

# THE BI-MEDIA MULTIPLIER EFFECT: HOW TV GUIDES AND TV CAN CREATE MORE VALUE TOGETHER

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## Introduction

This survey started with the statement that TV guides and television are powerful and related media that can create a multiplier effect. It exists a real co-ordination between both media, based on consumers generating a united creation of contacts. But how can this multiplier effect be quantified ? And what about the contribution of both media ?

Our methodology is based on the single source principle. One sample (the French TV people meter one's) is questioned on personal TV guides reading habits. These print habits are transformed into probabilities fitting to the French audience survey for print. We will present the fitting methodology, that is not a fusion technique, but an audience adjustment technique that preserve both coverage and duplications on all targets. We obtain thus a crossed distribution of contacts, that allows us to analyse contributions of both media for a real multimedia optimisation in television and TV guides.

We will then present some case studies showing feasibility of multimedia optimisation, and how TV guides contacts can contribute to TV plans in complementarity and synergy.

## Background and Objectives

### TV and TV guides magazines: a natural media combination

We have based our work on a first assumption: TV and TV guide magazines are both powerful and co-ordinated media which can create a multiplying effect. This idea will be developed all along this argumentation.

But in order to understand our approach better, let's start by a brief description of the situation of each medium on the French media landscape at the moment. Nowadays, TV is considered by the advertising market as the most powerful medium to reach consumer targets effectively. Every day, almost 88% of French people watch TV for nearly 3 and a half hours (differences depend on the targets chosen). But this important strength of reaching consumer targets needs to be paid for and TV is now one of the most expensive media available to advertisers. In comparison, French TV guide magazines can easily reach 85% of adults (15+) weekly at a cheaper cost per GRP on housewives under 50, the main target used by TV advertisers.

TABLE 1

	Television (National networks)	TV guide magazines (7 titles)
Average reach (adults 15+)	87.7%	84.7%
Cost / GRP (Housewives under 50)	3 778 €	2 233 €

Source AEPM 2000 – IMS Pop Corn Press and TV

This is the first statement about comparative reach and economy between these two media. But let's have a quick look at other features which can combine them easily.

TV is considered - again by the advertising market (advertisers and media agencies) – as the federative media “par excellence”. Currently, national networks can easily achieve high ratings on all targets, especially during major broadcast events such as sports (Football World Cup, European Championship ...) recent movies and reality shows. But if TV ratings are still high for national stations, a split is now occurring with the increasing development of cable and satellite stations. At the same time, the TV advertising offer is dramatically decreasing with the governmental decision to reduce air time on national public channels (France 2 and France 3) from a maximum of 12 minutes per hour to 8 minutes per hour. Even if private stations have absorbed a part of this “gift”, media agencies are still trying to optimise their TV buying with less space at a higher price.

In comparison, TV guides have another feature in common with TV as a wide targeting medium.

We proved several points in our survey "Readings and Family Dynamics" published in 1999 :

- A TV guide magazine is read daily by every family member from children to parents and this process is verified since the first day of purchase.
- Each family member has at least one daily ODV with the title
- More than 11 minutes of average daily reading per individual
- 12 days of life for a TV guide magazine (from Monday to the Friday the week after, with the beginning of current TV listings on the first Saturday – different for TV guide supplements distributed with weekend newspapers which have 7 days of life and less reading involvement).

The quality of print advertising ODVs is also a key point which can help us to specify TV guide assets:

- A strong involvement between the readers and their TV guide magazine
- A chosen medium which is bought (at the newsagent or by subscription)
- A strong advertising awareness compared to other kinds of magazines (weekly news and economics magazines, women's magazines etc...)

Last but not least, the advertising effectiveness of TV guides is a reality and is not only a monopoly of television. Emap France, in collaboration with Nielsen, has developed an exclusive media tool called Scan Planning which accurately measures direct and short term effectiveness on products sales created by print and TV guide advertising campaigns. Scan Planning crosses scan data from product buying and ODV probability with TV guides, via their bar code scanning. (actually in France, each magazine has a bar code sign on their front cover for statistical and analytical practicality).

As a result, if TV and TV guide magazines are

- wide targeting media,
- federative and family media,
- qualitative, effective and well-measured,

their simultaneous use by advertisers seems obvious.

### **A new intermedia planning opportunity**

Actually, this is a real media coordination which places consumers at the heart of our process.

