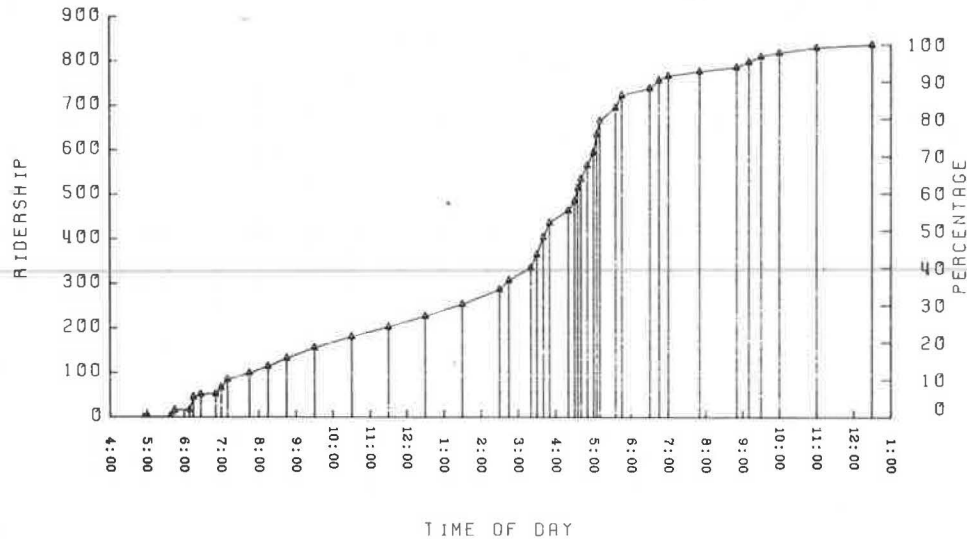


Figure 10. Cumulative outbound ridership.



## ACKNOWLEDGMENT

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## The Fare Cutter Card: A Revenue-Efficient and Market-Segmented Approach to Transit Pass Pricing

RICHARD L. ORAM, FRANK SPIELBERG, AND VINCENZO MILIONE

Recently, many transit properties have studied or instituted prepaid passes as part of marketing programs designed to retain existing riders and attract new riders. At the same time, transit properties are facing severe financial problems. As a result there can be conflict between the marketing department that wishes to offer an attractive fare mechanism that offers a substantial discount and the financial department that is concerned about lost revenue and free rides. To resolve this conflict, the Greater Bridgeport Transit District (GBTD) has introduced the Fare Cutter Card as part of a comprehensive demonstration of market-based fare policies. This card (actually a permit) has a substantially lower initial cost than an unlimited-use pass but requires a \$0.25 cash-drop for each ride. The card is therefore more affordable to low-income users while returning revenue to GBTD for all rides taken. Different approaches to implementing the Fare Cutter Card may enable a major extension of fare prepayment without additional loss or a major reduction in revenue losses allocated with fare prepayment, while maintaining the existing level of use. The GBTD experience to date with the Fare Cutter Card is preliminary, but the card appears to be popular with riders. In this paper the analytical issues associated

with the assessment of permits as compared with unlimited-use passes are outlined, the benefits of tailoring prepaid mechanisms to the characteristics of user submarkets are summarized, and marketing-related benefits of the Fare Cutter Card approach are discussed.

Monthly or weekly passes were once quite common in the transit industry. Urban residents who used public transit regularly for work and nonwork travel found the pass efficient and economical. Because most transit users made at least some nonwork transit trips during the month, pass purchasers were not overly concerned with failing to receive full value from a pass if they missed a few days of work during the month.

During the 1950s passes tended to fall into dis-

use. For regular transit riders, the number of non-work trips fell; therefore, purchasing a pass was no longer an assured saving. At the same time, transit properties faced with financial difficulties either raised the price of the pass (expressed as a multiple of trips per month) or eliminated it completely.

Currently there is renewed interest in passes at many transit properties. As riding habits have not reverted to earlier patterns and financial problems are again a major concern, the question is, Why have passes once again become a focus of attention?

The reasons are diverse, but they may be grouped roughly into two groups: convenience to the transit user and benefits to the transit operator.

