



THE SCREEN



WHITE PAPER

Audience Measurement for Screen Media (Digital signage advertising networks)

By: The Screen – Media Working Party, May 2006



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Grey = yet to be collated

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Founder sponsors & contributors:



BT, BBC Motion Gallery, I-Vu, Camelot

In association with:



Section 1: Context for the White Paper

1.1 Introduction

The screen-media industry takes its place in the communications market as a key part of the mix of media that today comprises the following existing and emerging media:

- Television
- Radio
- Print
- Internet
- Outdoor
- Cinemas
- Mobile

As such it needs to be able to demonstrate its relative value on a basis that is comparable to the existing methodologies used by other media. This paper provides a proposal for measurement that will allow the industry to take its place in the media planning agenda of brands and their agencies.

1.2 Industry

The screen-media industry comprises the provision of video based advertising in out-of-home locations using networked digital signage technology. These operate screen networks are frequently referred to as:

- Screen-media networks
- Networked digital signage
- Dynamic digital signage networks

These are all essentially the same thing; it is where they are deployed, how effectively they are deployed and how they are used in terms of media that varies significantly.

Where they are deployed, ie “out-of-home” covers a wide range of locations such as:

- Bricks & mortar retail, ie shops.
- Shopping malls
- Transport such as train stations, airports, buses
- Outdoor locations such as theme parks and sports stadia
- Other public places or business environments such as public libraries, university campuses, student unions.



1.3 The Screen Association

As with all emerging industries the screen-media industry has a need for a trade association dedicated to its championing and to helping shape its development successfully.

The design, installation, management and ownership of screen-media networks involves a myriad of activities across a very broad spectrum of industries. These include content creation, consumer and other user research, content distribution, physical installation, connectivity, media sales and digital panel supply to name but a few. Each of these activities is part of an established industry in their own right and is well represented by their respective industry association.

Whilst they may have some interest in the development of The Industry, none of these numerous industry associations can ever have the interests of The Industry as their primary *raison d'être*. Instead it is like a Venn Diagram; The Industry touches numerous other industries but does not correlate 100% with any of them. Instead it needs its own independent industry association.

The purpose of The Screen (www.thescreen.org) is to provide that dedicated industry association role.

The Screen is an independent not for profit industry association founded in early 2004 to promote and aid the development of the Industry in Europe.

The Screen is a broad church association that welcomes members from all the industry's user groups (brands, retailers, real estate owners, ad agencies, public sector banks etc), all complementary groups (such as complementary trade associations) and all groups with an interest in making the Industry successful. Specifically The Screen seeks to work in a complementary manner with all trade associations.

The Screen runs an active working party programme designed to help develop and promote best practice across the Industry and to help inform key users. The working parties are:

- Media working party (sponsors of this paper)
- Content working party
- Technology working party
- Network owners working party

In addition The Screen welcomes cooperation with other trade associations and already established extensive contacts with various industry stakeholders.

1.4 Other work on measurement

This report has sought to consider existing methodologies for other media as well as alternative proposals for screen-media measurement.



Section 2: Existing Models & Benchmarks

It is generally believed that validated methodologies employed by those in the paid for advertising world are usually the most robust, and in many cases other sectors are striving to adapt these approaches to their own areas of business (e.g traditional point of purchase suppliers).

With this in mind any developments on the subject of audience measurement will be done in conjunction with relevant advertising practitioners and associations.

Of course, it is possible to criticise audience measurement systems currently in place for other media due to some of their assumptions, (for example, 'presence in a room' equals TV viewing / or the purchase of a publication implies seeing an ad etc).

However, the key difference with such media is that:

- They are 'established'
- Consumption habits and experiences are well understood
- Research and case studies are in abundance
- Historic market rates exist.

This allows relative trading and evaluation between the different purchase options – **something that has not been possible with screen-media as consistent benchmarks have not been employed.**

Due to the inherent originality of screen-media based advertising, there are not even any similar advertising products that could be used to guide buyers. Whilst posters in certain environments (such as shopping malls or health clubs) might, like screens, be lacking in 'official' audience measurement systems; they are so similar to poster products in other locations (e.g roadside, underground etc) that much of the knowledge, research & experience is transferable.

The principal standard for poster audience measurement research is Postar (www.postar.co.uk) which in essence not only accurately measures the number of people passing an individual poster site, but also applies a reducing factor that takes into account:

- People's likelihood to actually see it based on the site's individual characteristics (e.g height, angle & distance to road, illumination, size, surrounding clutter and many other factors)
- The ability for large numbers of sites to be combined
- The resulting, de-duplicated coverage of a target audience can be calculated.

