

The IPA TouchPoints Initiative: Creating the Missing Link

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1. Introduction

The global media landscape is evolving at an unprecedented rate. New communication media are being launched on a continual basis, whilst traditional media are experiencing an explosion in the number of channels available, thus fragmenting their existing audiences. Consumers are now faced with an ever-increasing range of choice in what media they use, where they use it and in what time frame.

The need to understand this new landscape had led to an explosion in communications research as advertisers, agencies and media owners alike, try to chart an effective path through this labyrinth of choice.

However, one thing has remained fundamentally the same in the UK, and in most developed advertising markets - the joint industry committee structure charged with producing the industry media research currencies. Whilst each service has evolved in terms of measuring their respective communication channel, they all remain resolutely single media based despite the now multi-media nature of the world they serve. This is the core issue which sparked the IPA TouchPoints Initiative.

The IPA is the trade association for communication agencies in the UK and its member agencies represent c. 85% of all advertising expenditure within the UK market. At the beginning of 2003, the IPA Media Futures Group, comprising the CEOs of the major media agencies and tasked with overseeing all IPA Media Policy, expressed its dissatisfaction with current industry media research tools.

There were several causes of this dissatisfaction :

- Firstly, they were concerned about the cost, - the current industry contracts cost about £30m pa in the UK and agencies contribute about 10% of the total.
- Secondly, the negative PR surrounding all the industry currencies as they struggled to change to reflect the medium they served was beginning to call their credibility into question.
- Thirdly, and most importantly, the fact that all the industry currencies were single media based in what is now a multi-media world.

The IPA Media Futures Group identified the need for a practical tool which better reflected the current media market structure. It was considered that the lack of such a tool undermined the perceived professionalism of the media industry, particularly of media agencies, in the eyes of clients – all of this needed to be addressed.

The key questions for the group were - Was it possible to find a solution? and What form should any such initiative take? The IPA started by asking its members about precisely what they wanted. The cornerstone of this was a qualitative study of agency planning directors. They were asked what they thought of the current industry tools,

what tools they thought they would need to operate effectively in the future and finally, if they thought that any of the tools they needed could be provided by the IPA. The last question was key because if the IPA provides something, it must be available to all members, so any new initiative would not provide a clear competitive edge to any single agency.

The results of this qualitative study were very clear - planners were dissatisfied with the current industry tools and they wanted to know more about the relative effectiveness of each medium. However, the key demand was for the IPA to provide a tool to evaluate mixed media schedules both for planning and post campaign purposes.

Having established demand, the project was given a clear remit

- (i) to deliver new and fresh insights in its own right
- (ii) to act as a gateway across data sources and
- (iii) and not to act as an alternative to current industry research.

The last point is a key one. Although BARB, NRS etc do not address the multi-media environment, they are pre-eminent in the measurement of audiences to their own respective media and therefore , should be preserved.

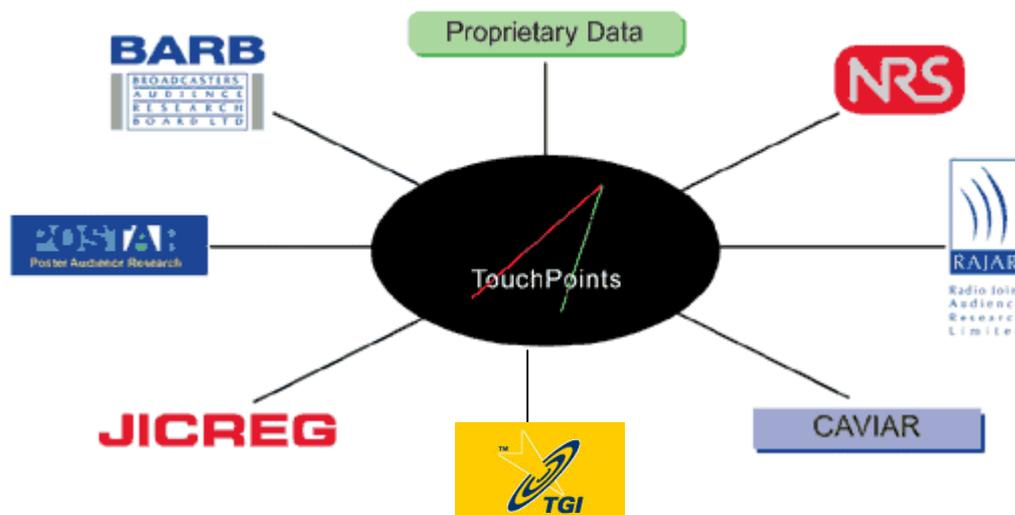
Therefore, it was decided that the IPA would develop a consumer centric, multi-media hub survey , this was duly branded TouchPoints.

