A VITAL AND ECONOMIC SOLUTION
IN A CHANGING NORTH AMERICAN MARKET

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Summary

The Print Measurement Bureau (PMB) has taken a major step in going beyond solely using individual demographic characteristics in ascribing non-respondents to the business products section of Canada's leading syndicated consumer media/marketing survey. As a result, it is one of the only data bases of its kind to embrace two different ascription hierarchies for two separate parts of the study.

Test results from a distinct and different ascription process for business products on PMB '91 ('89 and '90 interviews) clearly showed that such a business product ascription had an identifiable effect on business product data when compared to the data produced by the existing traditional individual demo based ascription and that the "new" resulting data on business products was directionally correct and believable. Although more extensive testing and analysis is required on this business ascription process and will be pursued by PMB, the acceptance and implementation of a two ascription processes within one of the worlds leading syndicated consumer data bases potentially opens a Pandora's Box in the area of ascription and fusion in North America.

This paper will review the rationale, the ascription characteristics hierarchy, the analysis of the business data differences and the importance of the data produced by this additional separate ascription. It will also comment on the vital importance of ascription as an economic solution to todays media/marketing data needs while recognizing that in extensively questioning ascription, we may be awakening a sleeping giant, at least in North America.

Background

In the current economy more and more information is required by marketers, media buyers and media sellers based on smaller and smaller budgets from respondents who are evermore elusive and less cooperative.

PMB, like so many other syndicated surveys, collects data via a two stage process from the same respondent, not all of whom complete the second and vital product data collection stage. The marketplace and economies demand that the two sets of data be coupled and no respondents be lost due to incomplete data thereBy reducing the precision of the study via a smaller sample size and increased response bias.

The process of ascription and the increasing power of computer technology offer an evermore economic means of providing users of the data complete information for all respondents when the data is coupled. But in "donating" responses to respondents of a national consumer survey who did not complete the product data, especially when some of that product data is business products, how reliable is the ascription process?

During 1991 and early 1992, PMB took a major, leading step by investigating a second, additional "business products" ascription despite the minefield of unanswered questions in the ascription arena and the lack of a full array of pragmatic internationally accepted guidelines.

At the request of some of Canada's leading business publications and, as approved by the PMB Research Committee, the PMB Ascription Committee addressed thè idea of the design and implementation of a distinct and separate ascription process for business products based on predominantly individual business characteristics rather than the individual demographic characteristics currently used for the ascription process for general consumer products and services. The objective was to address those publishers' overall

concerns about the incidence level of certain key business product usage categories under the existing ascription process.

Needless to say, that once the Ascription Committee agreed that incidence levels for ascribed data for:

i)   membership of frequent flyer programs
ii) 4+ flights on business in past year
iii) business purchase influence $10,000+
iv) business purchase influence on communications/EDP

were unusually low compared to actual complete respondent data and compared to existing industry data, they set about to test whether a separate and distinct business ascription would have an identifiable effect upon those specific business products, as well as others and whether the effect was significant and believable.

This paper will:

i)   identify in some detail the rationale and development of a new business ascription hierarchy of variables, i.e., find the discriminators from the characteristics obtained in the personal interview on which to match respondents without business product data to those with business product data
ii) comment on the differences between the new business hierarchy and the existing individual demographic based hierarchy
iii) briefly review the key technical difficulties which the supplier, Thompson Lightstone and Simmons, had to overcome
iv) review the highlights of the comparisons between the currently ascribed data and the business ascribed data in three key areas:

           a)   business travel
           b)   business purchasing
           c)   frequent flyer program membership

v) provide further evidence of the importance of this additional ascription process
vi) outline the current plans for testing the new business ascription and the opportunity it offers regarding better ascription of consumer data currently ascribed on an individual demographic characteristic basis; and
vii) offer additional thoughts and considerations on ascribing data from the perspective that ascribing answers to each and every question based on a unique ascription hierarchy of discriminators would be a massive and still prohibitively expensive undertaking.

