# DOCKET SECTION 

## BEFORE THE

## POSTAL RATE COMMISSION

 WASHINGTON, D.C.20268-0001
## DIRECT TESTIMONY

OF
HALSTEIN STRALBERG

ON BEHALF OF
TIME WARNER INC.

CONCERNING
DISTRIBUTION OF CLERK AND MAILHANDLER COSTTS

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## AUTOBIOGRAPHICAL SKETCH

My name is Halstein Stralberg. I am the manager of the Operations Research Division at Universal Analytics, Inc. (UAI), a management consulting firm in Torrance, California.

My academic background is in mathematics, with a master's degree from the University of Oslo, Norway in 1963. I received a bachelor's degree in mathematics, physics and astronomy at the University of Oslo in 1961. Most of my professional experience is in the area of management science and operations research. I have directed and performed over 20 years of postal related studies as well as a number of management studies for other clients in government and private industry, in such diverse fields as production scheduling and control, corporate planning and finance, investment analysis, design and optimization of transportation systems, health care and computer system design.

I have previously presented a total of 15 pieces of testimony before this Commission on a variety of postal costing and rate design issues. Two were rebuttal testimonies on behalf of the Postal Service in Docket R80-1. I presented four testimonies on behalf of Time Inc. in R87-1, four on behalf of Time Wamner Inc. in R90-1, one in MC91-3 two in R94-1 and two in MC95-1.

Since 1987 I have directed UArs activities in support of Time Warner's participation in postal rate cases. Besides the presentation of testimony, I have advised Time Warner on a variety of postal issues and directed the development of computer models for analysis of postal costs and rate design. One of these models is the Universal Mail Flow Model (TW-LR-6), which I used to estimate second-class presort and palletization savings in my R90-1 testimony.

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

- Design and development of the Mail Processing Cost Model (MPCM), a weekly staffing and scheduling computer program for postal facilities, with an annualized extension (AMPCM) that uses linear programming to fit long term staffing planning in a postal facility to seasonal variations in volume and personnel absentee/attrition rates.
- An extensive data collection in 18 postal facilities designed to: (1) establish a Postal Service data base on mail arrival rates and mail attributes affecting costs (subclass, shape, indicia, presort, container method, etc.), and (2) develop the model input data needed to apply MPCM for each facility.
- The "Study of Commercial Mailing Programs" --under the Long Range Classification

Study Program. This study involved a detailed cost and market evaluation of several rates and classification concepts, including various presort concepts, destinating SCF discounts for second class, plant loading and barcoding of preprinted envelopes.

- A BMC cost analysis which resulted in the establishment of the Inter/Intra-BMC parcel post rate differential in R80-1.
- Numerous simulation studies requested by postal management using the MPCM.

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

I have conducted a number of classes and seminars on the use of MPCM both for Postal Service employees and interested outside parties. I have made extensive visits to more than 30 USPS mail processing facilities, including multiple repeat visits to some of them, the last in September, 1996. On these visits I observed all aspects of mail processing operations on all tours, as well as methods of mail collection, acceptance and transportation. I estimate that in total I have spent more than 2000 hours on site in these facilities. I have also observed various ongoing postal data collection systems.

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

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

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

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

## I. PURPOSE OF TESTIMONY

In this testimony I comment on the Postal Service's proposed method for distributing Segment 3 costs among subclasses and special services. I identify a number of unstated, unverified and in some cases clearly erroneous assumptions that underlie witness Degen's distribution of mail processing costs based on a combination of MODS and IOCS data.

Besides identifying various problems with Degen's method, I offer an alternative approach that, while not fully satisfactory since the available data are wanting in many respects, relies on fewer untested assumptions, is closer to the approach traditionally used by the Commission, and makes use of much information that Degen has chosen to ignore.

## II. SUMMARY

In this docket the Postal Service has introduced two major changes in the treatment of cost segment 3 , consisting of clerk and mailhandler wage costs:
(1) USPS witness Bradley challenges the long held but untested assumption of $100 \%$ variability in most mail processing costs and presents econometric estimates of the volume variabilities for various mail processing operations.
(2) USPS witness Degen presents a method of distributing volume variable clerk and mailhandler wage costs that differs significantly frorn the traditional method.

I recommend that the Commission accept Bradley's estimates of volume variability in mail processing as the most accurate available. While I have not analyzed the technical merit of the details in Bradley's econometric method, I firmly believe that he at least is correct in his main conclusion, i.e., that mail processing costs are substantially less than $100 \%$ volume variable. Besides being intuitively obvious, this is confirmed by the considerable slack time in mail processing evidenced by the large and fast growing pool of break time and other general overhead "not handling" costs identified in IOCS.

On the other hand, I have identified many severe problems with Degen's proposed method for distributing mail processing and other segment 3 costs to subclasses and
special services, particularly his distribution of mixed mail and not handling costs. Degen, despite claims to the contrary, has not addressed the many complaints about bias in the IOCS raised by Periodicals and other mailers since Docket No. R90-1. Instead, he presents a method that is worse than the traditional IOCS method and requires reliance on numerous unstated, untested and sometimes demonstrably wrong assumptions, while ignoring much useful information recorded by IOCS clerks about the activities that clerks and mailhandlers engage in.

By insisting on distributing all mixed mail and not handling costs within a large number of cost pools, Degen ignores all cross-pool cost relationships and introduces significant distortions. His mixed mail method is basically the same method that both the Commission and the Postal Service concluded should not be used in Docket R94-1. Degen's extension of this elaborate but conceptually flawed approach by applying it individually within a large number of MODS cost pools makes it worse, not better. He introduces even more untested and erroneous assumptions by extending this already flawed approach to empty items and containers, which, according to the IOCS data, cost almost as much to handle when empty as when they contain mail.
"Not Handling" costs today represent over $42 \%$ of all accrued mail processing costs. Degen does not address the reasons why these costs have increased so much, and his approach ignores all distinctions between the 63 different types of not handling activity or inactivity that IOCS clerks observed clerks and mailhandlers engaged in. By distributing them strictly within the cost pools that observed employees happened to be clocked into, Degen assigns an excessive portion of these costs to the highly presorted and least automated mail, which receives a major portion of its handling at platforms and opening units. Those are operations where productivity is not monitored and where employees often are sent when there are no assignments for them elsewhere, leading to very high proportions of not handling being recorded at those operations in the IOCS.

The evidence Degen presents to link mixed mail and not handling costs to specific subclasses and special services is so weak that I recommend the Commission consider treating, at least in this docket, even some volume variable costs as institutional. In
particular, I have identified $\$ 2,733$ million in volume variable ( $\$ 3,727$ million accrued) not handling costs, referred to in the following as general overhead costs, that showed a highly anomalous growth during the past ten years when the automation program was being implemented. Apart from the historical connection with the automation program, little is known about the true causes of these sharply increased costs. The Postal Service apparently has still not seriously analyzed these cost increases. I recommend that the Commission treat at least some of these costs as institutional, until the Postal Service produces firm evidence linking them to specific subclasses and services.

Additionally, I propose an alternative method of distributing mail processing and other segment 3 costs that I urge the Commission to apply to those volume variable costs that it decides should be attributed. My method uses the same IOCS data, the same accrued costs and the same volume variability factors that Degen uses, and it attributes the same proportion of total segment 3 costs. However, it differs from Degen's method in many important respects. Specifically, I propose that:

- Mixed mail and not handling costs that are related to specific shape categories should be distributed based on the direct subclass costs for the corresponding shapes. The distribution should be performed within facility type (MODS, BMC and NonMODS), CAG and basic function, but not within MODS cost pools.
- All other mixed mail costs should be distributed based on all direct subclass costs, again within facility type, CAG and basic function.
- Window service and administration/support related not handling costs that Degen misclassifies as mail processing costs should be distributed with the distribution keys traditionally applied to such costs.
- Not handling costs related to specific subclasses and special services (e.g., Express Mail, Registry, P.O. Boxes) should be attributed to those subclasses and services.
- General overhead type not handling costs not linked to specific classes or activities should be distributed based on all direct and mixed mail costs, within facility type, CAG and, when available, basic function.

The method I propose for this docket relies on fewer untested or improbable assumptions than Degen and is closer to the traditional approach. Yet it is far from ideal, because much important information needed for accurate cost distribution simply
is not available. In order to make possible more accurate cost distributions in the future, the Postal Service must first of all develop a better way to collect data on mixed mail. Some suggested improvements to the current method are described later in this testimony. Secondly, it must address seriously the complaints of anomalously rising costs that Periodicals mailers have raised for a number of years, as well as the true causes for the still ongoing increase in not handling costs. This will require identifying the criteria applied by postal managers both in hiring decisions and in their decisions to assign employees to specific tasks, including their assignment of employees during slack periods when no work is available, and an analysis of the economic impact of such decisions.

In Section III I review the background against which the Postal Service's proposal in this docket must be seen, including issues frequently raised by Periodicals mailers that the Postal Service has chosen to ignore. Sections IV, V and VI detail my critique of Degen's approach and explain the differences between his approach and mine with regard to (1) the use of MODS and PIRS cost pool data; (2) mixed mail cost distribution; and (3) not handling cost distribution.

Exhibit 1 shows my proposed distribution of mail processing costs, for all postal facilities and separately for MODS offices, BMC's and NonMODS offices. Exhibit 2 shows my proposed distribution of all segment 3 costs, as respectively mail processing, window service and administration/support costs. Exhibit 3 compares my proposed distribution of segment 3 costs with that proposed by the Postal Service. Several additional exhibits are included to illustrate specific points in my criticism of Degen's approach. Appendix A describes in detail my methodology and the data sources I relied on. Appendix B describes my proposed method for distributing window service and administration/support related not handling costs.

## III BACKGROUND

In order to view the Postal Service's proposal in this docket in its proper context, one needs to consider the historical developments in mail processing costs, particularly during the past ten years when the Postal Service implemented automation of letter
sorting. During that period, Periodicals mailers have seen a highly anomalous increase in the processing costs attributed to them. MPA witness Cohen and industry witnesses Little and Crain present testimony in this docket that reviews these historical developments in detail and expresses the dismay of Periodicals mailers, both about the increasing costs and the Postal Service's continued unwillingness to address this problem. In this section I focus on the historical facts most relevant to my current testimony.

In both Dockets R90-1 and R94-1 I testified before this Commission about the sharp and anomalous increases in the mail processing costs for Periodicals, as measured by the IOCS, since FY86. I offered some possible explanations for this phenomenon, including the one that today still appears the most likely: that some of the employees processing Periodicals at manual and mechanized operations are essentially "automation refugees," i.e. employees formerly used for letter sorting, either manually or on LSM's, but no longer needed for those tasks, except, perhaps, during short surge periods before some critical dispatches. The rest of the time, these employees must still be clocked into some operation in order to get paid, and there is strong evidence in this docket that platforms and opening units, as well as manual flats cases, are among the favored areas for employees to spend time when not needed elsewhere. In other words, letter mail automation has had the paradoxical, presumably unintended and unforeseen, consequence that productivity has continually declined at the various manual operations where Periodicals are mostly handled.

Between FY86 and FY96, Periodicals processing costs increased much faster than postal wage rates and faster than the costs of all other major mail classes, despite both new technology and increased mailer presorting, barcoding and palletization that should have made the Postal Service's job easier. Closely related to these cost increases have been an increase in "not handling" and other non-productive time and a corresponding decline in productivity at the operations where Periodicals mail is mostly handled.

Despite testimony by myself and others in the last two rate cases, despite admonitions by the Commission, despite numerous other attempts by the Periodicals industry to draw management's attention to this very serious issue, there has been no meaningful
effort by USPS management to address the problem.
In R94-1 it was revealed that the Postal Service had made one major change in its IOCS procedures since Docket No. R90-1. It had replaced its previous method of collecting data on mixed mail with an elaborate scheme that required IOCS data collectors to do considerably more work than previously for each mixed mail tally. Unfortunately, this scheme was hopelessly flawed in its concept, as I pointed out in my R94-1 rebuttal testimony. ${ }^{1}$ One major flaw is its complete failure to collect any class related information about mail in containers, which incur most of the mixed mail costs, apparently based on the belief that such information can be reliably inferred via a series of proxies. In R94-1 the Postal Service itself declined to use this information, due to questions about whether the data were really meaningful, and the Commission concurred that the data should not be used. ${ }^{2}$ In this docket, the Postal Service appears to have forgotten all its previous reservations about this flawed scheme. As I show in Section V, implementing this already flawed approach within many cost pools requires even more unverified assumptions and causes even more biased results.

To its credit the Postal Service has in this docket challenged the long held but untested assumption of $100 \%$ volume variability in mail processing. But when it comes to the still rising Periodicals costs, the Postal Service's refusal to face the issue continues. Despite all claims to the contrary, Degen neither inquires into nor addresses the reasons for these rising costs. Instead his methodology not only unquestioningly accepts the already high Periodicals costs, but would raise them further. ${ }^{3}$

Periodicals mailers understand that in the long run large rate increases cannot be avoided if costs are allowed to remain out of control. They have been doing their part

[^0]to reduce their costs. The Postal Service, however, seems more concerned with its wish to announce savings realized by automation. To support such claims, it proposes a new cost distribution method that, unjustifiably and uncritically, shifts large amounts of costs onto the mail that is still mostly sorted manually.

In fact, Degen has not addressed any of the major issues raised by Periodicals mailers. "Not handling" costs are today larger than ever, and neither Degen nor the Postal Service has made any serious effort to determine why they are so high or why they keep rising. The best that can be said of Degen's approach is that it compiles data showing which cost pools MODS employees are clocked into when they don't handle mail. But Degen draws the wrong conclusion from this data. He ignores all available information about what employees were actually doing while not handling mail, assuming instead that the not handling costs within a cost pool are caused exclusively by the direct and mixed mail processed within that same pool. Degen is not interested in whether an employee was selling stamps, doing general administrative work, monitoring an automated letter sorting machine or on break, relying instead on the overriding assumption that not handling costs are causally related only within each cost pool.

In trying to make better sense of the data presented by Degen in this docket, I have come to conclude that there simply is no fully satisfactory way to distribute mail processing costs based on the information available. Despite having spent millions of dollars collecting mixed mail data, the Postal Service still does not know which subclasses are within the containers that cause most mixed mail costs. Nor is it any closer to explaining rising overhead and other not handling costs than when I first raised the issue of automation refugees more than seven years ago.

In the rest of this testimony I present my criticism of Degen's methodology in more detail, and explain the distribution method I believe is the best possible, given the paucity of meaningful data.

## IV. COST POOLS

Each clerk and mailhandler tally in the IOCS data base is associated with a dollar value,
where the sum of the costs for all tallies equals total accrued wage costs. Because IOCS sampling frequencies differ between CAG's, these tally costs are computed relative to the accrued costs within each combination of CAG and craft, as described in USPS-ST47. In the traditional IOCS method, these tally costs determined the contribution each tally made to the distributed mail processing costs.

Degen's method assigns all tallies taken at MODS offices and BMC's to a number of cost pools. The assignment is based on MODS (PIRS) operation numbers recorded by IOCS clerks. Each pool is defined by its accrued costs, according to the Postal Service's pay data system, and by a volume variability factor determined by Bradley. Degen uses the IOCS tally costs through most of his program, but in the end, in order to be consistent with Bradley's variability analysis, he re-weights the tallies in each cost pool so that the sum of the tallies in each pool equals the accrued costs of that pool. Additionally, he applies the volume variability factors determined by Bradley for each pool. In mathematical terms, this is done as follows.

Let K be a given cost pool, I a tally assigned to that pool, and POOLCOST(K) the total accrued costs within that pool, according to MODS. Let TCP $(K)$ be the sum of the tally costs (TC(L)) for all tallies L assigned to pool K. Under Degen's method, the volume variable cost associated with tally $I$ is then:
$\mathrm{PC}(\mathrm{I})=\mathrm{TC}(\mathrm{I}) * \operatorname{POOLCOST}(\mathrm{~K}) * \mathrm{VV}(\mathrm{K}) / \mathrm{TCP}(\mathrm{K})$
where $\mathrm{VV}(\mathrm{K})$ is the volume variability factor for pool K , according to Bradley and $\mathrm{TC}(\mathrm{I})$ is the tally cost for tally I. ${ }^{4}$

I agree with Degen that the general approach outlined above is an appropriate method for applying Bradley's variability analysis to the IOCS data. However, I strongly disagree with Degen's further decision to distribute all mixed mail and not handling costs exclusively within their assigned pools. Doing so ignores all cross pool

[^1]relationships and leads to severe distortions. Furthermore, consistency with Bradley's analysis does not require confining cost distribution to within each pool.

In most cases I believe the best way to avoid the distortions introduced by Degen's method, given the lack of more specific information, is to simply distribute the mixed mail and not handling costs across all pools, though separately for MODS, BMC and NonMODS facilities and, when possible, within CAG and basic function. On the other hand, some not handling tallies are associated with specific information that allows a more accurate distribution. The distributions I propose are equally consistent with Bradley's variability analysis, since the cost I associate with each tally is given by the above formula.

For example, assume that a tally describes an employee as selling stamps or setting meters in a postal window, but that the tally is assigned by Degen to the FSM (flat sorting machine) cost pool, because the observed employee was clocked into an FSM related MODS code. Since Bradley's analysis of the FSM cost pool was based on all wage costs for employees clocked into FSM MODS codes, regardless of what those employees were actually doing, it may be necessary, for consistency, to apply the FSM variability factor to all costs assigned to the FSM cost pool, i.e. to modify the tally costs as described above. However, that does not mean that all not handling and mixed mail costs within a given pool have to be distributed in the same way as the direct costs in that pool. It still makes more sense to distribute not handling costs according to what observed employees were actually doing. The appropriate way to distribute costs of selling stamps or setting postal meters, for example, is based on the relative usage of stamps and meters by the different subclasses, as in the traditional costing approach, rather than distributing them within cost pools for totally unrelated functions.

In subsequent sections I offer several additional examples of the severe distortion caused by Degen's pool-by-pool approach when, for example, mail that is treated as mixed mail (e.g., loose letters or flats in a container) at one pool undergoes the piece sorting that gives rise to most "direct" tally costs at other pools, and when employees are frequently reassigned between pools, spending significant amounts of nonproductive time at one pool in periods of low activity only to be really busy at
another pool during surge periods (e.g., before a critical dispatch).
These problems do not affect cost distribution within CAG's, which are separate groups of facilities. Employees cannot easily be reassigned from one CAG to another, whereas they easily can be, and frequently are, reassigned between cost pools. Nor do they appreciably affect cost distribution within "basic function." The major basic function categories are "outgoing" and "incoming." While there obviously is overlap, outgoing and incoming operations in postal facilities are mostly done on separate shifts, limiting the probability of frequent reassignments between basic functions. ${ }^{5}$

My alternative method distributes all mixed mail and most not handling costs across cost pools, but within CAG and basic function. Further details of my approach, and of the difference between my approach and Degen's, are given in Appenclix A.

## V. MIXED MAIL COSTS

In the IOCS, a direct tally occurs when an employee is observed handling an individual piece of mail, or an "item" or container that contains identical pieces. ${ }^{6}$ Additionally, two methods are used to create some direct tallies from mixed mail. One is the "top piece rule," normally applied when an employee is seen handling an individual bundle, letter tray or flat tray. The other is counting the mail in some items that do not contain identical mail and to which the top piece rule does not apply. In all other cases where employees are seen handling mail, mixed mail tallies occur.

The volume variable mixed mail costs that Degen distributes include $\$ 66$ million in uncounted mixed mail item costs and $\$ 490$ million in mixed container costs.

[^2]Additionally, he includes in his definition of mixed mail $\$ 229$ million in empty item costs and $\$ 350$ million in empty container costs. Altogether, he distributes $\$ 1,136$ million in volume variable "mixed mail" costs, versus $\$ 4,873$ million in "direct" costs, including counted and top piece rule items, and $\$ 4,050$ million in "not handling" costs.

The mail most likely to produce direct item or container tallies, and correspondingly less likely to produce mixed mail tallies, is highly presorted mail that travels through the postal system in mailer prepared bundles, sacks, trays or pallets, such as Periodicals and most Standard A mail. Sacks, pallets and bundles from Perioclicals mailers, for example, have identical mail pieces in them and therefore mostly give rise to direct tallies in IOCS. They incur substantial handlings at platforms and in opening units (bundle sorting) but mostly as what IOCS calls identical mail.

Mixed mail, on the other hand, consists of either collection mail or mail that has undergone at least one sorting operation and has thereby been mixed with other mail in postal facilities. Periodicals mail is likely to cause a larger portion of the direct item/container costs than of the mixed mail costs. That would imply that its share of mixed mail costs should be less than its share of direct costs. However, quite the opposite occurs under Degen's method. In MODS offices, for exarnple, regular rate Periodicals (2RR) has $3.86 \%$ of the direct volume variable costs, but Degen assigns it $5.75 \%$ of all mixed mail costs.

Distributing mixed mail costs fairly to mail subclasses is a difficult task. Frankly, the Postal Service's proposed scheme is not adequate to the task. It is essentially the same flawed approach that the Postal Service cautioned against using, and the Commission agreed should not be used, in Docket No. R94-1 (see Note 2, Supra). In order to implement it within each cost pool, Degen adds many new and unsubstantiated assumptions that make an already flawed approach even worse. He introduces even more distortions by extending the approach to empty equipment costs that in the past were simply treated as general overhead costs.

The evidence Degen presents to link mixed mail costs to specific subclasses is so weak that it raises doubt whether there exists any basis for attributing these costs to
subclasses. If the Commission decides that these costs should nevertheless be attributed, however, I recommend that it use the following approach:
(1) Mixed mail costs associated with specific shape categories (letters/cards, flats, or IPP's/parcels) should be distributed over the direct costs associated with the corresponding shapes, within CAG, basic function and facility type; and
(2) All other mixed mail costs, including empty item and container costs, should be distributed over all direct mail costs, again within CAG, basic function and facility type.

This is essentially the same approach as that which the Commission applied in previous dockets. ${ }^{7}$ It is not an ideal solution. It is likely to attribute an excessive portion of the mixed mail costs to the highly presorted subclasses, which provide most of the "direct" items and containers handled by the Postal Service. It is, however, still a much better approach than what the Postal Service proposes in this docket.

In order to be able to accurately distribute mixed mail costs in the future, what is needed is nothing less than a complete rethinking and redesign of the current IOCS approach to collecting data on mixed mail. The current approach, while elaborate and costly, simply fails to produce information from which reliable inferences can be drawn about the subclass content of mixed items and containers. The Commission should send the Postal Service back to the drawing board to come up with a better approach before the next rate case.

The following discussion explains in detail the particular problems with Degen's mixed mail approach. I discuss mixed and empty item costs first, and then mixed and empty container costs. Finally, I show how the Postal Service's mixed mail scheme has an imbedded bias against palletized mail, by treating pallets differently from other entities (containers) used to carry bundles, sacks and trays.