TV and TV guides magazines =

- **A targeting coordination** - we can reach the same individuals because a TV guide reader is also a TV viewer even though all TV viewers are not necessarily TV guide readers.
- **A consuming coordination** - TV is the main topic for each medium and our media consumption is generally located at the same place or not far from each other.

Our approach is based on this statement: these two media can create a single, linked distribution of ODVs for the benefit of advertising campaigns.

This new media opportunity is based on the idea of the "multiplying effect". But how can we quantify, prove, and justify this idea and how can we transform a concept into operational reality ? We have designed new intermedia planning software which can calculate the reach, the frequency and the cross distribution of ODVs for a linked TV and TV guide planning on the same individuals. This process is based on the Single Source principle.

### **The Single Source principle**

As shown above, we focused our survey on two very close, complementary media. Until our work, these media were studied by two different audience surveys.

- TV audiences are measured with a peplemeter at home with individual identification. Results are given every morning through a modem connection. All rough data related to single block and target is introduced into a media planning software that we call a media optimiser. The model of this software allows each TV space buyer to choose and optimise their TV buying.

- Furthermore, the software, which considers audiences of past weeks, is able to produce a statistical forecast of future block audiences on every target considered. A module can even help the choice of space buyers delivering rankings of blocks with the best audience, affinity, cost ... It proposes the building of a whole media plan optimising it either on coverage, repetition or cost. All this makes TV space buying a very reactive activity.
- TV guide audiences and print audiences in general, are measured in France through a bi-annual survey. This face to face at-home survey managed with a double screen CAPI, produces both frequency and recency audience data. This allows us to evaluate for each person interviewed how many times a consumer magazine is read per year, and when the last reading of each title occurred. Considering all answers, a model is built to evaluate coverage and average exposure repeat of a print media plan. As for television, software processes the data to help space buyers choose magazines, considering the targets and plan objectives (coverage, repetition at a precise level, cost...).

Considered separately, these two surveys are effective. But two surveys to evaluate the cumulative effect of a bimedia plan are one too many.

In the past some surveys were merged, some fusions were attempted. The result had never been considered robust enough to allow media planning on the most refined targets.

- Traditional fits don't respect the fine audience differences between targets or even sub-targets.
- Procedures of fusion are often too systematic in their search for twins. They try to find the absolute and definitive correspondent people even if this leads to nonsense in audience terms.

Our challenge was then to find methods and conditions that could stand up to planning practices without betraying the function of each individual media.

- Our first choice was to limit our print investigations to TV guides. They offer several interesting characteristics:
  - We know TV guides at Emap well and we have been studying them for years.
  - Their reading habits are very close to TV watching habits
  - They are the most powerful titles among all French consumer magazines, providing better statistical reliability.
- Secondly, we wanted to reconcile both media planning practices without losing peplemeter data advantages for TV. Therefore, we decided to use the annual census questionnaire of TV panels as a print survey. We introduced a print reading habits question into this questionnaire. This question, very close to the original one from print survey, is self-administrated by the 6,000 individuals of the TV panel.

Thus we have access to two types of data:

- The first from the French readership survey (AEPM) gives us a reference print level of audiences. It is robust data, as it is calculated from a large sample (20,000 interviews).
- The second comes from a TV peplemeter (Mediamat). This second data source has a lower but still significant size (6,000 people).

Furthermore both panels are nationally representative.

Before considering this second panel as a single source, we processed some verifications:

- The first was a cross validation of figures between both data sources. We checked that the rough data showed similar patterns in both surveys either on general results and on targeted results (particularly on age, region and social class).
- Secondly we controlled the coherence of habit distributions between both surveys
- Finally we used an innovative methodology to fit audiences measured in TV panels on the "official audience source" of readership survey. This methodology is developed in the next part.

This way we obtained, on a single source sample, bi-media data ready to be probablized. Once fitted, this single source data was ready to be used in a new bi-media optimiser.

## Method

We processed those data in partnership with Mediametrie for audience fits and with IMS for the optimising tool development.

Let's consider the available data :

- AEPM one gives audience levels. They are robust as they are calculated from a large sample and will be our reference for the fit. Available information is, on one hand recency readings (that gives us GRP), and on the other hand reading habits data.
- Mediamat also provides us with reading habits data from a question similar to AEPM ones.

## Objectives

Our goal is to approach an unknown reality, that is to say the probability law that rules audience of each studied magazine. For that we can rely on a set of measures (AEPM) and a presupposed model.