The Approach for a New Business Ascription Process

In the Spring of 1991, primarily as a result of continual questioning of the PMB airline/flying data projections and the large discrepancies between actual and ascribed data for the Canadian in-flight and frequent flyer magazines - Canadi>n, En Route (Air Canada) and Inside Guide, the PMB Business Ascription Committee was established.

By December 1991, PMB had approved the investment of $15,000 to test PMB '91 ('89 and '90 actual interview data) for a new "business" ascription of non-respondents to the business products questions. These questions covered business travel including membership of frequent flyer programs and over 40 business purchasing categories.

The new ascription variables selected by the Committee from the array of variables collected from all respondents in the personal interview part of the study were as follows:

1. Occupation (broad and fine)
2. Personal Income (broad and fine)
3. Business Purchase Influence
4. Flying on Business
5. Company Size

In view of budget and the known relationship of the available variables to business products no discriminate analysis of these variables was conducted.

These variables were put in highest priority with the original or existing ascription individual demographic variables being of less importance. Selection of these variables starts to recognize the difference in behaviour and lifestyles which are often separate and distinct from demographics.

In order for these variables to be implemented into usable ascription criteria appropriate breaks were determined for each of the variables. Two of the variables, Personal Income and Occupation were broken down into "broad" and "fine" categories. The following is the order of importance for the criteria and the breaks for each:

Ascription Characteristics Hierarchy

"New" Business
Rank Characteristic

1   Occupation (Broad)
        Prof/Mgr/Self-Employed
        Other Employed Full Time
        Employed Part Time
        Unemployed/Retired

2   Personal Income (Broad)
        $50,000+
        $20,000-$49,999
        < $20,000

3   Business Purchase Involvement
        Yes
        No
        No Answer/Not Stated/Not Applicable

4   Commercial Flights for Business
        Yes
        No

5   Employment (Fine)
        Professionals
        Sr. Managers/Owners
        Other Managers
        Technical/Sales/Teaching/
         Other White Collars
        Clerical/Secretarial
        Skilled/Unskilled/Primary
        All Other

Ascription Characteristics Hierarchy (cont)

"New" Business
Rank Characteristic

6   Personal Income (Fine)
        $75,000+
        $50,000-$74,999
        $35,000-$49,999
        $20,000-$34,999
        <$20,000

7   Company Size
        < 10 Employees
        10-49 Employees
        50-99 Employees
        100-249 Employees
        250-999 Employees
        1000+ Employees
        Refused/Don't Know/Not Stated/
          No Answer/Not Applicable.

The original existing individual demographic ascription characteristics were followed
sequentially after this:

Existing Individual

New Rank	Characteristic	Old Rank
8	Sex	1
9	Language	2
10	Age (Broad)	3
11	Province (Broad)	4
12	Professional/Business Mgr	5
13	Household Income (Broad)	6
14	Employment	7
15	Home Ownership	8
16	Marital Status	9
17	Presence of Children (Broad)	10
18	Education	11
19	Occupational Status	12
20	Region	13
21	Number of Adults in Household	14
22	Number of People in Household	15
23	Province	16
24	Household Income	17
25	Presence of Children (Fine)	18
26	Age (Fine)	19
27	Type of Dwelling	20
28	Television Viewing	21
29	Principle Grocery Shopper	22
30	Community Size	23
31	Strata (Fine	24
32	Strata (Broad)	25

These new business ascription criteria were used to ascribe the data in the following data areas:

1.   Business Travel (Section 15)
2.   Business Purchasing (Section 20)
3.   Membership in Frequent Flyer Program (Section 1408)

The difference in ascription characteristics and the hierarchy is self-evident. The concern with regard to approximately 20% of respondents with no (business) data from the product questionnaire "leave-behind" part of the Study and the effect of the existing ascription on the already low estimates for various flying data from the 80% who did respond to the product data cannot be overemphasized. Remember for business travel and business purchasing the existing ascription process had been clearly shown not to work; notably the failure of the existing process to ascribe business travel by air to people who have already claimed business travel by air (410 respondents). The comparison for '89 actual data is shown in Chart (I).