[^3]
## A. MIXED AND EMPTY ITEM COSTS

## 1. Mixed Item Costs

IOCS clerks collect data on 16 different "item" types, including bundles, three types of trays, ten types of sacks, pallets and "other" items. When they encounter bundles, letter trays or flat trays that do not contain identical mail, they are supposed to apply the "top piece rule" to determine the subclass. Ideally, according to IOCS handbook F-45 (USPS-LR-H-49), all mixed mail items to which the top piece rule does not apply should be counted.

In FY95 the Postal Service extended the top piece rule to apply to all letter and flat tray tallies. ${ }^{8}$ Since non-top piece rule items are supposed to be counted, there should, therefore, not be any mixed mail items in the IOCS data base. In reality, however, there are $\$ 66$ million in volume variable ( $\$ 93.6$ million accrued) uncounted mixed mail item costs in the BY96 data. Of the $\$ 66$ million, $\$ 26.2$ million are for bundles and letter and flat trays, to which the top piece rule should have been applied. According to Degen, this failure to apply the top piece rule was either because of concern about delaying the mail, or because of errors on some tallies. Tr. 6456-7.

According to the IOCS handbook, non-top piece rule items should be counted except when it is "extremely difficult" to do so. USPS LR-H-49. Yet, in reality, only about half of them were counted. When uncounted bundles and letter and flat trays are included, IOCS clerks counted only about $38 \%$ of the mixed items to which the top piece rule was not applied. ${ }^{9}$ This is illustrated in Exhibit 4, which shows, for each item type and facility type, the volume variable costs of, respectively, direct, counted, mixed uncounted and empty items.

[^4]| Direct \& Counted Item Costs - All Offices <br> (Volume Variable Costs - Non-Top Piece Rule Items) |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Subclass | Counted |  | Direct: |  |
|  | $\$ 1,000$ 's | Percent | $\$ 1,000$ 's | Percent |
| First | 6,260 | $14.88 \%$ | 3,014 | $5.52 \%$ |
| Periodicals | 5,129 | $12.20 \%$ | 14,130 | $25.87 \%$ |
| Standard A | 8,519 | $20.26 \%$ | 30,786 | $56.37 \%$ |
| Standard B | 5,125 | $12.19 \%$ | 2,680 | $4.91 \%$ |
| Priority | 9,157 | $21.77 \%$ | 1,592 | $2.91 \%$ |
| Express | 2,220 | $5.28 \%$ | 875 | $1.60 \%$ |
| Other | 5,647 | $13.43 \%$ | 1,541 | $2.82 \%$ |
| Total | 42,057 | $100.00 \%$ | 54,618 | $100.00 \%$ |

Degen distributes the costs of uncounted mixed items, empty iterns and items in containers with a distribution key based on subclass information for direct and counted items. He performs these distributions within cost pool and item type. This approach is seriously flawed. For the following reasons, neither the direct item data nor the counted item data, nor the combination of both, is suitable for the purpose of distributing the costs of uncounted mixed items.

The table below breaks down the costs of direct and counted mixed non-top piece rule items by major class category. Direct items, i.e. sacks and pallets with identical pieces, are generally prepared not by the Postal Service but by bulk mailers, mainly Periodicals and Standard A mailers. As the table shows, over $56 \%$ of these item costs are for Standard A, with another $26 \%$ for Periodicals. In MODS offices, Periodicals account for almost $31 \%$ of the direct sack and pallet costs (see Exhibit 5). Obviously, therefore, the data on these direct sacks and pallets are not at all suitable for determining the proportions by subclass of mail contained in mixed mail items, which can contain all kinds of mail, including collection sacks and sacks made up at USPS pouching units.

Degen might have produced less distortion if, instead of using direct and counted item data to distribute uncounted mixed item costs, he had used only the counted item data. This approach would still not be correct, however, because it is evident that the mixed items IOCS data collectors count do not have the same characteristics as the mixed items they choose not to count.

One way to confirm that the selection of which mixed items to count was biased is to compare the relative counted and uncounted costs for different item types in Exhibit 4. For parcel trays (TRAY-P), $74.3 \%$ were counted, more than for any other item type. Second in percent counted were brown sacks, with $70.4 \%$. For most item types, the percent counted was substantially less. This is hardly a coincidence. Brown sacks mainly carry magazines. Because magazines are relatively large, there tend to be few of them in each sack and they are therefore easy to count. Parcel trays carry parcels, which are also large and are few in number and easy to count.

The Postal Service may believe that this bias in counting doesn't matter, as long as one analyzes each item type separately. However, there is no reason to suppose that the tendency to count items with a few large pieces, and not items with many small pieces, does not extend to all item types. In fact, it is to be expected that IOCS clerks, pressed for time to meet their quota of tallies, would tend not to count a collection sack with hundreds of different pieces in it, but to count any item with just a few pieces. ${ }^{10}$

This is not a new issue. It was debated extensively in Docket No. R94-1, where both my testimony and that of MPA witness Cohen demonstrated the strong probability of bias in the selection of which items to count. At that time, both the Commission and the Postal Service concluded that the counted item data could not be relied on to distribute the costs of uncounted items and items in containers. The Commission should draw the same conclusion in this docket. ${ }^{11}$

[^5]1 For bundles and letter/flat trays, to which the top piece rule normally applies, less distortion might be achieved by excluding the direct item costs and attributing mixed item costs based only on the costs of top piece rule items, which after all are also mixed mail. That improvement to Degen's approach, however, would still not guarantee a correct distribution, given Degen's explanation that these items were recorded as mixed in order not to delay the mail. ${ }^{12}$

An additional problem that arises if one tries to distribute item costs within each of Degen's cost pools is the extreme thinness of the data in individual cells. In Degen's MODS data, I found 233 combinations of cost pool and non-top-piece-rule item type where mixed items had been observed. In 72 of these cells not a single item had been counted, and in those 72 cells a distribution across all pools becomes necessary in any case.

## 2. Empty Item Costs

In both MODS and NonMODS offices the cost of handling most item types was almost as large when the items were empty as when there was mail in them, which makes one wonder how much of the time recorded as spent handling empty items is time well spent. As Exhibit 4 shows, some item types purportedly cost substantially more to handle when empty than when there is mail in them. ${ }^{13}$

Degen's approach to distributing the $\$ 229$ million in volume variable empty item costs is flawed for at least two reasons. First, as discussed above, his distribution key is biased by giving too much weight to mail in direct items and too little weight to mail in mixed items.

[^6]Second, Degen's approach rests on the assumption that each item type containing mail that is handled within a given pool is correspondingly handled as empty within the same pool. Degen provides no evidence that this is true and apparently has not even looked for such evidence. In fact, it is almost certainly false. Take for example a direct sack which may travel through several postal facilities, undergoing various loading, unloading, sorting and transfer operations before finally being emptied at its destinating facility (e.g. a delivery unit in the case of a carrier route sack). Whatever is subsequently done to the empty sack to cause it to incur, according to Degen's data, almost as many costs as when it carried mail, it is extremely unlikely that its path back to a mailer will pass though exactly the same operations. ${ }^{14}$ I found 238 combinations of item type and MODS cost pool where empty items had been observed. In 50 of those, items had been observed only when empty. In an additional 26, no direct or counted items were observed.

If costs of empty sacks and other items are to be attributed at all to specific subclasses, they should, given the complete lack of evidence supporting Degen's narrower distribution, be treated as general overhead costs, distributed upon all direct costs.

## B. MIXED AND EMPTY CONTAINER COSTS

## 1. Mixed Container Costs

The Postal Service's current scheme for collecting data on mixed container costs in IOCS is fundamentally defective, due to its failure to collect any class-related information about these containers. Instead, it relies on a series of proxies to distribute these costs to subclasses. Degen did not invent this system, which both the Postal Service and the Commission rightly declined to place any reliance on in R94-1, but he not only adopts it (the first Postal Service witness to do so) but increases the impact of its deficiencies by applying it within a large number of individual cost pools. In the process he introduces a number of unstated, unproven, improbable and in some cases clearly erroneous

[^7]assumptions.

Assume that an IOCS data collector sees an employee handling two flats bundles, one containing copies of Time and the other copies of Newsweek (a quite possible scenario, since these publications are handled similarly and generally at the same time of the week). Although this would appear to be identical mail for all purposes relevant to the distribution of mail processing costs, the IOCS defines it as not "identical" and the data collector must refrain from capturing the readily available class information and instead record a "multiple item container" with bundles in it. Tr. 6550-51 The same applies to bundles of Standard A catalogs, First Class presorted letters (unless exactly equal in all relevant and irrelevant respects), and so on. Degen then relies on the distributed costs of bundle handling within each pool as a proxy to determine the costs of bundles observed in various types of containers.

The absurdity of this approach is perhaps most obvious in Degen's treatment of loose mail observed in containers. Containers with loose flats (and similar containers with letters) appear mostly at platforms and opening units, whereas their contents, i.e. the pieces and items carried in those containers, are mostly handled elsewhere. It is therefore inappropriate to distribute the mixed container costs within each pool.

Yet Degen distributes the large costs of loose flats and letters observed in containers at platforms and opening units on the basis of the relatively small portion of individual letter and flat handlings recorded at those operations, instead of the much larger portion performed at the operations dedicated to piece sorting.

Degen states the assumption underlying his approach: that "the subclass distribution of direct tallies handling flat-shape pieces in the same cost pool is an unbiased estimate of the unknown subclass distribution of loose flats in mixed-mail containers." Tr. 6528. He provides no evidence to support this assumption, and refers to no study of its accuracy. Moreover, application of his approach within each cost pool requires the further (unstated) assumption that mail that appears in containers at a given pool also appears as loose mail at the same cost pool. This latter assumption is clearly wrong, as the table below illustrates.

| Direct And Loose-In-Container Item Costs <br> At MODS Platforms/Opening Units |  |  |
| :--- | ---: | ---: |
|  | Loose In <br> Item Type | Direct | Containers | Cetters |
| :--- |
| Llats |
| Bundles |
| Flat Trays |
| Letter |

1 The table shows, for five major item types, the percentages, respectively, of direct and loose-in-container handling costs that occur at platforms and opening, units in MODS facilities. In the case of letters, for example, only $6.97 \%$ of direct handlings occur in those cost pools, yet over $53 \%$ of the loose-letters-in-container costs occur there. Degen's method, therefore, distributes over half the letters-in-containers costs based on only a small and incidental part of the total letter handling costs. For flats, the imbalance is almost as large: $48.51 \%$ of the loose-flats-in-container costs are distributed based on only $9.38 \%$ of the direct flats costs. ${ }^{15}$

This imbalance is not limited to loose pieces in containers but extends to bundles and other items (e.g., flat and letter trays) as well. For example, only $22.77 \%$ of direct bundle handling in MODS offices occurs at platforms and opening units, while $64.28 \%$ of bundles-in-container costs occur there. The pools with the largest percentages of direct bundle handling are manual letters (18.59\%) and BCS operations (13.87\%), but employees at those operations apparently do not move the containers that hold all those bundles, since they only have $4.44 \%$ and $0.88 \%$ respectively of the burdles-in-container costs. Exhibit 6 contains additional data on direct and loose-in-container item costs.

The result of Degen's pool-by-pool distribution is that mail classes that receive a large

[^8]portion of their total handling at platforms and opening units, such as Periodicals, will be held responsible for a disproportionate share of container costs.

This particular problem can be partly ameliorated by distributing container costs across all pools, rather than within pools. I strongly recommend this alternative if the Postal Service's container data are to be used at all.

There is, however, another, more fundamental problem with Degen's loose-mail-incontainer data that I see no way of addressing short of discarding all the current mixed container data, distributing all mixed costs upon all direct costs and urging the Postal Service to come up with a better system in the future.

It is obvious that since Periodicals do undergo a lot of flat sorting they will, under any variant of Degen's scheme, be held responsible for a large portion of the $\$ 38$ million loose flats in container costs. But when, if ever, do Periodicals flats appear loose in containers?

The only types of flats one would reasonably expect to appear loose in large containers are non-presorted flats arriving through collections, or perhaps being brought to postal platforms by certain types of First or Standard A mailers. Periodicals flats are packaged by mailers and submitted as bundles on pallets or in sacks. When those pallets or sacks do get opened, the bundles are sorted into containers, but as bundles, not as loose pieces. Putting loose Periodicals (or Standard A) flats in containers would destroy their presortation and possibly their facing as well. ${ }^{16}$

One can only speculate as to the correct interpretation of these loose-pieces-in-container costs. Such speculation would not be necessary if the IOCS directly captured class

[^9]information for containerized mail.

## 2. Empty Container Costs

Containers, like items, cost almost as much to handle when empty as when there is mail in them, if Degen's data are to be believed.

Degen distributes the empty container costs, for each container type and within each cost pool, based on the costs he has distributed for mixed and direct containers of the same type at the same cost pool. Consequently, all the highly questionable assumptions Degen relies on to distribute mixed container costs are extended to the additional $\$ 350$ million in empty container costs. In addition, his distribution of empty container costs relies on the further untested, unstated and most likely erroneous assumption that each container type containing mail that is handled within a given pool is correspondingly handled as empty within the same pool.

The reasons for rejecting Degen's distribution of empty container costs are therefore even stronger than the reasons for rejecting his distribution of mixed container costs. As with empty items, if empty container costs are to be attributed at all to subclasses, they should be treated as general overhead costs and distributed based on all direct subclass costs.

## C. PALLETS SHOULD BE TREATED AS CONTAINERS.

Another ill-conceived aspect of the IOCS mixed mail scheme is that pallets are considered items rather than containers. Most direct pallets contain mailer prepared Periodicals or Standard A bundles. Most of the pallets that were counted (as items) also appear to have contained Periodicals or Standard A bundles. But pallets are also used to carry sacks or trays which, as Degen confirmed (Tr. 6539-40), are unlikely to be counted because of the significant effort that would entail. Furthermore, because pallets are defined as items rather than containers, there is no way for the data collectors to record the fact that a pallet had sacks or trays rather than bundles on it. Tr. 6568. This creates an inconsistency relative to how items in containers are recorded.

To illustrate this problem, consider a highly simplified example. Assume that a given
postal operation (e.g., opening unit) is dedicated exclusively to bundle sorting, that it handles only two classes of mail, and that class A's bundles arrive in APC's while class B's bundles arrive on pallets. Assume further that each class is found to incur $\$ 1,000$ in direct bundle handling costs, and that the operation additionally incurs $\$ 500$ in pallet handling and $\$ 500$ in APC handling costs, for a total cost of $\$ 3,000$. Obviously, since class $A$ is the only class using APC's, class $B$ the only class using pallets, and their bundle handling costs are equal, both are responsible for a total of $\$ 1,500$.

That, however, is not how the Postal Service's "improved" mixed mail system works. Since class B is the only class using pallets, and pallets are defined as "items," class B will be held responsible for all pallet handling costs. Since APC's are defined not as items but as containers, IOCS clerks are not allowed to report the fact that the bundles in APC's are all class A, only that they are bundles. ${ }^{17}$ And since class B has one half of the bundle handling costs, it will be held responsible for half of the APC costs as well. In other words, $\$ 1,750$ will be attributed to class $B$ and only $\$ 1,250$ to class $A$.

Let us now consider how this affects Periodicals. Bundles of Periodicals are, to a large extent, carried on pallets through the postal system. If pallets were defined as containers, like all other entities that may contain bundles as well as sacks and trays, then an IOCS data collector who saw a pallet with Periodicals bundles would record it only as a pallet containing bundles, with no class information. The costs of that pallet would then be distributed based on the costs of all bundle handlings. Since regular rate periodicals ( 2 RR ) has about $6.8 \%$ of all bundle handling costs, it would be assigned about $6.8 \%$ of all costs of pallets with bundles on them. Instead, since pallets are defined as items, $2 R R$ is assigned more than one third of all pallet costs, including the costs of pallets containing sacks or trays that are likely to belong to other classes. In addition, $2 R R$ is held responsible for $6.8 \%$ of the costs of other containers with bundles in them.

[^10]This is yet another example of how Periodicals mail is certain to be overcharged under any possible use of the item/container data collected by the current IOCS. To correct this particular distortion, IOCS must be modified to (1) allow the fact that a pallet contains sacks, trays or parcels rather than bundles to be recorded; and more importantly, (2) record class related information for containers as well as items.

## D. MIXED MAIL SUMMARY

The Postal Service's method of distributing mixed mail costs had fundamental problems even before Degen attempted to apply it separately within each of a large number of cost pools:
(1) it failed to recognize the fundamental difference between direct items (i.e., items with identical mail pieces) that almost always originate from bulk mailers and mixed mail items that can contain all kinds of mail;
(2) it failed to address the inevitable bias introduced by letting IOCS data collectors count only items that are easy to count and will not delay the mail;
(3) it failed to recognize the difference between trays and bundles so time sensitive that trained data collectors did not even have time to examine one piece, and other trays and bundles;
(4) it created an inevitable bias against mail that travels through the system in palletized bundles, by treating pallets as items instead of as containers;
(5) it completely failed to record any direct class information about mail in mixed containers, even for containers that contain only one subclass but with nonidentical pieces; and
(6) it relied on a number of unverified and unreasonable assumptions regarding the relationship between loose mail in containers and piece handlings, ignoring for example the fact that letters and flats that appear loose in containers usually have come through collections.

Degen compounds these already severe problems by applying the same unsound procedures, and relying on the same inadequate data, within individual cost pools. Besides the extreme thinness of the mixed mail data that he places his reliance on, he has to rely on assumptions that relationships hold true within individual pools that may not, and probably do not, hold even in the aggregate. One consequence, discussed above, is that he distributes the large costs of loose letters and flats in containers observed at opening units and platforms in proportion to the mostly incidental
handling of individual letters and flats that occurs at those operations.
I do not necessarily advocate going back to the system that existed some years ago, when containers were characterized as "mixed First and third," "mixed fourth," etc. That system had its own weaknesses. But under the current system, IOCS clerks are being asked to do much more work than before for each mixed mail tally, yet the end result is less useful information. With all the effort that now goes into producing item and container tallies, there certainly must be a way to capture better information relevant to cost distribution.

I therefore urge the Commission to decline to adopt Degen's deeply flawed approach to distributing mixed mail costs and to send the Postal Service back to the drawing board, insisting that it come up with a mixed mail system that makes sense. In the meantime, the best solution available is to use the simpler and more traditional approach outlined above and described in more detail in Appendix A, i.e., to distribute shape related mixed mail costs based on the corresponding shape related direct costs and to distribute other mixed mail costs based on all direct costs. That approach still produces some bias against the types of mail that mostly travels through the postal system as identical (and thereby direct) mail, but the distortion is much less than under Degen's approach.

## VI. NOT HANDLING COSTS

The disastrous and highly anomalous increase in Periodicals costs over the past ten years occurred at the same time as two other major changes. One was the automation of letter sorting. The other was a sharp increase in costs referred to in this docket as "not handling" costs. In this section I first discuss the increase in not handling costs: how it is a natural consequence of increased automation and how, under the Postal Service's costing methods (old and new), the least automated mail will inevitably be held responsible for a portion of this cost increase, even though it did not cause the increase.

Next I show that the distribution of not handling costs proposed by Degen compounds the problem, first by ignoring important information available about some of the not handling costs and second by wrongly assuming that not handling costs are causally
related only to direct and mixed mail costs within the same cost pool. Finally, I describe a better way to distribute not handling costs, which uses much of the information Degen ignored, while relying on fewer unverified assumptions. Unlike Degen's approach, my approach uses distribution keys that correspond to the nature of each type of not handling activity. I distribute these costs, not within MODS cost pools, but within facility type, CAG and basic function.

## A. AUTOMATION HAS CAUSED A LARGE INCREASE IN NOT HANDLING COSTS, MUCH OF WHICH THE LEAST AUTOMATED MAIL HAS WRONGLY BEEN FORCED TO ABSORB.

As late as Docket No. R90-1, the only type of "not handling" costs of which there was general awareness outside the Postal Service itself was so-called overhead, consisting of breaks/personal needs, clocking in and out, and handling empty equipment. Testimony in that docket, by myself and others, questioned why overhead costs, as a percentage of other mail processing costs, had grown from $20.8 \%$ in FY86 to $23 \%$ in FY89. That increase, however, was small compared to what followed. In FY95 the overhead percentage grew to $29.4 \%$, and in FY96 it jumped to $31.5 \%$.

The largest component of overhead costs is break/personal needs time. According to Degen's data, an astonishing $15.4 \%$ of all working hours in mail processing facilities are spent on breaks. That is an hour and 14 minutes in an average eight-hour work day, not including lunch breaks.

However, as early as R90-1 my testimony postulated the existence of considerable additional "not handling" time, in the form of "automation refugees," i.e. employees no longer needed for manual letter sorting but still in the system, having been reassigned to the manual operations, particularly opening units, where productivity is least monitored in postal facilities. That seemed then, and still seems today, the only possible way one can explain the large increases in Periodicals costs.

Another cost category, namely costs reported as "mixed mail" by the LIOCATT, also grew dramatically after FY86. In Docket No. R94-1 witness Barker revealed that what were called "mixed mail" costs, (i.e. costs with IOCS activity codes 5610-5750) included
not just mixed mail but also not handling, and that in fact most of the increase in those costs was in the not handling component. In FY96, according to Degen's data, these not handling costs were about as large as the break-time costs, representing another $15 \%$ of all time spent in mail processing facilities. That is not all. One of the more bizarre "facts" brought to light in this case is that about one third of the time spent on "handling empty equipment" is actually spent not handling empty equipment, or anything else. Tr.6532. The "not handling empty equipment" costs are $2.8 \%$ of all mail processing costs. Clocking in and out adds another $1.9 \%$. Altogether, $35.1 \%$ of clerk and mailhandler mail processing costs, or almost three hours in an eight hour day, are spent on breaks/personal needs, clocking in/out, "not handling empty equipment" or "not handling" as defined by activity codes 5610-5750. In some cost pools, mainly operations where postal facilities do not measure productivity, these percentages are even much higher. ${ }^{18}$

In order to understand what all these non-handlings mean, it is necessary to realize one of the limitations of the IOCS. Apart from breaks, the IOCS has no way of indicating that an employee was observed doing nothing at all. If no specific category on the IOCS clerk's handheld computer fits, he must choose from categories such as "other work," or indicate that the employee was on his way to get something, etc. There is no way to indicate complete non-activity. The Postal Service's position is, of course, that their employees are always kept busy. See, for example, Moden's response to TW/USPS-T49d at Tr. 5935-36 and Degen's response to TW/USPS-T12-23 at Tr. 6522-25.

Other than common sense, therefore, the only proof that all these not handling costs do not represent productive time is the simple historical fact that most of them did not exist before FY86. Attempting to justify the large increase in these costs in R94-1, witness Barker argued that with increasing automation employees spend more time monitoring machines and less time touching individual mail pieces. He said that this is not a problem as long as overall productivity is improving. Tr. 1237-39, R94-1.