TouchPoints has been designed to provide new insights as a stand alone survey. However, it has also been designed to act as a ‘hub’ which sits in the middle of the

current industry currencies to bring them together through the process of integration to provide a fully integrated multimedia planning currency. The hub will also allow users to customise the database by integrating their own proprietary surveys

(See Fig 1)

Fig 1. Schematic of the TouchPoints Initiative



The TouchPoints Initiative has two distinct phases:

1. The production of the hub survey (undertaken by TNS Media Ltd)
2. Connecting industry currencies to the hub survey (undertaken by RSMB Research Ltd)

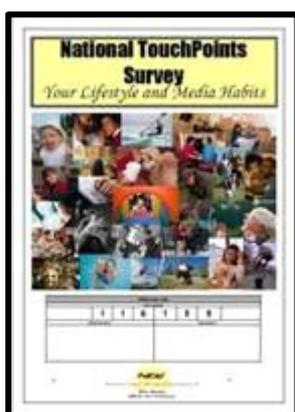
2. The Production of the Hub Survey

When planning the survey, a key requirement of the research design was the inclusion of 'hooks' to be used for integration with industry currencies. These hooks needed to mirror the currency measures both in content and in data collection methodology – so a mixed approach was needed for the Hub Survey methodology. Some media hooks

could be generated by straightforward recency questioning, others (television and radio) needed a time-based diary approach in order to improve compatibility with industry sources.

So the Hub Survey needed to involve respondents in two separate tasks:

Fig 2. Paper questionnaire



The first was the completion of a substantial contact questionnaire covering detailed usage and attitudes to television, radio, press, outdoor, cinema, online, SMS, event sponsorship and direct marketing. A wide range of lifestyle, attitudinal and detailed shopping questions was also included.

Fig 3. PDA with opening screen



The second task used a diary to collect data on what the respondents were doing, who they were with and what media they were using on a half-hourly basis. Following the success in 2002/3 of a major time-budget study for the BBC (The BBC Daily Life project) which had used PDAs to collect data, a similar methodology was used for TouchPoints.

PDAs have many advantages over paper-based diary data collection – not least in their ability to monitor the delay between a time-slot and its completion, thereby allowing controls to be applied to ensure the highest data quality. But this is an expensive option and a high response and return rate is necessary to keep costs as low

as possible. It was with this in mind – as well as the scale of the task we were asking respondents to undertake, that TNS proposed using an access panel to recruit the TouchPoints sample. So, with a broad research proposal in place, the next step was to explore some of the more detailed elements of the final study design.

A large-scale pilot study, involving over 1500 contacts, was conducted in order to answer questions in four key areas:

Q1. What response and completion rates could we expect to achieve from an access panel, how much would we need to incentivise in order to optimise these levels - and what implications would the answers have for the cost, efficiency and feasibility of the project?

TNS had never asked its panel members to participate in a project of this size before so the exact level of response was difficult to predict. For the pilot, 1510 panellists were contacted via telephone over the course of 10 days. 32% (485) of these agreed to participate in the study - comparing well with the 5% we might expect from an RDD sample. From these 485, 71% went on to complete both parts of the study. These figures were crucial in helping to plan the resourcing and timescale of a complex main survey. The testing of alternative incentives during this exercise also helped us to fix the optimum level for the main stage – £20 per respondent.

A further pilot test involved boosting and monitoring response rates in London – a particular problem for all surveys. Our findings supported the widely held belief that contact was the key issue in driving down response in the capital. Once people were

contacted, their agreement to participate and their final response was broadly similar with the rest of the country.

Q2. Can everybody cope with a PDA?

