

STREAMING TV: MAKING THE CONNECTION

EXTENDING MEASUREMENT TO EVALUATE OVERALL PROGRAMME PERFORMANCE

*Bas de Vos
Mariana Irazoqui
Enrico Verhulst
Gerwin Bok*

INTRODUCTION

Last year, in response to recent developments in viewing behaviour, SKO initiated a number of projects designed to improve audience measurement, including the introduction of time shifted viewing in audience reports and the testing of portable people meters. The results from these initiatives were presented in various audience measurement conferences in 2007 (De Vos and Appel, 2007 and De Vos and Kok, 2007). In this paper we describe another of these projects: the measurement of the viewing of television content with non-traditional equipment, such as computers. First results, lessons learned and next steps are presented for the first time in this paper.

In the Netherlands, the viewing of television content via on-demand streaming is rapidly growing. Programme makers are already taking this new viewing behaviour into account in evaluating the overall performance of their programmes. Today, broadcasters produce their own reports, assessing the amount of traffic on their sites and their streaming services. However, by the end of 2006, the TV industry expressed the need for comprehensive, transparent and independent reporting of the new online television audience to SKO, the JIC in charge of the television audience measurement in the Netherlands.

Continuing the consolidation of the reporting of TV content use, SKO has taken the first steps in the measurement of online television audiences by combining numbers of streaming requests with regular television ratings in the same report. The main goals of the project are to provide a single, authoritative source for online TV audience figures and to produce comparable and useful results for broadcasters, media agencies and advertisers. A third goal is the application of the approved standards used in TV audience research to stream measurement, further integrating traditional television and online operations within the broadcaster's organisation.

As yet, stream data is not collected in a TAM or Internet panel; thus it does not contain profile or accumulation data. Nevertheless, the information will allow SKO participants to estimate the added audience levels in relation to the basic reach from TV. Adding this measurement to the audience reports gives us an indication of the proportion of non-traditional distribution of TV content in relation to traditional TV viewing and provides an initial insight into the overall performance of television programmes.

In addition to TV programmes previously broadcast on television, streams may contain additional material that is related to television broadcasts but that is only available online. For this reason, SKO will also report on a 'concept' level. In the new reporting, all streams related

PART 1 / NEW MEDIA, NEW RULES?

to the same TV programme title (e.g. Idols) will be grouped in the reporting to produce an estimated gross performance level.

In the first section of this paper, we discuss the background of the project. In the next section we describe the project, defining and setting the parameters on television content that lead to the measurement of streams. The measurement technique used, Nedstat Streamsense module, is described in the following section. The issues involved in reporting stream requests in combination with TV ratings on a daily basis are then discussed, and the initial results are presented. Finally, based on our experiences this year, we look to the future of streaming TV measurement.

BACKGROUND

The options of when and how to watch television content continue to expand in the Netherlands; last year saw considerable growth in online TV viewing.

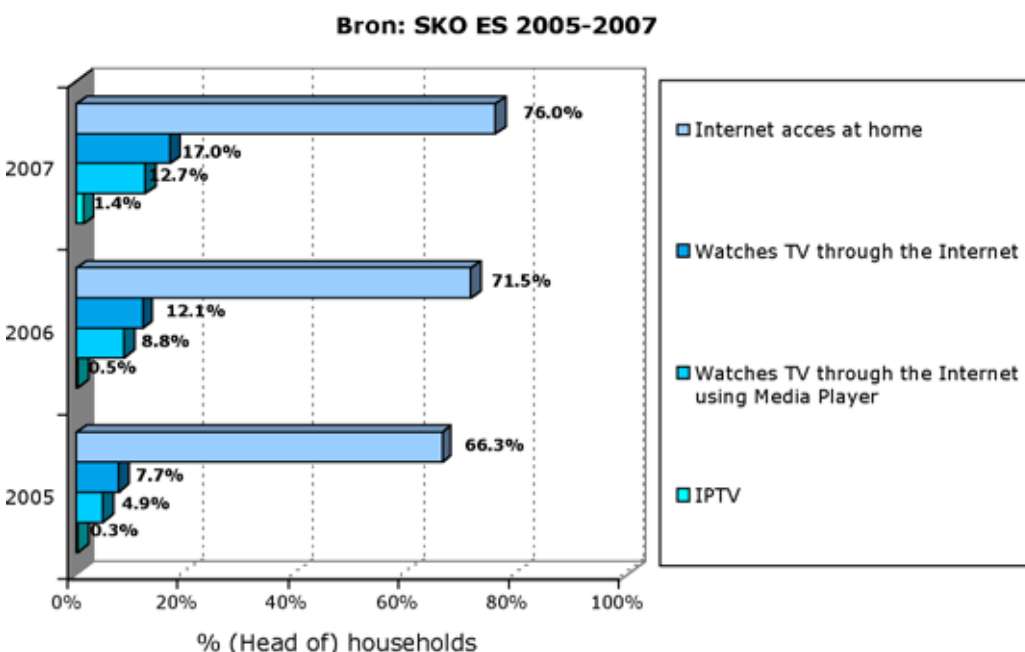
The Netherlands has the second largest broadband penetration rate in Europe. (European Commission, 2007). According to the SKO Establishment Survey,

45.2% of the households with Internet access in Netherlands have an ADSL line and another 38.9% has access through the cable, while narrow band penetration is only 11.4% (8.2 % is connected through analogue line /modem and 3.2% accesses Internet through ISN).

With an overall Internet penetration of 76%, the percentage of households that watch TV programmes online increased from 12% to almost 17% between 2006 and 2007 (see figure 1). Streaming appears to be the most popular form of online TV viewing, ca. 75% of the households that watch TV programmes online do so using media players.

