
15 still be thinking in the next 12 months versus  
16 estimating a future time period.

17 Q Right, so you don't know?

18 A I don't know.

19 Q Okay. Do you know whether they were told  
20 anything by the survey takers as to what they should  
21 believe --

22 A Well that's why --

23 Q Let me finish my question. Were they told  
24 anything by the survey takers as to what, as to when  
25 five-day would be implemented?

1           A     I didn't see that in the earlier questions  
2 here as I went through this, no.

3           Q     Okay. And so you would agree with me, would  
4 you not, that there's a good likelihood that the  
5 respondents thought of five-day being implemented at  
6 some point in the future?

7           A     Well I don't know how you're estimating the  
8 likelihood. You said there is a good likelihood,  
9 which sounds like a larger likelihood. I would agree  
10 with you that I don't know the likelihood.

11          Q     Okay, okay. Is it not important in trying  
12 to estimate the delta that we talked about earlier to  
13 do an apples to apples comparison, and by that I mean  
14 to measure the same time frame with and without five-  
15 day delivery?

16          A     Sure.

17          Q     Okay. And would you agree with me that the  
18 way this question is phrased, because it at least  
19 opens the possibility that we were talking about  
20 different time frames and because the latter time  
21 frame, the time frame after implementation, may have  
22 been, had a different macroeconomic climate, a  
23 different business climate, that we're not doing an  
24 apples to apples comparison?

25          A     I think that you have correctly seen a

1 possible difference in these two time periods, yes.

2 Q Let's go to question 10 on the top half of  
3 page 104. Let me read that question again because I  
4 want to ask you a specific question about that. It  
5 says "If the service change described does happen what  
6 is the likelihood that this change would cause your  
7 organization to modify the number of individual pieces  
8 of mail and/or packages your organization sends or the  
9 way you send it", do you see that?

10 A Yes I see that.

11 MR. DECHIARA: Okay. I'd like to show you a  
12 document -- and, Madam Chairman, I have just a few  
13 minutes before we break. Should I continue and try to  
14 squeeze this in?

15 CHAIRMAN GOLDWAY: Yes, let's get this one  
16 more in.

17 MR. DECHIARA: Okay, this is another cross-  
18 examination document which I'll ask to have marked as  
19 NALC Exhibit 3. And let me represent to you, Dr.  
20 Boatwright, that this is just a thing I found on the  
21 Internet that appears to be a layperson's document  
22 about how surveys should be conducted and I'm not  
23 asking you to vouch for anything about this document,  
24 I just want to read you something from it as a  
25 predicate for a question I'm then going to ask you.

1 And just for the record it's a document, the first  
2 page of the document is a document I created that just  
3 shows where on the Internet this document can be  
4 found. The second page is, it's entitled "Health  
5 Surveys in Social Science, a Primer for Applied Survey  
6 Projects."

7 CHAIRMAN GOLDWAY: Can we number this?

8 MR. DECHIARA: 3.

9 CHAIRMAN GOLDWAY: 3.

10 MR. DECHIARA: NALC Cross-Examination  
11 Exhibit 3.

12 (The document referred to was  
13 marked for identification as  
14 NALC Cross-Examination  
15 Exhibit 3.)

16 BY MR. DECHIARA:

17 Q And I just want to read to you the third  
18 page, it's actually page 25 of the document, it's  
19 entitled "Three Common Problems with Questionnaire  
20 Items". Number 1, "Double barreled questions. Make  
21 sure each question addresses only one construct. Bad:  
22 In general would you say that reports are accurate and  
23 on time? Better: In general would you say that  
24 reports are accurate? In general would you say that  
25 reports are on time?" Do you see that?

1           A     I do see that.

2           Q     Do you agree that in conducting survey  
3 questionnaires one should try to avoid what are  
4 referred to in this document as double barreled  
5 questions?

6           A     I agree.

7           Q     And would you agree that because Q10 asks  
8 the respondent both to give an estimate, in the same  
9 question, an estimate of a change in the number of  
10 individual pieces mailed as well as the way they send  
11 the mail or the manner in which the mail is sent that  
12 that's a double barreled question?

13          A     The double barreled requires one construct.  
14 It doesn't disallow the word "or". And in this case  
15 the "or" broadens the construct, and so it's still a  
16 single construct here. The construct is the change.  
17 Somebody might send a package but then shift their  
18 volume to FedEx, and now the mail volume at UPS still  
19 disappears. So that broader construct of, what's your  
20 potential for changing your mail volume at UPS, here  
21 is captured with this "or". It's still that single  
22 construct. So this wouldn't, again one construct  
23 doesn't disallow the word "or", and it seems to me  
24 that this, that their question here as stated would  
25 not necessarily be a, it's not a double barreled

1 question.

2 Q Would you agree with me that a respondent  
3 who's not a lawyer or not a marketing expert who  
4 responded to this survey might have read this question  
5 and thought to him or herself, well with five-day I  
6 might change the number of pieces I send a lot, I  
7 might change the quantity a lot, but the way in which  
8 I send it, in other words I'm still going to put  
9 postage on the envelopes and drop them in the mailbox,  
10 is not going to change, so for question number 10 on  
11 the likelihood scale I'm going to give a low number,  
12 meaning low likelihood, would you agree with me that  
13 there's a possibility of that sort of confusion?

14 A Well the word, the reason the words, like  
15 I'm going to postulate that this language is looser  
16 precisely because it's not intended for market  
17 researchers or attorneys. And to capture very clear  
18 communication in general, precise language often  
19 obfuscates -- there is some problem right there with  
20 that language. Precise language tends to make  
21 statements much more lengthy and sometimes harder to  
22 understand, especially over a telephone. So here the  
23 generic language I would suggest would improve the  
24 communication on average to makes sure that the  
25 respondents understood the intent of capturing the

1 probability that they're going to be shifting their  
2 volume away from, either reducing volume or shifting,  
3 reducing volume for the USPS.

4 Q So it's your testimony that asking them  
5 about a change in the number of pieces sent and the  
6 way they sent it made the question clearer?

7 A I would say the communication of that is  
8 clearer, yes.

9 MR. DECHIARA: Madam Chairman, it's a minute  
10 after noon, this is a good place for me to break.

11 CHAIRMAN GOLDWAY: Great. All right, we'll  
12 adjourn for a half an hour and be back here at 12:30.  
13 Thank you for your speedy lunch and prompt return.

14 (Whereupon, at 12:02 p.m., the hearing in  
15 the above-entitled matter was recessed, to reconvene  
16 at 12:35 p.m., the same day.)

17 //

18 //

19 //

20 //

21 //



1           A     That's a good characterization, yes that's  
2     correct.

3           Q     And since you don't know how many of the  
4     responses were towards the middle of the likelihood  
5     chart or towards the extremes, top or bottom, you  
6     don't know how certain the respondents were of their  
7     responses about how their mail behavior would be  
8     affected by five-day, correct?

9           A     Well probability formulas for uncertainty  
10    actually already account for that when you're  
11    calculating confidence intervals. So they're wider as  
12    you would anticipate given the questioning, confidence  
13    intervals are wider when your probabilities are  
14    towards the center, and they are much narrower when  
15    your probabilities are further away, that's correct.

16          Q     Okay, so if we plotted on a bell shaped  
17    curve the responses, the bell would be much fatter if  
18    more of the responses were towards the middle of the  
19    likelihood scale, correct?

20          A     Well that's not -- it depends on what bell  
21    you were actually plotting. It sounded to me like  
22    you're plotting the distribution over this particular  
23    range.

24          Q     Right.

25          A     Which without knowing the distribution in

1 fact I -- so that's a different bell curve, that's a  
2 different confidence interval than the one I'm  
3 referring to.

4 Q Okay. What is a confidence interval?

5 A It's a range of uncertainty.

6 Q And isn't it standard when someone conducts  
7 a survey that they not only provide the results of the  
8 survey but with the results they provide a confidence  
9 interval?

10 A Provide to -- well provide to whom? Who's  
11 conducting it and who's providing it? So in  
12 academics, sure, it's definitely standard in any  
13 research, academic research, that you'd provide either  
14 a confidence interval or some measure of that  
15 uncertainty, it could take the form of P values, P  
16 tests, there's various ways to present that  
17 information but that would be standard in academic  
18 work.

19 Q Well I'm not referring just to academic work  
20 but my question would include a professional survey  
21 taker organization like ORC. Would you expect an  
22 organization like that, which as far as I know is not  
23 an academic organization but is nonetheless take  
24 surveys, would you expect an organization like ORC  
25 when they provided the results that they did to the

1 Postal Service to not only provide the .71 percent  
2 figure but along with it to provide a confidence  
3 interval?

4 A I would like that to be standard in the  
5 world. The truth is when I've seen outside consultant  
6 reports more often than not they give what we call  
7 point estimates, which is a single number, rather than  
8 including the confidence intervals that I would love  
9 to see there as well as an academic.

10 Q Okay. Would you agree with me that the  
11 better practice would to have been not just to provide  
12 a point response but to provide confidence intervals?

13 A Well it depends on what you mean by better.  
14 As an academic I'm thinking of that as more exact.  
15 However the purpose of an outside consultant often is  
16 more accurate communication. And many of these extra  
17 numbers require additional explanation which then make  
18 it harder to understand the overall report. So I  
19 could make arguments that it's actually better to give  
20 the point estimates in the sense of making the  
21 decision for whoever, you know, better communication,  
22 excuse me. But as far as better statistical practice,  
23 it's better to have the confidence interval as well.

24 Q Okay. And ORC was performing this survey  
25 for the Postal Service and indirectly for the Postal

1 Regulatory Commission, which are two fairly  
2 sophisticated entities. Wouldn't it be fair to say  
3 that by providing confidence intervals ORC would have  
4 provided more helpful information than just the point  
5 figure alone?

6 A Again volume of information isn't  
7 necessarily more helpful. So I'm not, can't make that  
8 statement.

9 Q Okay, but we would agree that --

10 A I would have preferred to see them, as an  
11 academic reading the report I would have preferred to  
12 see them. Whether that would have been better  
13 communication for those two bodies, I'm not sure.

14 Q Okay. But you agree that ORC did not  
15 perform, provide confidence intervals?

16 A Not in its original report.

17 Q Okay. Did it at any point provide  
18 confidence intervals?

19 A My understanding yes, they did those  
20 calculations.

21 Q Okay. And when were they done?

22 A Where were they done?

23 Q No, when were they done?

24 A I couldn't tell you when they were done  
25 prior to my joining into the testimony.

1           Q     And do they appear in the report, the  
2 testimony in this case?

3           A     They appeared in some piece of, something  
4 that I received that looked official to me, but I  
5 couldn't tell you the number and I don't have a copy  
6 with me, so I can't look it up for you.

7           Q     Did you independently perform a confidence  
8 interval?

9           A     I did.

10          Q     Okay. Let me refer you to your testimony.  
11 Well actually before I refer you to your testimony,  
12 let me ask you, why did you perform a confidence  
13 interval if you understood that ORC had already done  
14 so?

15          A     Because the confidence intervals that I saw  
16 were actually for all the different segments, the  
17 different sized customers, the different products.  
18 And for the purposes of my communication I was wanting  
19 a single aggregate value, an overall so that I could  
20 discuss it in that context.

21          Q     Okay. If you turn to page 26 of your  
22 testimony, Note 25. And then let me read the first  
23 sentence of Note 25. It says "This 95 percent  
24 confidence interval was calculated using the standard  
25 asymptotic normal formula for percentages where

1 standard error is square root of  $pq/n$ ." Do you see  
2 that?

3 A Yes.

4 Q Is that a reference to the confidence  
5 interval you calculated?

6 A That would be, yes that's a reference to one  
7 of the confidence intervals I calculated. The last  
8 sentence in that same footnote refers to two others  
9 that I did not include here.

10 MR. DECHIARA: Okay. I'd like to, Madam  
11 Chairman, put into the record for purposes of cross-  
12 examination a document that I'll ask to have marked as  
13 NALC Cross-Examination Exhibit 4. And let me describe  
14 it for the record. It's a printout from the website  
15 of the Utah Department of Health. The first page is  
16 the website page, the second page is just the website  
17 address, and then starting on the third page is a PDF  
18 document which I printed out which discusses  
19 confidence intervals.

20 (The document referred to was  
21 marked for identification as  
22 NALC Cross-Examination  
23 Exhibit 4.)

24 //

25 //



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# Office of Public Health Assessment

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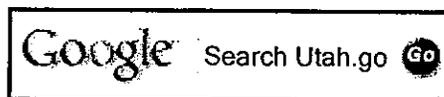
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NALC-XE-4

## Confidence Intervals in Public Health

When public health practitioners use health statistics, sometimes they are interested in the actual number of health events, but more often they use the statistics to assess the true underlying risk of a health problem in the community. Observed health statistics, that is, those counts, rates or percentages that are computed or estimated from health surveys, vital statistics registries, or other health surveillance systems, are not always an accurate reflection of the true underlying risk in the population. Observed rates can vary from sample to sample or year to year, even when the true underlying risk remains the same.

Statistics based on samples of a population are subject to sampling error. Sampling error refers to random variation that occurs because only a subset of the entire population is sampled and used to estimate a finding for the entire population. It is often mis-termed "margin of error" in popular use. Even health events that are based on a complete count of an entire population, such as deaths, are subject to random variation because the number of events that occurred may be considered as one of a large series of possible results that could have arisen under the same circumstances. In general, sampling error or random variation gets larger when the sample, population or number of events is small.

Statistical sampling theory is used to compute a confidence interval to provide an estimate of the potential discrepancy between the true population parameters and observed rates. Understanding the potential size of that discrepancy can provide information about how to interpret the observed statistic. For instance, if the state infant death rate of 5.94 increased to 6.03 in a one-year period, is that increase something that should cause concern? If the smoking rate among teens decreased from 13% to 8%, is that cause for celebration?

Technically speaking, the 95% confidence interval indicates the range of values within which the statistic would fall 95% of the time if the researcher were to calculate the statistic (e.g., a percentage or rate) from an infinite number of samples of the same size, drawn from the same population. In less technical language, the confidence interval is a range of values within which the "true" value of the rate is expected to occur (with 95% probability). This document describes the most common methods for calculation of 95% confidence intervals for some rates and estimates commonly used in public health.

### 95% Confidence Interval for a Percentage From a Survey Sample:

To calculate a confidence interval for a percentage from a survey sample, one must first calculate the *standard error* of the percentage. A percentage is also known as the mean of a binomial distribution. The standard error of the mean is a measure of dispersion for the hypothetical distribution of means called the *sampling distribution of the mean*. This is a distribution of means calculated from an infinite number of samples of the same size drawn from the same population as the original sample.