TNS's experience of the BBC Daily Life study suggested that offering a paper alternative to the PDA may well have been unnecessary. The BBC study did offer an alternative, on the assumption that older, less technically-proficient respondents might have a problem with electronic data collection. In the event, that assumption was challenged by anecdotal evidence of high levels of technical proficiency among over 65s. The TouchPoints pilot needed to confirm this – and to advise on strategy – if we were to avoid the time and compatibility issues involved in dual diary methodologies. While overall the pilot achieved an average response rate of 71%, amongst those aged 65+ this was still a very respectable 60%.

The pilot collected feedback on ease of use from many respondents and these comments were fed into the design of an illustrated instruction pack that went out with all PDAs in the main study.

Q3. How can we improve/optimize the PDA script to ensure an enjoyable experience for the respondent and thus full completion over the duration of the diary?

Early on we decided against a regular 'Beep' function to remind the respondent to fill out their diary mainly because we didn't want to see any PDAs being thrown from tall buildings!

But it was important to test the electronic script and obtain feedback from respondents on the ease of completion.

We conducted an extensive in-house pre-pilot among non research personnel from whom we received very constructive comments. We also received numerous letters from participating panellists highlighting possible improvements to the script. All of these were fed back into script development for the main stage.

Fig 4. PDA with location screen



Q4. How do we balance the need for data volume and complexity with respondent willingness to complete an extensive task and with the data quality issues that over-loading the respondent might raise?

In order to ensure robust radio and television data, we really needed respondents to complete the electronic diary for as long as possible – ideally seven days. But the concern was that this would prove too much for respondents, thereby affecting response rates and data quality. The same issue applied to the paper self-completion questionnaire, so both needed to be tested.

The BBC Daily Life Study had involved a three-day diary. We were fairly confident that we could increase that to four days but would respondents actually fill out the diary for a whole week and would the quantity and quality of data remain consistent across the period? Similarly, what would be the optimum length of the paper questionnaire without damaging response rates and data quality?

The pilot sample was split into four cells. Respondents received either a short (24 pages) or a long (44 pages) questionnaire, and were asked to complete the diary for either four or seven days.

Completion rates for the seven-day diary were, not surprisingly, lower than for the four-day version, but they were, nevertheless, higher than expected and supported the decision to go with a longer version. The same (lower but acceptable completion rates) was true for the longer paper self-completion questionnaire.

For the PDA diary, we also analysed the volume of ticks (answers) across the activity questions on a day-by-day basis to check for the fatigue effect. Fig 5 shows the average number of activities on the first and last day of each of the four pilot cells.

Fig 5. Average number of activities per half hour time period

Pilot Cell	First Day of Diary	Last Day of Diary
4 Day Short	2.9	2.9
4 Day Long	2.6	2.7
7 Day Short	2.6	2.7
7 Day Long	2.9	3.0

Not only was there no apparent fatigue present but in some cases the average number of activities per time-slot actually increased. Anecdotal evidence suggested that this

was primarily due to respondents becoming more familiar and comfortable with using the diary. This showed us that there were no reasons not to adopt the full seven day diary for the main study.

A similar test was conducted on the paper self-completion questionnaire, this time involving analysis of responses to questions that appeared towards the end of both questionnaires.

Fig 6 shows the ‘non-response’ percentages from four questions that appeared on pages 23-24 of the shorter questionnaire and pages 37-38 on the longer questionnaire.

Fig 6. Non response results from paper questionnaire

Question	Shorter questionnaire	Longer questionnaire
1	34%	38%
2	3%	2%
3	13%	6%
4	4%	3%

Overall, the pilot showed that not only was the project viable in terms of cost and efficiency but also we were able to use a seven day diary accompanied by a longer questionnaire.

Hub Survey

The pilot completed, the final script was prepared, covering a huge range of media activity half-hour by half-hour and including:

- **Communicating** – talking, emailing, texting, writing

- **Listening to radio** - stations
- **Watching TV - channels**, video/DVD, games console, programme genre
- **Reading** – newspaper title, magazine genre, book
- **Internet** - site genre, buying/seeking info, email, work

On a half-hourly basis we also asked respondents what mood they were in – and on a daily basis, collected exposure to cinema, directories, direct mail, tele-marketing calls and commercial texts

Telephone recruitment for the main stage began on 31st March 2005 and the first respondent pack (including PDA and paper questionnaire) was dispatched on 11th April with a diary start date of 16th April.

