



SURVEY ON TELEVISION  
AND NEW VIEWING TRENDS

Ongoing daily tracking survey

**SERIES A.1**

Weekly  
viewing shares  
of television channels – W27

**WAVE 127**

Results for the week  
**4/07 - 10/07/2011**



public issue

### 3screen.gr

Public Issue's subscription-based survey on television and new viewing trends.

#### Series A.1: Delivered weekly

Weekly viewing shares of television channels (nationwide total – age group total).

The viewing shares calculated on the basis of the 3screen.gr survey have been smoothed using the Kalman method. (Regarding the methodology, see p. 5). Due to this smoothing, the shares of previous weeks may show differences of the order of 0.1%.

#### Survey technical summary

Ongoing daily tracking survey.

Nationwide Telephone Survey of the general population, aged 15 years and over. The annual sample size totals 26,000 individuals (500 persons per week).

The survey investigates the television viewing habits of citizens and the use of new technologies, with the day-after recall method.

The reference population for the survey totals 9,320,600 persons, according to the latest available data of the Hellenic Statistical Authority from the Labor Force Survey (4th quarter 2010).

The survey has been conducted on a daily basis, 7 days a week, since February 2009, with a representative nationwide sample and has been designed in such a way as to provide a sound basis for obtaining results, not only by day of the week (Monday, Tuesday, etc.) but also on a weekly viewing basis.

The 3screen.gr survey enables subscribers to monitor over time (on a monthly, weekly or daily basis) the changing trends in citizens' viewing habits.

At the same time, it investigates new viewing habits based on the use of new technologies; in particular, citizens' familiarity with watching television programs via the Internet and mobile phones.

#### About Public Issue

Public Issue was established in 2001.

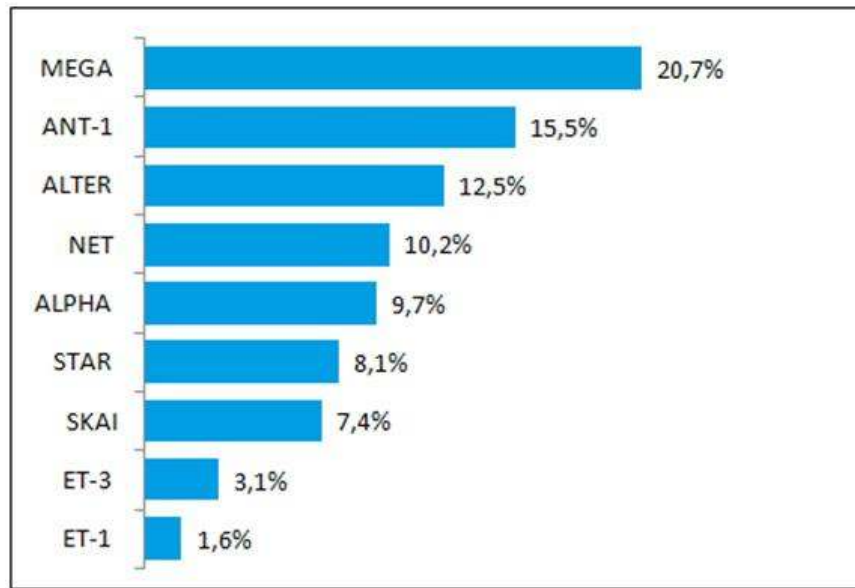
It specializes in political and election opinion polls, as well as media, social and consumer behavior surveys.

Member of: World Association for Public Opinion Research (WAPOR), European Society for Opinion and Marketing Research (ESOMAR), Association of Greek Market & Opinion Research Companies (SEDEA).

