INTERNET AUDIENCE MEASUREMENT NOW -
SITES, CONTENT AND CAMPAIGNS - ANYWHERE, ANYHOW

Frans Kok, JIC STIR
Marion Appel, Intomart GfK
Enrico Verhulst and Pat Pellegrini, comScore
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Introduction

The internet is widely considered to be the most intensely measured medium. But, which figures do we believe? JIC STIR, as with other JIC's, aims to provide an objective source for cross site comparisons as well as campaign planning and content measurement.

The growing demand for increasing granularity and quality of online audience data require a landslide approach to data collection and data processing techniques. The new Dutch online audience survey commissioned by JIC STIR applies hybrid strategies as well as multiple panel approaches in order to meet these demands. Users will no longer be bothered by conflicting results from different sources and be able to plan and evaluate their campaigns – on a detailed target group level.

The new survey begins in 2012. In 2011, an extensive Proof of Concept was performed of all aspects of the new model which was developed for STIR by Intomart GfK and Nedstat (now comScore) following the Request for Proposals in 2010. The new model integrates the unique design of the Webmeterpanel, which provides single source reach by target group as well as internet key figures irrespective of the surfing location, and the extensive know how of panel measurement by comScore. In this paper, we shall describe the background of the new model, building on the previous STIR Webmeter model, and the objectives and design of the new survey. Finally, some results of the Proof of Concept will be shared.

1.   **Background Dutch online audience measurement since 2005**

At the start of the internet audience measurement in 2005, the Dutch market commissioned Nedstat (now part of comScore) and Intomart GfK to carry out their proposed methodology based on the Webmeter concept. The Webmeter performs a pixel measurement within a recruited and managed panel, combining server-centred and client-centred approaches into the then novel method of "tracking through portal." In fact, the Webmeter is not a meter in the traditional sense of the word and is not based on software but on the tracking-through-portal principle: the Webmeter is independent of the location where individuals browse the Internet, they log on to a webpage: webmeter.nl. Any surfing behaviour is tracked, either at home or at work or any other location. The principal elements of the survey are the Webmeter, the Webmeter panel (9,000 members) and the questionnaires for collecting target group information from the panel. Over 400 demographics and life style characteristics are included in the monthly released data, i.e. comprehensive insight in media usage, personal and household situation, e-commerce behaviour and life style. An additional 1,000 non-surfers are added to the reporting sample so as to project the target groups used in analyses correctly to total population levels. The STIR survey delivers similar metrics to traditional audience research and respondent level data similar to a TV audience panel. The data set for media planning offers broad opportunities to publishers, media planners and strategists to delve deep into the data or perform optimisation of media schedules.
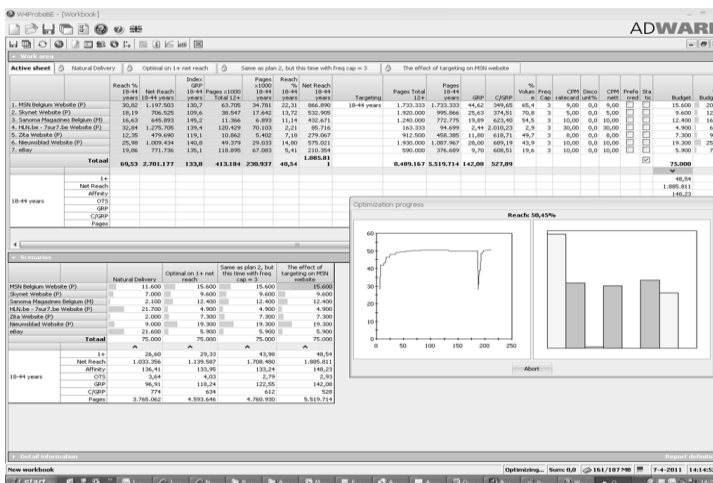

Figure 1. Optimisation scenario's using frequency capping and targeting

Webmeter pixel measurement is able to report on all 450 tagged websites that currently participate in the survey. For the annual reporting of market share across all websites, including Google, Youtube, and others, a small software panel was activated. The results from this panel were made to match as far as possible by harmonising the websites URL's to the measured tags. (For a detailed description of the survey design until 2011 see: Kok, Frans, Appel, Marion & Verhulst, Enrico, 2009)

By offering this data the Internet publishers and networks have been able to achieve their proper place in the media market and have witnessed a steadily growing market share in the Netherlands. Also, the STIR survey proves to be a catalyst for the development of cross-media approaches in the Netherlands. Stream measurements from the Webmeter panel are used for SKO WebTV reporting on profiles and cumulative reach of time shift viewing via the internet of TV programmes. Since 2009 the fused NOM and STIR data have been released several times, providing a single database for publishers to analyse reach of paper publications and internet versions combined.

