

BEFORE THE
POSTAL RATE COMMISSION
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POSTAL RATE AND FEE CHANGES, 2000

Docket No. R2000-1

**DIRECT TESTIMONY
OF
HALSTEIN STRALBERG**

**ON BEHALF OF
ALLIANCE OF NONPROFIT MAILERS
AMERICAN BUSINESS MEDIA
COALITION OF RELIGIOUS PRESS ASSOCIATIONS
DOW JONES & COMPANY, INC.
MAGAZINE PUBLISHERS OF AMERICA, INC.
THE MCGRAW-HILL COMPANIES, INC.
NATIONAL NEWSPAPER ASSOCIATION
AND
TIME WARNER INC.

CONCERNING
PERIODICALS COSTS AND RATE DESIGN
AND
DISTRIBUTION OF CLERK AND MAILHANDLER COSTS**

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1 **AUTOBIOGRAPHICAL SKETCH**

2 My name is Halstein Stralberg. I am a consultant to Time Warner on issues related to distribution
3 of magazines through the postal system. Until June 1999 I was a principal at Universal Analytics,
4 Inc. (UAI), a management consulting firm in Torrance, California. and manager of its Operations
5 Research Division.

6 My academic background is in mathematics, with a master's degree from the University of Oslo,
7 Norway in 1963. I received a bachelor's degree in mathematics, physics and astronomy at the
8 University of Oslo in 1961. Most of my professional experience is in the area of management
9 science and operations research. I have directed and performed over 25 years of postal related
10 studies as well as a number of management studies for other clients in government and private
11 industry, in such diverse fields as production scheduling and control, corporate planning and
12 finance, investment analysis, design and optimization of transportation systems, health care and
13 computer system design.

14 I have previously presented 17 pieces of testimony before this Commission on a variety of postal
15 costing and rate design issues: two rebuttal testimonies on behalf of the Postal Service in Docket
16 R80-1; four testimonies on behalf of Time Inc. in R87-1; four on behalf of Time Warner Inc. in
17 R90-1; one in MC91-3; two in R94-1; two in MC95-1; and two in R97-1.

18 Since 1987 most of my work has been in support of Time Warner's participation in postal rate
19 cases. Besides the presentation of testimony, I have advised Time Warner on a variety of postal
20 issues and directed the development of computer models for analysis of postal costs and rate
21 design. I participated actively on behalf of Time Warner as a member of the joint industry/USPS
22 Periodicals Review Team whose report and recommendations are included in LR-I-193, and as an
23 industry representative in the recent MTAC data collection on bundle breakage.

24 From 1973 until 1987, I directed UAI's efforts under several contracts with the U.S. Postal
25 Service. Some of my major activities on these contracts included:

- 26 • Design and development of the Mail Processing Cost Model (MPCM), a weekly staffing
27 and scheduling computer program for postal facilities, with an annualized extension
28 (AMPCM) that uses linear programming to fit long term staffing planning in a postal
29 facility to seasonal variations in volume and personnel absentee/attrition rates.
- 30 • An extensive data collection in 18 postal facilities designed to (1) establish a Postal
31 Service data base on mail arrival rates and mail attributes affecting costs (subclass, shape,

1 indicia, presort, container method, etc.), and (2) develop the model input data needed to
2 apply MPCM for each facility.

- 3 • The "Study of Commercial Mailing Programs" under the Long Range Classification Study
4 Program. This study involved a detailed cost and market evaluation of several rate and
5 classification concepts, including various presort concepts, destinating SCF discounts for
6 second class, plant loading and barcoding of preprinted envelopes.
- 7 • A BMC cost analysis which resulted in the establishment of the Inter/Intra-BMC parcel
8 post rate differential in R80-1.
- 9 • Numerous simulation studies requested by USPS management.

10 My two rebuttal testimonies on behalf of the Postal Service in R80-1 addressed the Intra/Inter
11 BMC cost analysis and Dr. Merewitz's use of MPCM to analyze peak load costs.

12 I have conducted a number of classes and seminars on the use of MPCM both for Postal Service
13 employees and interested outside parties. I have made extensive visits, including many multiple
14 repeat visits, to over 40 USPS mail processing facilities. I have observed all aspects of mail
15 processing operations on all tours, as well as methods of mail collection, acceptance and
16 transportation, and various ongoing postal data collection systems. I estimate that in total I have
17 spent more than 2000 hours on site in postal facilities.

18 Besides my postal activities, I directed a study for the department of Health and Human Services
19 of the impact of alternative regulatory policies used by state Medicaid agencies, which included an
20 extensive data gathering effort and multiple regression analysis to determine factors influencing
21 utilization and cost in the Medicaid program.

22 Before joining UAI I was an Operations Research Analyst at the Service Bureau Corporation
23 (IBM), where I performed several large-scale simulation studies, including an analysis during the
24 design stage of the Dallas/Fort Worth Airport's people mover system and simulations to improve
25 design and response time in large interactive computer systems.

26 I was an Operations Research Analyst at Norsk Hydro, a Norwegian petrochemical company,
27 where my work included design, development and implementation of factory production
28 scheduling systems, studies of transportation and distribution systems and risk analysis of
29 investment decisions.

30 For three years I was an assistant Professor of Mathematics at the University of Oslo, Norway.

1 **I. PURPOSE OF TESTIMONY**

2 My testimony has several purposes. First, as I have done in each rate case since Docket
3 No. R90-1, I discuss the long term, still ongoing and still not satisfactorily explained
4 rise in reported Periodicals costs and the associated almost precipitous drop in flats
5 sorting productivity, which seems to have accelerated as the Postal Service deployed
6 more and more advanced technology. I will show why the excuses for these trends
7 offered by the Postal Service in this docket so far are inadequate if not misleading, and
8 fail to address the broad issues surrounding the declining productivity raised by the
9 Commission first in POIR 4 and subsequently in Order No. 1289.

10 I propose several modifications to the Postal Service's MODS/IOCS based method of
11 distributing mail processing costs to subclasses and special services. I show that while
12 the Postal Service has improved its distribution of "not handling" costs relative to the
13 method it presented in R97-1, there is still room for considerable improvement. I
14 recommend ways to make better use of available IOCS data, but I also show that there
15 continue to be inherent biases in the present methodology that can be addressed only
16 through new and better data collection methods.

17 I also address the long discussed issue of bundle breakage. I identify severe errors in
18 the treatment of bundle breakage in witness Yacobucci's flats mail flow model (USPS-
19 T-25) and offer a revised model based on more accurate and recent data. Using this
20 model, I develop a corrected set of presort and automation cost differentials for use in
21 Periodicals rate design. I also analyze the Test Year 2001 impact of ongoing industry
22 and Postal Service efforts to substantially reduce bundle breakage and its cost effects.

23 I show that in this and previous dockets the Postal Service has understated the costs it
24 saves when mailers bring Periodicals or Standard A mail to the destinating delivery
25 unit (DDU). I therefore recommend increasing the Postal Service's proposed DDU
26 discount for Periodicals. Finally, I recommend that the Commission establish a
27 discount for 5-digit Periodicals pallets entered at the destinating SCF or DDU. Such a
28 discount would have little impact on other mailers but could lead to increased DDU
29 dropshipping and a substantial reduction in bundle sorting costs.

1 **II. SUMMARY**

2 Ten years ago, upon examining cost data presented by the Postal Service in the R90-1
3 rate case, I saw one of my worst fears turn into reality. In visits to postal facilities in the
4 preceding years I had become concerned that the rapid move to letter mail automation
5 would lead to claims of great savings which the Postal Service would only be able to
6 justify by reporting higher costs for non-automated mail. That is precisely what had
7 happened since FY86, base year for the preceding (R87-1) rate case, to a greater extent
8 than I had thought possible.¹ The alarming trend towards inexplicably higher
9 Periodicals costs has continued ever since. To comprehend the magnitude of this
10 increase one needs to consider the substantial increase in mailer worksharing and the
11 great strides in flats and bundle sorting technology that should have reduced costs.
12 One also must remember that some of the steepest Periodicals cost increases occurred
13 between FY86 and FY89, concurrent with the first big push towards letter automation.
14 A cost comparison that starts in FY89 will conceal the full extent of the problem.

15 The anomalous cost increases have fueled a contentious and often difficult dialog
16 between the industry and Postal Service management, whose reactions have seemed to
17 range from denial, to disbelief, to finger pointing. More recently, however, a
18 realization has grown both at the Postal Service and in the industry of a need to work
19 together in order to develop genuine solutions that drive costs out of the system. This
20 has led to cooperative efforts such as the Periodicals Operations Review Team, on
21 which I was an active participant. The Periodicals Review Team was able to learn
22 much about Postal Service operations in a short time through an intense schedule of
23 visits to mail processing facilities. After meeting with management in each facility
24 during daytime hours, we then sacrificed sleep to observe what was really happening
25 at various times during the night and early morning hours when most mail is
26 processed. The report of that effort, which I helped write, is on file in this docket as a
27 part of LR-I-193 and contains many specific recommendations that I hope Postal Service
28 management will take to heart and act on. Some initiatives have already resulted from

¹ See Docket No. R90-1, TW-T-2, Direct testimony of Halstein Stralberg On Behalf Of Time Warner and MPA Concerning Second Class Mail Processing Costs: Tr.27/13276 et seq.

1 that report, including an MTAC package integrity workgroup whose survey results on
2 bundle breakage I rely on later in this testimony.²

3 Unfortunately, from the inception of the Periodicals Review Team, the Postal Service
4 insisted that costing issues were "off the table." Thus we never saw even one IOCS
5 clerk. I say that this was unfortunate because, unlike the Postal Service, I believe the
6 issue of ever rising costs can never be fully resolved without an overhaul and re-design
7 of the current IOCS-based costing system. On the other hand, the team did learn much
8 about the dynamics that seem to drive costs in the postal system.

9 In summary, a newly cooperative approach is being pursued by the Postal Service and
10 the industry. There is agreement on many areas where costs can be driven from the
11 system, for example by new mail make-up regulations or by correcting some inefficient
12 practices. But there remains disagreement over both the extent and causes of the
13 Periodicals cost increase. I therefore review the problems faced by Periodicals in
14 Section III below, which rebuts both witness Smith's response to POIR 4 and witnesses
15 Unger and O'Tormey's responses to Order No. 1289.

16 Section IV addresses mail processing cost distribution. In Docket No. R97-1, I
17 expressed severe doubts about the accuracy of the numerous proportionality
18 assumptions implicit in the method proposed by Postal Service witness Degen.³ The
19 introduction of the MODS-based costing system at that time was a further blow to
20 Periodicals, whose reported costs suddenly were even higher than before. My
21 skepticism about many aspects of the new system, including its scheme of item and
22 container sampling, remains. On the other hand, I realize that MODS-based costing is
23 here to stay and that when properly applied it may have some merits.

24 The main problem with separately costing each MODS-based cost pool occurs for pools

² The testimonies of James O'Brien (TW-T-2) and Rita Cohen (MPA-T-1) include further descriptions of the experiences and insights gained by Periodicals Review Team members, as do several later sections of this testimony.

³ Docket No. R97-1, Direct Testimony of Halstein Stralberg On Behalf of Time Warner Inc. Concerning Distribution of Clerk and Mailhandler Costs: Tr. 26/13811.

1 where the volumes handled and the tasks performed lack uniformity, and whose costs
2 are mostly driven by events outside the pool itself. These pools are commonly referred
3 to as "allied." As pointed out in my R97-1 rebuttal testimony, within pool distribution
4 of mixed mail and "not handling" costs is particularly inappropriate at allied pools.⁴

5 I applaud the Postal Service's decision in this docket to propose a broader distribution
6 of allied not handling costs. I disagree, however, with witness Degen's curious claim
7 that the justification for such a broad distribution lies only in his and witness Bozzo's
8 inability to determine the volume variability for allied pools econometrically. USPS-T-
9 16 at 69. Costs at allied operations, particularly their large "not handling" component,
10 are mainly driven by piece distribution requirements. Until these relationships can be
11 quantified, a broad distribution of the allied not handling costs will, I believe, come
12 much closer than distribution within each allied pool to approximating true cost
13 causality.

14 I urge the Commission to stand by the broad distribution of allied mixed mail costs that
15 it introduced in its R97-1 Opinion. PRC Op. R97-1, ¶3146. The one change I
16 recommend is that in MODS the distribution of allied mixed mail costs be limited to
17 Function 1 pools, since Function 4 pools in fact represent a different set of facilities, as
18 do the NonMODS cost pools.⁵ Maintaining this broad distribution effectively means
19 ignoring the container and item type information in the allied costs pools. While I
20 generally am not in favor of disregarding available information, I believe it is justified
21 in this case by the severe possibilities of bias in the current scheme, particularly the
22 asymmetric treatment of pallets as compared to other containers. However, if the
23 Commission wishes to make use of the item and container information in allied mixed
24 mail data, it should use the alternative broad distribution of mixed mail data presented

⁴ Docket No. R97-1, TW-RT-1, Rebuttal Testimony of Halstein Stralberg On Behalf of Alliance of Nonprofit Mailers, American Business Press, Coalition of Religious Press Associations, Dow Jones & Company, Inc., Magazine Publishers of America, The McGraw-Hill Companies, Inc., National Newspaper Association and Time Warner Inc.: Tr. 36/19278, 19285-87.

⁵ The MODS mail processing cost pools are referred to as Function 1 and Function 4, where Function 1 represents the activities that take place in mail processing plants, or SCF's. Function 4 cost pools represent activities that occur in stations and branches of MODS offices.

1 by witness Degen in response to MPA/USPS-T16-17 (Tr. 15/6515-32).

2 The Postal Service's exclusive reliance on MODS numbers as a basis for cost
3 distribution has caused it to ignore much other useful information collected by IOCS
4 clerks. In this testimony I demonstrate that information given in response to IOCS
5 question 19 can lead to a more accurate cost distribution, particularly in MODS
6 Function 4, allied and NonMODS cost pools. I also show a better way to handle
7 "support pool" costs and "migrated" window service costs.

8 Section V of my testimony addresses bundle breakage. While some exaggerated claims
9 have been made about the relevance of this issue to rising Periodicals costs, it does
10 represent a significant amount of avoidable costs. A concerted ongoing joint
11 industry/USPS effort is expected to significantly reduce bundle breakage costs in the
12 2001 test year. Unfortunately, the Postal Service's first attempt at analytical modeling
13 of bundle breakage and its effects, the flats mail flow model presented in this case by
14 witness Yacobucci (USPS-T-25), has serious defects, both in modeling assumptions and
15 in the data it relies on. I propose an alternative model that uses most other aspects of
16 the Yacobucci model but refines the parts relating to bundle sorting and bundle
17 breakage, and that is based on a much better and more recent data base on package
18 integrity, collected by an MTAC team last fall.

19 The revised flats mail flow model, is filed in this case as MPA library reference MPA-
20 LR-2. It also includes some refinements of Yacobucci's assumptions about flats piece
21 sorting costs explained by witness Glick in PostCom, et al.-T-1.

22 Based on analyzing before and after scenarios with the revised flats model, considering
23 both changes the Postal Service is making in its bundle handling and recovery methods
24 and various industry efforts described by MPA witnesses Cohen (MPA-T-1) and Glick
25 (MPA-T-2), I estimate that Periodicals bundle breakage related costs in the test year will
26 be \$21 million less than implicitly assumed in the Postal Service's roll forward
27 estimates. The implication of this and other Periodicals cost reductions that the
28 industry expects will be achieved in the test year is discussed in Cohen's testimony.

29 Section VI addresses Periodicals rate design. I am more convinced than ever that the

1 only reliable way to reduce postal costs is for mailers to prepare their mail in ways that
2 bypass as much of the postal system as possible, i.e., by increased worksharing. In
3 addition to regulations requiring more efficient mail preparation, which the Postal
4 Service apparently plans to introduce more of, it is my view that there must be strong
5 rate incentives to encourage worksharing.

6 Based on the improved flats mail flow model discussed above, I demonstrate that the
7 cost differentials between levels of Periodicals presortation are considerably larger than
8 assumed in the Postal Service's filing. Even my modified mail flow model understates
9 the true presort cost differentials, because it excludes some operations that are
10 performed on mail requiring piece sorting but not on mail that bypasses piece sorting.
11 For that reason, the somewhat higher presort cost savings I present are still very
12 conservative.

13 I point out a longstanding omission in the Postal Service's estimates of Periodicals and
14 Standard A DDU dropship savings. The model used by the Postal Service ignores the
15 fact that it is the mailers, not Postal Service employees, who unload mail entered at
16 DDU's. I propose a corresponding increase in the DDU discount.

17 Finally, I propose the creation of a moderate discount for mail that is entered on 5-digit
18 pallets at the destinating SCF or delivery unit. The wish for more 5-digit pallets, which
19 can simply be cross-docked to the DDU, was almost universal among facility managers
20 interviewed by the Periodicals Review Team. The discount I propose will have
21 minimal if any impact on other rate categories, will reduce bundle sortation at the SCF
22 and the associated risk of breakage, and will make it feasible for some mailers to avoid
23 even more costs by dropshipping all the way to the DDU.

24 **III. RUNAWAY PERIODICALS COST INCREASES AND DECLINING FLATS**
25 **PRODUCTIVITY CONTINUE - AS DOES THE POSTAL SERVICE'S FAILURE TO**
26 **PROVIDE EXPLANATIONS**

27 In my R90-1, R94-1 and R97-1 testimonies before this Commission, I commented
28 extensively on the unreasonableness of the Periodicals cost increases, particularly the
29 mail processing costs reported by the IOCS.