CHART I

Involvement	Took Business Flight		Any Business Purchase	
	Actual	Ascribed	Actual	Ascribed
Total # Respondents (unweighted)	639	189	2262	472
Product Profile				
Any Business Flights	71%	32%		
4+ Business Flights	27%	9%		
Any Business Car Rental	33%	14%		
PI $1,000+			40%	28%
PI $10,000+			24%	17%
PI Computer HW/SW			18%	15%

PMB 1989 Actual. 6,594 Fully Completed Product Questionnaires

N.B.   1,358 records were ascribed for '89 actual data and
         1,537 records for '90 actual data

In North America co-operation and response rates are continuing their decline which puts a further emphasis on more rigourous, viable, economic, ascription procedures developed possibly for at least each and every major product category.

For those technically oriented a couple of additional points.

1.   SMRB was responsible for all ascriptions over all the years involved so that the only differences in resulting data were due to changing the ascription characteristics and their hierarchy, i.e., there were no model effects.

2.   Two of the "new" business ascription criteria used are screened questions and so not all potential donor respondents would have responses. This, was felt, would only **improve** the donor selection and therefore the resulting data

3.   The relative size of donor files were extremely large 6,594 for 1,358 non-respondents from '89 actual and 5979 for 1,537 non-respondents from '90 actual.
From their outstanding gold medal award paper Data Fusion An Appraisal and Experimental Evaluation presented at the MRS Conference in 1989 by Baker, Harris & O'Brien . . . "the accuracy of the fusion process is a function of the size of the donor file". From Performance evaluation of the Scarborough Ascription Model by Edward Townsend, 1992 . . . "Small incidence measurements, ... are more susceptible to alteration during the ascription process. The larger the donor pool, the smaller these variations from actual data are . ."

4.   The matching level of each of the criteria is illustrated in the following charts for each of 1989 Actual (Donor Base 6594) and 1990 Actual (Donor Base 5979) interviewing years.

        In both years only 47 respondents ('89) and 52 ('90) respondents with no business product data, 3.5% and 3.4% of non-respondents respectively, could not be matched to donors based on all the "seven" new business ascription criteria (See Charts II and III).

5.   In order for the new business ascription criteria to be utilized in ascribing the data for these areas a specific procedure was used. The first step in this procedure was to identify all records which have had the product profile ascribed. All records which were ascribed had a marker in a specific column of the datafile. For each of these data records which are marked as being ascribed, the data in the cards to which the new ascription was applied were blanked out. The ascription process was then run using the new criteria. The newly ascribed data placed in the appropriate data cards. All other data for the record was left untouched, containing the data from the original ascription process. Once the data had been ascribed to the appropriate data locations, cross-tabs were run to show what, if any, differences occurred in the data.

Highlights of Comparisons Between the "NEW" Business Ascription and Existing Household Based Ascription

A separate ascription process for business products was feasible and was implemented on PMB '91 ('89 actual and '90 actual) with little difficulty. The test indicated that the "new" ascription process was probably viable. Probably because at the time, PMB, a multipartite not-for-profit organization, had neither the time nor the money to invest in the traditional and ultimate test of taking the "new" ascription and applying it to a random selection of respondents with known business product data. This procedure is typically used to evaluate the ascribed results with actual respondent results:

1.   by examining the closeness of fit of the resulting projected data, and
2.   via a bull's-eye analysis comparison of respondent counts generated by the ascription versus the real or known counts for the particular question.

This work is now schedule by PMB for '93 and offers some special opportunities to assist the evolution of the "art" of ascription. This will be dealt with in the conclusion of the paper.

Each of the bases examined for this test exhibit the same basic trends. Business travel and associated activities show an increase in respondents with the "new" business ascription. Business purchase influence has increased in all categories. The area of job involvement, areas of operation, gross revenue, and financial institutions used by the corporation show changes but there are no discernible trends evolving from the new business ascription.

The comparative analysis produced a vast array of tables too numerous to review. However, as this project was initiated by the in-flight and frequent flyer magazines, examining the change in number of respondents for just a few business target groups against frequent flyer program members and business trips by air will underline the potential of a different ascription to move under-estimated data closer to well established and agreed industry estimates and as importantly to data from actual respondents.