2. Objectives and requirements for the new STIR survey (2012-2014)

Audience research and webanalytics remain two separate worlds. Why don't these figures match? Additional confusion arises as a result of behavioural targeting techniques used by ad servers. Why do we need an audience panel if we know exactly what a person does, using his/her cookie-information? Why is measurement limited to tagged websites and content, excluding important players from the survey? Explaining the why and how of differences in metrics and measurement definitions are not enough to convince the market to use audience data as trading currency. STIR participants expect understandable, "correct" figures as an objective, undisputed source for media planning and buying.

Nowadays, the complexities of internet measurement have multiplied, compared to 6 years ago. New models for audience measurement, in order to be future proof, must be able to include all dimensions of internet usage, sites and content, tagged as well as untagged, all devices, smartphones and tablets, all traffic including from home and work, short and long tail, campaigns, streams, visibility, etc. At the same time, advertisers and agencies require full demographics, target group characteristics and life style classification in order to plan and evaluate their internet campaigns according to the same standards as other media.

Campaign control must be possible during the running of the campaign: data released long after the fact are no longer acceptable. Will the market continue to accept daily reports on the number of impressions realised, as a sufficient steering instrument for the optimisation of campaign effectiveness? Planning and buying of campaigns has moved on to the level of net reach, frequency and quality of contact within the advertiser's defined target group. Timely campaign control data is now needed at the same level.

The objective of the new STIR survey is to meet the market demands for undisputable online audience figures, while at the same time maintaining the data granularity and quality of the Webmeter survey.

3. New survey design

Overview
The design of the STIR online audience measurement from 2012, has three basic elements:

1. User centric: a large online recruited software based panel of 20,000 using passive measurement of all internet activity, tagged and untagged (World Panel)
2. Tracking-through-portal: a smaller Webmeter panel of 5,000 measuring internet visits to tagged websites and content, based on active participation (at home and at work) and extensive demographics and other relevant target group characteristics (Target Panel)
3. Site centric: measurement of all visits to STIR-tagged websites (Total Traffic)

The data resulting from these measurements are merged into one panel. A two-way fusion donates target group data from Target Panel to World Panel and internet visits to untagged sites from World Panel to Target Panel. Surfing location is projected from the Webmeter measurements in the Target Panel.

After that, the weighted and projected panel results of the combined STIR Panel are calibrated with the results of the Total Traffic of tagged sites. Calibration to the Total Traffic is achieved by re-weighting the panel, correcting end results while maintaining distributions and duplications. For media planning purposes the panel data are combined with survey results from a sample of non-surfing people who have filled in the questionnaires, excluding internet characteristics and surfing behaviour. The population of the selected target groups is therefore identical to the projections of other audience measurement surveys that represent the total population.

STIR will report the new survey to the Dutch market starting January 2012. In comparison to the previous study, STIR will be able to deliver:

- Complete online usage in the Netherlands: tagged and untagged sites, content (streams) and advertising networks
- Weekly reporting: respondent level data for media planning (STIR participants' sites)
- Monthly top lists of all sites
- Quarterly trend reports
- Using the same platform, campaign tracking, (optional visibility), daily results including reach and profiles is offered to STIR media agency members

Fieldwork

The two panels which form the building blocks of the new STIR Survey are managed separately by the two partnering providers, Intomart GfK and comScore.

The Target Panel internet behaviour measurement is based on the principles of the Webmeter, a system that has been in use for the STIR internet audience measurement since beginning 2006 (Kok, Frans, Appel, Marion & Verhulst, Enrico, 2009). In the new survey, Intomart manages the Target Panel which is based on active participation of 5,000 panel members who are continuously screened for compliance. Recruitment is partly by random sampling (postal address lists) and partly from the Intomart Online Access panel of 135,000 members. The age hurdle is lowered from 13 to 6 years. Panel members are required to log into the Webmeter.nl page whenever they start surfing the internet, with some exceptions when people are single users of their device. In this way the comprehensive surfing behaviour for an individual is tracked. Measurement is restricted to tagged sites that are members of STIR. Reported data consist of raw, respondent level reach and frequency, including page views, website visits, content impressions and stream starts. Pages and content can be classified according to the needs of the publisher, including advertising package, by including these markers in the tag. All panel members have completed questionnaires including extensive demographics, life style, internet usage and e-commerce plus other media usage. The Target Panel forms the base for the reporting of target group characteristics for the combined STIR panel.