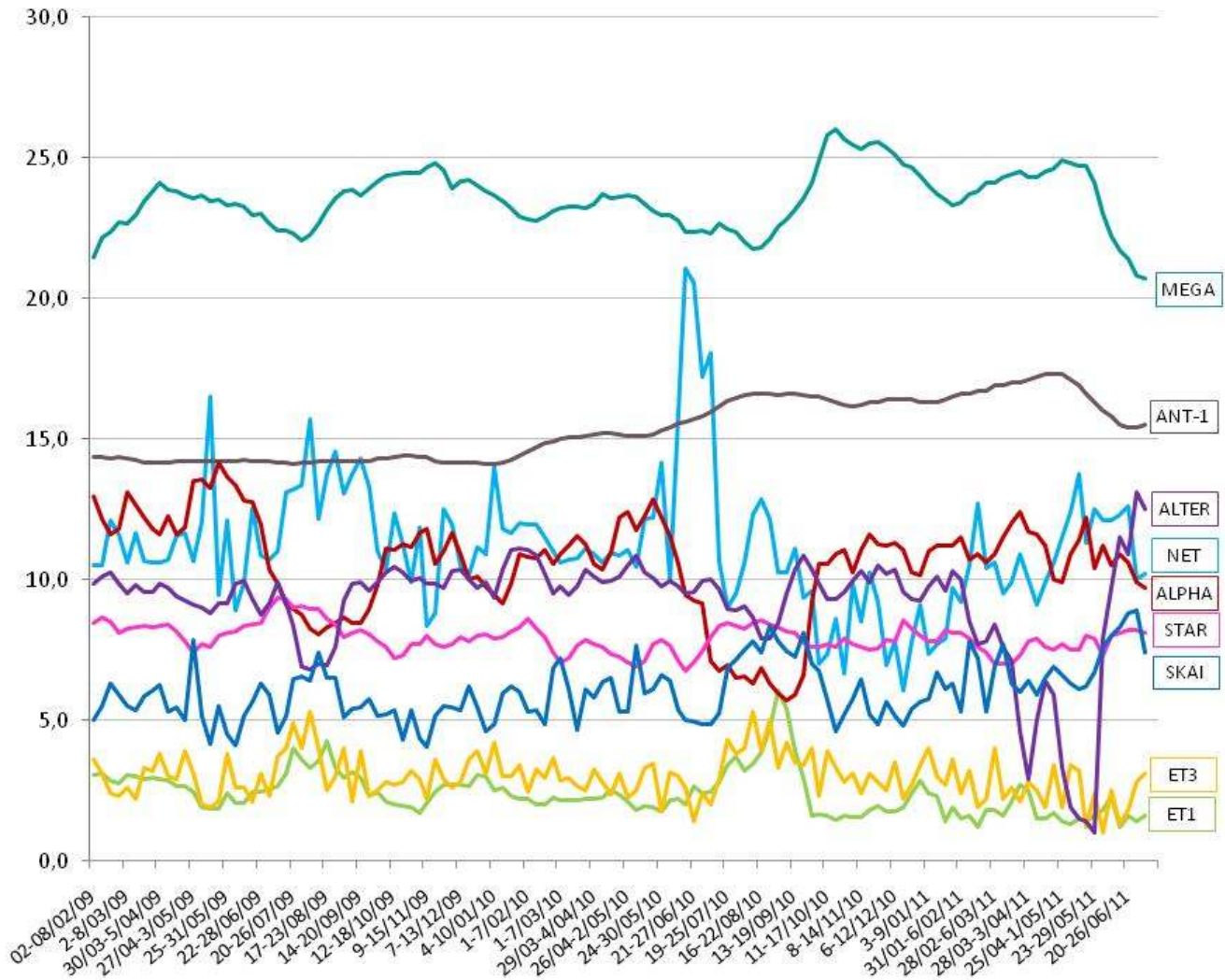
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**FIGURE 1:** Viewing shares of television channels – week: 4/07/2011-10/07/2011