[^11]Barker's explanation would make sense if most of the new not handling costs occurred at the most automated operations. Instead, as can be seen from Degen's data, most of these costs occur at non-automated operations. That, essentially, is what I postulated in my R90-1 testimony, without the supporting evidence available today. ${ }^{19}$

In fact, it is not surprising that most non-handlings occur at opening units and platforms, given that those are the operations where productivity is not monitored. Even the USPS Inspection Service has concluded that facility managers have little incentive to worry about productivity at those operations. ${ }^{20}$ Furthermore, postal employees have to clock in somewhere as soon as they arrive at work or get back from lunch, in order to get paid. The ten minutes per day spent clocking in and out of operations show that facilities have ample flexibility to send these employees where they are needed when they are needed, but why send them to an automated sorting operation before they are really needed there, when doing so would reduce the productivity achieved at that operation? Not surprisingly, it appears that employees often start their shift by checking into some opening unit and stay there until they are given specific assignments. ${ }^{21}$

Of course, excessive not handling time is not limited exclusively to platforms and opening units, as can be inferred from the sharply reduced productivity (pieces per

[^12]manhour) at almost all letter and flat sorting operations from FY88 to FY96 that is reflected in Bradley's MODS data. Time Warner XE-2 to witness Bradley, Tr. $5565^{52}$

To summarize, letter mail automation has had two major effects. First, it has dramatically reduced the direct costs involved in sorting letters, due to the order of magnitude difference in productivity between automated and manual letter sorting. Second, it has brought about a major increase in not handling costs, not only at automated operations, where Barker said an increase should be expected, but in many manual operations, as I postulated in R90-1. Overall, the savings in direct costs are no doubt larger than the increases in not handling costs. The trouble is, however, that the IOCS is not capable, and was never designed to, detect the connection between these two phenomena so that the cost savings produced by the automation program would be offset by the cost increases it also produces.

Nor does it appear that the Postal Service has made any serious attempt to study this connection, although one might think that addressing this issue would provide valuable clues as to how the postal work force can be managed more efficiently. Instead the Postal Service has, over the past ten years, burdened the least automated mail with an ever greater portion of not handling costs that were caused by automation, thereby allowing it to make exaggerated claims about automation savings. ${ }^{23}$

A simple example will illustrate why, even before Degen introduced further distortion

[^13]in this docket, the Postal Service's distribution of "not handling" costs in proportion to the "direct" costs has led to a bias against the least automated mail. Consider a postal service that handles only two product lines (mail classes 1 and 2) and uses a system similar to IOCS to distribute costs between them. At a certain point in time both classes are handled manually. The costing system shows $\$ 1,000$ in "direct" costs for each class, and another $\$ 1,000$ in "not handling" costs. In other words, total costs are $\$ 3,000$. Since each class has the same direct costs and both are handled similarly, the not handling costs are also split equally between them; i.e. a total of $\$ 1,500$ is attributed to each class.

This postal service then automates the processing of class 1, while class 2 continues to be handled manually. After this change, the costing system shows that the direct costs of class 1 have been cut in half, to only $\$ 500$, while the direct costs for class 2 , still handled manually, remain at $\$ 1,000$. However, the not handling costs have increased by $\$ 200$, to a total of $\$ 1,200$. In other words, total costs are $\$ 2,700$, a saving of $\$ 300$.

It is reasonable in this case to give class 1 credit for the $\$ 300$ saved; i.e. its new costs should be set at $\$ 1,200$, while the costs of class 2 should remain at $\$ 1,500$. That, however, is not how the costing system works if it is like the real IOCS. It concludes that since class 2 now incurs two thirds of the direct costs, it must also be responsible for two thirds of the $\$ 1,200$ not handling costs. In other words, class 2 is charged with $\$ 1,000$ in direct and $\$ 800$ in not handling costs, for a total of $\$ 1,800$. Its costs have suddenly, according to this costing system, increased by $\$ 300$, or $20 \%$, even though it is handled no differently than before. Class 1, on the other hand, is charged with only $\$ 500$ in direct and $\$ 400$ in indirect costs, for a total of $\$ 900$. It gets credit not only for the $\$ 300$ real savings that resulted from automation but for another $\$ 300$ in bogus savings produced by an outdated and no longer adequate costing system.

Real life is obviously more complex, and there are many classes of mail, all affected somewhat differently. Nevertheless, this example does illustrate what has happened to Periodicals costs over the past ten years. It also illustrates why the Postal Service, unwilling to admit its failure to manage its workforce efficiently in an automated environment, has never offered any meaningful explanation of the Periodicals cost increase or been willing to undertake a serious inquiry into the matter.

## B. DEGEN'S POOL-BY-POOL METHOD FURTHER DISTORTS THE RELATIONSHIP BETWEEN DIRECT AND NOT HANDLING COSTS

The pool-by-pool approach to distribution of not handling costs that Degen proposes causes two types of distortion. First, it inevitably leads to an even larger bias against the least automated mail, which receives a large portion of its total handling at platforms and opening units, the operations where employees most often are clocked in when they don't handle mail. Second, it ignores all information (other than MODS codes) that IOCS clerks recorded about different not handling activities. These issues are discussed further in sections 1 and 2 below.

## 1. The Pool-By-Pool Approach Unfairly Attributes Excessive Not Handling Costs To The Least Automated Mail.

As discussed above, the sharply increased not handling costs brought about by automation are mostly concentrated at platforms and opening units, operations where productivity is least monitored and therefore favored places to send people not needed elsewhere. But those operations are also where mail that is highly presorted and undergoes little automated sorting, such as Periodicals and most Standard A mail, receives a large portion of its handlings. Such mail, particularly its carrier route presorted component, requires mostly dock transfers and bundle sorts but little piece sorting, whereas mail with little presortation spends a large proportion of its time at piece sorting operations.

Ignoring the real reasons why so much not handling time is spent at platforms and opening units, ignoring the historical relationship between the implementation of automation and the rise in not handling costs, ignoring even all the information that IOCS does provide about different types of not handling costs, Degen proposes simply to distribute all not handling costs within each pool based only on the direct and mixed mail costs within that same pool. One inevitable consequence is higher costs than ever attributed to Periodicals, which receive a large portion of their handling at platforms and opening units.

The Postal Service claims that this new methodology was intended to "address" the concerns of Periodicals mailers and others about rising mail processing costs. Instead,
the method supports even more exaggerated claims of automation savings. The Postal Service apparently has given no serious consideration to questions raised by Periodicals mailers, who keep pointing out that their costs used to be much lower and that they have done a lot of work themselves to reduce those costs.

## 2. Degen Ignores All Information About The Nature Of Each Type Of Not Handling Activity.

The not handling costs that Degen distributes as mail processing costs are defined by 63 different IOCS activity codes, each representing a unique type of activity or inactivity. These codes reflect what IOCS clerks saw sampled clerks and mailhandlers doing. They are used in the traditional costing approach, which applies a number of different distribution keys designed according to the nature of each activity. Degen, on the other hand, ignores all this information, insisting that all that matters is the MODS cost pools employees happened to be clocked into.

The following sections demonstrate the inadequacy of Degen's approach with regard to four general categories of not handling costs: (a) class and activity specific not handling costs; (b) shape specific not handling costs; (c) general overhead not handling costs; and (d) not handling costs related to special services.
a. Class And Activity Specific Not Handling Costs. Degen takes his reliance on pool-by-pool distribution to the point of absurdity when he applies it even to costs for which much more specific information is available. For example, almost $\$ 30$ million in volume variable costs with IOCS activity code 6231, representing not handling associated with Express Mail, were observed over a large number of mail processing cost pools. No reasonable person would argue that these costs should be attributed to anything but Express Mail. Yet Degen, insisting that the only thing that matters is what cost pools people were logged into, attributes these Express Mail specific costs over all mail classes. ${ }^{24}$ He does the same with costs in activity codes 6220 (special clelivery) and 6230

[^14](Registry).
Degen does the same with all window service and administration/support activities where people performing those activities were incorrectly clocked into a MODS mail processing operation. As explained in Appendix B, I identified $\$ 498.317$ million of such volume variable not handling costs related to window service and administration/support ( $\$ 819.866$ million accrued). Degen simply distributes these costs within whatever mail processing cost pool employees were clocked into, ignoring the much more accurate distribution keys available to the Postal Service and the Commission for distributing such costs.

As I explained above in Section IV, consistency with Bradley's volume variability analysis may require use of pool relationships to determine the volume variability factor associated with each tally. It does not, however, require ignoring all information recorded by IOCS clerks about what observed employees were actually doing, when use of such information would produce more meaningful cost distribution. In my alternative approach I apply the distribution keys appropriate for each class and activity indicated by the IOCS activity codes.
b. Shape Specific Not Handling Costs. Degen also ignores the shape related characteristics of some not handling costs. In Docket No. R94-1, USPS witness Barker, discussing the rapid increase in mail processing not handling costs, indicated that one thing the Postal Service had done to improve distribution of not handling costs was to isolate those directly associated with processing of, respectively, letters/cards, flats, and parcels/IPPs. Activity code 5610 was used for not handling at operations dedicated to letters and cards, code 5620 was similarly used for operations dedicated to flats, and code 5700 for parcels/IPP's.

These codes are still in Degen's data base. Total volume variable not handling costs were $\$ 505.781$ million for code $5610, \$ 172.679$ million for code 5620 , and $\$ 71.331$ million for code 5700. ${ }^{25}$ Degen ignores this information and treats 5610-5700 costs like all other

[^15]not handling costs, e.g. distributing 5610 costs over many costs urrelated to letter sorting, etc., thus further distorting the true cost relationships in mail processing. Rather than addressing the problem of rising not handling costs, Degen throws out what little progress the Postal Service had made towards a somewhat fairer distribution of these costs. The appropriate distribution keys for 5610, 5620 and 5700 not handling costs are, in my opinion, the direct letters and cards costs, the direct flats costs, and the direct parcel/IPP costs.
c. General Overhead Not Handling Costs. Degen also distributes costs that are general overhead in nature, such as breaks, clocking in/out, not handling empty equipment and the mixed all shapes (code 5750) costs, within each pool. Yet he has conducted no study of whether these costs are causally related only to the direct and mixed costs within the same pool, and I doubt that such a study would have confirmed his assumptions.

Consider break time. An employee on break might as well be on break from any operation. The fact that while on break he is logged into a given MODS operation does not mean that he is needed for the mail being handled at that operation, but rather that he is not needed there at that particular time. The one hour and fourteen minutes in an average eight hour day spent on breaks/personal needs is far more than Moden could explain in terms of need for "wash up time" or on any other basis, and can only mean that there are significant blocks of time in an average processing day when facilities do not need all their available employees. The employees must still be clocked in somewhere, however, in order to get paid. USPS response to TW/USPS-T-4-23, redirected from witness Moden.

This category of general overhead not handling costs represents $\$ 3,728$ million in accrued costs, or $28.3 \%$ of all accrued mail processing costs (see Table A-2 in Appendix A for a breakdown of these costs). The existence of such large and still growing not

[^16]handling costs unrelated to specific productive activities is a clear evidence of considerable slack time in the postal system, reflecting an inability of USPS managers to manage their workforce efficiently in the automated environment. It also constitutes an independent verification of Bradley's conclusion that mail processing costs cannot be $100 \%$ volume variable, since a significant volume increase would (or at least should) provide the Postal Service with an opportunity to get more work out of its existing workforce, rather than just hiring more employees.

Since the Postal Service has produced no meaningful study of how facility managers really plan the use of their employees' time and where people are sent when not needed, little is known about the true causes for the sharp increases in these costs. For this reason, the Commission should seriously consider treating even the volume variable portion of these costs as institutional, until such time as the Postal Service produces convincing evidence linking them to specific subclasses and special services and explaining satisfactorily why these costs have grown so much in the past ten years.

If, however, the Commission decides that the volume variable portion of these overhead costs must be attributed even in this docket, the best approach to distributing them, though far from perfect, is to do what the Postal Service used to do, namely to treat them as systemwide costs and distribute them proportionately over all other costs.
d. Not Handling Costs Related To Special Services. Another inexplicable aspect of Degen's method is that, except for the Function 4 cost pools (stations and branches), he distributes no not handling costs at all to special services in MODS offices. This makes no sense, since his data show direct costs related to special services being incurred by employees clocked into almost all cost pools. An employee performing special services while for example clocked into an opening unit presumably also spends time on breaks/personal needs, clocking in/out, etc.

The question of how to distribute not handling costs should be decided based on the nature of each type of not handling activity, not by the MODS pool employees happen to be clocked into while performing the activity. Some of the not handling costs that Degen apparently believes should not be distributed to special services are in fact
specifically related to special services and should therefore be distributed only to those services. Examples include activity codes 5020 and 6020 (P.O. Boxes), 5080 and 6080 (money orders), 6220 (special delivery) and 6230 (Registry). Additionally, as I show in Appendix A, certain not handling activities, e.g. those with activity code 6580 (postage due), have major components related to special services.

On the other hand, some not handling activities are not at all related to special services and therefore should not be distributed to them. For example, shape related not handling costs clearly are not related to special services, since the latter have no shapes associated with them.

All these considerations are ignored by Degen, due to his total reliance on the pool-bypool approach to distributing not handling costs.

## C. A BETTER WAY TO DISTRIBUTE NOT HANDLING COSTS

This section outlines the method I propose for distributing not handling costs. The details are described in Appendix A. My method does not resolve every outstanding uncertainty about the correct distribution of these costs. Not could it do so, given the continuing lack of any in-depth study, which only the Postal Service itself could perform, of the factors that drive these costs and have caused them to rise so much in the past decade.

However, my method is far better than that proposed by Degen, in that I pay attention to the characteristics of each type of not handling, as defined by IOCS activity codes, and select the distribution key most appropriate for each type.

The key features of my approach are as follows:
(1) All not handling costs with activity codes linked to specific subclasses or special services are distributed to those subclasses and services. Examples include not handling costs specifically linked to Express Mail, Registry, Special Delivery, P.O. Boxes and Money Orders.
(2) All not handling costs related to window service and administration/support activities are distributed the way such costs have traditionally been distributed within cost segments 3.2 and 3.3. While I reassign these costs from mail processing to segments 3.2 and 3.3 , the important issue is not which segment the
costs are listed under but how they are distributed.
(3) In order to avoid the severe distortions caused by Degen's pool-by-pool approach, I distribute most remaining not handling costs within facility type, CAG and basic function, with the exception that for some categories (e.g. breaks) basic function is not available.
(4) I develop shape specific distribution keys to distribute the shape specific not handling costs (i.e., those with activity codes 5610-5700).
(5) Not handling costs are distributed to special services as well as subclasses, with the exception of costs related to specific shapes or empty equipment.
(6) I use only volume variable costs to perform all distributions.

Exhibit 1 shows my resulting distribution of mail processing costs. Appendix B describes my proposed distribution of the window service and administration/support costs that Degen misclassifies as mail processing costs.

## VII. CONCLUSIONS

The Postal Service deserves credit for addressing the question of volume variability in mail processing and challenging the long held but not credible assumption of $100 \%$ variability. It also deserves credit for making available MODS data that, despite many flaws, at least offer the potential for better insight in the factors that drive mail processing costs.

However, as I have demonstrated, the Postal Service has severely misinterpreted these data in its attempt to use them for cost distribution. Witness Degen's cost distribution approach is based on unverified, unreasonable and in some cases clearly erroneous assumptions. The many serious flaws in his methodology include:
(1) his implementation of a poorly designed and fundamentally biased scheme for capturing mixed mail costs, which both the Commission and the Postal Service itself refused, for good reasons, to rely on in Docket No. R94-1 and which Degen makes worse still by applying it within individual pools;
(2) his insistence on distributing costs within pools, without regard to evident cost relationships that exist across pools; and
(3) his ignoring all information, much of it relevant and important, that is available in IOCS regarding the characteristics of different types of not handling costs.

Degen has not examined the causes of rising not handling costs. On the contrary, he
has taken a step backward by ignoring what little relevant information is available about these costs. Nor has he addressed any of the questions raised by Periodicals mailers who have seen their costs rise much faster than postal wages despite all their efforts to help reduce those costs. Instead, his method uncritically assumes the legitimacy of past large cost increases and then proposes to raise Periodicals costs even further.

If the Postal Service, at long last, would take Periodicals mailers' concerns about rising costs seriously and launch a real investigation into why those costs have risen so much, the results might benefit more than just Periodicals mailers, by revealing the large inefficiencies in today's postal system and suggesting ways to use postal employees' time more efficiently. Instead, the Postal Service has chosen an approach that loads even more costs onto the least automated mail, thereby avoiding unpleasant questions about the efficiency of its management of its workforce and supporting its exaggerated claims of automation savings.

In addition to pointing out the failings in Degen's methodology, I have outlined a different approach to mail processing cost distribution, which is described in further detail in Appendices A and B. The alternative I propose is not ideal. A completely satisfactory method would require much more and better information about why postal managers assign people to different positions at different times, and about the true composition of mixed mail, information which only the Postal Service is in a position to collect. My proposed method is far better than Degen's, however, because I have avoided reliance on unverified assumptions and at the same time made use of important information that Degen simply ignored.

As I have demonstrated, the evidence provided by the Postal Service to link most mixed mail and not handling costs to specific subclasses and services in this docket is so weak that it raises serious doubts whether any basis exists for attributing even the volume variable portion of these costs. In particular, little is known about what really causes the $\$ 3,727$ million accrued ( $\$ 2,733$ million volume variable) costs referred to above as general overhead not handling costs. All that can be said with certainty about these costs is that they grew anomalously during the past ten years when the automation
program was being implemented. The Commission should seriously consider treating these costs as institutional until the Postal Service provides more reliable information about what causes them.

If, however, it decides that all volume variable mail processing costs should be attributed, then I urge the Commission to use my alternative approach to attribute Segment 3 costs.

EXHIBITS 1-6

## ALTERNATIVE ATTRIBUTION OF MAIL PROCESSING COSTS

Table 1-1 on the following page shows the attribution of mail processing costs that I propose to replace Degen's method. The tables on subsequent pages show my attribution, compared with Degen's, for costs incurred respectively in MODS offices, NonMODS offices and BMC's. Total attribution is less than Degen's because I propose to classify some costs as window service and administration/support costs (Segments 3.2 and 3.3). My proposed attribution of window service and administration/support costs is described in Appendix B.

| Table 1-1: Attributed Mail | Degen | All Offices | $\frac{\text { Difference }}{}$ |
| :---: | :---: | :---: | :---: |
| First-Class: |  |  |  |
| Letters and Parcels | 4,651,743 | 4,705,316 | 53,573 |
| Presort Letters and Parcels | 1,063,109 | 1,004,595 | $(58,514)$ |
| Postal Cards | 3,214 | 3,114 | (100) |
| Private Mailing Cards | 136,725 | 150,608 | 13,883 |
| Presort Cards | 36,425 | 45,625 | 9,200 |
| Total First Class | 5,891,215 | 5,909,257 | 18,041 |
| Priority Mail | 477,897 | 319,010 | $(158,887)$ |
| Express Mail | 84,168 | 53,669 | $(30,499)$ |
| Mailgrams | 74 | 108 | 34 |
| Periodicals: |  |  |  |
| Within County | 15,159 | 13,582 | $(1,577)$ |
| Regular Rate Publications | 461,712 | 368,436 | $(93,276)$ |
| Nonprofit Publications | 80,740 | 67,815 | $(12,925)$ |
| Classroom Publications | 5,684 | 3,752 | $(1,932)$ |
| Total Perodicals | 563,295 | 453,585 | (109,710) |
| Standard A: |  |  |  |
| Single Piece Rate | 78,662 | 76,331 | $(2,331)$ |
| Regular Enhanced Car. Rte. | 266,254 | 214,768 | $(51,486)$ |
| Regular Other | 1,545,319 | 1,414,263 | $(131,056)$ |
| Total Bulk Regular | 1,811,573 | 1,629,031 | $(182,542)$ |
| Nonprofit Enhanced Car. Rte. | 28,946 | 22,262 | $(6,684)$ |
| Nonprofit Other | 367,511 | 351,599 | $(15,912)$ |
| Total Bulk Nonprofit | 396,457 | 373,862 | $(22,596)$ |
| Total Standard A | 2,286,692 | 2,079,223 | $(207,469)$ |
| Standard B: |  |  |  |
| Parcels Zone Rate | 159,880 | 126,123 | $(33,757)$ |
| Bound Printed Matter | 74,506 | 65,574 | $(8,932)$ |
| Special Standard | 68,491 | 69,568 | 1,077 |
| Library Mail | 16,350 | 15,483 | (866) |
| Total Standard B | 319,227 | 276,748 | $(42,478)$ |
| Penalty - U. S.P.S. | 77,658 | 79,290 | 1,631 |
| Free Mail | 10,100 | 8,563 | $(1,536)$ |
| International Mail | 209,017 | 197,785 | $(11,232)$ |
| Total All Mail | 9,919,344 | 9,377,239 | $(542,105)$ |
| Special Services: |  |  |  |
| Registry | 42,163 | 66,952 | 24,789 |
| Certified | 18,473 | 22,932 | 4,459 |
| Insurance | 771 | 925 | 154 |
| COD | 1,815 | 2,378 | 563 |
| Special Delivery | 243 | 1,847 | 1,605 |
| Special Handling | 200 | 274 | 75 |
| Other | 76,063 | 88,212 | 12,149 |
| Total Special Services | 139,728 | 183,521 | 43,793 |
| Total Volume Variable | 10,059,072 | 9,560,760 | (4.98,312) |