*Hypothesis 1:* Probability distribution of contacts with a title on the whole population follows a beta law.

This prevails us to use in our optimiser contact distributions following beta binomial laws. This hypothesis was validated several times on different media. Using panel data (as for TV or radio), it is easy to calculate contact distributions of a media plan through a simple counting technique. It had thus been established that the result is close to perfect beta binomial distribution.

This hypothesis was already used in France by Mediametrie for its radio audience probablisation model. This model is now widely used by all the space buying market. Practically, we will determinate for each title a specific beta law including an amount of zero in order to fit to the non-reader quantity.

We then have to calculate model parameters so that audiences calculated in Mediamat for print titles would be exactly the same as the one measured in AEPM.

## Principles

The first step consists in analysing reading habits on the reference sample. We study reading habits of each title separately.

*Hypothesis 2:* It is presupposed that reading habits of each studied title is correlated to a complex mix of socio demographic membership of readers.

A profiling analyse of readership shows that each title drastically differs from the others according to socio demographic criteria. We then processed series of segmentations on recent reading figures of each title using as explanatory variables :

- traditional socio demographic variables (such as sex, age, size of city...)
- more refined variables (detailed region, subscription to cable TV network or to a satellite TV network, detailed occupation...)

Those detailed segmentations (processed at 15 levels) brought out discriminatory criteria for each title recent reading. It allows us to aggregate people with the same reading behaviour upon a title.

Such determined segments are for a first step amalgamated into "Groups" (at the 5<sup>th</sup> level of segmentation). On each "Group" thus created, we know the exact reading habit distribution and the level of recency readership on each class of habit. It is then easy to calculate parameters for the beta law that gives the same audience distribution as the one measured on this group. We have then a distribution law of reading probabilities (per title) at our disposal on each "Group".

Both samples (AEPM and Mediamat) being nationally representative, it is likely that reading habits of similar "Groups" (that is to say built with the same criteria combination) over both samples should be the same.

As a second step, we created into Mediamat, "Groups" similar to the one we found in AEPM. In each of these "Groups", we ranked each individual according to their reading habits declaration first and secondly to the sub-segment (between 6<sup>th</sup> and 15<sup>th</sup> level) they belong to.

These segments are by construction the more discriminatory criteria upon audience probability for a title.

Once all people are ranked, we apply to each "Group" its specific probability law. That is to say that each person in a segment will be charged with an audience amount to a title depending on

- the segment this person belongs to,
- the rank of this person in the segment,
- the specific probability law of the segment and
- the weight of the person among the whole sample.

## Advantages of the technique

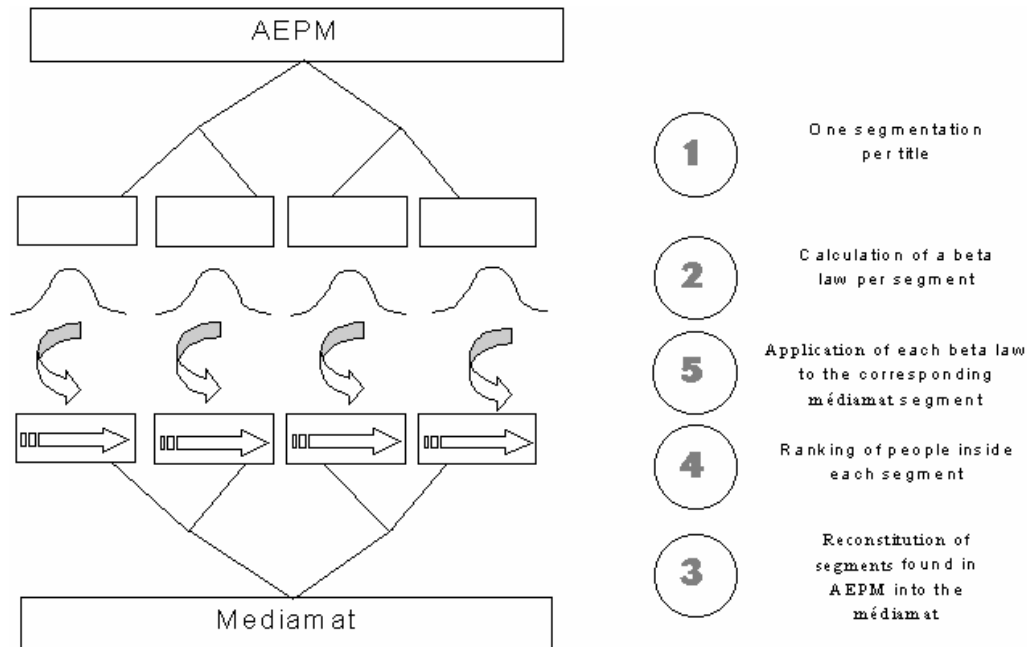
Thus the technique we used allows us to keep good audience levels (but that is the easy part). It also allows us, using a probability law applying instead of a simple audience data injection, to keep the correct level of zero contact people and the pattern of contacts accumulation.