It must be recognized that PMB estimates of frequent flyer program members were about 60% of the industry figures at the time and the PMB estimate of the number of people flying on business was also considered around half of the estimated actual total projected number.

Readers of this paper should also know that other factors notably non-response bias have been hypothesized as being part of the cause for the low PMB estimates in the "flying" targets. Regrettably testing this hypothesis while achievable was far too costly for PMB.

The following tables need no sophisticated analysis to confirm that the "new" business ascription moves the total number of respondents and therefore the projected population in absolutely the right direction. The proposed "closeness of fit" and "bull's-eye" analysis will provide an indication of the correctness and rigour of the ascribed data.
See Charts IV, V, VI and VII.

As a further check on the new business ascription compared to the existing ascription process, the new profile of non-responders was compared to their existing profile from the old ascription based on the 5 key characteristics used in the new business ascription for 4 key target groups.

		Existing Ascription # Cases	New Business Ascription #Cases
Target Group			
1.	Membership in Frequent Flyer Programs	1183	1201
2.	4 Business Flights in Past Year	446	526
3.	BPI $10,000+	1460	1468
4.	BPI Communications/EDP	1579	1604

See Charts VIII, IX, X and XI.

These profiles confirm the need to execute a more detailed analysis of the discrimination level of the ascription characteristics to be used across the wide range of business data to be ascribed. As mentioned earlier in the paper, in producing "better" data, the Ascription Committee did not have the budget required to more scientifically determine the discrimination level of the many variables (from the personal interview portion of the study) that could be selected as common donors across various business products. It is highly probable therefore that even if the new business ascription is found to be reasonably robust, the key to selecting which characteristics to include, how to group them and in which hierarchy remains elusive. The danger of inputting data that is only loosely related to the required information is recognized fully.

The Unique Opportunity Offered PMB and other Major Consumer/Business Databases by the Two Concurrent Ascription Processes now implemented within PMB

Earlier it was mentioned that the closeness-of-fit and "bull's-eye" analysis will be performed by PMB on a random selection of approximately 1000 respondents with known or actual business data and compared not only to their new ascribed data but also to their old ascribed data.

Allowing for some technical considerations, i.e., is 1000 a large enough sample; the ratio of the donor pool to the ascription pool must be similar to the current PMB ratio; only non-control variables can be evaluated etc., the process is quite straightforward albeit the test sample finishes up with three sets of data.

Comparisons can be made against a wide variety of product data based on a respondent's actual vs. business ascription vs. existing consumer ascription and evaluated on two measures : closeness of fit (least squares) and bull's-eye (comparison of respondent counts) analysis techniques, i.e., assess the disparity of two collections of ascribed data.

A valuable array of products and services could be examined in that the business ascription might work better on some consumer or lifestyle activities than the existing consumer ascription process, i.e.:

        business products (similar to those already examined directionally)

        lifestyle - movies, buying book, etc.

        consumer - VCR's, cereals, cars $40K+, cars less than $10K, etc.

        fun products - dog in house, avid tennis player, etc.

        psychographics (not currently ascribed but a potential opportunity for investigation)

Examination of products with high/low purchase incidences or indices could be most insightful, notably if such products are correlated to age, income or education. High education, or possibly, high income products may be "better" ascribed by the business ascription process. From such analysis further insights to the selection and grouping of common donor characteristics may be found.

It may indicate that each product category requires a different set of characteristics, groups or hierarchy to produce the "best" results. It is clear that the power and economy offered by computers in finding donors in large "incomplete" databases is growing almost exponentially. The cost of matching donors to receivers is therefore a declining problem. What is desperately required are full, complete and pragmatic industry accepted guidelines to assist in the statistically reliable approach to the selection, grouping and hierarchy of the donor variables to be used for the categories concerned, relative size of donor files, how often a single donor can be used, etc.

Worldwide Symposia have a special responsibility to the media buyers and sellers of print who use readership and product data. These people want single source, complete, reasonably accurate data base projected to a single universe or population.