1 In this docket, the Commission has taken the lead in seeking explanations of why, at a
2 time when the Postal Service claims unprecedented success in simultaneously lowering
3 costs and improving service for letter mail, it continues to report ever higher costs for
4 flat mail, in particular Periodicals flats. But the record established on this issue so far is
5 unhelpful and even rather misleading, because the Postal Service's response through
6 various witnesses has mostly served to obscure the full extent of the problem.

7 Part A below reviews various historical facts that demonstrate how serious the decline
8 in flat sorting productivity has been. Part B rebuts witnesses O'Tormey and
9 particularly Unger, who have failed completely to address the serious issues raised by
10 the Commission in Order No. 1289. Part C explains why I believe that in spite of many
11 failed promises of reduced costs in the past, there now are many hopeful signs that
12 things will turn around, that the attention of postal management finally is focused on
13 reducing Periodicals costs, and that the many possibilities presented in this docket for
14 test year cost reductions indeed will be realized.

15 **A. THE PRODUCTIVITY DECLINE AFFECTING PERIODICALS IS FAR**
16 **GREATER THAN ADMITTED BY POSTAL SERVICE WITNESSES**

17 When it raised the issue of rising Periodicals costs in POIR 4, the Commission focused
18 on the FY89 through FY98 period. In so doing, it may have taken its lead from witness
19 Degen's Docket No. R97-1 rebuttal testimony, in which Degen sought to minimize and
20 justify the large increases in Periodicals costs. Docket No. R97-1, USPS-RT-6: Tr.
21 36/19312 et seq. Degen knew full well, however, that some of the largest increases in
22 Periodicals costs occurred prior to FY89, starting in FY86.

23 To illustrate this point, I have plotted in Exhibit 1 the trend in Periodicals mail
24 processing costs, versus the corresponding trends for all mail and for clerk and
25 mailhandler wage costs, between FY83 and FY89. Prior to FY86, Periodicals costs were
26 growing, but at a moderate pace, approximately tracking the trend for all mail and
27 postal wages. But after FY86, Periodicals processing costs began to behave in a manner
28 fundamentally different from the costs of processing most other mail. Over the next
29 three years, the per piece Periodicals processing cost grew almost 25% more than the

1 wage rate, while overall processing costs tracked the wage rate.

2 Why worry about increases that occurred over ten years ago? One reason is that
3 pretending they did not occur has become a part of the Postal Service's continuing
4 denial of the seriousness of the problem visited upon Periodicals mailers. While some
5 of the first FSM's were already in operation in FY86, that year can be seen as
6 representing a time when flats were sorted manually, but much more efficiently than
7 today. It also represents the last year before letter mail automation began to cause
8 major changes in the mail processing environment. Until the Postal Service can process
9 Periodicals at least as efficiently as it did then, its flats automation program can only be
10 described as a failure. The new technology introduced since then is being charged to
11 flat mail, including Periodicals, in the form of higher maintenance and capital costs that
12 were supposed to be recovered by higher, not lower, sorting productivity. And
13 through sharply increased worksharing Periodicals mailers today do much of the work
14 that the Postal Service itself had to do in FY86.

15 In his response to POIR 4, Postal Service witness Smith plots the trends in processing
16 and in-house carrier costs for different categories of flats, adjusting for changes in
17 volumes and wage rates and for the major costing methodology change in R97-1. Smith
18 mentions briefly that some changes were made in IOCS methodology in FY92, the only
19 year in the last twenty that Periodicals processing costs declined, but does not appear to
20 acknowledge all the changes that were made or to make any adjustment for them.⁶

21 A far more serious omission is Smith's failure even to mention that both increased
22 mailer worksharing and advances in flat and bundle sorting technology over the period
23 he studied should have produced major reductions in Periodicals processing costs.⁷

⁶ In the early 1990's, the Postal Service modified the LIOCATT to separately distribute mixed mail costs that could be associated with specific shapes, a process that tends to lower the costs of flat mail, as discussed later in this testimony. That may be the reason for the one-time drop in Periodicals mail processing costs that occurred in FY92. See Docket No. R94-1, USPS-T-4 (Barker): Tr.3/1157-58; TW-T-1 (Stralberg): Tr. 26/13822.

⁷ As designer of the Postal Service's "piggy back" methodology, Smith could at least have mentioned that focusing solely on cost segments 3.1 and 6 fails to consider the sharply higher piggyback costs resulting from advanced technology that was meant to reduce costs.

1 The following are some of the factors that should have led to lower processing costs
2 and must be included in any serious evaluation of productivity trends. First, advances
3 in mailer worksharing (focusing on regular rate publications):

- 4 • Carrier route presort increased from 26% in FY89 to over 39% today. This increase,
5 made possible mostly through expensive investments in selective binding capability
6 by mailers and printers, represents a lot of flat sorting that the Postal Service used to
7 have to do (manually) but no longer needs to do.
- 8 • The percent entered at the destinating SCF, which bypasses all earlier transportation
9 and handling steps, increased from 15.4% in FY86 to 21.6% in FY89. By FY99, the
10 percent of pieces entered either at the DSCF or the DDU had grown to 36.5%.
11 Dropshipping saves handling and transportation costs and makes service standards
12 easier to meet.
- 13 • The industry began to palletize in the early 1980's, which everyone in the field
14 agrees saves postal costs. The percent of regular rate Periodicals palletized was
15 estimated at 28% in R87-1, 46% in R90-1, 56% in R97-1 and over 60% in this docket.
- 16 • Pre-barcoding was not even known in FY89. Today well over half the non-carrier
17 route Periodicals pieces are pre-barcoded. To qualify for barcode discounts, mailers
18 must comply with strict standards for address quality and other requirements that
19 did not exist in 1989.

20 Next, some of the impressive technological advances that should have helped raise
21 productivity:

- 22 • A large number of flat sorting machines were deployed in the late 1980's.
- 23 • FSM's were changed to the 2+2 configuration, a move R97-1 Postal Service witness
24 Moden said was expected to raise productivity by 13%. R97-1 response to
25 TW/USPS-T4-14j; at Tr. 5957, 5960.
- 26 • The number of FSM-881's increased to over 800.
- 27 • All FSM-881's were equipped first with barcode readers, then with OCR's.
- 28 • Over 300 FSM-1000's were deployed, with the intention to machine sort almost all
29 flats. The FSM-1000 has turned out to be a more advanced machine than the 881.
- 30 • Large numbers of small parcel and bundle sorters (SPBS) were deployed, many of

1 which were recently equipped with labor saving "feed systems."

2 This list presents many reasons why flats processing productivity should have risen in
3 the past decade. So far, there have been no productivity increases, only higher
4 piggyback costs due to higher maintenance and capital costs.

5 My analysis of the rising Periodicals costs in previous rate cases led me to conclude that
6 the main problem was not flats piece sorting costs but rather the ever rising "not
7 handling" costs at allied operations, a disproportionate share of which were being
8 attributed to Periodicals. It is, however, clear that declining piece sorting productivity
9 also has become a problem, and for all flats mail, not just Periodicals.

10 A MODS-based Docket No. R97-1 exhibit (Time Warner XE-2 to witness Bradley: Tr.
11 5565) showed that productivity in FSM sorting had declined every year from FY88
12 through FY96. FSM productivity in FY96 was 734 pieces per manhour, 18% less than
13 the 893 pieces per manhour achieved with technologically inferior machines in FY88. It
14 declined to only 614 pieces per manhour in FY98, and to 571 in FY99. See LR-I-190 and
15 LR-I-106, MODS volume and manhour data.

16 Postal Service officials sometimes respond to concerns about declining productivity
17 with the following argument. When a new technology is introduced, the easiest mail
18 tends to be sorted on it first, leading to very high initial productivity rates. But as time
19 goes on and more and more mail is sorted with the new technology, more difficult
20 kinds of mail are included, so that the productivity rate declines. Furthermore, as more
21 and more easy mail is transferred to the new advanced technology, the volume left for
22 the second best technology will consist of more difficult mail, so that the productivity
23 of that technology goes down too, and so on for the third best technology, etc.
24 However, in this process, because more and more mail is brought up to a higher
25 technology, the overall productivity is still increased. Or so the argument goes.⁸

26 For letter mail automation, this theory may have been correct. But the Postal Service

⁸ See, for example, witness Unger's attempts to defend this theory, in the face of plentiful evidence that it so far has not worked for flats. Tr. 21/8274-80.

1 also claims that its non-FSM facilities, where all flats are sorted manually, achieve a
2 manual sorting rate of 846 flats per manhour, much higher than the rate it now gets on
3 the FSM's (see LR-I-107), and that the manual rate is higher in those facilities because,
4 they sort all kinds of flats, not only the difficult ones that are diverted from the FSM's
5 in FSM offices. How is it possible that manual sortation of flats that include all kinds,
6 both the easy to sort and the most difficult, is much faster than FSM sortation which
7 excludes the most difficult flats? Why doesn't FSM sorting achieve at least as high an
8 average productivity as non-FSM offices are claimed to be achieving manually?⁹

9 To determine whether, as the above theory predicts, overall flat sorting productivity
10 did increase between FY96 and FY98, when so much new technology was deployed, I
11 compared total costs of processing on FSM's in MODS offices and at manual flats cases
12 in MODS Function 1, MODS Function 4 and NonMODS offices. As Table III-1 below
13 shows, total flat sorting costs increased 22.61% from FY96 to FY98, while the FSM
14 component increased over 41%.¹⁰ The average clerk/mailhandler wage rate increased
15 5.11%, leaving a wage adjusted increase of 16.65%. The volume of non-carrier route
16 flats in the postal system grew from 22.805 billion pieces in FY96 to 25.880 billion in
17 FY98, or 13.48%.¹¹ Combined with the wage adjusted cost increase, this indicates a
18 productivity loss of 2.79% from FY96 to FY98.

19 In reality, however, the productivity decline was worse. Almost all the increase in non-

⁹ One answer is that it often does. During the Periodicals Review Team facility visits we did observe very efficient FSM operations, both on Periodicals and Standard A flats, processing well over 1000 pieces per manhour. The fact that this does not always occur, that FSM's often sit idle, even when there are large volumes of mail waiting to be sorted - and even though daytime facility management apparently thinks they are being used continuously - is a problem that USPS management must address.

¹⁰ FSM costs in Table III-1 are based on LR-I-106 in this docket and LR-H-146 in Docket No. R97-1. Manual MODS Function 1 costs are for the MANF pool from the same two sources. Manual MODS Function 4 flat sorting costs are based on answers by Van-Ty-Smith to TW/USPS-T17-4 (FY98) and TW/USPS-T-17-23a (FY96), giving MANF costs at Function 4 offices (Tr. 15/6602-06, 6629-31). NonMODS costs are the NonMODS MANF costs in LR-I-106 (FY98) and response to TW/USPS-T-17-3 (FY96) (Tr. 15/6599-6601).

¹¹ Based on First Class and Standard A flats volumes from LR-I-233 and Periodicals billing determinant data.

1 carrier route flats volume was in Standard A flats, most of which have a 5-digit bundle
 2 presort and require only a single sort to carrier route. First Class flats, most of which
 3 have no presort and therefore may require three or four sorting iterations, declined in
 4 volume. See LR-I-233. The number of required flat sorts therefore increased much less
 5 than the 13.48% assumed above, and the flat sorting productivity declined more.
 6 Additionally, the above calculation looks only at the wages of the clerks who do the
 7 sorting and disregards all the other costs associated with the new equipment.

Table III-1: Flat Sorting Costs In FY96 & FY98 (\$1,000's)			
	FY96	FY98	Increase
FSM	736,969	1,042,369	41.44%
Manual MODS F1	514,848	459,933	-10.67%
Manual MODS F4	92,689	125,092	34.96%
Manual NonMODS	404,037	516,567	27.85%
Total	1,748,543	2,143,961	22.61%
Wage Rates			5.11%
Wage Adjusted Cost Increase			16.65%

8 If there is a bright part to this picture, it is that the Postal Service now has a large latent
 9 sorting capacity in the form of equipment that, at least in FY98 and FY99, it was still
 10 using in a very inefficient manner, as the numbers show, and in the form of even more
 11 advanced equipment that it is deploying. Utilization of this capacity should lead to
 12 sharp productivity increases in the handling of Periodicals and other flats.

13 **B. THE POSTAL SERVICE'S "FLATS" WITNESSES FAIL TO ADDRESS THE**
 14 **LONG TERM INCREASE IN PERIODICALS COSTS**

15 In its search for explanations of the unrelenting long term rise in flats costs, the
 16 Commission issued Order 1289 on March 28, requesting a witness from the ranks of
 17 senior management who could speak from experience about flats operations. The
 18 Postal Service produced witnesses O'Tormey (USPS-ST-42) and Unger (USPS-ST-43).

19 Both these witnesses describe difficulties in processing Periodicals and hint at possible
 20 ways to avoid costs. O'Tormey describes various very specific reasons to believe
 21 Periodicals costs in the test year will be substantially lower than projected in the Postal
 22 Service's roll forward process. These particular cost reduction opportunities include
 23 management initiatives to pay more attention to costs, joint USPS/industry efforts,

1 regulations that will require mailers to do more worksharing and technological
2 improvements. They are discussed in detail in MPA witness Cohen's testimony and
3 should be considered by the Commission in determining test year revenue
4 requirements.

5 But O'Tormey and Unger both fail in addressing the issue that the Commission
6 requested they address, namely the long term decline in flat sorting productivity and
7 anomalous Periodicals cost increase. In addressing this type of issue one needs to
8 adopt a historic perspective and identify things that have changed over time. Yet
9 Unger's testimony in particular is mostly about things that have stayed the same, about
10 which he makes observations that were equally or more true twenty or thirty years ago,
11 and about things that should have reduced Periodicals costs rather than increased
12 them.

13 During their oral cross-examination, it became quite clear that Unger and O'Tormey,
14 having been drafted to help explain the rising costs, in reality have no idea why
15 Periodicals costs have gone up. Neither witness knows how the Postal Service
16 attributes costs. Both address the issue from the point of view of operations, and from
17 that point of view it really makes no sense that Periodicals costs should have gone up.
18 Unger in particular does not seem to believe that they have gone up. See, e.g., Tr.
19 15/8282, 8357. All of this bolsters my long held belief that the main problem for
20 Periodicals is the Postal Service's outdated costing system and its tendency to place a
21 disproportionate share of the costs on the least automated mail.

22 Despite their admissions under cross-examination that the inefficiencies listed in their
23 written testimonies have existed for a long time and that neither of them really knows
24 why Periodicals costs have increased, it may be worthwhile to review some of the
25 things that Unger and O'Tormey initially suggested as explanations for the increased
26 Periodicals costs.

27 • Flats Are Different From Letters. Everyone knows that flats are bigger, heavier and
28 cannot be handled with the speed of automated letters. But repeating this obvious
29 fact does not explain why flats are being sorted at a slower pace today than when all
30 sortation was done manually. And even if O'Tormey and Unger are correct in

1 claiming that Periodicals flats are more likely than other flats to be sorted manually,
2 their costs should not be higher than when manual sorting was the only option.¹²

- 3 • Line Of Travel. The fact that the line of travel (LOT) requirement for Standard A
4 ECR has reduced costs in that subclass substantially is good news. Requiring it for
5 Periodicals, as the Postal Service plans to do, will likely help reduce Periodicals
6 carrier route costs as well. See 65 Fed. Reg. 31506 (May 18, 2000). But since there
7 never was such a requirement for Periodicals, the lack of it explains nothing about
8 the historical cost increase.

- 9 • Bundle Breakage. Unger and O'Tormey both mention bundle breakage, the same
10 excuse that first came to Postal Service witness Moden's mind ten years ago when
11 asked to explain the then already anomalous increase in Periodicals costs. See,
12 Docket No. R90-1, Tr. 11/4945 (Moden). Bundle breakage has been around for a
13 long time. As discussed in Section V, it is a problem mainly with sacked mail, as
14 clearly shown by a recent MTAC survey. Since there has been a major migration of
15 Periodicals from sacks to pallets over the past decade, it is likely that the problem
16 used to be worse. Moreover, the same MTAC survey shows that bundle breakage
17 affects Standard A flats as much as Periodicals flats. See Section V.C below.

- 18 • Sacks Versus Pallets. Unger mentions the lower cost of palletized mail compared
19 with sacks. USPS-ST-43 at 5. But this is one reason Periodicals costs should be
20 lower today, with over 60% of the volume now on pallets. Both O'Tormey and
21 Unger mention skin sacks, which obviously do add to costs. But I remember
22 hearing Postal Service officials complain about skin sacks in 1980. According to the
23 Periodicals mail characteristics studies in this docket and the last, there were fewer

¹² See USPS-ST-42 at 11-13. The only new physical characteristic of flats may be the presence of polywrap on some of them. This has become a problem because the Postal Service approved and agreed to allow automation discounts for many types of polywrap materials and issued a list of approved materials. But many in the field have never heard of the list, and FSM operators pay no attention to it. Obviously the Postal Service needs to make up its mind on whether or not to support these materials. If it decides yes, then it must make sure that its employees respect that decision.