Dispatch took place continuously, with diary start dates spread evenly through the week. Respondents received reminder telephone calls before their start date, half way through their seven days and again at the end of their task. They were also provided with a help-line number for queries. This fostering of a relationship with each respondent not only served to give the respondent confidence in their ability to complete the task but also gave the task itself much more gravitas.

Fieldwork finished in November 2005 (the main period lasting for 16 weeks from April to August), during which, we dispatched more than 8,000 PDA diaries and questionnaires - 94% of the PDAs being returned to us!

Self-completion and diary data went through a series of rigorous editing and acceptance tests, following which we achieved a final completed response rate of more than 67%. Fig7 shows the sample totals at respondent, day and time period levels – and with the data weighted to the UK population we effectively have over 15 billion time slots available for analysis.

Fig 7. TouchPoints Hub Survey Sample totals

Respondents	5,010
Days	35,070
Half-hour time periods	1, 683,360

3. Connecting the Industry Currencies to the TouchPoints Hub Survey

Stage 2 of the TouchPoints Initiative is the integration of industry currencies on to the hub survey to produce a probability based, multi-media planning system.

This is one of the most ambitious integration programmes ever undertaken. The data integration is being undertaken using a mixture of demographic and media links, with the relevant commercial contacts attached to each respondent which, when complete, will represent a single source, media contact survey.

There have been previous integrations of media databases however, the presence of the hub which allows media-usage defined fusion hooks will preserve more of the discriminatory power of the original donor surveys than would a fusion based purely on demographics. The presence of the Hub also preserves the internal consistency of the data when subject to multiple integrations.

Finally, each industry currency produces a different definition of commercial contacts i.e. the NRS definition of average issue readership is 'reading or looking at a copy of the publication within the publication period, whilst POSTAR's definition of audience is 'eyes on panels'. These industry definitions of commercial contact will be retained on the integrated TouchPoints database, the IPA will not change or try to harmonise them in any way.

The integration process is being undertaken by RSMB Research Ltd.

Data Integration For The Multi-Media Planning Database

The TouchPoints survey itself provides a single source survey of multi-media consumption. In some situations like radio, the data is very similar to the media currency i.e. half-hour listening (although it does not have the same level of detail or granularity as RAJAR); whilst for some media like outdoor, there is only a surrogate variable (albeit a powerful one), in this case time spent traveling by mode of transport. Therefore in order to provide a fully functional cross-media planning database it is necessary to integrate the various trading currency surveys.

One possible integration approach would be to use a mixture of ascription and calibration to extend the TouchPoints diary data to provide greater channel or title breakdowns and to force consistency with the currency data. However, this is more appropriate for the integration of one or two media, TouchPoints has too many dimensions to control and there is a danger of losing the richness of the currency data using this methodology. Therefore, wherever possible, we have opted for respondent level data fusion, using the TouchPoints data to provide the valuable linking information between the currency surveys, with a final calibration stage to force consistency with the currency surveys. A key principle is that the TouchPoints media data is over-written by the fused currency data to avoid conflict in the integrated database.

As a final step in this process, KMR's Target Group Index Survey has also been fused in to provide a range of product usage and ownership planning groups.

The Hub Survey

As detailed previously, the content of the hub survey has been carefully constructed to provide strong media linking variables so that important currency cross media interactions are not lost in the data integration process. For example, in addition to the time spent reading data provided by the diary, the paper questionnaire was recorded the familiar National Readership Survey style frequency and average issue readership information.

An important step in the integration process is the re-engineering of the TouchPoints sample to provide an appropriate hub or host survey onto which the media currencies are fused. As a minimum, the hub survey needs to be weighted to universe profiles derived from a large random probability sample. However, the TouchPoints sample is relatively small (c.5,000) compared to the media currencies (e.g. National Readership Survey c.36,000); a standard fusion would use only a small proportion of the currency survey sample and its effectiveness would be severely reduced.