Each specific industry sector has its own 'established' method of measurement, which we can briefly outline overleaf. (More detailed info available in the appendix)



Section 3: The White Paper Proposal – A Framework

Introduction

The characteristics of a measurement system for the screen media industry are that it should be:

- credible and reliable
- easy to understand, affordable and practical to apply
- consistent across the varying estates that make up the screen-media industry

This section is concerned to define the terms in which audiences are expressed rather than the methodology used for measurement. It is likely that different approaches may be required for different types of screen media, but there should be a commonality in terms of the underlying measurement concepts. Some of the practical issues that will need to be addressed are considered in the next section.

Credibility

Screen-media needs to establish a measurement system that is credible in the context of the criteria used for other media. The basic definition used across media to identify exposure is the 'Opportunity to See' (OTS). This is defined below for each of the traditional media:

Medium	Industry Body	Research method	OTS definition
Radio	RAJAR	Self-completion diary	Listening for at least five minutes in a fifteen minute period.
Print	NRS	Face-to-face interview	Read or looked at any copy of the newspaper or magazine for at least two minutes during the period of its publication interval.
TV	BARB	Panel equipped with electronic meters	Panel member in the room with the TV switched on and the peplemeter button pushed.
Outdoor	POSTAR	Traffic counts, modelled and calibrated by visibility adjustments	Visibility adjusted passage past a poster site.

More details of the methodologies used by other media are given later in this document.

It should be noted that none of these is perfect in determining whether an individual has been exposed to advertising. In the two minutes spent reading or looking at a magazine the respondent may not have looked at all the pages. The television viewer may not be paying attention to the screen. Radio listening may have taken place during the programming and not the commercials. Arguably the outdoor



medium comes closest to defining the 'true' likelihood of exposure by incorporating visibility adjustments, but this is arrived at after an extensive modelling process that averages out the differences between sites.

In the context of screen media it is proposed that an **Opportunity To See** should relate to the medium (i.e. looking at the screen(s)) while an **Impact** relates to exposure to advertising (i.e. looking at the screen(s) *while advertising material is being played*).

Other important definitions that relate to audience measurement are as follows:

- **Reach** (or coverage): The number or percentage of the audience who are exposed to a campaign. Often expressed as the reach among a key target group.
- **Frequency**: The number of times the average member of the audience is exposed to the campaign. This can also be expressed as the number or percentage who are exposed 1, 2 3, 4 ...n times, 2+, 3+, 4+ times etc.

Easy to Understand

As an 'outdoor' medium it is appropriate that screen media should look to traditional outdoor media to establish the parameters necessary in order to establish a currency. The main components of the POSTAR system are as follows:

- A verified count of the pedestrian and vehicular audience passing each panel (either collected directly or modelled).
- A visibility adjustment applied to reflect the likelihood that a passer-by will see it (depending on its size, orientation, distance from the road etc).
- A travel survey used to collect demographic data on the nature of the audience passing each site and, crucially, reach and frequency.

POSTAR is unique in applying a visibility adjustment to the total audience. This leads to two further terms that can be used to describe the audience: gross passages (the total number who pass each site) and net passages (the number who have an Opportunity To See each panel). It should be noted that POSTAR is not concerned with whether or not the poster was *actually* seen – this will depend at least in part on the strength of the creative, but also on whether the passer-by had an Opportunity To See.

A measurement system for screen media can follow the same basic approach, but three additional factors need to be taken into account:

- Screen-media are not static in the same way that posters are. Advertisements will be shown alongside programme material. Someone who glances at the screen may not see any advertising at all. The longer they look at the screen the more likely they are to be exposed to advertising. This suggests the need for a measure of time spent looking, or dwell time.



- Although posters are combined to build a campaign each individual site will have its own characteristics. The size of the audience will depend on the characteristics of the different sites included and how well dispersed they are. Screen-media are bought on a different basis. A typical venue (eg a supermarket) will have a number of screens located at different points. Someone who enters the store will have the chance of being exposed numerous times.
- Screen-media are more heterogeneous than posters. While posters can be different sizes and placed in different locations, in practical terms the audience can be measured in the same way. The way in which exposure to screen media is measured may need to be varied according to the location of the media. Screens in doctors' surgeries, for example, are likely to be measured in a different way from screens in bars or shopping malls.