1 Periodicals sacks in FY98 than in FY96.¹³

2 Service. Unger and O'Tormey both talk about service, as postal managers usually
3 do when asked to explain runaway costs. But they produce no evidence that service
4 needs are more of a cost factor today than they always have been. In particular,
5 there is no evidence of "Hot Pubs" being more of a burden today than ten or twenty
6 years ago. Far more mail is now dropshipped directly to the DSCF or even the
7 DDU, mostly by mailers of so-called hot pubs. The percent of regular rate
8 Periodicals entered at the DSCF has gone from practically zero before R84-1, when
9 the first discount was introduced, to 15% in FY86, to over 35% in FY98. This
10 dropshipping saves the Postal Service substantial handling and transportation costs
11 and makes it easier to meet service commitments. If Periodicals service really has
12 improved -- and it is not clear that it has -- the improvement is mostly due to
13 mailers bypassing parts of the system and dropshipping their mail at facilities much
14 closer to its destination.¹⁴

15 Unger mentions one type of "service" that the Periodicals Review Team agreed the
16 industry does not want: "special arrangements" (e.g., sending a vehicle on an extra
17 unscheduled trip) to get a publication to the delivery units even when it misses the
18 normal processing deadlines. If this type of "service" provides an excuse for
19 heaping large cost increases on Periodicals, then the industry for the most part
20 would rather take the responsibility for meeting its own deadlines, and live with the
21 consequences if it cannot meet them. See testimony of Time Inc. witness O'Brien,
22 TW-T-2 at 16.

23 • Allied Labor Requirements Caused By OCR/BCR Additions. Unger appears to say

¹³ See LR-H-190 and LR-I-87. According to those surveys, carried out by the same USPS contractor, the number of regular rate Periodicals sacks in the system was 100.846 million in FY96 but only 88.903 million in FY98, a decline of 11%. The same surveys show the number of pallets used by regular and science of agriculture Periodicals increasing by 22%.

¹⁴ Unger refers to the Wall Street Journal, which often has a very short time between arrival and dispatch. USPS-ST-43 at 6. But one often heard the same complaint about the same newspaper in the 1970's. Since then, WSJ has pulled over half of its volume out of the postal system.

1 that FSM productivity has not really declined; it is only that with the addition of
2 BCR and OCR mailstreams there is so much extra allied labor, some (but certainly
3 not all) of which is being charged to the FSM's themselves. But what is the point of
4 flats automation if it requires additional allied labor whose costs exceed the savings
5 presumably produced by more efficient machines (not even taking into account the
6 increased costs of capital, maintenance personnel and physical space that the new
7 automation has imposed)? Did management really not foresee the difficulties that
8 serving multiple mailstreams with different sorting technologies would cause?

9 Assertions that technological improvements somehow explain Periodicals cost
10 increases suggest to me that Postal Service management may be addressing us from
11 the other side of the looking glass.

- 12 • FY98 Problems. Unger and O'Tormey refer to some special difficulties the Postal
13 Service experienced in FY98. First there was too much mail volume, caused by the
14 UPS strike. Then at the end of the year, there was less volume than they had staffed
15 for, due to overly optimistic forecasts. Unger suggests that the Postal Service used
16 the surplus staff to provide especially good service. It is not clear what any of this
17 has to do with Periodicals, whose volumes are quite predictable, would not have
18 been affected by the UPS strike and therefore cannot have caused the large volume
19 swings. Unger says the Postal Service was able to reduce the volume of delayed
20 mail, but was it Periodicals that had been delayed?

21 In any case, FY98 appears to have been a difficult year. That raises the question of
22 whether expectations that 2001 will be a more typical year are fully recognized in
23 the Postal Service's roll forward method.

24 In summary, it appears that O'Tormey and Unger were chosen by the Postal Service to
25 respond to Order 1289 without being fully informed of the magnitude of the problem
26 faced by Periodicals mailers, whose reported costs have increased at alarming rates for
27 many years, and without knowing any more about the underlying causes than Postal
28 Service witnesses chosen to address the issue in previous dockets.

1 **C. THERE EXISTS A SIGNIFICANT POTENTIAL FOR LARGE REDUCTIONS IN**
2 **PERIODICALS COSTS IN YEAR 2001**

3 Since the Postal Service filed its request for new rates in January, there have emerged a
4 number of possibilities for significantly reducing the Periodicals costs that the Postal
5 Service projected for the 2001 test year. Those opportunities are described
6 comprehensively by MPA witness Cohen (MPA-T-1).

7 But given the long history of costs that went up when they should have gone down, of
8 inexplicable increases in Periodicals costs even when costs declined for other mail
9 classes, the Commission must no doubt be asking why it should believe that this time
10 will be different, that the many new promises will not turn later into still more excuses
11 for even higher costs.

12 In my opinion, some things really are different this time. One difference is that the
13 technological solutions the Postal Service in the past has tried to apply to flat mail never
14 offered more than a marginal improvement over manual sorting, and that marginal
15 improvement tended to be outweighed by higher allied labor, maintenance and capital
16 costs. The AFSM-100 appears to be different - giving an order of magnitude
17 improvement that should at least begin to have a real impact similar to the impact
18 OCR's and BCR's have had on letter mail.

19 More importantly, most of the new cost reduction opportunities are, for a change, not
20 based on technology. They include new regulations that will require mailers to do
21 more work, as for example placing the pieces in a carrier route bundle in line of travel
22 sequence (LOT) or complying with the L001 labeling list. They also include areas
23 where the Postal Service easily can reduce Periodicals costs simply by paying more
24 attention to costs, e.g., by not placing Periodicals on airplanes. And they include
25 already ongoing joint industry/Postal Service efforts to, for example, reduce bundle
26 breakage costs.

27 But perhaps the biggest difference today is that, after being the Postal Service's
28 squeakiest wheel for more than ten years, after continuing to complain about rising
29 costs and rejecting Postal Service tendencies to think of them as just a public relations

1 issue, the Periodicals industry now really has gotten the attention of Postal Service
2 management.

3 The Postal Service members of the Periodicals Review Team were at least as shocked as
4 we were to find, especially during our early morning visits, rows of idle FSM's whose
5 crews always had just gone to lunch, during presumably busy processing intervals,
6 with piles of mail waiting to be sorted, in one facility after another. They were probably
7 at least as shocked to hear one facility manager after another reveal that cost was really
8 not something they were used to thinking about. Or to observe FSM "supervisors"
9 who might as well not have been there since they played no role either in identifying
10 problems or solving them, leaving the FSM crews to manage themselves.¹⁵

11 All of this has led to a flurry of initiatives expected to help reduce costs not only for
12 Periodicals but other mail classes. Although the wheel still grinds slowly, some
13 initiatives, such as the Package Integrity Task Force are proceeding and will help bring
14 about lower costs.

15 Because of the degree of inefficiency that had been allowed to build up, with costs
16 mostly imposed on flats mailers, the Postal Service has a large "latent capacity" for
17 processing more mail, which can be realized even without new technology. Any
18 significant dent in the "missing FSM crew" problem will lead to lower costs.

19 I therefore have only two main concerns. One is that with the Postal Service's costing
20 system being as it is, particularly the IOCS, even a real reduction in Periodicals costs
21 could be reported as an "increase," because of the system's tendency always to allocate
22 more costs to the least automated mail. I discuss mail processing cost issues in the
23 following section. The other concern is that Postal Service management could
24 gradually slip back to its old ways, pretending that the problems raised by Periodicals
25 mailers have already been solved. To avoid this, the industry needs to continue its
26 vigilance. The Commission can do its part by holding the Postal Service to all its
27 promises of lower costs and by providing only the revenues that the Postal Service

¹⁵ Similar recollections are described by Mr. O'Brien. TW-T-2 at 14-15 and 17-18.

1 really needs to continue to deliver mail.

2 **IV. DISTRIBUTION OF MAIL PROCESSING COSTS**

3 In this section I propose several ways to improve the MODS/IOCS based distribution
4 of mail processing costs, using information that the Postal Service's method ignores.
5 The changes I propose are implemented in a SAS program contained in library
6 reference MPA-LR-3, producing the cost distribution used by MPA witness Cohen. In
7 the following discussion I use several tabulations of IOCS tally data that I extracted
8 from an ACCESS data base of mail processing IOCS tallies, contained in library
9 reference TW-LR-1.¹⁶

10 Section A below summarizes my recommendations. Section B discusses the increasing
11 inadequacy of the IOCS in the automated processing environment and the role a flawed
12 costing method has played in producing increases in reported Periodicals cost. Section
13 C analyzes the dynamic interaction between different mail processing cost pools and
14 the unique characteristics of "allied" operations, which require a different costing
15 approach from that used to model piece distribution operations.¹⁷ Section D explains
16 why the nature of allied operations justifies a broader distribution of their not handling
17 and mixed mail costs, at least until the limitations in current data systems are resolved
18 and a fundamentally different costing approach that fits the automated processing
19 environment has been developed.

¹⁶ Besides implementing the methodological changes described in this section, the SAS program in MPA-LR-3 assigns a lower volume variability than does the Postal Service's method in many cost pools where witness Bozzo (USPS-T-15) did not provide econometric estimates of variability. The rationale for assuming lower variability at many pools is explained by witness Cohen in MPA-T-1. While I believe, based on my observations, that many mail processing operations in today's environment must have costs that vary substantially less than 100% with their volume, my testimony does not address the estimation of volume variability factors.

¹⁷ The term "allied" is not always used consistently. For example, it sometimes includes a part of the work done at piece distribution operations such as a BCR or an FSM. In the following, when referring to MODS Function 1 offices, I use "allied" as a collective term for cost pools 1Bulk PR, 1Platform, 1OPNBulk, 1OPNPref, 1Pouchng, 1Sack_H, 1Sack_M and 1Scan, as defined in for example LR-I-106. In reference to NonMODS, I use the term to include the Allied and Misc pools, and for BMC's I refer to the PLA and OTHR pools. There are allied labor activities also in Function 4 pools such as LD43, but they are not identified in separate "pools."

1 Section E discusses the information recorded under IOCS Question 19 and shows that it
2 can be used in a MODS-based costing approach to provide more information about not
3 handling and empty equipment costs, thereby bringing the cost attribution a little
4 closer to real cost causality. In particular, use of Question 19 data can help improve
5 cost distribution in MODS Function 4 and allied and NonMODS cost pools.

6 Section F discusses some of the inherent biases in the current item/container sampling
7 system and suggests improvements in IOCS data collection procedures. Finally,
8 Section G proposes a different treatment of the so-called "migrated" and "support
9 pool" costs from that proposed by witness Degen.

10 A. SUMMARY OF RECOMMENDATIONS

11 The following recommendations, supported in later sections, will not make the IOCS a
12 perfect system. They will, however, move the distribution of mail processing costs a
13 little more in line with real cost causality. My recommendations do not depend on the
14 decisions the Commission may make on volume variability of mail processing costs.

- 15 • "Not handling" costs at allied MODS cost pools should be broadly distributed over
16 direct costs and distributed mixed mail costs in all MODS Function 1 cost pools, as
17 the Postal Service proposes. The justification for this approach, given the lack of
18 data supporting a more precise method, is that the large allied not handling costs
19 are mostly driven by the need to serve piece distribution pools.
- 20 • "Mixed mail" costs at allied MODS pools, including empty equipment costs, should
21 be broadly distributed over the direct costs in all Function 1 MODS cost pools. I
22 recommend that the Commission adopt the same approach it used for allied mixed
23 mail in its R97-1 Opinion. An alternative would be a broad distribution over pools,
24 but within the "item and container" categories in the current mixed mail sampling
25 system, as described by witness Degen in his response to MPA/USPS-T16-17 (Tr.
26 15/6515-32).
- 27 • Mixed mail and not handling costs in allied BMC and NonMODS cost pools should
28 be distributed broadly over all pools within the respective facility categories.

- 1 • The distribution of not handling and mixed mail costs in allied and support pools,
2 as well as Function 4 pools, can be enhanced by use of Question 19 data, i.e., by
3 distributing separately those not handling and mixed mail costs that are linked to
4 specific shapes and/or sorting technologies via Question 19 responses. In
5 NonMODS facilities, use of Question 19 data to define cost pools should be
6 extended to all tallies.

- 7 • The over \$80 million direct costs in so-called "support" pools should be distributed
8 according to the subclass or special service identification provided by IOCS clerks.
9 "Migrated" window service costs should be distributed as what they are, in
10 recognition of the fact that some classes use window service more than others.

11 **B. AS AUTOMATION OF MAIL PROCESSING CONTINUES, IOCS BECOMES**
12 **INCREASINGLY INADEQUATE AS A COSTING TOOL**

13 The IOCS was designed for cost distribution among subclasses and special services at a
14 time when almost all mail was handled manually. My testimonies in Dockets No. R90-
15 1, R94-1 and R97-1 explained why the system has become increasingly inadequate as
16 the Postal Service's processing environment has become more and more automated.
17 Due to automation and mechanization, the probability that a randomly selected postal
18 employee observed at a randomly selected point in time will be found holding mail in
19 his hand is less and less. With the declining number of "direct" IOCS tallies (tallies
20 allowing identification of specific subclasses or special services) and the sharp growth
21 in so-called "not handling" tallies, the interpretation of IOCS data for costing purposes
22 has come to rely more and more on unproven proportionality assumptions to distribute
23 costs associated with "mixed mail" and "not handling" tallies.

24 As shown in Table IV-1, "direct" IOCS tally costs in FY98 represent only 44.7% of the
25 total, whereas according to the Kearney Data Quality Study (at 73), the "direct" mail
26 processing tallies produced by IOCS were 77% of all tallies in 1969. The combination of
27 not handling tallies (43.4%) and empty equipment tallies (6.7%) in FY98 exceeds 50% of
28 all IOCS observations but was only 6% of the total in 1969. In NonMODS offices, which
29 are much less mechanized and automated than MODS offices and BMC's, direct costs

1 are still almost 62% of all tallies, and the not handling component is “only” 29.75%.¹⁸
 2 But reduced statistical reliability, caused by extrapolating subclass information from
 3 fewer and fewer “direct” tallies to more and more mixed mail, empty equipment and
 4 not handling tallies, is not the only problem with the current IOCS, and perhaps not
 5 even the most serious.

Table IV-1: Composition Of FY98 Mail Processing Tallies by Tally Type				
	MODS	NonMODS	BMC	All Facilities
Direct	41.77%	61.83%	30.10%	44.66%
Mixed Mail	5.30%	3.68%	10.13%	5.26%
Empty Equipment	6.86%	4.74%	11.50%	6.73%
Not Handling	46.08%	29.75%	48.26%	43.35%
Total	100.00%	100.00%	100.00%	100.00%

6
 7 For example, IOCS shows that certain operations take more time today than they did
 8 ten or twenty years ago and that employees at “allied” operations spend a large portion
 9 of their time “not handling mail.” But IOCS was never designed to explain why these
 10 things occur. Clearly, when some postal operations, e.g. flat sorting, suddenly seem to
 11 take much longer per piece than before, one suspects too many persons may have been
 12 assigned to those operations. That could happen, for example, if unexpected efficiency
 13 gains in one area (e.g., automated letter sorting) leave a facility with excess personnel
 14 but management is reluctant to reduce staff levels to below its approved budget.
 15 Historical coincidence and common sense indicate that this had something to do with
 16 the large Periodicals cost increase that started in the late 1980's. But Postal Service
 17 managers, at least those who have testified before this Commission, always deny that
 18 this could possibly have happened, insisting that postal facilities never have excess
 19 staffing, that facilities have every incentive to cut costs, and that if Periodicals costs are
 20 higher it must be because mailers are doing something wrong.¹⁹ And since the IOCS
 21 itself is incapable of providing any answer, the issue remains perpetually unresolved.

¹⁸ One reason the percent of “direct” tallies has not declined even more is that the Postal Service has considerably expanded the definition of “direct,” for example through expanded use of the “top piece rule” and by including counted mixed items among the “direct” tallies. See Docket No. MC97-2, USPS-T-5 at 10 (Patelunas).

¹⁹ See e.g., Docket No. R97-1, USPS-RT-8 (Steele): Tr. 33/17843 et seq.

1 Faced with growing doubts about the accuracy of IOCS, the Postal Service introduced
2 two major new features to its costing system in the 1990's. One is the current way of
3 recording item and container type data for handling mixed mail and empty containers.
4 The other is the MODS-based costing, which groups tallies into cost pools according to
5 the MODS operation numbers sampled employees were clocked into. Both changes
6 have a certain intuitive appeal and can provide much useful information. But both also
7 rely on numerous unproven and sometimes inaccurate proportionality assumptions.
8 Both can lead to serious distortions of true cost relationships if applied carelessly or
9 without proper understanding of the dynamics that affect mail processing costs.

10 MODS-based costing takes advantage of the connection between MODS and the Postal
11 Service's pay system. Since the Postal Service knows exactly how much in wage costs it
12 incurs for each MODS pool, it can provide a more accurate weighting of the tallies in
13 each pool. This is important, because the work in one pool may require employees at a
14 higher wage level than the work in another pool, a fact the old IOCS method could not
15 detect. However, this particular benefit of using MODS data can be realized regardless
16 of the distribution keys used for mixed mail and not handling costs.

17 MODS-based "pools" are not hermetically sealed compartments whose costs are
18 defined only by events within the pools themselves. Excessive reliance on the cost
19 pools appears to have prompted an almost complete disregard for much of the other
20 information contained in IOCS tallies. Mr. Degen carries this propensity to the point of
21 absurdity when he proposes to ignore the fact that some employees were working at
22 postal windows or the fact that some employees were handling mail pieces with known
23 subclasses, just because they happened to be clocked into a "support" pool while doing
24 so.

25 My R97-1 testimony explained in detail my concerns about the numerous unverified
26 assumptions underlying the method introduced by witness Degen and the potential
27 systematic biases caused, for example, by treating pallets (which are used extensively
28 by Periodicals mailers) in a manner inconsistent with the treatment of other containers.
29 Most of the concerns I expressed then are just as relevant today.

30 In its R97-1 Opinion, the Commission adopted most of the proposed MODS-based cost

1 distribution method, including its use of item and container data. However, it rejected
2 the Postal Service's proposed method in one important respect, concluding that it was
3 more appropriate to distribute mixed mail costs (including empty equipment costs)
4 recorded at "allied" cost pools broadly, over the direct costs in all MODS pools. The
5 unique role played by allied operations in the flow of mail through processing facilities
6 had been stressed in my rebuttal testimony. Docket No. R97-1, Tr. 36/19285-87
7 (Stralberg); 19228-30 (Cohen).