Once you have calculated the standard error of the percentage, you must decide how large you want the confidence interval to be. The most common alternative is a 95% confidence interval. This is the width of the interval that includes the mean (the *sampling distribution of the mean*,

Then the 95% confidence interval is:

$$.13 \pm 1.96 * \text{standard error} = .13 \pm 1.96 * .015 = .13 \pm .0294 = .101 - .159$$

So the 95% confidence interval has a lower limit of 10.1% and an upper limit of 15.9%

The formula used above applies to a binomial distribution, which is the distribution of two complimentary values (e.g., heads and tails, for and against). If you are calculating a confidence interval for a different statistic, such as an average, you'll need to modify the equation. The quantity (pq) is the variance of a binomial distribution. If your measure is not a proportion, but, say, an average, you must modify the formula, substituting the pq quantity with the variance. The standard error can also be calculated as the standard deviation divided by the square root of the sample size:

$$\frac{\sigma}{\sqrt{n}}$$

### Small Samples

If the sample from which the percentage was calculated was rather small (according to central limit theorem we can define small as 29 or fewer) then the shape of the sampling distribution of the mean is not the same as the shape of the normal distribution. In this special case, we can use another distribution, known as the *t* distribution, that has a slightly different shape than the normal distribution.<sup>2</sup>

The procedures in this case are analogous to those above but the *t*-score comes from a family of distributions that depend on the "degrees of freedom." The number of degrees of freedom is defined as "n-1" where "n" is the size of the sample. For a sample of size=30 the degrees of freedom is equal to 29. So, for a 95% confidence interval, you must use the *t*-score associated with 29 degrees of freedom. That particular *t*-score is 2.045 (see Appendix 1.). So you would multiply the standard error by 2.045 instead of 1.96 to generate the 95% confidence interval.

If our sample were a different size, say 20, then the degrees of freedom would be 19, which is associated with a *t*-score of 2.093 for a 95% confidence interval. As you see the interval will get wider as our sample size is reduced. This reflects the uncertainty in our estimate of the variance in the population. For a 95% confidence interval with 9 degrees of freedom the *t*-score is 2.262. Table 1. lists the *t*-scores for specific degrees of freedom and sizes of confidence interval. For a 95% confidence interval, you would use the *t*-score that defines the points on the distribution that excludes the most extreme 5% of the distribution, which is 0.025 on either end of the curve.

<sup>2</sup> Student's t-distribution, downloaded on 2/13/09 from [http://en.wikipedia.org/wiki/File:Student\\_densite\\_best.JPG](http://en.wikipedia.org/wiki/File:Student_densite_best.JPG)

the probability that the true value falls below or above the interval boundaries than is the case for standard symmetric confidence intervals for small proportions.

The method used is as follows:

(1) Perform a logit transformation of the original percentage estimate:

$$f = \log(p) - \log(1-p)$$

where:

p = the percentage estimate

f = the logit transformation of the percentage

(2) Transform the standard error of the percentage to a standard error of the it's logit transformation:

$$se(f) = se(p)/(p*(1-p))$$

where:

se = standard error

(3) Calculate the lower and upper confidence bounds of the logit transformation of the percentage:

$$Lf = f - t(\alpha/2, df)*se$$

$$Uf = f + t(\alpha/2, df)*se$$

where:

Lf = lower confidence bound of f

Uf = upper confidence bound of f

t(alpha/2, df) = the value of the t-score corresponding to the desired alpha level (0.05 for a 95% Confidence Interval) and the degrees of freedom (degrees of freedom is defined as "n-1" where "n" is the sample size).

(4) Finally, perform inverse logit transformations to get the confidence bounds of p:

$$Lp = \exp(Lf)/(1+\exp(Lf))$$

$$Up = \exp(Uf)/(1+\exp(Uf))$$

where:

Lp = lower confidence bound of p

Up = upper confidence bound of p

### Complex Sample Designs

The above formulas assume that the survey sample was a *simple random sample*. If the survey used a complex sample design (such as clustering within households or disproportionate sampling from various geographic regions), special techniques must be used to calculate the standard error of the mean. Those techniques are accomplished using statistical software such as SAS®, STATA®, or SUDAAN®.

### When the Rate is Equal to 0

When the percentage or rate is equal to zero, using the above calculation will yield a confidence interval of zero, which is incorrect. A simple method you can use to estimate the

For example, in a given geographic area, there were 722 births in a single year, and seven infant deaths. The infant mortality rate in was 9.7 per 1,000 live births, calculated as  $[(7/722)*1,000]$ . The lower and upper confidence limits are calculated using the confidence factors found on Appendix 2. The factors for seven events are .4021 and 2.0604 for the lower and upper limits of the confidence interval, respectively. The lower limit of the confidence interval =  $9.7*.4021 = 3.90$ , and the upper limit =  $9.7*2.0604 = 19.99$ , for a rate of 9.7 and a 95% confidence interval from 3.90 to 19.99. If this same rate had been based on 100 deaths then the confidence factors would be .8136 and 1.2163. The lower limit would be  $9.7*.8136$ , and the upper limit  $9.7*1.2163$  for an estimate of 9.7 with a confidence interval from 7.89 to 11.80. This interval is much smaller due to the greater number of deaths on which the rate is based.

In the Utah IBIS-PH query system, starting in March 2010, the confidence factors are obtained by using SAS® software that requires specification of the percentage of the inverse gamma distribution to be excluded on either end of the distribution (2.5% for a 95% confidence interval), and the two parameters associated with the distribution function: the mean and the variance. In the case of the crude rate, where the variance and mean are equal, this is the special case of the gamma family of distributions known as the Poisson distribution.

### Directly Age-Adjusted Rates

When comparing across geographic areas, some method of age adjusting is typically used to control for area-to-area differences in health events that can be explained by differing ages of the area populations. For example, an area that has an older population will have higher crude (not age-adjusted) rates for cancer, even though its exposure levels and cancer rates for specific age groups are the same as those of other areas. One might incorrectly attribute the high cancer rates to some characteristic of the area other than age. Age-adjusted rates control for age effects, allowing better comparability of rates across areas. Direct standardization adjusts the age-specific rates observed in the small area to the age distribution of a standard population (Lilienfeld & Stolley, 1994)<sup>5</sup>.

The directly age-adjusted death rate is a weighted average of the age-specific death rates where the age-specific weights represent the relative age distribution of the standard population.

$$\text{Directly age-adjusted death rate (DAADR)} = \sum W_{si} * D_i / P_i = \sum W_{si} * R_i$$

Where.....

$W_{si}$  = the weight for the  $i^{\text{th}}$  age group in the standard population (the proportion of the standard population in the  $i^{\text{th}}$  age group) =  $P_{si} / \sum P_{si}$

$P_{si}$  = the population in age group  $i$  in the standard population

$D_i$  = number of deaths (or other event) in age group  $i$  of the study population

$P_i$  = the population in age group  $i$  in the study population

$R_i$  = the age-specific rate in the  $i^{\text{th}}$  age group

<sup>5</sup> Lilienfeld, DE and Stolley, PD (1994)

there are fewer than 20 (some say 25) cases in the index population, indirect standardization of rates should be used.

Indirectly standardized rates are based on the Standardized Mortality Ratio (SMR) and the crude rate for a standard population. Indirect standardization adjusts the overall standard population rate to the age distribution of the small area (Lilienfeld & Stolley, 1994)<sup>8</sup>. Strictly speaking, it is valid to compare indirectly standardized rates only with the rate in the standard population, not with each other.<sup>9</sup>

An indirectly standardized death or disease rate (ISR) can be computed as:

$$ISR = SMR * R_s$$

$$SMR = \frac{\text{observed deaths/disease in the small area}}{\text{expected deaths/disease in the small area}} = \frac{D}{e} = \frac{D}{\sum (R_{si} * n_i)}$$

Where...

SMR = observed deaths in the small area/expected deaths in the small area

D = observed number of deaths in the small area

e =  $\sum (R_{si} * n_i)$  = expected number of deaths in small area

$R_s$  = the crude death rate in the standard population

$R_{si}$  = the age-specific death rate in age group i of the standard population ( # deaths / population count, before applying the constant)

$n_i$  = the population count in age group i of the small area

For indirectly standardized rates based on events that follow a Poisson distribution and for which the ratio of events to total population is small (<.3) and the sample size is large, the following two methods can be used to calculate confidence interval (Kahn & Sempos, 1989)<sup>10</sup>.

(1) When the number of events  $\geq 20$ :

$$CI_{ISR} = \pm 1.96 \sqrt{(SMR/e)} * R_s * K$$

<sup>8</sup> Lilienfeld & Stolley (1994)

<sup>9</sup> Rothman, Kenneth J. and Greenland, Sander (1998) *Modern Epidemiology* (2nd Ed.). Philadelphia, PA: Lippincott.

<sup>10</sup> Harold A. Kahn and Christopher T. Sempos (1989) *Statistical Methods in Epidemiology*. New York: Oxford University Press.

**Appendix 1. Upper critical values of Student's t distribution with  $K$  degrees of freedom**

Probability of exceeding the critical value

| $K$ | 0.10  | 0.05  | 0.025  | 0.01   | 0.001   |
|-----|-------|-------|--------|--------|---------|
| 1   | 3.078 | 6.314 | 12.706 | 31.821 | 318.313 |
| 2   | 1.886 | 2.920 | 4.303  | 6.965  | 22.327  |
| 3   | 1.638 | 2.353 | 3.182  | 4.541  | 10.215  |
| 4   | 1.533 | 2.132 | 2.776  | 3.747  | 7.173   |
| 5   | 1.476 | 2.015 | 2.571  | 3.365  | 5.893   |
| 6   | 1.440 | 1.943 | 2.447  | 3.143  | 5.208   |
| 7   | 1.415 | 1.895 | 2.365  | 2.998  | 4.782   |
| 8   | 1.397 | 1.860 | 2.306  | 2.896  | 4.499   |
| 9   | 1.383 | 1.833 | 2.262  | 2.821  | 4.296   |
| 10  | 1.372 | 1.812 | 2.228  | 2.764  | 4.143   |
| 11  | 1.363 | 1.796 | 2.201  | 2.718  | 4.024   |
| 12  | 1.356 | 1.782 | 2.179  | 2.681  | 3.929   |
| 13  | 1.350 | 1.771 | 2.160  | 2.650  | 3.852   |
| 14  | 1.345 | 1.761 | 2.145  | 2.624  | 3.787   |
| 15  | 1.341 | 1.753 | 2.131  | 2.602  | 3.733   |
| 16  | 1.337 | 1.746 | 2.120  | 2.583  | 3.686   |
| 17  | 1.333 | 1.740 | 2.110  | 2.567  | 3.646   |
| 18  | 1.330 | 1.734 | 2.101  | 2.552  | 3.610   |
| 19  | 1.328 | 1.729 | 2.093  | 2.539  | 3.579   |
| 20  | 1.325 | 1.725 | 2.086  | 2.528  | 3.552   |
| 21  | 1.323 | 1.721 | 2.080  | 2.518  | 3.527   |
| 22  | 1.321 | 1.717 | 2.074  | 2.508  | 3.505   |
| 23  | 1.319 | 1.714 | 2.069  | 2.500  | 3.485   |
| 24  | 1.318 | 1.711 | 2.064  | 2.492  | 3.467   |
| 25  | 1.316 | 1.708 | 2.060  | 2.485  | 3.450   |
| 26  | 1.315 | 1.706 | 2.056  | 2.479  | 3.435   |
| 27  | 1.314 | 1.703 | 2.052  | 2.473  | 3.421   |
| 28  | 1.313 | 1.701 | 2.048  | 2.467  | 3.408   |
| 29  | 1.311 | 1.699 | 2.045  | 2.462  | 3.396   |
| 30  | 1.310 | 1.697 | 2.042  | 2.457  | 3.385   |

1 CHAIRMAN GOLDWAY:

2 (Discussion held off the record.)

3

4

5 BY MR. DECHIARA:

6 Q Dr. Boatwright, can you turn to the second  
7 page of the, what I referred to as the .pdf document?  
8 It's the second page of this document that begins on  
9 the third page of the printout that says "Confidence  
10 Intervals in Public Health."

11 A I believe I'm at the second page. It has a  
12 bell curve --

13 Q Right, exactly.

14 A -- printed on it? Yes.

15 Q Okay. Under the picture of the bell curve  
16 there is some text, and it looks like, and it looks  
17 like it says  $PQ$  divided by  $N$ , under the square root  
18 sign. Do you see that?

19 A I see that.

20 Q Okay. Is that the same formula that you  
21 used that's referred to on the first sentence of  
22 footnote 25 of your testimony?

23 A That is the same.

24 Q Okay. Now, if you turn to page, the next  
25 page of the .pdf document in NALC cross-examination

1 Exhibit 4, the second paragraph begins as follows.

2 "The formula used above applies to a binomial  
3 distribution, which is the distribution of two  
4 complementary values (e.g. heads and tails, for and  
5 against)." Do you see that?

6 A I see that.

7 Q First of all, can you tell us what your  
8 understanding of what a binomial distribution is?

9 A That's exactly what it says here. It's a  
10 distribution where there's two possible outcomes. Or  
11 the random variable that has two possible outcomes,  
12 with a static probability, here listed as P.

13 Q Okay. And was, were the estimates that  
14 Respondents gave to ORC regarding their estimated  
15 future mail use binomial?

16 A Well, if we read the center, "The formula  
17 used above applies to the binomial distribution," it  
18 doesn't say exclusively to the binomial distribution.  
19 It actually applies to percentages in general, where  
20 your percentage is estimated from a population.  
21 So percentages turn out to be acymphatically normal  
22 when you get the barge samples. And large here, as a  
23 statistician, varies by context, but 2,000 is way  
24 large. Generally 30 is large enough.  
25 So anyway, it applies to binomials, correct. It also

1 applies to other percentages is also correct.

2 Q Okay, but none of that was my question. My  
3 question was, were the estimates given by the  
4 Respondents of their future estimated mail use  
5 binomial?

6 A Well, they were not binomial, but it was the  
7 appropriate formula to use for the --

8 Q I understand that it was appropriate, but  
9 the response I was looking for you've given me, which  
10 was that they were not binomial, correct?

11 A That's correct.

12 Q Okay.

13 A They were not binomial, and yet I could  
14 easily take their answers. I could take the zero --

15 CHAIRMAN GOLDWAY: Okay.

16 THE WITNESS: Am I not going to change?  
17 Versus all the other one through 10 probability of  
18 change. And I would have, by definition, a binomial  
19 distribution. So I can create a binomial distribution  
20 very easily from their responses.

21 BY MR. DECHIARA:

22 Q Do you agree that large mailers like the  
23 national accounts account for a disproportionate  
24 amount of mail sent?

25 A That's my understanding. That's the greater

1 volume, yes.

2 Q Do you know whether, when ORC reached its  
3 point-seven-one-percent figure, whether that number  
4 was based on estimated volume changes of a few large  
5 mailers, or a lot of small mailers?

6 A Point-seven-one percent, was it estimated  
7 from a broader population or just from a few?

8 Q Right.

9 A Well, they, according to the testimony, they  
10 were very careful to sample and pull numbers in from  
11 different products, segmentation by product and by  
12 type; in a sense, a size of mailer. So that  
13 particular estimate, I mean, so their .71 is  
14 reflective of a population, rather than of just the  
15 largest group.

16 Q Right. I'm not asking you whether the  
17 Respondents were reflective of the population at  
18 large. What I'm asking you is, is the result -- do  
19 you know, and maybe you don't know, is the result  
20 more, the resulting number more attributable to  
21 estimated mail changes by a smaller number of large  
22 mailers, like national accounts? Or changes, changes  
23 by smaller mailers?