#### TRANSIT USER PERSPECTIVE

Convenience to the transit user relates mainly to the ability of the user to avoid inconvenient cash payments for boarding or getting a transfer. The general adoption of the exact-fare requirement, the elimination of change-making on vehicles, and rising transit fares have increased user requirements for change, perhaps to 6, 8, or more coins per day. With zone travel, the change requirements can increase further; even for a local rider the need to have change can be an obvious inconvenience that may discourage some potential riders. Purchase of a pass with one single monthly outlay--often by check--eliminates the need for coins for a full month; this may greatly improve the convenience and overall image of using transit.

In addition to convenience, when the pass is priced at or near the level of use of regular commuters, it offers significant economic benefits to riders who make more than 10 trips per week. Because of the reduction of off-peak trip making, and because of the need to make the instrument attractive to the largest portion of the market, many transit agencies reduce the price of the pass to allow a savings of 20 percent or more to commuter-only users. Often, the greater the overall orientation of the system to commuting, the greater is the discount offered to commuters. Commuter rail lines are the extreme of this case, with pass discounts often approaching 50 percent of the regular fare.

Other fare prepayment demonstrations have indicated that pass users do trade off convenience with economic savings, which suggests that the total prepayment market can be disaggregated into primarily price- or convenience-sensitive submarkets (1).

#### TRANSIT OPERATOR PERSPECTIVE

For the transit operator, the benefits of passes can include stimulation of the riding habit, improved cash flow, decreased cash handling, improved operations, marketing benefits, and ability to integrate merchant and employer support programs. Some of these effects, however, become significant only when a substantial portion of the riders use the pass--perhaps one-third or more of total riders.

Even with these benefits, both users and operators have major concerns about passes that have combined to limit their market appeal and resulting positive effects. For the user, the problems are most frequently related to cost or concern over loss of a pass. Purchase of a pass requires a substantial up-front outlay, generally 32 to 44 times greater than a single cash fare, which is often perceived by less-affluent users as a preclusive barrier. Typically, pass purchase is far more prevalent among riders in the \$10,000 to \$20,000 (or greater) income range than among those with incomes less than \$10,000, despite the higher trip rates usually associated with lower-income levels (2).

There is also the fear by the user that he will not be able to make sufficient rides during the month to recoup the cost of the pass. Even in cases where the pass price is set so low that it equals the cash fare for 16.67 round trips per month, or less than 4 per week, the effects of holidays, taking a few days off from work, being sick a day or two, driving some days, or even getting a ride from a friend on occasion may raise the uncertainty of pass use to outweigh the potential savings. Riders also tend to perceive a month as equal to 4 weeks rather than the operator's assessment of a month equaling 4.33 weeks. Because the majority of riders use transit only to and from work, there is little opportunity to make up for lost days by nonwork trips. The fear of paying more for a pass than would have been paid with cash is thus a substantial barrier.

The transit operator perceives the potential both for increased administrative costs and for loss of revenue from the most frequent riders who shift from paying cash fare to using a pass for all trips. Use of passes results in significant revenue loss from at least three sources: (a) discounts to regular users (twice daily), (b) discounts to intensive users (more than twice daily), and (c) fraudulent use of passes (e.g., multiple users). When offered at a discount, passes also stimulate peak-hour use, which may be more of a problem than a benefit for some systems. [Good design of a pass program can mitigate this problem, however (3).] On an allocated-cost basis, the commuter market is also least deserving of lower fares, which clearly results through passes. Equity issues also contradict discounting practices.

Overall, a transit property that decides to offer a pass is typically faced with conflicts between desires to increase convenience and promote ridership by offering a low-priced pass (33 to 37 monthly trips) and the increasingly vital concern of avoiding loss of revenue by giving away trips made by frequent riders for which cash fares are not, but could be, collected.

#### BRIDGEPORT PROGRAM

Since 1981 the Greater Bridgeport Transit District (GBTD) in Connecticut has been engaged in an ambitious program of pricing management. Under the sponsorship of the Office of Service and Management Demonstrations of UMTA, GBTD has undertaken to make fare programs and pricing of transit services an integral element of their operations and development strategy. To this end GBTD has introduced a market-segmented pricing structure and established innovative private-sector participation programs (e.g., merchant and employer contributions), and it also has established the full-time staff position of pricing manager to monitor, design, and coordinate all pricing and fare-related activities of the district.