In the final analysis most of them do not care nor really understand two-part surveys and ascription (or fused data bases). Minimizing non-response, item non-response, respondent error, no answers, etc., is our responsibility to these users who, despite all our warnings, will continue to use data in dangerous ways.

The need for ascription (and data fusion) is surely going to increase significantly as our data users demand ever more information on ever more target groups who are becoming less and less responsive in the field.

While supporting every initiative to generate the highest possible response rates in (two-part) surveys, significant progress on ascription (and data fusion) is required to provide data users what data users ultimately require.

The new PMB business ascription process already adds to the body of knowledge on ascription by confirming the value of a separate business ascription for business product categories in a national consumer survey. It may shortly throw more light on its value in other product categories.

The world appears to be stuck on one mode of ascription and it is time to move on. This paper reflects the results of a real, common sense, research driven approach to an ascription that went beyond individual demographic characteristics because they were not acceptable to business magazines.

Should this ultimately lead to the development of unique donor characteristics for each product or category in two-stage single surveys, i.e., ascription, or, for each product or category in the fusion of two separate surveys, our clients - the users of such data - will have "better" data on which to make multi-million dollar decisions.

Has this paper opened a Pandora's Box concerning ascription and fusion in the syndicated study arena in North America? Perhaps, but it has already been opened in Europe. If it has awakened a sleeping giant in North America than it's none too soon. My hope is that this paper will result in the development of the first set of pragmatic industry guidelines for ascription, which will serve us all in embracing a vital and economic solution to a significant research dilemma.

ACKNOWLEDGMENTS

CHART II

Business Ascription Criteria - 1989 Interviewing

MAJOR VARIABLES	CATEGORIES	ASCRIPTION RESULTS	
		NUMBER MATCHED	%
Employment (Broad)	Professional/Manager/Self Employed Other Employed Full-time Employed Part-time Unemployed/Retired	1358	100.0%
Personal Income (Broad)	$50,000+ $20,000 - $49,999 <$20,000	1358	100.0%
Business Purchase Involvement	Yes No No Answer/Not Stated/Not Applicable	1358	100.0%
Commercial Airline Flights for Business	Yes No	1355	99.8%
Employment (Fine)	Professionals Sr. Managers/Owners Other Managers Technical/Sales/Teach/Other White Collar Clerical Secretarial Skilled/Unskilled/Primary All Other	1345	99.0%
Personal Income (Fine)	$75,000+ $50,000 - $74,999 $35,000 - $49,999 $20,000 - $34,999 <$20,000	1340	98.7%
Company Size	< 10 employees 10 - 49 employees 50 - 99 employees 100 - 249 employees 250 - 999 employees 1000+ employees Refused/Don't Know/Not Stated/No Answer/ Not Applicable	1311	96.5%

CHART III

Business Ascription Criteria - 1990 Interviewing

MAJOR VARIABLES	CATEGORIES	ASCRIPTION RESULTS	
		NUMBER MATCHED	%
Employment (Broad)	Professional/Manager/Self Employed Other Employed Full-time Employed Part-time Unemployed/Retired	1537	100.0%
Personal Income (Broad)	$50,000+ $20,000 - $49,999 <$20,000	1537	100.0%
Business Purchase Involvement	Yes No No Answer/Not Stated/Not Applicable	1536	99.9%
Commercial Airline Flights for Business	Yes No	1536	99.9%
Employment (Fine)	Professionals Sr. Managers/Owners Other Managers Technical/Sales/Teach/Other White Collar Clerical Secretarial Skilled/Unskilled/Primary All Other	1527	99.3%
Personal Income (Fine)	$75,000+ $50,000 - $74,999 $35,000 - $49,999 $20,000 - $34,999 <$20,000	1520	98.9%
Company Size	< 10 employees 10 - 49 employees 50 - 99 employees 100 - 249 employees 250 - 999 employees 1000+ employees Refused/Don't Know/Not Stated/No Answer/ Not Applicable	1485	96.6%

CHART IV

MEMBER OF FREQUENT FLYER PROGRAM
(Respondent Counts)