Consistency

Rather than a uniform approach to measurement a generic system can be devised that will have the following characteristics:

- A verified count of the audience (footfall) – equivalent to 'gross passages' past poster panels. This is crucial to determining the size of the audience and it is essential that these estimates are accurate. Some form of external validation will be required.
- An adjustment to this that takes into account time spent looking at the screen(s) and likelihood of exposure to advertising - equivalent to visibility adjustment for poster panels. This is discussed in detail below.
- A method of identifying reach and frequency - equivalent to POSTAR's travel survey. This can be obtained by means of interviews carried out at a sample of locations. These would seek to collect demographic information as well as data on how often respondents visit the location (in order to derive frequency).

There will also need to be some method of verifying that the planned material is actually shown and the equipment is functioning correctly - equivalent to verification that poster campaigns have been posted as specified.

Visibility Adjustment

As outlined above the POSTAR visibility adjustment is a factor applied to each panel to reduce the number of gross passages taking into account the fact that (depending on its location) some passers by have very little chance of actually seeing it. These factors were derived using laboratory experiments that tracked the eye movements of subjects in order to simulate passages past sites with different characteristics.

An alternative to POSTAR's visibility adjustment that has been adopted in some markets is to define a 'field of vision' associated with each site. This can be used as



a basis for identifying actual Opportunities to See and determining length of exposure – the amount of time the person spends inside the field of vision.

Traditional outdoor media appear in a variety of different formats, from 4 sheet bus shelter advertising through to 64 sheet (and larger) roadside posters. These have the common characteristic that they all appear in an outdoor roadside environment. It was therefore appropriate to use the same set of experiments to derive visibility adjustments that would encompass all poster formats. Screen media are more diverse and it is likely that visibility adjustments will need to be derived separately for each format. There are several ways in which this might be done:

- Using laboratory experiments as POSTAR did. The problem here is that a laboratory may be less suitable as a test environment for screen media. It may be difficult, for example, to simulate shopping or waiting in a waiting room if it is not possible to replicate the additional distractions or pressures that people might be under in real-life situations.
- Respondents could be equipped with eye-tracking or field of vision glasses to monitor what they are looking at as they pass through the location. This runs the risk that they may alter their behaviour as a result of wearing the glasses. There is also the possibility that the extent to which they look at the screens may be influenced by the content, however bland this may be.
- It may be possible, by observation or other forms of technology, to measure how long people spend within the field of vision of the screens in a location. This would be similar to using field of vision glasses.

The proposal is to use the time that screens are within the respondent's field of vision as a basis for calculating visibility adjustments. This could be done using field of vision glasses or by observation. It may be necessary to use eye-tracking glasses as well to 'calibrate' the field of vision analysis (i.e. field of vision on its own may exaggerate actual exposure to screen media). It is possible that there may be demographic differences in people's propensity to look at screen-media and this can also be investigated. However, it is noted that POSTAR did not find any differences for outdoor media

A further adjustment will need to be made to take into account the fact that the advertising may not be on screen all the time. If advertisements and programme material are interspersed the respondent will not be exposed to advertising the whole time that he or she is looking at the screen. This adjustment can be applied as a simple proportion – if advertising makes up 20% of the overall content the assumption is that the respondent is exposed for 20% of the time that a screen is within his/her field of vision.

Model Development

Although screen media are more heterogeneous than posters it would be impractical to assess each installation on an individual basis. This suggests that some form of modelling will be required so that basic parameters associated with the installation



(square footage, number and size of screens installed etc) can be used in conjunction with data on footfall to predict likelihood of exposure to advertising.

The steps involved are likely to be:

- Define different types of screen media.
- Combine these into groups that are sufficiently similar.
- Develop an appropriate model for estimating the audience in each situation.
- Derive an appropriate visibility adjustment for each type of screen media.

Inputs to the model will include variables related to the location (supplied by the media owner and independently verified), by observation (at a sample of locations) and from respondents (obtained by interview).

Location-related variables:

Location type (bar, mall, waiting area etc)
Number and size of screens
Position of screens (eg at the entrance, at the checkout etc)
Colour of screen surrounds
Height of screens
Audio and video or video only
Square footage
Special characteristics (eg whether there is a food court etc)

By observation

Time spent in field of vision
Time spent in public areas

Individual-related variables:

Demographics
Time spent at location
Frequency of visiting location
Party size

It may also be worth collecting the postcode of respondents so that geodemographic data can be included in the model if necessary. This may be useful for estimating the demographic profile at locations where interviews are not carried out.