8 The next two sections discuss the dynamic interactions between mail processing
9 operations, the unique role of "allied" operations, and the reasons why a broad
10 distribution of allied mixed mail and not handling costs is appropriate at this time.

11 **C. WHAT DRIVES THE COSTS OF MAIL PROCESSING IN POSTAL FACILITIES?**

12 The objective of postal costing is to identify causal links between accrued costs and mail
13 subclasses. The easiest part of this exercise is to establish causal links for the "direct"
14 costs incurred when employees handle specific classes of mail. There is little argument
15 about the attribution of those costs to the classes that are being handled.²⁰

16 At some cost pools where units handled and operations performed are fairly uniform,
17 e.g. those that distribute only pieces of a particular shape, it is also reasonable to
18 assume that not handling and other indirect costs are caused by the different mail
19 classes and subclasses in the same proportion as the direct costs. For example, if one
20 subclass causes 50% of the direct costs at OCR's, it is reasonable to assume it also is
21 responsible for 50% of the indirect OCR costs.

22 The question is far more complex, however, for the highly composite allied operations
23 (platforms and opening/pouching units). These operations have much higher ratios of

²⁰ However, Periodicals flats may be saddled with an excessive portion of direct costs. They are often the first to be diverted to manual sorting when FSM's are occupied with First Class and Standard A flats and the first to be moved to annexes (generating extra costs for transportation back and forth to the main plants.) Some of these inequities may be possible to correct by changes in processing procedures. In this analysis, however, I focus on the distribution of indirect costs, which must be addressed through the costing system.

1 not handling to handling costs and perform a wide variety of different tasks.
2 Furthermore, because productivity at allied operations generally is not monitored, it is
3 probable that employees are often assigned to them when they are not needed
4 elsewhere.

5 The dynamics that drive postal costs are evidently still not well understood, even by
6 Postal Service management. Understanding these dynamics is essential both to
7 reversing the unfavorable cost trends for Periodicals and other flat mail and to
8 attributing costs properly.

9 As an active member of the Periodicals Review Team, I made many observations about
10 the factors that drive costs in mail processing facilities, most of which were shared by
11 other industry team members.

12 First, in a series of meetings with facility managers it became obvious that managers
13 have little or no incentive to reduce staffing levels, which in the long run is the only
14 way to substantially reduce costs, but have strong incentives to maximize service,
15 reflected both in higher First Class overnight delivery scores and reduced customer
16 complaints. For a facility manager to reduce staff below the complement he is allowed
17 means risking reduced delivery scores, more complaints from postal patrons and more
18 labor grievances, all of which could negatively impact his compensation.

19 Second, the need for high staffing levels in mail processing plants, particularly at allied
20 operations, appears to be driven by relatively brief, hectic bursts of peak activity
21 associated with: (1) arrivals of outgoing collection mail in the early evening; and (2)
22 critical dispatches, such as early morning dispatches to AO's, stations and branches.

23 Third, these peak periods of allied labor activity are driven not by the total amount of
24 allied labor required but by time constraints on that portion of the mail that requires
25 many consecutive operations within a limited time frame between arrival and dispatch.

26 When mail arrives at a processing plant, there is usually a burst of activity at the
27 platform, resulting in a fast unload followed by a lull until another truck arrives (except
28 when many trucks arrive almost at the same time). Some of the mail unloaded may be

1 in "direct" containers, including pallets, that simply need to be cross-docked and
2 staged for loading onto outbound trucks. This activity takes little time. If all mail
3 required just cross-docking, there would be no need for high platform staffing levels,
4 since there normally would be ample time between mail arrival and dispatch.

5 The rest of the mail goes inside the facility to various opening units, where trays, sacks
6 and presorted bundles in the unloaded containers are sorted, either mechanically or
7 manually. Some of these trays, sacks and bundles, including all carrier route sorted
8 bundles, are "directs" that after being sorted at the opening units are brought back to
9 the platform and staged for dispatch to outbound trucks. Again, if all the mail were of
10 this type, there normally would be ample time between arrival and dispatch, and both
11 platforms and opening units could work at a more uniform pace, with lower staffing
12 levels and much less "not handling" time.

13 What defines the time constraints, however, and requires initial bursts of activity to get
14 the mail unloaded and started on its processing, and later more bursts of activity to
15 meet dispatch schedules, is the "working mail" that is separated from the direct mail in
16 the opening units. This mail first requires various "prep" operations prior to sorting,
17 including culling, facing, canceling, and for some letters remote barcoding, and then
18 one or more piece sorts before it can finally be returned to the allied operations for
19 dispatch.²¹

20 For example, the Periodicals Review Team watched an intense flurry of activity just
21 prior to the 5 a.m. dispatch to AO's at the Charlotte SCF platform. A few minutes after
22 these dispatches had left, however, the platform was completely empty and deserted.
23 It was evident that direct pallets and containers of direct bundles had already been
24 staged at the platform during an earlier, calmer period, and that all of the intense
25 activity immediately preceding these dispatches was focused on the mail that had come

²¹ Perhaps the tightest time-constraint between arrival and dispatch is determined by letter mail which is DPS sorted. DPS sorting to a given 5-digit zone requires all letters that will be included in that day's DPS mail to be available; i.e., the outgoing and incoming primary sorts for these letters must be completed before the DPS sorting starts. Time constraints are even tighter when the same barcode reader is used for several zones, normally one zone at a time.

1 off the letter and flat piece sorting operations, i.e., the working mail.

2 In other words, it is the mail that requires the most processing steps, generally the
3 "working mail," that drives the need for high staffing levels in allied operations in
4 order to: (1) get the arriving mail unloaded, "prepped" and entered into the processing
5 stream as soon as possible; and (2) get the mail whose sorting has just been completed
6 pulled down and sent to dispatch. It can therefore also be said that this mail is most
7 responsible for the extensive amounts of "not handling" and the often rather slow work
8 tempo that one observes in between these critical periods.

9 These observations bear directly on the question of how to distribute allied "not
10 handling" and "mixed mail" costs. That subject is discussed further below.

11 **D. A BROAD DISTRIBUTION OF NOT HANDLING AND MIXED MAIL COSTS**
12 **AT ALLIED OPERATIONS IS THE MOST APPROPRIATE UNTIL THE**
13 **DYNAMICS CAUSING THESE COSTS ARE BETTER UNDERSTOOD**

14 As illustrated above, "allied" operations in MODS facilities incur very large "not
15 handling" costs, in spite of being much less automated than the piece distribution
16 operations they support. These not handling costs are incurred in order to serve other
17 operations effectively, e.g., getting the mail prepped and to piece distribution as
18 quickly as possible. It is not known how much of the allied not handling costs are
19 incurred in serving letter sorting operations, how much in serving flats and parcel
20 operations or how much in serving the transit mail that requires little or no processing
21 before being dispatched.²²

22 How then should one assign responsibility for these costs? Obviously they should be

²² We do know, however, that much of the work being done in the allied pools could instead be done at the piece sorting operations. Witness Unger argues, for example, that there is no clear distinction between FSM and allied operations and that one therefore should not pay too much attention to productivity changes. USPS-ST-43 at 14. My observation has been that allied functions such as cutting bundles may be done at the FSM's at some times in some locations, while being done elsewhere in other cases. The same applies to the many allied functions performed before and after letter mail is sorted on OCR's or BCR's.

1 distributed to the mail that causes them, but there appears to exist no appropriate
2 model with which to “correctly” determine causality. I do not believe it makes sense to
3 assign responsibility for these large not handling costs based only on the relatively
4 small direct costs in allied operations. The best solution is to distribute them broadly,
5 over all distributed direct and mixed mail costs in the given facility group (e.g.,
6 Function 1 pools in the case of MODS allied costs). That essentially is what the Postal
7 Service in this docket proposes to do.

8 However, there is a way to improve somewhat on the undifferentiated broad
9 distribution of allied not handling costs. As explained below in Section E, some of
10 these costs can be associated with specific shapes and piece sorting technologies
11 through responses to IOCS Question 19 and are therefore more appropriate to
12 distribute over the corresponding direct and mixed mail costs. The information
13 available from Question 19 indicates that allied not handling costs are more often
14 linked to letter operations than to flat operations and therefore that even a broad
15 distribution of allied not handling costs may attribute too much cost to flat mail.

16 There are equally strong reasons to distribute allied “mixed mail” costs broadly. Not
17 only are there relatively few allied direct costs upon which to distribute the mixed mail
18 costs, but it can easily occur that a container of mail is sampled as “mixed” in an allied
19 pool while the items it contains may be sampled in some other pool, or that an empty
20 container observed at the platform may have been observed as a full container
21 somewhere else. All this speaks in favor of simply distributing mixed mail costs
22 broadly, particularly at allied operations.

23 There are, however, at least two ways to implement the concept of broad distribution of
24 allied mixed mail costs. One, described by Mr. Degen in response to MPA/USPS-T16-
25 17 (Tr. 15/6515-32), is carried out in the same manner as the Postal Service’s other
26 mixed mail distributions but across rather than within pools. That method performs
27 the distribution separately within the different item and container categories.

28 I prefer the alternative approach used by the Commission in its R97-1 Opinion. That
29 distribution is carried out both across pools and across item and container types. It
30 does, however, make use of the shape related information on a subset of the allied

1 mixed mail tallies, having activity codes 5610 (letters), 5620 (flats) or 5700 (parcels).
2 Mixed mail allied tallies with any of these activity codes are distributed across pools
3 but over the direct costs with shape letter, flat or IPP/parcel respectively.²³

4 While the item/container scheme used by the Postal Service is intriguing in many
5 ways, I tend to favor the broader distribution for the many reasons I explained in my
6 R97-1 testimony. Section F below describes specific reasons I find for still questioning
7 the validity of the item/container scheme as currently implemented in IOCS.

8 **E. AN IMPROVED COST DISTRIBUTION IS POSSIBLE USING QUESTION 19**
9 **SHAPE RELATED DATA THAT THE POSTAL SERVICE HAS IGNORED**

10 IOCS clerks are prompted to answer many questions about the activities of sampled
11 employees, where they performed those activities and the type of mail handled, if any.
12 Question 19 seeks to identify the type of operation at which the sampled employee was
13 located. Exhibit 2 shows the possible combinations of answers. The initial question has
14 20 possible answers (A-U). If A (manual) is chosen, a second list of nine possible
15 selections is presented to the IOCS clerk. If, for example, the observed employee was
16 working at a manual letter case, the Question 19 response would be the combination A
17 A, where the first A indicates manual and the second indicates a letter case. Similarly,
18 the combination A B indicates a manual flats case. The letter C by itself indicates the
19 employee was working at a BCR/BCS (in this case there is no subsequent question), etc.
20 Some additional choices are presented to the IOCS clerk if he indicates that the
21 employee was operating transport equipment or sorting parcels.

22 The Postal Service's R97-1 cost distribution method ignored the Question 19 data
23 completely (except for tallies without MODS numbers.) In the current proposal,
24 Question 19 data are used to define IOCS-based cost pools in NonMODS facilities.

²³ In this docket the activity codes 5610, 5620 and 5700 have been removed from most of the tallies that would have had such activity codes in previous years. Response to TW/USPS-T17-7: Tr. 15/6607-09. However, the Question 19 data on which those activity codes were based are available, and can be used also to obtain shape related connections for many empty equipment and not handling tallies, as discussed in Section E.

1 The use of Question 19 data proposed below goes further in associating some tallies
2 with specific shapes. On direct tallies, the shape of the mail piece handled is recorded
3 separately and Question 19 cannot add to that information. But for some non-direct
4 tallies in pools that are not identified with a unique shape, e.g., allied pools, Question
5 19 data can provide information that adds more precision to the cost distribution. The
6 only limiting factor is that such information is only available on some tallies.

7 Suppose, for example, that an opening unit or platform employee is observed handling
8 an empty hamper near an FSM. This could very easily happen if, for example, he is at
9 the FSM to retrieve empty equipment for use somewhere else. From the information
10 used in the Postal Service's cost distribution method, one would know only that he was
11 handling an empty hamper, the cost of which would be distributed over all mixed and
12 direct hamper costs (assuming that one uses a broad mixed mail distribution within
13 item and container type.) But from the Question 19 data we know that this was an
14 empty hamper used in flats processing, which makes possible a more accurate
15 distribution.²⁴

16 In the following I show how Question 19 data can help provide a somewhat more
17 accurate cost distribution in the following types of pools:

- 18 (1) Function 4 pools (stations and branches of MODS offices);
- 19 (2) NonMODS pools; and
- 20 (3) Allied and "Support" pools.

21 1. Function 4 pools - Stations and Branches of MODS Offices

22 The Periodicals Review Team observed stations and branches of most of the main
23 processing plants that we visited. We normally saw these offices in the early morning
24 hours, when most incoming mail is received and distributed to carriers and P.O. boxes.

²⁴ The pre-R97-1 cost distribution method used Question 19 data to identify certain mixed mail and not handling tallies as being related to either letter, flat or parcel distribution and distributed those costs separately over direct costs for, respectively, letter, flat and parcel handling. Mixed mail and not handling costs identified as shape related in this way were given activity codes 5610, 5620 and 5700. In R97-1 I proposed continued use of these codes, and the Commission used them in its distribution of allied mixed mail costs.

1 Besides the carriers, most of the employees we encountered were clerks working under
 2 MODS number 240, also known as LD43, the largest Function 4 cost pool. The \$563
 3 million accrued LD43 FY98 processing costs are comparable with those of all BMC's.
 4 Together with the smaller LD41 (automated sorting - mostly DPS), LD42 (mechanized
 5 sorting - almost nonexistent) and LD44 (box distribution), LD43 represents most
 6 incoming mail processing at stations and branches.²⁵ Given LD43's size and the fact
 7 that it contains a mixture of letter, flat and parcel distribution as well as allied labor
 8 functions, I thought it worthwhile to see how much use of Question 19 data would
 9 impact its cost distribution.

10 LD43 has about \$295 million in direct costs with known shape. As shown in Table IV-2,
 11 the portions associated with letters, flats and IPP's/parcels respectively are 46.79%,
 12 34.57% and 18.64%. There are another \$261 million "not handling" costs in this pool.
 13 There is Question 19 information for 73% of these costs, of which 72%, or about \$136
 14 million, can be associated with specific shapes. But as shown in Table IV-2, the share of
 15 these costs that is associated with letters is far higher than for the direct costs (62.6%
 16 versus 46.79%). The share of not handling costs associated with flats, on the other
 17 hand, is only 20.18%, versus 34.57% of the direct costs. That means that if one
 18 distributes these shape related not handling costs over the direct costs for
 19 corresponding shapes, the portion attributed to flat mail will be considerably less than
 20 under the Postal Service's method, which treats all not handling tallies within a pool
 21 indiscriminately.

	Letters	Flats	IPP/Parcels	Total
Direct Tallies	46.79%	34.57%	18.64%	100.00%
Empty Containers	45.74%	21.84%	32.42%	100.00%
Not Handling	62.60%	20.18%	17.22%	100.00%

22 I am not surprised that there appear to be higher not handling costs associated with
 23 letter mail. Although LD43 letter sorting is manual, it is affected by its association with

²⁵ The other Function 4 pools are LD49 (computerized forwarding), LD79 (business mail entry), separate pools for special services and Express Mail, and two "support" pools.

1 automated letter sorting at the main plant, which may on one day sort all letters on
2 automation and the next day leave a large volume to be sorted manually.

3 Question 19 data can also be applied to empty container costs. Of \$26.5 million in
4 empty container costs at the LD43 pool, \$15.7 million are associated with specific
5 shapes. And as Table IV-2 shows, the shape related percentages are different from the
6 "direct" percentages. Not surprisingly, the share of empty container costs associated
7 with IPP's and parcels is much larger than the corresponding shares of direct costs.
8 Flats, on the other hand, are associated with a smaller portion of the empty container
9 costs than of the direct tallies.²⁶

10 Based on these findings, I propose that the method used by witness Van-Ty-Smith
11 (USPS-T-17) to distribute empty container and not handling costs within the non-
12 support Function 4 cost pools be modified as follows:

- 13 • The costs of empty containers of a given type that are associated with specific
14 shapes through Question 19 data are distributed over only the direct and mixed
15 container data for the corresponding container type and shape.
- 16 • Not handling costs that are shape related are distributed over only the distributed
17 direct and mixed mail costs for the corresponding shape.

18 The method described above is implemented in the SAS program in MPA-LR-3. It
19 reduces the Function 4 costs attributed to Periodicals by over \$4 million, relative to the
20 Postal Service's method. My method does not associate all not handling or empty
21 container costs with specific shapes. One might think of the shape associated portion of
22 the empty container costs as the costs that occur at or near the distribution areas, e.g., a
23 letter or flat case or a parcel sort operation. The non-associated portion may occur
24 when the containers are brought back out on the platform, staged for return to the main
25 plant or for reuse locally, etc. Intuitively, it seems likely that the non-shape associated

²⁶ One interpretation might be that containers with parcels arriving at a station or branch are emptied rather quickly and thereafter become part of the "handling empty equipment" problem, whereas containers with flats may be used longer with mail in them.

1 costs have a shape distribution similar to those that can be identified by shape, since
2 they represent the same empty containers being handled in different parts of the local
3 office. There are, however, no shape specific data for the remaining empty container
4 costs.

