

Wednesday 4 December 2013
19:00

ECOM ICOM Experts Address Series 2013-14
Organised by MSc Programme Office, Dept. of Computer Science, HKU

Designing second-screen apps - what's hot and what's not?

Peter Olaf Looms



The line-up for this presentation

☐ Media in the 21st century

- ☐ Living with change

☐ Second-screen apps

- ☐ What do we mean by “app”?
- ☐ How do apps fit into social media & social communication?
- ☐ Which “screens” are we talking about?
- ☐ What is the current app situation?

☐ Designing second-screen apps

- what's hot and what's not?

- ☐ What do we mean by “design”?
- ☐ What research disciplines are involved in second-screen development?
- ☐ Second-screen apps in the near future

Media in the 20th century

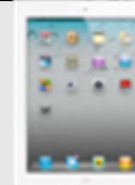
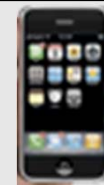
Analogue Natives



Media in the 21st century



Digital Natives



Media in the 21st century



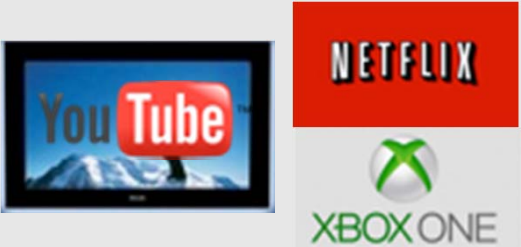




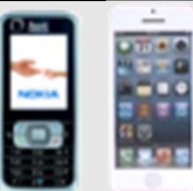






Digital Immigrants



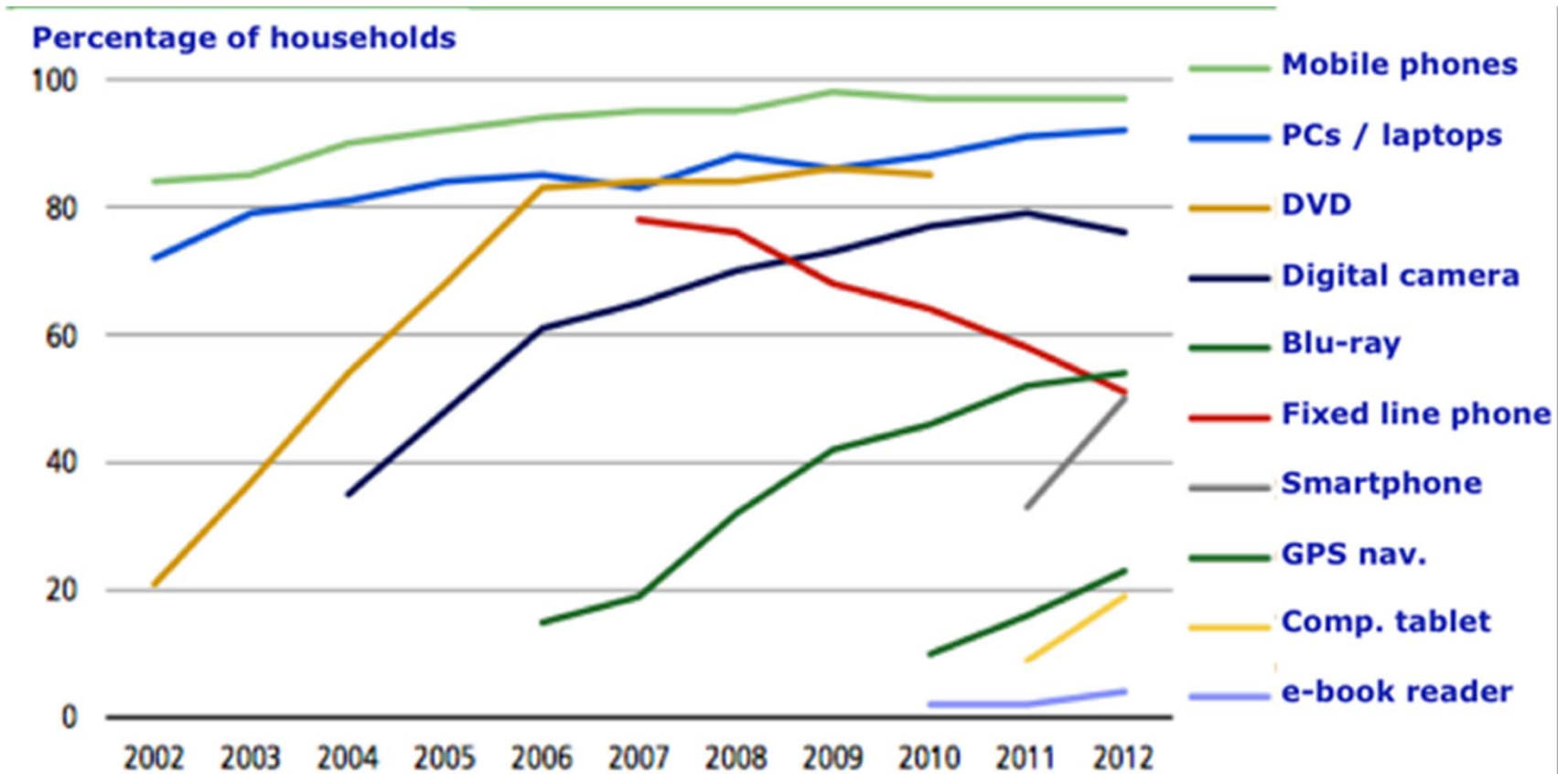
Media in the 20th and 21st century

Source of the terms: Prensky, Marc (2001). Digital Natives, Digital Immigrants. From "On the Horizon" MCB University Press, Vol. 9 No. 5, October 2001

Analogue Natives	Digital Immigrants	Digital Natives
		
		
		
		
What is changing? How fast does change happen?		

The technologies we use are changing

Household Ownership 2002-12



Kilde: Familiernes besiddelse af varige forbrugsgoder www.statistikbanken.dk/395

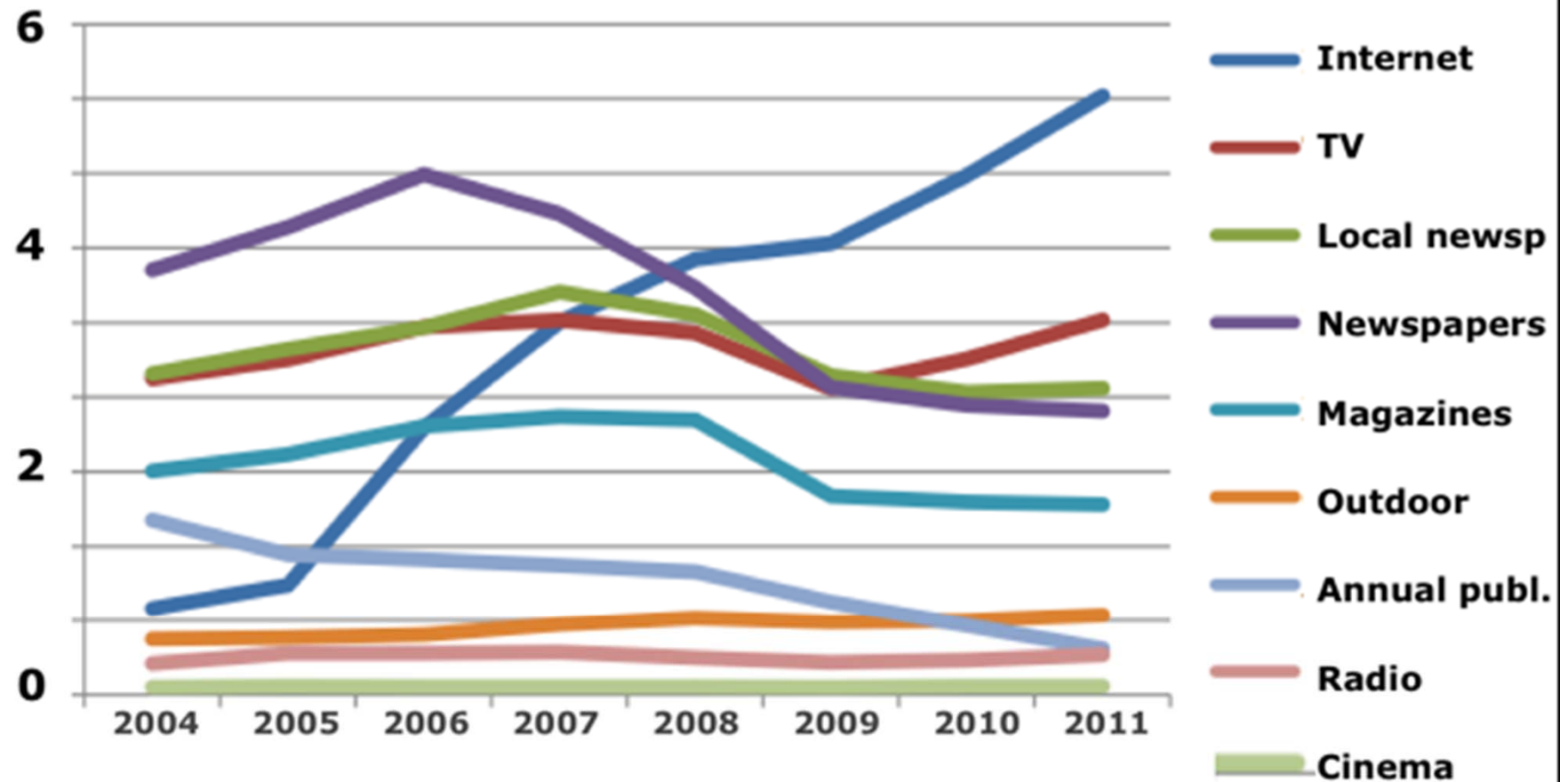
Traditional phones
Digital cameras
PCs

Source: Statistical Yearbook [Denmark] 2013

Advertising revenue is changing

Advertising spend 2004-2011 (Denmark)