24 A Well, the formulas, the way the statistical  
25 formulas work is there is some group which drives the

1 majority of volume, proportionately they are going to  
2 have more influence on the answer. Not influence in a  
3 political sense; I guess that word is a little bit  
4 awkward here. They are going to have greater impact  
5 on the .071 than a smaller-volume group.  
6 So if you're looking for averages in population,  
7 naturally the numbers, the calculations are going to  
8 be more impacted by those who are sending the most  
9 volume.

10 Q Would it have made a difference to your  
11 calculation of the confidence intervals, whether this  
12 .71 percent was driven by changes estimated by a small  
13 number of large mailers, like national accounts?

14 A You know, there are many different ways. I  
15 actually did multiple ways, and one way I did it was  
16 to calculate exclusively for that large group. First  
17 class, I think it's first -- no, it wouldn't be bulk  
18 rate. Whatever it was, the largest-volume segment.  
19 And it was very, very close to this.  
20 This, this formula, if I wanted to use for segmented  
21 groups, would have to modify this formula. But here I  
22 was trying for kind of a broader interval, just to get  
23 ballpark calculations. And if I did the actual  
24 detailed exact formula, it would actually have been  
25 much more narrow, much more -- it would have been

1 narrower than this. So this is kind of an over-  
2 estimate of the confidence interval, if you will.

3 Q Okay. Just for the clarity of the record,  
4 when you were saying, in your response just now when  
5 you said this formula, you are referring to the  
6 formula that's set out on the first sentence of  
7 footnote 25.

8 A That's correct. There are a variety of  
9 confidence interval calculations that can be used, and  
10 I chose one that, again, for communication purposes,  
11 was simpler, and then achieved the purposes of giving  
12 people an understanding of what kind of ranges we're  
13 looking at.

14 Q In his testimony Dr. Crew, on page 7, says,  
15 "At the very least, the Postal Service should have  
16 also undertaken an econometric analysis as another  
17 means of predicting how ending Saturday delivery would  
18 impact mail volume." Are you familiar with that, that  
19 testimony?

20 A I'm familiar with that testimony, yes.

21 Q Okay. Let's assume, hypothetically -- and I  
22 know you're not going to agree with this hypothetical,  
23 but let's see if you can answer the question  
24 nonetheless. Let's assume hypothetically that there  
25 were no cost obstacles or feasibility obstacles to

1 performing an econometric study. Would you agree that  
2 having done an econometric study would have helped  
3 inform the Postal Service's understanding of the  
4 impact of five-day delivery?

5 A Well, if you can get more information  
6 without any cost, feasibility is included in the cost  
7 there, more information is better than less  
8 information.

9 Q And the reason you, or what you argue in  
10 your testimony -- correct me if I'm wrong -- is that  
11 you argue that doing an econometric study would not  
12 have been possible. Is that, am I, is that correct?

13 A That's probably too strong. Let's look at,  
14 can you point me to the exact words so that I can see  
15 what I said?

16 Q I will, okay. Page 23, line 6. You say on  
17 page 23, line 6, "However, given the lack of empirical  
18 data to use with an econometric model, I do not see  
19 that such an approach was an available option."

20 A So available, I would say, is very different  
21 from possible. And so sure, if we were going back and  
22 starting over and data were available from some other,  
23 some other country that would be similar enough to the  
24 United States to where you could look at their  
25 experience over time of volume loss, that would have

1       been relevant information to help, help estimate and  
2       forecast the impact here. Great idea.

3           Q       And when you, before you wrote that sentence  
4       that I just quoted, did you give any serious thought  
5       to how one might construct an econometric model for  
6       this case?

7           A       Oh, sure. I gave it quite a bit of serious  
8       thought.

9           Q       And did you conclude that, given the lack of  
10       empirical data, that such an approach would not be an  
11       available option?

12          A       So one of my own studies is looking at  
13       econometric data for a change-in-service option for a  
14       retailer. So this is a retailer had -- well, it was  
15       looking at stock-outs, absence of product, and looking  
16       at the impact of sales volume that the absence of  
17       products led to. Some of that sales volume would be  
18       switching to an alternative product. Some of that  
19       sales volume loss on a particular product would be  
20       going to people, buying it at competitors, or just not  
21       even buying at all.

22                   So I'm quite familiar with econometrics  
23       modeling. The great thing about that data is having  
24       the stock-out information, I could estimate the impact  
25       of reduction of service, if you will, because we had a

1 whole history of data of reduction of service.

2           If somebody -- I gave the example here of a  
3 country that was very similar. If there were a  
4 country very similar to the United States, and in a  
5 similar time period as well, in terms of the economy.  
6 So all the kinds of things that align. That would be  
7 a data set that I could analyze.

8           So I gave thought to it, I thought of the  
9 structure. I left the wording open partly because  
10 there might be data sets that I don't know about.

11           Q     Let me refer you to page 7 of Dr. Crew's  
12 testimony. He says, this is towards the bottom of the  
13 page, "Indeed, other postal operators have used  
14 econometric studies when seeking to assess demand  
15 elasticity in connection with contemplated service  
16 changes."

17           Did you undertake any effort to see whether  
18 that statement was accurate?

19           A     Well, that statement's pretty broad. And I  
20 notice the Postal Service has a wonderful and very  
21 accurate econometric model; for instance, looking at  
22 demand elasticities for price changes.  
23 So as they're evaluating, well, how those work in  
24 general is that you have a whole history of price  
25 changes in the past. And in essence, it's an elegant

1 pattern-matching, where you're looking at what-if  
2 analysis of what if we make it one percent, two  
3 percent type of price change. And given the types of,  
4 given other, you know, whatever goes into the model,  
5 et cetera, then my understanding is such econometric  
6 models the Post Office is using are pretty accurate in  
7 forecasting what's going to happen to demand.

8           The key here is you have a whole history of  
9 price changes from the past. If, for example, you  
10 suddenly decided to change rates, still talking about  
11 prices of 15 to 20 percent. And I don't think  
12 historically, to my knowledge, you've had such great,  
13 such large price changes.

14           The model is, breaks down, in terms of its  
15 forecasting accuracy. So there, even thinking about  
16 price changes, econometric model, the uncertainty of  
17 the estimates is far greater than the uncertainty when  
18 you're making price changes that are consistent with  
19 past changes here.

20           In the context of service reduction, to my  
21 knowledge, I think in the twenties I heard that the  
22 United States had reduced its service. But that was  
23 quite a bit of time ago. Or maybe it was Canada.  
24 In any case, we don't have that kind of data available  
25 to use the elegant econometric models that have

1 already been developed, because they have enveloped  
2 price changes.

3 But service reductions, we would need the  
4 data on service reductions in order to see what  
5 happened in the past, so that we can understand what  
6 happens in the future.

7 Q Are you done?

8 A I'm done.

9 Q Okay. Can you answer my question now?

10 A I thought that was the answer.

11 Q No, you did not. Okay, here is my question.  
12 Dr. Crew testified that, "Other postal operators have  
13 used econometric studies when seeking to assess demand  
14 elasticity in connection with contemplated service  
15 changes." Did you, for example, look at any  
16 literature concerning other postal operators to see  
17 whether Dr. Crew's statement is true?

18 A I gave you one example of an econometric  
19 model that is consistent of demand elasticities in  
20 response to service changes. Service here being price  
21 included as part of the service, the price of the  
22 service. So I gave you one example, which is well  
23 used --

24 Q Okay, maybe we're not understanding each  
25 other. When Dr. Crew, as I understand it, when he's

1 referring to other postal operators, he's talking  
2 about postal services in other countries.

3 A Sure.

4 Q Okay. And Dr. Crew is saying in other  
5 countries, postal operators have used econometric  
6 studies when seeking to assess demand elasticity in  
7 connection with contemplated service changes. Have  
8 you looked at those studies?

9 A I don't need to look at those studies.  
10 Because --

11 Q That's not my question. My question is not  
12 do you need to.

13 A The answer to --

14 Q My question is, did you look at the studies?

15 A I'll give you the quick answer now, and a  
16 longer answer later, to understand why it matters.  
17 No.

18 Q Thank you. Now, you also say the cost of an  
19 econometric study would be a problem, because in your  
20 estimate the cost of an econometric study here would  
21 have been north of \$1.55 billion. Is that your  
22 testimony?

23 A That's my testimony, yes.

24 Q And --

25 A At least in the example that I presented.

1 It doesn't mean that all studies in all cases would be  
2 \$1.55 billion.

3 Q And most of that \$1.55 billion in the  
4 ballpark estimate you gave was from the cost of delay,  
5 you know, of implementation, correct?

6 A Right. Correct.

7 Q Putting aside for a minute the cost of delay  
8 of implementation, do you have an estimate of what it  
9 would have cost just to, for the Postal Service just  
10 to conduct the study, or have someone conduct the  
11 study for it?

12 A I was illustrating the cost here of, because  
13 the delay would be the greatest piece. And if I'm  
14 focusing here on the decision at hand, and if we're  
15 going to, as Dr. Crew was indicating --

16 CHAIRMAN GOLDWAY: Could you just ask the,  
17 answer the question? What does it cost to hire  
18 somebody to do an econometric study? That's the  
19 question.

20 THE WITNESS: It's going to vary on what  
21 goes into it. As far as some people might, you might  
22 have a full-time PhD student working on it, so you're  
23 paying the PhD student's salary, doubling it for money  
24 going to the school. So let's call that salary  
25 piece --

1 CHAIRMAN GOLDWAY: Give us a range.

2 THE WITNESS: Well, I don't, I don't know  
3 the range. So it's trivial relative to the \$1.5  
4 billion cost of delay, which is why I rounded it off.

5 BY MR. DECHIARA:

6 Q Okay. So can we agree that the cost of  
7 doing the study itself is trivial, and not the issue?

8 A One-point-five-billion dollars is non-  
9 trivial.

10 Q No, no, no, no. I'm saying taking out --

11 CHAIRMAN GOLDWAY: That's the study, not the  
12 impact of the study.

13 BY MR. DECHIARA:

14 Q Or not the cost of delay.

15 A Sure. If we were going back in time, and if  
16 it were feasible. Again, you brought up these other  
17 countries and studies over there, countries which may  
18 not be comparable to the United States system. So  
19 there is pointless -- there is also the value of the  
20 information, which is critical to look at.

21 Q Dr. Boatwright --

22 A If we're looking at the cost --

23 CHAIRMAN GOLDWAY: Thank you, Doctor.

24 THE WITNESS: -- and the value as well --

25 BY MR. DECHIARA:

1           Q     Dr. Boatwright, I'm trying to focus your  
2     answers, and I'm trying to focus my questions. So I  
3     understand you have a multi-layered objection to Dr.  
4     Crew's suggestion that an econometric study be done.  
5     And you say it's not -- wait, let me finish. You say  
6     it's not feasible. I've asked you about that; you've  
7     testified about that.

8                     You say it may have a cost, cause a costly  
9     delay in implementation. We haven't talked about  
10    that; we'll get to that.

11                    But now I'm focusing simply on the cost of  
12    having the survey conducted; whether it's -- I'm  
13    sorry, the econometric study. Whether it's a good  
14    econometric study that says what, whatever the -- do  
15    you have an estimate of the cost of just doing the  
16    econometric study?

17           A     I have to object to your characterization.  
18    I'm not against an econometric study. I perform them.

19           Q     Okay, that's fine.

20           A     I like them.

21           Q     Okay, good. Do you have, do you have an  
22    estimate of what --

23           A     I don't have an estimate of what it would  
24    cost.

25           Q     Okay. Would you agree with me that it's a

1 trivial amount compared to the magnitude of the  
2 numbers we're talking about in this case?

3 A A million dollars is a trivial amount  
4 relative to \$1.5 billion.

5 Q Is that answer yes?

6 A My answer is yes.

7 Q Thank you. So now let's talk about the cost  
8 of delay.

9 A Sure.

10 Q How long would an econometric study have  
11 taken to do?

12 A Again, that varies on who's doing it. If  
13 they work full time and the data were already cleaned  
14 and prepped and handed to them, they may be able to do  
15 it in months.

16 Q Okay.

17 A Okay.

18 Q Well, let's assume the United States Postal  
19 Service has in-house economists, it has money  
20 available to hire outside economists, this is a high-  
21 priority matter. Let's assume all those things, which  
22 I think are safe assumptions. How long, do you have  
23 an estimate of how long it would take if this were a  
24 high-priority matter for the Postal Service?

25 A Again, assuming that all that's easily, all

1 the data are available, et cetera, then months.

2 Q Okay. And so if this, if an econometric  
3 study had been done concurrently with the ORC  
4 research, it would have been done a long time ago,  
5 correct?

6 A That's correct.

7 Q And if it were started today, it would most  
8 likely be done before five-day delivery were  
9 implemented, correct?

10 A Well, here I'm focusing my testimony on a  
11 decision which will be made long before that five-day,  
12 before the implementation.

13 Q Yes.

14 A So I'm focusing on a different time point.

15 Q It doesn't matter what you were focusing on,  
16 I just want you to answer my question. My question  
17 is, do you agree that if the econometric study were  
18 done today, or started today, it would be completed  
19 before five-day delivery were implemented.

20 A I'm assuming it would.

21 Q Thank you. Let me refer you to page 8 of  
22 Dr. Crew's testimony. He says, in the bottom  
23 paragraph on page 8, "More significantly, even if mail  
24 volume only dropped 0.71 percent initially in response  
25 to the end of Saturday delivery, the resulting mail

1 volume loss may grow in magnitude in subsequent  
2 years." Do you see that?

3 A I do see that.

4 Q Now, I've looked through your written  
5 testimony, and I did not see anywhere in your written  
6 testimony where you dispute that. Am I correct that  
7 in your written testimony you did not dispute that --

8 A There is nothing to dispute.

9 Q Let me just finish my sentence.

10 A Okay.

11 Q Thank you. Am I correct that there's  
12 nothing in your written testimony that disputes that  
13 statement by Dr. Crew?

14 A There's nothing -- you can't dispute that.  
15 It may also lessen. May or may not grow, it may or  
16 may not lessen. So there's no statement here to, to  
17 dispute.

18 MR. DECHIARA: Madame Chairman, I have no  
19 further questions.

20 CHAIRMAN GOLDWAY: Okay. Let's see, is  
21 there anyone else who wishes to ask questions at this  
22 time? Are there questions from the Bench?

23 COMMISSIONER ACTON: I have a question.

24 CHAIRMAN GOLDWAY: Mr. Acton, Commissioner  
25 Acton?

1                   COMMISSIONER ACTON: Thank you, Madame  
2 Chairman.

3                   BY COMMISSIONER ACTON:

4           Q     Thank you for your testimony today, Dr.  
5 Boatwright.

6           A     Thank you for listening, Commissioner Acton.

7           Q     Good afternoon. You've got a table in your  
8 testimony, Table 1, where you talk about growth in net  
9 savings for five-day delivery. You referenced it  
10 earlier. Are these -- I have a couple of questions,  
11 just to be clear.

12                   Are these ongoing annual estimates?

13           A     These are estimates for just 2009. So these  
14 are using 2009 figures. The estimate is, since this  
15 is for 2009, that would be the savings only in 2009.  
16 But there would be annual savings and probably, you  
17 know, potentially of similar magnitude.  
18 So other years weren't estimated, but this is an  
19 annual savings, and there would be annual savings year  
20 after year.