**FIGURE 2:** Weekly viewing shares of television channels, 2/02/2009-10/07/2011



**TABLE 1:** Weekly viewing shares of television channels, 5/07/2010-10/07/2011

	ET-1	NET	ET-3	ANT-1	MEGA	ALPHA	STAR	ALTER	SKAI
5-11/07/10	2,4	18,1	2,0	16,0	22,3	7,1	8,0	10,0	4,9
12-18/07/10	2,8	10,7	2,9	16,2	22,6	6,8	8,3	9,7	5,3
19-25/07/10	3,4	9,0	4,3	16,3	22,4	7,0	8,5	8,9	6,8
26/07-1/08/10	3,7	9,5	3,8	16,5	22,3	6,5	8,4	8,9	7,2
2-8/08/10	3,2	10,6	4,0	16,6	22,0	6,6	8,3	9,1	7,5
9-15/08/10	3,5	12,3	5,3	16,6	21,8	6,3	8,5	8,6	7,8
16-22/08/10	3,9	12,9	3,9	16,6	21,8	6,9	8,5	7,9	7,4
23-29/08/10	4,7	12,2	5,0	16,6	22,1	6,3	8,4	7,9	8,4
30/08-5/09/10	6,1	10,3	3,3	16,6	22,6	6,0	8,3	8,5	7,8
6-12/09/10	5,4	10,3	4,2	16,6	22,8	5,7	8,2	9,5	7,5
13-19/09/10	3,9	11,1	3,5	16,6	23,1	5,9	8,1	10,4	7,2
20-26/09/10	3,0	9,4	3,4	16,6	23,6	6,6	7,8	10,8	8,1
27/09-3/10/10	1,6	9,6	4,0	16,5	24,1	9,2	7,6	10,4	7,0
4-10/10/10	1,6	7,0	2,3	16,5	24,9	10,6	7,6	9,8	6,8
11-17/10/10	1,6	7,4	3,9	16,4	25,8	10,6	7,7	9,3	5,7
18-24/10/10	1,4	8,6	3,3	16,3	26,0	10,9	7,6	9,3	4,6
25-31/10/10	1,6	6,7	2,8	16,2	25,7	11,1	7,9	9,5	5,2
1-7/11/10	1,6	9,9	3,1	16,2	25,4	10,3	7,7	10,0	5,7
8-14/11/10	1,6	8,5	2,4	16,2	25,3	11,1	7,6	10,3	6,5
15-21/11/10	1,8	10,3	3,1	16,3	25,5	11,6	7,5	9,9	5,2
22-28/11/10	2,0	9,2	2,8	16,3	25,5	11,3	7,5	10,5	4,9
29/11-5/12/10	1,8	7,0	2,5	16,4	25,3	11,2	7,9	10,2	5,6
6-12/12/10	1,7	7,8	3,5	16,4	25,1	11,3	7,8	10,3	5,1
13-19/12/10	1,9	6,1	2,2	16,4	24,8	11,1	8,6	9,5	4,8
20-26/12/10	2,4	7,8	2,7	16,4	24,7	10,3	8,3	9,3	5,4
27/12-2/01/11	2,9	9,1	3,4	16,3	24,4	10,2	8,0	9,2	5,7
3-9/01/11	2,4	7,4	4,0	16,3	24,0	11,0	7,8	9,8	5,8
10-16/01/11	2,3	7,7	3,0	16,3	23,7	11,2	7,8	10,1	6,7
17-23/01/11	1,4	7,9	2,7	16,4	23,5	11,2	8,2	9,6	6,1
24-30/01/11	1,9	9,7	3,6	16,5	23,3	11,2	8,1	10,3	6,3
31/01-6/02/11	1,5	9,2	2,4	16,6	23,4	11,5	8,1	10,0	5,3
7-13/02/11	1,6	10,5	3,2	16,6	23,7	10,7	7,9	8,5	7,8
14-20/02/11	1,2	12,7	1,9	16,7	23,8	10,9	7,6	7,7	7,2
21-27/02/11	1,8	10,4	2,2	16,7	24,1	10,6	7,4	7,8	5,3
28/02-6/03/11	1,8	10,6	4,0	16,9	24,1	10,9	7,0	8,4	6,9
7-13/03/11	1,6	9,5	2,2	16,9	24,3	11,5	7,0	7,6	7,7
14-20/03/11	2,1	9,9	2,6	17,0	24,4	12,0	7,0	7,1	6,3
21-27/03/11	2,7	10,9	2,1	17,0	24,5	12,4	7,3	4,6	6,0
28/03-3/04/11	2,5	10,0	2,8	17,1	24,3	11,7	7,8	2,9	6,4
4-10/04/11	1,5	9,1	2,5	17,2	24,3	11,6	7,9	5,0	5,9
11-17/04/11	1,5	9,9	1,9	17,3	24,5	11,2	7,6	6,4	6,5
18-24/04/11	1,7	10,6	3,4	17,3	24,6	10,0	7,5	5,9	6,9
25/04-1/05/11	1,4	11,5	1,9	17,3	24,9	9,9	7,7	3,3	6,6
2-8/05/11	1,3	12,4	3,4	17,1	24,8	10,9	7,5	1,9	6,3
9-15/05/11	1,5	13,8	3,2	16,9	24,7	11,4	7,5	1,5	6,1
16-22/05/11	1,4	11,3	1,2	16,6	24,7	12,2	8,0	1,4	6,2
23-29/05/11	1,6	12,5	2,4	16,3	24,1	10,4	7,9	1,0	6,7
30/05-5/06/11	1,8	12,1	1,0	16,0	23,0	11,2	7,3	7,9	7,6
6-12/06/11	2,3	12,1	2,5	15,8	22,2	10,5	8,0	9,7	8,0
13-19/06/11	1,2	12,3	1,3	15,5	21,7	10,9	8,1	11,5	8,3
20-26/06/11	1,6	12,6	1,8	15,4	21,4	10,6	8,2	10,9	8,8
27/06-3/07/11	1,4	10,0	2,8	15,4	20,8	9,9	8,2	13,1	8,9
4-10/07/11	1,6	10,2	3,1	15,5	20,7	9,7	8,1	12,5	7,4

## Methodology

In any series of repeated surveys conducted on a continuous basis, such as the weekly waves of Public Issue's [3screen.gr](http://3screen.gr) survey, the problem always arises as to when a percentage change between two points in time is due to true opinion change and when it is due to sampling error.