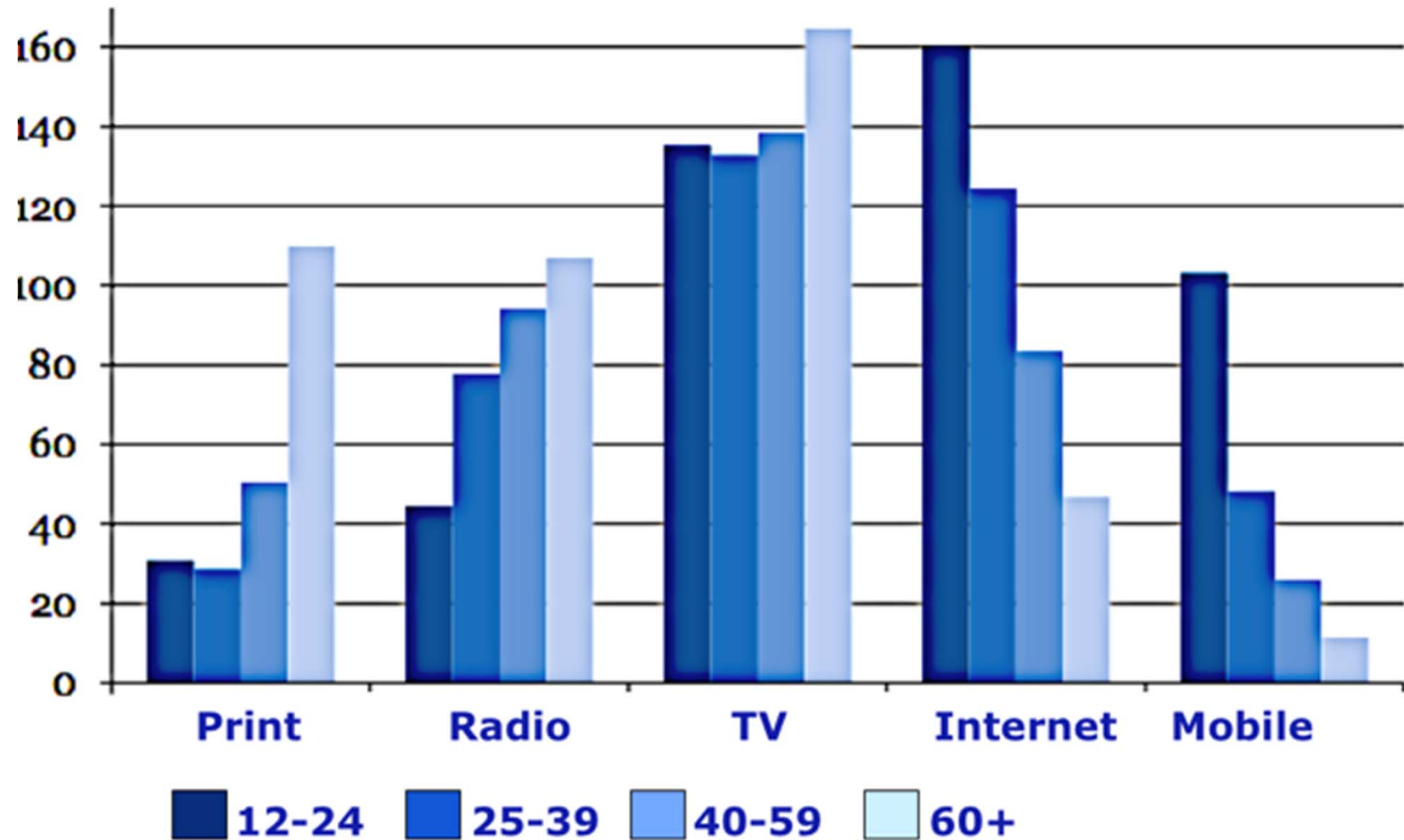
HKD billion



Source: Danskernes brug af internettet 2012 © Danske Medier
<http://www.fdim.dk/statistik/danskernes-brug-af-internettet>

Media Consumption is Changing

Daily Media Consumption (Danes 2012)



MAIL Online 30 August 2010 (UK)

Nine million adults in Britain have never used the internet, study finds

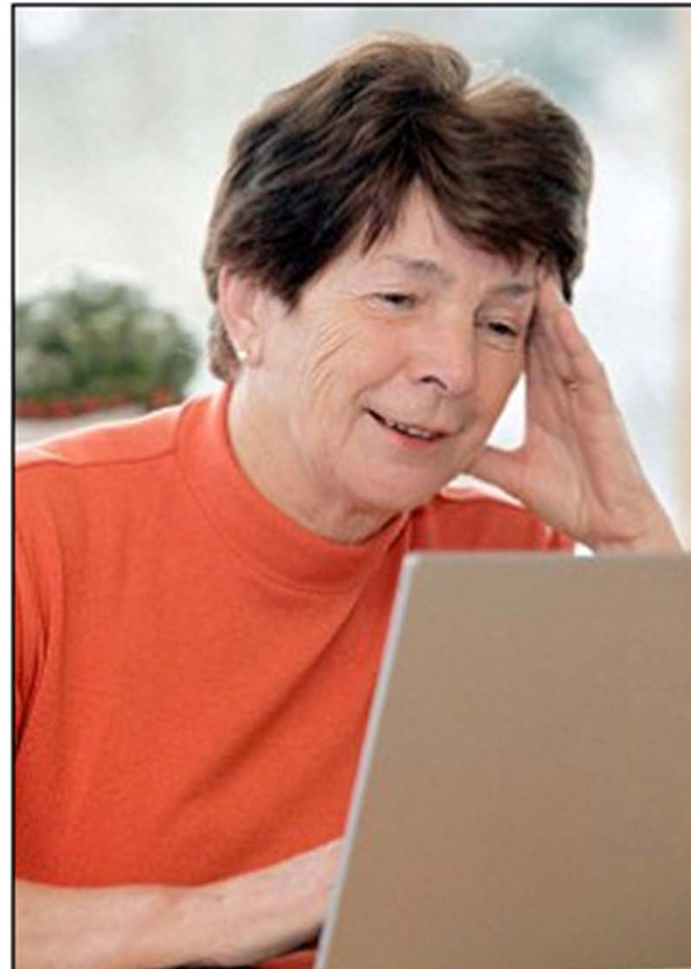
Over nine million adults in Britain have never used the internet, new research has revealed.

A study by the Office of National Statistics found the elderly, widowed and people on lower incomes were less likely to connect to the internet.

Campaign groups have warned Britain faces a 'digital divide' if more progress is not made to get millions more online.

Prime Minister David Cameron has raised the issue in the past, saying his Government was determined to make sure 'people aren't left behind as more services and business move online'.

The new ONS report claims a generation gap in technology still exists in Britain with only one per cent of 16 to 24-year-olds having never used the internet, compared to 60 per cent of over-65s.



MAIL Online 15 May 2013 (UK)

Seven million UK adults have NEVER used the internet but one million have ventured online for the first time since last year

- 14 per cent of people over the age of 16 have never accessed material online
- More women than men have never used the internet
- Those least likely to have connected were aged 75 or over

The Economist 9 November 2013

Online video in China

The Chinese stream

**China's online-video market is the largest and most innovative in the world.
It is also the most competitive**

女神办公室 trailer:

http://v.youku.com/v_show/id_XNjI2MjI4MjY0.html

Nov 9th 2013 | BEIJING | From the print edition

LATER this month PPTV, a Chinese online-video firm, will release a new reality show called “The Goddess Office” (pictured) about four young women living together in a house, trying to create their own e-commerce company. Viewers will be able to ask the stars questions and send them money and ideas for their start-up. The show will employ familiar television elements: the comedic rapport of the characters in “Friends” and the commercial ambitions of contestants in “The Apprentice”. But this “television” show will run exclusively online, rather than on a traditional TV network.



The Economist 9 November 2013

Google's YouTube video service is blocked in China, but local companies, including Youku Tudou and Sohu, are wildly popular (see table). There is lots of user-generated content, but viewers spend most of their time watching professional shows, such as the full-length films, television dramas and comedies that the websites license from China and around the world. Media gluttons can devour all this content without charge, as long as they sit through the advertisements.

Online-video sites in China owe much of their popularity to the government's tight regulation of the TV industry: all of the 3,000-plus stations are state-owned and their programmes are heavily censored. Rules about content range from the predictable (no shows inciting political unrest) to the puzzling (no depictions of time travel). It takes months for programmes to get official approval for broadcasting, and only an estimated 30% of shows that are made get aired on TV.

Online-video sites, in contrast, need a government licence to operate, but are left to police the content on their sites themselves—perhaps because the government never expected them to attract such a mass of viewers. "In principle it's the same, but in reality it's very difficult to say what the standards are for the online-video content players," says Vincent Tao, the boss of PPTV. For example, last month the government ordered television channels to edit episodes of "Pleasant Goat and the Big Big Wolf", a long-running children's cartoon, because it was deemed to be too violent.

Stars of the smaller screen

Chinese online-video services

Website	Traffic*, Sep 2013, m	Highlights
Youku Tudou	309	Merger of Youku and Tudou in Aug 2012
Sohu	254	Rumours that it may buy Kankan, another video service
QQ TV	251	Owned by Tencent
Baidu (iQiyi)	168	Bought PPS for \$370m in May, partnering to make a set-top box
LeTV	162	Developed a set-top box and internet TV
PPTV	137	Suning and Hony invested \$420m in Oct

Sources: iResearch;
press reports

*Unique monthly visitors

Media in the 21st century

Key take aways:

- ☑ Information and Communication Technologies change continually
- ☑ Our society is diverse - it consists of analogue natives, digital immigrants and digital natives
- ☑ Our needs as human beings are largely the same but they are satisfied in different ways
- ☑ A sense of what is changing and the rate of change is critical



☒ Media in the 21st century

- Living with change

☐ Second-screen apps

- What do we mean by “app”?
- How do apps fit into social media & social communication?
- Which “screens” are we talking about?
- What is the current app situation?

☐ Designing second-screen apps

- what's hot and what's not?

- What do we mean by “design”?
- What research disciplines are involved in second-screen development?
- Second-screen apps in the near future

What do we mean by “app”?