| Table 1-2: Attributed Mail Processing Costs - MODS (\$1,000's) |  |  |  |
| :---: | :---: | :---: | :---: |
| Subclass | Degen | Stralberg | Difference |
| First-Class: |  |  |  |
| Letters and Parcels | 3,853,315 | 3,890,026 | 36,711 |
| Presort Letters and Parcels | 847,751 | 787,825 | $(59,926)$ |
| Postal Cards | 2,279 | 2,177 | (101) |
| Private Mailing Cards | 111,759 | 124,063 | 12,304 |
| Presort Cards | 28,718 | 37,292 | 8,574 |
| Total First Class | 4,843,822 | 4,841,384 | $(2,438)$ |
| Priority Mail | 410,462 | 255,199 | $(155,263)$ |
| Express Mail | 63,591 | 40,391 | $(23,200)$ |
| Mailgrams | 74 | 108 | 34 |
| Periodicals: |  |  |  |
| Within County | 10,018 | 8,492 | $(1,526)$ |
| Regular Rate Publications | 354,199 | 272,147 | $(82,052)$ |
| Nonprofit Publications | 62,875 | 50,460 | $(12,415)$ |
| Classroom Publications | 3,459 | 2,092 | $(1,367)$ |
| Total Perodicals | 430,551 | 333,191 | $(97,360)$ |
| Standard A: |  |  |  |
| Single Piece Rate | 54,294 | 52,031 | $(2,263)$ |
| Regular Enhanced Car. Rte. | 169,041 | 133,672 | $(35,369)$ |
| Regular Other | 1,106,751 | 983,411 | $(123,340)$ |
| Total Bulk Regular | 1,275,792 | 1,117,084 | $(158,708)$ |
| Nonprofit Enhanced Car. Rte. | 19,716 | 15,464 | $(4,252)$ |
| Nonprofit Other | 287,179 | 269,902 | $(17,277)$ |
| Total Bulk Nonprofit | 306,895 | 285,366 | $(21,529)$ |
| Total Standard A | 1,636,981 | 1,454,481 | $(182,500)$ |
| Standard B: |  |  |  |
| Parcels Zone Rate | 64,010 | 36,783 | $(27,227)$ |
| Bound Printed Matter | 28,846 | 18,998 | $(9,848)$ |
| Special Standard | 21,379 | 15,488 | $(5,891)$ |
| Library Mail | 6,157 | 4,280 | $(1,877)$ |
| Total Standard B | 120,392 | 75,550 | $(44,842)$ |
| Penalty-U. S.P.S. | 56,303 | 58,562 | 2,259 |
| Free Mail | 7,400 | 5,520 | $(1,880)$ |
| International Mail | 173,427 | 162,633 | $(10,794)$ |
| Total All Mail | 7,743,003 | 7,227,019 | $(515,984)$ |
| Special Services: |  |  |  |
| Registry | 27,011 | 39,174 | 12,163 |
| Certified | 5,684 | 7,149 | 1,464 |
| Insurance | 133 | 298 | 165 |
| COD | 508 | 726 | 219 |
| Special Delivery | 243 | 1,304 | 1,061 |
| Special Handling | 85 | 122 | 37 |
| Other | 47,113 | 57,094 | 9,981 |
| Total Special Services | 80,776 | 105,867 | 25,091 |
| Total Volume Variable | 7,823,779 | 7,332,885 | $(490,894)$ |


| Subclass | Degen | Stralberg | Difference |
| :---: | :---: | :---: | :---: |
| First-Class: |  |  |  |
| Letters and Parcels | 794,125 | 808,605 | 14,480 |
| Presort Letters and Parcels | 214,435 | 215,522 | 1,087 |
| Postal Cards | 935 | 936 | 1 |
| Private Mailing Cards | 24,847 | 26,376 | 1,529 |
| Presort Cards | 7,707 | 8,282 | 575 |
| Total First Class | 1,042,049 | 1,059,721 | 17,672 |
| Priority Mail | 65,920 | 61,803 | $(4,117)$ |
| Express Mail | 20,558 | 13,098 | $(7,460)$ |
| Mailgrams | 0 | 0 | 0 |
| Periodicals: |  |  |  |
| Within County | 5,045 | 4,991 | (54) |
| Regular Rate Publications | 91,108 | 83,430 | $(7,678)$ |
| Nonprofit Publications | 14,266 | 14,354 | 88 |
| Classroom Publications | 1,311 | 1,148 | (163) |
| Total Perodicals | 111,730 | 103,924 | $(7,806)$ |
| Standard A: |  |  |  |
| Single Piece Rate | 12,912 | 12,463 | (449) |
| Regular Enhanced Car. Rte. | 80,272 | 66,687 | $(13,585)$ |
| Regular Other | 299,550 | 295,561 | $(3,989)$ |
| Total Bulk Regular | 379,822 | 362,249 | $(17,573)$ |
| Nonprofit Enhanced Car. Rte. | 7,710 | 5,518 | $(2,192)$ |
| Nonprofit Other | 60,700 | 62,442 | 1,742 |
| Total Bulk Nonprofit | 68,410 | 67,961 | (449) |
| Total Standard A | 461,144 | 442,673 | (18,471) |
| Standard B: |  |  |  |
| Parcels Zone Rate | 19,634 | 16,375 | $(3,259)$ |
| Bound Printed Matter | 12,908 | 11,320 | $(1,588)$ |
| Special Standard | 8,471 | 8,580 | 109 |
| Library Mail | 1,758 | 1,587 | (171) |
| Total Standard B | 42,771 | 37,862 | $(4,909)$ |
| Penalty - U. S.P.S. | 17,070 | 16,861 | (209) |
| Free Mail | 726 | 768 | 42 |
| International Mail | 6,461 | 6,221 | (240) |
| Total All Mail | 1,768,429 | 1,742,930 | $(25,499)$ |
| Special Services: |  |  |  |
| Registry | 14,973 | 27,212 | 12,239 |
| Certified | 12,789 | 15,752 | 2,963 |
| Insurance | 630 | 605 | (25) |
| COD | 1,307 | 1,650 | 343 |
| Special Delivery | 0 | 537 | 537 |
| Special Handling | 115 | 152 | 37 |
| Other | 28,806 | 30,826 | 2,020 |
| Total Special Services | 58,620 | 76,734 | 18,114 |
| Total Volume Variable | 1,827,049 | 1,819,664 | $(7,385)$ |

Exhibit 1, P. 5 of 5

| Subclass | Degen | Stralberg | Difference |
| :---: | :---: | :---: | :---: |
| First-Class: |  |  |  |
| Letters and Parcels | 4,303 | 6,684 | 2,381 |
| Presort Letters and Parcels | 923 | 1,248 | 325 |
| Postal Cards | 0 | 0 | 0 |
| Private Mailing Cards | 119 | 169 | 50 |
| Presort Cards | 0 | 50 | 50 |
| Total First Class | 5,344 | 8,152 | 2,807 |
| Priority Mail | 1,515 | 2,009 | 493 |
| Express Mail | 19 | 180 | 161 |
| Mailgrams | 0 | 0 | 0 |
| Periodicals: |  |  |  |
| Within County | 96 | 99 | 3 |
| Regular Rate Publications | 16,405 | 12,859 | $(3,546)$ |
| Nonprofit Publications | 3,599 | 3,001 | (598) |
| Classroom Publications | 914 | 512 | (403) |
| Total Perodicals | 21,015 | 16,471 | $(4,544)$ |
| Standard A: |  |  |  |
| Single Piece Rate | 11,456 | 11,837 | 381 |
| Regular Enhanced Car. Rte. | 16,941 | 14,408 | $(2,533)$ |
| Regular Other | 139,018 | 135,290 | $(3,728)$ |
| Total Bulk Regular | 155,959 | 149,698 | $(6,261)$ |
| Nonprofit Enhanced Car. Rte. | 1,520 | 1,280 | (240) |
| Nonprofit Other | 19,632 | 19,255 | (377) |
| Total Bulk Nonprofit | 21,152 | 20,535 | (618) |
| Total Standard A | 188,567 | 182,070 | $(6,497)$ |
| Standard B: |  |  |  |
| Parcels Zone Rate | 76,236 | 72,965 | $(3,271)$ |
| Bound Printed Matter | 32,752 | 35,256 | 2,504 |
| Special Standard | 38,641 | 45,500 | 6,859 |
| Library Mail | 8,435 | 9,617 | 1,182 |
| Total Standard B | 156,064 | 163,337 | 7,273 |
| Penalty - U. S.P.S. | 4,285 | 3,866 | (419) |
| Free Mail | 1,973 | 2,275 | 302 |
| Intemational Mail | 29,129 | 28,931 | (198) |
| Total All Mail | 407,912 | 407,290 | (622) |
| Special Services: |  |  |  |
| Registry | 179 | 566 | 387 |
| Certified | 0 | 32 | 32 |
| Insurance | 9 | 23 | 14 |
| COD | 0 | 1 | 1 |
| Special Delivery | 0 | 6 | 6 |
| Special Handling | 0 | 1 | 1 |
| Other | 144 | 292 | 148 |
| Total Special Services | 332 | 921 | 589 |
| Total Volume Variable | 408,244 | 408,211 | (33) |


| Table 2-1: Modified Attribution Of BY96 Segment 3 Costs (\$1,000's) ${ }^{\text {1 }}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 3.1 Mail Processing | 3.2 Window | 3.3 Admin./ | Total Serment 3 |
| First-Class: |  |  |  |  |
| Letters \& Parcels | 4.824.580 | 515.633 | 482.452 | 5.822 .665 |
| Presort Letters \& Parcels | 1.022.013 | 22.798 | 143.598 | 1,188,409 |
| Single Piece Cards | 157.814 | 33.190 | 19.016 | 210.020 |
| Presort Cards | 47.363 | 792 | 5,362 | 53.518 |
| Total First Class | 6.051 .771 | 572.412 | 650.429 | 7,274.612 |
| Priority Mail | 317.269 | 42.667 | 29.499 | 389.435 |
| Express Mail | 53.623 | 23.797 | 52.807 | 130.227 |
| Mailgrams | 114 |  | 17 | 130 |
| Periodicals: |  |  |  |  |
| Within County | 13,630 | 473 | 2.747 | 16.849 |
| Regular Rate Publications | 374.072 | 2,260 | 41.143 | 417.474 |
| Nonprofit Publications | 69.132 | 243 | 10.207 | 79.582 |
| Classroom Publications | 3.822 | 9 | 387 | 4.208 |
| Total Perodicals | 460.656 | 2.975 | 54.483 | 518.115 |
| Standard A: | 73726 | 2481 | 6582 | 82790 |
| Regular Enhanced Car. Rte. | 205.602 | 5.953 | 67.013 | 278.568 |
| Regular Other | 1.360.059 | 23.106 | 151.132 | 1.534.297 |
| Total Bulk Regular | 1.565.661 | 29.059 | 218.145 | 1.812.865 |
| Nonorofit Enhanced Car. Rte. | 21.255 | 988 | 5.246 | 27.481 |
| Nonprofit Other | 338.336 | 8.409 | 37.583 | 384.327 |
| Total Bulk Nonprofit | 359.590 | 2.389 | 42.828 | 411.808 |
| Total Standard A | 1.998 .978 | 40.930 | 267.555 | 2.307 .463 |
| Standard B: |  |  |  |  |
| Parcels Zone Rate | 122.377 | 7.746 | 12.225 | 142.348 |
| Bound Printed Matter | 63.641 | 641 | 7.330 | 71.612 |
| Special Standard | 68.161 | 3.296 | 6.082 | 77.549 |
| Library Mail | 15.091 | 102 | 1.170 | 16.363 |
| Total Standard B | 269,270 | 11.786 | 26.807 | 307.86 |
| Penaltv - U. S.P.S. | 103.62 d | 14.202 | 10.156 | 127.97 |
| Free Mail | 8.926 | 187 | 744 | 9.85 |
| International Mail | 209.994 | 24.648 | 21.895 | 256.53 |
| Total All Mail | 9.474.221 | 733.603 | 1.114 .392 | 11.322 .216 |
| Soecial Services: |  |  |  |  |
| Registry | 31.606 | 12.087 | 4.903 | 48.596 |
| Certified | 23.209 | 39.092 | 11.452 | 73.75 |
| Insurance | 937 | 11,938 | 851 | 13.725 |
| COD | 2.406 | 3.669 | 878 | 6.95 |
| Special Delivery | 49 | 153 | 110 | 312 |
| Money Orders | 0 | 82.983 | 4.139 | 87.123 |
| Stamped Envelopes | 7 | 1.361 | 67 | 1.428 |
| Special Handling | 277 | 548 | 41 | 86 |
| Post office box |  | 69.153 | 7,163 | 76.31 |
| Other | 88.878 | 10.208 | 10.265 | 109.35 |
| Total Special Services | 147.362 | 231.193 | 39.870 | 418.425 |
| Total Volume Variable | 2.621 .583 | 964.796 | 1.154 .262 | 11740.64 |
| Other | 2.805.963 | - 1.059 .160 | 850.338 | 4,715.46 |
| Total Accrued Costs | 12,427,547 | 2,023,956 | 2,004,601 | 16,456,10 |

[^17]|  | $\begin{aligned} & \text { USPS } \\ & \text { Proposal } \end{aligned}$ | Stralberg | Difference |
| :---: | :---: | :---: | :---: |
| First-Class: |  |  |  |
| Letters \& Parcels | 5,566,303 | 5,822,665 | 256,362 |
| Presort Letters \& Parcels | 1,194,689 | 1,188,409 | $(6,280)$ |
| Single Piece Cards | 183,379 | 210,020 | 26,641 |
| Presort Cards | 41,349 | 53,518 | 12,169 |
| Total First Class | 6,985,720 | 7,274,612 | 288.892 |
| Priority Mail | 540,853 | 389.435 | (151.418) |
| Express Mail | 112,436 | 130,227 | 17,791 |
| Mailgrams | 88 | 130 | 42 |
| Periodicals: |  |  |  |
| Within County | 17,388 | 16,849 | (539) |
| Regular Rate Publications | 496,960 | 417,474 | $(79,486)$ |
| Nonprofit Publications | 88,934 | 79,582 | $(9,352)$ |
| Classroom Publications | 6,005 | 4,209 | $(1,796)$ |
| Total Perodicals | 609.287 | 518,115 | ( 91,172$)$ |
| Standard A: |  |  |  |
| Single Piece Rate | 82,069 | 82,790 | 721 |
| Regular Enhanced Car. Rte. | 305,921 | 278.568 | (27.353) |
| Regular Other | 1,605,824 | 1,534,297 | $(71,527)$ |
| Total Bulk Regular | 1,911,745 | 1,812,865 | $(98,880)$ |
| Nonprofit Enhanced Car. Rte. | 32.442 | 27,481 | (4,961) |
| Nonprofit Other | 385,597 | 384,327 | $(1,270)$ |
| Total Bulk Nonprofit | 418,039 | 411,808 | (6,231) |
| Total Standard A | 2.411.853 | 2,307,463 | (104.390) |
| Standard B: |  |  |  |
| Parcels Zone Rate | 168,661 | 142,348 | $(26,313)$ |
| Bound Printed Matter | 76,322 | 71,612 | $(4,710)$ |
| Special Standard | 72,257 | 77,540 | 5,283 |
| Library Mail | 16,453 | 16,363 | (90) |
| Total Standard B | 333,693 | 307,863 | $(25,830)$ |
| Penalty - U. S.P.S. | 112,772 | 127.977 | 15,205 |
| Free Mail | 11,042 | 9,857 | $(1,185)$ |
| International Mail | 252,743 | 256,537 | 3,794 |
| Total All Mail | 11.370 .487 | 11.322.216 | (48.271) |
| Special Services: |  |  |  |
| Registry | 31,718 | 48,596 | 16,878 |
| Certified | 63,305 | 73,754 | 10,449 |
| Insurance | 12,818 | 13,725 | 907 |
| COD | 5,968 | 6,953 | 985 |
| Special Delivery | 216 | 312 | 96 |
| Money Orders | 82,277 | 87,123 | 4,846 |
| Stamped Envelopes | 1,341 | 1,428 | 87 |
| Special Handling | 754 | 867 | 113 |
| Post office box | 65,299 | 76,317 | 11,018 |
| Other | 89,524 | 109,351 | 19,827 |
| Total Special Services | 353,220 | 418,425 | 65,205 |
| Total Volume Variable | 11.723 .707 | 11.740,641 | 16.934 |
| Other | 4.732.392 | 4,715,462 | (16.930) |
| Total Costs | 16.456.099 | 16.456.103 | 4 |

2 Table 4-1 shows the volume variable BY96 costs associated with respectively direct (identical), counted mixed, uncounted mixed and empty items, for each item type. Tables 4-2 through 4-4 on the subsequent pages show the corresponding information for, respectively, MODS offices, NonMODS offices and BMC's. The tables separate top-piece-rule and non-top-piece-rule items. The direct costs shown for top-piece-rule items include all top-piece-rule tallies. None of these items were counted. In total, there were $\$ 41.537$ million in counted item costs and $\$ 66.012$ million in uncounted mixed item costs, i.e. $38.6 \%$ of eligible items were counted.

The estimates of counted item costs are from datasets TW28emdr, TW28enmr and TW28ebmr, provided by Degen in USPS LR-H-296. Other estimates are from the data sources described in Appendix A.

| Table 4-1: Volume Variable Item Costs - All Offices (\$1,000's) |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Item | Direct | Mixed |  | Total | Empty |
|  |  |  | Counted | Uncounted | Non-Empty |


\left.| Table 4-2: Volume Variable Item Costs - MODS (\$1,000's |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | Direct | Mixed |  | Total | Empty |
|  |  |  | Counted | Uncounted | Non-Empty |$\right)$


| $\begin{aligned} & \text { tem } \\ & \text { Type } \\ & \hline \end{aligned}$ | Direct | Mixed |  | Total | Empty |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Counted | Uncounted | Non-Empty |  |
| Top Piece Rule: |  |  |  |  |  |
| BUNDLE | 128,635 | N.A. | 653 | 129,287 | N.A. |
| TRAY-FT | 12,033 | N.A. | 430 | 12,463 | 6,752 |
| TRAY-LT | 25,341 | N.A. | 854 | 26,195 | 12,459 |
| Total Top Piece Rule | 166,009 | N.A. | 1,936 | 167,945 | 19,211 |
| Non-Top Piece Rule: |  |  |  |  |  |
| CON-CON | 68 | 76 | 88 | 232 | 911 |
| TRAY-P. | 44 | 88 | 0 | 132 | 105 |
| Pallet | 823 | 194 | 71 | 1,087 | 855 |
| OTHITEM | 802 | 403 | 1,109 | 2,315 | 1,420 |
| SCK-BL\&O | 367 | 490 | 0 | 857 | 88 |
| SCK-GREN | 38 | 274 | 269 | 580 | 1,261 |
| SCK-OR\&Y | 233 | 905 | 280 | 1,419 | 590 |
| SCK-BRWN | 1,368 | 275 | 0 | 1,643 | 1,224 |
| SCK-WH\#1 | 329 | 497 | 427 | 1,253 | 1,580 |
| SCK-WH\#2 | 292 | 905 | 985 | 2,181 | 2,034 |
| SCK-WH\#3 | 1,780 | 397 | 105 | 2,283 | 2,171 |
| SCK-OTHR | 241 | 0 | 269 | 509 | 949 |
| SCK-INTL | 0 | 0 | 0 | 0 | 0 |
| Total Non-Top Piece Rule | 6,384 | 4,504 | 3,603 | 14,491 | 13,188 |
| Total All Items | 172,393 | 4,504 | 5,540 | 182,436 | 32,399 |


| Item | Direct |  | xed | Total | Empty |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Type |  | Counted | Uncounted | Non-Empty |  |
| Top Piece Rule: |  |  |  |  |  |
| BUNDLE | 13,326 | N.A. | 1,037 | 14,363 | N.A. |
| TRAY-FT | 1,281 | N.A. | 349 | 1,630 | 666 |
| TRAY-LT | 5,302 | N.A. | 347 | 5,649 | 433 |
| Total Top Piece Rule | 19,909 | N.A. | 1,733 | 21,642 | 1,099 |
| Non-Top Piece Rule: CON-CON | 0 | 0 | 61 | 61 | 0 |
| TRAY-P. | 111 | 26 | 87 | 224 | 120 |
| Pallet | 3,088 | 711 | 835 | 4,634 | 2,540 |
| OTHITEM | 107 | 118 | 286 | 510 | 520 |
| SCK-BL\&O | 0 | 0 | 0 | 0 | 0 |
| SCK-GREN | 35 | 57 | 62 | 154 | 0 |
| SCK-OR\&Y | 8 | 95 | 0 | 103 | 32 |
| SCK-BRWN | 1,527 | 186 | 274 | 1,987 | 372 |
| SCK-WH\#1 | 2,285 | 3,743 | 1,276 | 7,304 | 5,533 |
| SCK-WH\#2 | 3,184 | 1,444 | 1,737 | 6,365 | 2,326 |
| SCK-WH\#3 | 8,404 | 1,053 | 878 | 10,336 | 1,329 |
| SCK-OTHR | 1,143 | 800 | 963 | 2,907 | 145 |
| SCK-INTL | 223 | 726 | 0 | 949 | 12 |
| Total Non-Top Piece Rule | 20,115 | 8,959 | 6,458 | 35,533 | 12,929 |
| Total All Items | 40,024 | 8,959 | 8,191 | 57,175 | 14,028 |

2 Tables 5-1 through 5-3 show the volume variable BY96 costs associated with, respectively, direct (identical) and counted mixed non-top-piece-rule item costs broken down by major class category. The estimates of counted item costs are from datasets TW28emdr, TW28enmr and TW28ebmr, provided by Degen in USPS LR-H-296. There is a small discrepancy in the estimated relative amounts of direct and counted item costs between the tables below and those shown in Exhibit 4, due to a discrepancy in the counted item data provided by Degen. ${ }^{1}$ However, this discrepancy does not affect the method I propose for distributing mixed mail costs in this docket.

| Table 5-1: Direct \& Counted Item Costs In MODS Offices <br> (Volume Variable Costs - Non-Top Piece Rule Items) |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
| Subclass | Counted |  | Direct |  |  |
|  | $\$ 1,000$ 's | Percent | $\$ 1,000$ 's | Percent |  |
| First | 5,347 | $18.70 \%$ | 2,661 | $9.46 \%$ |  |
| Periodicals | 3,744 | $13.09 \%$ | 8,638 | $30.72 \%$ |  |
| Standard A | 4,849 | $16.96 \%$ | 14,317 | $50.91 \%$ |  |
| Standard B | 1,213 | $4.24 \%$ | 714 | $2.54 \%$ |  |
| Priority | 7,946 | $27.79 \%$ | 1,242 | $4.42 \%$ |  |
| Express | 1,856 | $6.49 \%$ | 584 | $2.08 \%$ |  |
| Other | 3,638 | $12.72 \%$ | $(36)$ | $-0.13 \%$ |  |
| Total | 28,594 | $100.00 \%$ | 28,119 | $100.00 \%$ |  |

[^18]| Subclass | Counted |  | Direct: |  |
| :---: | :---: | :---: | :---: | :---: |
|  | \$1,000's | Percent | \$1,000's | Percent |
| First | 867 | 19.25\% | 284 | 4.45\% |
| Periodicals: | 680 | 15.11\% | 1,578 | 24.71\% |
| Standard A: | 926 | 20.56\% | 3,882 | 60.80\% |
| Standard B: | 451 | 10.02\% | (0) | -0.00\% |
| Priority | 1,211 | 26.89\% | 350 | $5.48 \%$ |
| Express | 364 | 8.07\% | 291 | 4.56\% |
| Other | 5 | 0.10\% | 0 | $0.00 \%$ |
| Total | 4,504 | 100.00\% | 6,384 | $100.00 \%$ |


| Table 5-3: Direct \& Counted Item Costs In BMC's (Volume Variable Costs - Non-Top Piece Rule Items) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Subclass | Counted |  | Direct |  |
|  | \$1,000's | Percent | \$1,000's | Percent |
| First | 46 | 0.51\% | 69 | 0.34\% |
| Periodicals | 704 | 7.86\% | 3,915 | 19.46\% |
| Standard A | 2,745 | 30.63\% | 12,588 | 62.58\% |
| Standard B | 3,460 | 38.62\% | 1,966 | 9.77\% |
| Priority | 0 | 0.00\% | 0 | 0.00\% |
| Express | 0 | 0.00\% | 0 | 0.00\% |
| Other | 2,004 | 22.37\% | 1,577 | 7.84\% |
| Total | 8,960 | 100.00\% | 20,115 | 100.00\% |

## COSTS OF LOOSE ITEMS AND ITEMS IN CONTAINERS AT MODS COST POOLS

Tables 6-1 and 6-2 on the following pages show how the direct costs of loose items and the costs of items-in-containers, respectively, are spread over MODS cost pools for different item types. Comparison of the two tables show clearly that loose items are mostly handled at operations different from those that predominantly handle containers with the same types of items in them. It is therefore inappropriate to distribute items-in-container costs based on direct item costs within cost pools.