The World Panel

Digital media has consistently pushed the methodological boundaries of established media measurement. Online audiences are theoretically the most measurable but are operationally the most challenging to measure due to massive fragmentation and myriad behaviours. comScore's purpose built and designed World Panel responds to these challenges by deploying a low-touch technology driven solution permitting the large sample size (20,000) required to measure the long tail of digital media. Of course, panels have a long history in both academic and market research, across a variety of disciplines from engineering, biostatistics, demography and sociology, employing a multitude of panel design methodologies. The reason for the continued use of panels are the rich 'event histories' of individuals and their behaviour that are collected; a longitudinal record used to provide social and behavioural dynamics.

comScore employs an online panel methodology for internet measurement which provides a direct means for associating each individual panelist, and their associated demographic composition, with their internet behaviour. This means that the panel permits measurement of the delivery of digital content linked with demographic composition, along with metrics like how long individuals browsed a site (duration or engagement), the overall reach of a site, and the frequency of visitation. Panels permit an understanding of the context of what people were doing before or after being exposed to an advertising message so questions like 'what is the likelihood of a trademarked search after exposure to an advertisement?' can be considered.

comScore's panellists are recruited exclusively online which overcomes issues related to the traditional use of landline telephone frames such as how to reach or recruit mobile-only or mobile-primary households using random dialling approach, for example. Telephone recruitment does not work for online measurement; segmenting comScore panellists into landline, landline/mobile-landline primary, landline/mobile-mobile primary, and mobile-only showed significant digital behavioural differences between these four groups, and the latter two would be missed completely in a telephone frame.

The online recruitment occurs in two ways: the affiliate program "banners plus Permission Research" and through a dozens of third-party application (TAP) providers. The sheer number of TAP partners permits comScore to case a wide net and recruit from a large range of sites; panellists are offered free downloads of games, utilities, data storage, etc., in return for their participation in the panel. The affiliate program is a network of qualified web entities where potential panellists are recruited via banner ads designed such that they appeal to a broad array of persons who are directed to our online intake site. Banner ads are effective for recruitment because they provide an avenue for reaching a wide component of the online population, as well as individuals that might be drawn to the various offers, for example, 'Trees for Knowledge.' In this special program, comScore plants a tree for each new panellist installed and so the offer appeals to panellists interested in improving the environment as well as the internet.

Potential panel members are informed they would be joining an online market research panel that tracks their online browsing and purchasing behaviour, and makes explicit the strict comScore privacy policy. Upon registration, the panellist provides their basic demographic information (age and sex), along with household information, and they download the software meter that passively tracks their online behaviour (see below). The TAP program involves our partnership with application providers who offer visitors a vast array of free software, applications and utilities in return for joining the panel. In the recent past, we have increased our TAP network from about 13 to well over 40 partners at present. This allows comScore to cast a wide net and recruit from a large range of sites - increasing the likelihood of appealing to all types of potential panellists in the digital world and reducing the potential for behavioural bias in the panel. Both the affiliate program and TAP provide full demographics required for weighting in a particular market, with supplemental demographic data collected by survey.

A recent enhancement to comScore's online recruitment methodology involves the use of recruitment targeting. Recruitment targeting allows comScore to gain some control of marginal recruitment which means that the selection of the next panellist recruited is guided by the current panel composition against the universe. This is a best practice used in traditional offline panel methodology which comScore is pioneering in the online recruitment world. Since the TAP process is used extensively for recruitment, implementing a targeted recruitment methodology involves the development of a partner 'dashboard' which is essentially a mechanism to track partner yield by demographics, behaviour and panel performance by installation versus the comScore panel composition versus universe. Recruitment partners are then 'dialled up or down' based on that partner's historical yield versus the current panel needs. In practice, marginal recruitment (that is, selection of the next panellists recruited) is driven by current panel composition against universe. However, such an approach must take into account practical limits on partner targeting flexibility (as well as historic partner and campaign-level performance.)

comScore is able to gather online information in a low-touch or passive manner; panellists are never asked to "log in" when they begin an internet session. Thus, the behaviour gathered is free of any bias associated with survey or electronic data collection where respondents remain aware that they are being observed and measured, and may alter their media consumption accordingly. Data on all digital activity is collected from recruited panellists through a software meter that is downloaded onto all machines used by the panellist. As noted, the software meter captures all web activity in a passive fashion, and so therefore does not require the panellist (or other panellists in the home who share the metered PC or laptop) to identify themselves at each web session. This non-intrusive approach is a fundamental part of the low-touch recruitment philosophy because it has the benefit of reducing panellist fatigue (and the subsequent turnover that results). However, this begs the question 'how does comScore know who is using the machine?'

The answer is a proprietary 'session assignment technology' (SAT) which uses all possible information captured the software meter to "learn" how many users use the same machine (i.e., the roster) and then differentiate their usage (i.e., the sessions) via biometrics (e.g., specific attributes of keystrokes and mouse usage) and other session information. The strategy is passive observation over an extended time period in order to identify the person in front of the machine for each internet session.

SAT works by first developing a roster of machine users, using observed online behaviour, with demographics associated with each user. The machine rosters are typically derived from panellist registration information, but also comScore surveys email or other online identifiers such as social networks and log-ins – these are often called session 'markers'. Assigning sessions to persons using SAT is the way comScore assigns demographics to sessions. The basis of session attribution is simple: most user sessions have identifiable information and these identification markers match up with attributes collected through the roster creation process, reducing the need for any inference, and permitting the biometric signatures developed to be linked to users for future session attribution. In fact, about 80-85% of user sessions do not require any type of inference in user identification for two reasons: first, almost half of panel machines are single-user machines and, second, on multiple user machines, about 70% of sessions are marked sessions where identifiers exist to assign sessions to a specific user. For the remaining 15-20% of unmarked sessions, comScore uses SAT and its associated biometric and behavioural information.