21           Q     Did you perform those recurring estimates  
22 for, beyond 2009?

23           A     I did not.

24           Q     Okay. Do you think that these -- these  
25 estimates are based on volume forecasting, are they not?

1           A     Well, the middle portion, lines B, C, and D,  
2     are volume forecasting. The first line is purely,  
3     there's no volume forecasting. That's purely cost  
4     savings.

5           Q     But I'm going to the question of the bottom  
6     line here, the net savings.

7           A     Okay. That has both in it.

8           Q     There is some volume forecasting going on.  
9     And does that, does the nature of the calculations  
10    make them static? Or are they dynamic assessments?

11          A     They would be dynamic in the sense that, I  
12    mean, the cost volume -- I mean, we already know that  
13    volume has been changing in the past, and the same  
14    kinds of changes in the past would also change in the  
15    future. So yes, volume is dynamic.

16          Q     I guess where I'm going with this is, you  
17    know, of course, the nature of volume forecasting of  
18    late. And if these are dynamic assessments, then, and  
19    the trend has not been good for postal volume, is the  
20    likelihood that that would be expressed in a negative  
21    fashion going forward?

22          A     Well, the past trend has been outside of the  
23    six-day-to-five-day move. So if that were to  
24    continue, that's on top of the change. So here we're  
25    only looking at the change due to the six-to-five-day proposal.

1 Q Okay. I have one other question; it has to  
2 do with the likelihood.

3 A Okay.

4 Q In your testimony, you're using the  
5 likelihood, you're assessing the likelihood scale in  
6 the context of service testing, as opposed to product  
7 testing. Although I think that your characterization  
8 here is that this is a new product with different  
9 service qualities, is that right?

10 A I'm using the product in that general sense,  
11 that services are an example of a product.

12 Q Is there --

13 A Have you --

14 Q I'm sorry.

15 A I just wanted, you would use the two  
16 differently. And so I'm curious what you were  
17 referring to as products separate from service.

18 Q Right. I think I'm wondering if there is a  
19 good precedent in your experience for the use of the  
20 likelihood scale in, in a situation where, as opposed  
21 to testing new products, you're testing the changing  
22 nature of a given product; in this case, the frequency  
23 of delivery.

24 A I'm trying to think if there are some  
25 examples for you, or with you. Because the use of the

1       likelihood scale is something you, its application is  
2       for a decision in general. And so there would be no,  
3       in my mind there would be no need to distinguish  
4       between a product and service, because it's not a  
5       decision of an uncertain quantity in the future.  
6       But for the sake of example, I'm just thinking  
7       through. You know, most products have service  
8       components now. I'm trying to think of a pure  
9       service. Nothing is coming to mind quickly. Sorry.

10           Q       But it sounds as if -- and the reason I ask  
11       you is I'm trying to understand that it's in your  
12       professional opinion, your expert opinion, that the  
13       use of this likelihood scale is perfectly valid for  
14       this application.

15           A       Perfectly valid. In fact, it would be  
16       invalid not to use the probability when you have an  
17       uncertain quantity.

18           COMMISSIONER ACTON: Thanks again. Thank  
19       you, Madame Chairman.

20           CHAIRMAN GOLDWAY: I have a couple of  
21       questions. I know other Commissioners do, as well.

22                    You presume that there is a permanent  
23       \$3.1 billion savings every year, going forward. But  
24       if the Postal Service kept Saturday delivery, and  
25       there were reduced volumes; and they continued to have

1 savings, as they've demonstrated in the last two or  
2 three years, overall in the work hours versus volumes;  
3 wouldn't you have to compare the future savings to  
4 what would have been the savings anyhow? Rather than  
5 fixing it at this particular time, and then just  
6 extrapolating for 10 years? Wouldn't the proper  
7 economic analysis take out that difference between  
8 what would be saved anyway?

9 THE WITNESS: So that would be the proper  
10 answer to a different question, if I understand your  
11 question correctly. So if you're wanting to forecast  
12 the economic condition of the Post Office, you would  
13 need to bring in -- economic condition overall, with  
14 and without six-day and five-day delivery, you would  
15 need to bring in some of these other factors to know  
16 the base line of economic condition.

17 CHAIRMAN GOLDWAY: Well, we have a  
18 \$5 million study that was done, that estimates  
19 reductions in volumes over the next 10 years,  
20 regardless of what's being done.

21 THE WITNESS: Okay.

22 CHAIRMAN GOLDWAY: And we also have an  
23 indication from the Postal Service that they plan on  
24 cutting costs over the next 10 years, and a very  
25 strong record of their ability to cut costs in the

1 last three years, some of which can be calculated  
2 directly to the issue of delivery.

3 They've had greater success in cutting costs  
4 in mail processing, but they still have had  
5 significant, given the structure of having to have  
6 delivery points that continue to grow, and a person to  
7 deliver mail, you still have significant efficiencies  
8 in that.

9 So when you project what the Postal  
10 Service's likely savings are going to be, don't you  
11 have to take out what they would have saved anyway  
12 over that period of time?

13 THE WITNESS: But looking at their overall  
14 savings over the next 10 years would need to be  
15 comprehensive and take --

16 CHAIRMAN GOLDWAY: Wouldn't you say that the  
17 3.1 forever is not quite right? You'd have to adjust  
18 that over time, assuming that there were going to be  
19 efficiencies and volume declines anyway over time?

20 THE WITNESS: So if each of these pieces is  
21 independent of one another, then the -- aside from  
22 other dynamics like Commissioner Acton was asking  
23 about -- the 3.1 I'm going to say was going to be  
24 stable for this piece, if they're independent.  
25 But partly what you're saying is there might be some

1 interplay or interaction between all the different  
2 pieces of proposals. So the comprehensive view would  
3 need that interaction.

4 Here, as I understand this study, it was  
5 really just looking at the one contribution.

6 CHAIRMAN GOLDWAY: So it's looking at the  
7 one contribution, and assuming that the cost savings,  
8 that the savings are going to be -- that the general  
9 operations, year after year after year, would be the  
10 same. The costs would be the same.

11 THE WITNESS: Well, the --

12 CHAIRMAN GOLDWAY: But that's not the  
13 indication the Postal Service has announced for the  
14 future, or that anyone has projected.

15 THE WITNESS: Well, I don't, I don't --

16 CHAIRMAN GOLDWAY: So I don't see how you  
17 can get 3.1, 3.1, 3.1 every year.

18 THE WITNESS: Well, there may be -- well,  
19 there's more, you know, more of the Post Office --

20 CHAIRMAN GOLDWAY: Would --

21 THE WITNESS: I don't see any reason why the  
22 \$3.1 billion would change due to other changes  
23 proposed, because I don't know maybe the interplay  
24 between the various proposals.

25 CHAIRMAN GOLDWAY: So you don't, you haven't

1 looked at the 10-year plan and the Postal Service's  
2 plan for cutting costs anyway, regardless of this.

3 THE WITNESS: Other than a quick glance, no,  
4 I didn't look into those in detail.

5 CHAIRMAN GOLDWAY: But just in general  
6 principles, you know, if you were advising some other  
7 corporation, and they told you that they were making  
8 changes over time to reduce costs; and you know, they  
9 were going to have lower volumes and lower, and route  
10 consolidations and lower overhead of various sorts all  
11 along. And this year they could take this much out  
12 for the Postal Service. But since next year there  
13 would be fewer of those costs to take out anyway,  
14 because they had reduced them, wouldn't that \$3.1  
15 million be less?

16 THE WITNESS: Well, that --

17 CHAIRMAN GOLDWAY: Or 3.1 --

18 THE WITNESS: Now they no longer have to  
19 spend that -- let's say it's all with salaries. I  
20 don't know what it breaks down to, the \$3.1 billion.  
21 If you rehired all those people the next year, you're  
22 respending it.

23 CHAIRMAN GOLDWAY: No, but what I'm saying,  
24 that even if -- they were going to save some of that  
25 \$3.1 billion anyway, because volumes are going to go

1 down and they were reducing things and having cost  
2 efficiencies next year that they don't have in place  
3 this year. So if you took, the next year if you took  
4 this from six to five day, the savings would be less  
5 because there would be fewer employees and less  
6 overhead to go from. And you might have a lower, you  
7 know, there might be some change in the volume ratios,  
8 as well.

9 So I don't see how you can say 3.1 every  
10 year for 10 years, as an economist. Wouldn't you make  
11 some of those adjustments in another report to another  
12 company?

13 THE WITNESS: Well, this calculation is  
14 looking at just this one change. With just this one  
15 change, which is not your question, it would be  
16 \$3.1 billion year after year after year --

17 CHAIRMAN GOLDWAY: Et ceterus parabus.

18 THE WITNESS: Yeah, et ceterus parabus.

19 CHAIRMAN GOLDWAY: Which you --

20 THE WITNESS: But there are, what I think  
21 you're saying is that there are alternative cost  
22 measures that could overlap with this.

23 CHAIRMAN GOLDWAY: No, I'm saying there are  
24 cost measures that are going to go on, period.

25 THE WITNESS: And if those start maybe, if

1 those kick in first, let's say those end up --

2 CHAIRMAN GOLDWAY: Those are kicking in.

3 THE WITNESS: -- laying off some people --

4 CHAIRMAN GOLDWAY: They are.

5 THE WITNESS: -- there would be fewer people  
6 to lay off for six-day, possibly.

7 CHAIRMAN GOLDWAY: So next year --

8 THE WITNESS: So that's somewhere around  
9 between the two.

10 CHAIRMAN GOLDWAY: Yes, I'm saying this year  
11 they're cutting and cutting and cutting. So if they,  
12 at the point that they implement a six-day, should  
13 that be allowed by Congress, the savings could well be  
14 less than \$3.1 billion.

15 THE WITNESS: It might be. They may have  
16 already accomplished some of this, and the overlap may  
17 lessen, yes.

18 CHAIRMAN GOLDWAY: Okay. And then I wanted  
19 to ask you, we had that interesting discussion about  
20 how your philosophy is that you like to add value to  
21 enhance a brand, and to ensure the success of a  
22 company.

23 What would you think about adding a seventh  
24 day, as the Inspector General has proposed? How would  
25 you, say, we're going to increase the value of the

1 Postal Service by making it a seven-day delivery  
2 system? How would you measure that?

3 THE WITNESS: Again, cost aside, that  
4 certainly would be valued by many people, to have a  
5 seventh day.

6 CHAIRMAN GOLDWAY: Clearly, this truck  
7 company had to spend more money to fit out its trucks,  
8 to recognize the human nature of the people that it  
9 was going to serve. They decided to invest that money  
10 to build their brand.

11 THE WITNESS: That's true, very true. But  
12 at the end of the day, they do have to stay in  
13 business. So you could, at the end of the day --

14 CHAIRMAN GOLDWAY: Yes, but they made a  
15 calculation. So how would you measure a calculation  
16 to increase service?

17 THE WITNESS: I would go back and also  
18 consider the demand implications, how many more  
19 revenues is that going to bring in for the extra value  
20 that you're providing. So it would be a very similar  
21 type of analysis that we've been discussing today,  
22 just the other direction.

23 CHAIRMAN GOLDWAY: Have you done much work  
24 with regulated agencies?

25 THE WITNESS: I have not.

1           CHAIRMAN GOLDWAY: Because the issue here is  
2 the relationship between price and service.

3           THE WITNESS: Uh-huh.

4           CHAIRMAN GOLDWAY: And in a regulated agency  
5 you're supposed to maintain the same service level at  
6 a set price.

7           THE WITNESS: Okay.

8           CHAIRMAN GOLDWAY: So if you're going to  
9 reduce the service and maintain the same price -- in  
10 fact, raise the price -- what does that do to the  
11 value of the product?

12          THE WITNESS: Well, hopefully, again, I kept  
13 on using the words like multi-attribute, because there  
14 are many ways to provide value. So hopefully you  
15 would compensate people some other way.

16          CHAIRMAN GOLDWAY: Do you have some other  
17 ideas of what they would be?

18          THE WITNESS: That final paragraph, I don't  
19 really mean it to be pie in the sky, oh, invent  
20 something wonderful. I really do mean, honestly, that  
21 there are ways --

22          CHAIRMAN GOLDWAY: Well, but if we're going  
23 to allow the Postal Service to reduce its service, and  
24 you're saying that the answer is to add value --

25          THE WITNESS: Long term, you need to add value.

1           CHAIRMAN GOLDWAY: But don't you need to do  
2 it at the same time, to maintain value in a regulated  
3 environment?

4           THE WITNESS: There may be, I don't know how  
5 you're measuring service for the purposes of the  
6 regulation. There might be a temporary dip, which may  
7 not be allowed for you. Again, I don't know how you  
8 measure it. I'm thinking in terms of your long-run  
9 objectives, you certainly do want to add value back in  
10 in other ways for people.

11           CHAIRMAN GOLDWAY: Okay. And one other  
12 question. With regard to the questionnaire that was  
13 given out, if the customers had been asked, had been  
14 told that the Postal Service is experiencing some  
15 financial difficulty, and they are hoping to save  
16 money; but you don't indicate to them that there is an  
17 option for price increases, because really they're  
18 just tracking the consumer price index; would you have  
19 gotten the same answers? If you hadn't put in the  
20 fact that there might be a price increase, or that the  
21 price increase was related to the reduction in  
22 service.

23           If you had just asked them, you know, the  
24 Postal Service wants to save a little money; could you  
25 live with five days. Would you have gotten similar

1 answers or different answers? Just intuitively,  
2 whether you --

3 THE WITNESS: I'm not sure that that's not  
4 so different from what was asked, so I guess I'm  
5 confused.

6 CHAIRMAN GOLDWAY: I thought they were given  
7 a context.

8 THE WITNESS: They were given context. But  
9 it sounded to me like you were giving context, as  
10 well.

11 CHAIRMAN GOLDWAY: Well, I'm just saying  
12 the, my only context is the Postal Service is  
13 interested in saving a little money. And the context  
14 they had it was in, you know, in financial difficulty,  
15 and you'd have different, you know, and that the  
16 option is to raise prices. Instead of raising prices,  
17 would you accept five-day delivery. At least that's  
18 what the people who came to our hearings have told us  
19 they were asked.

20 THE WITNESS: The goal is to present the  
21 context that they're going to face in the future,  
22 which is, which is an estimation in itself.  
23 And so if you're presenting a different context from  
24 the future, then, then you would possibly get  
25 different answers, yes.

1                   CHAIRMAN GOLDWAY: Okay.

2                   THE WITNESS: But that's the goal, is you're  
3 trying to get what they really will do in the future.  
4 You're trying to present the context that really will  
5 be there.

6                   CHAIRMAN GOLDWAY: Right. So if there's  
7 some dispute about what the context was in the  
8 questions they asked, then I might have concern about  
9 the answers that were, were received from that.

10                  THE WITNESS: Concerned, but I did put a  
11 table to, on sensitivity analysis, the Table 19, to  
12 help people with magnitudes of such concerns. And I  
13 didn't put these numbers in of plus-or-minus one  
14 percent, or two percent or five percent as right  
15 answers. I put this in as just a template to, if you  
16 want to choose different numbers yourself and run  
17 through this, that's the intent of this, is to  
18 encourage you to do so.

19                  CHAIRMAN GOLDWAY: So you were just  
20 estimating yourself what those numbers were. You  
21 don't have any empirical data for those numbers.