Furthermore, the use of several probability laws (one per "Group" for each title) produces more refined results, explaining the quality of targeted audiences.

In the same way, the whole technique (and particularly segmentations), being processed title per title (and not in a global approach), it ensures a higher reliability of the results, and an increased precision while evaluating duplications between titles.

### From individual audiences to media planning model

The last stage consists of making sure that TV guide individual audience data, once processed in our media planning software, testing media plans, gives coherent results on classical targets. Therefore, a so-called “bi source” model has been developed that integrates on one hand formerly calculated individual data (and thus respects coverage levels, accumulation and duplication) and on the other hand “target GRPs” that are the official GRP of different targets given by the AEPM.



### Description of POPSI PRESSE TV

The objective of this software is to offer the media agencies the possibility of evaluating both TV and TV print planning on the same basis and especially an inter media ODV distribution, the reach and the frequency of one medium compared to the other and of course the accumulated results. The benefit of this new media tool is that it could be principally used with the TV mediaplanning software which is already implemented in major media agencies, Pop Corn TV, developed by IMS/Ipsos.

Main characteristics :

#### 1. TV planning selection

- A print planning cannot be evaluated without a pre-established TV planning. Before entering the keyboarding planning and evaluation module, it is necessary to select a TV plan, especially via the keyboarding schedule.

TABLE 2

The screenshot shows the POPSI PRESSE TV software interface. It features a grid of data for TV planning evaluation. The grid has columns for different media types and rows for different planning parameters. The interface includes a menu bar at the top and a status bar at the bottom.

## 2. Keyboarding process for TV Guide planning: very simple to use.

TABLE 3



## 3. Evaluation unit

The print ads (inserts?) are rigorously processed as TV ads and all are independent of one another. The TV probability system is used without modifications in either the algorithmic calculations or the reading probabilities proceedings. TV ads are treated first by the system before print ads, TV GRP's, Print GRP's, the indication of the medium for each data thus others necessary parameters as target definition, reach between X and Y ODV, etc. Each print ad is classified as a TV ad with a fictitious channel code, day code, time code, in order to be able to use the data reading system of the TV evaluation process.

## 3. Results tables

At the end of the evaluation, 3 different types of data results are available: a global contact distribution, the TV campaign contact distribution and the Print contact distribution. A first data table sums up these results of the bi-media campaign :

TABLE 4

Target : 25-49 ind.	Global TV + Print	TV campaign	TV guide campaign
Number of ads	66	61	5
Budget (€)	1.157.828	929.263	228.564
GRP	374	282	92
Reach (1 contact +) (%)	92.8	83.1	64.8
Average Frequency	4	3.4	1.4

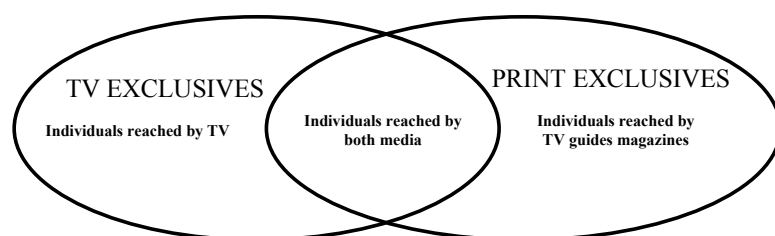
Source IMS/Pop Corn

The contact distributions are described in another table which allows us to analyse the cross contact distribution :

- Target individuals reached by both media
- Target individuals reached by one medium and not by the other (exclusives)

All this data is available for each contact level (1, 2, 3, etc...)

TABLE 5



Our next step in research will be to separate the exclusive individuals per medium in order to analyse their media habits medium by medium in terms of low, medium and high categories of media consumption. The objective of this research is to quantify the weight of small TV consumers in each target who can be reached (at a lower cost) by TV guide campaigns.