Base (%)	Old Ascription	New Ascription	Change (%)	New Total Base	Change to Total Base
12+	249	267	+ 7%	1201	+ 2%
Top 20% P.I.	154	184	+ 19%	771	+ 4%
BPI	24	22	- 8%	123	- 2%
Travel on Comm. Airline Past 12 Months re Business	70	176	+151%	687	+18%
Managers	68	90	+ 32%	379	+ 6%
Snr. Managers	34	36	+ 6%	143	+ 1%
SPBM's	91	118	+ 30%	508	+ 6%

Source: PMB '91 ('89 and '90 Interviews)

CHART V

BUSINESS TRIPS BY AIR

IN PAST 12 MONTHS - LOW 1-3
(Respondent Counts)

Base (%)	Old Ascription	New Ascription	Change (%)	New Total Base	Change to Total Base
12+	26	187	+146%	897	+14%
Top 20% P.I.	61	136	+123%	636	+13%
BPI	8	19	+138%	124	+10%
Travel on Comm. Airline Past 12 Months re Business	76	166	+118%	783	+13%
Managers	27	56	+107%	291	+11%
Snr. Managers	18	30	+ 67%	125	+11%
SPBM's	49	85	+ 73%	412	+10%

Source: PMB '91 ('89 and '90 Interviews)

CHART VI

BUSINESS TRIPS BY AIR

IN PAST 12 MONTHS - MEDIUM 4-6
(Respondent Counts)

Base (%)	Old Ascription	New Ascription	Change (%)	New Total Base	Change to Total Base
12+	19	62	+226%	280	+18%
Top 20% P.I.	18	53	+194%	243	+17%
BPI	1	7	+600%	23	+35%
Travel on Comm. Airline Past 12 Months re Business	19	60	+216%	261	+19%
Managers	6	24	+300%	114	+19%
Snr. Managers	1	6	+500%	38	+15%
SPBM's	11	34	+209%	174	+15%

Source: PMB '91 ('89 and '90 Interviews)

CHART VII

BUSINESS TRIPS BY AIR

IN PAST 12 MONTHS - HIGH 7+
(Respondent Counts)

Base (%)	Old Ascription	New Ascription	Change (%)	New Total Base	Change to Total Base
12+	18	55	+206%	246	+18%
Top 20% P.I.	16	54	+238%	224	+20%
BPI	0	2		10	+25%
Travel on Comm. Airline Past 12 Months re Business	18	55	+206%	231	+19%
Managers	9	25	+178%	102	+19%
Snr. Managers	4	17	+325%	56	+30%
SPBM's	13	34	+162%	160	+15%

Source: PMB '91 ('89 and '90 Interviews)

CHART VIII

Membership in Frequent Flyer Program

	Current Ascription	Business Ascription	Difference	
	#	#	#	%
TOTAL	1183	1201	+18	+2
OCCUPATION				
Professional	186	193	+7	+4
Sr. Manager/Owner	141	143	+2	+1
Other Manager	240	256	+16	+7
Technical/Sales/Teaching/				
Other White Collar	171	177	+6	+4
Clerical/Secretarial	86	90	+4	+5
Skilled/Unskilled/Primary	109	93	-16	-15
All Others	250	249	-1	*
PERSONAL INCOME				
$75,000+	165	167	+2	+1
$50,000 - $74,999	243	266	+23	+9
$35,000 - $49,999	254	262	+8	+3
$20,000 - $34,999	219	216	-3	-1
Less than $20,000	298	285	-13	-4
BUSINESS PURCHASE INVOLVEMENT				
Yes	760	798	+28	+4
No	174	152	-22	-13
COMMERCIAL AIRLINE FLIGHTS FOR BUSINESS				
Yes	581	687	+106	+18
No	599	511	+88	+15
COMPANY SIZE				
< 10 employees	175	178	+3	+2
10 - 49 employees	138	157	+19	+14
50 - 99 employees	65	54	-9	-14
100 - 249 employees	83	82	-1	-1
250 - 999 employees	79	92	+13	+16
1000+ employees	59	62	+3	+5

