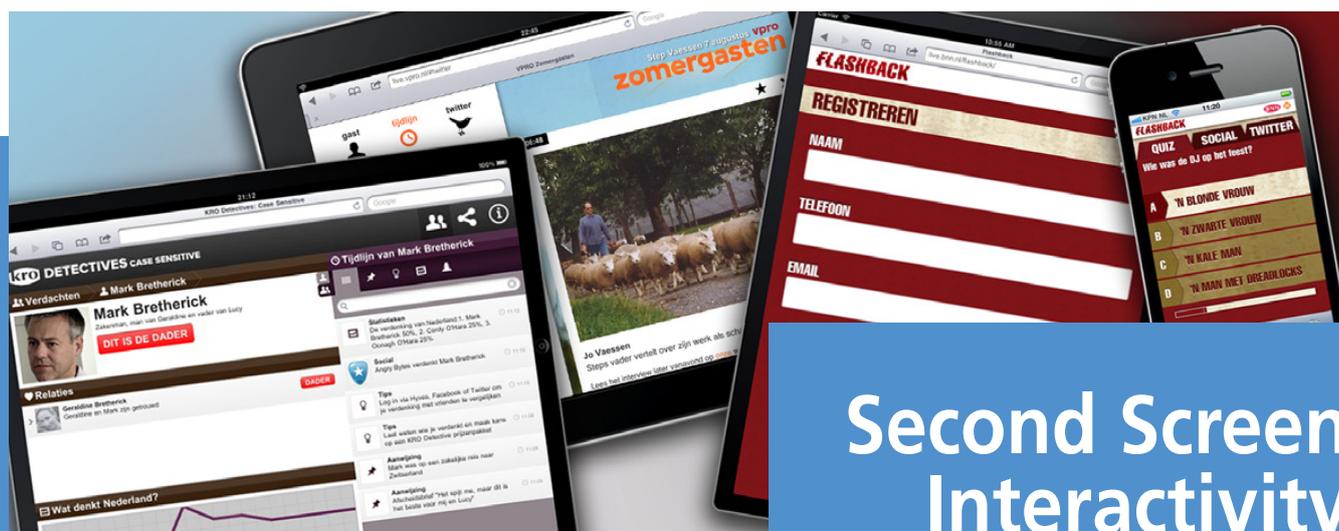


10 things you need to know about...



Second Screen Interactivity

1 First screen, Second Screen ...

In the future, tablets, laptops and smart-phones will be used to present additional information simultaneously with broadcast television or radio. The television set or radio set will be the main attraction but accompanied by 'Second Screens' also called 'Companion Screens'.

2 Personalised return channel

Second Screens are internet connected devices and typically have one user that is also the owner of the device. Surveys suggest that in 2011 about 60 percent of the devices used as Second Screens by the audience are laptops. Tablets (average 15%) and smart phones generate the rest of the traffic. If there are several people in a room who want to 'play along' with a TV show, everybody can use their own device to interact with the television programme. At the same time, the viewing experience of the main screen is not distracted by overlays chosen by one participant only. The input of the audience, from the internet return path, can be used by programme makers immediately during the broadcast.

3 Optimized data entry

A large advantage for television viewing, compared to using a remote control, is that Second Screens are optimized for data entry. Typically they have a complete (digital) keyboard, and often are equipped with a touch screen that enables quick intuitive responses to interactive opportunities.

4 Interactivity models

Second Screens are ideal for play-along interactivity while watching quizzes on television, real time voting during competitions, presenting background information for those who want to know more about a subject, in depth browsing of statistics during sport events, who-is-who visualisation when new characters or speakers are introduced, and other personalised interactivity.

5 A digital version of the couch

All the interactive models can include functions of social networks. For example, friends can be invited for a play a long quiz competition and the results can be published on your social network page or content can be shared. A function many love is chatting with friends about the show you are both watching. In fact, even today, one third of all discussions on social networks are about traditional media. You do not have to be on the same physical couch any more to comment on what is on television.



6 Standard web techniques

Second Screen interactivity is done by a simulcast of web content during the broadcast. Landscape format second screens (laptops and tablets) and standing format second screens (smart-phones) nowadays can use HTML5. The two way communication between clients and servers are most of the times delivered via either Websocket Api or Node.js.

7 Fast scaling infrastructure

Typically, Second Screen interactivity attacks a ‘mob response’ in the few minutes before the show starts. This audience will have to log in, invite friends to play along with the show and play against each other. The IP-infrastructure should be able to digest this sudden surge in traffic. Cloud Computing can be used to help perform this task.

8 Synchronisation

Due to different behaviour of broadcast distribution channels, live broadcasts do not reach the audience at exactly the same instant. In general, distribution over Internet of live feeds is slower than via cable. Terrestrial broadcast distribution is even quicker. The speed of Second Screen content distribution varies from fixed to mobile IP-networks. Synchronisation of broadcast and application is essential for certain interactive content types. There may be solutions in future using techniques such as audio fingerprint technology.

9 Programming interactivity

First experiments in trials show normal participation rates of interactive elements of 0.35 to 2 percent of the total audience of the show. Second Screens interaction should increase this, while not distracting attention from the television. In fact, the audience also leaves the Second Screen on the coffee table when it is not interesting enough. From a content perspective it will take extra production effort to develop a proposition of what is published at what moment during the broadcast.

10 New business models and partnerships.

Only the broadcaster knows exactly what will happen at a certain time in a broadcast programme. If there are third party Second Screen application builders, they will need partnerships with the linear broadcaster. The Second screen may open many new models for metadata exploitation or advertisement placement.