The solution was to fuse the TouchPoints survey onto the BARB (UK Broadcaster's Audience Research Board) Establishment Survey which generates a sample of 50,000 adults in six months of fieldwork. This does not confer any precedence to television because the only interest is in the base demographic and geographical data.

Whilst this process does not increase the sample size of the TouchPoints Survey , this re-engineering exercise results in a large, high quality random sample featuring demographics and TouchPoints single source media data. This is now a suitable hub

(or host) respondent level survey into which each of the media currencies can be fused or integrated.

The Data Integration Subjects

The integrated database provides a planning tool across nine media groups plus the TGI. In some cases respondent level data fusion has been used to integrate the media currency, however, not all of the currency databases provide a respondent level survey suitable for data fusion and in these cases alternative data integration processes have been used. The data integration subjects with the integration techniques are detailed in Fig 8. In some cases the media does not have industry currency data, then the source data is the TouchPoints Survey itself.

Fig 8 Industry Currencies and their TouchPoints Integration Technique

Television - Fusion from BARB
Magazines and National Newspapers - Fusion from NRS
Radio - Fusion from RAJAR
Regional Press - Profile matching from JICREG
Posters - Calibration from POSTAR
Cinema - Calibration from CAA admissions
Internet - TouchPoints
Direct Mail - TouchPoints
SMS - TouchPoints
Product Usage - Fusion from TGI

Respondent Level Data Fusion

The currencies for television, radio, magazines and press have been integrated using respondent level data fusion.

It is possible to fuse the media currency surveys using only standard demographic linkages or hooks. This is a reasonable technique if nothing else is available because demographics are powerful discriminators of behaviour for all media, but it leaves open the following issues:

(i) The relevance and discriminatory power of the demographic hooks can only be assessed in terms of each media separately. We really need to understand how the hooks relate to interactions between different media. The TouchPoints survey provides this information.

(ii) There is a concern that demographic fusion won't be so good for cross-relating media consumption which may be more related to lifestyle and attitudes than other product usage type fusion subjects. There is evidence from previous evaluations of KMR's Target Group Ratings product that fusion does not perform so well for lifestyle led products like cosmetics, showing above average regression to the mean. The TouchPoints survey provides media based linking variables. For example, if there is a respondent in the TouchPoints hub survey who is a heavy TV viewer but light radio listener, then the fusion process will match them separately with a heavy TV viewing BARB panel member and a light radio listening RAJAR diary respondent.

(iii) There is very limited opportunity for validation. The TouchPoints survey provides this validation opportunity.

Fusion Hooks - Media Imperatives

The hooks available for each media fusion comprise demographics, geographics and a set of media imperatives.

A media imperative is a summary of each respondent's consumption of the media to be fused. To be used as a hook, we must be able to construct the media imperative in both the hub survey and the currency survey to be fused, and be reasonably confident that they are measuring the same thing. For example, it is possible to calculate hours of viewing by time segment, by day of week, by channel group in both the TouchPoints Hub and the BARB panel.

These patterns of viewing must be summarised to form a usable set of fusion hooks. In order to avoid subjectivity in this process, a principle component analysis was used to construct the media imperatives. A principle component is a linear combination (like a regression model) of hours of viewing by time segment, day of week and channel group which maximises the diversity between individuals. A relatively small number of principle components explain the majority of the systematic variation between individuals.

The principle components were constructed in the TouchPoints Hub Survey giving a functional model. Then given a particular respondent's hours of viewing by time

segment, day of week and channel, the value of the principle component can be calculated for each TouchPoints respondent and each BARB panel member, using the same functional model. This process was controlled to allow for differences in overall levels and variation in viewing levels between the hub surveys and the BARB panel.

A separate set of media imperative hooks was constructed for each currency fusion. The radio imperatives are based upon hours of viewing by time segment, day of week and channel. The press imperatives are based upon claimed typical frequency of readership by publication group.

Fusion Hooks - Importance Weights

The principle of the data fusion process is to find a respondent in the media currency (donor) survey who has the same demographic and media imperative profile as a particular respondent in the TouchPoints hub (recipient) survey. When a match is found, this donor's media currency data is then assigned to the TouchPoints recipient and replaces their TouchPoints media data.