Compared to other European countries, the Netherlands is a forerunner in streaming of TV programmes. Since 2002, NPO, the Dutch public broadcaster, has offered previously broadcast television programmes as free video-on-demand services at Uitzendinggemist.nl. Live streams have been available since 2005. The number of TV programmes streamed from NPO's online archives has increased steadily; in October 2007 stream requests reached a record figure of more than 10.3 million. In February 2008 they realised 13.4 million requests.

FIGURE 1
INTERNET ACCESS AND TV VIEWING THROUGH THE INTERNET



PART 1 / NEW MEDIA, NEW RULES?

A similar on-demand stream service is available on the websites of diverse regional and commercial broadcasters.

RTL Nederland used to offer free, on-demand streams at rtl.nl. In April 2007, RTLGemist.nl was introduced to facilitate the access to their streaming service. Some content, like foreign fiction, is offered against a small fee (RTL Video). In February 2008 they reached 9.5 million requests.

MTV Overdrive was launched end of August 2006. This is a free, online streaming service with free clips and material that has not been broadcast on television, including complete interviews and backstage reports. The site also offers online streams of programmes previously broadcast, as well as some programmes not as yet broadcast on television. The other MTV Networks stations, TMF and Nickelodeon (TurboNick), also provide on-demand streams at their websites.

Since last January, SBS has offered on-demand service through specific SBS programme sites as well as through the site MyVideo.nl. The new site acts mainly as an extra platform for specific programmes, showing (parts of) their video materials online only (e.g. Dancing Queen), as well as user-generated content. A specific, on-demand streams service site will be online in the autumn 2008.

In April 2007, NPO also started offering short fragments of their video material on YouTube. Even before that, it was possible to request streams from NPO via Google Video. RTL also offers user-generated video.

Almost all broadcasters offer a number of services through their websites, such as news, live events, but among the most visited pages are those offering on demand streaming. On average, 16% of all visits and 9% of all the pages viewed in February 2008 involved a request for streaming video (see table 1).

TABLE 1

Number of visits – visits containing streams NPO, RTL and SBS domains.				
	Visits (*1000)		Visits including streams (*1000)	Percentage of visits including streams (%)
Domain	Feb-07	Feb-08	Feb-08	Feb-08
NPO	53,951	85,214	15,462	18.1%
RTL	10,881	16,066	1,242	7.7%
SBS	2,316	3,042	363	11.9%
Average	22,383	34,774	5,689	16.4%

Number of pages views – streams requests NPO, RTL and SBS domains.				
	Page views (*1000)		Page views including streams (*1000)	Percentage of page views including streams (%)
Domain	Feb-07	Feb-08	Feb-08	Feb-08
NPO	-	480,136	41,446	8.6%
RTL	-	64,717	2,963	4.6%
SBS	-	20,863	4,636	22.2%
Average		188,572	16,348	8.7%

Source: STIR Webmeter™, Stichting Internet Reclame

PART 1 / NEW MEDIA, NEW RULES?

Past experiences provide an indication of the magnitude of the phenomena, especially with regard to major sporting events. The former TV station Talpa / Tien provided online streams from the start of their regular broadcasting. On August 13, 2005, 15,000 streams were requested from their website, which also offered live streams for (almost) all their programmes. By 2006, video streams of popular Talpa productions could be downloaded for a small fee. In the autumn of 2006, they began offering live and on-demand streams of Dutch football league matches. Viewers could also purchase an online subscription to follow specific clubs. By February 2007, Tien.tv had registered more than 6.3 million visits.

For the 2006 Olympic Games, NPO launched a special site that included programmes also broadcast on the Dutch television channel Nederland 2, plus five pages of live streams of sport programmes, available only online. During the Games, a total of 9.2 million streams were requested (an average of 540,000 streams per day) by 420,000 unique visitors.

In 2006 RTL Nederland experimented with online streaming of the race "24 hours of Le Mans". Short, live fragments of the race were broadcast on the Dutch television station RTL7. Each fragment contained a reference to rtl.nl, where a live stream of the complete race could be viewed. In the two days over which the event was broadcast, the site registered 14,000 unique visitors.

SKO STREAMING: THE PROJECT

SKO is preparing an initial report on the measurement of TV stream requests at the web sites of all member stations. The results from this measurement will be presented parallel to the regular TV audiences report.

Currently, broadcasters produce their own reports on stream requests at their websites, but continuous figures are not available. Nor are there measurement data and results for streams that could be compared among suppliers across the industry. The SKO report has a unique character, it is intended as a first step in the development of a comprehensive, transparent and

independent measurement and reporting on streaming TV audience behaviour.

The SKO streaming research project began at the end of 2006 and was presented for approval on May 31, 2007. Since then there have been a number of meetings between the SKO Technical Board and the broadcasters. The SKO Technical Board established parameters for the definition of online TV content to be measured and outlined the layout of the new audience report.

Panel vs. server-based pixel measurement

One of the first topics of discussion was the method to use to count requested streams. As audience researchers, our initial preference was for panel-based research, conducted parallel to or, possibly, within the current TV audience research panel. Using all or part of the current TV panel was not an option for SKO, because we believed that it was too intrusive. Moreover, with 2,900 members, the TV panel might be too small to provide a sufficient number of individual stream requests.