App is short for application software

**Frequently used to mean mobile app
(more specific) or
computer program (more general).**

**How do apps fit into social media & social
communication?**

Social - what do we mean?



Dialogue



On the phone



Lending a book



Sharing photos

Social Media - what do we mean?

Synchronous

Asynchronous

Social Media - what do we mean?

**Same
place**

(presencial)

**Different
place**

(virtual)

Social Media - what do we mean?

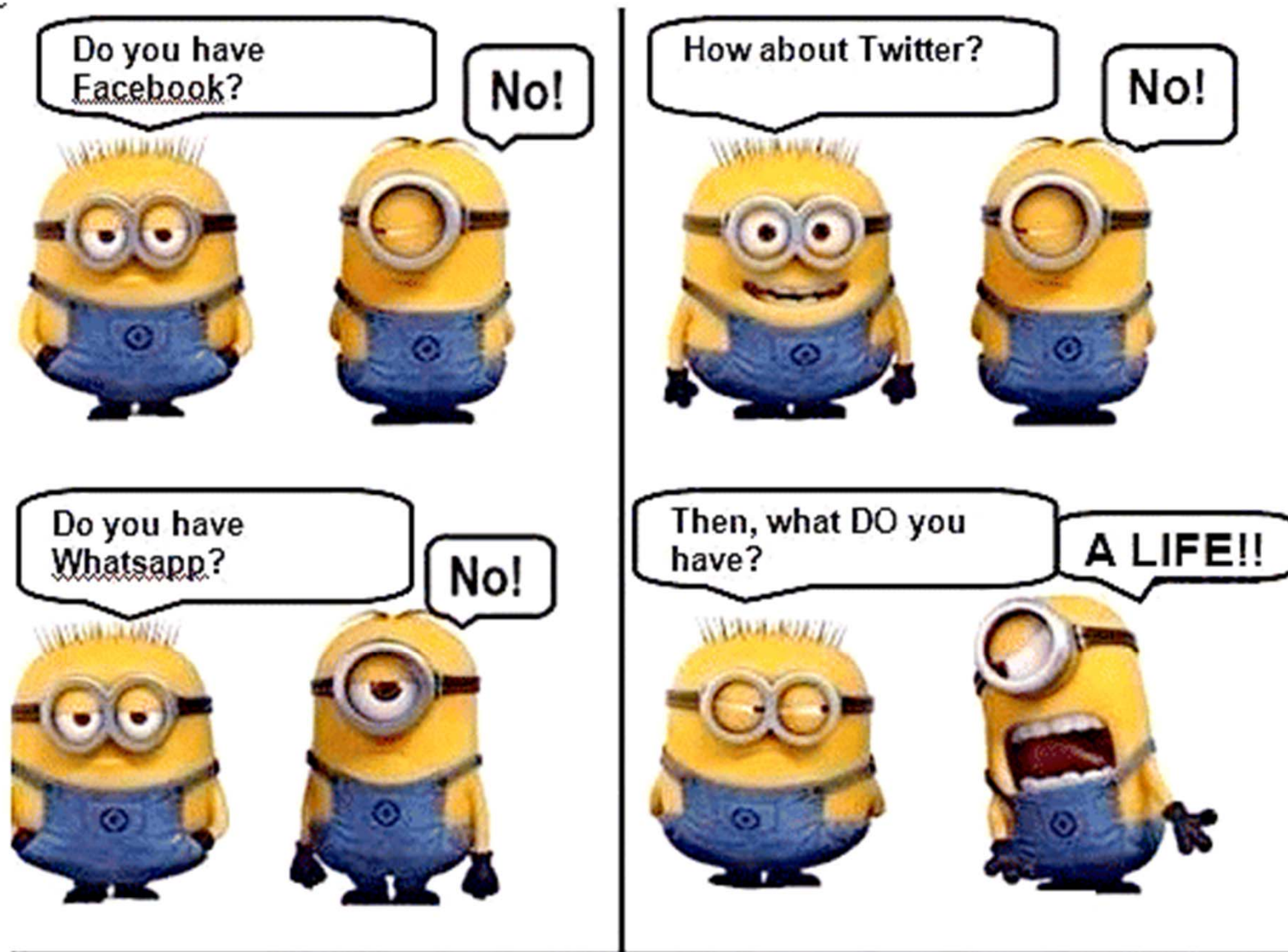
**Synchronous
Same place**

**Synchronous
Virtual**

**Asynchronous
Same place**

**Asynchronous
Virtual**

Are social media 'social'?



So what about this case - social media?



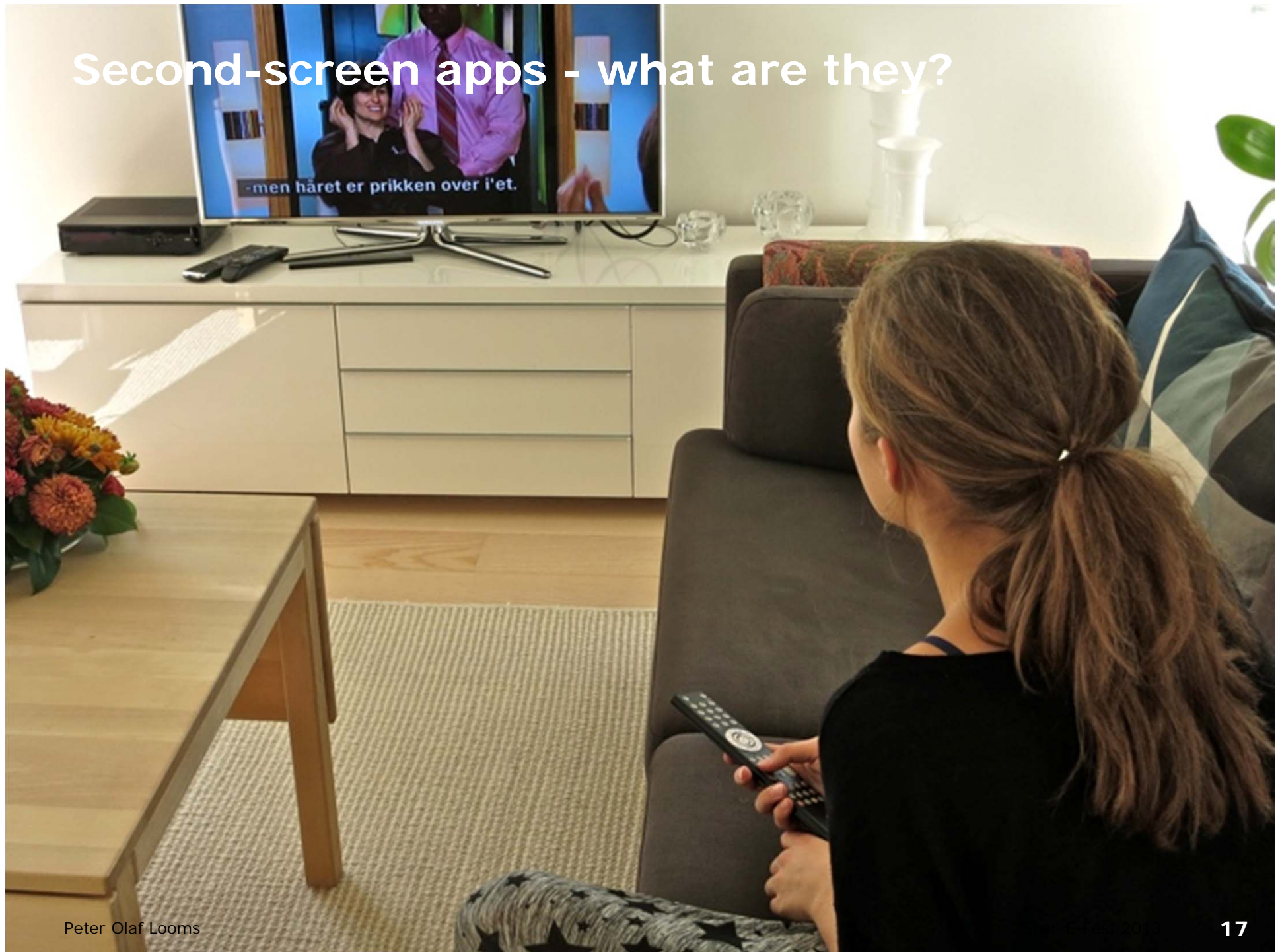
Apps and Social Media

Key take aways:

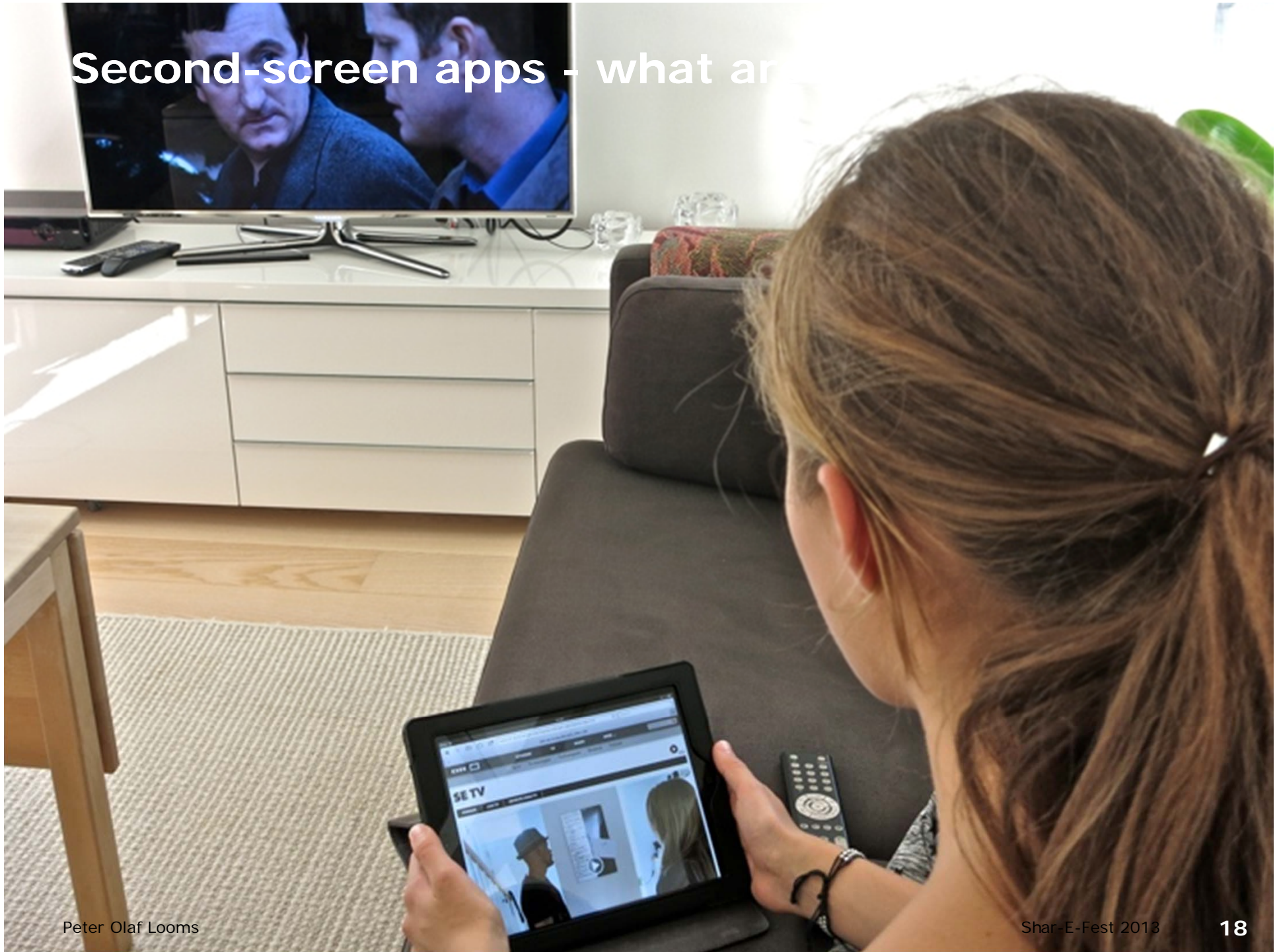
- ☒ Social originally meant communication at the same time and place
- ☒ Social now covers virtual communication
- ☒ When designing social media we need to keep in mind
 - ☒ time (synchronous or asynchronous?) &
 - ☒ place (presencial or virtual communication?)



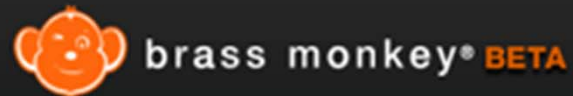
Second-screen apps - what are they?



Second-screen apps - what are



Brass Monkey Beta



Enter Fullscreen



Your browser is the
console, your phone is
the *controller*.



Download Apple iOS
Free on the App Store!



Download Android
Free on Google Play!

Download and start up the Brass Monkey application now. Make sure you device is on the same WiFi connection as your computer or smart tv.

I need help setting up my wifi



Second-screen apps - what are they?



Seven-in-ten enhance TV by simultaneously using another device

96%

HAVE SIMULTANEOUSLY USED ANOTHER DEVICE WHEN WATCHING ENTERTAINMENT, AND 51% DO SO "ALWAYS" OR "MOST OF THE TIME."



70%

EXPERIENCE ENHANCERS

TEND TO BE:

- Male
- 8095er
- College educated
- Constant user of social media
- Significantly more likely than average to socialize content about entertainment
- Behavior highest among those residing in India, Brazil and China



Q6 When watching entertainment content, how often are you simultaneously using another device [e.g. television, computer, smartphone, tablet, etc.]?

Q7 How likely are you to use multiple devices while watching entertainment content to enhance your entertainment experience?

Source: Edelman (2013). Designing the Future of Entertainment. 2013 Global Entertainment Survey <http://www.slideshare.net/EdelmanInsights/2013-edelman-global-entertainment-survey>

Second-screen apps - what are they?

Synchronous

Taking part (女神办公室), Voting & Quizzes

Breaking news & Sports results

Access services (customizable subtitles,
optional sign language overlay, AD)
Discussing TV with family & friends

Asynchronous

Video On Demand (TV & video online)

Meta-content (looking for something)

Recommendations

Information services linked to the show

Second-screen apps - what are they?

Synchronous

Taking part (女神办公室), Voting & Quizzes

Breaking news & Sports results

Access services (customizable subtitles,
optional sign language overlay, AD)
Discussing TV with family & friends

Uses broadcast & broadband on same TV

Mechanisms for synchronising content
from 2014 (HbbTV 2.0)

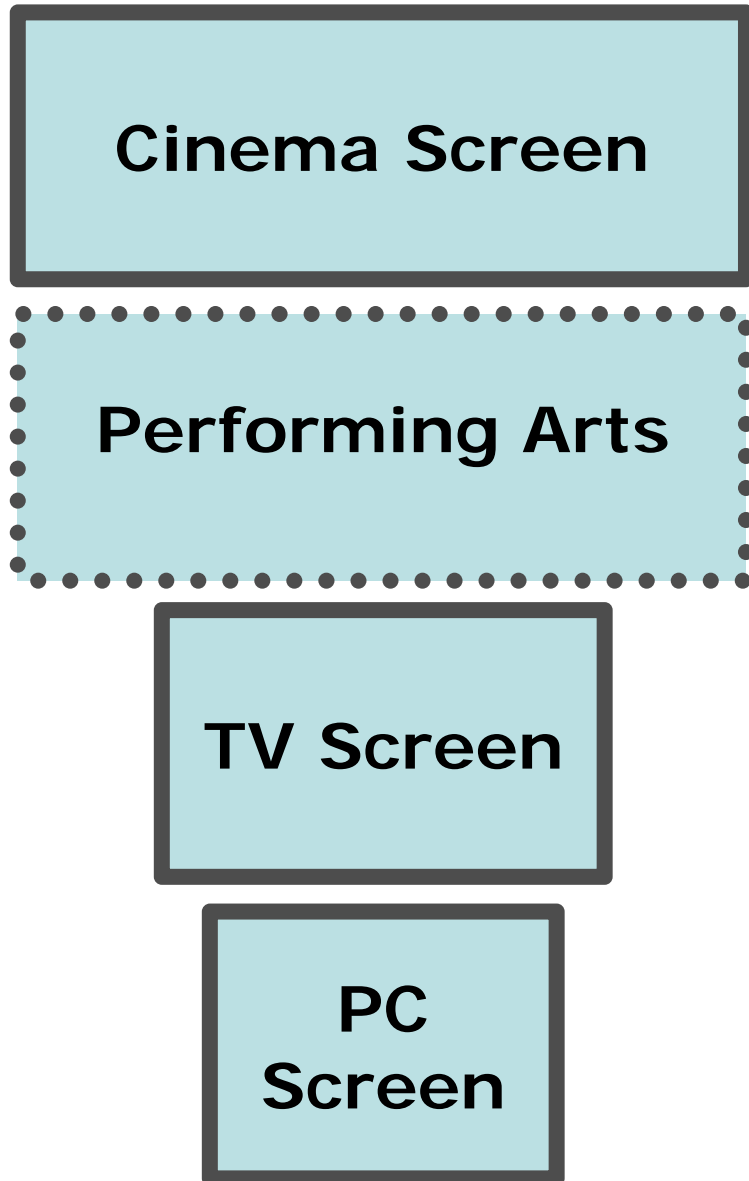
Source: Looms, Peter Olaf (2013) TV in the 21st Century – One Screen or Two?
RTHK Media Digest. Hong Kong SAR, China.

http://rthk.hk/mediadigest/20130205_76_122955.html

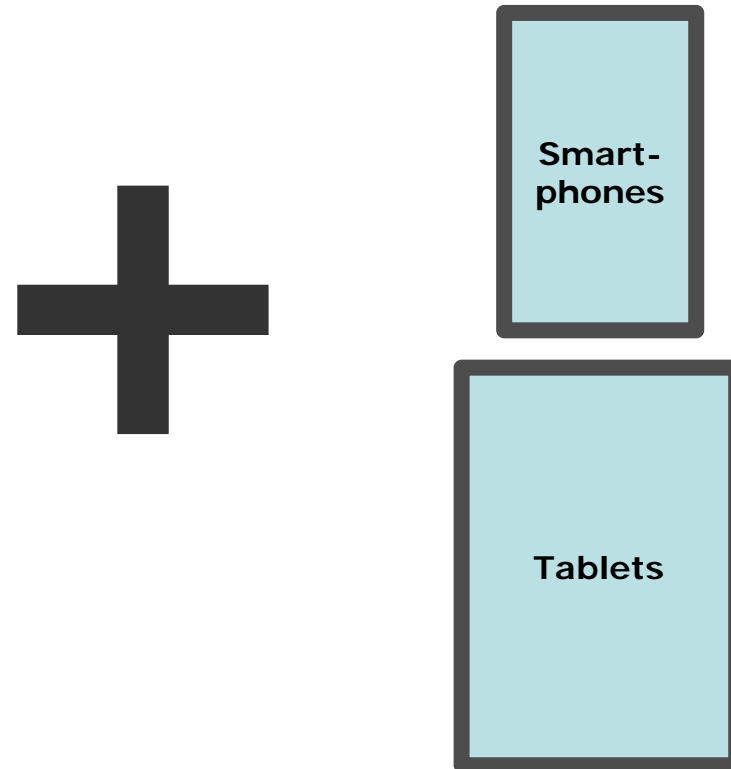
Second-screen apps - what are they?