The panel-centric hybrid methodology is an extension and a significant step forward in terms of the art and science of internet measurement (see also Pellegrini, 2009). To fully understand this enhancement, it is important to understand the basis of the methodology which uses a massive panel at its core. With data collected from over 171 countries, and reported on 41 countries, comScore panellists represent the global internet audience. A consistent panel methodology across all 41 reported markets means that regional and global views of internet behaviour are possible, as well as market level analyses. For JIC STIR a quarterly trend report will be issued, comparing recent developments in the Dutch market to the World panel worldwide.

The myriad digital data captured by our software meter from panellists requires a powerful taxonomy in order for this granular data to be digestible in a meaningful way. The so-called Client Focused Dictionary (or CFD) is a proprietary URL dictionary used to define sites' hierarchies and is created based on a combination of URL patterns that make up various sections of a site. Thus, a well-maintained and accurate CFD is paramount to internet measurement so that sites are reported in a purposeful and meaningful manner, while simultaneously filtering out non-essential domains such as back-end server calls or non-user-requested pages. The panel methodology is the only way to derive true unique visitor counts – real people – visiting pages on the web, not cookies[i], ISPs, or any other combination of non-human traffic, and so has played a major role in the movement of

advertising from traditional media to digital media. Advertisers want to know who is seeing their display ad or searching as opposed to raw counts of visits, say, from server-based census data, which contains varying levels of noise which should not be counted as unique visits to a site or page.

Data Processing

Data is collected from two panels for the STIR Online Audience Measurement with quite different underlying philosophies and methodologies, resulting in different sample structures and available metrics and demographics. GfK, comScore and JIC STIR see great benefit in combining these two methodological approaches, each having their specific advantages and drawbacks. Combined, the two panels offer the Dutch market both high quality sampling, extensive target groups and profiles of all web-sites and content.

The two data sources are combined in order to arrive at a single media planning database. Using fusion techniques, the demographic variables that are collected through questionnaires in the Target panel are ascribed to the panellists of the World Panel. The panellists of the Target Panel are then completed with the visits of sites without measurement code (untagged sites), from the measured data in the World Panel. This fusion procedure can also be used in situations where measurement codes of STIR sites were missing temporarily, to estimate and ascribe the missing data.

Site definitions

Before the two panels can be merged, the webanalytics and the meter data need to be harmonised. In the current STIR survey, sites are identified by measuring codes which contain specific attributes:

- Corporate - owner of the site, usually the company that site belongs to;
- Site - name of the site, usually the domain name;
- Channel - name of the STIR channel that (part of) the site belongs to;
- Webdir (optional) – a directory within the site;
- Context (mandatory) – name of third party indicating that content of this third party is included in the site's STIR figures
- Auto - to identify automatically updated pages
- Content – stream info on level of Webdir

Current STIR research allows a "site" tag to be placed on multiple domains. For users of the STIR data it is not always clear what the reported site really represents. Within the World Panel, reporting on a site begins by collecting, filtering and grouping of visited Urls measured by the panel software on the PCs. Site definitions are managed within comScore's Client Focused Dictionary (CFD), which is available online.

Proposed modifications to add or filter domains are judged by the CFD team on the basis of a set of rules. These rules include the ownership of a site at corporate level. Other rules concern the branding and when it is allowed to add reach of third party sites and "pseudo-domains" to the websites reported figure.

These CFD rules are drawn up in the first place to maintain an objective categorization and ranking of all sites worldwide in the comScore data, which is then used in the online reports. In addition to the official categorization and ranking, there is at the individual level in STIR more flexibility. So-called Custom Entities allow companies to report on alternative combinations of sites (objects, domains, sub domains). These capabilities are used in the POC to "harmonise data" between World Panel and Target Panel. Within the World panel are the nu.nl sites measured and reported as separate media titles: Nu.nl, nubijlage.nl, etc. STIR on the other hand reports all these sites as a single site: Nu.nl. In order to solve this discrepancy, a Custom Entity is created in the CFD so as to group nu.nl, nujij.nl, nubijlage.nl, nufoto.nl etc., to NU.nl. In this way, the data from two completely different measurement tools are harmonized and made comparable for further data processing and reporting.
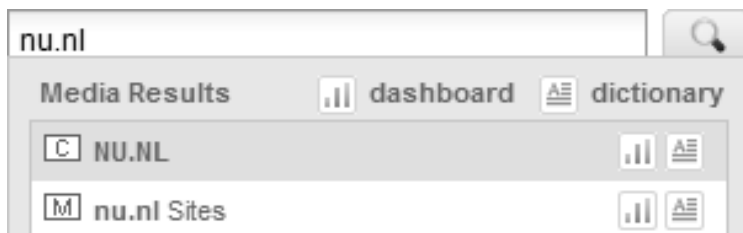

Figure 2: Custom Entity Nu.nl Sites created in CFD

CFD definitions in combination with tagging allow a flexible definition of a "site". There is extensive experience with the CFD rules to define sites and STIR will be able to use that knowledge and experience and conform to international standards.