5 Similarly, one might expect the portion of not handling costs that occur away from the
6 letter, flat and parcel distribution areas to have similar shape ratios, but there are no
7 data to prove such an assumption. Had I assumed that the shape affiliation for the
8 remaining not handling and empty container costs parallel the costs associated with
9 shape by applicable Question 19 data, then the redistribution referred to above would
10 have led to even lower Periodicals costs, and it would generally have raised the costs of
11 letter mail more. I have used the more conservative approach.

12 To summarize, not handling costs appear to be more letter related and less flat related,
13 and empty container costs appear to be more parcel related and less flat related, than
14 the direct and mixed mail costs. Given the high degree of letter mail automation and
15 the large bulk occupied by parcels, these conclusions make intuitive sense.

16 2. NonMODS Offices

17 The USPS proposal defines cost pools in NonMODS offices based mostly on Question
18 19 data. For example, a tally showing an employee to be at a manual letter operation,
19 defined by the combination A A in response to Question 19, is assigned to the MANL
20 cost pool. The combinations A B and A C are similarly assigned to the MANF and
21 MANP pools, and so on.

22 This approach would seem to accomplish essentially what the redistribution described
23 above accomplished for the MODS stations and branches data. There is, however, one
24 major difference. The Postal Service does not apply the Question 19 data to break time
25 tallies. Costs associated with those tallies are distributed proportionately on all other
26 NonMODS costs. But there is Question 19 information for the break time tallies, and
27 when it is applied rather than ignored it increases the costs at the MANL (letters) pool
28 by almost \$28 million, and reduces the allied and miscellaneous costs that are

1 distributed globally.²⁷

2 The SAS program in MPA-LR-3 uses Question 19 information to assign break time
3 tallies to NonMODS cost pools. Keeping those tallies separate and distributing them
4 proportionally to all other costs, as Van-Ty-Smith's method does, would be equivalent
5 to a completely global distribution of all break time costs in MODS offices.

6 3. In The Allied Pools, Available Question 19 Data Suggest That Even A "Broad"
7 Distribution Of Not Handling And Mixed Mail Costs May Overcharge Flat Mail

8 The methodological changes described below are applied in MPA-LR-3 to the MODS
9 Function 1, BMC and NonMODS allied and "support" pools. The following discussion
10 focuses on MODS Function 1 offices, which have by far the largest allied costs. In these
11 processing plants there tend to be much greater distances between operations than in a
12 small Function 4 delivery unit. Employees in the allied pools may be more mobile
13 overall than those in other pools, because their work is done in support of piece
14 distribution. An opening unit employee, for example, may bring hampers, APC's or
15 other containers of mail to an FSM or BCR operation to be sorted, and he may take back
16 with him either empty containers or containers full of mail that has been sorted and is
17 ready for an additional sort or for dispatch.

18 It follows that one would expect to see, in the Question 19 data, evidence of allied
19 employees working near shape specific distribution operations some of the time, but
20 not most of the time. In fact, of the roughly \$1.8 billion in allied and support pool not
21 handling costs, only about ten percent have a shape specific affiliation. It is unfortunate
22 that one cannot associate more of these costs with specific shapes, given that so many
23 allied employees appear to be involved in some type of moving or "prepping" mail of a
24 specific shape for piece distribution.

25 Table IV-3 illustrates the shape affiliation of direct MODS costs, which form most of the
26 distribution key for not handling costs. It divides MODS cost pools into the Function 4

²⁷ Witness Van-Ty-Smith conceded all of the above in her response to TW/USPS-T17-18 (Tr. 15/6621-24). In response to part d of that interrogatory, she provided a revised NonMODS cost distribution in which Periodicals costs were lower by over \$1 million.

1 pools and three categories of Function 1 pools. For each, it shows the percentage of the
 2 direct costs associated, respectively, with letters, flats and IPP/parcels, as well as those
 3 with no shape identified. The categories of Function 1 pools are:

4 Allied pools 1BULKPR, 1OPBULK, 1OPPREF, 1PLATFORM, 1POUCHING, 1SACKM
 5 and 1SACKH. They have only \$551 million in direct costs (tally dollars) but \$1,528
 6 million in not handling costs.

7 Function 1 Support includes the 1Misc and 1Support pools, for which the Postal Service
 8 proposes to ignore all shape and subclass information and distribute even the direct
 9 costs over the rest of Function 1.

10 Other Function 1 includes all Function 1 distribution pools, as well as the cancellation
 11 and SPBS and certain specialized pools. They represent 71.5% of all direct MODS costs
 12 (\$3.667 billion) but only 42.9% of the not handling costs.

13

Table IV-3: Shares Of Direct MODS Costs - By Shape						
Shape	Allied Pools	Other Function 1	Function 1 Less Support	Function 1 Support	Function 4	MODS Total
Letters	40.06%	60.81%	57.72%	63.80%	57.09%	57.65%
Flats	36.86%	31.36%	32.18%	20.08%	28.32%	31.49%
IPP/parcels	22.60%	6.56%	8.95%	9.90%	10.98%	9.27%
No Shape	0.49%	1.27%	1.16%	6.22%	3.61%	1.59%

14
 15 As can be seen from this table, the broad distribution of allied not handling costs means
 16 distributing more of those costs to letter mail and less to flats and parcels than would
 17 result from a pool by pool distribution.

18 Question 19 data for the over \$1.8 billion in allied and support function not handling
 19 costs show that about \$173 million have shape related information. The mix of allied &
 20 support not handling shape affiliations is:

- 21 Letters: 61.53%
- 22 Flats: 23.86%
- 23 IPP/parcels: 14.61%

24 The \$173 million should be distributed neither within pools nor broadly over all costs,

1 but over the direct costs of the corresponding shape. It is noteworthy that the portion
2 belonging to flats (23.86%) is much smaller than flat mail's share of the direct costs both
3 overall and in the allied pools. The 23.86% that are flat affiliated are composed as
4 follows:

- 5 • 15.53% are for allied employees observed at flats sorting machines (FSM's). These
6 costs should be distributed over direct FSM costs, rather than all flats related costs.
- 7 • 7.4% are for allied employees observed at manual flats cases. These costs should be
8 distributed over manual flat sorting (MANF) costs, rather than all flats costs.
- 9 • 0.92% are for allied employees observed at flats cancellation machines. These costs
10 should be distributed over the direct costs of flats at the cancellation pool.

11 Unfortunately, evidence from Question 19 data is available to support the above
12 distribution only for a small portion of all allied and support not handling costs. But it
13 is reasonable to believe that the shape ratios indicated above apply to a much larger
14 portion of the allied not handling costs. Time spent by opening/pouching unit
15 employees on "not handling" mail when near a piece distribution operation is probably
16 more than matched by the time they spend "not handling" as they wend their way back
17 to their own base, or wait at their own base for further instructions.

18 Based on the above, I believe that the Commission should approve at least the broad
19 distribution of allied not handling costs. I hope the Commission will improve on that
20 distribution further, using Question 19 data as explained above. To summarize, my
21 conclusions are based on the following:

- 22 • Preparation for piece distribution is the major task performed by allied operations,
23 particularly opening units, which are often organized according to shape.
- 24 • The "direct" costs at the allied pools are small compared to the very large mixed
25 mail and not handling costs, and the direct costs within each pool are therefore a
26 poor basis for distributing such large mixed and not handling costs.
- 27 • IOCS provides no information related to shape or sorting technology for most allied
28 not handling time.
- 29 • The allied not handling costs on which shape related information is available,
30 however, indicate that the portion related to flat mail is much smaller than
31 suggested by the shape distribution of direct costs.

32 A similar argument applies to the approximately \$260 million empty container costs

1 associated with the MODS allied, support and empty equipment pools. Question 19
2 provides shape information for roughly 12% of these costs and the following shape
3 distribution:

4 Letters: 53.81%
5 Flats: 27.74%
6 IPP/parcels 18.45%

7 This again is much different from the "direct" cost ratios in Table IV-3 and indicates
8 that relatively fewer empty container costs should be charged to flat mail.²⁸

9 The alternative distribution described above of some allied not handling and empty
10 container costs based on Question 19 data results in somewhat lower costs for
11 Periodicals. But the most important point I hope to make with this analysis is that even
12 a broad distribution of not handling costs at allied operations is likely to overstate
13 considerably the amount of such costs that are caused by flat mail processing
14 requirements. A within-each-pool distribution is even worse for Periodicals and for
15 flat mail in general and would, in my opinion, distort the true causal links between
16 mail volumes of different categories and mail processing costs.

17 **F. THE ITEM/CONTAINER SAMPLING SCHEME IS FLAWED AND SHOULD BE**
18 **REDESIGNED FOR USE IN FUTURE RATE CASES**

19 I explained in my Docket No. R97-1 testimony the major problems I see with the Postal
20 Service's scheme of item and container sampling. I realize it is difficult to design a
21 perfect system, especially in a rapidly changing environment, but I nevertheless hope
22 the Postal Service will fix the "bugs" in its current scheme before the next rate case.

23 I will not repeat all my previous arguments here, but I do wish to make some
24 additional comments on the asymmetric way in which pallets are treated under the
25 current system and the impact this has on Periodicals costs. Pallets carry flats bundles,

²⁸ For parcels, use of the not handling and empty container percentages indicated by Question 19 responses, as explained above, results in higher costs than the costs they receive from a broad distribution of allied not handling and empty container costs, but lower than they would in a strict within-each-pool distribution.

1 sacks, letter and flats trays, parcels - in short, all kinds of items and shapes. Logic
2 seems to dictate that they be treated similarly to other "containers," such as hampers
3 and APC's. Instead, pallets are classified as "items" and are treated in the same way as
4 trays and sacks. Based on many observations I made during facility visits with the
5 Periodicals Review Team, this has practical consequences more severe than I had
6 previously thought.

7 When an IOCS clerk sees a mailer-prepared pallet with flats bundles, he can normally
8 determine its contents rather easily.²⁹ But if a pallet instead contains sacks or trays,
9 which it is often impractical to get to without tearing off the pallet's lid or shrinkwrap,
10 there is no way for the IOCS clerk to record that fact (as he can do with containers),
11 because pallets are "items." He would have to record a pallet that could not be
12 counted. The associated costs would then be distributed over the costs of pallets that
13 can be counted, almost all of which have Periodicals or Standard A, or perhaps bound
14 printed matter (BPM), flats bundles on them.³⁰

15 A related problem occurs when a pallet carries empty trays (letter or flat trays), which
16 appears to occur often. The IOCS clerk can record an "empty pallet" and be in accord
17 with written instructions, but the costs incurred are actually caused by the trays, not the
18 pallet. Still another problem is that a postal pack, which essentially is a pallet with a
19 cardboard box on top of it, is treated as a container, except when it has been emptied of

²⁹ In fact, the information sheet that a mailer must include with every Periodicals pallet provides all the information the IOCS clerk needs, and there is no need to remove the lid or shrinkwrap on the pallet to record this information.

³⁰ When asked about this, witness Ramage answered for the Postal Service that some IOCS clerks might "solve" the problem by recording not a pallet with sacks or trays, which is impossible, but an "other container" with sacks or trays, or a "multiple items not in a container" type container. See answer to TW/USPS-T17-14, redirected from witness Van-Ty-Smith. In other words, he suggested that IOCS clerks on their own try to solve the dilemma posed by a flaw in the data collection scheme. But the fact that, when the written instructions don't seem to make any sense, IOCS clerks do creative things for which there is no basis in the written instructions, is in itself even more worrisome. One must wonder what other creative things IOCS clerks do for which there is no basis in their written instructions.

Furthermore, when that "other container" or the "multiple items not in a container" container is emptied, it becomes an empty pallet whose costs will be charged to the "direct" pallets. In any case, the IOCS handbook does not mention the type of solution that Ramage says is often used.

1 its content and the box on top has been removed. It then becomes an empty pallet, and
2 the costs of handling it are again attributed over the costs of "direct" pallets.

3 These are problems that the Postal Service could, and hopefully soon will, fix. I believe
4 that with some changes the item/container scheme can be substantially improved,
5 although I realize that the Commission adopted its use in all cases except for allied
6 mixed mail costs in R97-1. In the meantime, for the purpose of distributing allied
7 mixed mail costs in this docket, I recommend that the Commission stick with its R97-1
8 method for broad allied cost distribution.

9 **G. "SUPPORT" POOLS AND "MIGRATED" COSTS**

10 Postal Service witnesses ~~Degen~~ and Van-Ty-Smith refer to Function 1 pools "1MISC"
11 and "1Support" and Function 4 pools "LD48_ADM" and "LD48 OTH" as "support"
12 pools. Degen proposes to distribute all costs in these pools broadly over, respectively,
13 all other Function 1 and all other Function 4 pools. His proposal ignores the fact that
14 some of these "support" costs are from direct tallies showing specific subclasses or
15 special services, another example of Degen's unbending faith in MODS numbers as the
16 only cost indicators that matter.³¹

17 Table IV-4 shows the support pool costs in "tally dollars" and accrued dollars. Total
18 accrued costs are over \$622 million, of which \$83.191 million are direct costs that can,
19 and in my opinion should, be fully distributed directly to subclasses and special
20 services, as shown in Exhibit 3. The remaining volume variable costs in those pools can
21 then be distributed globally as proposed by Degen and Van-Ty-Smith.³²
22

³¹ The apparent source of this confusion is that certain employees are primarily assigned to support functions, including various administrative tasks, where a large portion of the "not handling" costs in fact are administrative costs, according to the activity codes that appear on the tallies. Evidently these employees are sometimes used to help out with actually sorting the mail and are seen doing so by IOCS clerks, but have omitted to change MODS number before they go to process mail.

³² These pools have a low overall volume variability (around 46%), due to the presence of large numbers of tallies representing activities that are considered fixed. The direct tally costs, however, are assumed 100% volume variable in Van-Ty-Smith's calculations of IOCS based volume variabilities.

	Function 1		Function 2		TOTAL SUPPORT
	IMISC	ISUPPORT	LD48 OTH	LD48_ADM	
Tally Costs:					
Direct	22,479,724	7,896,902	35,836,746	23,499,489	89,712,861
Mixed	12,079,045	2,987,335	9,344,602	3,140,125	27,551,106
Not handling	108,437,987	202,058,606	105,865,691	148,935,950	565,298,234
Total	142,996,756	212,942,843	151,047,038	175,575,564	682,562,201
Accrued Costs:					
Direct	21,529,619	6,824,717	33,252,312	21,585,330	83,191,979
Mixed	11,568,524	2,581,736	8,670,698	2,884,345	25,705,304
Not handling	103,854,857	174,624,547	98,230,989	136,804,324	513,514,717
Total	136,953,000	184,031,000	140,154,000	161,274,000	622,412,000

1

2 Another example of Degen's belief that MODS numbers outweigh and make obsolete
 3 all other information is his proposal that costs of window service and administrative
 4 activities be "migrated" to cost segment 3.1 (the mail processing cost segment) when
 5 employees performing those activities are clocked into mail processing MODS
 6 numbers. This "migration," eventually rejected by the Commission in R97-1, is
 7 proposed again in this docket, with minor modifications. The "migrated" costs are
 8 mostly of the "not handling" variety.

9 My concern about this is that when typical window service costs are distributed over
 10 regular mail processing costs, a portion of those costs will be assigned to Periodicals
 11 and other mail classes that generally do not use window service.³³

³³ Since this had been an issue in Docket No. R97-1, I took every opportunity when visiting Function 4 MODS offices with the Periodicals Review Team to ask the supervisors in charge whether mail processing clerks sometimes perform window service or administrative functions. Each supervisor confirmed that his mail processing clerks are also used, on an as needed basis, for tasks like window service and administrative functions. One said that although he ideally prefers to have most employees focus on one type of task, it is common that clerks go back and forth between different tasks during a day, for example relieving window clerks during lunch and later returning to mail processing. Clerks who move between tasks are of course supposed to clock in and out each time, but few in the field pretend that they always do. In fact, it is clear that they often do not, especially if they serve just as short term replacements (for example, when a window clerk needs to leave his position briefly for whatever reason). When these clerks do omit to clock out of one operation and into the other, the result is precisely that observed in R97-1 and again in this docket, namely tallies showing that employees are seen by IOCS clerks doing one activity, while clocked into a MODS number representing another.

1 In this docket, the window service costs proposed to be "migrated" represent \$77
2 million in "tally" costs or \$72 million in BY98 accrued costs. Over half of these are in
3 the two Function 4 support pools referred to above. Since Van-Ty-Smith's program
4 includes a window-service-based distribution key for Function 4 support pool costs, the
5 potential distortion caused by the presence of window service costs in cost segment 3.1
6 would appear to be less than in Docket No. R97-1. Most of the remaining migrated
7 window service costs are in cost pools LD43 and LD44. Ideally, the window service not
8 handling costs in those pools should be distributed separately, using a window-service-
9 based distribution key.

10 V. BUNDLE HANDLING AND BUNDLE BREAKAGE

11 Bundle breakage is not a new phenomenon. It has existed as long as there have been
12 presorted bundles. Opinions vary greatly, however, among postal workers, postal
13 managers and observers of the Postal Service as to the magnitude of the problem, its
14 impact on costs, who is to blame for it and whether it is getting worse or better. Until
15 very recently there were no solid data against which to evaluate the often farfetched
16 claims about bundle breakage.

17 Since the R90-1 rate case, when the Periodicals industry first complained about the
18 already anomalous increases in Periodicals costs, some Postal Officials have blamed the
19 rising costs on bundle breakage and failure of mailers to prepare bundles capable of
20 withstanding any degree of rough treatment. See Dockets No. R90-1, Tr 11/4945
21 (Moden); R97-1, Tr. 36/19350 (Degen); and R2000-1, USPS-ST-42 at 11 (O'Tormey); and
22 USPS-ST-43 at 4 (Unger). During the facility visits that I participated in with the
23 Periodicals Review Team, some facility managers called bundle breakage a minor or
24 irrelevant issue, affecting Standard A more than Periodicals, while others described it
25 as the issue and claimed it was the main culprit behind higher Periodicals costs.