22                  THE WITNESS: I do not. And so all those  
23 numbers, every time at least the magnitude value is  
24 \$3.1 billion, regardless of these plus or minuses, you  
25 know, yours might shift to, you know, \$2.8 billion or

1 something different, depending on what numbers you  
2 used.

3 CHAIRMAN GOLDWAY: If we did our analysis  
4 and we figured that the savings were one billion,  
5 would that have changed some of your answers there,  
6 too?

7 THE WITNESS: Well, what I'm trying to do is  
8 report the answers. One billion is one billion, and  
9 that's what I reported.

10 CHAIRMAN GOLDWAY: No, if we had decided.  
11 If we decide when we go through all the numbers,  
12 because we look at our costs differently from the  
13 Postal Service. Bottom line, they're only going to  
14 save \$1 billion a year. Would that have changed any  
15 of the ways that you estimated those numbers there?

16 THE WITNESS: I believe I don't know what  
17 you're saying. If I had known that before this, I  
18 would have reported the one billion, and commented, I  
19 mean, that all the rest of the report would go  
20 through, but --

21 CHAIRMAN GOLDWAY: Okay, okay. Thank you.  
22 That clarifies it for me. Commissioner Blair.

23 COMMISSIONER BLAIR: Thank you, Madame  
24 Chair.

25 BY COMMISSIONER BLAIR:

Heritage Reporting Corporation  
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1           Q     Good afternoon, Dr. Boatwright. A couple of  
2 lines of questions. But first I want to start off in  
3 asking, I was looking at your bio. And it says that  
4 you do product development, you do research based on  
5 product development methods, looking at, assessing  
6 customer needs, opportunities, et cetera, et cetera.  
7 And I was wondering, and I think the Chairman began to  
8 touch on this, is there a difference in your market  
9 research when you're looking at customers and markets,  
10 sir, by a monopoly? Versus that in the private or,  
11 private sector? Which faces full-fledged competition.  
12 Not monopoly, protected products.

13           A     When the focus is on customer needs, there  
14 really shouldn't be a difference in the market  
15 research. Because your goal is truly understanding  
16 the customers.

17                     The way you might serve that, your answer of  
18 how do I achieve those needs, might shift, depending  
19 on your organization and the structure. But as far as  
20 understanding and empathizing, like about the  
21 qualitative research here was geared towards  
22 understanding and really trying to provide a match  
23 between the proposal and what customers truly needed.  
24 But, so the market research, you asked about market  
25 research, is there any difference. And I'm saying no,

1 there is no difference, because you're really trying  
2 to understand the customer.

3 Q Well, when that customer has, when the  
4 entity no longer provides that service and it creates  
5 a void, is that not factored into any of the research  
6 on something like this? I was just trying to, I was  
7 just trying to get a better understanding of -- the  
8 Postal Service exercises a broad monopoly over letters  
9 and the mailbox. And if you're cutting off 17 percent  
10 of the delivery, which is one day of service, how does  
11 that factor in to -- I don't know if it does. And I  
12 was just trying to get a better grasp of how this  
13 would affect, how this would be factored into your  
14 research.

15 A I believe that was --

16 Q And I guess also, it would also factor into  
17 the demand, the ultimate demand for the product, if  
18 it's not being delivered, if it's not being given as  
19 often to the public.

20 A Well, that was the actual goal of all of  
21 this. The qualitative study would include people's,  
22 really, emotional reaction to looking at their  
23 wording. And that's included -- well. So yes, it's  
24 all about that void, of what if it's gone, how you're  
25 going to react. And many, many customers seemed like,

1 given the current situation, they could live without.  
2 The quantitative is also focused exclusively on the  
3 void. It's like what if it's gone, now what's going  
4 to happen in the marketplace? And it's trying to  
5 estimate that, as well.

6 Q Did you do any research on, if the  
7 monopolies were waived in any of these situations,  
8 about what kind of, what customers would then do? The  
9 possibility of another entity entering the market, if  
10 permitted, to fill that void?

11 A Well, I think there are other, for some  
12 portions of the service there already are other  
13 competitors. Or you can think of other days as being  
14 substitutes or a substitute product; people can go on  
15 other days.

16 So naturally customers are thinking about  
17 alternatives that would be open to them in the future,  
18 at least with the restricted alternatives they have.  
19 I have not analyzed relaxing the monopoly at all, to  
20 answer that part of the question, no.

21 Q Well, it goes to the point that I'm  
22 concerned about stopping a six-day delivery, because  
23 it seems that customers would want an alternative of  
24 some kind. And it doesn't seem that this proposal is  
25 providing that kind of alternative, especially for

1 people who are dependent upon Saturday mail delivery.

2 So that's the aspect that I'm coming from.

3 A Okay.

4 Q And the other thing I wanted to ask you, you  
5 had quite a discussion with Mr. Dechiara over  
6 branding. And how, what happens, what does your  
7 research show that when an entity shifts its brand  
8 from focusing on one of its unique aspects to  
9 something else, because it dropped that unique aspect?  
10 I'm specifically referring to the Postal Service's use  
11 of its ubiquity. I'm looking at the cover of their  
12 2005 annual report. And boldly on the cover it  
13 declares, "Everywhere, Every Day," which seems to me  
14 to be touting its six-day -- although it's not every  
15 day, it's not Sunday -- but it's touting its six-day-  
16 a-week delivery.

17 Now you're proposing a service, little S,  
18 whereby it's not really every day, it's five days a  
19 week. And what does your research show that customers  
20 think about that, when something that an entity had  
21 been touting, had used as one of its unique marketing  
22 aspects, and now they no longer do that? What  
23 happens? Does it cause dissonance with customers?  
24 What does your research show?

25 A Well, I think certainly a loss of something

1 valued is, is negative. There are trends in the  
2 marketplace already, people are already shifting, some  
3 people are already shifting some of their volume  
4 elsewhere. So that indicates that you have less, you  
5 have less value to lose, which isn't necessarily a  
6 good thing, either.

7 So that, that portion, so sure again, to the  
8 extent that you're getting rid of something valued,  
9 that's a problem. Although partly there is the  
10 presentation that what if you don't do it. And I  
11 don't know if anybody would think oh, no, we won't  
12 have a Postal Service, because that's quite extreme.  
13 But if that's the alternative.

14 So I guess it really depends on the, the  
15 comparison. So comparison, I think some of these  
16 studies were comparing price changes versus loss of a  
17 day. And so that's where you start to see people's  
18 relative preferences. But absolute preferences,  
19 prefer, you know, six days, or even seven.

20 QSo you said something that really caught my  
21 attention, when you said there's less value to lose.  
22 Why would you have said that? I mean, is that your  
23 assessment of the postal system today, is that it's  
24 not as, it doesn't play the same role today as it did  
25 25 years ago?

1           A     Well, with looking at the loss of volume  
2     that's already pre-existed this proposal, more and  
3     more volume is shifting, for instance, electronically,  
4     so you have less of the pie that you're delivering.  
5     And that's sort of what I'm referring to, is that you  
6     have a smaller pie that you're affecting than you did  
7     before.

8           Q     So it's really a recognition of, a  
9     recognition of a diminished product.

10          A     Yes. And so the ultimate goal is how can we  
11     start to grow back the other way. That's not in this  
12     report, but I think, holistically, that's something  
13     that all of you are working with.

14          Q     And you don't see growing it the other way  
15     by providing greater services, greater days of  
16     delivery.

17          A     If it hampers -- so the a long-term  
18     objective is to go the other way, possibly the step  
19     that will enable you to do so is to have a short-term  
20     loss for a larger gain. Companies do that kind of  
21     thing, as well, short-term loss, larger gain. I don't  
22     know if it's the right thing or the wrong thing, and  
23     that's not what I'm about. I was just looking at,  
24     there definitely is a short-term gain here, but that's  
25     all I was looking at.

1           Q     It just seems to me that, that what you've  
2     been telling us today is that it's almost a  
3     recognition of a product that, in your opinion,  
4     doesn't play the same role that it did years back, or  
5     in a previous day. It's a recognition that, that  
6     cutting days of delivery is needed in order to balance  
7     its demand in society today. Am I misinterpreting  
8     you, or is that a correct interpretation?

9           A     That's correct, but I don't want, I mean,  
10    there are certainly people who have the same high  
11    value going to their mailbox each day. So I'm really  
12    talking in aggregate, looking at the reduced volume,  
13    and just simply talking about that pie. And with that  
14    explanation, yes, yes, I would agree.

15                   COMMISSIONER BLAIR:   Okay. Thank you.

16                   CHAIRMAN GOLDWAY:   Commissioner Langley.

17                   COMMISSIONER LANGLEY:  I don't have any  
18    questions at this time, but I do thank Dr. Boatwright  
19    for being here.

20                   THE WITNESS:   Thank you.

21                   CHAIRMAN GOLDWAY:  I have one more question,  
22    if you don't mind. One of the things I was reminded  
23    of today by my staff person is that this change is  
24    really not just a change in delivery. It's also a  
25    change in collection; mail that's collected on a

1 Friday will not be picked up until Monday. And  
2 processing and delivery time.

3 And I'm wondering whether the -- because  
4 there was some confusion about that during the hearing  
5 process we had, when we had these long public  
6 hearings. I'm wondering whether, had there been more  
7 discussion of that in the questions that were asked of  
8 people, whether there would have been some change in  
9 their perception, as well.

10 You know, people might have thought well, I  
11 can live without picking up my mail on Saturday, or  
12 you know, getting it. But there's a whole process  
13 that's involved here, in terms of well, you can, your  
14 mail will be stopped for at least an extra day,  
15 sometimes two days, because of this, in its  
16 processing, in its time to be picked up. You know, it  
17 will sit in that collection box for an extra two days.  
18 And I just wondered whether questions that explained  
19 that more fully would have made a difference in the  
20 results that you talk about in your market research.

21 THE WITNESS: Well, again, if they were  
22 presented with a different scenario than the one  
23 presented to them, that can impact the final  
24 estimates. The qualitative results for sure, I  
25 recollect that they were presented with a list of the

1       implications of what all went to the five-day  
2       proposal.

3                   And so as far as the qualitative feedback  
4       from customers, I believe that led to some changes,  
5       actually, and some tempering of what you're actually  
6       going to do. So there seemed to be at least some  
7       discussion there.

8                   And in the end, you know, everybody agrees  
9       this is a negative impact; and therefore, sales are  
10      going to go down rather than up. And so that's  
11      capturing the reaction. If you presented different  
12      material up front, then there would be some change in  
13      that negative reaction, and the volume estimate, as  
14      well.

15                   CHAIRMAN GOLDWAY: Okay, well, thank you.  
16      Are there any other questions before -- oh.  
17      Commissioner Hammond, did you have a question?

18                   VICE CHAIRMAN HAMMOND: I have no questions  
19      for Dr. Boatwright. Thank you.

20                   CHAIRMAN GOLDWAY: Thank you. You usually  
21      let me know. Yes.

22                   COMMISSIONER ACTON: I have one more.

23                   CHAIRMAN GOLDWAY: Oh, you do, okay.

24                   BY COMMISSIONER ACTON:

25                   Q     One final question from me, Dr. Boatwright.

1 This is a bit of a follow-up to a reference Chairman  
2 Goldway made earlier.

3 The Commission -- and this again has to do  
4 with Table 1 of your testimony. You say that Line A,  
5 gross savings, for the purposes of your testimony,  
6 you're assuming that this estimate is correct. It was  
7 provided to you, I suppose, by the Postal Service,  
8 yes?

9 A It was provided in, yes, in one of the  
10 testimonies.

11 Q And the Commission, as you probably know, is  
12 going about trying to assess the accuracy of that  
13 number. And we may have some variance from that.

14 A Okay.

15 Q And I believe Chairman Goldway proposed it  
16 could be, just for the sake of discussion, let's say  
17 we put it at a billion dollars, instead of  
18 \$3.3 billion.

19 A Okay.

20 Q Do these other inputs, do they vary with the  
21 change in your first line?

22 A The cost savings actually -- no, they would  
23 be independent.

24 Q That's what I think. So by that instance,  
25 if we were using a billion as the example of gross

1 savings, then the new calculation would be, I believe,  
2 about \$800 million, instead of of \$3.1 billion.

3 A That's 200. I believe it would actually, if  
4 you start with a billion, I think it's less than that.  
5 One billion minus the 4-6, plus the 2-6, or a negative  
6 two, minus another two. So it's 600 million, I  
7 believe. I think that's what you said.

8 Q Okay. All right. So I'm just trying to  
9 determine what sort of impact our findings on gross  
10 savings might have in the context of your table here.  
11 So we can plug in our number and --

12 A Yes.

13 Q -- calculate a new net savings.

14 A Yes. Perfect.

15 COMMISSIONER ACTON: Thank you.

16 CHAIRMAN GOLDWAY: I think that about  
17 clarifies things. Thank you. I think we can break  
18 now for you to discuss with Mr. Hollies whether you  
19 have any answers you'd like to provide to the -- how  
20 much time do you think you'll need?

21 MR. HOLLIES: Fifteen minutes would be  
22 appreciated.

23 CHAIRMAN GOLDWAY: Okay. Before we break,  
24 I'd just like to announce to our audience here  
25 listening that Senator Akaka has submitted a statement

1 about his concerns on this proposal. And just as  
2 Senator Murkowski her statement to us two weeks ago,  
3 we will handle this statement in just the same way in  
4 terms of the record. And it will be posted on the  
5 internet for people to read.

6 Senator Akaka was unable to attend our  
7 meeting today, although he had hoped to originally,  
8 but we are grateful for his ongoing interest in the  
9 Postal System as a whole. And in particular we're  
10 very pleased that he took the opportunity to submit  
11 his own specific statement on this case in front of  
12 us.

13 And with that, I'll adjourn for 20 minutes.  
14 Is that what you said? Fifteen, 15 minutes. And I'll  
15 be back here to welcome you, but then I'll have to  
16 leave very soon after that. Thank you.

17 (Whereupon, a short recess was taken.)

18 CHAIRMAN GOLDWAY: We're reconvening.  
19 Counsel.

20 REDIRECT EXAMINATION

21 BY MR. HOLLIES:

22 Q Dr. Boatwright, in your discussion with  
23 counsel for NALC, you indicated at one point that you  
24 didn't need to look at the studies regarding other  
25 posts and their experience. Why?

1           A     In my explanation of the econometric models  
2 earlier today, I talked about using past precedent or  
3 using past empirical results to forecast the future.  
4 In particular, the Post Office uses models of past  
5 price increases to estimate demand implications of  
6 future price increases.

7                     And I brought up there that if you had a  
8 very different scenario then from what you had in the  
9 past, your forecasts are all the more empirical. Of  
10 course, that is the issue critically here that the  
11 other, we don't have other countries that are similar  
12 to the United States at the level of the operating  
13 environment, similar enough to where those forecasts  
14 seem like they'd be reliable.

15                     In particular, one distinction would be the  
16 extensive use of direct-mail advertising in the United  
17 States, which is dissimilar at that level from other  
18 countries that have implemented a five-day.  
19 And it's for this kind of reason that companies that  
20 are introducing products globally in other countries,  
21 they don't use the success of the product here in the  
22 United States to then forecast how that product will  
23 fare in a dissimilar country. They go to that  
24 country, and they do market research in the country of  
25 interest prior to product introduction.