Each table summarizes at the bottom the total handling costs per item type and the portion of those costs that are incurred at platforms and opening units, defined to include MODS cost pools Bulk PR, CancMPP, OpBulk, OpPref, Platfrm, Pouching, Sacks_H and Sacks_M. For each item type, the proportion of items-in-container costs incurred at platforms or opening units is significantly larger than the corresponding proportion for direct item costs. The last column in each table represents "other items," which here means all non-top-piece-rule items (sacks, pallets, parcel trays, etc.).

| Cost Pool | Cards | Letters | Flats | IPP's | Parcels | Bundles | $\begin{aligned} & \text { Flat } \\ & \text { Trays } \\ & \hline \end{aligned}$ | Letter Trays | Other Items |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bcs/ | 4,021 | 209,359 | 823 | 174 | 19 | 61,535 | 5,020 | 66,569 | 268 |
| Express | 28 | 360 | 6,962 | 231 | 1,432 | 310 | 0 | 97 | 1,000 |
| Fsm/ | 158 | 8,360 | 334,521 | 1,309 | 1,704 | 28,501 | 23,929 | 664 | 358 |
| Lsm/ | 20,747 | 374,633 | 2,556 | 369 | 171 | 36,527 | 1,338 | 22,184 | 260 |
| Manf | 252 | 10,886 | 204,992 | 1,547 | 3,651 | 26,280 | 7,228 | 637 | 711 |
| Manl | 27,992 | 523,223 | 20,554 | 2,096 | 2,346 | 82,899 | 2,758 | 24,021 | 471 |
| Manp | 23 | 576 | 1,430 | 1,258 | 4,624 | 640 | 63 | 264 | 362 |
| Mecparc | 55 | 235 | 348 | 160 | 1,890 | 387 | 0 | 0 | 215 |
| Ocr/ | 1,207 | 58,324 | 675 | 92 | 100 | 17,693 | 1,423 | 18,282 | 93 |
| Priority | 28 | 1,067 | 12,737 | 2,621 | 20,249 | 509 | 70 | 325 | 2,448 |
| Spbs Oth | 91 | 1,173 | 4,075 | 6,243 | 3,405 | 13,944 | 519 | 256 | 1,843 |
| Spbsprio | 0 | 68 | 4,273 | 3,310 | 6,509 | 1,442 | 204 | 104 | 893 |
| Busreply | 389 | 3,248 | 630 | 104 | 215 | 1,381 | 116 | 167 | 49 |
| Intl | 747 | 16,961 | 5,045 | 1,183 | 4,419 | 2,887 | 602 | 1,656 | 2,288 |
| Ld15 | 5,673 | 124,721 | 1,426 | 0 | 0 | 28,565 | 1,763 | 34,268 | 0 |
| Ld41 | 0 | 4,764 | 28 | 0 | 0 | 1,183 | 39 | 710 | 31 |
| Ld42 | 19 | 308 | 450 | 0 | 24 | 75 | 14 | 60 | 0 |
| Ld43 | 2,229 | 72,130 | 41,874 | 6,421 | 20,342 | 24,099 | 5,840 | 7,770 | 1,855 |
| Ld44 | 736 | 37,851 | 11,759 | 733 | 1,321 | 5,806 | 4.81 | 873 | 170 |
| Ld48 Exp | 0 | 16 | 226 | 2 | 23 | 0 | 0 | 0 | 0 |
| Ld48 Oth | 123 | 2,003 | 533 | 76 | 324 | 554 | 180 | 201 | 59 |
| Ld48_Ssv | 53 | 1,409 | 741 | 99 | 213 | 361 | 53 | 80 | 0 |
| Ld49 | 9,156 | 69,095 | 28,505 | 1,059 | 2,187 | 2,736 | 950 | 2,418 | 41 |
| Ld79 | 291 | 3,268 | 797 | 44 | 330 | 3,645 | 201 | 2,209 | 1,861 |
| Mailgram | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| Registry | 44 | 405 | 203 | 32 | 79 | 158 | 0 | 30 | 159 |
| Rewrap | 109 | 2,184 | 361 | 3 | 462 | 57 | 0 | 169 | 0 |
| 1 Bulk Pr | 25 | 636 | 106 | 0 | 123 | 558 | 28 | 821 | 33 |
| 1 Cancmpp | 1,723 | 50,499 | 12,705 | 2,249 | 2,259 | 8,385 | 3,027 | 5,795 | 551 |
| 1 Eeqmt | , | 216 | 170 | 0 | 62 | 259 | 56 | 0 | 60 |
| 1 Misc | 137 | 4,469 | 1,421 | 207 | 803 | 1,225 | 376 | 1,439 | 283 |
| 1Opbulk | 338 | 10,661 | 10,392 | 2,431 | 2,282 | 31,589 | 2,968 | 8,965 | 3,790 |
| 1 Oppref | 524 | 31,811 | 26,630 | 16,478 | 12,879 | 34,113 | 6,523 | 26,660 | 7,417 |
| 1 Platfrm | 79 | 6,462 | 6,040 | 1,407 | 8,288 | 6,830 | 4,844 | 7,407 | 13,562 |
| 1 Pouchng | 785 | 13,955 | 13,754 | 10,269 | 7,254 | 16,419 | 7,510 | 23,845 | 5,299 |
| 1Sacks_H | 38 | 905 | 1,193 | 414 | 2,485 | 3,281 | 708 | 2,341 | 4,375 |
| 1Sacks_M | 0 | 64 | 544 | 61 | 1,002 | 365 | 475 | 910 | 4,253 |
| 1 Scan | 0 | 593 | 754 | 369 | 2,710 | 112 | 595 | 2,045 | 1,561 |
| 1 Support | 138 | 2,684 | 516 | 87 | 230 | 661 | 29 | 312 | 53 |
| Ld48_Adm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Support Oth. | 0 | 206 | 0 | 0 | 0 | 0 | 0 | 42 | 0 |
| Total | 77,957 | 1,649,789 | 760,750 | 63,138 | 116,415 | 445,969 | 79,928 | 264,595 | 56,713 |
| Platforms/ <br> Open. Units | 3.512 | 114.993 | 71,364 | 33,310 | 36,572 | 101,540 | 26,083 | 76,744 | 39,281 |
| Percent | 4.51\% | 6.97\% | 9.38\% | 52.76\% | 31.42\% | 22.77\% | 32.63\% | 29.00\% | 69.26\% |


| Cost Pool | Cards | Letters | Flats | IPP's | Parcels | Bundles | Flat <br> Trays | Letter <br> Trays | Other <br> Items |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bcs/ | 0 | 3,243 | 66 | 0 | 0 | 171 | 367 | 16,389 | 169 |
| Express | 0 | 21 | 116 | 42 | 69 | 0 | 28 | 61 | 501 |
| Fsm/ | 0 | 138 | 4,015 | 170 | 180 | 925 | 9,183 | 179 | 382 |
| Lsm/ | 265 | 1,448 | 149 | 66 | 0 | 336 | 196 | 3,807 | 147 |
| Manf | 1 | 123 | 5,339 | 239 | 168 | 1,314 | 5,318 | 503 | 340 |
| Manl | 22 | 1,357 | 520 | 65 | 8 | 864 | 1,394 | 7,740 | 454 |
| Manp | 1 | 22 | 66 | 252 | 592 | 74 | 93 | 111 | 278 |
| Mecparc | 0 | 55 | 0 | 52 | 55 | 55 | 0 | 0 | 231 |
| Ocr/ | 106 | 874 | 0 | 45 | 0 | 90 | 222 | 3,399 | 98 |
| Priority | 40 | 114 | 281 | 413 | 2,168 | 69 | 114 | 188 | 1,475 |
| Spbs Oth | 27 | 119 | 487 | 672 | 752 | 1,358 | 66 | 106 | 758 |
| Spbsprio | 0 | 3 | 204 | 748 | 1,177 | 168 | 150 | 105 | 927 |
| Busreply | 0 | 25 | 88 | 129 | 76 | 54 | 56 | 110 | 8 |
| Intl | 4 | 58 | 249 | 297 | 741 | 127 | 368 | 548 | 2,309 |
| Ld 15 | 0 | 1,881 | 0 | 0 | 0 | 0 | 0 | 15,211 | 0 |
| L-d41 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 404 | 0 |
| Ld42 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 38 | 0 |
| Ld43 | 81 | 1,596 | 1,363 | 624 | 2,291 | 717 | 2,689 | 5,111 | 1,047 |
| Ld44 | 6 | 48 | 110 | 81 | 28 | 0 | 187 | 305 | 2 |
| Ld48 Exp | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Id48 Oth | 1 | 34 | 19 | 4 | 49 | 23 | 162 | 222 | 6 |
| Ld48_Ssv | 2 | 29 | 16 | 0 | 17 | 6 | 31 | 20 | 14 |
| Ld49 | 0 | 293 | 280 | 0 | 0 | 43 | 348 | 1,030 | 0 |
| Ld79 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 537 | 285 |
| Mailgram | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Registry | 0 | 4 | 7 | 32 | 84 | 9 | 9 | 58 | 342 |
| Rewrap | 43 | 0 | 68 | 95 | 19 | 55 | 63 | 55 | 0 |
| 1 Bulk Pr | 0 | 0 | 8 | 0 | 0 | 34 | 60 | 381 | 18 |
| 1 Cancmpp | 212 | 4,625 | 1,244 | 612 | 270 | 83 | 1,055 | 2,455 | 614 |
| 1 Eeqmt | 0 | 5 | 56 | 121 | 68 | 0 | 165 | 266 | 865 |
| 1Misc | 63 | 269 | 251 | 108 | 32 | 413 | 577 | 1,387 | 125 |
| 10pbulk | 23 | 868 | 2,355 | 756 | 966 | 1,770 | 2,836 | 5,461 | 1,933 |
| 1 Oppref | 90 | 2,500 | 3,186 | 1,841 | 2,157 | 3,122 | 6,338 | 18,284 | 5,083 |
| 1 Platfrm | 215 | 3,736 | 3,650 | 3,263 | 13,307 | 5,446 | 17,261 | 27,143 | 22,013 |
| 1 Pouchng | 5 | 1,635 | 2,156 | 1,075 | 1,137 | 1,317 | 7,117 | 18,136 | 3,339 |
| 1Sacks_H | 0 | 292 | 400 | 259 | 1,615 | 560 | 1,507 | 2,605 | 3,618 |
| l Sacks_M | 0 | 169 | 122 | 63 | 255 | 189 | 389 | 825 | 899 |
| 1 Scan | 0 | 196 | 60 | 177 | 435 | 56 | 647 | 1,964 | 1,129 |
| 1 Support | 0 | 71 | 107 | 38 | 81 | 20 | 128 | 248 | 57 |
| Ld48_Adm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Support Oth. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1,206 | 25,938 | 27,050 | 12,339 | 28,796 | 19,481 | 59,124 | 135,391 | 49,464 |
| Platforms/ Open. Units | 544 | 13,825 | 13,122 | 7,868 | 19,706 | 12,521 | 36,563 | 75,291 | 37,517 |
| Percent | 45.11\% | 53.30\% | 48.51\% | 63.77\% | 68.43\% | 64.28\% | 61.84\% | 55.61\% | 75.85\% |

## APPENDIX A: DATA SOURCES AND METHODOLOGY

This appendix explains in detail the methodology used to develop the alternative mail processing cost distribution presented in Exhibit 1. Section 1 explains how I extracted from the IOCS data base the information needed to develop an alternative distribution method, as well as various exhibits presented with this testimony. Section 2 describes various spreadsheets used to perform my calculations. Section 3 describes how IOCS tally costs are translated to corresponding volume variable costs in my methodology. Section 4 describes my use of CAG and basic function to disaggregate mail processing costs. Section 5 describes the methodology I propose be used in this docket for distributing mixed mail and not handling mail processing costs. Section 6 describes some further adjustments I applied to the distributed mail processing costs, similar to the adjustments in witness Alexandrovich's workpapers. My proposed treatment of not handling costs associated with window service and administration/support activities is described in Appendix B.

## 1. SAS Programs Used To Access The IOCS Data Base

I started with a series of SAS runs, documented in MPA LR-H-1. The library reference contains the SAS program listings, LOG files and resulting ASCII output for each program. There are a total of 15 programs and 15 output files, five for each of the three facility types. They are named $x$ CAGBFy, where $x$ is either $B, M$ or $N$, representing BMC's, MODS offices and NonMODS offices respectively, and $y$ is one of the letters D, $\mathrm{M}, \mathrm{E}, \mathrm{P}$ or N , denoting respectively (1) direct tallies; (2) mixed mail and empty item tallies; (3) empty item tallies only; (4) unidentified container tallies; and (5) not handling tallies. The contents of each file type are described below. Each file consists of lines representing all encountered combinations of the relevant variables along with the IOCS tally costs for each such combination.

Direct Costs. Files $\times$ CAGBFD.txt contain entries representing all direct costs classified as mail processing costs by Degen, including costs of top piece rule items and counted items. Each line represents a unique combination of the following variables: (1) CAG; (2) basic function; (3) cost pool; (4) subclass or special service; and (5) Type, where Type can be any of the following:
(1) unspecified;
(2) a specific shape (card, letter, flat, IPP or parcel);
(3) an item type as defined in USPS LR-H-49 (bundle, one of three tray types, one of ten sack types, pallet, or other item); or
(4) a container type as defined at page 91 in USPS LR-H-49.

The subclass codes include mixed mail codes 5300-5345, resulting from some counted items.

Mixed Mail Costs. Files xCAGBFM.txt include costs of all mixed uncounted items, empty items, and identified mixed mail containers. Each line represents a combination of: (1) CAG; (2) basic function; (3) cost pool; (4) activity code; (5) Handling; and (6) Type, where the variable Type is always either a shape or item type and Handling is a container type for mixed mail container entries and equivalent to Type for items not in containers.

Empty Item Costs. Files $x$ CAGBFE.txt are subsets of the corresponding $x$ CAGBFM.txt files, containing only entries representing empty item costs.

Unidentified Container Costs. Files xCAGBFP.txt contain the costs of unidentified containers. Each line is a unique combination of: (1) CAG; (2) basic function; (3) cost pool; (4) activity code; and (5) container type.

Not Handling Costs. Files xCAGBFN.txt contain all costs defined by Degen as mail processing not handling costs, including some costs traditionally classified as window service and administrative costs. Each line is a unique combination of: (1) CAG; (2) basic function; (3) cost pool; and (4) activity code.

## 2. Spreadsheets

Data from the SAS outputs described above were imported into spreadsheets in order to be able to perform operations on individual entries. The following five spreadsheets were used to develop the alternative distribution of Segment 3 costs described in Exhibits 1-3:
(1) MODS computes the direct costs per subclass and distributes mixed mail and not handling costs for MODS offices.
(2) MODSMX computes and tabulates mixed mail costs in MODS offices.
(3) MODSNH computes all not handling costs in MODS offices and tabulates those
that will be distributed as mail processing, window service and administrative costs respectively. It also performs my proposed distribution of sub-segments 3.2 and 3.3 as well as total Segment 3 costs.
(4) NonMODS performs all necessary computations for NonMODS offices.
(5) BMC performs all necessary computations for BMC's.

Additionally, spreadsheet COUNTED was used to develop the information relating to counted items in Exhibits 4 and 5.

My spreadsheets are included in Library Reference TW LR-H-1. My analysis was performed using Quattro for Windows version 5 spreadsheets. To facilitate their use, the library reference also includes Excel versions of each spreadsheet.

## 3. IOCS Tally Costs And Volume Variable Costs

My calculations start by computing, for each cost combination produced by the SAS programs described above, the volume variable costs corresponding to the tally costs for the given combination. Volume variable costs are computed by multiplying the tally costs with the ratio of accrued costs to tally costs for the given cost pool and then applying the variability factors determined by witness Bradley for each pool. I use volume variable costs in all subsequent calculations. ${ }^{1}$

I distribute volume variable mixed mail and not handling costs across cost pools, rather than within costs pools, for reasons explained earlier in this testimony. It should be understood that even Degen distributes some costs across pools. ${ }^{2}$ However, his method uses IOCS tally dollars until the end and only then, after distributing all mixed mail and not handling costs, does he re-weight to cost pool dollars and apply volume variability factors. This approach appears to be inappropriate, for the following reasons.

[^19]First, Bradley's variability factors differ substantially among pools. Distribution across pools, before applying these factors, implies a distribution over costs that are assumed to be partly fixed, whereas in other parts of the Postal Service's costing methodology volume variable costs are generally distributed upon other volume variable costs.

Second, tally costs differ substantially from accrued costs in many pools. ${ }^{3}$ If the accrued costs are the "true" pool costs, then the tally costs are not the true costs, and a distribution based on them will necessarily cause distortions of the true cost relationships. To avoid these problems, I use only volume variable costs, as defined by Bradley's variability factors applied to the accrued costs (according to MODS and PIRS) within each pool.

## 4. Use Of CAG And Basic Function

As explained earlier in this testimony, I conclude that distributing mixed mail and not handling costs within each of Degen's numerous cost pools causes severe distortions by ignoring many relevant cross-pool cost relationships. For this reason, I distribute all mixed mail and most not handling costs within CAG and basic function, rather than within pool. Application of this approach to the three facility types is explained below.

## a. Distribution Within CAG.

The MODS IOCS data show costs belonging to CAG's A, B, C and D. However, over $90 \%$ of the costs are classified as CAG A, with most of the rest being CAG B. Due to the limited amount of CAG C and D costs in these facilities, I combine the data for CAG's B, C and D into one group.

BMC's constitute a separate CAG, and the BMC data therefore cannot be further broken down by CAG.

I found CAG's B through $H$ represented in the NonMODS data and used all of them in my distribution of mixed and not handling costs. ${ }^{4}$

[^20]Table A-3 illustrates the importance of distributing costs within CAG. Part a of the table breaks down the direct, mixed and not handling costs in MODS facilities by CAG. While $90.3 \%$ of the direct MODS mail processing costs are in CAG A, almost $95 \%$ of the mixed mail costs and over $95 \%$ of certain not handling costs are in CAG A. The not handling costs most concentrated in large facilities (CAG A) are those associated with activity codes 5610-5750, and these are the not handling costs that have grown the most since the Postal Service introduced letter mail automation. Of the MODS CAG A volume variable costs that I distribute as mail processing costs (segment 3.1), only $48.49 \%$ are from direct mail tallies. If one includes the additional not handling costs that Degen misclassified as mail processing, then only $45.69 \%$ are from direct tallies.

That excessive not handling time is predominantly a problem in very large postal facilities is confirmed by part b of Table A-3, which breaks down direct, mixed and not handling costs in NonMODS offices by CAG B through H. As one goes to smaller and smaller facilities, the percent of direct costs increases and the time spent not handling decreases, to only $12.4 \%$ of total employee time in CAG H facilities. ${ }^{5}$

## b. Distribution Within Basic Function

The basic function categories used in IOCS are: (1) outgoing; (2) incoming; (3) transit; and (4) other. According to Handbook F-45, one of the first three categories should be used when an employee is handling mail and for most not handling activities as well, while the "other" category is to be used "when the employee is working in a section or operation that does not involve mail and the Basic Functions Outgoing, Incoming, and Transit do not apply." USPS LR-H-49 at 136-38 and Appendix B.

Yet the "other" category appears, though as a small percentage of the total, also for direct mail and mixed mail tallies. Since this appears to mean simply that the IOCS clerks could not determine the correct basic function, I eliminate "other" as a separate category prior to distributing mixed mail and not handling costs. This is done by allocating the "other" costs proportionately over the three other categories in both the

[^21]distributing and distributed data sets. ${ }^{6}$

I do not use distribution by basic function for not handling costs that are given totally or predominantly as "other." For example, almost all "break/personal needs" costs appear with basic function "other" in the IOCS data, reflecting the obvious fact that basic function is meaningless for an employee who is on break. ${ }^{7}$

## 5. Distribution Of Mixed Mail And Not Handling Costs

Described below are the distribution keys I developed for mixed mail and the various types of not handling costs. All distributions are performed separately within each of the three facility types, i.e. MODS, NonMODS, and BMC's. The first "page" in spreadsheets MODS, NonMODS, and BMC shows the process that starts with the direct costs for each facility type and ends with the inclusion of all mixed mail and not handling costs, except the not handling costs that are reassigned to cost segments 3.2 and 3.3. Tables A-5 through A-7 show my attribution of direct, mixed mail and not handling costs to subclasses and special services in, respectively, MODS, NonMODS and BMC facilities.

The discussion below is organized as follows:
(1) mixed mail costs;
(2) window service and administration/support related not handling costs;
(3) specific class or service related not handling costs;
(4) shape-related not handling costs;
(5) mixed shapes not handling and overhead costs; and
(6) other not handling costs.

## a. Mixed Mail Costs

With a few exceptions, the mixed mail tallies in Degen's IOCS mail processing data base have one of the following five activity codes:

[^22](1) 5610 - mixed letters and cards;
(2) 5620 -mixed flats;
(3) 5700 - mixed IPP's and parcels;
(4) 5750 - mixed all shapes; and
(5) 6523 - empty items and containers.

I distribute the mixed mail costs with activity code 5610 based on the corresponding direct costs associated with letters and cards. The distribution is performed within facility type, CAG and basic function. Similarly, I distribute the 5620 mixed mail costs based on direct costs associated with flats and the 5700 mixed mail costs based on direct costs associated with IPP's and parcels. For the last two categories, which represent by far the largest portion of mixed mail costs, I use a distribution key based on all direct costs for subclasses. This distribution is also performed within facility type, CAG and basic function. I distribute no mixed mail costs to special services. The distributed mixed mail costs are added to the direct costs, forming another distribution key used for some of the not handling costs described below. ${ }^{8}$

## b. Window Service and Administration/Support Costs

Appendix B identifies the window service and administration/support related not handling costs that Degen has classified as mail processing costs, and describes how such costs should be distributed. As discussed earlier in this testimony, once the volume variable portion of these costs has been determined, there is no reason not to distribute them according to what the observed employees were actually doing. I reassign them back to cost segments 3.2 and 3.3 in order to apply a more appropriate distribution method.