26 In this case witness Yacobucci (USPS-T-25) has attempted to incorporate costs of bundle
27 breakage into the model he uses to estimate presort and automation cost differentials
28 for First Class, Periodicals and Standard A flats. The effort to apply, for the first time,
29 an analytical approach to bundle breakage is praiseworthy. However, Yacobucci's

1 model is severely flawed, primarily because he: (1) ignores the fundamental difference
2 between sacked and palletized mail; and (2) relies on an essentially worthless bundle
3 breakage survey, described in LR-I-88, that involved no actual observations but
4 amounted simply to averaging the guesses of some facility managers.

5 Yacobucci's approach greatly overstates bundle breakage costs of palletized mail,
6 which in reality experiences little bundle breakage, while understating the much more
7 severe problem with sacked mail, whose bundles break at an alarming rate. As a
8 result, Yacobucci overstates the costs of carrier route presorted mail, thereby distorting
9 the presort cost differentials that form the basis for witness Taufique's rate design.

10 Fortunately, the record in this docket contains a far more reliable database on bundle
11 breakage for Periodicals and Standard A flats, based on an MTAC survey last fall of
12 what happens as flat bundles are dumped on SPBS (small parcel and bundle sorters)
13 and manual sorting belts.³⁴ MTAC team members counted flats bundles in thousands
14 of Periodicals and Standard A containers, recording extensive information about
15 bundle make-up, breakage rates and other bundle damage. This database provides a
16 far more reliable source of information on the true extent and cost consequences of
17 bundle breakage than the meaningless numbers in LR-I-88.

18 I have modified Yacobucci's spreadsheet both to use the MTAC bundle breakage data
19 and to treat more accurately the mail flows associated with broken bundles and bundle
20 sorting. The revised spreadsheet is in library reference MPA-LR-2. I use it for two
21 purposes. One is to estimate potential savings in bundle breakage costs that will be
22 realized in the 2001 test year due to a variety of efforts by both the industry and the
23 Postal Service. I estimate that as a result of these efforts, regular rate and nonprofit
24 Periodicals will experience a test year cost saving of \$21 million that has not been
25 accounted for in the Postal Service's roll forward projections. The second model
26 application provides a new set of worksharing related unit costs for use in Periodicals
27 rate design, as discussed in Section VI. Witness Glick applies the revised model to
28 Standard A costs in his testimony PostCom, et al.-T-1.

³⁴ See response to TW/USPS-2 (filed April 13, 2000): Tr. 21/9281-83; and LR-I-297.

1 **A. THE DYNAMICS AND COST EFFECTS OF BUNDLE BREAKAGE**

2 Before describing the changes I propose in the flats mail flow model, let me summarize
3 the bundle breakage issue, based on my own observations, conversations with Postal
4 Service personnel both at headquarters and in the field, and a detailed analysis of the
5 MTAC “package integrity” data base. Some key facts to consider are:

- 6 • Bundles coming out of sacks break far more frequently than palletized bundles.
7 This is hardly news, but the extent of the difference revealed by the MTAC package
8 integrity data is probably greater than most observers, including myself, had
9 expected. For Periodicals pallets, the breakage rate is only 0.5% when pallets are
10 dumped on a belt in a mechanized SPBS operation. The rate may be higher on the
11 most mechanized SPBS “feed systems” installed in the largest facilities but even less
12 than 0.5% in manual bundle sorting operations. For Periodicals sacks, the MTAC
13 study found 16% of the bundles to be already broken when they came out of the
14 sacks.

- 15 • When a palletized bundle does break, however, cost consequences are often larger
16 than when a sacked bundle breaks. The reason is that many sacked bundles have
17 the same presort level as the sack itself. For example, a 3-digit bundle traveling in a
18 3-digit sack may be broken upon arrival at the opening unit where the sack will be
19 emptied, but since this typically is a 3-digit opening unit, there is no loss of piece
20 sortation. The loose pieces from the broken bundle will be taken to a 3-digit piece
21 sorting unit (incoming primary), which is where they would have been taken even
22 if the bundle did not break by itself. Palletized bundles, on the other hand, often
23 have a higher presort level than the pallet itself, and breakage of such bundles can
24 lead to loss of presort and therefore additional piece handlings.

- 25 • For pallets, there is a big difference between manual bundle sorting and sorting on
26 an SPBS. In manual sorting, the pallet contents are not “dumped.” Instead,
27 sortation is done from the pallet itself. Bundles lifted from the pallets are practically
28 always still intact. If damage occurs, it is when they land in a recipient container
29 that typically represents a higher level of sort. For example, in manual bundle
30 sorting from a 3-digit pallet, bundles may be thrown into 5-digit containers. If one

1 of them breaks at that point, the pieces will have made it to the 5-digit sort level.
2 The worst that can happen (if it is a carrier route bundle) is that the pieces will have
3 to undergo a 5-digit (incoming secondary) piece sort that the bundle was meant to
4 bypass. Under mechanized (SPBS) sorting of such a pallet, however, the pallet is
5 dumped onto a belt from which bundles are carried to keying stations. If they break
6 on that belt, the pieces may need to go to a 3-digit (incoming primary) sort
7 operation, or even an ADC piece sort if dumped from an ADC pallet.

- 8 • In observing bundle sorting on SPBS machines with the Periodicals Review Team,
9 we often saw loose pieces from broken bundles being keyed as individual pieces by
10 SPBS operators rather than being taken to an FSM or manual flat case, which would
11 be more efficient. It was also noted that SPBS operators had a built in incentive to
12 key these loose flats, as an easy way to raise "productivity." The productivity rate
13 on an SPBS is total items keyed divided by manhours spent, where the items keyed
14 could be either bundles or loose flats from broken bundles. It is not known
15 precisely how widespread the practice of keying flats on the SPBS was in FY98, but
16 it appeared to be fairly pervasive as late as the first part of FY99, when most of the
17 Periodicals Review Team's facility visits occurred.³⁵
- 18 • It appeared more recently, when I participated in the MTAC data collection in two
19 facilities, that things have improved, that inappropriate keying of individual pieces
20 no longer occurs and that SPBS employees are doing a better job of recovering
21 partially broken bundles. Inasmuch as these apparent improvements seem to be
22 linked to concerted efforts by USPS management, I am optimistic that bundle
23 breakage costs in the test year will be considerably less than in FY98.

³⁵ For example, in one processing plant I observed the belt carrying bundles from the SPBS keying stations and noted that roughly every other item carried on the belt was a loose flat, presumably coming from broken bundles, with the other items carried being unbroken bundles. All items carried would be counted and reported in MODS as if they were bundles, thereby inflating considerably the reported "productivity" of the SPBS operation. For shrink-wrapped pieces from broken bundles, it appeared that keying them on the SPBS was almost routine in all facilities.

1 **B. MISTAKES IN YACOBUCCI'S MODEL**

2 Yacobucci's bundle breakage model does recognize the potentially higher cost
3 associated with breakage of a palletized bundle. But it fails to account for the much
4 higher breakage rate for sacked bundles. In assuming the same breakage rate (10% in
5 each bundle sort) for sacks and pallets, Yacobucci contradicts even the LR-I-88 survey
6 that he claims to rely on.

7 In that survey, various facility managers were asked to estimate the percentage of
8 bundles that inadvertently break for, respectively, Periodicals sacks, Periodicals pallets,
9 Standard A sacks and Standard A pallets. They were not asked to perform any kind of
10 count to support their guesses. A spreadsheet called BundleBreakage.xls in LR-I-88
11 lists 48 responses and calculates the averages. It is clear that many of the respondents
12 did not think very deeply before providing their answers. The responses range from
13 zero to 80% breakage for sacks and from zero to 40% breakage for pallets. A straight
14 average of these responses gives 8% for Periodicals pallets and 18% for Periodicals
15 sacks. Most respondents, however, indicated a pallet breakage rate of 5% or less, but
16 nonsensical responses from some drove the average to 8%.

17 While Yacobucci claims his model uses the breakage data from LR-I-88, he in fact
18 ignores the one thing that is consistent about these responses, namely that they, almost
19 without exception, indicated higher breakage for sacked bundles. Yacobucci assumes
20 10% for both. In fact, he assumes more, for of the 90% of bundles not broken in the first
21 bundle sort, he assumes that another 10% breaks if there is a subsequent bundle sort,
22 and another 10% of the remainder if there is a third sort, etc. Since palletized bundles
23 tend to have more secondary bundle sorts, Yacobucci effectively ends up assuming that
24 palletized bundles break more than sacked bundles, contrary to all evidence. This not
25 only distorts the cost relationship between sacks and pallets. It also severely distorts
26 the relationship between presort levels, leading to a sharply reduced estimate of
27 savings produced by carrier route presortation.

28 Before describing the details of the alternative model that I propose the Commission
29 use, let me discuss briefly the new bundle breakage data.

1 **C. THE MTAC PACKAGE INTEGRITY DATA**

2 The database resulting from the MTAC data collection in the fall of 1999 is contained in
3 LR-I-297. I participated in this data collection at two of the six sites. While not perfect,
4 I believe this database is by far the best available source of information at this time on
5 which to base an analysis of the bundle breakage issue.

6 Basically, teams of Postal Service employees visited six different processing plants,
7 spending three working days at each site examining bundles being dumped on sorting
8 belts from sacks and pallets. Industry representatives were invited to participate as
9 observers as well as data collectors. The six sites were widely dispersed in size and
10 geographic location, but they did have in common that they use at least one SPBS
11 machine to sort bundles. Altogether, the resulting database includes information on
12 80,233 bundles coming out of 2,733 containers. Bundles were characterized in terms of
13 class (Periodicals or Standard A), container type (sacks or pallets), detailed make-up
14 characteristics (type and method of strapping, shrink-wrapping, etc.), characteristics of
15 the individual pieces (size, glossiness, use of polywrap), bundle thickness and in terms
16 of how well the bundles maintained their integrity during their first sorting operation.

17 Table V-1 summarizes the main findings from the MTAC survey. For Periodicals and
18 Standard A, and separately for sacks and pallets, the table shows the percent of bundles
19 that the data collectors identified as (1) broken or (2) suspect. The latter category
20 represents bundles that sustained some damage without actually breaking. The Postal
21 Service members of the data collection team felt that these bundles were at risk of
22 breaking in subsequent handlings, i.e., if after being sorted on one SPBS machine into a
23 recipient hamper or other container, that container were to be dumped on another belt
24 for a further bundle sorting.

25

	Periodicals		Standard A	
	Pallets	Sacks	Pallets	Sacks
Broken	0.50%	15.67%	1.26%	18.18%
"Suspect"	13.66%	19.64%	6.63%	14.37%

1 **D. REVISED FLATS MAIL FLOW MODEL ASSUMPTIONS**

2 The revised flats model treats the flow of individual flats and bundles essentially in the
3 same way as the original Yacobucci model. The main differences concern the modeling
4 of bundle breakage and its related handling costs, as described below. Certain other
5 changes, dealing with assumed productivities, acceptance rates and wage rates in
6 various flats piece sorting operations, have been made by witness Glick and are
7 explained in PostCom, et al.-T-1.

8 The model has been organized so as to facilitate changes in key parameters that
9 determine the degree of bundle breakage and its cost consequences. This makes it easy
10 to determine the impact of improvements that are expected to have occurred by the test
11 year. In this section I refer to the parameter values presumed to apply in the FY98 base
12 year. Section E discusses the impact of expected changes in the test year.

13 I have assumed that in FY98 the percent of breakage shown in Table V-1 occurred when
14 a container of mail encountered its first bundle sorting operation. In the case of manual
15 bundle sorting from pallets, however, I assume that the breakage occurred only at the
16 next sort level. This means, effectively, that no breakage is assumed on 5-digit pallets
17 when their contents are manually sorted, which they normally are.

18 I have further assumed that bundles from sacks or pallets requiring a subsequent sort
19 would experience a breakage rate indicated by the second row in Table V-1, i.e., that a
20 "suspect" bundle would break if subjected to a second round of dumping and sorting.
21 In the case of manual sorting from pallets, however, I assumed the "suspect" bundles
22 would break only when subjected to a third level sort.³⁶ Unlike Yacobucci, I do not
23 assume that bundles continue to break more and more if subjected to still further sorts.

³⁶ I realize there is no solid evidence that all "suspect" bundles would break completely in a second or even third sorting operation. Some probably would not break, especially if the subsequent sort is done manually, which is often the case. In fact, bundle breakage in subsequent sorts is an area that, as far as I know, has not yet been addressed in any type of survey. On the other hand, in experimenting with the model, I found that these secondary breakage ratios have little impact on the model results. Most damage appears to be done in the initial sort. Assuming that all "suspects" break in the second round may have the effect of slightly overstating the costs of bundle breakage and of understating the savings produced by presortation.

1 When a bundle breaks, I assume, as in Yacobucci's model, that the loose pieces are sent
2 to a piece sorting operation corresponding to the presort level at which it breaks. E.g.,
3 if a bundle breaks on a 3-digit opening unit belt, it is assumed that the pieces must go
4 to an incoming primary sort, even if they previously were in a 5-digit or carrier route
5 bundle.

6 However, in the case of bundles breaking during a mechanized bundle sort, I assume
7 that a certain percentage of the loose pieces would be keyed individually on the SPBS
8 rather than taken to the appropriate FSM or manual operation. I assume this
9 percentage was 25% in FY98.³⁷

10 For broken bundles in manual bundle sorting operations, I assumed that the manual
11 handling costs are three times higher than for other bundles. Postal Service officials I
12 talked to said they thought the factor was "at least three, perhaps four."

13 I have made some other model improvements relating to bundle handling in general.
14 The model now uses separate numbers of pieces per bundle for sacked and palletized
15 mail, as confirmed by the mail characteristics study in LR-I-87. I corrected Yacobucci's
16 treatment of carrier route sacks, where he had forgotten that the productivity rate he
17 used was a per sack and not a per bundle productivity (TW/USPS-T25-1: Tr. 5/1461-
18 63).

19 Finally, I de-averaged the manual bundle sorting productivities for 3-digit/SCF, ADC
20 and mixed ADC bundle sorts. Yacobucci's own survey (LR-I-88) showed that they are
21 dramatically different, but he chose to ignore the differences.³⁸

³⁷ It may have been higher. I remember seeing operators pulling pieces out of bundles that were not yet broken, that would have been called only "suspect" in the MTAC terminology. If this practice was fairly widespread, the extra costs incurred in FY98 could have been greater than assumed in my analysis.

³⁸ It is not surprising that they are different, with mixed ADC sorting being more expensive than ADC and 3-digit sorting. There are no "mixed ADC" pallets, or at least very few, so that a mixed ADC bundle sort would be sorting of sacked mail only. Manual bundle sorting of sacked mail is much more time consuming than for palletized mail, even though the difference is not revealed by the averaged productivity rates Yacobucci provides. The difference is due both to the extra time spent opening, shaking out and storing sacks, bundle breakage and the greater ease of locating the

1 **E. ESTIMATES OF BUNDLE BREAKAGE COST SAVINGS**

2 With all the attention given to bundle breakage, both by the Postal Service and mailers,
3 I believe there will be a substantial reduction in both the incidence of breakage and the
4 cost consequences when breakage occurs. The Postal Service, however, has not
5 included any reduction of these costs in its roll forward projections.

6 I performed a simple analysis using the model described above to estimate the
7 potential savings, assuming the following changes would occur in the test year:³⁹

- 8 • Bundle breakage and "suspect" rates in Table V-1, assumed to apply in FY98, would
9 be reduced to half in FY2001, due to various joint USPS/industry efforts, discussed
10 in detail in the testimonies of MPA witnesses Cohen and Glick.
- 11 • In the test year, no loose pieces from broken bundles would be keyed individually
12 on the SPBS machines, as emphasized in a recent written instruction from
13 Headquarters to managers in the field. Response to MPA/USPS-T10-6, Attachment
14 (filed February 23, 2000); see also Tr. 5/1707.

15 The results were as follows. For regular rate Periodicals, a change from base year to
16 test year assumptions reduced the average modeled cost per piece from 5.754 cents to
17 5.514 cents, a saving of 0.24 cents per average piece.⁴⁰ With the 7.352 billion after rates
18 regular rate pieces assumed by witness Taufique (see Taufique's Periodicals rate design
19 spreadsheet, LR-I-167), this translates into a total saving of \$17.64 million. For
20 nonprofit periodicals, the modeled cost went down from 4.173 to 4.007 cents per piece,
21 a saving of 0.166 cents per piece, which for 2.052 billion after rates pieces gives a test
22 year saving of \$3.406 million per year.

³⁹ In MPA-T-2 witness Glick describes a similar analysis, applying the model to both Periodicals and Standard A mail. The model is not set up to analyze Standard A ECR mail, which I believe is also affected by bundle breakage and likely to benefit from the improvements discussed here.

⁴⁰ In the MPA-LR-2 spreadsheet, the modeled per piece costs under a given set of assumptions are shown in spreadsheet cell G54 on worksheet 'Sc Costs' as cents per average piece, excluding platform costs and the CRA adjustment.

1 For regular and nonprofit publications combined, I therefore project a test year saving
2 of approximately \$21 million. About 59% of these savings would result from an end to
3 inappropriate keying of loose pieces on the SPBS machines, even with no reduction in
4 actual breakage.