In the first SKO daily reporting on weekly stream requests, we found a maximum of 50,000 - 90,000 requested streams for top programmes from RTL Nederland and NPO. For the total Dutch population 6+ years (14 million), this means 0.00375 to 0.006429 requests per person. To report reach for a minimum registration of 100, we would need a panel containing at least 28,000 individuals. STIR, the JIC responsible for the continuous registration of Internet viewings and reach, has an online panel with 8,000 members. In order to make the measurement of streams operational on such a basis, we would need to register at least 200,000 streams per week on a title basis. To report on a monthly basis or on another aggregate level (all parts within a programme concept, channel, or a group of streams), we would also need to register a large number of streams per aggregation.

Because of this, we elected to use another means of measuring online television viewing: server-based pixel measurement. Measurement techniques are discussed in chapter 3 below.

PART 1 / NEW MEDIA, NEW RULES?

In the spring of 2007, SKO selected Nedstat to carry on the research project, together with Intomart GfK and Mediaxim. Nedstat Stream Sense module is used on the websites of all SKO member stations to measure TV streams. Stations and broadcasters have been working throughout 2007 to harmonize naming conventions in TV streams to match market standard programme titles as reported by SKO. This is a necessary step in order to link streams to specific broadcasts.

Intomart GfK delivers the key for combining the streaming data provided by Nedstat and the programme information provided by MediaXim. Intomart GfK is experienced in combining information from multiple surveys, including the appreciation panel surveys for NPO, BBC and other clients.

Which streams to measure?

A main goal of the project is to produce comparable figures. In order to do that, SKO needs full collaboration of broadcasters, who will have to take a careful look at the labelling of their broadcast and online products. They may need to engage in a learning process about their business implementation.

To ensure comparability, it is necessary to agree on a definition of the subject of the measurement: the content of on demand streams. As indicated above, streams available in the Netherlands include live broadcasts as well as repeats of previously broadcast TV programmes and may also include content not shown on television. In addition, a stream may contain all or parts of a programme broadcast on television.

To deal with the issues of overlap between programmes (previously) broadcast on television and online content included in the overall programme concept, the Technical board chose the following reporting solution.

We distinguish six different types of 'TV content' to be considered for reporting.

1. Integral live streams, online and parallel to TV broadcasts.
2. Live streams which are online-only.
3. Streams of TV programmes previously broadcast on television.

4. Streams containing "micro chunks" of programmes previously broadcast on television. These are programmes that are sliced into smaller parts.

5. Streams containing extra programme-related material only available online, such as extra auditions for "Idols".

6. Online streams of thematic channels that also broadcast on TV. These TV channels are yet to be measured in our TAM.

All six types of streaming content are included in the project. Types 1, 3 and 4 will be reported on a daily basis, the other three will be included in a title-based monthly report.

Project set-up

The process flow is as follows:

- Broadcasters label their streams, including the appropriate stream recognition codes.
- Nedstat measures the number of stream requests.
- Intomart GfK obtains the correct broadcast information from the MediaXim database.
- Then broadcasters check the matches and correct titles of non-matches.
- Using a fixed format, Intomart GfK then combines the streaming information with the regular TV ratings for each stream.
- The percentage of non-matches is checked by Intomart GfK to prevent reporting on too small a basis.
- Results are made available at the SKO website www.kijkonderzoek.nl.

Initially the reports can only be accessed by registered users who have a login id for the website, but they will be made available to the general public at a later date.

Reporting streams

A second major issue for the SKO Streaming project regards the system used by the broadcasters to store their streams. Currently, the standards that individual broadcasters use to label streams vary. Inevitably, a process of harmonization is required to produce valid and comparable measurements. And this process takes time. That is why SKO has opted for a gradual implementation of the reporting.

PART 1 / NEW MEDIA, NEW RULES?

The first daily TV audience reports containing TV streams data will be issued in The Netherlands in June 2008. Reports will initially deal with those eleven SKO-member stations that are ready with the harmonization of stream labels (NPO, RTL and, perhaps, MTV Networks).

The report adds the number of online stream requests to the reported television programme ratings. It consists of a daily overview of audiences of all broadcast programmes and the related video streams requested up to six days after broadcast, as well as monthly overview of all requested video streams belonging to the same programme title.

The two SKO streaming reports are compared in figure 2. The daily SKO streaming report incorporates the regular television audience ratings, while the monthly report only contains the number of requested streams with both streams of (previously) broadcast reports and online content. The daily report only takes into account streams of (parts of) broadcasts requested up to six days after broadcasting. The monthly report includes all streams matched to a specific programme title within the calendar month, regardless of when and whether or not the content was broadcast on TV.

In the second phase, the project will be extended to include information on other aspects of online audience behaviour, such as viewing time and clicking behaviour for streams of TV programmes and programme concepts. This additional information will allow us to report audiences in terms of number of times viewed and duration of viewing.

FIGURE 2
SKO STREAMING REPORTS

Daily report	Monthly report
<ul style="list-style-type: none">• Report of tv viewers and number of requested streams.• Video streams of TV broadcasts.<ul style="list-style-type: none">- On the same date/time/channel.	<ul style="list-style-type: none">• Report of number of requested streams.• All video streams for a TV programme title.<ul style="list-style-type: none">- Online only- Broadcast on TV, regardless of date/time/channel
<ul style="list-style-type: none">• Period = up to 6 days after broadcast.• At www.kijkonderzoek.nl	<ul style="list-style-type: none">• Period = 1 month.• At www.kijkonderzoek.nl

NEDSTAT'S STREAM SENSE™: ONLINE VIDEO ANALYTICS

How to measure TV streams

For many years, most Dutch broadcasters have used Sitestat to measure activity on their website. Although a number of the larger broadcasting companies were already using Stream Sense™ to measure stream viewing, its use was not a prerequisite for taking part in the initial phase of the TV streams reporting project.