1 MR. HOLLIES: That concludes my questions.

2 CHAIRMAN GOLDWAY: Are there any other  
3 questions? Mr. Dechiara?

4 MR. DECHIARA: Yes, if I could just have a  
5 minute, Madame Chairman.

6 RE-CROSS-EXAMINATION

7 BY MR. DECHIARA:

8 Q Dr. Boatwright, was it your understanding of  
9 Dr. Crew's testimony, when Dr. Crew talked about  
10 econometric studies done by postal services in other  
11 countries that USPS could have taken those studies and  
12 applied them to the United States' situation? Was  
13 that your understanding of what he was saying?

14 A Let's turn to, in his testimony, if you can  
15 remind me what he wrote.

16 Q It's on page 7, about two thirds of the way  
17 down.

18 A I'll read it again. And I'm going to  
19 include the following sentence after that, because it  
20 possibly illustrates what he was thinking of.  
21 "The Postal Service has a long history of using  
22 econometric analysis in various applications,  
23 including the measure elasticities demand. Similarly,  
24 other postal operators worldwide employ econometrics  
25 extensively. Econometric studies can predict, using

1 historical data on price increases, how a future price  
2 increase will impact mail volume."

3 Q Right. But my, what I wanted to point you  
4 to is, and what my question went to was, the sentence  
5 that, about two thirds of the way down on page 7 that  
6 said, in Dr. Crew's testimony, that says, "Indeed,  
7 other postal operators have used econometric studies  
8 when seeking to assess demand elasticity in connection  
9 with contemplated service changes."

10 Did you have an understanding about whether  
11 Dr. Crew was referring to studies in other countries  
12 that concern those other countries? Or was it your  
13 understanding --

14 A You could, I could interpret it either way,  
15 and I'd get to the same answer. One is to take other  
16 studies and try to apply them. Ultimately, you have  
17 to have the data to use for an econometric study.

18 Where are you going to get the data?

19 Q Okay, so let me just stop you there.

20 A You could take it from our own country,  
21 where we have no data, or you get it from a different  
22 country, which is different from ours.

23 Q Okay.

24 A Possibly you can do a meta-analysis, where  
25 you can account for macro factors which cause

1 different countries to vary from one to another. That  
2 would be a direction that there might be hope,  
3 depending on if you have enough countries to have  
4 reliable results on a meta-analysis.

5 Q But you said one option would be to try to  
6 take the studies done in other countries, and then  
7 apply them to the United States. And your testimony  
8 on redirect was that could not have been done because  
9 other countries are not, don't have systems like the  
10 United States. Is that the gist of your testimony?

11 A No, that wasn't the gist.

12 Q What's the gist of your testimony?

13 A Because it would not lead to reliable  
14 estimates because of the differences there. And the  
15 goals --

16 Q Let me stop you there.

17 A I don't want to stop there.

18 Q How do you know?

19 A The goal here is not, the goal is not  
20 directional. We all know that it's a loss of service,  
21 and the goal here is to estimate a specific quantity  
22 of that loss. So other countries, if they're  
23 different from ours, they don't help us in estimating  
24 the specific quantity here, because our country is  
25 very different.

1           Q     But how expert are you in the differences  
2     between the United States Postal Service and postal  
3     services of other countries?

4           A     I am, I have extensive expertise in using  
5     econometric models across a variety of applications.

6           Q     That's not my question. Please answer my  
7     question.

8           A     I am answering it. So I understand how  
9     important it is to have relevant data. Given my,  
10    given how I have been told of the differences in the  
11    countries, it is my assessment that the differences  
12    that I have been told about are enough to where those  
13    other, those other countries' estimates would not be a  
14    reliable forecast for our country.

15                   Now, ask me --

16           Q     Who told you about those differences?

17           A     Postal Service personnel.

18           Q     What were you told?

19           A     They characterized different -- I gave you  
20    an example already, that the type of mail that is used  
21    here, the direct mail, advertising being a different  
22    proportion, a much larger proportion in the U.S. than  
23    in other countries. There is an example.

24           Q     But wasn't Dr. Crew, in this sentence,  
25    citing as examples of what was done in other countries

1 just to provide an illustration that it could be done?  
2 In other words, one could use econometric studies to  
3 assess demand elasticity in connection with  
4 contemplated service changes?

5 MR. HOLLIES: Objection. Calls for  
6 speculation.

7 MR. DECHIARA: Well, I don't know if it  
8 does. Maybe he knows the answer.

9 BY MR. DECHIARA:

10 Q Isn't that your understanding of what Dr.  
11 Crew's point was?

12 ADr. Crew was very general in his statement. And  
13 so we don't have a specific answer on what he was  
14 thinking.

15 MR. DECHIARA: I have nothing further.

16 CHAIRMAN GOLDWAY: Okay. Well, thank you,  
17 Dr. Boatwright, this was a long and interesting  
18 discussion that we've had on the area of market  
19 research. And I appreciate your patience with us and  
20 the answers that you've provided to the Commission and  
21 for the public record.

22 I'm pleased to tell you that this completes  
23 your testimony here today. And again, thank you for  
24 your participation. And you are excused.

25 THE WITNESS: Thank you very much.

1 (Witness excused.)

2 MR. DECHIARA: Madame Chairman, just one  
3 housekeeping matter. I ran out of copies of NALC  
4 Cross-Examination Exhibit 4 before I had one to give  
5 to the reporter. May I take perhaps the witness's  
6 copy now that he's done, and give it to the reporter?

7 CHAIRMAN GOLDWAY: Is that acceptable?

8 THE WITNESS: I have made marks on my copy.

9 MR. DECHIARA: Oh, okay. Then does anyone  
10 have a clean copy?

11 CHAIRMAN GOLDWAY: Which was that one?

12 MR. DECHIARA: It was the No. 4. It's the  
13 one that says on the front, "Office of Public Health  
14 Assessment." I thought I had enough, and I just seem  
15 to have run one short. And there's not one in the  
16 record.

17 MR. HOLLIES: Madame Chairman, my copy is  
18 sufficiently clean. And if we can make a copy of it,  
19 do that momentarily.

20 CHAIRMAN GOLDWAY: Thank you for your  
21 cooperation.

22 MR. DECHIARA: Thank you very much.

23 CHAIRMAN GOLDWAY: And you will be provided  
24 that copy by Postal counsel. And again, Dr.  
25 Boatwright, you're excused.

1 I'm going to excuse myself, as well, and ask  
2 Vice Chairman Hammond to continue with the remaining  
3 aspect of this surrebuttal hearing today. Thank you  
4 very much.

5 VICE CHAIRMAN HAMMOND: Will do, Madame  
6 Chairman.

7 Mr. Tidwell, will you identify the next  
8 witness so that I can swear her in?

9 MR. TIDWELL: Vice Chairman Hammond, the  
10 Postal Service calls Melissa Starr to the stand.

11 Whereupon,

12 MELISSA STARR

13 having been duly sworn, was called as a  
14 witness herein and was examined and testified as  
15 follows:

16 VICE CHAIRMAN HAMMOND: Thank you. You may  
17 be seated.

18 DIRECT EXAMINATION

19 BY MR. TIDWELL:

20 Q Ms. Starr, on the table before you are two  
21 copies of the document that is entitled "Surrebuttal  
22 Testimony of Melissa Starr on Behalf of the United  
23 States Postal Service." It's been designated for  
24 purposes of this proceeding as USPS-RT-3.

25 //

1 (The document referred to was  
2 marked for identification as  
3 Exhibit USPS-RT-3.)

4 Q Was that document prepared by you or under  
5 your supervision?

6 A It was.

7 Q If you were to provide the contents of that  
8 document as your oral testimony today, would it, would  
9 it be the same, insofar as it also incorporates the  
10 corrections, the errata that were filed on Friday,  
11 October 1?

12 A It would be.

13 MR. TIDWELL: Mr. Vice Chairman, the Postal  
14 Service wants to move that the surrebuttal testimony  
15 of witness Starr be entered into evidence.

16 CHAIRMAN GOLDWAY: Is there any objection?  
17 Hearing none, I will direct counsel to provide the  
18 reporter with two copies of the corrected direct  
19 testimony of Melissa Starr. The testimony is received  
20 into evidence, and shall be transcribed.

21 (The document referred to,  
22 having been previously marked  
23 for identification as  
24 Exhibit USPS-RT-3, was  
25 received in evidence.)

**USPS-RT-3**

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

SIX-DAY TO FIVE-DAY CARRIER DELIVERY  
AND RELATED SERVICE CHANGES, 2010

Docket No. N2010-1

**SURREBUTTAL TESTIMONY OF  
MELISSA STARR  
ON BEHALF OF THE  
UNITED STATES POSTAL SERVICE**

1    **Autobiographical Sketch**

2           My name is Melissa Starr. I am a Senior Project Executive in IBM's  
3    Global Services Division in the Business Analytics and Optimization practice,  
4    located at 8000 Grainger Court, Springfield, VA 22153.

5  
6           I am responsible for directing IBM's projects in the area of postal transit-  
7    time performance measurement. I have led this work for more than 15 years,  
8    directing the development of 20 new service performance measurement systems  
9    of domestic and international postal products ranging from First-Class Mail,  
10   Priority Mail, Standard Mail, Periodicals, to Express Mail. I have also led two  
11   major expansions of the External First-Class Measurement System (EXFC) in  
12   1998 and 2008. I have performed service measurement studies for the United  
13   States Postal Service and other international postal agencies.

14  
15   I have a B.S. in Business Administration with a concentration in Statistics from  
16   the University of Alabama. I also have a M.S. in Statistics from North Carolina  
17   State University.

1    **I.     Purpose and Scope of Testimony**

2           The purpose of this testimony is to provide information about the service  
3 performance of single-piece First-Class Mail in rebuttal to the testimony of Public  
4 Representative witness Oregon Secretary of State Kate Brown (PR-T-1) at pages  
5 2689-90 of Transcript Volume ~~IX~~<sup>IX</sup> regarding the length of time normally required  
6 for mail delivery between or to and from certain rural areas in Oregon.

7

8

9    **II.    The EXFC Measurement System**

10

11           For several decades, the Global Business Services division within  
12 International Business Machines (IBM) Corporation has operated the External  
13 First-Class (EXFC) system for the United States Postal Service. EXFC  
14 rigorously measures the number of days from deposit of single-piece First-Class  
15 Mail<sup>®</sup> letters, cards and flat envelopes into collection boxes or lobby chutes until  
16 delivery to residential or business street addresses or Post Office Box addresses.  
17 EXFC compares the transit times of anonymously entered test mail pieces to the  
18 service standards established for the 3-digit ZIP Code origins and destinations  
19 for those mail pieces. EXFC continuously tests service in 892 3-digit ZIP Code  
20 areas among which virtually all single-piece First-Class Mail originates and  
21 destines. Aggregate EXFC data are reported by the Postal Service to the  
22 Commission on a quarterly basis.<sup>1</sup>

---

<sup>1</sup> A description of EXFC was provided to the Commission in Docket No. PI2008-1, on pages 14-15 of the Postal Service's June 2008 *Service Performance Measurement* document attached to PRC Order No. 83 (June 18, 2008).  
See <http://www.prc.gov/Docs/60/60194/OrderNo.83Attachment.pdf>.

1 Beginning with fiscal year (FY) 2009, EXFC measurement in Oregon  
2 included all of the 3-digit ZIP Code areas within the state: 970, 971, 972, 973,  
3 974, 975, 976, 977, 978, and 979. First-Class Mail pieces sent within Oregon  
4 have either an overnight or two-day service standard, with all mail sent within the  
5 same three-digit ZIP Code area having an overnight service standard.

6

7

### 8 **III. Description of Methodology for Analysis of EXFC Data**

9

10 After reviewing the testimony of Public Representative witness Brown  
11 regarding mail transit times between rural origins and destinations within the  
12 state of Oregon (Tr. Vol. ~~X~~<sup>IX</sup> at 2689-90), we examined EXFC test mail piece data  
13 collected since the beginning of FY 2009. For purposes of our analysis, we  
14 categorized each 5-digit ZIP Code origin-destination pair within Oregon into one  
15 of four groups based on the classification of the origin and destination 5-digit ZIP  
16 Codes as urban or rural. The ZIP Code classification was performed using a  
17 resource from the Oregon Office of Rural Health (ORH) which designates each  
18 5-digit ZIP Code as either rural or urban based on distance.<sup>2</sup> The rural locations  
19 are all geographic areas 10 or more miles from the centroid of a population  
20 center containing 40,000 or more. Population numbers were based on 2007 data  
21 produced by the Portland State University Population Research Center  
22 (<http://www.pdx.edu/prc/>). Using this resource, 347 5-digit ZIP Code areas within

---

<sup>2</sup> The following linked document describes the method relied upon by the Oregon Office of Rural Health to define areas within the state as rural or urban:  
<http://www.ohsu.edu/ohsuedu/outreach/oregonruralhealth/data/definitions/index.cfm>

1 Oregon were classified as rural and the remaining 125 5-digit ZIP Codes were  
 2 classified as urban.<sup>3</sup>

3 The EXFC test mail fell into four categories as follows:

- 4 ○ Rural origin to Rural destination – Such examples would include mail sent  
 5 within the same rural area, such as Klamath Falls, or between rural  
 6 locations such as from Ontario to Klamath Falls.  
 7
- 8 ○ Rural origin to Urban destination – Examples might include mail sent from  
 9 a rural area such as Grants Pass to the nearby urban area of Medford or  
 10 mailed from Nyssa to Portland.  
 11
- 12 ○ Urban origin to Rural destination – Examples include pieces from Salem to  
 13 nearby Stayton or across the state to Stanfield.  
 14
- 15 ○ Urban origin to Urban destination – Examples here include pieces mailed  
 16 within the same urban area, such as Eugene, or between urban areas,  
 17 such as from Bend to Medford.  
 18

19 Next we examined raw EXFC data to count the total number of EXFC test  
 20 pieces in each category as well as the number of pieces which took five or more  
 21 calendar days to deliver. These data are in the attached spreadsheets. Then we  
 22 calculated the percentage of mail that experienced a transit time of five or more  
 23 calendar days.  
 24

#### 25 **IV. Analysis of Results**

26 The following table shows the results of this analysis for two time periods:  
 27  
 28 Quarter 1 to Quarter 3 FY 2010 and the entirety of FY 2009.

---

<sup>3</sup> The following linked list identifies the 5-digit ZIP Codes in Oregon designated as either rural or urban by the Oregon Office of Rural Health:  
<http://www.ohsu.edu/ohsuedu/outreach/oregonruralhealth/data/definitions/upload/List-of-OR-Zip-Codes-and-ORH-Designations.pdf>

1

| Category                          | Percentage of EXFC Mail within Oregon Taking 5+ Calendar Days in Transit |              |
|-----------------------------------|--|--------------|
|                                   | Q1 – Q3 FY10   | Q1 – Q4 FY09 |
| Rural Origin to Rural Destination | 0.5%   | 1.0%         |
| Rural Origin to Urban Destination | 0.7%   | 0.7%         |
| Urban Origin to Rural Destination | 0.5%   | 0.3%         |
| Urban Origin to Urban Destination | 0.4%   | 0.3%         |

2

3 These results indicate that the incidence of EXFC test pieces sent within the  
4 state of Oregon taking five or more calendar days to deliver was very low across  
5 all four categories in both time periods. Less than one percent of all test pieces  
6 took five or more calendar days when mailed from a rural Oregon origin to a rural  
7 Oregon destination, which was the primary area of concern cited in the testimony  
8 of Public Representative witness Secretary of State Brown. While some pieces  
9 required five or more days in all categories during both time periods, these data  
10 indicate that such cases were definitely not the norm in rural or urban areas of  
11 Oregon as measured by the independent EXFC measurement system.