The thrust of the GBTD pricing activities has been directed toward increasing ridership while maintaining revenues by (a) tailoring price structures and prepayment mechanisms to specific market segments and (b) involving the private sector in the promotion of specific prepayment elements.

Tailoring has been achieved by identifying the travel habits of specific market groups and offering a payment mechanism to these groups in ways that make it attractive to the target audience but does not result in loss of revenue from other rider groups. Tailoring also includes introductory and ongoing promotion efforts. For example, a commuter pass offered on the Fairfield Mini-Mover (suburban paratransit) service is aimed at those who use the

bus to access train service to New York. A distance-based fare scheme is incorporated into the pass system to equitably distribute relatively higher fares. Ticket sales have been introduced for off-peak users to reflect the lower fares and trip rates of elderly and youth riders. Promotion has focused on use of discount coupons rather than across-the-board fare reductions to naturally target discounts to price-motivated users and potential users.

Similarly, GBTD offers a Commuter Pass for its regular-route services that is based on 38 trips per month (\$23) and is good only on weekdays before 9:00 a.m. and between 2:00 and 6:00 p.m. The effective cost of this pass is reduced by the innovative Value Fare program, under which participating merchants offer discounts to pass purchasers in exchange for GBTD advertising in the bimonthly Value Fare Merchant Discount List. The potential sum of the discounts, now available at more than 130 stores and restaurants, far exceeds the full cost of a pass (see Figure 1). The benefits of the pass program have been further extended through an employer participation program, in which companies administer the program and in many cases subsidize all or part of the pass price.

Nevertheless, it was obvious to GBTD that a major share of its market would not be attracted to the Commuter Pass. Surveys of GBTD riders indicated three essential factors. First, ridership is not significantly peaked; rather, the hours between 9:00 a.m. and 3:00 p.m. serve only a slightly smaller percentage of total patronage than do the peak hours. Second, much of the GBTD patronage is composed of low-income individuals. Third, a substantial proportion of GBTD riders make more than 10 rides per week, i.e., more than just rush hours on weekdays.

If GBTD were to offer to this submarket an unlimited-use pass based on 40 or fewer trips per month, there was the danger of a significant revenue loss. The actual ridership level of this group is 11 to 20 rides per week, or 47 to 95 rides per month (Figure 2). If the pass price was set at a price high enough to reduce the potential loss, few members of this submarket would be attracted to or be able to afford the initial cash outlay required. To meet the needs of this group, GBTD designed the Fare Cutter Card. Figure 3 shows the Fare Cutter Card and the characteristics of its users, as well as the companion Commuter Pass.

The Fare Cutter Card, also called a permit, allows the user to ride at any time during the month but requires a cash deposit of \$0.25 (less than half the regular fare) at the time of each ride. The initial cost of the card is \$15, which is 65 percent of the cost of a Commuter Pass, thereby making the card more affordable to typical riders. At the same time, potential for revenue loss to GBTD is limited. The break-even number of trips is just more than 42 trips per month, which makes the card a sound investment for frequent riders. Even after the break-even point, however, GBTD still receives revenue from card users.

The basic rationale behind offering both a monthly peak-period-only Commuter Pass and the Fare Cutter Card is market segmentation, i.e., design according to the different travel submarkets served by GBTD. As shown by the GBTD trip rate distribution (Figure 2), the peak at 10 trips per week represents commuter-only users. The Commuter Pass should appeal to this group, who presumably earn relatively higher incomes and are more sensitive to the convenience of a fully paid pass. However, if the monthly pass was unlimited (i.e., valid at all times of day), it could be used by the substantial propor-

Figure 1. Excerpt from GBTD Value Fare Merchant Discount List.

**\$1.00 off any Birthday Cake.**

1 coupon per order, not to be combined with Senior Citizen discount.

This ad is not a VALUE FARE coupon. Ads cannot be redeemed.