Data fusion

The harmonization of the site definitions in both panels is conditional to the process of statistical data fusion. The fusion uses imputation (or ascription) algorithms. Imputation is very often used to compute partial non-response in interview data. To start with, the incomplete variable is analysed in order to determine which other variables are statistically significant for the chance of non-response in this variable. This set of explanatory or relational variables are then used to split the data set into homogeneous, mutually excluding segments. Within a homogeneous group for each case with non-response, the value of a randomly chosen donor is copied from the same group. This process maintains the variation of the answers within the donor group.

The algorithms used during the imputation (and thus also fusion) include:
- Random hot-deck;
- Predictive mean matching (derived from linear regression);
- Simultaneous imputation.

On the basis of multivariate analysis of the Target Panel and the World Panel measurements 8 to 12 respondent segments are identified, specifically to identify type of surfing behaviour as explanatory variables for the visit to the untagged sites. On the basis of this segmentation twins in the both files are identified and the visit to untagged sites of the twin respondent World Panel injected with the corresponding Target Panel member. Then also a levelling is done to browsing from the workplace. The ratio of work versus at home surfing from the Target Panel is used for similar kinds of sites in the World Panel.

In the PoC, the quality of the fusion was expressed in the metric: 'percent correct' which indicates the percentage of value allocations that is based on a 100% similarity of the results within the homogeneous group to which the twins belonged. In groups where there is not a single value, but e.g. 5% yes, 95% no, the attribution of each value is less than 100% correct. A minimum of 70% correct is taken as a minimum norm.

The resulting data base of 25,000 STIR Panel members is then weighted and calibrated to both census data from demographic sources as well as web analytics.

Calibration

The third key component of our offer to STIR is calibrating panel results to total traffic measurements of the tagged sites. This is a huge change compared to the previous Webmeter concept when only measurements of panel members were tracked and all other pixel server calls were ignored. In the new hybrid system the STIR measurement tags are used for site centric measurement and for Webmeter measurement. In this way, discussions about differences caused by incomplete or incorrect coding are no longer necessary. The total measurement uses the same platform.

The page views and visits to the larger sites as well as clusters of smaller sites belonging to homogeneous groups are input for calibration. The aim of calibration is to ensure that the numbers from web analytics closely match the results of STIR. We believe this will prevent market discussion on the validity of the STIR research because numbers are "as expected".

However, total measurements also includes web traffic that is outside our panel of Dutch respondents of 6 years and older. We will first correct the total measurements to match with the panel definition.

Total measurements are all the requested pages of websites. This normally also includes the following traffic:
1. Foreign traffic: web traffic from browsers that are located in other countries
2. Robot traffic: automated page requests that are for instance used by Google to update their search engine

These types of traffic are not part of the STIR panel definition which is focused on Dutch people of 6 years and older.
Foreign traffic can easily be identified based upon IP-address. These will be filtered out. There exists an active list of robots which will be applied to filter out robot traffic. The corrected total measurements are then used for the calibration.

The weighting of the panel consists of two steps:
1. Weighting and projection to the socio-demographic characteristics of the Dutch population of 13 years and older on the basis of MOA gold standard and the Media Standard Survey
2. Calibration of the projected numbers of visitors and page views of the tagged websites to the actual measured numbers, such that the measured ratio per site visitors – page views in the panel is reconstructed.

Daily, the measured totals from all tagged websites, the number of page views, visits and unique visitors become available, cleaned for foreign visits and robot visits. A multi-dimensional weighting is performed, so that the combined Target and World

Panel will on the one hand be weighted to the Dutch population and on the other hand reproduce the total measurements (page views and visitors) of the relevant tagged websites.

There are two types of weighting techniques: linear weighting and multiplicative weighting. Both methods have advantages and disadvantages. The linear weighting technique is based on a multivariate regression methodology. The disadvantage of this regression methodology is that it often leads to outliers of the weighting factors. It can even happen that negative weighting factors arise when a particular combination of attributes is weighted. The limit of these outliers of the weighting factors often comes down to extra statistical post-operations. For the calibration we prefer to make use of the multiplicative variant.