For this reason, Green, Gerber and De Boef (1999)<sup>1</sup> adapted a method known as [Kalman smoothing](#) to the study of repeated surveys.

This method enables a differentiation to be made between true change and sampling error, by considering that true change is due to an Autoregressive Parameter AR(1), and it may be applied even when the series values are unevenly spaced, i.e. even when there are missing values.

The method is applied to the weekly viewing shares of television channels (as percentages). The sample is considered to be the total of responses, not of respondents, during the week in question (aggregate over 7 days). The smoothing is performed on the assumption that the likelihood of a respondent watching some channel during a period of one week is independent of the likelihood of him/her watching some other channel during the same week. The time interval chosen for the smoothing is one week, so that the sample size is adequate for the application of the method.

Generally speaking, the method can be divided into three steps:

1) If the true viewing percentage of a channel is  $\xi$  and  $X$  is the percentage observed, by means of a public opinion sampling survey, then  $X = \xi + e$ , where  $e$  is the sampling error. The true change in  $\xi$  is considered to be described by an Autoregressive Model AR (1), of the type  $\xi_t = \alpha + \gamma\xi_{t-1} + u_t$ .

Firstly, from the existing observations, the parameters  $\alpha$ ,  $\gamma$  and the variance  $\sigma_u^2$  are estimated using the maximum likelihood method.

2) Use of [Kalman filtering](#). In the second step, time series values are 'filtered' in order to reduce the effect of sampling error. The values (observations) of the time series are filtered, thus creating a new time series, beginning with the first survey wave. The values of the filtered time series constitute a weighted aggregate of the previous filtered value and the value of the present survey. The weight of the value of the present survey becomes smaller as its sampling error increases. Correspondingly, the weight of the value of the present survey becomes greater as  $\sigma_u^2$  increases. In this way, the forward time series of filtered percentages is created.

3) Use of [Kalman smoothing](#). The third step involves the process of [smoothing](#), which is based on the filtered values. This process is retrospective. Beginning with the last filtered value and moving backward, it smoothes the filtered values.

The smoothing is carried out in such a way that the more a filtered value mispredicts its next one, the more it is smoothed.

[Kalman filtering](#) reduces the effect of sampling error in all surveys, since the resulting 'filtered' value incorporates all the information from all the prior surveys, while [Kalman smoothing](#) incorporates in every survey all the information from all available surveys.

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<sup>1</sup> Green, D., Gerber, A. and De Boef, S. (1999), 'Tracking opinion over time, a method for reducing sampling error', *Public Opinion Quarterly*, 63, 178-192.

**A. Weekly deliverables**

Series A, deliverable W01-W52:

- A1. Weekly viewing shares of television channels (nationwide total – age group total)

**B. Monthly deliverables**

Series B, deliverable M01-M12:

- B1. Monthly viewing shares of television channels
- B2. TV channel attachment, penetration and shares on a monthly basis
- B3. Viewing habits on a monthly, weekly, daily basis and by day of the week

**C. Quarterly deliverables**

Series C, deliverable Q01-Q04:

- C1. TV channel attachment, penetration and shares on a quarterly basis
- C2. Program breakdown and rating of shows and television stations on a quarterly basis
- C3. Demographic and social profile of show categories and television stations viewers.

**D. Semi-annual deliverables**

Series D, deliverable S01-S02:

- D1. TV channel attachment, penetration and shares on a semi-annual basis
- D2. Program breakdown and rating of shows and television stations on a semi-annual basis

**E. Yearly deliverables**

Series E, deliverable Y01:

- E1. TV channel attachment, penetration and shares on a yearly basis
- E2. Program breakdown and rating of shows and television stations on a yearly basis
- E3. Demographic and social profile of viewers, show categories and television stations

**SEPARATE ANNUAL REPORTS**

- **Media Typology** – Annual survey on the segmentation of the general population based on the use of media, regarding news.
- **Indices** of digital and home entertainment equipment ownership