ANN'S NEWFIELD BAKERY  
1691 Main St., Bridgeport  
368-3491  
1214 E. Main St., Bpt.  
576-8867  
3657 Main St. Stratford  
378-5480

**Buy one soft sundae & get second free**

Limit 1 per customer

Ads cannot be redeemed. This ad is not a VALUE FARE coupon.



Carvel Ice Cream Store  
1668 Park Avenue  
Bridgeport 579-6318

**2 pieces of chicken, 1 potato with gravy and 1 dinner roll for \$1.25 with coupon.**

Limit one per customer. Two coupons per customer.

This ad is not a VALUE FARE coupon. Ads cannot be redeemed.



KENTUCKY FRIED CHICKEN  
4301 Main St., 374-1555  
324 Boston Ave., 334-7339  
1322 Barnum Ave., Sfd.  
375-8408

**Free gift with any purchase of \$29.95 or more.**

Seiko Bulova watches

Ads cannot be redeemed. This ad is not a VALUE FARE coupon.



Shaw Jewelers, Inc.  
1128 Main Street  
Bridgeport 334-0943

**Bowl two games, get third free.**

Limit 1 per customer

This ad is not a VALUE FARE coupon. Ads cannot be redeemed.



TOWN FAIR LANES  
1791 Stratford Ave.  
Stratford, CT.  
378-9338

**50¢ off one dozen doughnuts.**

"You've tried the rest, now try the best!"

Ads cannot be redeemed. This ad is not a VALUE FARE coupon.

DOUGHNUT INN  
426 Old Stratfield Rd.  
Fairfield  
Trumbull Shopping Park  
Trumbull  
1030 Stratford Ave.  
Stratford

*"It's like not paying any fare at all."*

tion of the riders who make more intensive use of the system, which would cause a significant revenue loss. The Fare Cutter Card mitigates this problem. Moreover, GBTD also instituted token use when the passes were introduced, which appealed to less-than-commuter users and reduced pressure for pass discounts.

The revenue effects of these different payment mechanisms are shown in Figure 4. The diagram shows that an unlimited-use pass would lead to a revenue loss to the system for all rides more than 38 per month. With the Commuter Pass and Fare Cutter Card, a second break-even is set at 43 rides per month; even for those riders taking more than 43 trips, there is a continued return of revenue to the system, albeit at a lower rate.

The GBTD prepayment strategy includes the following elements.

1. Due to restrictions on pass use (the limited-use Commuter Pass and cash-drop requirement of the

Figure 2. Market-segmented fare mechanisms.

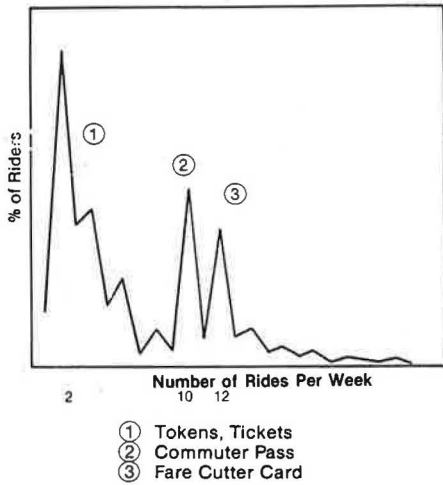


Figure 4. Fare revenue variations.

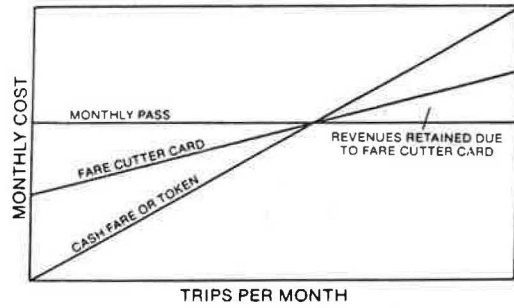


Figure 3. GBTD market-segmented and restricted-use passes.



- User Characteristics\*
- wide range of trip rate variation
  - peak and off-peak use
  - purchasers have higher sensitivity to front end cost
  - purchasers have lower valuation of convenience
  - purchasers have lower income



- narrow range of trip rate variation
- peak-only use
- purchasers have higher income
- purchasers have lower sensitivity to front end cost
- purchasers have higher valuation of convenience

\* Per program design; market response evaluation pending.