Characteristics of multiplicative weighting are:

- Iterative process that converges;
- There is no model basis;
- Also known as: raking, raking ratio estimation, iterative proportional fitting,
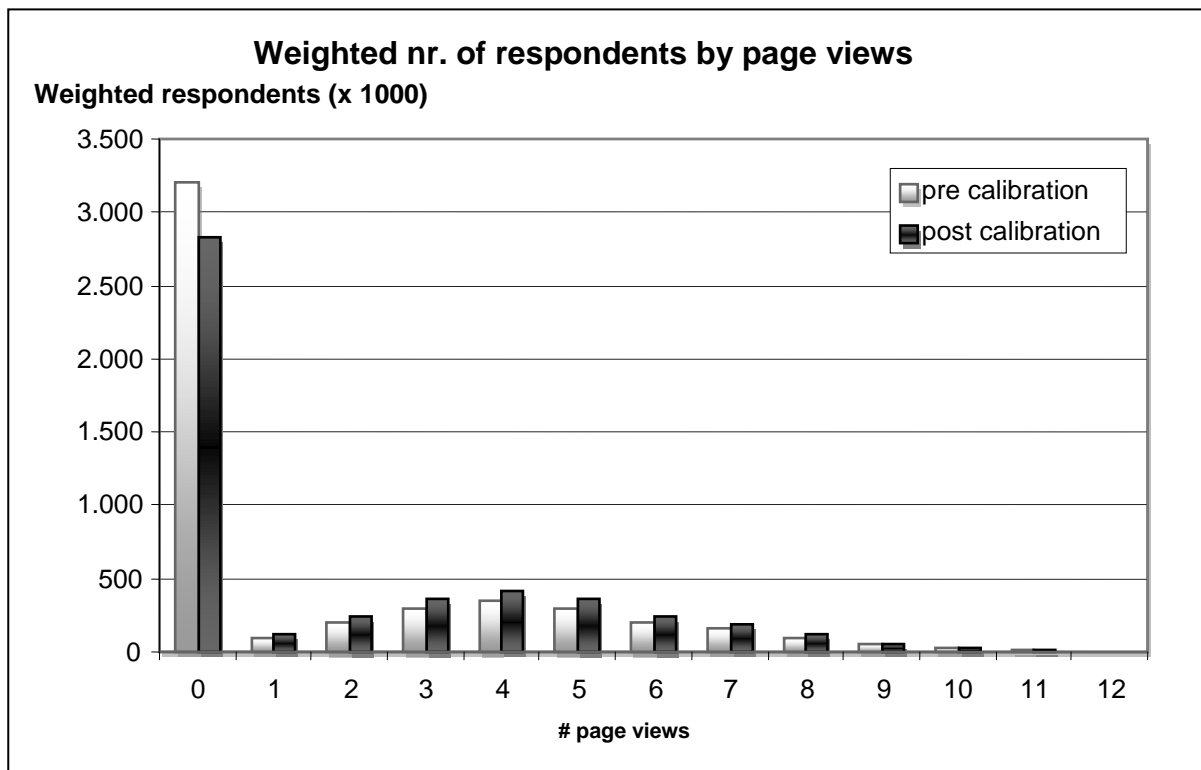- Weighting factors are always positive (as opposed to possible outcomes of linear weighting).

Figure 3. Result of calibration process: frequency distribution of respondents by number of page views, pre and post calibration.

By combining weighting, projection and calibration into the iterative process, an optimal result can be achieved that preserves the initial distribution patterns and overlap. It leads to less skew in the reported sample and thereby all reported sites benefit, not only the 50 major sites that are used as input for the calibration.

In view of STIR's requirement of weekly reporting, data processing shall be highly automated. The development of the model-ling and the tools for adjusting site definitions and other requirements are currently under way.

Campaign tracking

On the platform of the STIR survey, integrated campaign measurements are made available to participating Media Agencies. A code generator will be made available for Media agencies as well as extensive training. Agencies will have different options: simple tag measurement which reports daily the number of actually served add impressions, plus reach within the selected target group, or a visibility measurement collecting in addition duration and visibility (above the fold) of the ad impression. The same campaign tracking is available for pre-roll videos. Campaigns across a large number of sites are reported on site level (STIR member sites) plus other, non tagged sites as a total (other sites).

4. Proof of concept

The novelty of the combined panels and the proposed statistical procedures made STIR tender committee require an extensive Proof of Concept (PoC), which was performed in January 2011. The PoC demonstrated the system working on a real week of data, measured in both panels, as well as the total traffic measurements of a limited number of websites (STIR members).

The following items were verified in the PoC:
1. Harmonisation of site definitions Webmeter – World Metrix
2. Population adjustment of Total Traffic measurements
3. Quality of Target Panel
4. Quality of World Panel
5. Data fusion of untagged sites (WP -> TP)
6. Data fusion of target group characteristics (TP -> WP)
7. Calibration of fused panel to Total Traffic measurements
8. Measurement of streams
9. Weekly reporting process
10. Campaign tracking
11. Visibility measurement

All elements of the PoC were judged to be satisfactory by the Technical Committee and Board of JIC STIR, who were present at the extensive presentations and demonstrations. In addition, the PoC permitted KPI's to be defined for the quality auditing of the Survey once it goes live and throughout its duration.