5 I am aware that witness O'Tormey thinks a \$15 million reduction in Periodicals bundle
6 breakage costs is a reasonable and realistic goal for the test year. Response to
7 MPA/USPS-ST42-10. While he may have used a different type of analysis to arrive at
8 his estimate, I am encouraged by the fact that O'Tormey's estimate at least is of the
9 same order of magnitude as mine.

10 Although the cost reduction targets described above may seem aggressive, the true test
11 year savings could be even higher than \$21 million, simply because I may have
12 underestimated the base year breakage related costs. It is possible, in fact likely, that
13 the bundle breakage percentages from the MTAC study, conducted in the fall of 1999,
14 do not reflect the full extent to which bundles were breaking during FY98. During the
15 Periodicals Review Team visits in the fall of 1998, it was noted that the frequency with
16 which palletized bundles break when dumped on an SPBS belt depended a great deal
17 on the skill and carefulness of the person operating the dumper. A gradual tipping of
18 the pallet, allowing only a limited number of bundles to fall off at a time, to be carried
19 away by the belt before more bundles fell, was observed to cause significantly less
20 breakage than a sudden dumping of the entire pallet content. The team urged sharing
21 of "best practices" in this area as a way to quickly reduce the breakage problem. That
22 may already have occurred, at least informally, by the time of the MTAC data
23 collection. See also witness O'Brien's observations on the effects different handling
24 methods appear to have on bundle breakage, TW-T-2 at 12-14.

25 For all of the above reasons, I recommend that the Commission include in its roll
26 forward projections a \$21 million Periodicals cost reduction, to be achieved by reduced
27 bundle breakage and by improved handling of the bundles that do break.

28 VI. RATE DESIGN ISSUES

29 This section proposes three improvements in the Periodicals rate design presented in

1 the Postal Service's rate request.

- 2 • I show that the worksharing related unit costs presented by witness Yacobucci
3 severely understate the true cost differentials between mail at different presort
4 levels. I present a revised set of unit cost estimates that should be used in rate
5 design. I also show that, even with the corrections I was able to make, the model
6 still has severe limitations and still underestimates presort savings.
- 7 • I point out an omission in the Postal Service's estimates of the savings when mail is
8 entered at the DDU, and show that the discount for DDU entry therefore should be
9 larger both in the piece and pound rates.
- 10 • I propose a two cents per piece discount for mail entered on 5-digit pallets at the
11 destinating SCF or delivery unit and explain why such a discount is both cost
12 justified and timely.

13 **A. PRESORT & AUTOMATION COST DIFFERENTIALS**

14 A corrected set of presort and automation related mail processing unit costs for regular
15 rate and nonprofit Periodicals is presented in Tables VI-1 and VI-2 in Exhibit 4. They
16 are in the same format as the corresponding tables in USPS-T-25. Witness Yacobucci's
17 original estimates are shown for comparison. I am convinced that the new estimates
18 are closer to actual cost differentials between different presort levels and between pre-
19 barcoded and non-barcoded mail. However, for reasons explained below, I believe the
20 true presort related cost differentials are even larger than these tables indicate.

21 The main reason the numbers have changed from those originally filed by Yacobucci is
22 the correction in bundle breakage assumptions explained in Section V, in particular the
23 adoption of data from a survey based on actual observations of breakage. The
24 estimates shown reflect Section V's test year assumptions regarding bundle breakage.⁴¹

25 The estimates in Tables VI-1 and VI-2 also show larger cost differentials between
26 barcoded and non-barcoded flats at each given presort level, particularly the basic and
27 3-digit levels. This is due to modified assumptions about productivity and accept rates
28 for barcoded and non-barcoded flats, explained by witness Glick in PostCom, et al.-T-1.

⁴¹ In other words, they are based on the assumption that the fairly aggressive goals for bundle breakage reduction outlined above will be realized. Use of base year assumptions (e.g., more bundle breakage) would raise the cost of basic presort and lower it for 5-digit.

1 While recommending that the Commission use these revised estimates of worksharing
2 related savings in its Periodicals rate design, I believe the true presort related cost
3 differences may be substantially larger. This belief is based on the following.

4 First, the mail flows in the current flats model exclude some of the allied labor that
5 occurs after non-carrier route flats have undergone their first piece sorting. The easiest
6 way to see this is in worksheet "MF Model Costs" in LR-MPA-2. The worksheet
7 contains two main sections. The first section, in spreadsheet rows 7-19, calculates costs
8 associated with bundle handling. It is essentially as created by Yacobucci, except that I
9 have modified some of the equations dealing with bundle breakage and bundle sorting
10 productivity.⁴²

11 The second, and largest, section (rows 22-59) computes the costs incurred in automated,
12 mechanized and manual flats sorting, including the multiple sorts required by flats that
13 start out at a low presort level. These costs are based mostly on MODS productivity
14 estimates and correspond essentially to the costs incurred in the FSM and MANF cost
15 pools in MODS Function 1 offices, and the MANF components in NonMODS and
16 Function 4 offices.

17 Assume that a flat, after one FSM sort, ends up in a tray with some higher presort level
18 but still needs further sorting in another FSM or manual operation. Somehow that tray
19 has to get to the next sorting operation, and it is unavoidable that this will involve some
20 allied labor beyond that provided by the FSM clerks.⁴³ These costs are not incurred by
21 mail that travels through the system in carrier route presorted bundles. Thus, while it

⁴² This worksheet's precise look varies between each of the 94 different scenarios (47 for sacked mail and 47 for palletized mail) that the model's macro program calculates. All costs associated with a scenario are calculated on this sheet, and subsequently copied onto worksheet "Sc Costs," which determines and applies the CRA adjustment factor.

⁴³ Besides the physical movement of APC's and other containers on which the flats trays are loaded when swept by the FSM operators, for example, from the FSM to a dispatch area, the trays may need to be sorted. The Postal Service is hoping to reduce allied labor costs associated with handling of letter and flat trays by installation of computerized tray management systems. I watched one such system in action at the Charlotte main post office. It was impressive, but what it definitely did not do was to eliminate allied labor. If anything, it seemed to be concentrating the required allied labor in the period just preceding the critical dispatch. See also TW-T-2 at 14.

1 appears that bundle handling and piece sorting costs are reflected in a quite complete
2 manner in the current model, the allied labor following piece sorting has not been
3 modeled at all.

4 I have not attempted to update the flats model to include this additional allied labor,
5 due to lack of time and resources and an apparent paucity of reliable data with which
6 to analyze these costs. But its existence clearly indicates that the cost differentials
7 produced by the model are conservative.⁴⁴

8 The second reason I believe presort differentials still are understated is the Postal
9 Service's assumption, introduced first in Docket No. MC96-2 and unchallenged since,
10 that its manual incoming secondary sorting rate in non-FSM offices, which is where
11 most such sorting occurs, is very high - at 846 pieces per manhour. Cite. Since this is
12 higher than the productivity rates the Postal Service achieves with most types of FSM
13 sorting, the flats model currently seems to imply that it would cost more to sort flats if
14 there were enough FSM's to do all the sorting by machine, eliminating manual
15 incoming secondary sorting completely.

16 To see the impact of this assumption, I ran the model assuming that the manual
17 incoming secondary flat sorting productivity is the same in non-FSM offices as the 457
18 pieces per manhour that it is in FSM offices. The effect of this change would be to
19 increase the differential between carrier route presorted and 5-digit presorted flats by
20 1.5 cents per piece. Since I find it extremely unlikely that the 846 pieces per manhour in
21 manual incoming secondary sorting is being achieved in practice, the carrier route

⁴⁴ In his response to TW/USPS-T25-2j (Tr. 5/1467), Yacobucci argues that his model does include the costs referred to above, since through the CRA adjustment he pulls in all costs incurred in opening and pouching units. But here, as in some of his other responses, Yacobucci appears to have missed the point that a worksharing mail flow model is meant not just to account for all the costs but to de-average them. The CRA adjustment is meant to include costs not explicitly modeled, but it is based on the assumption that the costs not modeled are incurred by each of the mail categories under study in the same proportion as the explicitly modeled costs. Such an assumption is seldom completely true, and it therefore is better to try to include explicitly as many costs as possible. Ideally, one should aim for CRA adjustment factors that are fairly close to 1.

1 savings are probably severely understated by the results in Tables VI-1 and VI-2.⁴⁵

2 **B. DELIVERY UNIT DISCOUNTS**

3 In this section I show that the discounts the Postal Service proposes for Periodicals and
4 Standard A mail entered at the destinating delivery unit (DDU) are inadequate and
5 should be increased. My arguments focus on carrier route presorted regular rate and
6 nonprofit Periodicals, for which I propose a higher DDU discount. However, these
7 arguments could equally well be applied to Standard A ECR mail entered at DDU's.

8 The Postal Service offers DDU entry discounts for Periodicals, Standard A and
9 Standard B mail. But whereas the Standard B discounts are based on all costs that the
10 Postal Service avoids when mailers take their mail to the DDU, the same is not true for
11 Periodicals or Standard A mail.

12 When a mailer dropships to a DDU, the driver for the mailer is required to unload the
13 mail and place it on the DDU platform, thereby helping the Postal Service to avoid the
14 DDU unloading costs it would have incurred if the mail were not dropshipped. The
15 Postal Service's estimates of DDU dropship savings for Standard B mail explicitly
16 acknowledge the savings from avoided DDU unloading. Its corresponding savings
17 estimates for DDU entered Periodicals and Standard A mail, however, do not. This
18 inconsistency should be corrected, both in fairness and in order to encourage mailers to
19 perform more dropshipping when it is cost effective to do so.

20 There can be no doubt that mailers actually are required to unload their own mail
21 when they dropship to the DDU, and that this policy is being enforced in practice.

⁴⁵ In fact, the Postal Service has never verified whether it really is achieving these high manual rates. It just assumes so, based on the rates in a few MODS offices without FSM's. But most manual incoming secondary sorting is performed in associate offices and stations and branches, i.e., in Non MODS and Function 4 offices. When flat sorting productivity rates are measured in non-FSM offices, they are based on volumes obtained by multiplying estimated pounds or linear feet by assumed conversion factors. These conversion factors were changed in FY99, because the old factors overstated volumes and thereby productivity rates. The 846 estimate used in the flats mail flow model should be scaled down for that reason alone. Productivity rates based on conversion rates may be particularly overstated for Periodicals, which are thicker than most other flats.

1 Library Reference LR-I-296, titled "Drop Shipment Procedures for Destination Entry,"
2 spells out the driver's responsibilities at the DDU on page 20 in section 5.4.3. Time
3 Warner is at this time conducting a limited DDU entry experiment in the Los Angeles
4 area. It has found that its drivers indeed are being required to unload their own mail
5 and that every vehicle used for dropshipping must carry its own pallet jack.

6 The Postal Service's estimates of non-transportation savings brought about by DSCF
7 and DDU dropshipping are presented in this case by witness Crum, whose calculations
8 are contained in LR-I-175 as a series of Excel spreadsheets. Spreadsheets
9 AttachmentL.xls and AttachmentM.xls contain Crum's calculations for regular rate and
10 nonprofit Periodicals respectively. A review of these spreadsheets, basically similar to
11 those used in R97-1, shows that Crum calculates the DSCF and DDU savings, relative to
12 Zone 1&2 entry, based on avoided platform handling costs at SCF's and BMC's.
13 Unloading costs avoided at the DDU are not included.

14 I have created new versions of the two spreadsheets for Periodicals mail that correct the
15 deficiency described above. The revised spreadsheets are named respectively
16 AttachmentLrevised.xls and AttachmentMrevised.xls.. Each contains an extra
17 worksheet, named Table 5, that calculates the DDU costs avoided when mailers
18 perform the unloading at the DDU. The Table 5 sheets are created by first copying the
19 Table 3 sheets, which calculate SCF crossdocking costs, then removing the entries not
20 related to unloading and assuming that sacked mail receives manual unloading only.
21 Electronic versions are included in TW-LR-2.

22 Crum estimates, for regular rate Periodicals, that the DSCF and DDU non-
23 transportation savings relative to Zones 1&2 entry are 1.72 and 3.01 cents per piece
24 respectively, i.e., that the DDU savings relative to DSCF entry are 1.29 cents per piece.
25 By including savings at the DDU, I find the savings from DDU entry to be 3.56 cents
26 per piece relative to Zones 1&2 entry, or 1.84 cents relative to DSCF entry. However, I
27 have incorporated one additional correction to Crum's method. His estimates of per
28 piece savings are based on estimated numbers of pieces for all sacks and all pallets
29 respectively. But the only candidates for DDU dropshipping are 5-digit pallets and 5-
30 digit or carrier route sacks. According to the mail characteristics study (LR-I-87) 5-digit

1 pallets tend to contain fewer pieces than the average for all pallets. The per piece
2 savings from avoided crossdocking and DDU unloading therefore become larger when
3 the calculations are focused on 5-digit pallets and 5-digit or carrier route sacks only.

4 Incorporating the above, I estimate the savings from DDU entry to be 3.74 cents per
5 piece relative to Zones 1&2 entry or 2.02 cents relative to DSCF entry. Inserting these
6 revised savings estimates in the Taufique rate design model gives a DDU piece
7 discount 0.5 cents higher than proposed by the Postal Service, and a per advertising
8 pound discount that also is 0.5 cents higher than the Postal Service proposes.

9 The Commission should adopt these higher DDU discounts. Doing so will encourage
10 more mailers to take their mail directly to the DDU's, thereby avoiding all postal costs
11 incurred before the DDU's and providing, as an additional benefit not included in the
12 estimated savings, less congested conditions at SCF platforms, thereby less wasted
13 time, less delay for all mail and in the long run less need for the Postal Service to
14 expand its current plants. Additionally, since the current use of the DDU option by
15 Periodicals Outside County mailers is so small, raising the DDU discount to reflect the
16 full savings will have little if any impact on other mailers.

17 **C. 5-DIGIT PALLETS SAVE SIGNIFICANT COSTS AND SHOULD BE**
18 **ENCOURAGED BY A DISCOUNT**

19 Just about every facility manager I have met in recent years expressed a wish for more 5-
20 digit pallets, which can simply be cross-docked to the appropriate delivery unit. A 5-
21 digit pallet can be brought directly to the DDU carrier section, where its bundles are
22 handed directly to the carriers or left in designated slots for each carrier to pick up. 5-
23 digit pallets avoid all bundle sorting except the final sort to individual carriers and
24 eliminate the chance of premature bundle breakage completely. Some managers
25 indicated that they would gladly take 5-digit pallets even with less volume than the
26 current 250 lb. Minimum.⁴⁶

⁴⁶ Some years ago, when a general pallet discount was being considered seriously both by the Commission and the Postal Service, counterarguments were made to the effect that many delivery

1 However, it is unlikely that Periodicals mailers will ever produce many more 5-digit
2 pallets than they do today without some new incentive. One reason is that preparing
3 smaller 5-digit pallets is more costly for printers, who would rather put the mail on
4 2,000 lb 3-digit or ADC pallets than bother creating 5-digit pallets. Publishers therefore
5 need some incentive to persuade their printers. Another reason is that even very large
6 Periodicals simply lack the volume to make up even 250 lb. pallets for more than a few
7 delivery units. Resolving this requires co-mailing, co-palletization or some other
8 consolidation effort that will add to the mailers' costs. But if mailers can produce 5-
9 digit pallets at costs below what this would save the Postal Service, then a suitable
10 discount might reduce total costs for both sides.

11 A discount for 5-digit pallets would accomplish another desirable goal, by making it
12 feasible for more mailers to bring their mail directly to the DDU. Currently only a tiny
13 fraction of Outside County Periodicals is entered at DDU's. One reason is that current
14 DDU discounts reflect only what the Postal Service believes it saves by avoided cross-
15 docking of pallets or sacks at the DSCF. But if one compares that discount with the
16 discount offered for parcel post DDU or DSCF entry, it is clear that the parcel post
17 discount includes more than just avoided cross-dock costs; in fact it includes all
18 avoided costs, including that of parcel sorting. An analogous concept for Periodicals
19 would be a discount that includes the avoided cost of sorting bundles from a 3-digit
20 pallet or one with even less presort. The best way to do this is to offer mailers one
21 incentive for preparing 5-digit pallets, and another for taking them to the DDU.

22 I therefore propose the establishment in this docket of a two cents per piece discount
23 for entering mail on 5-digit pallet. To avoid concerns expressed by some operations
24 specialists at Postal Service headquarters, I would limit the discount to pallets that are
25 entered at either the destinating SCF or the destinating delivery unit and comply with
26 all existing regulations regarding the acceptance of 5-digit pallets.

27 Most of the mail on 5-digit pallets today is in carrier route presorted bundles. The cost

units might not be able to handle pallets. However, it has been my impression that this issue is irrelevant, simply because the few delivery units that cannot handle pallets are so small that no Periodicals mailer would have enough volume to fill up a pallet to them anyway.

1 savings estimates derived below are therefore explained with reference to carrier route
2 bundles. However, the savings achieved by putting 5-digit presorted mail on a 5-digit
3 pallet are about the same as for carrier route mail and I therefore propose that the
4 discount be extended also to 5-digit mail on 5-digit pallets, subject to current
5 regulations regarding commingling, etc.⁴⁷

6 To estimate the savings produced by 5-digit pallets, one can compare them either with
7 3-digit pallets or with 5-digit sacks. In the following I will first compare 5-digit and 3-
8 digit pallets. Then I will show that the cost differential between 5-digit pallets and 5-
9 digit sacks is considerably larger. Most of the 5-digit pallet versus 3-digit pallet savings
10 can be extracted directly from the flats mail flow model discussed above.