Fare Cutter Card), revenue loss is reduced compared with unlimited-use passes.

2. The low front-end cost of the Fare Cutter Card compared with the Commuter Pass or an unlimited-use instrument helps make prepayment affordable to a greater portion of the GBTD low-income market. The Fare Cutter Card approach may be a key for the efficient extension of prepayment in other cities.

3. GBTD has achieved market segmentation with tokens for infrequent users, the Commuter Pass for daily commuters, and the Fare Cutter Card for those who are heavy users of transit. The mechanisms are tailored to user characteristics.

Comparative pricing and revenue effects for the Fare Cutter Card versus the unlimited-use pass approach is detailed in Figure 5. In relation to an unlimited-use pass, benefits of the Fare Cutter Card can be summarized as (a) its purchase price can be up to 50 percent less, (b) the break-even trip level

can be reduced by up to 15 percent, and (c) revenue loss can be reduced by up to 50 percent. As noted, pass-related revenue loss is by no means trivial. If an average effective discount of 20 percent is absorbed by the pass program (as in the example cited in Figure 5) the total revenue loss can exceed \$600,000 annually for a medium-sized property with a well-established pass program.

The three different price levels for the Fare Cutter Card cited in Figure 5 (\$15, \$12, and \$10) actually represent different prices that the card has sold for in Bridgeport. A temporary price reduction and special coupon discounts have been used to stimulate development of the total pass program and to experiment with market responses to the instruments. The GBTD program is now just 1 year old, and full knowledge of the new fare instruments is clearly dependent on continued development of the program, which to date, for reasons particular to Bridgeport, has been slower than anticipated. Yet early evidence, based on limited observation, indicates that the Fare Cutter Card can fulfill its objectives. Although the Fare Cutter Card submarket is about 75 percent larger than that of the Commuter Pass, its sales have exceeded 3 times those of the Commuter Pass. Fare Cutter Card sales were particularly responsive to the coupon discount that reduced the price of the card to an extremely affordable price of \$10.

It must be stressed that the data reported here are preliminary; they are more the product of conceptualizing and design than validated experience. Pass sales in Bridgeport have yet to reach 200; the target sales level is 800. The slow growth is not particularly discouraging because there had been no pass program in Bridgeport and because initial prices of the new passes were purposely set high. Limited outlets, marketing, and other Bridgeport problems do not reduce the validity of the Fare Cutter Card and market-segmentation approaches. A more complete evaluation is planned.

EVALUATION ISSUES

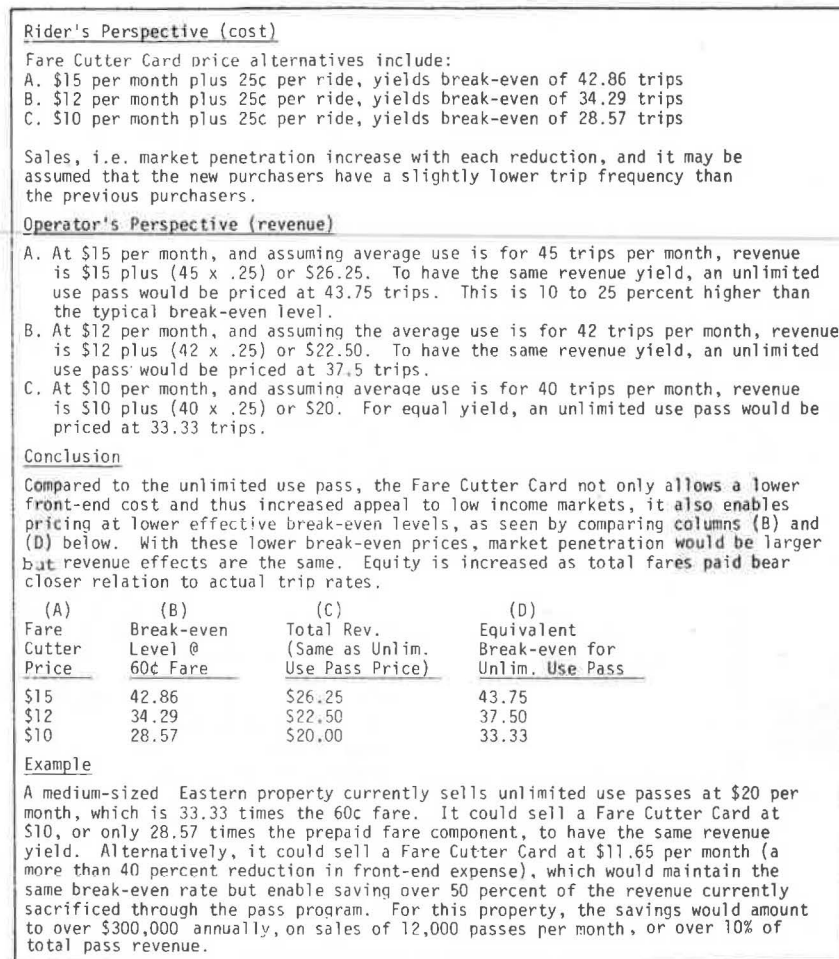
Although the Bridgeport experience has provided useful insight about transit passes, a great deal remains to be learned about the role that permits can play in improving transit revenues and marketing programs. Theory favoring permits over passes has also been noted (4).