A Cross Section of Results from the Proof of Concept (POC)

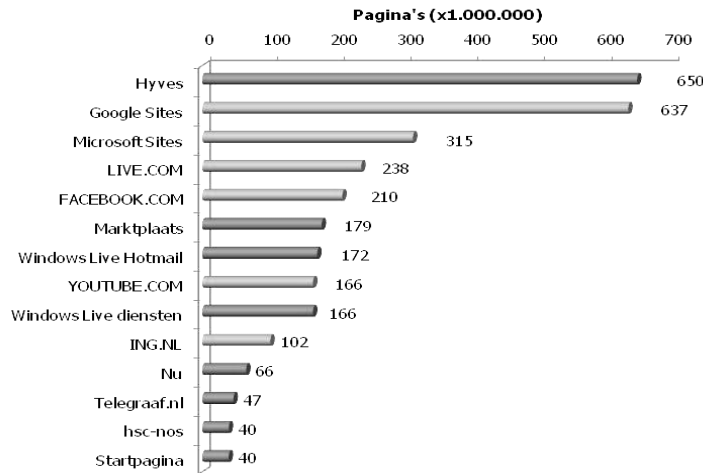*Figure 4. Proof of Concept: top 10-websites in Netherlands in combined World Target Panel, after fusion and calibration (page views) Week 48, 2010.*

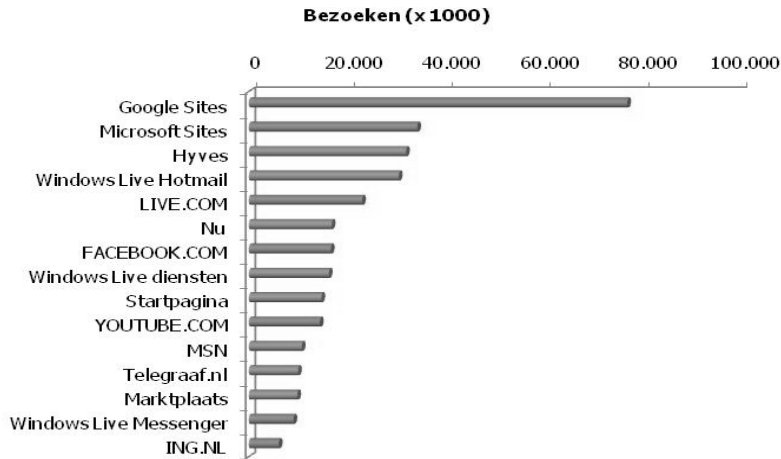**Bezoeken (x 1000)**

Figure 5. Proof of Concept: top 10-websites in Netherlands in combined World Target Panel, after fusion and calibration (visits) Week 48, 2010.
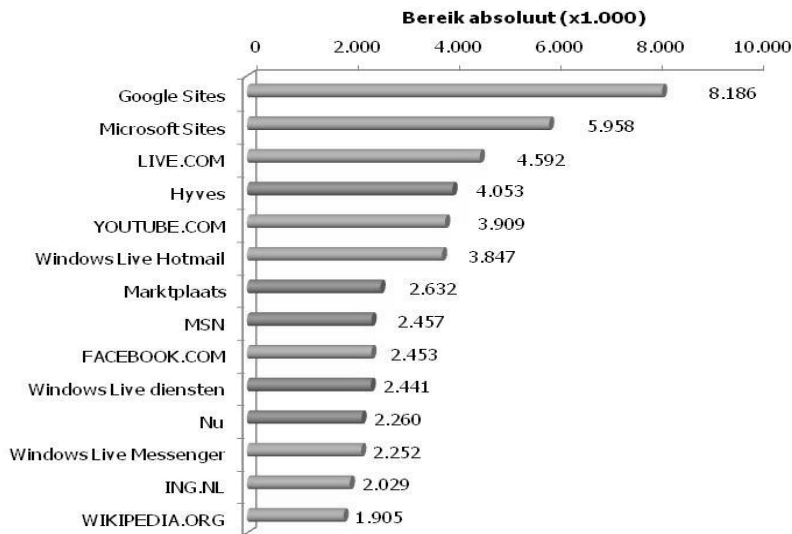
Bereik absoluut (x1.000)