SKO wanted the level of participation among broadcasters to be as high as possible. The first phase therefore only involved measuring and reporting the number of requests for a TV stream. This can be achieved using a simple page view measurement, with additional labelling to match the stream data to the television data.

In phase 2, all participants will be using Stream Sense™. This will allow the reporting of the duration of viewing time of the streams of a particular programme, regardless of whether or not participants slice their streams into smaller chunks.

The biggest challenge in identifying TV streams is matching the content to the television data. The systems broadcasters currently use to place television content online do not link to the television programme data. We expect that this process will be automated in the near future in such a way that the data for TV streams can be derived from the television programme data.

To facilitate the matching of the viewing of television

TABLE 2
MATCHING IDENTIFIERS

Date of broadcast	Date that the TV programme was broadcast
Programme title	Name of the programme, based on database of programme names
Channel code	Unique code that identifies each TV channel uniquely
Type of broadcast	Identifies if the stream was broadcast on TV and in what way: (1) live stream and parallel to TV broadcast, (2) live stream and only online, (3) previously on TV, (4) part of TV programme, (5) extra material only online, (6) thematic channel stream only online
Programme identifier	Daily, unique code per station
Start time of the programme	Scheduled start time of the programme

streams, broadcasters are asked to add the information contained in table 2 to their TV stream measurement code.

The matching is done on a daily basis by Intomart GfK using the MediaXim data and a combination of the available identifiers.

A page view measurement of a TV stream typically looks like this:

```
http://countrycode.sitestat.com/clientname/sitename/s?
pagename&sko_dt=<date_ofbroadcast>&
sko_pr=<program_name>&sko_stid=<channel_
id>&sko_ty=<type_of_broadcast>&sko_
prid=<program_id>&sko_t=<start_time>;
```

Measuring TV streams details

For a more detailed measurement of audience behaviour for online content, broadcasters need to implement Stream Sense™. Stream Sense™ has been developed for publishers of online streaming content. Real-time analytics report on visitor behaviour during video or audio streams, whether on demand, progressive download or live and regardless of where the streams are hosted.

Stream Sense™ answers critical questions about video stream usage including click behaviour during advertising messages. It provides detailed insight into how visitors interact with online video streams. (See figure 3.)

Stream Sense™ draws its data from the visitor’s browser,

allowing for a seamless integration with Sitestat website analytics. In turn, this allows for additional in-depth reporting of activity before and after the viewing of a stream. Users can determine how visitors arrive at the website, how they navigate the site before watching the stream and whether they signed up for or purchased a product.

Click behaviour during advertisements

A broadcaster may want to determine whether pre-roll advertisements work better than mid-roll. Stream Sense™ provides this insight in a single overview that lists all completed videos (vod) and advertisements (ad). (See figure 4.)

Stream Sense™ supports Windows Media Player, RealPlayer, Flash players and, via an open standard API, any other player. The measurements are browser-based and no installation of plug-ins or dedicated players is needed.

Broadcasters will need to enter measurement codes in their play lists using the identifiers discussed above.

Stream Sense™ measures all browser activities (start, stop, pause, forward, rewind, etc.) in combination with the specified parts of the stream in the play list (e.g. commercial parts).

This data is passed daily to Intomart GfK for matching with the TV data. SKO expects to use this information in later stages of reporting, for example, for reporting on the viewing of advertisings in streams.

PART 1 / NEW MEDIA, NEW RULES?

FIGURE 3



FIGURE 4



Practical measuring issues

Most of the issues that arise in relating online stream data streams to the TV audience data are logical issues, which have been solved in a practical manner.

TV day setting

In the television audience reports, a time frame is used of 24 hours per day that runs from 02:00 until 26:00, meaning that a programme that starts at 01:15 am on the 25th of February is reported as seen on February the 24th, starting at 25:15.

The TV streams will use the same date setting in their labels.

Repeated broadcasts

SKO combines the TV audience data with the viewing of TV streams on the day of broadcast and the six days after a programme was broadcast. However, a broadcast may be repeated one or more times within this period. SKO has elected to always relate TV streams to the first broadcast of a TV programme.

TV programme broadcast rescheduled

When a television programme is rescheduled, the date and start time of related streams must also be modified accordingly.

Tools to assist correct naming

As long as TV streams are being issued through manually managed play lists, errors are bound to occur. Broadcasters are working on integrating the process of broadcasting television programmes and the process of placing television content online.

Assistance in using correct programme names

The programme label is the most important attribute in the matching of streams to the television data. To eliminate confusion caused by differences in naming and spelling, a web-based application is available that provides all official programme names. As soon as a new television programme is launched, the correct form and spelling of the name is included in the listing. We expect this information to be available soon through an API (Application Programming Interface), permitting further automation of the naming process of TV streams.

Minimizing non-matches

To reduce the number of non-matches, a web-based application has been developed that allows broadcasters to check unmatched TV streams each day and manually relate them to the appropriate TV data.

REPORTING PROGRAMME STREAMS NEXT TO TV RATINGS

In order to match a stream and a television broadcast, Intomart GfK needs to receive two data sets: a data set with information on the requested streams and a data set on television broadcasts. The task is then to find fields in both data sets that can be used to achieve as good a match in an as automatic manner as possible.

Making the match based on broadcast date and title sounds like a logical option, but in reality it poses a number of problems. Broadcasters use different procedures for assigning titles in the television programme data on the one hand and labelling online streams on the other. SKO has established a set of rules governing programme titles in the TAM, but as yet, these rules do not apply to the labelling of streaming content. Changes in programme schedules at short notice also make matching based on broadcast date and start time problematic.