12 The FY09 annual Service Variance Report for Single-Piece First-Class  
13 Mail indicated that nationally 99.8 percent of First-Class Mail with an overnight  
14 service standard was delivered within the service standard plus three delivery  
15 days and that 99.4 percent of First-Class Mail with a two-day service standard  
16 was delivered within the service standard plus two delivery days. For each  
17 quarter thus far in FY 2010, the results have been similar at the national level as  
18 well as for the Portland performance cluster.<sup>4</sup> These results provide further

---

<sup>4</sup> EXFC service performance and variance data are compiled on a quarterly basis and published online at [www.usps.com](http://www.usps.com). The above-referenced variance data are accessible for examination directly via the following link:  
[http://www.usps.com/serviceperformance/pdf/FY2010\\_SinglePiece\\_First\\_Class\\_Mail\\_ServiceVariance.pdf](http://www.usps.com/serviceperformance/pdf/FY2010_SinglePiece_First_Class_Mail_ServiceVariance.pdf)

- 1 evidence that single-piece First-Class Mail that experiences five or more days for
- 2 delivery is not frequently observed in the EXFC measurement system.

EXFC Test Pieces Sent Within Oregon in FY 2009

| Number of Calendar Days Required           | Number of Test Pieces in Category |                                   |                                   |                                   |
|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|  | Rural Origin to Rural Destination | Rural Origin to Urban Destination | Urban Origin to Rural Destination | Urban Origin to Urban Destination |
| 1  | 1222                              | 1057                              | 4240                              | 10123                             |
| 2  | 591                               | 654                               | 1595                              | 1728                              |
| 3  | 146                               | 152                               | 424                               | 482                               |
| 4  | 21                                | 16                                | 104                               | 66                                |
| 5  | 5                                 | 10                                | 9                                 | 18                                |
| 6  | 8                                 | 1                                 | 4                                 | 9                                 |
| 7  | 3                                 | 3                                 | 2                                 | 7                                 |
| 8  |                                   |                                   | 2                                 | 2                                 |
| 9  | 1                                 |                                   |                                   |                                   |
| 11   | 1                                 |                                   |                                   |                                   |
| 12   |                                   |                                   |                                   | 1                                 |
| 14   |                                   |                                   |                                   | 1                                 |
| 17   | 1                                 |                                   |                                   |                                   |
| <b>Grand Total</b>                         | <b>1999</b>                       | <b>1893</b>                       | <b>6380</b>                       | <b>12437</b>                      |
| Number pieces taking 5 or more days        | 19                                | 14                                | 17                                | 38                                |
| Total Pieces                               | 1999                              | 1893                              | 6380                              | 12437                             |
| Percentage of Pieces taking 5 or more days | 1.0%                              | 0.7%                              | 0.3%                              | 0.3%                              |

Attachment to USPS-RT-3 -- page 1

EXFC Test Pieces Sent Within Oregon in FY 2010 Q1 through Q3

| Number of Calendar Days Required           | Number of Test Pieces in Category |                                   |                                   |                                   |
|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
|  | Rural Origin to Rural Destination | Rural Origin to Urban Destination | Urban Origin to Rural Destination | Urban Origin to Urban Destination |
| 1  | 1005                              | 824                               | 3319                              | 7055                              |
| 2  | 467                               | 576                               | 1250                              | 1452                              |
| 3  | 157                               | 153                               | 273                               | 277                               |
| 4  | 24                                | 36                                | 43                                | 73                                |
| 5  | 3                                 | 3                                 | 7                                 | 14                                |
| 6  | 2                                 | 1                                 | 10                                | 10                                |
| 7  | 1                                 | 3                                 | 1                                 | 4                                 |
| 8  | 3                                 |                                   | 1                                 | 2                                 |
| 9  |                                   |                                   | 1                                 |                                   |
| 10   |                                   | 2                                 |                                   |                                   |
| 11   |                                   | 1                                 | 1                                 |                                   |
| 12   |                                   |                                   | 1                                 | 3                                 |
| 13   |                                   |                                   | 1                                 |                                   |
| 14   |                                   | 1                                 | 1                                 |                                   |
| 15   |                                   |                                   |                                   | 1                                 |
| 20   |                                   |                                   |                                   | 2                                 |
| <b>Grand Total</b>                         | <b>1662</b>                       | <b>1600</b>                       | <b>4909</b>                       | <b>8893</b>                       |
| Number pieces taking 5 or more days        | 9                                 | 11                                | 24                                | 36                                |
| Total Pieces                               | 1662                              | 1600                              | 4909                              | 8893                              |
| Percentage of Pieces taking 5 or more days | 0.5%                              | 0.7%                              | 0.5%                              | 0.4%                              |

Attachment to USPS-RT-3 -- page 2

1                   CHAIRMAN GOLDWAY: This now brings us to  
2 oral cross-examination. One party has requested oral  
3 cross-examination; that is the Public Representative,  
4 Ms. Gallagher. Is there any other party that wants to  
5 cross-examine witness Starr?

6                   MS. GALLAGHER: Vice Chairman Hammond, this  
7 is Patricia Gallagher for the Public Representative  
8 team. I was contacted by David Popkin, who is a  
9 citizen participant. He has several questions he  
10 would like asked today on his behalf.

11                   I have discussed this matter with Mr.  
12 Tidwell, counsel for the Postal Service. I believe it  
13 is agreeable to him if I pose those questions on Mr.  
14 Popkin's behalf. I'd like to make sure I have  
15 understood Mr. Tidwell correctly.

16                   VICE CHAIRMAN HAMMOND: Is that correct, Mr.  
17 Tidwell, that you have no objection?

18                   MR. TIDWELL: That is correct.

19                   VICE CHAIRMAN HAMMOND: Thank you.

20                   MS. GALLAGHER: Then, Vice Chairman Hammond,  
21 the question would be at what point you would like  
22 those questions to be asked. I am prepared to do it  
23 now or --

24                   VICE CHAIRMAN HAMMOND: Let's go ahead and  
25 get them out of the way now, please.

1 MS. GALLAGHER: Okay, fine. Thank you.

2 CROSS-EXAMINATION

3 BY MS. GALLAGHER:

4 Q Good afternoon, Ms. Starr. These are, I'm  
5 asking on behalf of David Popkin. And he is located  
6 in Englewood, New Jersey.

7 And the first question I am posing on his  
8 behalf is whether you would please confirm or explain,  
9 if you are unable to confirm, that the EXFC data that  
10 you provided in your testimony represents the results  
11 of all EXFC mail pieces that were both deposited and  
12 delivered within the state of Oregon; and therefore,  
13 consist of mail that has either an overnight or a two-  
14 day delivery standard.

15 A I am confirming that that is --

16 Q Thank you.

17 A I'm confirming that that's the case.

18 Q Thank you again. The second question on Mr.  
19 Popkin's behalf is, do the origin and destination  
20 percentages of EXFC mail attempt to match the  
21 corresponding origin and destination percentages of  
22 the overall single-piece first-class mail stream? And  
23 he provides an example to assist in that.

24 For example, if 20 percent of the mail  
25 deposited in New York, New York stays within New York,

1 New York, then will the EXFC program attempt to have  
2 20 percent of the EXFC mail deposited in New York, New  
3 York stay within New York, New York? And if not, how  
4 is the composition of the EXFC mail determined?

5 A So similar to that, but not exactly, so I  
6 will explain.

7 Q Sure.

8 A The EXFC is actually a destination-based  
9 design, so we're setting the destination. So for  
10 example, a performance cluster district of the Postal  
11 Service of New York, we could look at that one. And  
12 then the origin part of it is based on the mail  
13 percentages. So it's just sort of the opposite of the  
14 way he phrased the question, but based on destination.  
15 The other thing that goes into it is that we set those  
16 sample sizes based on the service standards. So if we  
17 want a particular number of S pieces for each service  
18 standard, so again you would have to put the context  
19 of the overnight pieces to the New York District, and  
20 then the two-day pieces. That's the way the --

21 Q Thank you. His next question is, what  
22 percentage of EXFC mail is deposited on Saturday?

23 A Sure. In FY '10 we targeted 6.5 percent of  
24 the, of the mail, which was based on looking at postal  
25 data for the OTIS system for the prior year.

1           Q     Thank you.  Then another question here  
2 actually has several parts.  The first is, what  
3 percentage of EXFC mail deposited will be destined to  
4 an overnight-delivery area?

5           A     That is in FY '10 it was 50.1 percent  
6 nationally.

7           Q     Okay.  His additional questions are to a  
8 two-day delivery area, to a three-day delivery area,  
9 if you have that.

10          A     Sure.  Again, in FY '10 the targeted  
11 percentage for two-day was 22.8 nationally.  And  
12 three, and we did three- to five-day, so I don't have  
13 exactly three-day.  But I'll give you the estimate,  
14 which is 27.1 would have a three-, four-, or five-day  
15 standard.

16          Q     And just if I could clarify on my own  
17 behalf, this is you're talking about the national  
18 system, correct?

19          A     Those are national --

20          Q     And not the specifics as to your testimony.

21          A     Correct.

22          Q     Thank you.

23                MS. GALLAGHER:  Vice Chairman Hammond, I  
24 believe that finishes the questions the public  
25 representative agreed to relay on Mr. Popkin's behalf.

1                   VICE CHAIRMAN HAMMOND: Okay. Ms.  
2 Gallagher, could you then go ahead with your  
3 questioning? And I would remind the witness to please  
4 speak into the microphone.

5                   THE WITNESS: Okay.

6                   MS. GALLAGHER: Thank you, Vice Chairman  
7 Hammond.

8                   BY MS. GALLAGHER:

9                   Q     And again, hello. I am one of actually one  
10 of the public representatives assigned to this case,  
11 Ms. Starr. Kenneth Moeller and Lawrence Fenster, my  
12 fellow public representatives, are also here.  
13 And speaking only for myself, I had a chance to attend  
14 a briefing at the Springfield location a few years  
15 ago, along with some others, and found it very  
16 interesting to learn about that. It was very  
17 informative.

18                   But as they say, a little knowledge is a  
19 dangerous thing. And so I was wondering about the  
20 description you provide in your testimony about IBM's  
21 involvement. I can point you to where that is. I  
22 think the discussion is in Section 2 of your  
23 testimony, and I guess beginning about line 11. I  
24 have two related questions.

25                   I thought PriceWaterhouse actually had the

Heritage Reporting Corporation  
(202) 628-4888

1 initial contract, starting in 1990 until early in the  
2 2000s. And could you maybe, where did I go wrong? Or  
3 can you help me out on that?

4 A Sure. The clarification is absolutely  
5 accurate in that in 2002, IBM acquired  
6 PriceWaterhouseCoopers Consulting, and acquired all of  
7 the contracts associated with that. So the  
8 historical, you know, references probably should say  
9 PriceWaterhouseCoopers in --

10 Q So it was PriceWaterhouse even before 1998?  
11 Yes, but I think, well, you've been there all that  
12 time.

13 A I have been there all that time.

14 Q That's right. So that's the way, I guess,  
15 the main thing is helpful for the record. The  
16 contracts may have changed, but you have been there  
17 consistently.

18 A Right. And you know, we've been in the same  
19 building even, so just the title on the building --

20 Q Yes, I remember the building. And then  
21 there's something else I'd like to clarify for the  
22 record. You mention, as you get to your analysis  
23 section, a couple -- you may not even need your  
24 testimony for this. But you say we examined and we  
25 reviewed. Could you just explain for us who the "we"

1 you're talking about is?

2 A Sure.

3 Q And it doesn't have to be by name. The  
4 title or job role, or how many might be helpful.

5 A Sure. On my team we have a statistics  
6 analysis and reporting group, so members of that team,  
7 as well as our analysis and quality assurance team,  
8 who verifies the numbers.

9 Q Okay. But in terms of people, did you say  
10 about six people? Or what did you say?

11 A In all of this, our team is large.

12 Q Oh, okay.

13 A Involved in this actual testimony, four.

14 Q Okay. So for the analysis about four,  
15 that's what I was getting at. Then a preliminary  
16 matter is, are you aware that the Commission has held  
17 field hearings in this case?

18 A I am aware of those, yes.

19 Q Yes. And in fact, my point is that the  
20 Commission has heard from persons other than witness  
21 Brown on the topic of the impact of the Postal  
22 Service's proposal on election-related mail pieces?

23 A I'm not aware of that.

24 Q Didn't know that, okay. Would you accept  
25 for the record that, in fact, they have? Well, thank

1 you. And the Commission has also been interested in  
2 Alaska and Hawaii, but was not able to hold hearings  
3 there.

4 And let me see, now. On page 2 of your  
5 testimony, line 10 -- you have referred to the  
6 testimony of Witness Brown. In particular, you  
7 mention two pages of the transcript, namely Transcript  
8 IX pages 2689 and 2690. Are you aware in terms of  
9 testimony, we have a couple different components of  
10 testimony, and that portion would be akin to a  
11 transcript of, for example, our exchange today that  
12 was in fact the statements during oral cross and not  
13 prepared testimony?

14 A Yes.

15 (The document referred to was  
16 marked for identification as  
17 Exhibit No. PR-USPS-RT-3/1.)

18 BY MS. GALLAGHER:

19 Q Thank you. Because it may be helpful, we  
20 may not need to use it, we have cross-examination  
21 exhibit of those two pages you refer to as well as the  
22 page that follows the two you refer to. Mr. Moeller  
23 is going to give these to Postal Service counsel, the  
24 Commission, the reporter and to you. We have  
25 additional copies available for others. As I said, we

1 may not need this because you may know what we're  
2 talking about, but just in case it becomes useful.

3 Just to clarify, you say that the discussion  
4 on those two pages, the two that you referred to,  
5 deals in part with a conversation that Public  
6 Representative Witness Brown had had with Linda Smith,  
7 who was an election officer in Klamath County, Oregon,  
8 so at least in part that's what some of that  
9 discussion refers to.

10 A Right.

11 Q Would you accept that Witness Brown was  
12 speaking to Linda Smith in Witness Brown's capacity as  
13 Chief Elections Officer as Secretary of State?

14 A Yes.

15 Q Okay. So it wasn't neighbor to neighbor  
16 across the driveway. It was about official mail of  
17 some sort?

18 A Yes.

19 Q And then the persons discussed in those two  
20 pages discussing this with Witness Brown, there's an  
21 unattributed "Q" because it rolls over from the  
22 earlier page, but that was Counsel Tidwell, would you  
23 agree, and then also Chairman Goldway is on 2690?

24 A Okay.

25 Q That's right, so the two people discussing

1 with Witness Brown were those two persons, and at  
2 least in part the conversation with Linda Smith had  
3 arisen? Is that a yes?

4 A Yes.

5 VICE CHAIRMAN HAMMOND: Witness, would you  
6 remember that it is best to say yes or no rather than  
7 to simply nod?

8 THE WITNESS: Yes. Okay. Yes.

9 VICE CHAIRMAN HAMMOND: Thank you.

10 BY MS. GALLAGHER:

11 Q Okay. So were you able to review anything  
12 besides these two pages, or you think your testimony  
13 is limited only to these pages?