## c. Specific Class Or Service Related Costs

Costs with not handling codes 6220,6230 and 6231 appear in all three facility types. There is no need to "distribute" these costs since they are in fact associated specifically

[^23]with special delivery, Registry and Express Mail. Table A-1 summarizes the volume variable costs, tally costs and accrued costs for these activity codes.

Traditionally, 6231 costs have been treated as "specific fixed" costs associated with Express Mail in cost segment 3.3. In the Postal Service's filing, those 6231 costs that Degen did not transfer to mail processing are still treated, in cost segment 3.3, as specific fixed costs that become part of the incremental Express Mail costs. For consistency I reallocate all 6231 costs back to segment 3.3, as explained further in Appendix B.

| Table A-1: Class/Service Specific Not Handling Costs - All Offices $\mathbf{( \$ 1 , 0 0 0 ' s})$ |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Class/ | Activity | Volume | Accrued | Tally |
| Service | Code | Variable | Costs | Costs |
| Spec. Delivery | 6220 | 1,517 | 4,137 | 4,051 |
| Registry | 6230 | 30,605 | 80,389 | 85,367 |
| Express Mail | 6231 | 29,863 | 54,195 | 57,209 |
| Total |  | 61,985 | 138,721 | 146,628 |

## d. Shape Related Not Handling Costs.

These are the not handling components of activity codes 5610,5620 and 5700 . I distribute them based on direct costs for, respectively, letters and cards, flats and IPP's/parcels. These distributions are performed separately within each combination of CAG, basic function, and facility type, but across MODS (PIRS) cost pools. Separate pages in spreadsheets MODS, BMC, and NonMODS contain each shape based distribution key.

One would expect to find 5610 costs at operations dedicated to letters, 5620 at those dedicated to flats, and 5700 at those dedicated to parcels. However, although concentrated mostly at those operations, each type of cost also occurs, in Degen's data base, at many operations where one would not expect to find them. At the same time, one finds handlings of individual letters, flats, or parcels at operations one would not expect. This is illustrated in Table A-4. Presumably, this is due to employees being clocked into one operation while working at another. As with the mixed shapes and general overhead costs discussed below, I conclude that these costs should not be distributed separately within individual MODS cost pools.
e. Mixed Shapes And Overhead Costs

These are costs with activity codes 5750 (mixed shapes), 6521 (breaks/personal needs), 6522 (clocking in/out), and 6523 (not handling empty equipment). Table A-2 shows the magnitude of these costs, which represent $\$ 3.6$ billion in IOCS tally costs, $\$ 3.73$ billion in accrued costs according to Degen, and $\$ 2.73$ billion in volume variable costs according to Degen/Bradley. What is known about these costs is that they have grown a great deal during the implementation of letter mail automation, but it is not known precisely why they have grown and continue to grow so much. Distributing these costs within individual MODS or PIRS pools when so little is known about their true causality makes little sense. I distribute them across all MODS (PIRS) cost pools, but within CAG and basic function, with the exception that basic function is not known for the 6521 and 6522 costs. I distribute the 6523 costs over direct and mixed costs for all mail and the others over direct and mixed costs for all mail and special services.

| Table A-2: Mixed \& Overhead Not Handling Mail Processing Costs $\mathbf{( \$ 1 , 0 0 0 s )}$ |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |
|  | IOCS | Volume <br> Code | Accrued <br> Variable Costs | Tally <br> Costs |  |
| Mixed All Shapes | 5750 | 782,792 | $1,073,136$ | $1,028,702$ |  |
| Breaks/Personal Needs | 6521 | $1,478,103$ | $2,032,392$ | $1,966,503$ |  |
| Clocking In/Out | 6522 | 194,309 | 252,614 | 245,861 |  |
| Empty Equip. Not Handling | 6523 | 277,939 | 369,353 | 360,580 |  |
| Total |  | $2,733,142$ | $3,727,494$ | $3,601,646$ |  |

Tallies with activity code 6522 are not included in the IOCS data for BMC's and NonMODS offices presented in this docket. Instead they are distributed by Alexandrovich (WP-B, W.S.3.1.1) after Degen finishes his distribution of all other mail processing costs. Section 6 below describes this and several other adjustments required for a complete distribution of all mail processing costs.

In the BMC IOCS data, the 6521 costs appear as belonging to a separate cost pool (Zbreaks) that is not included among the BMC cost pools Degen lists in his testimony and various interrogatory responses. Instead, Degen has included a distribution of the 6521 costs in the accrued costs he gives for the six other BMC cost pools. Using Degen's accrued pool costs, it therefore is not necessary to explicitly consider the 6521 costs in the analysis of BMC costs.

As explained earlier in this testimony, the evidence available to link these costs to specific subclasses and special services is so weak that I seriously doubt whether any rational basis exists for attributing even their volume variable portion. For this reason, the Commission should consider treating some or all of the not handling costs with activity codes 5750 and 6521-23 (\$3.6 billion in IOCS costs) as institutional costs, at least until the Postal Service provides a credible explanation of what has caused these costs to increase so much during the past ten years. If, however, the Commission decides that these costs must be attributed, then it should, given that so little is known about their true causes, treat them as general overhead costs and distribute them in the manner explained above.

## f. Other Not Handling Costs

There remain the following categories of not handling costs not discussed above:

- platform acceptance costs (6210);
- nixie costs (6240);
- central markup costs (6570);
- postage due costs (6580); and
- carrier related costs $(6420,6430)$.

As with other categories of non-overhead not handling costs, Degen ignores the ready availability of distribution keys suited to not handling costs with activity codes 6210, 6240, 6570 and 6580. For example, the LIOCATT program treats the platform acceptance not handling costs (code 6210) as part of uniform operation code 07 , which is defined as "accepting mail from patron on platform." Similarly, Nixie costs have uniform operation code 06 , and postage due and central markup costs have operation codes 00 and 14.'

The ideal way to distribute these not handling costs, in a manner consistent with Bradley's volume variability estimates, is therefore as follows. For each facility type, isolate the volume variable direct costs associated with uniform operation codes 00,06 , 07 and 14 respectively and use each set as a distribution key for the corresponding not

[^24]handling costs. These distributions can then be performed separately within facility type, CAG and basic function.

I have used a slightly simpler approach, due to shortness of time and resources. Rather than constructing distribution keys for not handling costs $6210,6240,6570$ and 6580 separately from the IOCS data for each facility type, I simply used the distribution keys available from the FY96 LIOCATT, i.e. the distributed costs for the four uniform operation codes listed above. Table A-8 summarizes these distribution keys. This approach requires use of the same distribution key for each facility type, but the inaccuracy that might result is negligible compared to the major distortion caused by Degen's method, which simply ignores all information about the nature of each not handling activity. For example, as can be seen from Table A-8, more than half of all postage due costs are linked to special services. That is also true for the direct costs in Degen's "Business Reply" cost pool. But most of the not handling postage due costs (code 6580) are spread over a variety of other Degen cost pools that sampled employees happened to be clocked into. The consequence is that under Degen's scheme a disproportionate share of the 6580 costs are distributed to mail classes, including classes that do not incur any direct postage due costs.

In the case of 6210 (platform acceptance) not handling costs, I do not use basic function since it appears that doing so would make little sense. ${ }^{10}$

The last category listed above ( 6420 and 6430 ) is costs that it would appear should not even be in cost segment 3. I have treated these as system overhead costs and distributed them in the same manner as the other overhead costs described in the preceding section.

[^25]
## 6. Further Mail Processing Cost Adjustments

In his workpapers A2 and B3 witness Alexandrovich makes several adjustments to the mail processing costs distributed by Degen. Table A-9 shows corresponding adjustments applied to the alternative distribution described above. These adjustments are:
(1) distribution of BMC and NonMods clocking in and out costs (activity code 6522);
(2) special delivery adjustment;
(3) registry adjustment;
(4) lump sum distribution; and
(5) premium pay adjustment.

The first four of these adjustments are carried out in W.S. 3.1.1 of Alexandrovich's B3 workpaper (LR-H-201). I have carried out the corresponding adjustments, based on my revised distribution of mixed mail and not handling costs. The first adjustment distributes a total of $\$ 47.111$ million in accrued clocking in and out costs at BMC's and NonMODS offices ( $\$ 34.635$ million volume variable), based on all other mail processing costs distributed for these facility types. The second adjustment distributes special delivery mail processing costs to subclasses based on Segment 9 mail handling costs. The third adjustment distributes Registry costs to certain mail categories and the last adjustment distributes a total of $\$ 33.826$ million in lump sum costs that are not included in the IOCS data base.

The premium pay adjustment is shown at the beginning of Alexandrovich's workpaper A2. It is based on keys for nightshift and Sunday processing that should be recalculated to be consistent with my revised mail processing cost distribution. I have not, however, attempted to update these keys. Instead, I simply redistributed the same total costs that Alexandrovich redistributes in performing this adjustment.

Page WKPA_B in spreadsheet MODSNH shows the details of the adjustments described above. I used the resulting mail processing costs distribution, shown in Table A-9, in performing the redistribution of certain administration/support costs, as described in Appendix B. Under my method, total BY96 mail processing costs are $\$ 12,427.547$ million, of which $\$ 9,621.583$ million are volume variable.

|  | CAGA | CAG's BCD | Total |
| :---: | :---: | :---: | :---: |
| Direct | $\begin{array}{r} 3,244,655 \\ 90.34 \% \\ \hline \end{array}$ | $\begin{array}{r} 346,965 \\ 9.66 \% \end{array}$ | $\begin{array}{r} 3,591,620 \\ 100.00 \% \end{array}$ |
| Mixed | $\begin{aligned} & \hline 858,261 \\ & 94.54 \% \\ & \hline \end{aligned}$ | $\begin{array}{r} 49,551 \\ 5.46 \% \\ \hline \end{array}$ | $\begin{array}{r} 907,811 \\ 100.00 \% \\ \hline \end{array}$ |
| Not Handling: $5610-5750$ Costs | $\begin{array}{r} 1,153,581 \\ 95.20 \% \\ \hline \end{array}$ | $\begin{array}{r} 58,177 \\ 4.80 \% \\ \hline \end{array}$ | 1,211,758 |
| $6521-6523$ Costs | $\begin{array}{r} 1,309,359 \\ 92.25 \% \\ \hline \end{array}$ | $\begin{array}{r} 110,039 \\ 7.75 \% \\ \hline \end{array}$ | $\begin{array}{r} 1,419,398 \\ 100.00 \% \\ \hline \end{array}$ |
| Other Mail Processing Not Handling | $\begin{array}{r} 125,355 \\ 61.97 \% \\ \hline \end{array}$ | $\begin{array}{r} 76,943 \\ 38.03 \% \\ \hline \end{array}$ | $\begin{array}{r} 202,298 \\ 100.00 \% \\ \hline \end{array}$ |
| Total Segment 3.1 Not Handling (Stralberg) | $\begin{array}{r} \hline 2,588,296 \\ 91.35 \% \\ \hline \end{array}$ | $\begin{array}{r} 245,158 \\ 8.65 \% \\ \hline \end{array}$ | $\begin{array}{r} 2,833,454 \\ 100.00 \% \\ \hline \end{array}$ |
| Total Segment 3.1 (Stralberg) | $\begin{array}{r} 6,691,211 \\ 91.25 \% \\ \hline \end{array}$ | $\begin{array}{r} 641,674 \\ 8.75 \% \\ \hline \end{array}$ | $\begin{array}{r} 7,332,885 \\ 100.00 \% \\ \hline \end{array}$ |
| Not Handling Transferred To 3.2 \& 3.3 | $\begin{aligned} & \hline 410,570 \\ & 83.64 \% \\ & \hline \end{aligned}$ | $\begin{array}{r} 80,324 \\ 16.36 \% \\ \hline \end{array}$ | $\begin{gathered} 490,895 \\ 100.00 \% \\ \hline \end{gathered}$ |
| Percent Direct: <br> Relative To Stralberg Total <br> Relative To Degen Total | $\begin{aligned} & 48.49 \% \\ & 45.69 \% \\ & \hline \end{aligned}$ | $\begin{aligned} & 54.07 \% \\ & 48.06 \% \\ & \hline \end{aligned}$ | $\begin{aligned} & 48.98 \% \\ & 45.91 \% \\ & \hline \end{aligned}$ |


|  | B | C | D | E | F | G | H | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Direct | $\begin{array}{r} 104,104 \\ 9.17 \% \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 252,268 \\ 22.22 \% \\ \hline \end{array}$ | $\begin{array}{r} 213,427 \\ 18.80 \% \\ \hline \end{array}$ | $\begin{array}{\|l} 235,190 \\ 20.72 \% \\ \hline \end{array}$ | $\begin{aligned} & 144,443 \\ & 12.73 \% \end{aligned}$ | $\begin{aligned} & 92,420 \\ & 8.14 \% \end{aligned}$ | $\begin{aligned} & 93,262 \\ & 8.22 \% \end{aligned}$ | $\begin{array}{r} 1,135,114 \\ 100,00 \% \\ \hline \end{array}$ |
| Mixed | $\begin{aligned} & 14,510 \\ & 9.44 \% \\ & \hline \end{aligned}$ | $\begin{array}{r} 41,104 \\ 26.74 \% \\ \hline \end{array}$ | $\begin{array}{r} 27,455 \\ 17.86 \% \\ \hline \end{array}$ | $\begin{array}{r} 41,083 \\ 26.72 \% \\ \hline \end{array}$ | $\begin{array}{r} 18,112 \\ 11.78 \% \\ \hline \end{array}$ | $\begin{array}{r} 6,835 \\ 4.45 \% \\ \hline \end{array}$ | $\begin{array}{r} 4,644 \\ 3.02 \% \\ \hline \end{array}$ | $\begin{array}{r} 153,742 \\ 100.00 \% \\ \hline \end{array}$ |
| Not Handling | $\begin{array}{r} 67,937 \\ 12.62 \% \\ \hline \end{array}$ | $\begin{aligned} & 178,179 \\ & 33.11 \% \\ & \hline \end{aligned}$ | $\begin{array}{r} 95,947 \\ 17.83 \% \\ \hline \end{array}$ | $\begin{array}{r} 99,638 \\ 18.51 \% \\ \hline \end{array}$ | $\begin{aligned} & 48,986 \\ & 9.10 \% \\ & \hline \end{aligned}$ | $\begin{aligned} & 33,707 \\ & 6.26 \% \end{aligned}$ | $\begin{aligned} & 13,800 \\ & 2.56 \% \end{aligned}$ | $\begin{array}{r} 538,194 \\ 100.00 \% \\ \hline \end{array}$ |
| Total | $\begin{aligned} & 186,551 \\ & 10.21 \% \\ & \hline \end{aligned}$ | $\begin{aligned} & 471,551 \\ & 25.81 \% \\ & \hline \end{aligned}$ | $\begin{array}{r} 336,828 \\ 18.44 \% \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 375,910 \\ 20.57 \% \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline 211,541 \\ 11.58 \% \\ \hline \end{array}$ | $\begin{array}{r} 132,963 \\ 7.28 \% \\ \hline \end{array}$ | $\begin{array}{\|r\|} \hline 111,706 \\ 6.11 \% \\ \hline \end{array}$ | $\begin{array}{r} 1,827,050 \\ 100.00 \% \\ \hline \end{array}$ |
| Percent Direct | 55.80\% | 53.50\% | 63.36\% | 62.57\% | 68.28\% | 69.51\% | 83.49\% | 62.13\% |
| Percent <br> Mixed | 7.78\% | 8.72\% | 8.15\% | 10.93\% | 8.56\% | 5.14\% | 4.16\% | 8.41\% |
| Percent <br> Not Handling | 36.42\% | 37.79\% | 28.49\% | 26.51\% | 23.16\% | 25.35\% | 12.35\% | 29.46\% |


| Cost Pool: | Direct Handling |  |  | Shape Related Not Handling |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Letters \& Cards | Flats | IPP's \& Parcels | Letters \& Cards | Flats | IPP's \& Parcels |
| BCS/ | 213,380 | 823 | 193 | 103,202 | 111 | 137 |
| EXPRESS | 388 | 6,962 | 1,663 | 92 | 105 | 186 |
| FSM/ | 8,519 | 334,521 | 3,013 | 4,066 | 72,872 | 165 |
| LSM/ | 395,380 | 2,556 | 540 | 57,419 | 659 | 209 |
| MANF | 11,138 | 204,992 | 5,199 | 3,495 | 42,024 | 204 |
| MANL | 551,215 | 20,554 | 4,442 | 90,205 | 3,201 | 499 |
| MANP | 599 | 1,430 | 5,882 | 206 | 106 | 1,758 |
| MECPARC | 290 | 348 | 2,050 | 41 | 0 | 1,036 |
| OCR/ | 59,532 | 675 | 192 | 24,923 | 90 | 0 |
| PRIORITY | 1,095 | 12,737 | 22,870 | 471 | 330 | 5,328 |
| SPBS OTH | 1,265 | 4,075 | 9,648 | 127 | 108 | 1,543 |
| SPBSPRIO | 68 | 4,273 | 9,819 | 153 | 220 | 1,201 |
| BUSREPLY | 3,637 | 630 | 319 | 427 | 0 | 108 |
| INTL | 17,708 | 5,045 | 5,602 | 2,145 | 819 | 1,230 |
| LD15 | 130,393 | 1,426 | 0 | 42,430 | 0 | 0 |
| LD41 | 4,764 | 28 | 0 | 5,301 | 32 | 0 |
| LD42 | 327 | 450 | 24 | 107 | 63 | 0 |
| LD43 | 74,359 | 41,874 | 26,762 | 20,666 | 6,075 | 5,342 |
| LD44 | 38,587 | 11,759 | 2,054 | 5,806 | 411 | 192 |
| LD48 EXP | 16 | 226 | 25 | 0 | 0 | 0 |
| LD48 OTH | 2,126 | 533 | 400 | 308 | 71 | 49 |
| LD48_SSV | 1,462 | 741 | 312 | 198 | 34 | 18 |
| LD49 | 78,251 | 28,505 | 3,247 | 650 | 53 | 0 |
| LD79 | 3,558 | 797 | 373 | 211 | 0 | 69 |
| MAILGRAM | 0 | 0 | 0 | 0 | 0 | 0 |
| REGISTRY | 449 | 203 | 111 | 70 | 28 | 7 |
| REWRAP | 2,293 | 361 | 465 | 377 | 0 | 302 |
| 1BULK PR | 662 | 106 | 123 | 137 | 0 | 71 |
| 1CANCMPP | 52,222 | 12,705 | 4,509 | 11,305 | 1,669 | 182 |
| 1EEQMT | 216 | 170 | 62 | 0 | 59 | 122 |
| 1MISC | 4,606 | 1,421 | 1,010 | 5,165 | 1,678 | 296 |
| 1OPBULK | 10,999 | 10,392 | 4,713 | 7,673 | 4,114 | 1,533 |
| 10PPREF | 32,335 | 26,630 | 29,357 | 22,401 | 6,069 | 4,250 |
| 1PLATFRM | 6,541 | 6,040 | 9,695 | 5,686 | 2,471 | 3,705 |
| 1POUCHNG | 14,740 | 13,754 | 17,522 | 19,921 | 6,980 | 1,657 |
| 1SACKS_H | 942 | 1,193 | 2,900 | 687 | 592 | 881 |
| 1SACKS_M | 64 | 544 | 1,063 | 139 | 0 | 749 |
| ISCAN | 593 | 754 | 3,079 | 373 | 195 | 171 |
| 1SUPPORT | 2,822 | 516 | 316 | 887 | 187 | 40 |
| LD48_ADM | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1,727,540 | 760,750 | 179,553 | 437,470 | 151,426 | 33,244 |


| Table A-5: Distribution Of MODS Direct, Mixed And Not Handling Costs (\$1,000's) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Direct Costs | Mixed <br> Mail <br> Costs | Not Handling Costs | Distribute $5301-5345$ Costs | Total |
| First-Class: |  |  |  |  |  |
| Letters and Parcels | 1,897,032 | 496,676 | 1,494,403 | 1,916 | 3,890,026 |
| Presort Letters and Parcels | 388,342 | 94,308 | 304,788 | 388 | 787,825 |
| Postal Cards | 1,048 | 285 | 844 | 1 | 2,177 |
| Private Mailing Cards | 59,994 | 15,487 | 48,521 | 61 | 124,063 |
| Presort Cards | 17,661 | 4,629 | 14,984 | 18 | 37,292 |
| Priority Mail | 121,421 | 34,574 | 99,204 |  | 255,199 |
| Express Mail | 17,159 | 5,662 | 17,570 |  | 40,391 |
| Mailgrams | 49 | 15 | 44 |  | 108 |
| Periodicals: |  |  |  |  |  |
| Within County | 4,194 | 925 | 3,356 | 17 | 8,492 |
| Regular Rate Publications | 137,930 | 33,129 | 100,533 | 556 | 272,147 |
| Nonprofit Publications | 25,222 | 5,955 | 19,180 | 103 | 50,460 |
| Classroom Publications | 1,073 | 266 | 748 | 4 | 2,092 |
| Standard A: |  |  |  |  |  |
| Single Piece Rate | 24,650 | 5,988 | 20,941 | 452 | 52,031 |
| Regular Enh. Car. Rte. | 67,185 | 14,933 | 50,392 | 1,162 | 133,672 |
| Regular Other | 486,785 | 119,034 | 369,041 | 8,550 | 983,411 |
| Nonprofit Enh. Car. Rte. | 7,872 | 1,704 | 5,755 | 134 | 15,464 |
| Nonprofit Other | 131,636 | 31,915 | 104,004 | 2,347 | 269,902 |
| Standard B: |  |  |  |  |  |
| Parcels Zone Rate | 17,140 | 4,747 | 14,652 | 245 | 36,783 |
| Bound Printed Matter | 9,310 | 2,208 | 7,354 | 126 | 18,998 |
| Special Standard | 7,287 | 1,976 | 6,123 | 103 | 15,488 |
| Library Mail | 2,143 | 549 | 1,560 | 28 | 4,280 |
| Penalty - U. S.P.S. | 28,087 | 6,491 | 23,984 |  | 58,562 |
| Free Mail | 2,644 | 742 | 2,134 |  | 5,520 |
| International Mail | 73,833 | 23,695 | 65,105 |  | 162,633 |
| Special Services: |  |  |  |  |  |
| Registry | 14,130 | 0 | 25,045 |  | 39,174 |
| Certified | 3,733 | 0 | 3,416 |  | 7,149 |
| Insurance | 124 | 0 | 174 |  | 298 |
| COD | 432 | 0 | 294 |  | 726 |
| Special Delivery | 135 | 0 | 1,168 |  | 1,304 |
| Special Handling | 79 | 0 | 42 |  | 122 |
| Other Special Services | 34,037 | 0 | 23,057 |  | 57,094 |
| Mixed First Class (5301) | 1,281 | 315 | 789 | $(2,385)$ | 0 |
| Mixed Periodicals (5331) | 389 | 81 | 211 | (680) | 0 |
| Mixed Third Class (5340) | 6,586 | 1,321 | 3,502 | $(11,409)$ | 0 |
| Mixed Standard A (5341) | 710 | 145 | 382 | $(1,237)$ | 0 |
| Mixed Standard B (5345) | 290 | 58 | 154 | (502) | 0 |
| Total | 3,591,620 | 907,811 | 2,833,454 | 0 | 7,332,885 |