CHART IX

4+ Flights on Business in the Past Year

	Current Ascription	Business Ascription	Difference	
	#	#	#	%
TOTAL	446	526	+80	+18
OCCUPATION				
Professional	103	118	+15	+15
Sr. Manager/Owner	76	94	+18	+24
Other Manager	141	158	+17	+12
Technical/Sales/Teaching/				
Other White Collar	72	90	+18	+25
Clerical/Secretarial	9	10	+1	+1
Skilled/Unskilled/Primary	25	33	+8	+32
All Others	20	23	+3	+15
PERSONAL INCOME				
$75,000+	113	132	+19	+17
$50,000 - $74,999	155	183	+28	+18
$35,000 - $49,999	96	119	+23	+24
$20,000 - $34,999	58	66	+8	+14
Less than $20,000	21	22	+1	+5
BUSINESS PURCHASE INVOLVEMENT				
Yes	384	457	+73	+19
No	42	48	+2	+14
COMMERCIAL AIRLINE FLIGHTS FOR BUSINESS				
Yes	414	492	+78	+19
No	32	34	+2	-6
COMPANY SIZE				
< 10 employees	92	104	+12	+13
10 - 49 employees	80	111	+31	+39
50 - 99 employees	33	32	-1	-3
100 - 249 employees	48	49	+1	+2
250 - 999 employees	48	57	+9	+19
1000+ employees	42	46	+4	+10

Business Purchase Influence $10,000+　　　　　　　　CHART X

	Current Ascription	Business Ascription	Difference	
	#	#	#	%
TOTAL	1460	1468	+8	+1
OCCUPATION				
Professional	205	202	-3	-1
Sr. Manager/Owner	281	308	+27	+10
Other Manager	426	444	+18	+4
Technical/Sales/Teaching/				
Other White Collar	177	165	-8	-5
Clerical/Secretarial	116	116	0	-
Skilled/Unskilled/Primary	219	198	-21	-10
All Others	36	35	-1	-3
PERSONAL INCOME				
$75,000+	212	217	+5	+2
$50,000 - $74,999	339	359	+20	+6
$35,000 - $49,999	339	343	+4	+1
$20,000 - $34,999	408	399	-9	-2
Less than $20,000	157	146	-9	-6
BUSINESS PURCHASE INVOLVEMENT				
Yes	1297	1365	+68	+5
No	122	61	-61	-50
COMMERCIAL AIRLINE FLIGHTS FOR BUSINESS				
Yes	600	643	+43	+7
No	857	822	-35	-4
COMPANY SIZE				
< 10 employees	332	359	+27	+8
10 - 49 employees	263	273	+10	+4
50 - 99 employees	81	83	+2	+2
100 - 249 employees	102	106	+4	+4
250 - 999 employees	106	109	+3	+3
1000+ employees	81	80	-1	-1

Business Purchase Influence Communication/EDP　　　　　　CHART XI

	Current Ascription	Business Ascription	Difference	
	#	#	#	%
TOTAL	1579	1604	+25	+2
OCCUPATION				
Professional	228	243	+15	+7
Sr. Manager/Owner	300	344	+44	+15
Other Manager	440	433	-7	-2
Technical/Sales/Teaching/				
Other White Collar	199	192	-7	-4
Clerical/Secretarial	204	214	+10	+5
Skilled/Unskilled/Primary	165	137	-28	-17
All Others	43	41	-2	+5
PERSONAL INCOME				
$75,000+	195	208	+13	+7
$50,000 - $74,999	351	372	+21	+6
$35,000 - $49,999	357	354	-3	-1
$20,000 - $34,999	468	471	+3	+1
Less than $20,000	202	195	-7	-3
BUSINESS PURCHASE INVOLVEMENT				
Yes	1373	1460	+87	+6
No	160	98	-62	-4
COMMERCIAL AIRLINE FLIGHTS FOR BUSINESS				
Yes	618	665	+47	+8
No	958	933	-25	-3
COMPANY SIZE				
< 10 employees	371	409	+38	+10
10 - 49 employees	276	295	+19	+7
50 - 99 employees	75	77	+2	+2
100 - 249 employees	103	102	-1	-1
250 - 999 employees	96	93	-3	-3
1000+ employees	79	79	0	-