Key metrics

The metrics that will be derived are:

- Impacts
- Cover
- Frequency.
- Dwell time

The precise definition of an 'impact' is to be agreed. It is likely that consumers will be exposed to screen media in a number of short bursts as they shift their position or



move around the location. In some cases (for example in a waiting room) they may watch for longer periods. It is suggested that an impact should be defined in terms of total time exposed to screen media factored down by

- i) the visibility adjustment outlined above and
- ii) the amount of advertising as a proportion of all material shown, including programming.

The proposal is that ten seconds spent looking at the screen(s) while advertising is being shown should count as one impact. So, if a ten second commercial is shown every two minutes consumers would need to view the screen(s) for at least two minutes (taking into account visibility adjustments) for this to count as an impact. Ten seconds is suggested as a suitable time period because this corresponds to the length of a typical advertising message displayed on screen media.

These can all be related to the total audience which might be sold on a 'cost per thousand' basis (i.e. the cost per thousand impacts, equivalent to 'gross rating points' for TV) with the research and modelling authenticated so that buyers can see they are comparing like with like across different screen media (and in relation to more traditional media).

Demographic data, collected from respondent interviews probably, though not necessarily, at the same time as observational data, is essential to advertisers.

There is other information that can be collected to demonstrate the value of screen media to advertisers. This is beyond the scope of this research, which is concerned purely with audience measurement, but could be collected separately. This includes:

- Recall
- Programme content
- Attention paid
- Opinions of screen media
- Impact on purchasing



Section 4: The White Paper Proposal – Implementing an Audience Measurement System

This section gives a practical overview of methods to derive the following:

- Footfall: How many people in the location
- Opportunity to see How many people are able to see a screen
- Impacts How many people see an ad
- Reach (Cover) Number or proportion of people seeing an ad
- Frequency How many times people see an ad or slot
- Dwell
 - How long they stay in the establishment
 - How long they stay in vicinity of screen
 - How long they look at the screen
- Reliability What proportion of screens work

Recommendations are made as to how each of these can be derived, but these are subject to further discussion.

FOOTFALL

This is the gross measurement of the number of people that visit a location. It is equivalent to gross passages past outdoor poster sites. Footfall sets the upper limit to the number of Opportunities To See.

Shopping mall

Mall operator's records. Without investigation these are probably not suitably reliable records.

Overhead people counters, these can provide a reasonably accurate count as they are able to distinguish multiple people walking in at the same time. They can also be set to only record people over a certain height which avoids counting children and dogs.

Horizontal beam counters. Whilst technically reliable they do not distinguish multiple people coming in at the same time which can reduce accuracy significantly. By setting the beam at a certain height the count can exclude children and dogs.

Manual survey based count. This is reasonably accurate as a count but expensive so tends to provide a very small range of sample data.

Shops, grocery, CTN, fashion, Pharmacies

Same as for malls.

The number of transactions is not likely to be an accurate guide as people often come in groups yet there will only be one



transaction. Also for many types of shop people will browse but not buy.

Hair & other salons It is reasonable to assume that the number of transactions is equivalent to the number of people in the premises. Very few people visit a salon without a transaction and those that don't are possibly not relevant to the count.

Taxi Basic data is the number of fares collected.

Manual survey data will be required to provide an estimate of the average number of passengers.

Buses Ticket sales provide a basic data point however many passengers travel on season tickets or one day travelcards.

People counter systems can be effective but are expensive to operate.

London Underground In principle data should be collectable from the turnstile counts however there are a number of stations such as Finsbury Park where passengers transferring from main line trains do not pass through a turnstile.

Main-line trains Ticket sales

People counters

Airports In the departure areas it should be possible to get very accurate gross data in terms of the number of people that pass through.

Other:

- Student union
- Community centre
- Station concourse
- Station platform
- Health clubs / gyms

OPPORTUNITY TO SEE (OTS)

This is a count of how many people come into the vicinity of a screen and are able to see it, irrespective of whether they look or not. In some locations the opportunity to see will equal the footfall data. However in many locations the numbers will differ significantly due to the size and layout.

The measure could be based on the location or the individual screens. The recommendation is that it should be on the individual screens. However, in some



locations a rate card will be based on the location in which there may be multiple screens running from the same playlist.