| Table A-6: Distribution Of NonMODS Direct, Mixed And Not Handling Costs |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :--- | :--- | :---: |
| (\$1,000's) |  |  |  |  |  |  |  |



| Not Handling Code IOCS Operation Code | Platform Accept 6210 07 | Nixie <br> 6240 <br> 06 | Central Markup 6570 14 | Postage Due Due 6580 00 |
| :---: | :---: | :---: | :---: | :---: |
| First-Class: |  |  |  |  |
| Letters and Parcels | 7,086,660 | 52,139,636 | 69,869,862 | 17,205,321 |
| Presort Letters and Parcels | 5,557,860 | 14,424,783 | 47,314,507 | 2,250,290 |
| Postal Cards | 0 | 320,350 | 0 | 0 |
| Private Mailing Cards | 516,789 | 1,830,085 | 4,609,543 | 572,542 |
| Presort Cards | 411,086 | 569,251 | 1,623,596 | 204,066 |
| Priority Mail | 2,717,705 | 2,229,056 | 1,499,294 | 788,831 |
| Express Mail | 496,231 | 28,052,533 | 225,177 | 728,798 |
| Mailgrams | 0 | , | 0 | 0 |
| Periodicals: |  |  |  |  |
| Within County | 325,354 | 0 | 428,948 | 0 |
| Regular Rate Publications | 1,557,034 | 3,199,526 | 14,351,969 | 0 |
| Nonprofit Publications | 494,467 | 434,390 | 4,425,371 | 0 |
| Classroom Publications | 399 | 0 | 0 | 0 |
| Standard A: |  |  |  |  |
| Single Piece Rate | 380,319 | 1,137,129 | 7,000,123 | 969,118 |
| Regular Enh. Car. Rte. | 4,096,682 | 736,784 | 1,678,872 | 182,131 |
| Regular Other | 13,424,292 | 6,064,397 | 7,387,738 | 1,154,887 |
| Nonprofit Enh. Car. Rte. | 423,389 | 82,505 | 269,550 | 0 |
| Nonprofit Other | 6,419,477 | 1,590,259 | 1,159,387 | 345,016 |
| Standard B: |  |  |  |  |
| Parcels Zone Rate | 899,106 | 389,628 | 591,262 | 220,967 |
| Bound Printed Matter | 334,873 | 292,641 | 1,553,663 | 118,594 |
| Special Standard | 249,253 | 443,927 | 372,198 | 523,877 |
| Library Mail | 0 | 0 | 51,579 | 0 |
| Penalty - U. S.P.S. | 900,408 | 4,630,326 | 9,479,484 | 1,074,087 |
| Free Mail | 0 | 0 | 273,562 | 0 |
| International Mail | 176,690 | 10,583,168 | 525,311 | 902,985 |
| Special Services: |  |  |  |  |
| Registry | 63,342 | 60,864,964 | 70,239 | 361,974 |
| Certified | 144,955 | 23,240,271 | 0 | 3,406,832 |
| Insurance | 53,142 | 533,070 | 0 | 82,234 |
| COD | 0 | 2,316,941 | 0 | 137,489 |
| Special Delivery | 60,859 | 0 | 0 | 0 |
| Special Handling | 6,472 | 0 | 0 | 0 |
| Other Special Services | 119,672 | 10,883,053 | 8,704,344 | 31,292,750 |
| Total | 46,916,516 | 226,988,673 | 183,465,579 | 62,522,789 |


|  | $\begin{gathered} \text { MP Costs } \\ \text { From } \\ \text { Exhibit } 1 \\ \hline \end{gathered}$ | BMC/ <br> N.MODS <br> 6522 Costs | Special Delivery Adjust. | Registry Adjust. | $\begin{array}{\|l\|l\|} \hline \text { Lump } \\ \text { Sum } \\ \text { Dist. } \end{array}$ | $\begin{gathered} \text { Premium } \\ \text { Pay } \\ \text { Adjust. } \end{gathered}$ | Adiusted MP Costs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| First-Class: |  |  |  |  |  |  |  |
| Letters \& Parcels | 4,705,316 | 11,095 | 14 | 0 | 12,87 | 95,283 | 4,824,580 |
| Presort Letters \& Parcels | 1,004,595 | 2,944 | 10 | 0 | 2,750 | 11,714 | 1,022,013 |
| Postal cards | 3,114 | 13 | 0 | 0 | 9 | 0 | 1,022,135 |
| Single Piece Cards | 150,608 | 361 | 1 | 0 | 412 | 3,298 | 154,679 |
| Presort Cards | 45,625 | 113 | 1 | 0 | 125 | 1,500 | 47,363 |
| Total First Class | 5,909,257 | 14,526 | 26 | 0 | 16,16 | 111,79 | 6,051,771 |
| Priority Mail | 319.010 | 885 | 32 | 0 | 873 | (3.531) | 317.269 |
| Express Mail | 53,669 | 181 | 1,476 | 0 | 151 | $(1,855)$ | 53,623 |
| Mailgrams | 108 | 0 | 2 | 0 | 0 | 4 | 114 |
| Periodicals: |  |  |  |  |  |  |  |
| Within County | 13,582 | 70 | 0 | 0 | 37 | (60) | 13,630 |
| Regular Rate Publications | 368,436 | 1,444 | 1 | 0 | 1,010 | 3,181 | 374,072 |
| Nonprofit Publications | 67,815 | 268 | 0 | 0 | 186 | 864 | 69,132 |
| Classroom Publications | 3,752 | 28 | 0 | 0 | 10 | 32 | 3,822 |
| Total Perodicals | 453,585 | 1,810 | 1 | 0 | 1,243 | 4,017 | 460,656 |
| Standard A: |  |  |  |  |  |  |  |
| Single Piece Rate | 76,331 | 460 | 0 | 0 | 210 | $(3,274)$ | 73,726 |
| Regular Enh. Car. Rte. | 214,768 | 1,256 | 0 | 0 | 590 | (11,011 | 205,602 |
| Regular Other | 1,414,263 | 7,322 | 0 | 0 | 3,880 | (65,406 | 1,360,059 |
| Total Bulk Regular | 1,629,031 | 8,578 | 0 | 0 | 4,470 | (76,417 | 1,565,661 |
| Nonprofit Enh. Car. Rte. | 22,262 | 106 | 0 | 0 | 61 | $(1,175)$ | 21,255 |
| Nonprofit Other | 351,599 | 1,318 | 0 | 0 | 963 | (15,544 | 338,336 |
| Total Bulk Nonprofit | 373,862 | 1,424 | 0 | 0 | 1,024 | (16,719 | 359,590 |
| Total Standard A | 2,079,223 | 10,461 | 0 | 0 | 5,703 | (96,410 | 1,998,978 |
| Standard B: |  |  |  |  |  |  |  |
| Parcels Zone Rate | 126,123 | 2,015 | 1 | 0 | 350 | (6,112) | 122,377 |
| Bound Printed Matter | 65,574 | 1,020 | 0 | 0 | 182 | (3,135) | 63,641 |
| Special Standard | 69,568 | 1,235 | 0 | 0 | 193 | $(2,835)$ | 68,161 |
| Library Mail | 15,483 | 258 | 0 | 0 | 43 | (693) | 15,091 |
| Total Standard B | 276.748 | 4,528 | 2 | 0 | 768 | (12,775 | 269,270 |
| Penalty - U. S.P.S. | 79.290 | 323 | 0 | 24.655 | 285 | (933) | 103.620 |
| Free Mail | 8,563 | 66 | 0 |  | 24 | 273 | 8,926 |
| International Mail | 197,785 | 795 | 267 | 11,159 | 573 | (585) | 209,994 |
| Total All Mail | 9,377.239 | 33.575 | 1.806 | 35.814 | 25.78 | , | 9,474.221 |
| Special Services: |  |  |  |  |  |  |  |
| Registry | 66,952 | 382 | 0 | $(35,814)$ | 86 | 0 | 31,606 |
| Certified | 22,932 | 214 | 0 | 0 | 63 | 0 | 23,209 |
| Insurance | 925 | 9 | 0 | 0 | 3 | 0 | 937 |
| COD | 2,378 | 22 | 0 | 0 | 7 | 0 | 2,406 |
| Special Delivery | 1,847 | 7 | $(1,806)$ | 0 | 0 | 0 | 49 |
| Special Handling | 274 | 2 | 0 | 0 | , | 0 | 277 |
| Other | 88,212 | 424 | 0 | 0 | 242 | 0 | 88,878 |
| Total Special Services | 183.521 | 1,060 | $(1,806)$ | $(35,814)$ | 401 | 0 | 147,362 |
| Total Volume Variable | 2,560.760 | 34.635 | 0 | 0 | 26.18 | 0 | 2,621.583 |
| Other | 2.785.850 | 12.476 | 0 | 0 | 7.637 | 0 | 2,805.963 |
| Cotal Costs | 12.346,610 | 47.111 | 0 | 0 | 33.82 | 0 | 12.427.547 |

This appendix identifies the not handling costs that Degen proposes to treat as mail processing costs that should instead be treated as parts of cost segments 3.2 (window service) and 3.3 (administration and support). It also explains how I propose to attribute these reassigned costs to subclasses and special services.

Table B-1 summarizes the volume variable portion of these costs, as well as the corresponding IOCS tally costs and accrued costs. Degen attributes these costs to mail processing because employees incurring them happened to be (erroneously) clocked into mail processing operations when observed by IOCS clerks. However, as explained earlier in this testimony, once the volume variable portion of these costs has been determined, there is no reason not to distribute them according to what the observed employees were actually doing, i.e. window service and administrative work.


The volume variable costs in Table B-1 include:
(1) $\$ 41.444$ million with activity codes $5020-5195$ and $6000-6200$, which represent various types of window related activities;
(2) $\$ 29.863$ million in administrative costs specifically related to Express Mail;
(3) $\$ 284.363$ million with activity codes $6320-6330,6460-6519$ and $6610-6660$, which represent various types of administrative and support activities; and
(4) $\$ 142.647$ million in overhead (breaks and clocking in/out) costs.

In the following I explain first how the costs in Table B-1 should be distributed to
subclasses and special services within cost segments 3.2 and 3.3. I then explain my calculation of the overhead portion of these costs.

## 1. Window Service Costs

Table B-2 breaks down the reallocated window service costs by IOCS activity code. It includes a description of the type of activity indicated by each code, according to Appendix B in USPS LR-H-1. I reassign all costs with codes $5020-5180$ and $6000-6200$ found in the MODS mail processing part of Degen's IOCS data. Degen's answer to MPA/USPS-T12-8d (see accompanying spreadsheet in USPS LR-H-277) confirms that all these costs, as well as the corresponding break time costs, would traditionally have been treated as window service costs. My calculation of the reallocated clocking in and out costs is explained in Section 3 below.

Table B-3 shows how I propose to attribute these costs to subclasses and special services. In the Postal Service's filing, the final attribution of window service costs is developed in worksheet W.S.3.2.1 in witness Alexandrovich's workpaper B. My calculations start with the results of that worksheet and apply a similar methodology to the additional window service costs.

For example, W.S.3.2.1 attributes costs with activity codes 5040 and 6040 , which represent selling stamps to customers, based on RPW estimates of the number of stamps used by each subclass. I do the same with the additional 5040 and 6040 costs that Degen misclassified as mail processing costs. The only difference is that while W.S.3.2.1 applies an assumed volume variability factor for these costs, I use the volume variable portion of the additional 5040 and 6040 costs that is already given in Table B-2. I use a similar approach for codes 5070,6070 , and 6073 , which relate to the setting of meters. Consistent with W.S.3.2.1, I attribute the costs of codes 5050 and 6050 (selling cards) to the private post card subclass.

Additionally, many of the codes in Table B-2 correspond to specific categories of special services and can be attributed directly to those services. Codes 5020 and 6020 relate to P.O. boxes. Codes 5080 and 6080 relate to money orders. I attribute them to these services. Similarly, I attribute costs with codes 5060 and 5090 to stamped envelopes and codes $5120,6030,6120$ and 6200 to other services.

Finally, I add the costs attributed as described above to the total costs for each subclass and service given in W.S.3.2.1 and use those combined costs as a key for attributing all remaining window service costs shown in Table B-2.

Total window service costs under this approach become $\$ 2,023.956$ million, about $\$ 10$ million more than in the FY96 CRA cost report. There appear to be two reasons for this discrepancy. First, with the re-weighting of IOCS tallies that Degen performs in order to be consistent with Bradley's volume variability analysis, the IOCS tallies indicating window service cannot be expected to produce exactly the same costs as under the traditional IOCS approach. Second, Degen indicated in his responses to MPA/USPS-T12-8 and TW/USPS-T12-41 that some direct costs have been transferred by his method, both from window service to mail processing and vice versa. Since these are direct costs whose subclass is already known, and the main objective is to attribute costs to subclasses, I did not attempt to reclassify them between mail processing and window service.

## 2. Administrative And Support Costs

Table B-4 breaks down the reallocated administrative and support costs by IOCS activity code and describes the type of activity indicated by each code, according to Appendix B in USPS LR-H-1. ${ }^{1}$ In the following I explain how the volume variable portion of these costs should be attributed to subclasses and special services.

Costs with activity codes $6320-6330,6460-6519$ and $6610-6660$ are used in W.S.3.0.4 of Alexandrovich's workpaper B to develop different categories of administrative and support costs. Those costs are then distributed in worksheets W.S.3.3.1 and 3.3.2 and workpapers A1 and A2, using various distribution keys. For example, costs with code 6630, by far the largest component in Table B-4, are part of general office and clerical costs and are distributed based on all other salaries in cost segments 2 through 12.

[^26]In Table B-5 the reassigned volume variable and accrued costs in Table B-4 are grouped into the cost categories used in W.S.3.0.4. The first two columns show the non-overhead portion of these costs, while the last two columns include the reassigned overhead costs, distributed in the same proportion as the reassigned non-overhead costs.

For each category in Table B-5, the volume variable portion should be distributed to subclasses based on the distribution keys used for the corresponding category in the Alexandrovich workpapers. The difference between accrued and volume variable costs should be added to the fixed costs for each category. ${ }^{2}$ However, as a result of my redistribution of mail processing and window service costs, some of the distribution keys used by Alexandrovich will also change. His distribution keys include salary costs in cost segments 2-12. My redistribution of mail processing and window service costs will affect the distribution of segment 2 (supervisors) costs as well as segment 11 (custodial and maintenance) costs.

Table B-7 presents a redistribution of the costs already distributed by Alexandrovich within segment 3.3 , as well as a distribution of the reassigned administration/support costs listed in Table B-5.

Due to limited time and resources I did not recalculate all elements of Alexandrovich's distribution keys. Specifically, I did not attempt to recalculate the distribution of segment 11 costs. Within segment 2, I redistributed the costs of supervision of mail processing and window service activities, using my revised distributions of the corresponding segment 3 costs. Additionally, I replaced the distribution key for supervision of central mail markup with the same LIOCATT distribution key that I used to distribute activity code 6570 not handling costs, as explained in Appendix A. I did not attempt to redistribute other sub-segments of segment 2. The following describes exactly how I performed the distribution shown in Table B-7, for each cost category in Table B-5. Further details can be found on page WKPA_B of my MODSNH spreadsheet.

[^27]For the Express Mail related (6231) costs in Table B-5, I attribute the volume variable portion directly to Express Mail, while including the difference between accrued and volume variable costs as "specific fixed," so that all accrued 6231 costs become part of the "incremental" Express Mail costs. With this approach, total 6231 costs associated with Express Mail become $\$ 83.505$ million, close to the $\$ 82.089$ million in the FY96 CRA report.

I distribute the reassigned data collection and processing costs based on FY96 piece volume data, consistent with Alexandrovich's method. For general office and clerical costs, I use a distribution key based on all segment 2-12 salaries, excluding segment 3.3 and the supervision of administration/support activities part of segment 2. I use this key to redistribute the $\$ 329.228$ million in volume variable general office and clerical costs already distributed by Alexandrovich, as well as to distribute the reassigned $\$ 302.865$ million. I apply the same distribution key to time and attendance costs.

For quality control costs I use a distribution key based on mail processing and segment 6 salaries, to distribute both the quality control costs in Table B-5 and those already in segment 3.3. For the last five categories in Table B-5 (scheme examination, parcel training, non-parcel training, other training and "other administration") I simply use the distribution keys already in Alexandrovich's A2 workpaper to distribute the reassigned costs. Ideally, however, most of these distribution keys should be recalculated to be consistent with my revised distribution of mail processing costs.

Exhibit 2 summarizes my proposed attribution of the mail processing, window service and administration/support portions of Segment 3 costs. Exhibit 3 compares my distribution of Segment 3 costs with the distribution in Alexandrovich's testimony. ${ }^{3}$

As with window service costs, this treatment of administration/support not handling costs assures that the costs of each activity are distributed in a manner consistent with the nature of the activity itself. This is a far more accurate method for attributing these

[^28]costs to the mail and services that cause them than Degen's method of distributing them within whatever mail processing related cost pools employees doing administrative work were erroneously clocked into.

For example, most of the 6231 costs correctly attributed to Express Mail by my method as well as by the traditional IOCS method are distributed by Degen as general not handling costs, causing all classes of mail to bear a part of the burden of these costs. Another example is the $\$ 464.134$ million ( $\$ 302.865$ million volume variable) in general office and clerical costs (see Table B-5) that Degen distributes within mail processing but that I reassign to administration/support. Since the corresponding $\$ 555.181$ million ( $\$ 329.228$ million volume variable) that Degen left in cost segment 3.3 are distributed (Alexandrovich workpaper A-2) over all salaries in cost segments 2 through 12, the effect of his approach is that mail processing carries all of the $\$ 464.134$ million plus its proportionate share of the remaining $\$ 555.181$ million. Because different subclasses do not use all cost segments in the same proportion, the effect is to overburden those subclasses that use a higher than average portion of mail processing costs.

As shown in Table B-7, total segment 3.3 costs with my method are $\$ 2,004.601$ million, versus $\$ 1,987.493$ million in the FY96 CRA, a difference of $\$ 17.108$ million. However, there is one further adjustment that I have not attempted to make, which if carried out would leave cost segment 3.3 with fewer costs than in the FY96 data.

In W.S.3.0.4, the "other admin." category includes $\$ 70.101$ million in volume variable direct \& mixed mail costs, imported from part IV of USPS LR-H-146 (see note in W.S.3.3.1), that have migrated from mail processing to segment 3.3. It might be more accurate to transfer these costs back to the mail processing segment, where they would carry their part of the greater burden of overhead and other general not handling costs in mail processing. This adjustment, along with the others described above, would leave segment 3.3 with considerably fewer costs than in the FY96 CRA. This indicates that there still are additional not handling costs, which I have not been able to identify, that should be transferred to segment 3.3.

## 3. Reallocated Overhead Costs

Employees engaged in window service and administration/support activities obviously
also spend some time on breaks and in clocking in or out of operations.
I relied on Degen's answer to MPA/USPS-T12-8d to determine the break time (6521) costs that correspond to the non-overhead costs in Tables B-2 and B-4. In that response Degen also indicated that $\$ 153.607$ million in clocking in/out (6522) costs traditionally classified as administrative have been reclassified by him as mail processing costs. However, Degen appears to have compared his program with the LIOCATT, which calls all 6522 costs administrative. In the past these costs were then distributed, by what used to be called Barker's (now Alexandrovich's) workpapers, among mail processing, window service and administration. I use the approach described below to determine the portion of clocking in and out costs that should be returned to segments 3.2 and 3.3.

Traditionally, 6522 costs were distributed among mail processing, window service and administration/support in W.S.3.0.1, by apportioning them based on total nonoverhead costs. Alexandrovich, in this docket, uses essentially the same approach for BMC's and Non-MODS offices, where 6522 tally costs do not appear explicitly in the IOCS data base. In fact, he does the same for MODS offices, except that in those offices he excludes mail processing, apparently assuming that the mail processing portion of 6522 costs in MODS offices already has been correctly allocated by Degen.

Table B-6 presents a similar method of distributing all 6522 costs for MODS offices, including mail processing. The table operates on accrued costs. From the MODS costs assigned by Degen to mail processing ( $\$ 10,225.601$ million) I subtract the 6522 portion as well as the other costs that I reassign back to window service and administration. The adjusted non-6522 MODS costs are used to distribute the 6522 MODS costs. From the 6522 costs distributed in this manner I subtract the 6522 costs attributed to each category by Degen/Alexandrovich to determine the portion that should be reallocated. To determine the volume variable portion of these costs I use the ratio of volume variable to accrued costs for all other costs reassigned to window service and administration/support respectively. The results of this method indicate that $\$ 3.496$ million (volume variable) in 6522 costs should be reallocated to window service and $\$ 11.748$ million should be reallocated to administration and support.