There is one field contained in the programme data provided by MediaXim that was in use many years before MediaXim started coding TV programmes for SKO. The information it contains is of no use to the industry in general, but very valuable to the broadcaster who provides it. This is the programme identification (ProgID); a code provided by the broadcaster that identifies a unique broadcast. In many ways, it is comparable to the commercial ID for a commercial. Once a ProgID is included in the stream data files, the magic starts.

RTL Nederland already provides this ProgID in the stream information. We have tested its functionality and achieved an almost perfect rate of matching. For the NPO, the situation is more complex, as the ProgID NPO provides in the MediaXim broadcasting data is different from the ProgID provided in the streams information. The NPO will correct this situation in the course of this year. In the meanwhile, they will provide Intomart GfK with a look-up table for translating the ProgID prior to matching. On a separate note, Intomart GfK already uses the NPO ProgID to couple the TAM

with the Appreciation Survey commissioned by the NPO and with the Prognosis System commissioned by the Ster. Intomart's experience with both of these processes was very useful in finding a solution for matching stream and television broadcast data.

But what if a broadcaster does not provide this ProgID? There are six fields with programme information in the stream data that broadcasters are requested to provide (see table 2). The more fields provided, the greater the chance of automatically making a match. A prioritised list of fields or combination of fields can be set up for each broadcaster based on the data they provide and the quality they guarantee. For example:

- Priority 1: date of broadcast + ProgID
- Priority 2: date of broadcast + title
- Priority 3: date of broadcast + title + start time
- Priority 4: date of broadcast + title + start time + station code

If the first criterion does not produce a match or returns more than one possible match, the second will be applied, and so on.

To assist broadcasters, Intomart GfK has developed two useful applications: the programme title database and the matching application user interface.

Programme title database

Intomart GfK has created a database containing programme information dating from 2004 to date. The database is updated after each delivery of programme data by MediaXim. The broadcaster's staff responsible for providing streams can use the database to find the correct spelling of the programme title as they are preparing to place a stream online.

RTL Nederland has already inquired about the possibility of establishing an automatic connection to this database to integrate it in the procedure for making streams available.

The screen depicted in figure 5 shows the results of a search using the partial title "eigen huis" to determine the correct spelling of the programme 'Eigen Huis &

PART 1 / NEW MEDIA, NEW RULES?

Tuin'. The question was whether to use an “&” or “en” (“and” in Dutch). The search results also show the number of broadcasts with that programme title per channel, as well the first and last time the programme was broadcast.

The aim of this application is to improve the quality of the information provided in the ‘programme title’ field in the streams data set. If the spelling is exactly the same as that in the television broadcast data set, automatic matching based on the broadcast data and programme title fields should be possible.

Matching application user interface

If neither ProglID nor the correct spelling of a title is provided, then there are still a few fields left with which to work. Fewer fields mean the quality of the matching is less reliable. In these cases, as well as in the event that no match was made, matching must be done manually by the broadcasters. To aid in this process, Intomart GfK has developed an online application that will allow broadcasters to check the quality of the matching process and manually correct a mismatch or link streams to broadcasts when the automatic matching has failed.

The application reports on how the matching of a stream was done. It shows the number of streams matched by ProglID, by title, etc. The information on streams is

presented beside the information on television broadcasts, making it easier for a broadcaster to check the quality of the matches and make changes if necessary.

At the time of this writing, this application was not fully operational, so we do not have screenshots or sufficient user experience to illustrate the operation of this application in more detail. However, we expect that the quality control and manual matching will take less than 15 minutes.

SKO will be able to access the programme to check changes made manually by the broadcasters. This will allow them to perform periodic audits of the quality of the matching. Such audits are necessary because broadcasters have the final responsibility for the match and they may be able to influence the results by manually changing matches.

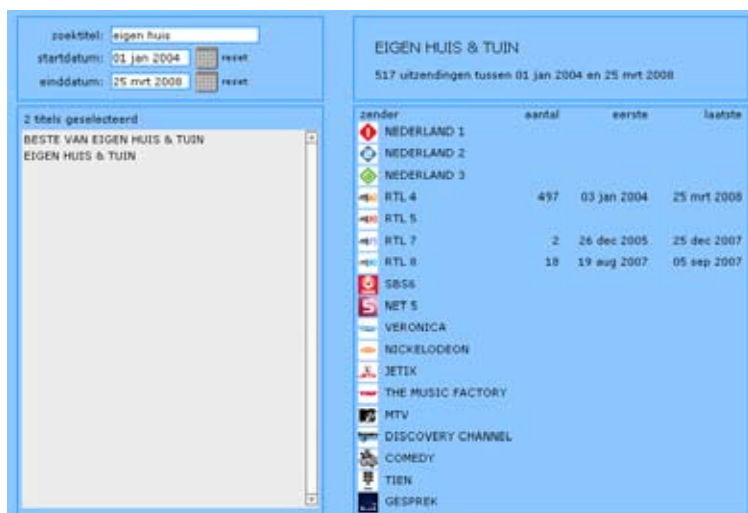
When the matching is complete, it’s finally time for the last step in this process, and the goal of this project: reporting.

Reporting the results

Once a stream is matched with an actual broadcast of a TV programme, all the results from the TAM are available.

Streams containing content (previously) broadcast on television are reported on a daily basis. SKO has

FIGURE 5



PART 1 / NEW MEDIA, NEW RULES?

expressed a preference for starting with daily top reports, ranking the streams according to the number of requests on the day of broadcast and the six days that follow. An example of this report is included in the next chapter (see tables 3 and 4).