Evaluation issues for investigation in Bridgeport include the following.

1. Is there a market group desiring a fully paid unlimited-use pass? Is the lack of such an instrument an impediment to a prepayment program? Are restricted instruments confusing?

2. Who are the primary users of the Fare Cutter Card and the Commuter Pass? How do the groups dif-

**Figure 5. Comparison of Fare Cutter Card and unlimited-use pass: prices, break-even levels, and revenues.**



fer in socioeconomic, travel behavior, and other factors?

3. What is the effect of lower front-end costs on pass or permit purchases? Is fear of pass loss reduced? Is fear of not making the break-even level of trips reduced?

4. What are the revenue effects of market-segmented and restricted-use instruments as opposed to unlimited-use passes?

5. Does the Fare Cutter Card induce additional trip making?

6. For Fare Cutter Card pricing, is a low front-end cost plus high drop-fare (i.e., \$0.25) preferable to a high front-end plus low drop-fare (i.e., \$0.10) combination?

7. Can the Fare Cutter Card be priced at a lower break-even rate to have the same revenue effect as an unlimited-use pass? Are transferability problems reduced?

8. Is the Fare Cutter Card perceived as a lower risk investment?

9. Have peak-period-only users (i.e., those intended for the Commuter Pass) been attracted to the Fare Cutter Card?

10. Is the market-segmentation framework a useful approach for improved transit marketing?

#### EXPERIENCE IN OTHER CITIES

Currently, use of reduced-fare permits in the transit industry is limited. (Identification cards used

to show eligibility for elderly and student reduced fares are not considered permits in this discussion.) The current American Public Transit Association "Transit Fare Summary" (5) indicates that only three other systems currently use permits. In all three cases the permits used are closer to unlimited-use passes than to the Bridgeport Fare Cutter Card because the drop-charges are lower than the \$0.25 charged by Bridgeport. Two of these systems have used permits for many years, and a larger number of systems relied on permits in earlier decades. It has been the premise of this paper that permits should be revitalized. A brief review of the other systems that currently use permits is warranted.

#### Pittsburgh

Before October 1982, Pittsburgh [Port Authority Transit (PAT)] had both weekly and monthly permits. At a \$0.75 base fare, the weekly permit sold for \$5.50 with a \$0.10 drop, and the monthly permit sold for \$21.25 with a \$0.10 drop. The break-even levels were 8.46 trips per week and 32.64 trips per month. Sales of approximately 10,000 weekly permits and 20,000 monthly permits were common.

In October 1982, when PAT shifted to \$1.00 base fare, the price of the weekly permit was raised to \$8 plus \$0.10 per trip, and a new monthly unlimited-use pass for \$40 was instituted. The break-even trip rate on the weekly was raised to 8.89, an increase

of more than 5 percent beyond the fare increase. The break-even rate of the new pass is 40 trips. Preliminary sales patterns show marked adjustment, with the weekly instrument accounting for a 40 percent larger share and the monthly instrument accounting for a 20 percent smaller share. PAT sought to satisfy a long-standing request for a fully paid instrument and as can be seen, it raised the break-even level on the monthly pass.