Main 'screens' screens

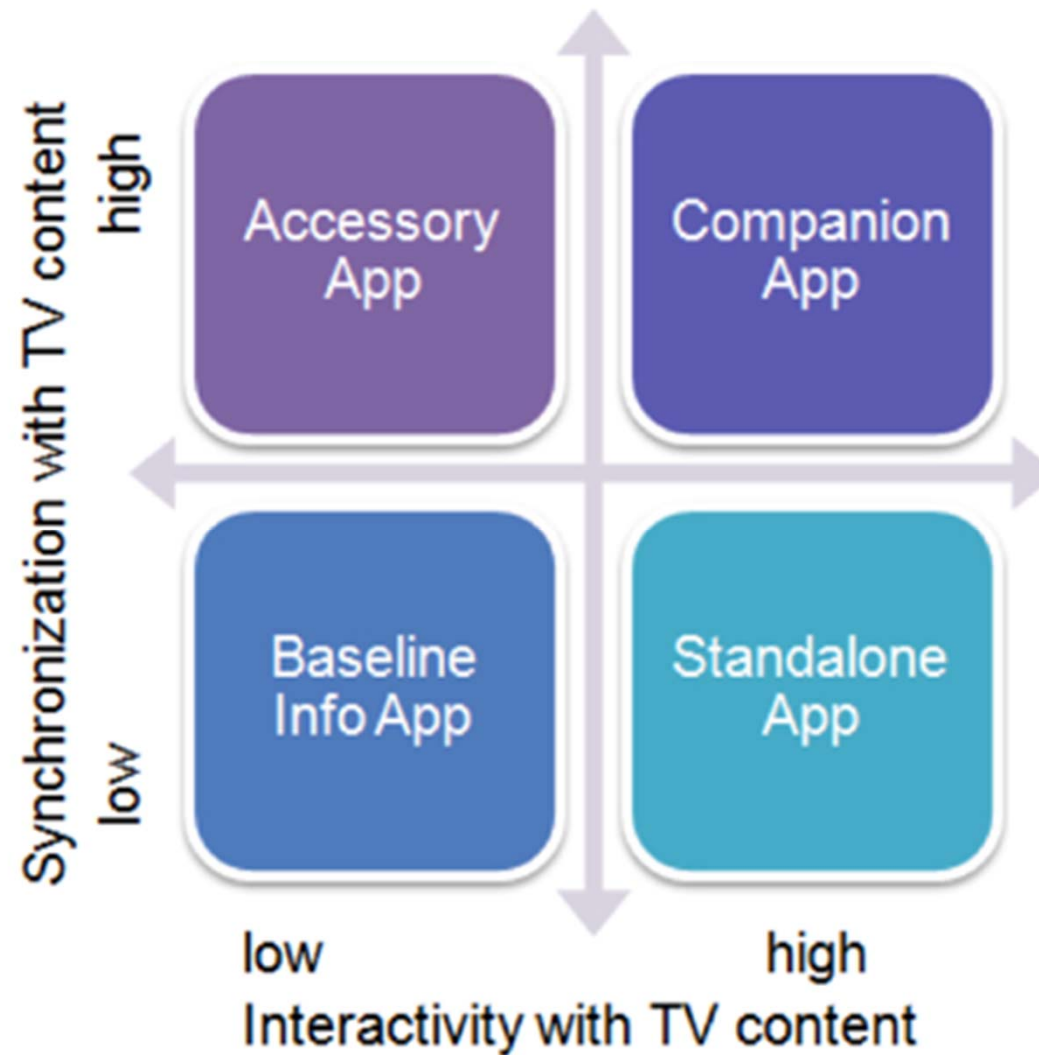


Second



Second-screen taxonomy

Regina Bernhaupt (2013)



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Designing second-screen apps

The Action-Centric model sees design as a process informed by research and knowledge.

However, research and knowledge are brought into the design process through the judgment and common sense of designers – by designers "thinking on their feet"

Designing second-screen apps

- what's hot and what's not?

“Contrary to a key assumption of the TV industry, interaction with digital interactive TV (iTV) programmes and ads is driven as much by **social motivations as it is by **information seeking**.**

This insight was revealed by a survey of a representative sample of 867 digital TV households in the UK.”

Source:

Steven Bellman, Anika Schweda and Duane Varan (2008)
The importance of social motives for watching and interacting with digital television.
Interactive Television Research Institute, Murdoch University, Perth, WA.
International Journal of Market Research Vol. 52 Issue 1.

Designing second-screen apps

- what's hot and what's not?

1. **Problem Removal.** Being a couch potato.
2. **Problem Avoidance.** The consumer seeks a product or service that will prevent a future problem. For example, a viewer might check the weather on the TV to see if it is likely to rain.
3. **Incomplete Satisfaction.** (This would be the typical motivation for switching channels).
4. **Mixed Approach-Avoidance.**
5. **Normal Depletion.** This 'empty larder' motivation drives a lot of habitual consumer behaviour.
6. **Sensory Gratification.** (This would be the typical reason for choosing to watch an entertaining TV show).
7. **Intellectual Stimulation and Mastery.** (Seeking information out of curiosity ... would be the typical motivation for watching documentaries).
8. **Social Approval.** The consumer seeks recognition from social reference groups through the use of the product or service.

Source:

Steven Bellman, Anika Schweda and Duane Varan (2008)
The importance of social motives for watching and interacting with digital television.
Interactive Television Research Institute, Murdoch University, Perth, WA.
International Journal of Market Research Vol. 52 Issue 1.

Designing second-screen apps - what's hot and what's not?

Value and Engagement in the Era of Social Entertainment and Second Screens



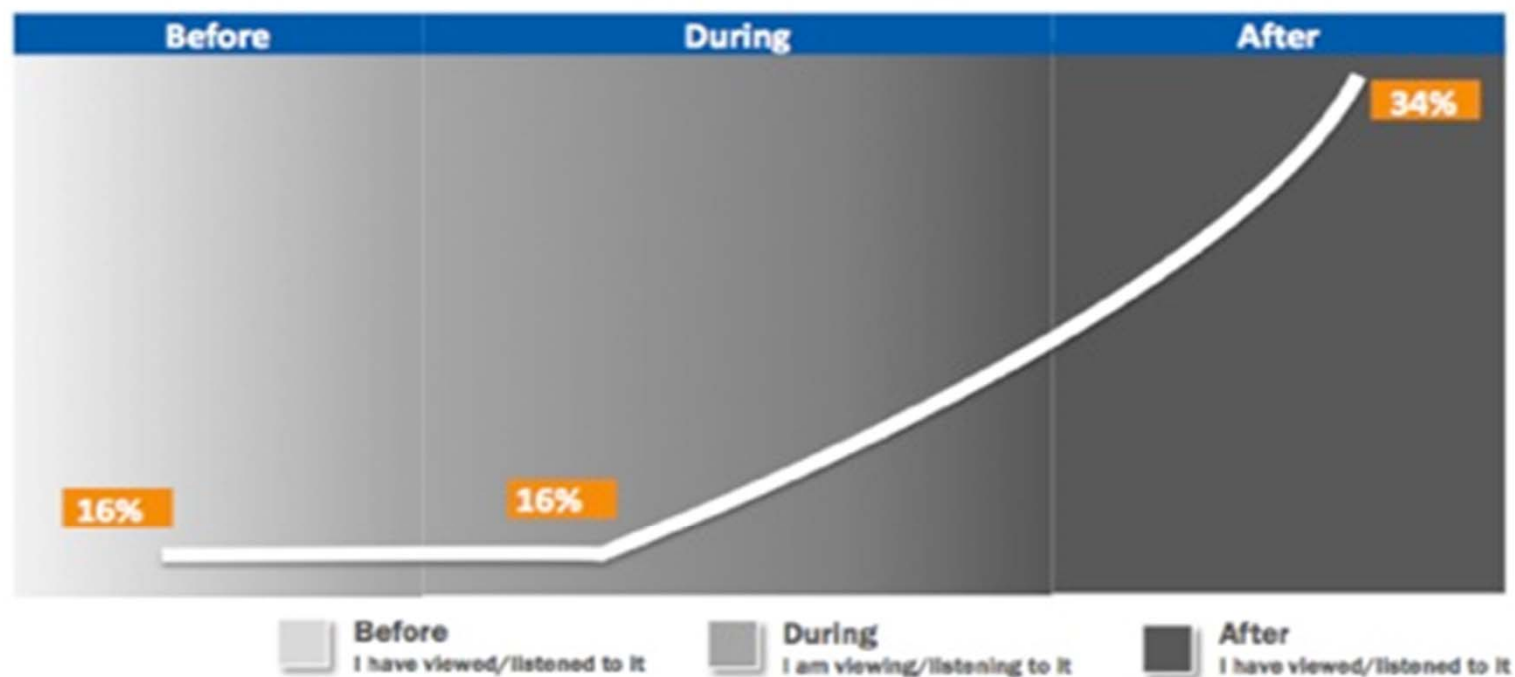
Designing second-screen apps

- what's hot and what's not?

The Conversation Curve

Audiences are much more likely to comment about entertainment content after they have watched, listened or played. Brands should consider how to amplify and sustain this curve.