14 A I have reviewed more of the testimony, but  
15 subsequently to your asking --

16 Q Focused on this? Okay. But you're familiar  
17 overall with it when Witness Brown was talking about  
18 elections?

19 A Yes.

20 Q Okay. I think you have to help us put that  
21 reference into context. You're familiar with some  
22 broader aspects of the testimony?

23 A Yes.

24 Q So then to help put in context some of the  
25 results you presented, have you ever publicly

1 presented EXFC data of the type presented here, broken  
2 out, but more like say for a single state?

3 A I do not recall presenting it this way  
4 exactly in the past, no.

5 Q Okay. And you haven't been a witness before  
6 here, so you wouldn't have obviously done it in that  
7 context?

8 A No.

9 Q So is this kind of historic, or that's too  
10 dramatic to call it that?

11 A It's probably a little dramatic. I mean, we  
12 certainly responded to interrogatories in the past  
13 with the EXFC data that was not part of the general  
14 released data.

15 Q Okay. And when you did that, did you also  
16 provide say the raw data even under seal perhaps?

17 A We have not to my knowledge every provided  
18 the raw data.

19 Q Even under seal?

20 A Under seal, no.

21 Q No? Okay. Well, part of our job as public  
22 representatives is to help develop the record or  
23 complete the record in areas we might want developing,  
24 and knowing that the Commission has had field hearings  
25 and that some witnesses there have been interested in

1 the vote by mail issue, would you be willing to  
2 present the same type of analysis, must reduced, for  
3 example, not the entire FY2009, but say perhaps the  
4 first quarter of 2009 to help complete the record,  
5 maybe for the field hearing states and maybe perhaps  
6 Alaska and Hawaii?

7 MR. TIDWELL: Mr. Vice Chairman, the Postal  
8 Service would object to that discovery request. It  
9 goes beyond the scope of the witness' rebuttal  
10 testimony which pertained only to the state of Oregon.  
11 The opportunity to have requested transit data  
12 nationwide or pertinent to other -- states was there  
13 to all the parties at earlier stages of the case.  
14 We're well beyond broad discovery against the Postal  
15 Service in this proceeding now.

16 VICE CHAIRMAN HAMMOND: I will listen to Ms.  
17 Gallagher.

18 MS. GALLAGHER: I certainly respect Mr.  
19 Tidwell's position. However, a couple of things.  
20 Surrebuttal testimony really does not present an  
21 opportunity under the Commission rules to send forth  
22 written interrogatories as the witness has said she's  
23 responded to in the past or to make motions from the  
24 floor to motion for consideration of this. Also, in  
25 terms of being a broad request, I've really narrowed

1 it in terms of the field hearing states.

2 It could be narrowed further just to those  
3 where the vote by mail issues came up, and I further  
4 narrowed it to just one quarter of FY2009, and  
5 particularly since this raw data issue I've not  
6 pursued. I did have a conversation with Counsel  
7 Tidwell about it. I thought it would be more  
8 productive not to pursue requests for raw data, but to  
9 see if perhaps given the importance of this issue that  
10 related data could be provided. We know Texas came  
11 out --

12 VICE CHAIRMAN HAMMOND: Mr. Tidwell?

13 MR. TIDWELL: Mr. Vice Chairman, the  
14 surrebuttal testimony responds to the public  
15 representative testimony that was specific to one  
16 state. The public representative chose to present  
17 testimony narrowly focused on that one state. We're  
18 responding to that testimony. It would seem  
19 inappropriate to now expand beyond the scope of the  
20 witness surrebuttal, beyond the scope of the public  
21 representative's own witness' testimony to now, at  
22 what is close to the 11th hour, discovery into states  
23 and other parts of the country that go well beyond the  
24 narrow issue that this witness is providing.

25 VICE CHAIRMAN HAMMOND: Yes, Mr. Tidwell, I

1 believe you have a valid objection, so please move on,  
2 Ms. Gallagher.

3 MS. GALLAGHER: Thank you.

4 BY MS. GALLAGHER:

5 Q Then, we will get to the foundation for your  
6 testimony coming in, and as Mr. Tidwell said, this was  
7 Witness Brown's testimony, so I think our transcript  
8 excerpt will come in handy now. If you could turn to  
9 that? I guess I was slightly puzzled because I think  
10 we could have pursued this on brief if some other  
11 cooperation were available, but I guess I was puzzled  
12 that 2689, when you find the discussion generally  
13 actually starts -- I don't know for certain if it's  
14 mis-sentence, but it's definitely a sentence in  
15 progress.

16 Was that intentional because you point to  
17 the entire impetus for you to file this testimony  
18 comes from these two pages, so it starts with  
19 "ballot." Do you have an answer for why that happens?

20 A I don't know. I think mostly we were  
21 focused on the lines starting at Line 8, "Would the  
22 ballot actually get there?"

23 Q Well, I have 2688, but I won't go there, so  
24 your point is when the ballot gets where?

25 A Line 8, the second area is just actually

1 will the ballot actually get there on time and whether  
2 you're talking about Klamath Falls or Mission, Oregon,  
3 the service delivery can be up to --

4 Q Right. Thank you. So when you talk about  
5 the ballot, are you talking about the ballot getting  
6 to the voter from the elections office of vice versa?  
7 Voter to the election's office?

8 A My understanding is that paragraph was the  
9 ballot getting back to the election's office.

10 Q Okay. Then, also on 2690, I see that page  
11 also drops off cutting Chairman Goldway off there.  
12 Obviously, you didn't intend to do that, but it does  
13 make it a little hard when we're trying to figure out  
14 what the sole impetus for your testimony was.

15 A I think it was just I guess on that middle  
16 paragraph where it talked about, you know, the five  
17 day.

18 Q So you're saying the entire support for your  
19 testimony is from 8 to 14?

20 A I believe that's correct.

21 Q Okay. So really in your testimony, we could  
22 consider correcting that to say Transcript IX, 2689,  
23 Lines 8 through 14? We need a yes or no.

24 A No, I don't think that is exactly correct,  
25 and perhaps we should have included the other

1 sections.

2 Q Okay. So then, for example, if we go to  
3 2691? Well, let's actually do that rollover portion  
4 where it goes from 2690, Line 24, to the line, and I'm  
5 just narrating here, Chairman Goldway, but that's the  
6 last day on which ballots can be mailed, and that in  
7 some parts of rural Oregon, it takes as much as five  
8 days to get to someone's home, and the witness says  
9 yes, so that's really saying as much as five days is  
10 the question?

11 A Right. Yes.

12 Q And your results support that length as up  
13 to five days at least, right?

14 A I'm sorry. I don't understand.

15 Q I thought the table shows that there are  
16 some mail delivered up to five days and even beyond?

17 A There are instances of mail taking as much  
18 as or longer than five days.

19 Q Yes, but so your results are consistent with  
20 that statement then, really consistent with the  
21 witness' testimony?

22 A I thought the witness was saying that it  
23 normally takes that amount of time, and that was the  
24 part that we took exception to, that that is not what  
25 we observed in the excess fee that it's normally --

1           Q     I agree, but you see here right on that very  
2 same page where you cut off the testimony we're saying  
3 she's also agreeing in a way that it takes as much as  
4 five days, so really the record is somewhat unclear on  
5 this, and yet you decide to only use one reason. For  
6 example, if that portion had been in that one  
7 paragraph, was not in, your whole testimony you're  
8 saying would not have come in. Were you listening to  
9 the testimony?

10          A     I did not listen to it.

11          Q     No? So how did you become familiar with  
12 these two pages?

13          A     Mr. Tidwell.

14          Q     Did he only give you these two pages?

15          A     I actually don't recall.

16          Q     Okay. Thank you. That's fine. I think we  
17 can turn to another part, and this about the methods  
18 of EXFC, and I corrected when you talk about the  
19 instance in which a voter might leave a complete  
20 ballot, for example, in a residential door slot or in  
21 a mailbox with the arrow up is not covered in your  
22 testing procedure, is that correct?

23          A     Correct.

24          Q     Okay. And then I have a question. You talk  
25 about businesses being a destination. Are government

1 offices considered a destination in your testing?

2 A In general, government office would have a  
3 mailroom, which would disqualify it.

4 Q Thank you. Thank you.

5 A So that would be the reason for  
6 disqualification.

7 Q But before -- just to talk about -- it is  
8 not in your test procedure just like the red flag is  
9 not?

10 A I just want to clarify that I can't  
11 absolutely tell you that we don't have any government  
12 offices because that is not a disqualifier. The  
13 disqualifier for a business is having a mailroom or  
14 having some third party --

15 Q I understand. I understand, but given that  
16 for 30 years you've been there, have you in those 30  
17 years come across a government agency?

18 A I don't recall.

19 Q Okay. That's fine.

20 A Okay.

21 Q That's the perfectly good answer.

22 A Okay.

23 MS. GALLAGHER: Okay. One moment, please.  
24 Thank you. I think that completes our cross-  
25 examination.

1                   VICE CHAIRMAN HAMMOND: Thank you, Ms.  
2 Gallagher. Do we have questions from the bench?  
3 Commissioner Langley, do you have questions, please?

4                   COMMISSIONER LANGLEY: I do have one  
5 question. When you're talking about two-day delivery,  
6 do you happen to know what proportion of inter-island  
7 mail in Hawaii, that would be inter-island yet FC, has  
8 a two-day delivery standard?

9                   THE WITNESS: There are no two-day delivery  
10 standards for first-class mail in Hawaii.

11                  COMMISSIONER LANGLEY: What is the delivery  
12 standard for first-class mail, the optimum standard?

13                  THE WITNESS: So it's overnight or any  
14 portion of the 967, 968, which are the islands.

15                  COMMISSIONER LANGLEY: So even though mail  
16 from the big island of Hawaii has to go to the island  
17 of Oahu for processing and then back to Hawaii, is  
18 there 100 percent overnight delivery then?

19                  THE WITNESS: So I don't know all of the  
20 standards, you know. I'm sorry. I know those service  
21 standards. There is no place in the country that  
22 achieves 100 percent on time, so I think I can safely  
23 say without knowing exactly what the standard is that  
24 it's not 100 percent.

25                  COMMISSIONER LANGLEY: Okay. So there would

1 be a certain proportion that is not going to meet the  
2 over night. Do we know that percentage of the  
3 proportion that doesn't? I'm asking because Hawaii  
4 does use vote by mail extensively.

5 THE WITNESS: I don't know it off the top of  
6 my head, no.

7 COMMISSIONER LANGLEY: Okay. Thank you very  
8 much.

9 VICE CHAIRMAN HAMMOND: Commissioner Blair,  
10 do you have any questions for this witness?

11 COMMISSIONER BLAIR: I have no questions.  
12 Thank you.

13 VICE CHAIRMAN HAMMOND: Thank you.  
14 Commissioner Acton?

15 COMMISSIONER ACTON: No thanks.

16 VICE CHAIRMAN HAMMOND: Thank you. Then,  
17 Mr. Tidwell, would you like some time with your  
18 witness to review whether there is need for redirect?  
19 You would like one minute. Please take that, and we  
20 will wait here.

21 (Whereupon, a short recess was taken.)

22 MR. TIDWELL: Mr. Vice Chairman, one quick  
23 question.

24 VICE CHAIRMAN HAMMOND: Please proceed.

25 //

1 REDIRECT EXAMINATION

2 BY MR. TIDWELL:

3 Q Ms. Starr, you had a discussion with Counsel  
4 Gallagher regarding your review of the testimony of  
5 Witness Brown in preparation of your testimony. Just  
6 to be clear, were you provided with the hard copy of  
7 the portions of the hard copy transcript and a  
8 complete electronic version of the transcript for  
9 review?

10 A I was.

11 MR. TIDWELL: Okay. Thanks. I just wanted  
12 to make that clear. That's all we have.

13 VICE CHAIRMAN HAMMOND: Thank you, Mr.  
14 Tidwell. Commissioner Langley, did you have need for  
15 one other comment or question?

16 COMMISSIONER LANGLEY: Well, I would  
17 appreciate if I could have my question on the  
18 proportion of mail that doesn't achieve 100 percent  
19 overnight delivery responded to on the record.

20 THE WITNESS: And just focused on Hawaii, is  
21 that right?

22 COMMISSIONER LANGLEY: Yes.

23 THE WITNESS: Okay.

24 COMMISSIONER LANGLEY: Thank you.

25 VICE CHAIRMAN HAMMOND: Mr. Tidwell, can you

1 provide that information?

2 MR. TIDWELL: I'm going to predict that we  
3 can provide it by Wednesday.

4 VICE CHAIRMAN HAMMOND: That seems to be  
5 acceptable I believe. Thank you. Let's see then.  
6 Ms. Starr, that completes your testimony here today.  
7 We certainly appreciate your appearance, your  
8 contributions to our record, and we will now excuse  
9 you. Thank you.

10 VICE CHAIRMAN HAMMOND: Ms. Gallagher, do  
11 you have something else to add, please? I'm sorry.

12 MS. GALLAGHER: Vice Chairman, with all due  
13 respect, generally after redirect there's a chance to  
14 ask another question if appropriate.

15 VICE CHAIRMAN HAMMOND: I'm sorry. I failed  
16 to give you the opportunity to ask your additional  
17 question, so please, without objection, go forward.

18 MS. GALLAGHER: HAMMOND: It's very minor.

19 RE-CROSS-EXAMINATION

20 BY MS. GALLAGHER:

21 Q Would we turn to page 1 of your testimony,  
22 and notwithstanding your response to Mr. Tidwell, am I  
23 not correct that you actually say this is to rebut the  
24 testimony of Witness Brown at pages 689-90 of  
25 Transcript IX? So even though you may have been sent

1 the other things, in fact the foundation for your  
2 testimony is as stated here?

3 A It does say that, definitely.

4 MS. GALLAGHER: Thank you. That's it.

5 VICE CHAIRMAN HAMMOND: Thank you very much,  
6 Ms. Gallagher, and so that will now conclude your  
7 testimony, Ms. Starr, and thank you very much.

8 (Witness excused.)

9 VICE CHAIRMAN HAMMOND: This will conclude  
10 today's hearing, and this also concludes all of the  
11 hearings in the N-2010-1 docket. Briefs in this case  
12 are due on October 15, 2010, and reply briefs are due  
13 on October 21, 2010. The Commission appreciates your  
14 participation and contributions to the record, and we  
15 are now adjourned.

16 (Whereupon, at 2:43 p.m., the hearing in the  
17 above-entitled matter was concluded.)

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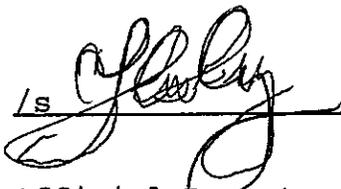
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REPORTER'S CERTIFICATE

DOCKET NO.: N2010-1  
CASE TITLE: Six-Day to Five-Day Street Delivery and  
Related Service Charges  
HEARING DATE: 10/4/10  
LOCATION: Washington, DC.

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the ~~United States Court of Federal Claims~~ Postal Regulatory Commission.

Date: 10/4/10

/s/  \_\_\_\_\_

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