Assessment of PAT's instruments is further complicated by transfer fees that pass users can avoid. Nevertheless, the mechanisms and their continued market response are clearly worthy of further investigation. If the market-segmentation and low front-end cost perspectives have merit, the additional features of the PAT weekly permits--the appeal of low purchase prices to low-income users and high-priced monthly passes for higher-income users--may be improvements over the Bridgeport design, albeit at the high administrative cost of reliance on weekly instruments.

### Jacksonville

Jacksonville Transit Authority (JTA) has similarly found a permit attractive for many years, but it has applied permits and passes in the reverse of the PAT approach. Under a \$0.50 fare, JTA sold a monthly permit for \$18. It carried a fare value of \$0.50, but because many JTA trips require one or more zone charges, the drop-fee reflects a distance surcharge. When JTA changed to a \$0.60 fare, the permit was raised in price to \$22 per month, a slightly larger increase than that of the base fare. JTA also has a weekly fully paid pass, but it is priced high (\$10 and \$12 under the \$0.50 and \$0.60 fares, respectively), as it is used almost exclusively by transferring riders who must pay double fares on the JTA system. If double fares are taken into account, the weekly pass break-even level is 10 trips per week, or 43.33 per month, as opposed to 36.67 for the monthly permit. Sales of both instruments are now constant at about 1,000 per month. The compatibility of a permit with distance-based fares is a useful observation from Jacksonville.

### San Mateo

The experience in San Mateo, California, demonstrates that a permit is not always popular. San Mateo Transit has a low fare; \$0.25 until recently, and currently \$0.35. The permit reduces the fare by \$0.15. Formerly, the user was required to pay an additional \$0.10, and is now required to pay \$0.20. The instrument sells for \$5 per month and has a break-even level of 33.33. It has never been popular, perhaps because a reduced-fare permit is not sensible for low-fare systems. The recent change--making \$0.20 extra fare required, leaves the instrument offering little in terms of savings or convenience.

### MARKETING AND PROMOTIONAL APPLICATIONS

The benefits of prepaid passes in extending transit marketing opportunities (e.g., employer or merchant programs) are significant. The Fare Cutter Card approach may be able to increase these opportunities.

Employer involvement in pass programs is always contingent on there being a large enough number of riders and pass buyers. To the extent that a Fare Cutter Card increases the market for prepayment, employer involvement may increase to include smaller firms that otherwise would not participate. Merchant programs similarly require a critical mass of participants.

An additional benefit of the Fare Cutter Card is its perception as a fair split by employers willing to assist employees with their bus fares. The base cost component of the Fare Cutter Card can be (and has been) perceived as analogous to the free parking element of automobile commuting expenses that employers support, and the \$0.25 per ride component of the Fare Cutter Card is perceived as being similar to gasoline expenses. Although the cost of an unlimited-use pass can be divided similarly, the ready-made perception of this fair split is conducive to ensuring good employer-support agreements.

The combination of prepaid and pay-as-you-go fares is perceived as reasonable and equitable from the standpoint of both employers and users. For the employers, the requirement for a fare-box drop serves to limit the number of employees who accept the subsidy to those who truly intend to use it. Moreover, even a minor subsidy (i.e., a few dollars) will make a Fare Cutter Card extremely affordable. In Bridgeport, a subsidy by General Electric (\$5 per month) reduced the price of the Fare Cutter Card to only \$7. A Fare Cutter Card does not, however, meet the needs of the employer willing to subsidize 100 percent of employee fares. The companion Commuter Pass does, however.

A further benefit of the Fare Cutter Card is that it readily facilitates additional fare variations, both as permanent policy and for intermittent promotional purposes. For example, the \$0.25 per ride charge could not apply on Sundays, when ridership is particularly low. The \$0.25 supplement could also be a peak-period-only surcharge. Or perhaps the \$0.25 additional charge could be applied at all times except between the peak periods on regular weekdays, when lower fares are justified. If a large share of total riders use passes, this approach has benefits similar to a downtown free-fare zone in stimulating daytime transit use by commuters. The additional charge could also be suspended for occasional promotions, such as before Christmas or during other special shopping periods. Overall, the Fare Cutter Card enables more specific and targeted use and therefore is more cost effective in meeting the needs and opportunities that pricing and promotional policies can and should address.