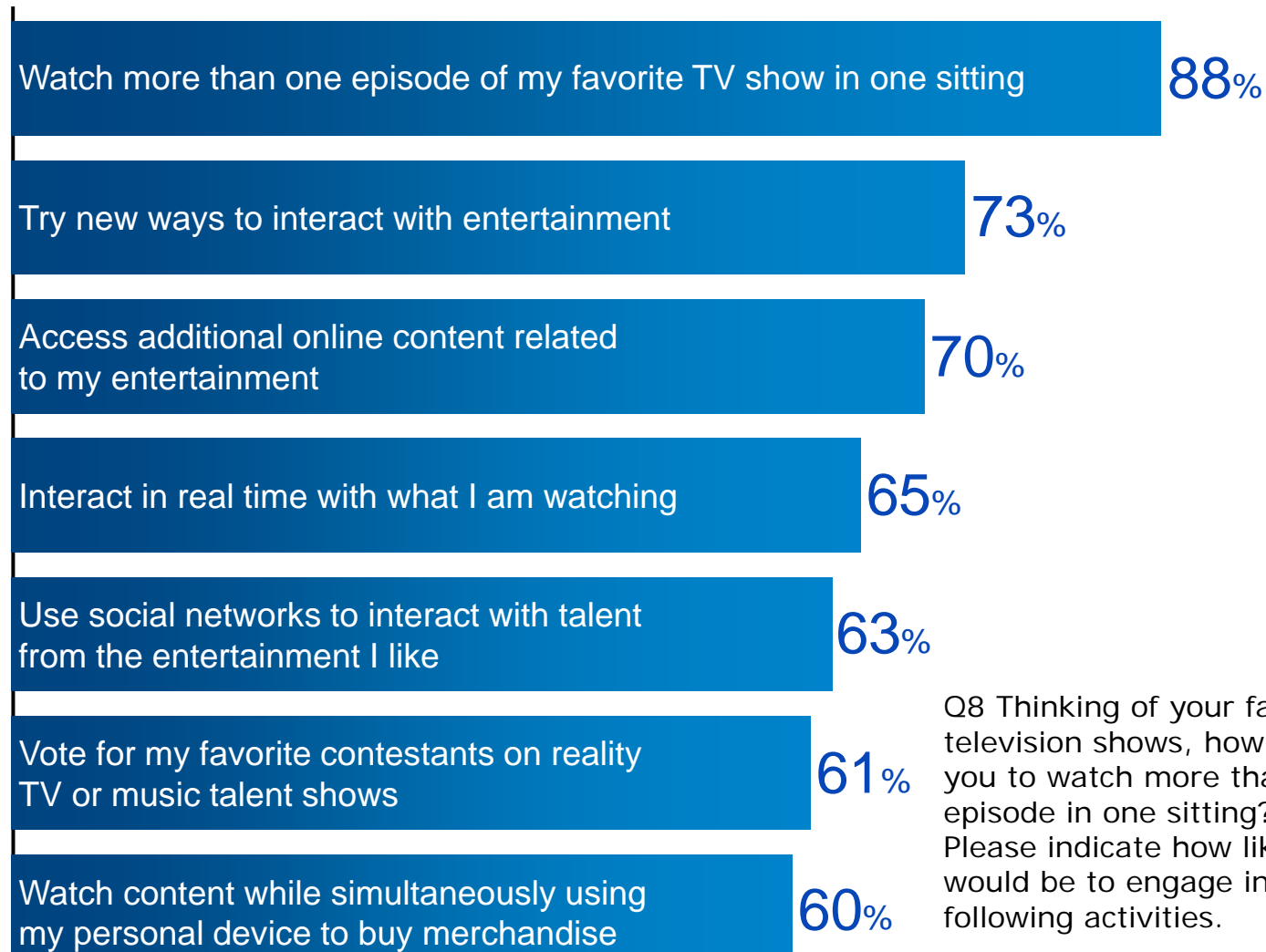
Likelihood of commenting
on a social network



Q19. Which types of content are you likely to comment about on a social media networks (like Twitter or Facebook) before you have viewed/listened to it, while you are viewing/listening to it and after you have viewed/listened to it?

Base: All respondents who use any social media sites (n1837)

People **say** they want immersive and interactive experiences



Q8 Thinking of your favorite television shows, how likely are you to watch more than one episode in one sitting? Q10 Please indicate how likely you would be to engage in the following activities.

Source: Edelman (2013). Designing the Future of Entertainment
2013 Global Entertainment Survey <http://www.slideshare.net/EdelmanInsights/2013-edelman-global-entertainment-survey>

People are as likely to share about entertainment as about themselves or their friends



Emerging markets (India, Brazil, China and Turkey); 8095ers; and college graduates lead the trend

Q16 Generally speaking, how likely are you to use social media to share content about each of the following?



Globally, **5x**
people are
more likely to share
positive than negative
experiences

To share joy/satisfaction

20%

To warn others not to waste time
or money on content that is not
entertaining

4%

Q23 Which of the following best represents your view? Please rank your top three responses. When I use social media to share content about entertainment, I do it mostly... (Shown: % First choice)

Media consumption in connection with events



Media consumption in connection with events

- **IBC in September 2013 focused on the interplay between “traditional media” and social media.**
- **IBC’s session “The 2nd Screen - From Statistics to Services” looked at users and value.**



Sarah Pearson
ACB, UK
Video ethnography
of major events



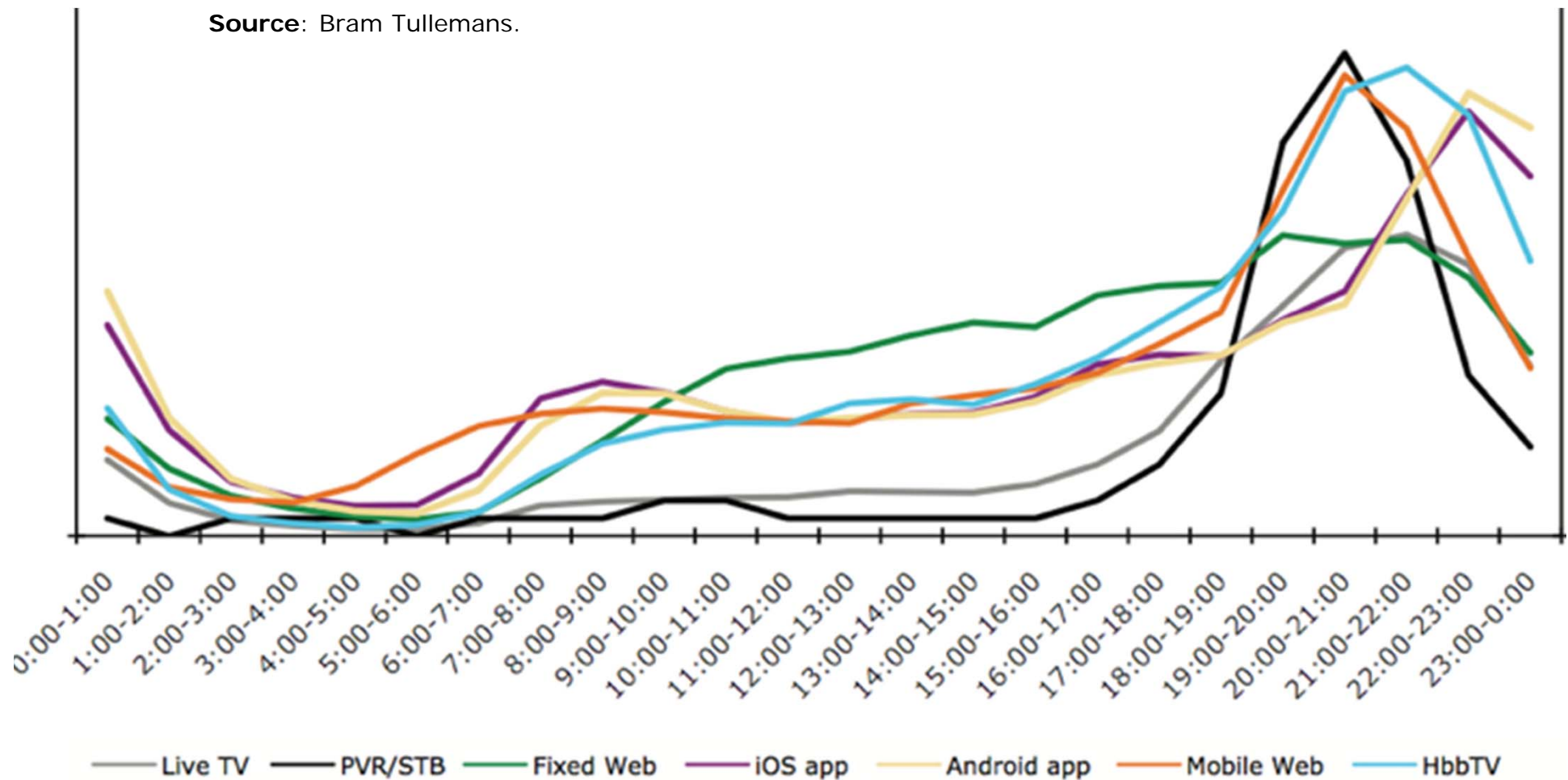
Regina Bernhaupt
RUWIDO, France
User modelling