Streams with content not previously broadcast on television, but related to the programme concept will be reported on a monthly basis. The number of requested streams is reported per programme title (see table 6).

The reports will be made available by Intomart GfK on the SKO website www.kijkonderzoek.nl.

RESULTS

In this chapter, we present the first results of the SKO Streaming project. The results are based on the test data for the month of February 2008.

Daily reports

The daily report gives the numbers of requests for online streams of TV programmes broadcast on the day in question. This includes requests made on the day of broadcast and the six days after broadcast. Streams containing micro chunks of TV programmes are not included in the test data. The report depicted in table 3 shows streams and audience ratings for all RTL Nederland channels on Thursday,

TABLE 3
DAILY SKO STREAMING REPORT TOP LIST RTL.
NUMBER OF REQUESTED STREAMS TV-PROGRAMMES

Broadcasting information					SKO Streams*	SKO TAM ** Common currency	
	Broadcasting date	Time	Programme title	Channel		Requested Streams	Rating % 6+
1	28/02/08	20:01	GOEDE TIJDEN SLECHTE TIJDEN	RTL4	51,995	8.0	1,192,000
2	28/02/08	21:29	ZESDE ZINTUIG	RTL4	18,825	6.9	1,034,000
3	28/02/08	19:32	GOUDEN KOEI	RTL5	15,954	3.9	585,000
4	28/02/08	20:31	HELP MIJN MAN IS KLUSSER	RTL4	3,944	5.7	858,000
5	28/02/08	20:03	POSTCODE LOTERIJ DEAL OR NO DEAL	RTL5	2,580	4.6	687,000
6	28/02/08	17:37	JENSEN	RTL5	1,723	1.1	161,000
7	28/02/08	22:30	4 IN HET LAND	RTL4	648	4.1	617,000
8	28/02/08	18:15	EDITIE NL	RTL4	505	5.0	752,000

Source: SKO Stichting KijkOnderzoek

* Number of requested streams TV programmes up to 6 days after broadcast. Micro chunks excluded.

** TV viewing TV programmes among individuals 6+ including TSV up to 6 days after broadcast.

PART 1 / NEW MEDIA, NEW RULES?

TABLE 4
DAILY SKO STREAMING REPORT TOP LIST NPO.
NUMBER OF REQUESTED STREAMS TV-PROGRAMMES

Broadcasting information					SKO Streams*	SKO TAM** Common currency	
	Broadcasting date	Time	Programme title	Channel		Requested Streams	Rating % 6+
1	28/02/08	18:59	ONM	Ned3	21,398	3.1	462,000
2	28/02/08	19:30	WERELD DRAAIT DOOR	Ned3	9,508	7.1	1,069,000
3	28/02/08	20:30	PROOST!	Ned3	8,280	2.6	383,000
4	28/02/08	10:23	ZANDKASTEEL	Ned3	8,237	0.5	72,000
5	28/02/08	23:03	PAUW & WITTEMAN	Ned1	4,736	6.6	986,000
6	28/02/08	20:33	WIE IS DE MOL	Ned1	4,663	10.4	1,561,000
7	28/02/08	18:24	KLOKHUIS	Ned3	3,278	1.7	254,000
8	28/02/08	21:31	100 HET HUWELIJK	Ned1	3,196	6.4	959,000
9	28/02/08	18:44	JEUGDJOURNAAL	Ned3	2,621	2.2	330,000
10	28/02/08	18:01	DALTONS	Ned3	2,615	1.1	162,000

Source: SKO Stichting KijkOnderzoek

* Number of requested streams TV programmes up to 6 days after broadcast. Micro chunks excluded.

** TV viewing TV programmes among individuals 6+ including TSV up to 6 days after broadcast.

February 28, 2008. In the period from February 28 to March 5, eight programmes were requested as streams online. The report only includes streams that were requested at least 100 times.

The first set of columns contains programme title and broadcast information. The middle column (SKO Streams) shows the number of stream requests per title. Consolidated audience ratings for the programme (including time shifted viewing up to six days after broadcasting) are shown in the last two columns.

Programmes are ranked by the number of stream requests. The stream for an episode of the soap "Goede tijden slechte tijden" was the most frequently requested stream in the period from February 28 to March 5.

The most striking feature of this report is the difference in magnitude between numbers of TV viewers and online requests. Whereas 1.2 million viewers watched the episode of "Goede tijden slechte tijden" on television, only 52,000 requests were made for the online video stream.

This programme also frequently tops the rankings for time shifted television viewing in the Netherlands. Between February 28 and March 5, 66,000 viewers watched the daily episode of "Goede tijden slechte tijden" on a time shifted basis, achieving a time shifted viewing share of 5.5%. (See table 5.)

A similar viewing pattern is found for the new entertainment programme "Zesde zintuig". The first episode of

PART 1 / NEW MEDIA, NEW RULES?

TABLE 5
SKO TOP LIST '000 VIEWERS TIME SHIFTED VIEWING 6+. RTL AND NPO. 1-2-2008.
TIME SHIFTED VIEWING UP TO 6 DAYS AFTER BROADCASTING.