Shopping mall Depending on the location and nature of the media network people may or may not be able to see screens while they are in the mall. They may also pass many screens that are showing content from the same playlist.

Thermal tracking map which shows the density of people's movement around the location.

Other ways to measure whether people walk in the right area

Other automated systems

Shops, grocery, CTN, fashion, Pharmacies

Depending on the nature of the shop and the location and nature of the media network people may or may not be able to see screens while they are in the shop.

For screens in the main aisles it may be valid to assume that everyone visiting the shop can see these, so footfall will equal Opportunity to See for these screens.

For shelf edge people counters at the end of aisles are possible but expensive.

Question whether a detailed survey in a sample of stores can be grossed up as representative for all stores in a retail multiple.

Hair & other salons Opportunity to see can be considered as equal to Footfall.

Taxi Opportunity to see can be considered as equal to Footfall

Buses Opportunity to see can be considered as equal to Footfall

London Underground Opportunity to see can probably be considered as equal to Footfall

Main-line trains Opportunity to see can probably be considered as equal to Footfall

Airport Opportunity to see can probably be considered as equal to Footfall

Other:



- Student union
- Community centre
- Station concourse
- Station platform
- Health clubs / gyms

IMPACTS

Definition: How many people see at least 10 seconds of an ad.

Techniques:

Large screen Camera behind screen and then analyse the video. This will provide accurate data for people looking at the screen from which other data be derived.

Survey. Not as accurate as using video.

Shelf edge Motion sensors can be used to capture a gross figure for the number of people who pass the screen (Opportunity to See) with an additional motion sensor set on a timer, eg 15 seconds, to gauge the number of people who remain in front of the screen and are therefore likely to have seen the content.

Camera behind screen to record video for later analysis. This can provide very accurate specific data which if provided on valid statistical sampling basis can provide indicative figures for a whole similar network.

Survey. This is expensive and probably not as accurate as the camera.

REACH AND FREQUENCY

Reach is defined as the number or proportion who have at least one impact. Frequency is the number of times people see an ad or 10 second slot. This will be affected by a number of considerations.

- Number or density of screens in a location showing the same playlist (only relevant to larger locations such as grocery, department stores and malls.
- How long they spend in the location

Malls, large grocery and department stores

Survey of people by interview to establish a pattern.

Tracking a sample of individuals to get a representative result.



Tagging volunteers and then using automated counting.

DWELL TIME

How long people watch the screens will depend on:

- Noticing the screens
- Noticing the content
- Finding the content engaging:
 - Emotionally, ie is it enjoyable, about to announce football scores
 - Physically, ie touch screens, text messages
- Past experience of screen-media

So whilst it may be argued that the nature of the location will provide a long dwell time due to a captive audience this is actually an inappropriate premise. Once people have noticed the screens and looked at them if they do not find them engaging they will turn away.

OTHER FACTORS

Playlist data:

- Loop length
- Length of ad
- Number of times ad repeats in a loop

Demographics: A key metric for advertisers, is required for each network or class of screen (some networks will operate zones that may have different demographics, for example male washrooms/ladies washrooms). It should be possible to apply it to one to the main measures such as Footfall, OTS or Impacts.

Audio: A factor that will affect perceived impact.

RELIABILITY

If the screens are not playing at all or not playing the right content then the audience will not be seeing the ads. So a key adjunct to audience measurement is a discount factor for screen that are not going to play the appropriate content when expected.

- Systems to report players and locations
- Systems to report actual playout logs, note these must be from the players not from planning documents.



Section 5: Cost per Thousand

It is anticipated that the screen-media industry will settle at a Cost per Thousand (CPT) mechanic, like all other forms of widely established media. The solution lies in creating the benchmark protocols to establish what key criteria is making up this figure, across each network.

The “Cost” needs to be justified and it needs to be on the basis of the DMN being used with the quality of the specific content factored out.

As noted earlier in this paper there is a lot of history and data regarding existing media (TV, radio, print etc) but it is not a difficult task for a research company to start establishing relative values. Progressively media owners will establish cause and effect methods to demonstrate the value of their medium based on accepted standards of audience measurement.

The network vendor sector has an important role to play in this respect as they can provide the feedback mechanisms to data mine.

This ability to bring together relative and absolute measures for analysis provides screen-media with a near unparalleled opportunity to demonstrate value.



Section 6: Unlocking the medium's potential

In a recent research report, DMN's were described as an "at a glance" medium. This underrates the potential.