A large number of demographic and media imperative hooks (about a dozen of each) were used in the matching process. Inevitably it is not possible to find exact matches across all hooks. Where compromises have to be made it is necessary to give precedence to the more important hooks. Therefore we need to quantify their relative importance or discriminatory power through analysis of variance.

A key feature of this particular fusion exercise is that because we have the single source hub survey, we can evaluate the hooks in terms of the true object of the fusion,

i.e. volumes and patterns of consumption across all media as measured by the TouchPoints half-hour diary. In this respect, the importance of a television viewing based media imperative is tempered by its relative inability to explain variations in consumption of all the other media. Demographic hooks have a chance to gain their rightful place in the hierarchy.

Obviously there is a separate set of hooks for each media fusion and therefore a separate set of importance weights. For each fusion a multi-variate analysis of variance techniques has been used to consolidate the patterns of consumption across all media to construct a single importance weight for each fusion hook. Since this is a media planning application, the input patterns of consumption were weighted by media to reflect share of advertising expenditure.

The Fusion Process

RSMB's data fusion algorithm uses a variation of Mahalanobis' Distances to quantify the similarity between recipients and potential donors. This allows for correlations and differences in scale between the hooks. There is also a cohesive piece of statistical theory which justifies the formula used to incorporate the importance weights into the distance measurement.

The analyses needed to calculate the importance weights are extensive and the computation of Mahalanobis' Distance is intensive. Some fusion practitioners have argued that this sophistication is unnecessary. This may be true if there are only a few

demographic hooks but an equivalent to Mahalanobis' Distance is required when, as in this case, there are many, as in this case.

The routine for pairing donors with recipients makes a trade off between the closeness of their hook profiles (as measured by Mahalanobis' Distance) and donor frequency distribution (the number of times each potential donor is used). The greater the control of the donor frequency distribution, the more likely we are to preserve the media currencies in the integrated database.

At the end of the data fusion process, the integrated database is a large representative, sample of the population. The information available for each respondent is:

- Demographic, geographic and geodemographic classifications
- A full Target Group Index product usage and ownership record
- A media usage record from each of the integrated media currencies which reflects the levels and patterns of that respondent's media consumption as measured by TouchPoints.

Reach and Frequency Planning

The primary application of the integrated database is multi-media schedule reach and frequency analysis. It is recognised that the database will also be used for non-commercial applications, but the reach and frequency application is discussed here for illustration of the thought processes involved.

For television, in theory it would be possible to use the BARB panel's long term viewing records so that actual contacts with a TV schedule of commercial spots could be counted for each individual. However, all other media currencies have only short-term measurements of exposure and depend upon probability expansions to estimate longer-term contacts with a schedule. Further, each media currency has a different probability model (the National Readership Survey has several) for the expansion. This partly reflects the fact that the inputs to the models are different for each medium. For example, the NRS readership data is recency and frequency whilst the RAJAR radio data is from a one week quarter hour diary. A common denominator is required which embraces all media. The solution we adopted is personal probabilities. Not only do we believe this to be the best statistical solution, it is also probably the only practical way of getting systems into the market place.

If a person does or doesn't make contact with a specific media event (e.g. a TV spot, yesterday's issue of a newspaper, a radio station in a particular quarter hour) then their personal probability is 1 or 0. However, this is not indicative of that person's probability of making contact with the equivalent event on another day or in another week. As a basis for estimating that person's long-term contacts it is useless because it doesn't allow that they might change from 0 to 1 in the course of a schedule. What we need is their underlying probability of making contact with each media event, a number between 0 and 1. Then if that media event is repeated a number of times, we can use a Binomial expansion to estimate a particular person's probability of making 0, 1, 2, 3,contacts. These respondent level frequency distributions are then aggregated to form the full sample reach and frequency analysis. The bureaux

providing the systems must be congratulated on their ability to perform such a computationally intensive task so efficiently.

The decision to use personal probabilities means that the database is transparent to the bureaux, guaranteeing a level of consistency in the market place.

4. IPA TouchPoints – Current Status

The project has been a commercial success in that it was underwritten by the eleven agencies represented in the IPA Media Futures Group and ten, blue-chip media owner founding partners who helped both with funding and technical input (Fig 9.). The survey is now being made available to other companies and is receiving a strong take-up from

Fig 9. IPA TouchPoints Founding Partners

other IPA members in the media, creative, direct and digital areas in addition to other media owners.