11 Four of the 47 Periodicals "scenarios" defined by Yacobucci are relevant to the
12 following discussion. Each scenario is analyzed separately for sacks and pallets in the
13 revised model. The scenarios are:

- 14 39. Carrier route bundles in 3-digit containers, non-machinable;
- 15 40. Carrier route bundles in 3-digit containers, machinable;
- 16 41. Carrier route bundles in 5-digit containers, non-machinable; and
- 17 42. Carrier route bundles in 5-digit containers, machinable.

18 The costs associated with these "scenarios" are shown on worksheet "Sc Costs" in rows
19 44, 45, 50 and 51 respectively. The estimated mail processing costs (cents per piece) of
20 each scenario are shown in columns N (sacks) and Q (pallets). The comparison
21 between carrier route pieces on 5-digit and 3-digit pallets shows a cost differential of
22 1.79 cents per piece (non-machinable) or 1.78 cents per piece (machinable).⁴⁸ Those are

⁴⁷ For example, if a mailer has enough pre-barcode flats for a given delivery unit to meet the pallet weight minimum, but chooses not to make carrier route bundles, he could, by putting it all on a 5-digit pallet which can be taken directly to an FSM incoming secondary operation for that DDU, avoid considerable Postal Service costs relative to if the mail were on a 3-digit pallet or in 5-digit sacks.

⁴⁸ If instead one compares 5-digit bundles on 5-digit versus 3-digit pallets, the cost differential that can be read directly from the flats mail flow model is approximately 1.5 cents per piece. The additional savings described above also have a close analogy for 5-digit bundles. It is the difference between an FSM loading clerk having to pick bundles from different mailings that have lost rotation out of a hamper and rotate the flats so as to be readable for the keyer, versus taking neatly

1 the savings indicated by this rather primitive mail flow model. But I believe there are
2 enough other differences, beyond what the model reveals, to justify at least a two cents
3 differential between carrier route bundles arriving on a 3-digit versus a 5-digit pallet at
4 an SCF. Let me mention just one difference. The bundles from the 3-digit pallet will
5 probably arrive at the DDU in a hamper or APC, after having undergone a bundle sort
6 at the SCF. In that hamper, they will normally have been thrown together with bundles
7 of other publications, or other mail classes. In order to sort these bundles to carriers, a
8 clerk has to pick up each bundle, orient it until the address can be read and then sort it
9 to the appropriate carrier. On the other hand, bundles on the 5-digit pallet, when it
10 comes time to sort them to carrier at the DDU, will have remained neatly stacked,
11 already faced and oriented, so that sorting each bundle takes less time. In addition,
12 mailers often arrange the bundles on a pallet in sequence, so that bundles to some
13 carriers are all in the top layer, etc. This sequencing of bundles on pallets was
14 mentioned several times during the Periodicals Review Team visits as a way mailers
15 could help reduce costs, and often already do.⁴⁹

16 Let us now address the cost differential between 5-digit pallets and 5-digit sacks.
17 Comparing model results for 5-digit pallets and 5-digit sacks, as I suggested above in
18 the case of 3-digit pallets, actually gives a smaller difference. It shows 5-digit sacks as
19 costing only 1.04 cents per piece more than 5-digit pallets.⁵⁰ But there are two other
20 sources of cost differences between these container types, as explained below.

21 First, the flats model used to estimate presort and automation cost differentials, by
22 design, does not include platform handling costs. In this case we are looking at a 5-
23 digit sack versus a 5-digit pallet that would both have to be cross-docked at the SCF to
24 the DDU. From the Crum spreadsheets referred to in the preceding section, or my
25 versions of them, included in LR-TW-2, it can be inferred that the sack cross-dock

stacked bundles, all with the same rotation, from a pallet.

⁴⁹ The Postal Service could even, in order to be assured of getting the full savings from the 5-digit pallets, make some type of sequencing on the pallet a requirement for getting the discount.

⁵⁰ If I assume no bundle breakage cost reductions, then the modeled cost difference grows to 1.8 cents per piece. In fact, the cost difference that this model picks up is mostly based on bundle breakage.

1 would cost 2.3 cents per piece, while the 5-digit pallet cross-dock, assuming the average
2 number of pieces, would cost under 1 cent per piece. That is a difference of over 1.3
3 cents per piece. Adding it to the modeled 1.04 cents per piece referred to above already
4 gives a cost differential larger than that between 5-digit and 3-digit pallets.

5 Second, the mechanized and manual bundle sorting rates that Yacobucci provided are
6 averages for sacks and pallets and do not reflect the fact that sorting sacked bundles,
7 quite apart from the problems with bundle breakage, is far more expensive than sorting
8 bundles from pallets.⁵¹ Taking this into account will show a much larger cost
9 differential between 5-digit sacks and 5-digit pallets.

10 In any case, I believe the above arguments demonstrate sufficiently that 5-digit pallets
11 would save at least two cents per piece relative both to 3-digit pallets and 5-digit sacks,
12 and that a discount for Periodicals entered on 5-digit pallets at the destinating SCF or
13 delivery unit is justified at this time. Given the small percentage of Periodicals that
14 currently use 5-digit pallets, this discount will have little impact on the rates paid by
15 other mailers.

16 **VII. CONCLUSIONS**

17 I have attempted above to convey the total magnitude and severity of the cost increases
18 that have been attributed to Periodicals mail over the last fourteen years, particularly
19 for mail processing costs. The magnitude of the increases cannot be grasped without
20 realizing that in 1989 Periodicals processing costs already had increased 25% more than
21 clerk and mailhandler wages over just a three year period. Nor can it be grasped
22 without understanding how much mailers have improved their mail preparation in
23 ways that should have led to much lower costs, and the extent to which great advances

⁵¹ For example, before the contents of a sack can be sorted, it must be dumped on a table or sorting belt. The Postal Service uses an MTM based productivity rate for dumping from sacks equal to 99.4 sacks per manhour. Witness Eggleston indicates that, being MTM based, this productivity rate may be higher than those achieved in practice. Response to TW/USPS-T26-2b. Yet it can be verified that this productivity indicates a cost of over 40 cents per sack, which at roughly 30 pieces in a typical sack is well over one cent more per piece that must be added in any comparison between 5-digit pallets and 5-digit sacks.

1 in flat and bundle sorting technology also should have led to much lower costs.

2 Like past Postal Service witnesses who tried to "explain" the Periodicals cost increases
3 with simplistic arguments, witnesses O'Tormey and Unger ended up more or less
4 conceding that they do not understand the reasons for the long term trend, do not
5 understand postal costing and are unaware of any operational reason why Periodicals
6 costs have gone up instead of down.

7 The Postal Service will continue to lack an explanation for the cost increase until it
8 admits that there really are huge inefficiencies in its system, that facilities are being
9 staffed for peak periods with much unproductive time in between, and that its costing
10 system assigns a disproportionate share of that unproductive time to the mail that is
11 least automated, thereby inflating Periodicals costs.

12 In order to lessen the impact of an outdated costing system, I have proposed above
13 various modifications to the MODS-based system of attributing mail processing costs,
14 which are also supported and used by MPA witness Cohen. The key changes I propose
15 are the broad distribution of mixed mail and not handling costs at allied operations and
16 use of IOCS data that the Postal Service ignores, such as the answers to IOCS questions
17 18 and 19.

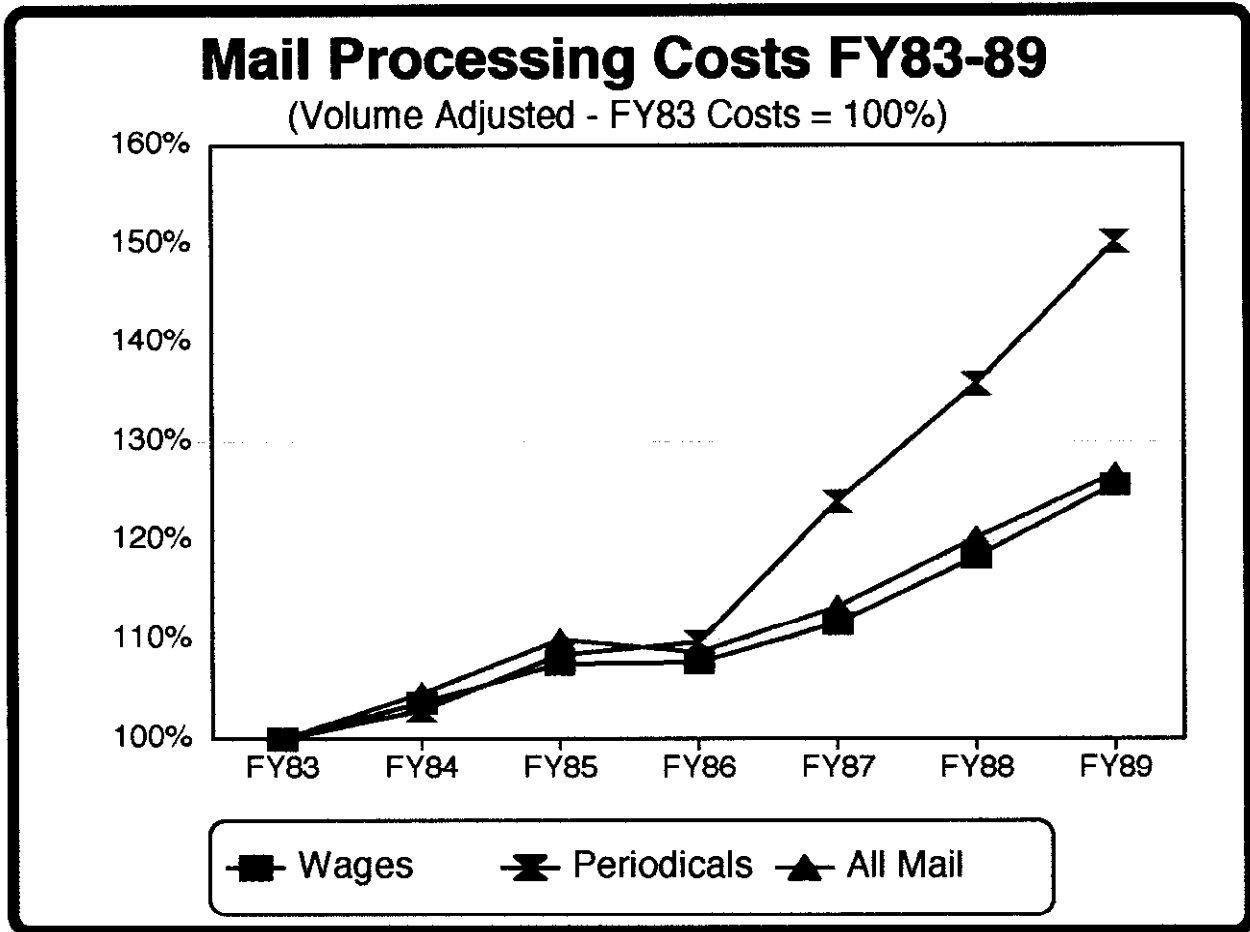
18 Of the many inefficiencies in the postal system, one whose cost effects can be reduced
19 substantially is premature bundle breakage. I have explained why the Postal Service's
20 initial attempt at "modeling" bundle breakage effects is severely flawed in its reliance
21 on both meaningless data and incorrect modeling assumptions. Correcting the relevant
22 sections of witness Yacobucci's flats mail flow model, together with reasonable
23 assumptions about joint industry/Postal Service efforts now underway to reduce
24 breakage, led me to conclude that costs of Periodicals bundle breakage will decline by
25 at least \$21 million in FY2001, compared to BY1998.

26 I urge the Commission to use in its rate design the presort and automation cost
27 differentials, presented in Exhibit 4, that result from the corrected flats mail flow
28 model. As demonstrated in this testimony, the corrected figures, although probably
29 still conservative, are closer to reality than the differentials produced by witness

1 Yacobucci's original flawed model.

2 Finally, I have proposed establishment of a discount for 5-digit pallets entered at the
3 destinating SCF or DDU and an increase in the DDU dropship discount for Periodicals.
4 Neither change will have much impact on other mailers, but these initiatives together
5 will motivate some mailers to bypass Postal Service operations and thereby help reduce
6 the costs of the postal system.

TRENDS IN PERIODICALS AND ALL MAIL PROCESSING COSTS AND CLERK/MAILHANDLER WAGES BEFORE AND AFTER FY86



POSSIBLE ANSWERS TO IOCS QUESTION 19¹

F128	19	Manual/Mech./Auto. Operations	Manual	A
			OCR	B
			Mail Processing BCR/BCS	C
			Delivery BCR/BCS	D
			Carrier Sequence BCS	E
			MPLSM/SPLSM	F
			Letter Facer/Canceler	G
			Flat Facer/Canceler	H
			Sack Sorting Machine	I
			Parcel Sorting Machine	J
			Flat Sorting Machine	K
			Small Parcel/Bundle Sorter	L
			NMO Machine	M
			Multi-Slide	N
			ACDCS	P
			Central Banding	Q
			Culling Machine	R
			Remote Barcoding Terminal	S
			Transport Equipment	T
			All Other Equipment	U
F9211		Type of Manual Operation	Letter Case Distribution	A
			Flat Case Distribution	B
			Parcel Piece Distribution	C
			Coll. Cancel/Meter Mail Prep.	D
			Presort Mail Units	E
			Opening Units	F
			Pouch/Rack Units	G
			Platform Units	H
			Other Manual Operations	I
F9212		Type of Transp. Equipment	Manual Forklift	A
			Mechanized Forklift	B
			Tow Motor	C
			Other Powered Equipment	D
			Other Manl.-Propelled Equip.	E
F9602		Sorting To	Sacks	A
			Trays or Tubs	B
			Pallets	C
			Rolling Containers	D

¹ Extracted from the full table of IOCS records in Append-A.doc, LR-I-12.

"SUPPORT" COSTS THAT CAN BE ATTRIBUTED DIRECTLY

Table IV-5: Direct Accrued Costs in MODS "Support" Pools By Subclass And Special Service (\$1,000's)					
Subclass	Function 1		Function 4		Total Support
	1MISC	1SUPPORT	LD48 OTH	LD48_ADM	
1C LP	\$11,420	\$2,819	\$10,216	\$7,529	\$31,984
1C PR	\$2,175	\$665	\$3,503	\$1,898	\$8,241
PVTC	\$642	\$150	\$565	\$275	\$1,632
PRSTC	\$0	\$0	\$189	\$0	\$189
PRIOR	\$933	\$350	\$2,304	\$727	\$4,315
EXPRS	\$368	\$269	\$661	\$702	\$2,000
2C2RE	\$321	\$392	\$1,558	\$348	\$2,618
2C2NP	\$222	\$0	\$233	\$55	\$510
3COZ	\$112	\$106	\$426	\$103	\$747
3CREC	\$143	\$94	\$2,232	\$335	\$2,805
3CROT	\$1,659	\$521	\$3,704	\$2,528	\$8,411
3CNEC	\$59	\$39	\$129	\$0	\$227
3CNOT	\$577	\$150	\$923	\$541	\$2,191
4CPCL	\$0	\$97	\$663	\$522	\$1,282
4CBPM	\$68	\$0	\$108	\$60	\$236
4CSPC	\$51	\$0	\$108	\$24	\$183
USPS	\$527	\$233	\$967	\$752	\$2,480
INTL	\$1,339	\$443	\$629	\$368	\$2,779
REGIS	\$152	\$0	\$115	\$275	\$543
CERT.	\$467	\$435	\$3,153	\$3,443	\$7,499
INS.	\$49	\$0	\$49	\$246	\$344
COD	\$0	\$0	\$217	\$294	\$510
OTHSV	\$244	\$60	\$536	\$561	\$1,402
5340	\$0	\$0	\$66	\$0	\$66
Total:	\$21,530	\$6,825	\$33,252	\$21,585	\$83,192

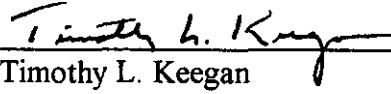
CORRECTED PRESORT/AUTOMATION COST DIFFERENTIALS FOR PERIODICALS MAIL

TABLE VI-1: Corrected Presort/Automation Related Costs Regular Rate Periodicals			
Method	Rate Category	Cents Per Piece	
		Original Estimate	Corrected Estimate
Cost Averages-Actual	Basic, Nonautomation	22.781	25.901
	Basic, Automation	21.493	22.765
	3-Digit, Nonautomation	18.332	20.786
	3-Digit, Automation	17.898	18.659
	5-Digit, Nonautomation	13.133	14.309
	5-Digit, Automation	13.572	14.192
	Carrier Route	8.640	7.430
Cost Averages-Normalized Auto-Related Savings	Basic, Nonautomation	24.115	27.145
	Basic, Automation	21.992	23.389
	3-Digit, Nonautomation	19.269	21.588
	3-Digit, Automation	17.755	18.465
	5-Digit, Nonautomation	13.720	14.549
	5-Digit, Automation	13.465	14.038

TABLE VI-2: Corrected Presort/Automation Related Costs Nonprofit Periodicals			
Method	Rate Category	Cents Per Piece	
		Original Estimate	Corrected Estimate
Cost Averages-Actual	Basic, Nonautomation	14.157	17.138
	Basic, Automation	11.989	13.080
	3-Digit, Nonautomation	11.438	13.967
	3-Digit, Automation	10.523	11.524
	5-Digit, Nonautomation	7.956	8.913
	5-Digit, Automation	8.039	8.772
	Carrier Route	5.008	4.220
Cost Averages-Normalized Auto-Related Savings	Basic, Nonautomation	14.399	17.118
	Basic, Automation	13.092	14.620
	3-Digit, Nonautomation	11.733	14.142
	3-Digit, Automation	10.694	11.852
	5-Digit, Nonautomation	8.141	9.014
	5-Digit, Automation	7.958	8.652

CERTIFICATE OF SERVICE

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



Timothy L. Keegan

May 22, 2000