Broadcasting information					6+ TSV	6+ Common Currency		
	Channel	Broadcasting date	Time	Programme title	'000s	Rating%	'000s	TSV Share
1	NL 1	28/02/08	20:33	Wie is de mol	155	10.4	1,561	9.9
2	RTL 4	28/02/08	20:01	Goede tijden slechte tijden	66	8.0	1,192	5.5
3	NL 2	28/02/08	20:54	Twee voor twaalf	60	6.1	912	6.6
4	RTL 5	28/02/08	20:34	Crime scene investigation	55	3.1	471	11.6
5	RTL 5	28/02/08	21:30	Las vegas	39	2.1	320	12.1
6	RTL 5	28/02/08	19:32	Gouden kooi	34	3.9	585	5.7
7	RTL 4	28/02/08	21:29	Zesde zintuig	30	6.9	1,034	2.9
8	NL 3	28/02/08	18:59	Onm	30	3.1	462	6.4
9	NL 1	28/02/08	21:31	100 het huwelijk	18	6.4	959	1.9
10	RTL 4	28/02/08	20:31	Help mijn man is klusser	17	5.7	858	2.0
11	RTL 4	28/02/08	17:07	As the world turns	17	2.4	363	4.6
12	RTL 5	28/02/08	20:03	Postcode loterij deal or no deal	16	4.6	687	2.3
13	NL 3	28/02/08	20:30	Proost!	13	2.6	383	3.5
14	NL 2	28/02/08	21:30	Andere tijden	11	4.0	598	1.9
15	NL 1	28/02/08	22:30	Geld maakt gelukkig	10	6.0	901	1.1
16	RTL 5	28/02/08	19:03	Dharma & greg	9	1.9	283	3.3
17	NL 2	28/02/08	22:59	Holland doc	8	0.9	141	5.5
18	NL 3	28/02/08	19:30	Wereld draait door	7	7.1	1,069	0.6
19	NL 3	28/02/08	11:52	Pingu	7	0.2	31	21.7
20	NL 3	28/02/08	8:12	Wereld is mooi	6	0.5	74	7.9

Source: SKO Stichting KijkOnderzoek

this programme was aired on the 28th of February, achieving a broad TV audience and a seventh place in the top 20 programmes viewed time shifted. It also has the second-highest number of requested streams from RTLGemist.nl.

The daily reality show “Gouden Kooi” reached only 585,000 TV viewers, but it appears to have a higher proportion of time shifted viewing (5.7%) and a relatively high level of online viewing (more than 15,000 requests).

The daily SKO Streaming report for NPO channels is presented in table 4.

The number of requests through Uitzendiggemist.nl is high. Even the 10th-ranked programme in this list, “Daltons”, was requested more than 2,500 times.

At the top position for Thursday, February 28, we again find a daily soap. The stream of “ONM” was requested more than 21,000 times. This programme

PART 1 / NEW MEDIA, NEW RULES?

usually reaches a smaller TV audience than the RTL soap mentioned above, but appears to have a much higher number of online requests. This is followed by the daily on-air magazine “Wereld draait door”, a thematic documentary over alcohol consumption among the youth (“Proost”) and a series for young people (“Zandkasteel”) with between 9,500 and 8,000 stream requests. “Wereld draait door” and “Proost” are also among the top 20 programmes time shifted viewed (see table 5).

If we examine the daily reports for RTL Nederland, focusing only on streams containing programmes previously broadcast on television, we find that each day the same programmes were the most frequently requested streams. The highest number of stream requests was recorded for “Idols” on February 9; four episodes of “Idols” had the highest numbers of stream requests, reaching totals of between 55,000 and 108,000 requests up to six days after being broadcast on RTL4. Nine episodes of “Goede tijden slechte tijden” follow them as daily top scorers. The football programme “Voetbal insite” also appears as the top scorer in the daily ranking of stream requests. The largest number of requests for “Voetbal insite” (28,118 stream requests) was recorded for the programme broadcast on February 3, 2008.

It is also interesting to look at the relation between the daily figures for time shifted audiences and requested online streams over a longer period of time. Each weekday of February, the daily soap “Goede tijden slechte tijden” can be found in first place in the RTL top 10 of requested streams. The reality show “Gouden kooi” is the second most requested online programme stream for the majority of weekdays in February. On February 5, 12, and 19, the weekly broadcast of “Mijn tent is top” was ranked second (and on the 26th, this programme had the third-highest number of stream requests). As mentioned above, the first episode of “Zesde zintuig” aired on the 28th and reached the number two position. And on February 14, the second most requested stream was that of the special “All you need is love Valentijn”. Every Saturday we find “Idols”

in first place as the most requested stream, while the football programmes “RTL Voetbal insite” and “RTL Voetbal Eredivisie” lead the Sunday rankings.

Looking at the time shifted viewing of RTL programmes broadcast on weekdays in February, we find a similar pattern among those programmes available online. Ten episodes of “Goede tijden slechte tijden” appear in the top 10 list of programmes with the highest amount of time shifted viewing for the month. The daily episodes of the soap also have the highest level of time shifted viewing for every weekday except for February 7, when it falls to second place. On Saturdays, “Idols uitslag”, a programme recapping and presenting the results of the “Idols” competition, has the highest level of time shifted viewing, except for February 9, when “RTL Voetbal insite” and “RTL Voetbal Eredivisie” occupy first place, as they do each Sunday in the month.

Monthly reports

The monthly streaming report offers a different perspective. It will report the number of requests for all television-related streaming content for the calendar month. Streams with content related to a program concept will be matched with a programme title and programs will be ranked according to the total number of stream requests made that month. For the top ranking program titles, the report will show the numbers of requests for streams of previously broadcast programs and streams containing material only available online.

The test data for February 2008 only contains measurements of streams of NPO and RTL programs broadcast on television. In table 6 this information is reported in the right-hand column; in the future, the numbers of requests for streaming content only available online will be included in a second column on the right.