Les Carter
BlackArrow, USA
2nd screen and
advertising

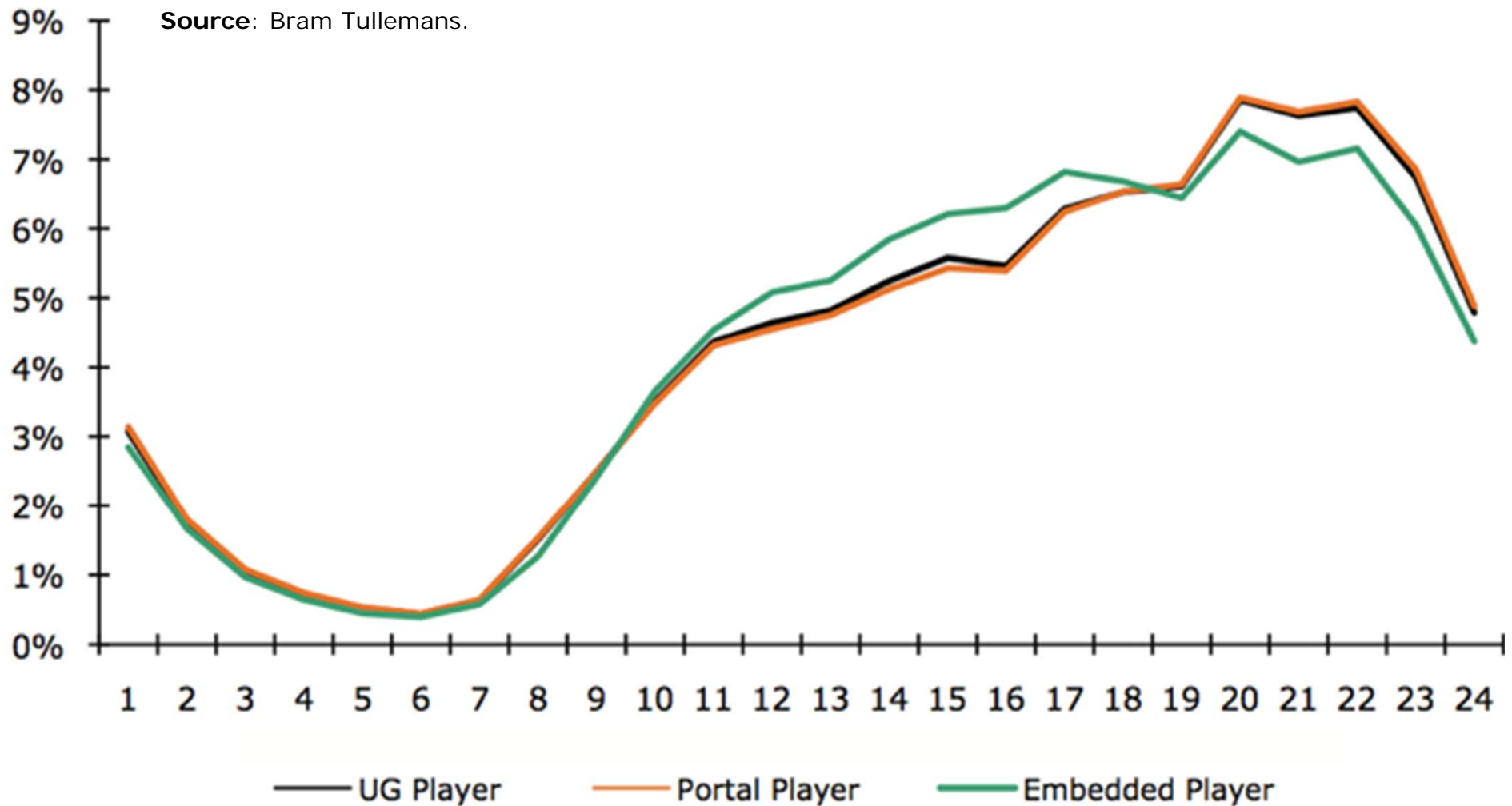
Media throughout the day

Media use for a 24 hour cycle (Netherlands - March 2012)

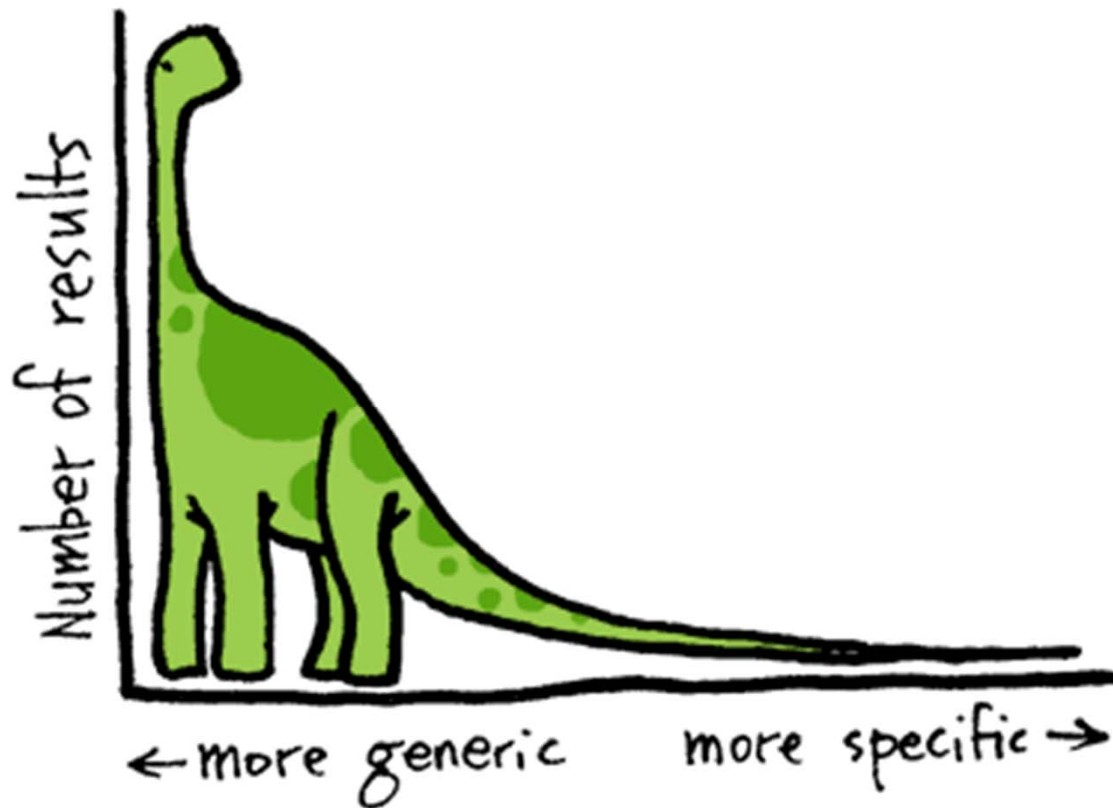


Media throughout the day

Media use for a 24 hour cycle (Netherlands - March 2012)



The Long Tail and the Water Cooler



Source: Chris Anderson. The Long Tail.
WIRED magazine Issue 12.10 - October 2004
<http://www.wired.com/wired/archive/12.10/tail.html>
Illustration from
<http://www.searchengineguide.com/matt-bailey/keyword-strategies-the-long-tail.php>

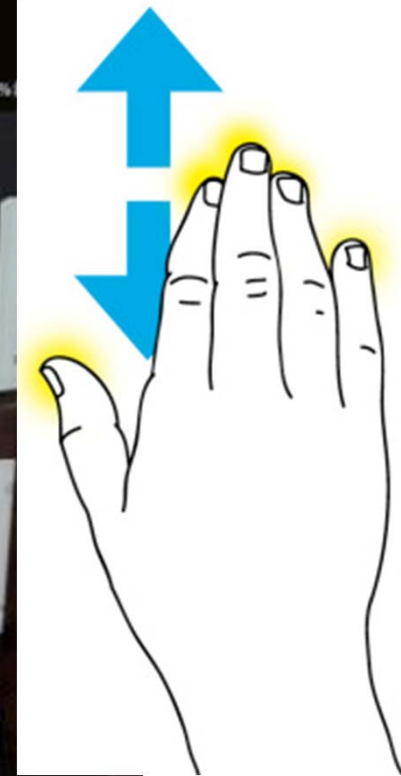


Source: Bram Tullema. Multiplatform measurement
- The watercooler has gone digital. p 14-15. Tech-i
Issue 13 • September 2012. EBU, Geneva.

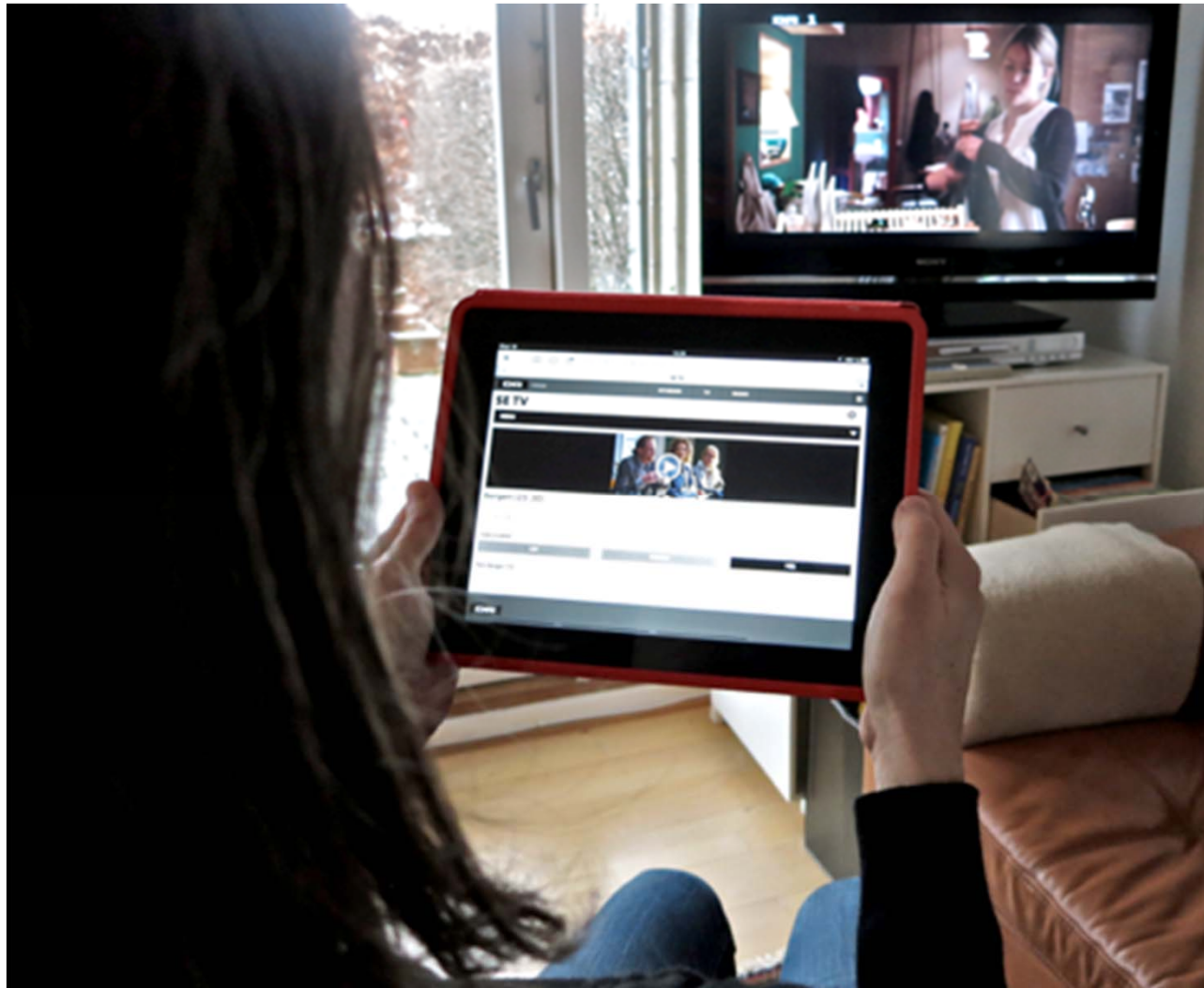
Regina Bernhaupt and analysis of users



Point-and-click / Finger movements



Second screen app for selecting content



Source *full article:*

Looms, Peter Olaf (2013) TV in the 21st Century – One Screen or Two? RTHK Media Digest. Hong Kong SAR, China. http://rthk.hk/mediadigest/20130205_76_122955.html

Regina Bernhaupt and analysis of users

Source: Regina Bernhaupt (2013) ^{1,2}, Michael Pirker ¹ and Bastien Gatellier ² *1 ruwido, Austria and 2 IRIT, France* IDENTIFICATION OF USER EXPERIENCE AND USABILITY DIMENSIONS FOR SECOND SCREEN APPLICATIONS: RESULTS FROM AN EXPERT EVALUATION USING GENERIC TASK MODELS. IBC Congress 2013. 13 September, 2013, Amsterdam, Netherlands.