A number of factors need to be considered:

- There locations where the audience is "captive"
- In some locations with a passing audience such as a shopping mall "at a glance" may be an appropriate description however:
 - With the right content people can be engaged to watch so to use the word "glance" misrepresents the opportunity.
 - As people become familiar with screen-media and perceive benefit they are more likely to proactively look.
- In locations such as the shelf edge the display system can offer levels of interactivity (passive with motion sensors or active with buttons or touch screens) which certainly move it away from being a "glance" based medium.

This issue of captive locations was considered a key one in the early stages of the market and a number of networks are growing successfully on the back of this. In fact, for some time people were referring to many of these networks as 'captive audience networks'.

The issue of promotional versus branding also has a lot to do with the location of the signage. In a retail outlet it may make sense for it to be more promotional so as to drive immediate action and increase sales. However in a train, taxi, hair salon, gymnasium etc there are unquestionably excellent opportunities for developing branding.

Even in retail by sponsoring lifestyle ambient or instructional media brands can unquestionably develop highly effective branding strategies.



APPENDIX - I

The following provides further detail on the standards and methodologies used by other media:

- 10.1 TV: BARB
- 10.2 Posters: Postar
- 10.3 Radio: RAJAR
- 10.4 Internet: JICWEB, ABCE
- 10.5 Print: ABC

- 10.6 ScreenMedia: Avanti's approach

TV: BARB

TV audiences are evaluated primarily by BARB (www.barb.co.uk)

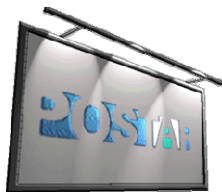


Some of the basic outputs from BARB include:

Details to be added

POSTERS: POSTAR

Outdoor Poster audiences are evaluated primarily by POSTAR (www.Postar.co.uk)



Some of the basic outputs from Postar include:

Throughput / Footfall

- Number of people passing through a particular environment, regardless of whether they have passed a screen/site. *(Such figures are not one of Postar's output, but are used by many digital sales companies)*

Gross Audience

- Number of people passing a site

Impacts



- Number of people who will have seen a site(net audience)

Coverage

- % of a target audience who have seen a campaign at least once
(note : target audience is segmented by demographic group & geography, e.g a TV region)

Frequency

- Average number of times ad seen

To illustrate the potential transferability of such knowledge, it does not take a huge leap of faith for an advertiser or media planner to conclude that if consumers take in the messages displayed on a highly accountable poster format in a conventional location, they will probably take in the messages displayed on identically sized posters in a newer environment such as a shopping mall.

With screens we have no such starting point. More traditional forms of out-of-home advertising will undoubtedly need to play a role in the measurement and evaluation of screen media, but simply claiming that screens are generically better will not be accepted, especially when there are so many alternative OOH opportunities available to advertisers

RADIO: RAJAR

Radio audiences are evaluated primarily by RAJAR (www.rajar.co.uk)



Some of the basic outputs from RAJAR include:

Listeners / The Universe

- Number of people who might listen to a station is most popularly collated via 'the diary method*' – (Fierce debate surrounds the efficiency of this method based on the very small sample of audiences who participate, and proportionally scaled up to give regional / national coverage).
- **The Universe** comprises of all individuals aged 4 and over living in private households in the UK. Individual radio services have their own Total Survey Areas (TSA's) defined within this.
 - Information is collected by means of a seven day self completion diary. The interviewer is required to place diaries with one household member aged 15+ at a total of 15 households. In addition, up to two children (4-14) may be selected per household, up to a maximum of five per assignment.



The diary is customised at placement. Each respondent is asked to sort through a set of cards with the names of all the radio stations in the area and invited to select all the stations which they might listen to or hear in various situations. This process provides a station repertoire for the selected individual which is then entered in the diary by the interviewer, using station name labels. All diaries are collected personally by interviewers at the end of the seven day test period.

Population

- No. of adults within transmission area

Target Population

- No. of target audience within transmission area

Target Reach 000's

- No of target audience listening to station each week

Target Reach %

- No of target audience listening as a % of total

Target Average Hours

- Average weekly hours listened by each target audience listener

From this a CEF (Cost Efficiency Factor) is created against which planners can give a 'score' to every station, and negotiate a CPT directly with each station.