### SUMMARY

Although the Fare Cutter Card does not offer the full level of convenience of a flash pass, it can be a valuable instrument for many transit properties, particularly as fares increase and the search for operational and revenue efficiency increases. Because previous research and demonstrations have indicated that convenience is not the primary factor influencing pass purchase (1), lower initial price of the Fare Cutter Card and its justified pricing at lower break-even levels may be more operative factors in making prepayment attractive to a significantly larger proportion of the transit market. Moreover, as fares tend higher, the barrier of the front-end cost becomes more important and may limit or even reduce the market for conventional unlimited-use passes.

Thus the Fare Cutter Card approach may markedly extend the pass market and increase the benefits of prepayment for the operating agency. At the same time, the cash-drop aspect of the card diffuses concern over the free rides given to some users through unlimited passes, and the resulting revenue loss. The further ability to couple the Fare Cutter Card with targeted promotions and merchant and employer participation programs makes it an instrument that may be the contemporary choice for many operations.

## ACKNOWLEDGMENT

This paper is an interim report on elements of the pricing management program instituted at the GBTD under sponsorship of the Office of Service and Management Demonstrations, UMTA.

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*Notice: The opinions expressed in this paper are those of the authors and do not reflect the policies of the sponsoring agencies.*

## AC-Muni Joint Monthly Pass: A Look at the First Step Toward Fare Integration in the San Francisco Bay Area

JOEL MARKOWITZ

The first joint monthly transit pass in the San Francisco Bay Area was introduced in September 1981. Purchasers of the new pass were surveyed in October 1981, and the trends in joint and separate pass sales were monitored. The pass was targeted at a specific segment of the commuter market, and apparently it was successful in reaching that market. Purchasers of the new pass are extremely satisfied with it; administration is simple; distribution is centralized and inexpensive; and revenue losses from a promotional discount are minimal. Since introduction of the joint pass, however, sales have flattened, which reflects the restricted market and the diminishing value of the promotional incentive because of rising fares. Local efforts are continuing toward developing a more integrated regional fare system on which to base interoperator pass prices, a technological development project to adapt rapid transit station automatic fare gates to accept joint passes, and a promotional effort to increase pass sales through employers.

In January 1982 the final report of the Joint Fare Prepayment Demonstration Design Project was submitted to UMTA in three volumes (1-3). The project was carried out by the Metropolitan Transportation Commission (MTC) of the San Francisco Bay Area under a grant from the Office of Service and Methods (now Management) Demonstrations. The objective of the project was to identify, evaluate, and select alternatives for achieving joint fare prepayment arrangements (such as tickets or passes) among several of the large, independent transit systems operating in the area. The hope was that a joint prepayment scheme would help achieve a higher degree of fare integration in the region. In this paper the final project reports are updated based on the early experience with the first product of the joint fare program—a joint monthly pass.

## BACKGROUND

The program was originally intended to design a joint fare prepayment demonstration that would then be implemented by the operating agencies in a subsequent phase of the demonstration. However, a succession of events, from initial project planning in 1978 to the present, reoriented the approach. State laws affecting transit finance and operator-MTC relations were some of the most significant external influences on the project.

A long history of concern for coordination among the several agencies (some studies date back 25 years) was finally catalyzed in 1980 by a crisis in transit financing that required concerted action by the three largest transit agencies to raise fares the same year. The identification of substantial local funds (from the sales tax) to pursue joint passes among these three operators obviated the need to independently press a follow-up UMTA demonstration. Instead, activities under the project grant were reoriented to support the local effort.

One of these activities was the description of the current market of transit pass users and the estimation of the market for future joint passes. Attention and resources were focused on a survey of purchasers of the two major existing individual system passes. The survey, conducted in October 1980, is described in a paper by Dittmar (4) and in Volume 2 of the project final report (2).

At the outset of the project there was no established date for introducing the first multioperator