Media Owner	Agencies
AOL (UK) Ltd	Initiative
BBC	MediaCom
Chrysalis Radio	Mediaedge: CIA
J C Decaux	Media Planning Group
The Guardian	MindShare
ITV	OMD UK
News International	PHD Media Ltd
smgACCESS	Starcom MediaVest
Tesco Media Service	Universal McCann
Wanadoo	Vizeum
	Zenithoptimedia

The results of the stand-alone Hub Survey were released on the 23rd of March and the Integrated Planning System is due to be released in June 2006.

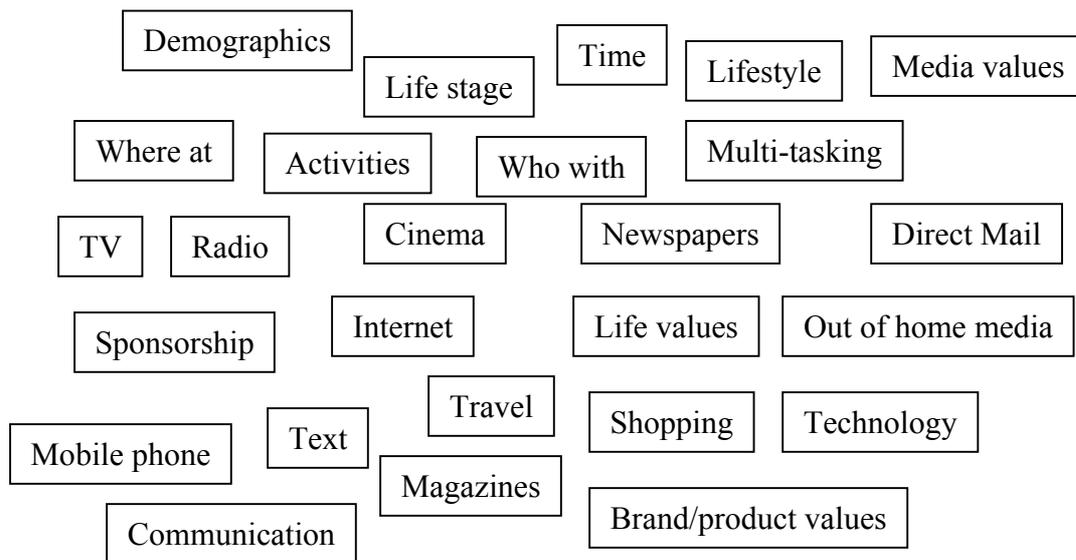
When complete the TouchPoints Initiative will deliver the following:

- Allow all media channels to be evaluated on an equal basis at the start of the planning process.
- Give new insights into how communication channels are used, singly, together and on a time of day basis.
- Allow post evaluation of mixed media campaigns.
- Act as a hub to marry disparate media data sources together.
- Give the industry a better understanding to the communication process.

Whilst most of the data available on TouchPoints can be found in other surveys, this is the first time all these metrics have been brought together in one survey which allows them to be cross referenced (Fig 10). Furthermore, it allows the analysis of consumer behaviour by time, by media, channel usage and by lifestyle. The construction of sophisticated markets definitions, target markets and consumer relationships

The Hub Survey is already providing unique insight into people's lifestyles, and their consumption of media

Fig10. Connections; Interrelationships & Multi-Dimensional Insights



Future Considerations

The current status of the TouchPoints initiative is very good. The launch of the Hub Survey has been extremely well received in the UK with very positive feedback from the sponsors and the industry as a whole.

The launch of the survey has generated an immense amount of interest both within the UK and abroad. In particular, the World of Federation of Advertisers has been particularly supportive in that it fulfils the criteria laid down in their recently published Blueprint for Holistic Research.

However, TouchPoints does face several key challenges. The database is, by its very nature, both large and complex, therefore users will need to familiarise themselves with its content and have a clear idea of how they wish to use it if they are to get the most effective use of it

If used to its full potential it will change the way that media is planned and therefore, change in the current working practices of the media industry. All this will take time to achieve, in the meantime, there is a growing call for TouchPoints2 for 2007.