 Abstract task	ABSTRACT TASK corresponds to a complex task that should be decomposed into simpler ones.	 Iterative task	ITERATIVE TASK can be executed 1 or more times. It can be interrupted or suspended by another task. A decoration at the top-left side set the task as iterative.
 System task	SYSTEM TASKS refers to activities that are carried out by an interactive system. Systems tasks can treat information received from the user or provide information to users.	 Optional task	OPTIONAL TASK can be executed or not accordingly to the user context. Optional tasks are indicated by a decoration on the top-right site of the task.
 User task  Cognitive task  Perceptive task  Motor task	USER TASKS is a generic task describing a user activity. It can be specialized as: Cognitive task (e.g. decision making, analysis); Perceptive task (e.g. perception of alert); Motor task (e.g. a physical activity).	 Interactive task  Input task  Output task  InputOutput task	INTERACTIVE TASK is an interaction between the User and the System; it can be refined into: Input task when the users provide input to the system; Output task when the system provides an output to the user; Input Output task is a mix of both but in an atomic way.

Figure 2: The Hamsters Notation. Legend replicated from Winckler, Bach & Bernhaupt (4)

Regina Bernhaupt and analysis of users

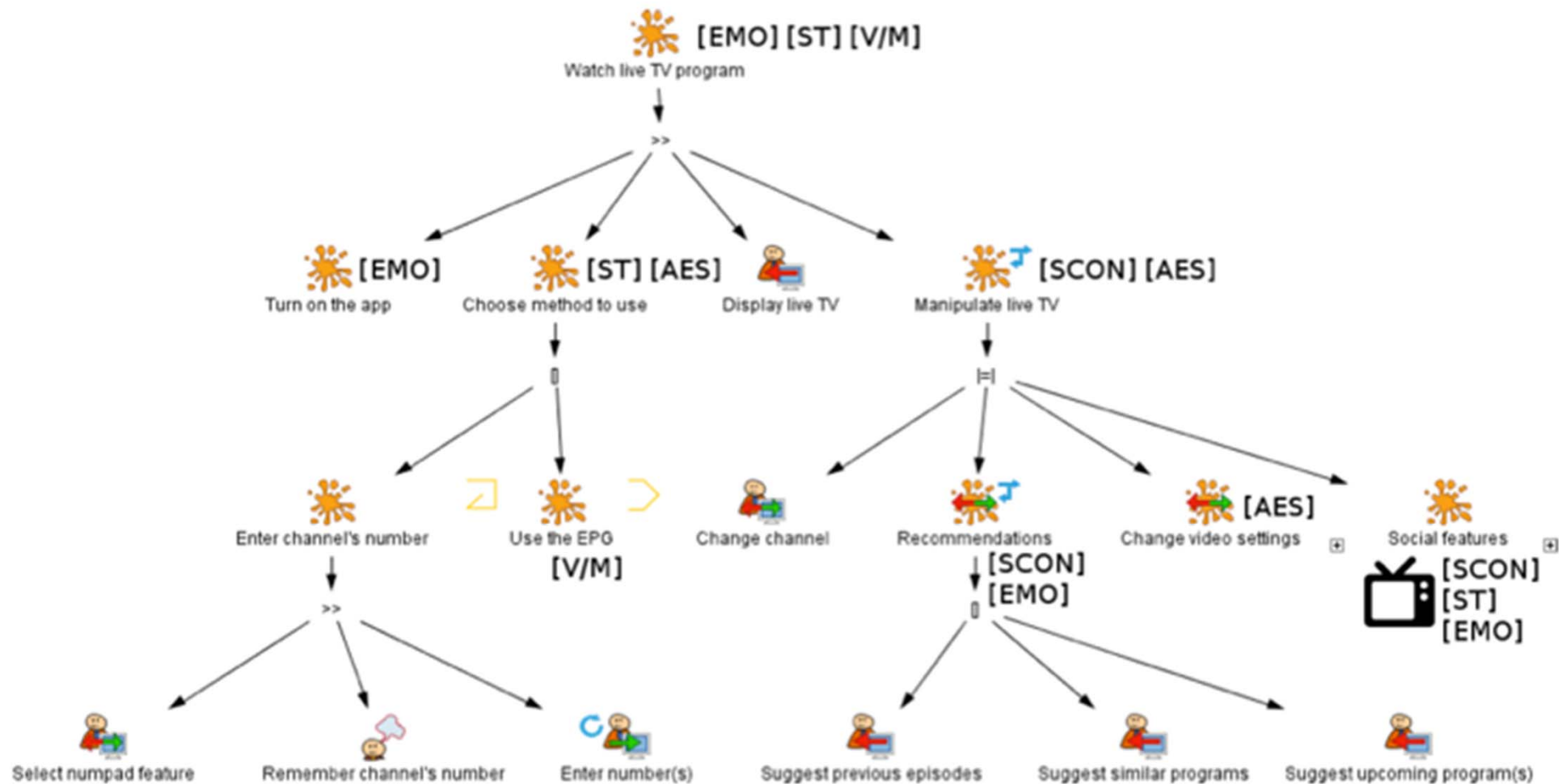
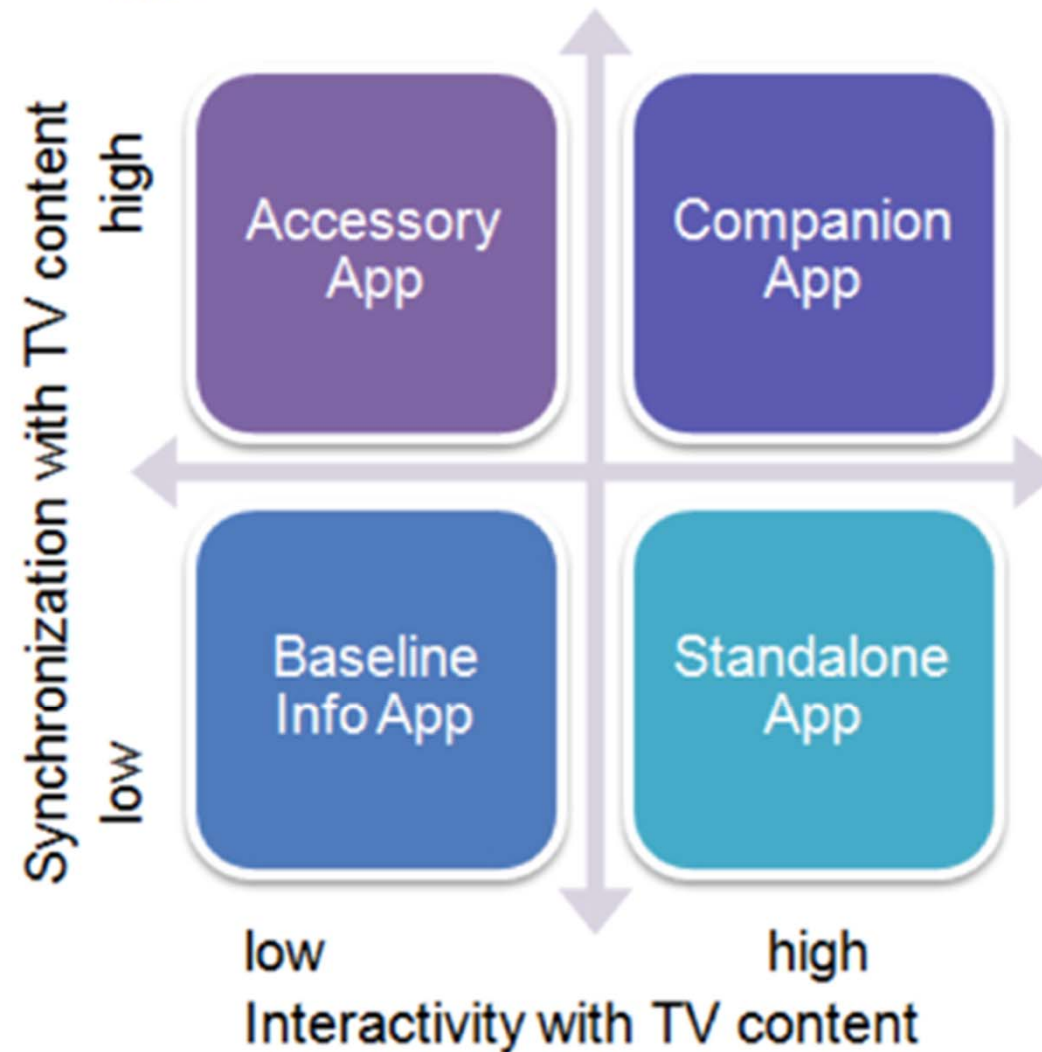


Figure 3: Task Analysis of Live TV watching. The TV symbol indicates that the action performed will lead to an interaction with the TV screen.

Symbols: '>>' Task 1 enables Task 2, '[' Choice, '| = |' order independent

Where do we go from here?



Designing second-screen apps

- what's hot and what's not?

Key take aways:

- ☑ Smartphones and tablets are truly ubiquitous
- ☑ Understanding social motivations can help us design media
- ☑ We can use a wide range of sources and research methods to come up with effective and compelling media experiences
- ☑ Apps and second-screen apps are set to play a role in stimulating mass media and the performing arts.



Thank you for listening



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