INTERNET: JICWEBS

Internet audience measurement is being increasingly standardised:

- JICWEBS, www.jicwebs.org
- ABCE, www.abce.co.uk

Companies who sell email/web/video streaming say their charges are based more on cost of bandwidth and then translating that in to a cost per thousand equivalent

Costs are aggregated out, particularly to take account of currency fluctuations (as they inevitably work on a global platform)

Tracking software on the site side includes:

- DART
- Open Adstream
- Accipter



- NetGravity
- MSN Admanager
- AOL Rainman
- Yahoo!MS

On the agency side includes:

- Atlas DMT
- Open Adstream
- Bluestreak
- DFA



APPENDIX II: DMN Index screen concept

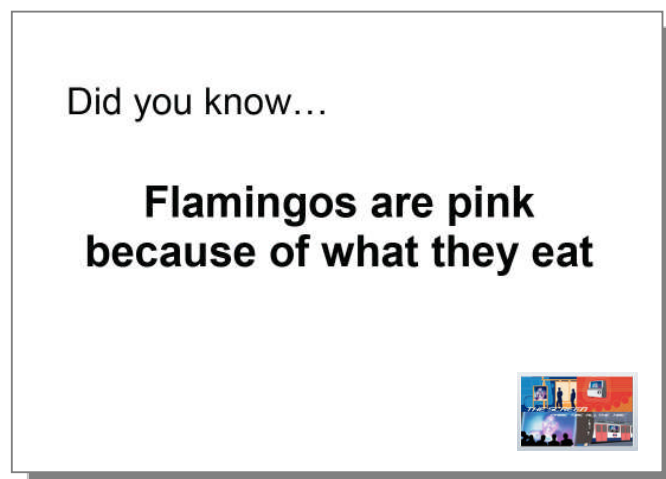
The following is included as a proposal that was considered but not proposed due to the possibly conflicting impact of the content used.

The objective of the DMN Index Screen is to provide a standardised index of a digital media network. One of the most significant flaws with all the DMN effectiveness research published to date is that it is based on different content and therefore a high degree of the result should be attributed to quality of the result.

It is very important that content be factored out so that a network can be rated based on its attributes as consistently as possible across the industry.

Various notes relating to this:

- An independent organisation releases a simple screen (still image) intended to be shown at controlled times against which recall research can be performed. The image would carry the logo of the organisation to provide accreditation.



- The idea is that if different networks use the same index screen the relative merits of these networks in terms of recall can be identified.
- The payout would be standardised, for example 10 seconds per minute over an hour.
- The follow-up research would be standardised, so in the context of the attached example questions might be:
 - Did you notice the video screens around the shop?
 - Did you recall any of the content?
 - **Do you know any facts about flamingos?**



The last question being intended to identify the more sub-conscious awareness.

Executing the 'Index Screen' concept

1) Establish a factor for proximity to transactions, (indoors / outdoors / in a shop / in a mall / etc).

This will allow for the relative ability of a network to stimulate action such as an increase in sales.

The "per Thousand" needs to be standardised as a first step, it could be "Opportunities to see" which would seem to equate with people buying a magazine or Impacts which is harder to evaluate and more stringent than applied to most other media. One of the key aspects of DMN is they are usually sited in captive and measurable locations, Shopping malls with multiple entrances/exits may be one of the most complex.

Further to the above, we would expect that the GRP factor should provide a measure of compensation for DMN sited in highly measurable and captive locations such as a hairdressing salon or the potentially more uncertain environment of a shopping mall.

Gross Rating Points = Reach x Frequency

- Reach: % of people seeing the ad at least once
- Frequency: The average number of times people see an ad

With as much of the above as possible standardised various DMN should start to be able to adjust the cost based on evidence that uses stable and consistent measures.

It will not take too many cycles for advertisers to understand the impact. What will have been achieved is a stability and reliability in the basis for relative measures which is what we have now with other media even if it is imperfect in absolute terms.

A Formula may appear objective but will still require some subjective assessment. A process like the Index Screen may appear subjective but that is why professional researchers have value – they should apply consistent standards.

2) Measure the factors affecting the calculation of audiences

Addressed by the Index screen result:

- Number of screens
- Screen size
- Screen type (is brightness important?)
- Dwell time



- Duration of each 'viewing'
- Travel patterns within an environment
- Screen positioning (e.g height)
- Screen location
- Other distractions
- Content

Addressed under consideration of "per thousand"

- Footfall

Addressed as a cost issue:

- Spot length
- Frequency of advertising (per hour?)