### Main results from POPSI PRESSE TV

At first, we notice that TV guides campaigns optimise global planning reach at a lower cost per GRP than TV.

#### Case study n° 1: Print optimises a global planning in complement with TV

A car manufacturer campaign which simultaneously uses both TV and TV guides.

TABLE 6 : Campaign description

Target : 25-49 individuals

Period : 1<sup>st</sup> quarter 2001

	TV campaign budget split (%)		TV Guides ads
TF1 (private)	50	Télé Star	1
France 2 (public)	22	Télé Loisirs	1
France 3 (public)	10	Télé 7 Jours	1
Canal + (private)	10	TV Magazine	1
La Cinquieme (public)	1	TV Hebdo	1
M6 (private)	7		

TABLE 7: Campaign results

	TV campaign	TV guides campaign	Bi media results	Print Multiplier Effect
Number of ads	61	5	66	
Budget (€)	929.263	228.564	1.157.827	
Budget split (%)	80	20	100	
Reach (%)	83.1	64.8	92.8	+ 9.7 points of reach
Reach (individuals)	16.463.000	12.845.000	24.268.000	+ 7.805.000 ind.
GRP	282	92	374	
Cost per GRP (€)	4.096	2.484	3.095	- 24 %

We also note that the introduction of Print into a mono-media TV strategy can improve the global results of a campaign.

#### Case study n° 2 : Print can optimise a single TV strategy

A cosmetic & toiletries product which only uses TV for its communication. It has been decided to substitute almost 20% of TV budgets by ads in TV guides in order to measure the bi-media multiplier effect.

TABLE 8 : Original TV campaign description

Target : Households with children under 15

Period : 3 weeks, 1<sup>st</sup> quarter 2001

Original planning	TV
Number of spots	78
Budget (€)	1.003.829
Reach (%)	80.9
Reach (000)	5.053
GRP	381
C/GRP (€)	2.804

TABLE 9: New bi-media planning results

Method : we suspended almost 20% of the original mono TV „planning budget. The budget which was cancelled on TV was invested in TV guide magazines. We kept on TV the same split in terms of budget / channel and of budget / day part.

	Original TV schedule	New TV schedule	Print schedule	Bi media results	Bi-media multiplier effect
Number of spots/ads	78	65	6	71	
Budget (€)	1.003.829	838.250	165.560	1.003.809	
Budget split (%)	100	84	16		
Reach (%)	80.9	77.8	48.2	87	<b>+ 6 points of reach</b>
Reach (000)	5.053.000	4.862.000	3.011.000	5.436.000	<b>+ 383.000 ind.</b>
GRP	380.8	328	99.5	427.5	<b>+ 47 GRP</b>
C/GRP (€)	2.804	2.718	1.664	2.348	<b>-16%</b>

As a conclusion, our approach confirms an expected phenomenon that had not been quantified before. This solution is the first one and will be the beginning of a research series made easier by this quantification of the contribution of TV guides to optimising the results of TV campaigns.

## Perspectives

Considering those results we forecasted our next research axes:

- 1- Complete a case study database
- 2- Create a TV/Tv guides awareness multiplier effect indicator
- 3- Qualify print contacts
- 4- Integrate children audiences into Popsi Presse TV
- 5- Evaluate a multiplier effect between a consumer magazine and its internet site

## Bibliography

- Jean Louis CHANDON (1975) A comparative Study of Media Exposure Models, Garland Publishing, New York  
 Carole FAGOT (1993) Mediascann: A Leap Forward Press Single Source Research, in FIPP  
 Timothy JOYCE (1991) Adding Print Exposures to Single Source Data Bases, AC Nielsen Co, ARF  
 Susan SQUIRES (1995) Data fusion and data linkage, Admap  
 Ken BAKER (1996) What do we know about data fusion, Admap  
 Rolf SPEETZEN (1993) Theory and practice of the VA and VA+TV, FIPP  
 Jayne Z SPITTLER (1998) TV optimisers : fad or trend ? , Admap  
 Alan Smith (1997) Integrated marketing communications starts with print plus television, Esomar  
 Gerhard FRANZ (2000) The Future of Multimedia research, JMRS  
 Carole FAGOT (2000) How does advertising in TV guides modify short-term purchasing behaviour ?, Esomar

Perception and valorisation of Brand EMAP/ESOP 1998

Reading and Family dynamic survey EMAP 1999

How to measure and optimise print magazines effectiveness EMAP 2000