Figure 6. Proof of Concept: top 10-websites in Netherlands in combined World Target Panel, after fusion and calibration (Reach) Week 48, 2010.
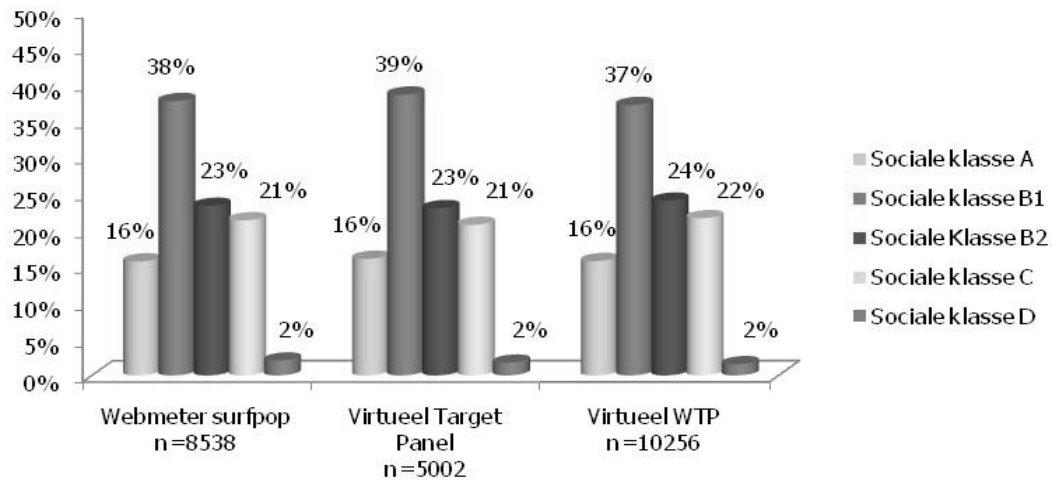
Figure 7. Proof of Concept: Social class after fusion in combined World Target Panel, compared to PoC Target Panel (Week 48, 2010) and current Webmeter panel.
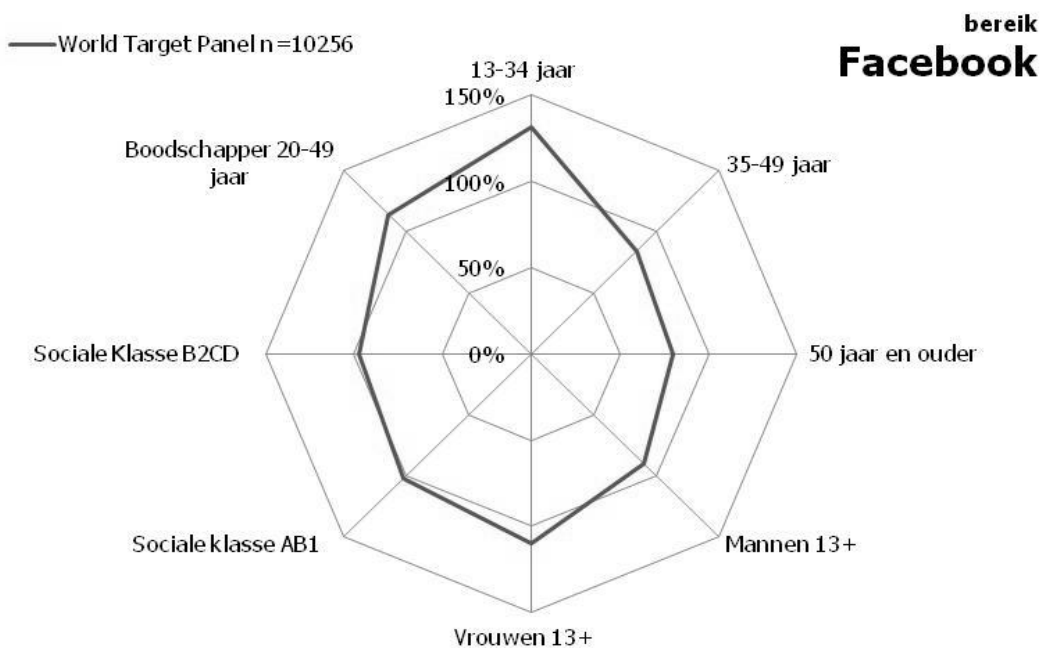

Figure 8. Proof of Concept: Reach profile of untagged site in fused and calibrated World Target Panel (Week 48, 2010).

Even though the survey design is complex, in the proof of concept stage, the parties involved have demonstrated convincingly that their combined expertise will be able to realise this vision. During 2011, the final contract details were discussed and on 29th July 2011 the contract was awarded. By 2012 the newly designed STIR Online Audience Measurement shall be operational.

5. Evaluation of this approach for other countries

The STIR design is not easily copied to other countries. It does however show how high quality standards can be married to more pragmatic approaches that have a less prohibitive price tag attached.

The combination of different measurement methodologies (tracking through portal and meter software), different panel approaches (active and passive), plus hybrid reporting within the same measurement system is a complex, but closed system. STIR is unique in the ability to report undisputed figures, based on a large panel of 25.000 individuals, including visits from any location or browser

by these individuals to all member sites, tagged or untagged alike, with full granularity of a target group panel.   And, of course, measure all relevant internet properties: pages, content, streams, and advertisements.

We believe that the components of this system can be integrated in due course, provided parties have a clear path in view. Starting with a meter panel is a very good beginning, provided the option of tagging websites and content is developed for acquiring total traffic measurements for calibration. Adding an active panel, measuring in- and out of home internet usage, is a further enhancement, provided the panel is recruited and managed by an experienced agency.

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[i] A cookie is a small piece of code inserted into the computer of the user whose behavior is being examined; cookies are used to try to uniquely identify the computer and thereby track its activity over time.