The assumption underlying this method is that, since clerks and mailhandlers appear to move relatively frequently, not only between mail processing activities but also
between mail processing, window service and administrative functions, it makes most sense to consider the costs directly involved in moving from one assignment to another as systemwide costs that should be shared in proportion to all other costs. While one could perhaps use alternative assumptions, I believe it is best to rely on this assumption until the Postal Service produces a well-founded study that clearly identifies the specific causes behind the increase in 6522 and other overhead costs.


| Subclass | WS 3.2.1 | Stamps | Meters | Cards | Spec. Serv. | Overhead \& Other | Revised Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Letters \& Parcels | 489,789 | 8,735 | 362 |  |  | 16,747 | 515,633 |
| Presort Letters \& Parcels | 21,505 | 204 | 348 |  |  | 740 | 22,798 |
| Postal cards | 0 | 0 | 0 |  |  | 0 | 0 |
| Single Piece Cards | 31,460 | 406 | 7 | 240 |  | 1,078 | 33,190 |
| Presort Cards | 755 | 10 | 1 |  |  | 26 | 792 |
| Total First Class | 543,508 | 9,355 | 718 | 240 |  | 18,591 | 572,412 |
| Priority Mail | 41,227 | 45 | 9 |  |  | 1,386 | 42,667 |
| Express Mail | 23,023 | 0 | 1 |  |  | 773 | 23,797 |
| Mailgrams | - | 0 | 0 |  |  | 0 | 0 |
| In-County publications | 457 |  |  |  |  | 15 | 473 |
| Regular rate publications | 2,186 |  |  |  |  | 73 | 2,260 |
| Nonprofit publications | 235 |  |  |  |  | 8 | 243 |
| Classroom publications | 0 |  |  |  |  | 0 | 0 |
| Total Periodicals | 2,879 |  |  |  |  | 97 | 2,975 |
| Single Piece Rate | 2,391 | 9 | 1 |  |  | 81 | 2,481 |
| Regular Enh. Car. Rte. | 5,677 | 72 | 11 |  |  | 193 | 5,953 |
| Regular Other | 22,021 | 287 | 48 |  |  | 750 | 23,106 |
| Nonprofit Enh. Car. Rte. | 930 | 15 | 3 |  |  | 32 | 980 |
| Nonprofit Other | 7,998 | 118 | 19 |  |  | 273 | 8,409 |
| Total Standard A | 39,017 | 502 | 82 |  |  | 1,329 | 40,930 |
| Parcels Zone Rate | 7,491 | 3 | 1 |  |  | 252 | 7,746 |
| Bound Printed Matter | 619 | 1 | 0 |  |  | 21 | 641 |
| Special Standard | 3,186 | 2 | 0 |  |  | 107 | 3,296 |
| Library Mail | 98 | 0 | 0 |  |  | 3 | 102 |
| Total Standard B | 11,395 | 6 | 2 |  |  | 383 | 11,786 |
| Penalty - U. S.P.S. | 13,740 |  |  |  |  | 461 | 14,202 |
| Free Mail | 181 |  |  |  |  | 6 | 187 |
| Intermational Mail | 23,585 | 256 | 6 |  |  | 801 | 24,648 |
| Total all mail | 698,556 | 10,164 | 817 |  |  | 23,826 | 733,363 |
| Special services: |  |  |  |  |  |  |  |
| Registry | 11,695 |  |  |  |  | 393 | 12,087 |
| Certified | 37,822 |  |  |  |  | 1,270 | 39,092 |
| Insured | 11,550 |  |  |  |  | 388 | 11,938 |
| C.O.D. | 3,549 |  |  |  |  | 119 | 3,669 |
| Special delivery | 148 |  |  |  |  | 5 | 153 |
| Money orders | 79,884 |  |  |  | 404 | 2,695 | 82,983 |
| Stamped envelopes | 1,302 |  |  |  | 16 | 44 | 1,361 |
| Special handling | 530 |  |  |  |  | 18 | 548 |
| Post Office Box | 62,861 |  |  |  | 4,047 | 2,246 | 69,153 |
| Other | 6,490 |  |  |  | 3,387 | 332 | 10,208 |
| Total special services | 215,831 |  |  |  | 7,853 | 7,509 | 231,193 |
| Total Volume Variable | 914,387 | 10,164 | 817 | 240 | 7,853 | 31,334 | 964,796 |
| Total Other Costs | 992,234 | 10,241 | 1,718 | 353 | 9,062 | 45,552 | 1,059,610 |
| Total Window Service | 1,906,621 | 20,405 | 2,535 | 593 | 16,915 | 76,886 | 2,023,956 |


| Cost Category | Activity Code | Volume Variable | Accrued Costs | Tally Costs |
| :---: | :---: | :---: | :---: | :---: |
| Mail Related: |  |  |  |  |
| Express Mail | 6231 | 29,863 | 54,195 | 57,209 |
| Supplies and Equipment (MODS) | 6320 | 3,653 | 9,068 | 9,477 |
| Supplies and Equipment (NonMODS) | 6320 | 106 | 135 | 129 |
| Claims and Inquiry | 6330 | 4,247 | 9,112 | 9,565 |
| Vehicle Service Clerical Work | 6460 | 1,226 | 2,093 | 2,148 |
| Qual. Control/Rev. Protection (MODS) | 6480 | 5,991 | 8,250 | 8,324 |
| Qual. Control/Rev. Protection (NonMODS) | 6480 | 66 | 84 | 80 |
| Headquarters/Area Test | 6495 | 2,041 | 3,000 | 2,986 |
| Conducting and Taking Scheme Exams | 6500 | 1,534 | 2,036 | 2,277 |
| Training - Letter Shape | 6511 | 3,854 | 4,015 | 1,149 |
| Training - Flat Shape | 6512 | 455 | 520 | 501 |
| Training - Parcel Shape | 6514 | 63 | 81 | 70 |
| Training - Mixed All Shapes | 6516 | 3,665 | 4,236 | 2,201 |
| Training - Other Training | 6519 | 10,387 | 14,540 | 15,033 |
| General Services: |  |  |  |  |
| Personnel and E\&LR Work | 6610 | 13,193 | 19,427 | 21,556 |
| Accounting Or Auditing | 6620 | 10,942 | 21,749 | 21,189 |
| General Administrative Services | 6630 | 213,934 | 344,174 | 370,456 |
| Time and Attendance at Non-PSDS Office | 6640 | 1,253 | 3,130 | 3,534 |
| PSDS/MODS Time and Attendance | 6650 | 4,789 | 17,717 | 19,139 |
| PSDS/MODS - All Other | 6660 | 2,965 | 4,977 | 5,439 |
| Overhead: |  |  |  |  |
| Breaks/Personal Needs | 6521 | 121,934 | 161,506 | 161,961 |
| Clocking In/Out | 6522 | 11,748 | 18,485 | 19,330 |
| Total |  | 447,909 | 702,531 | 733,754 |


|  | Excluding Overhead |  | With Overhead |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Volume Variable | Accrued | Volume <br> Variable | Accrued |
| Express Mail | 29,863 | 54,195 | 43,728 | 72,863 |
| Data Collection \& Processing | 5,005 | 7,978 | 7,046 | 10,726 |
| General Office \& Clerical | 214,547 | 345,221 | 302,86, | 464,134 |
| Time \& Attendance | 19,234 | 40,274 | 29,537 | 54,146 |
| Miscellaneous Work | 6,057 | 8,334 | 8,189 | 11,204 |
| Scheme Examination | 1,534 | 2,036 | 2,055 | 2,738 |
| Parcel Training | 116 | 155 | 156 | 208 |
| Non-Parcel Training | 7,922 | 8,698 | 10,147 | 11,694 |
| Other Training | 10,387 | 14,540 | 14,106 | 19,548 |
| Other Admin | 19,561 | 41,111 | 30,078 | 55,272 |
| Total Reassigned | 314,226 | 522,540 | 447,909 | 702,531 |



|  | USPS | Stralberg |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Redistributed | From Seq 31 | New Total |
| First-Class: |  |  |  |  |
| Letters \& Parcels | 302,027 | 306,631 | 175,821 | 482,452 |
| Presort Letters \& Parcels | 92,320 | 92,218 | 51,380 | 143,598 |
| Single Piece Cards | 11,583 | 12,161 | 6,854 | 19,016 |
| Presort Cards | 3,137 | 3,429 | 1,933 | 5,362 |
| Total First Class | 409,067 | 414,439 | 235,990 | 650,429 |
| Priority Mail | 21,927 | 18.408 | 11.091 | 29.499 |
| Express Mail | 6,211 | 5,651 | 47,156 | 52,807 |
| Mailgrams | 9 | 10 | 7 | 17 |
| Periodicals: |  |  |  |  |
| Within County | 1,721 | 1,727 | 1,020 | 2,747 |
| Regular Rate Publications | 27,573 | 25,784 | 15,359 | 41,143 |
| Nonprofit Publications | 6,729 | 6,517 | 3,690 | 10,207 |
| Classroom Publications | 285 | 242 | 145 | 387 |
| Total Perodicals | 36,308 | 34,270 | 20,214 | 54,483 |
| Standard A: |  |  |  |  |
| Single Piece Rate | 4,114 | 4,132 | 2.451 | 6,582 |
| Regular Enhanced Car. Rte. | 43.303 | 43.044 | 23.969 | 67.013 |
| Regular Other | 97,685 | 96,000 | 55,132 | 151,132 |
| Total Bulk Regular | 140,988 | 139,044 | 79,100 | 218,145 |
| Nonprofit Enhanced Car. Rte. | 3.578 | 3.476 | 1.770 | 5.246 |
| Nonprofit Other | 24,178 | 24,105 | 13,478 | 37,583 |
| Total Bulk Nonprofit | 27,756 | 27,581 | 15,248 | 42.828 |
| Total Standard A | 172.858 | 170.757 | 96.722 | 267.555 |
| Standard B: |  |  |  |  |
| Parcels Zone Rate | 8,089 | 7,567 | 4,658 | 12,225 |
| Bound Printed Matter | 4,456 | 4,436 | 2,894 | 7,330 |
| Special Standard | 3,585 | 3,757 | 2,325 | 6,082 |
| Library Mail | 707 | 711 | 459 | 1,170 |
| Total Standard B | 16,837 | 16,471 | 10,336 | 26,807 |
| Penalty -U. S.P.S. | 6.324 | 6.619 | 3.537 | 10.156 |
| Free Mail | 483 | 458 | 286 | 744 |
| International Mail | 14,351 | 14,252 | 7,643 | 21,895 |
| Total All Mail | 684.375 | 681.334 | 433.058 | 1.114.392 |
| Special Services: |  |  |  |  |
| Registry | 2,775 | 3,212 | 1,691 | 4,903 |
| Certified | 6,778 | 7,048 | 4,404 | 11,452 |
| Insurance | 487 | 510 | 34.1 | 851 |
| COD | 579 | 602 | 276 | 878 |
| Special Delivery | 59 | 64 | 46 | 110 |
| Money Orders | 2,393 | 2,511 | 1,629 | 4,139 |
| Stamped Envelopes | 39 | 40 | 26 | 67 |
| Special Handling | 22 | 25 | 16 | 41 |
| Post Office Box | 2,438 | 4,219 | 2,944 | 7,163 |
| Other | 6,412 | 6,790 | 3,475 | 10,265 |
| Total Special Services | 21,982 | 25,021 | 14,849 | 39,870 |
| Total Volume Variable | 706.357 | 706.355 | 447,907 | 1.154 .262 |
| Other | 595.711 | 595.712 | 254,626 | 850.338 |
| Total Costs | 1.302 .068 | 1.302 .068 | 702.533 | 2.004.601 |

## 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.


December 30, 1997


[^0]:    ${ }^{1}$ TW-RT-1, Rebuttal testimony of Halstein Stralberg on behalf of Time Warner Inc., Docket No R941, at 12-13 (Tr. 11851-52).
    ${ }^{2}$ Docket No. R94-1, Tr. 1166-71; PRC Op. R9401 at III-22-23.
    ${ }^{3}$ While the mail processing costs attributed by Degen to Periodicals are about the same as under the old methodology used in FY96, this must be seen against a background of much lower systemwide attribution levels. In other words, Degen has in reality increased Periodicals mail processing costs substantially.

[^1]:    ${ }^{4}$ See Tr. 6528 where Degen describes how he converts tally costs to volume variable costs. USPS LR-H-304 contains, in spreadsheet Dma-13b.xls, the tally dollars and accrued costs for each pool used by Degen.

[^2]:    ${ }^{5}$ Outgoing mail is processed mostly on the Tour 3 (late afternoon and evening) shift and culminates with the dispatches of mail that came from collections that day. Then the Tour 1 (early morning) shift takes over and performs mostly incoming processing, which culminates with the dispatch of destinating mail to AO's, stations and branches. The Tour 2 (day) shift processes more incoming mail, mostly non-preferential, as well as transit mail.
    "The pieces in an item or container are considered "identical" only if they "have the same origin, mail class, subclass, shape, size, weight and postage. The pieces are the same except for their destinations." USPS LR-H-49 at 88.

[^3]:    ${ }^{7}$ Appendix A explains in detail how I propose to implement this approach in the present docket.

[^4]:    ${ }^{8}$ According to witness Patelunas: "Prior to this change, there were a number of conditions under which the 'top-piece' rule did not apply. Under the new procedures, the data collector uses the 'top-piece' rule for all letter and flat tray tallies." MC97-2, USPS-T-5 at page 10.
    'Degen refers to concern about delaying the mail as another reason for not counting mixed items. That reason, however, is mentioned neither for top-piece-rule nor non-top-piece-rule items in the IOCS handbook. The handbook gives only two examples of "extremely difficult": (1) palletized, shrink-wrapped sacks; and (2) "a sealed registered pouch or CON-CON that cannot be unlocked." Handbook at 90-91. In reality, many much easier to count items also remained uncounted.

[^5]:    ${ }^{10}$ On cross examination (Tr. 6706), Degen implied that the main reason mixed items were not counted was to avoid delaying the mail. But unless the item is encountered just before a critical dispatch, the sampled employee could continue to work on other items while the data collector counts the one sampled. If almost half of all mixed items are observed just before a critical dispatch, then the Postal Service must have a much worse peaking problem than anyone has imagined. And those uncounted items must all contain high priority mail, unlike the counted items which contain all kinds of mail and certainly unlike the direct items which are almost all Periodicals and Standard A. It is much more likely that the data collectors, in most cases, chose not to count because it would delay them, not because it would delay the mail.
    ${ }^{11}$ In R94-1 USPS witness Barker testified that the costs of counted items should not be viewed as sufficiently reliable to use for distribution purposes unless and until the Postal Service had performed a special study to determine why so many mixed mail items remained uncounted and whether there existed a rational basis for distributing their costs based on the counted items. Tr.

[^6]:    1157-58, R94-1. The Postal Service has presented no results from such a special study in this docket. Nor, to my knowledge, has it ever conducted or considered conducting such a study.
    ${ }^{12}$ If concerns about delaying the mail were so serious that the data collectors did not even have time to look at one piece in these items, the items must indeed have contained some high priority mail. These bundles and trays must in any case have contained mail different from that contained in the bundles and trays to which there was time to apply the top piece rule, again indicating a likely bias when one distributes one set based on the other.
    ${ }^{13}$ At BMC's, most items not containing parcels are simply transferred without being opened. Even there, however, $\$ 14$ million were incurred in handling of empty items.

[^7]:    ${ }^{14}$ Some emptied items will be filled with other mail in the facility where they were emptied. Those items at least will not traverse as empty the path they followed when full.

[^8]:    ${ }^{15}$ Since in Degen's universe flats are sorted at letter operations, letters are sorted at flats operations and in fact both are sorted just about anywhere, one suspects that most of the letter and flat sorting that appears at opening units and platforms results from employees being clocked into one operation but working at another. Generally, individual letter and flat sorting is not performed at platforms or opening units. (Even if an employee were to remove a handful of letters or flats from a container in order, for example, to place them in a tray, he would be recorded in IOCS as handling a bundle rather than as handling letters or flats.)

[^9]:    ${ }^{16}$ Some bundles, of course, are broken unintentionally as they move through the system. It is also possible that postal employees do occasionally break open flat and letter bundles and place them as loose pieces in hampers and other containers. But even if this is done in a way that does not require extra piece sorting, it still would be inefficient make-shift work, as a handling step could be saved by simply taking those bundles, after they have been sorted into hampers, etc., to the operations where they will be piece sorted and placing them directly on the ledge of the sorting cases or machines.

[^10]:    ${ }^{17}$ Unless, of course, all the pieces in an APC are identical. But bundles in APC's are more likely to be bundles that already have been sorted at another post office, i.e. mixed with bundles from other mailers, even if they may all be of the same class.

[^11]:    ${ }^{18}$ The percentage is higher still when one removes the window service and administrative costs that Degen has incorrectly included in his definition of mail processing. The percentage is close to $50 \%$ at opening units and over $50 \%$ at platforms and sack sorting operations.

[^12]:    ${ }^{19}$ Strictly speaking, what I postulated in R90-1 was that over-staffing at some manual operations would reduce productivity at those operations and be reflected in IOCS as higher costs for the mail that receives most of its handlings at those operations. The sharp increase in not handling is one manifestation of this phenomenon that can be recognized in IOCS, assuming one is willing to compare data for different years. Another manifestation that IOCS cannot identify directly, but that is confirmed by declining productivity figures ( Tr . 5565), is that employees at over-staffed operations simply work slower than if they were under real pressure to meet a deadline. Even Moden appears to agree that employees don't always work equally hard. Tr. 5990-91.
    ${ }^{20}$ See USPS LR-H-236, U.S. Postal Inspection Service, "National Coordination Audit: Allied Workhours" (December 1996), at 10,13.
    ${ }^{21}$ Id. at 19. Even though they spend ten minutes a day on the average clocking in and out of operations, there is evidence that employees don't always bother to do so when they go from one operation to another. How else can one explain letters being sorted at flats cases and vice versa, window customers being served in areas where they are not admitted, etc.? Table 6-1 in Exhibit 6 shows how the handlings of different shape items are spread over MODS operations. See Tr. 64006413 for the spread of non-handlings with different activity codes over MODS operations.

[^13]:    ${ }^{2}$ Of the productivity declines shown by that exhibit, perhaps the $18 \%$ decline in flat sorting machine (FSM) productivity is the most counterintuitive. Since FY88, FSM's have been changed from their original configuration to a more efficient $2+2$ configuration that, according to Moden, was expected to increase productivity by $13 \%$, based on engineering estimates. Moden response to TW/USPS-T4-14j at Tr. 5957, 5960. More importantly, they have all been equipped with barcode readers, and a large portion of non-carrier route flats today, at least Periodicals and Standard A flats, are pre-barcoded. Despite all that, and the improvements one might expect as postal employees became more familiar with these machines, productivity declined from 893 pieces per manhour to 734. (The decline was $21 \%$ before Bradley "scrubbed" his data.) Note that FSM is mislabeled FSB in the exhibit referred to.
    ${ }^{23}$ See General Accounting Office, "Automation is restraining but not reducing costs" (May 1992), at 28-29, 34-35; "Postal Service role in a competitive communications environment" (May 24, 1994) at 12-13.

[^14]:    ${ }^{26}$ In MODS offices, $\$ 22.6$ million of these costs were spread over almost all the pools, again indicating that employees were logged into one operation while working at another. Only about half of the $\$ 22.6$ million were incurred in the EXPRESS cost pool, where, by the way, many classes other than Express Mail appear to be handled. See Tr. 6401-03, 6405,6407,6409.

[^15]:    ${ }^{25}$ Of course, in MODS offices none of these costs are limited to the pools where one would expect to

[^16]:    find them, as can be seen from Table A-4 in Appendix A. All three codes can be found in most MODS cost pools, reflecting again the fact that employees are not always clocked into the operations where they are working.

[^17]:    ${ }^{1}$ Sources: Seg. 3.1: Table A-9. Seg 3.2: Table B-3. Seg. 3.3: Table B-7.

[^18]:    ${ }^{1}$ This discrepancy has the following history. Degen originally, in response to TW/USPS-12-28e, provided counted item costs by cost pool, item type and subclass. Time Warner asked, in TW/USPS-5, why it appeared that the international sacks counted in MODS offices contained no international mail. Degen responded by saying that there was a mistake in his original counted item response, that in fact many more international sacks had been counted, and that the corrected information would be filed in USPS LR-H-296. Data sets TW28erndr, TW28ebmr and TW28enmr from that library reference give estimates of total counted item costs by cost pool and item type, and a further breakdown of the counted item costs for each pool and item type by subclass. The two do not match completely, particularly for international sacks. Subtracting the counted item costs given by subclass from the corresponding combined direct and counted item data in the IOCS data base gives a small negative direct cost for international mail, indicating that Degen's revised response must have overstated the counting of international sacks.

[^19]:    ${ }^{2}$ In the case of NonMODS facilities, conversion to volume variable costs from tally costs requires only multiplication with a single factor, since Bradley did not analyze individual cost pools in those offices. For those offices I therefore use tally costs through most of my calculations, converting to volume variable costs only in the final step.
    ${ }^{2}$ Degen distributes across pools whenever a distributing dataset contains no data in a given cell, which occurs often in the case of mixed mail. Additionally, he always distributes certain cost pools (e.g. MISC, EEQMT) across all pools, and he distributes mixed mail costs at platforms across a set of pools that includes opening units. LR-H-146, part II.B.

[^20]:    ${ }^{3}$ See Degen's response to DMA/USPS-T12-13b and Dma13b.xlx in USPS LR-H-304.
    ${ }^{4} I$ expected to find CAG's I and J data as well in NonMODS offices, but since the tally costs I used add up to the same number as that indicated by Degen, I must have used all the data he used. If CAG's I and J

[^21]:    data ever existed, they must have been combined with CAG H data in an earlier stage of processing the IOCS data.
    ${ }^{5}$ In CAG H facilities, employees spend an average of only 16 minutes in an eight hour day on "breaks/personal needs," almost one hour less than the system average for clerks and mailhandlers.

[^22]:    ${ }^{6}$ If, for example, the basic functions in a given data set are $40 \%$ outgoing, $40 \%$ incoming, $10 \%$ transit and $10 \%$ other, this is transformed to $44.444 \%$ outgoing, $44.444 \%$ incoming and $11.111 \%$ transit.
    ' While this is recognized in IOCS, Degen goes to the other extreme, assuming that all break time costs must be distributed to mail handled in the pool that the idle employee is clocked into while on break.

[^23]:    ${ }^{\text {s }}$ The exceptions referred to above occur for MODS facilities only. They include a small amount of costs ( 0.521 million volume variable) with activity code 5461 , representing mixed international mail, which I attribute directly to international mail. Additionally, there are a total of $\$ 3.225$ million volume variable costs with activity codes $6480,6516,6519,6620$ and 6630 , all of which should ideally be considered part of segment 3.3 (administration and support). Since the amount is relatively small, I kept them as a part of segment 3.1 costs and distributed them in the same way as the 5750 and 6523 mixed mail costs.

[^24]:    'See Table B-5 in USPS LR-H-1 and FY96 CRA Workpaper C-2: Fiscal Year 1996 LIOCATT for clerks and mailhandlers by operation code.

[^25]:    ${ }^{10}$ As can be seen from the LIOCATT development of the distribution for uniform operation code 07, almost all these costs with the exception of the 6210 costs are given as outgoing, with the residual portion having basic function "other." The 6210 costs, on the other hand, have a substantial component of incoming and transit. I don't know the reason for this apparent discrepancy. It would appear that mail being accepted from a postal patron is at that point always outgoing mail, since no postal employee has made any decision yet about where to send it.

[^26]:    ${ }^{1}$ My analysis of administration-related not handling costs matches that indicated by Degen in his response to MPA/USPS-T12-8, except that Degen's answer did not include $\$ 12.7$ million related to LD15, representing remote encoding facilities. For consistency, I have included the LD15 administration-related costs in the above table. Since the remote encoding facilities are physically separate from other mail processing facilities, another approach might be to treat them completely apart from MODS facilities. I have not, however, attempted to carry out this approach.

[^27]:    ${ }^{2}$ The costs already in W.S.3.0.4 are distributed by Alexandrovich using volume variabilities corresponding to his various distributing sets. Notes on page 38.1 of workpaper A-2. The difference in distributing the reassigned costs is that their volume variability is already known from Table B-4.

[^28]:    ${ }^{3}$ Since Degen filed a change to his testimony, resulting in the attribution of an additional $\$ 17$ million in mail processing costs, I presume that Alexandrovich's Segment 3 cost distribution should change accordingly. However, since I am not aware of any corresponding change being filed by Alexandrovich, I show the original numbers from his testimony in Exhibit 3. For this reason, it may appear, but it is not the case, that I am attributing about $\$ 17$ million more Segment 3 costs than the Postal Service has proposed.