Table 6 depicts the monthly report of streaming content for the RTL programs for February 2008. Most of the streaming requests at RTL sites in February were for TV programs broadcast in the first two months of the year: only 3% were for programs broadcast between December 3 and 31, 2007. Not surprisingly,

PART 1 / NEW MEDIA, NEW RULES?

TABLE 6
MONTHLY TOP LIST NUMBER OF REQUESTED RTL STREAMS BY TITLE. FEBRUARY 2008.

Broadcasting information			SKO Streams
	Programme title	Broadcaster	Requested Streams
1	GOEDE TIJDEN SLECHTE TIJDEN	RTL	768,570
2	GOUDEN KOOI	RTL	441,836
3	IDOLS	RTL	329,384
4	RTL VOETBAL INSITE	RTL	71,828
5	MIJN TENT IS TOP	RTL	68,116
6	JENSEN	RTL	38,955
7	POSTCODE LOTERIJ DEAL OR NO DEAL	RTL	36,956
8	IDOLS BACKSTAGE	RTL	35,341
9	RTL VOETBAL JUPILER LEAGUE	RTL	33,215
10	RTL VOETBAL EREDIVISIE	RTL	29,228
11	CHAR HET MEDIUM	RTL	27,825
12	ALL YOU NEED IS LOVE VALENTIJN	RTL	20,073
13	4 IN HET LAND	RTL	13,715
14	RTL TRAVEL ADRENALINE	RTL	13,449
15	EDITIE NL	RTL	13,360

Source: Stichting KijkOnderzoek

the most requested programme in February is “Goede tijden slechte tijden”, with more than 768,000 streams. Streams of “Gouden Kooi” and “Idols” are second and third most requested streams. The TV programme “Idols” has two titles belonging to the same concept: “Idols” and “Idols backstage”. Taken together, they received 364,725 stream requests.

As with RTL, the test data for NPO programs only includes streams of programs previously broadcast on television. In February, 9,771,242 streams were requested from NPO sites. Of these, 2.1 million requests were for streams of programs broadcast before 2008: 17% for programmes broadcast in 2007. 4%, in 2006 and 1% on programmes broadcast in 2005. Unfortunately, at the time of this writing we have not received enough NPO attest data at the programme title level to prepare monthly results for this broadcaster. We expect

to present this information during our presentation at the conference.

CONCLUDING REMARKS AND NEXT STEPS

This paper describes a project that took 18 months from conception to completion. An elephant pregnancy, one could say. But the results presented in the previous chapter show that the proof of the pudding is in the eating.

The measurement of streaming TV content has produced useful initial results. Coupling the number of stream requests for a given program with the regular television ratings provides insights into the relation between (live and time shifted) television viewing and online viewing of TV content.

And by organizing this measurement in a project that

PART 1 / NEW MEDIA, NEW RULES?

is supported by the whole market, a new market standard is realized, one that enables broadcasters and programme makers to evaluate programme performance in a more thorough way.

What lessons can be learned from the project set-up:

- Establishing cooperation between the TV and online departments within a broadcaster's organization may take some time, especially if the need for it is not made clear to all parties.
- Setting up the labelling of streams to facilitate matching with television results is a complex process, especially when other labelling procedures have been up and running for some time. This is something for broadcasters thinking about starting to offer online streaming services to bear in mind. When planning your start, think about how you might want to coordinate your online activities with other activities at some later date and organize your metadata accordingly.
- In the Netherlands, traditional television audience research is well established, at a high standard. New industry standards for measuring and reporting on the viewing of streaming TV content have to be discussed and put in operation. We need to decide what needs to be taken into account and what can be ignored.
- It is extremely important to explain in detail to end users what is being reported: What is the difference between an average viewer and a stream request?
- While the initial results might seem simple, the quality of the measurement of streaming requests is now already higher than most other traditional media use research, such a print or outdoor advertising posters. That makes the results strong.

Ok, where do we go from here? There are number of topics and issues that can be placed on our agenda. In terms of the streaming research, the next step should be the measurement of viewing duration, so that average viewing time can be included in the reports. The measurement of streaming spots is a next level research subject, raising different issues than those

involved in measuring streaming programmes. As the use of advertising within streams develops, we will need to address these issues.

There also will be a discussion with the industry organization of the Internet research (STIR) on how to move on towards the future. It might be an idea to work together on this subject and build a basis for future cooperation. Also the measurement of professionally made but non-TV content streams should be discussed because there are more professional media organizations that make high quality streaming video content.

Finally a test with panel based measurement of streaming video within our TAM is a subject of discussion with Intomart GfK. Perhaps this is the future, so let us try to take a look at it next year.

References

De Vos and Appel (2007). Is a Rating still a Rating? How changing behaviour alters definitions in the digital age. ESOMAR/WM3 2007. Dublin.

De Vos and Kok (2007). How passive is passive? The EMM tested in the Netherlands. ASI 2007 European Television Symposium. Barcelona.

European Commission (2007). DG INFSO/B3 COCOM07-50 FINAL. Implementation of Regulatory Framework (II) COMMUNICATIONS COMMITTEE. Working Document Subject: Broadband access in the EU: situation at 1 July 2007. Brussel.

The Authors

Bas de Vos is Managing Director, SKO Stichting KijkOnderzoek, Netherlands.

Mariana Irazoqui is Methodologist, SKO Stichting KijkOnderzoek, Netherlands.

Enrico Verhulst is Vice President Consultancy, Nedstat, Netherlands.

Gerwin Bok is Head of Media Information Services, Intomart GfK, Netherlands.