



Phase 5 Proposal
‘Connected Devices and Simultaneous Use’

Providing a deeper understanding
of human interaction, engagement
and usage in the natural context

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Overview and Objective

The I-3-9 Media Lab is an industry-neutral longitudinal study that uses video ethnography to analyse the impact of technology on audience behaviour in the natural context. The lab has been delivering indicative research to the media industry and regulator for over four years, and its members have used this research as a basis upon which to predict future media consumption.

The objective for Phase 5 will be to analyse the attitudes, expectations and eventual usage of new connected devices, with a particular focus on connected TVs in various stages of adoption. Capture for the main part of the study will begin in October 2011: post-Virgin TiVo, post-Kinect, post-Move and pre-Youview. For the main study ACB uses a 'hot-housing' technique to familiarise participants with new technology. This will include connected TVs, the Xbox 360 with Kinect, tablets, and Android mobiles with apps for interacting and sharing and controlling the television content and the PVR. A mini study before Phase 5 included five families with connected TVs and examined attitudes and beliefs pre-purchase, buying behaviour, installation, and pre hot-housing usage and attitudes and beliefs post-purchase.

Our sample for the main study of Phase 5 includes households with Freesat, Sky+, BT Vision and Virgin TiVo. All homes will have access to laptops with iPlayer and 4oD on the desktop. The Wii will be included in the study in addition to the Xbox 360 with Kinect. This phase will continue to make use of our innovative mobile capture technology to monitor the usage of Android phones and tablets both in and out of the home.

Each household is carefully matched to appropriate and relevant technology. In this way we hope to understand the behaviour of the early majority for future-focused research.

The Best Methodology

It is problematic to rely on the claimed behaviour of TV audiences. ACB provides accurate insights into audience behaviour by observing viewers for four weeks, and by conducting filmed interviews with the participants at the end of the study. This research is designed to complement larger research studies, enabling a better understanding of emergent behaviour, and facilitating a more reliable method of questioning.

Over the past four phases ACB has answered the following questions:

- What are the Drivers and Barriers of VoD consumption? How does VoD consumption on the PC compare to the TV? How does catch-up, archive, and pay-per-view content compare?
- Audience profiling - Who will explore and integrate the technology into their routine?
- How does programme and channel brand impact choice?
- What content do viewers pay for?
- How engaged are viewers with new content?
- What content is viewed socially and privately?
- How does the impact of advertising differ on each platform? How does online advertising compare to TV advertising? Is online advertising a barrier to entry?
- What are the differences between claimed and actual behaviour in terms of ad acceptance/avoidance?

Why do Members use the Lab?

“We use it as a truth serum” – Leading Pay TV operator

“Best research there is” – Leading UK broadcaster

“Rigorous; Fantastic” – Leading advertising agency

How the Answers are used by the Industry

The answers we provide are used by clients to gain:

- *Early* indicative insights into the stages of use and adoption
- A vivid and robust picture of future audience viewing behaviour
- Deep and rich findings that address that limitations of quantitative research
- An understanding of concurrent viewing at home and on the go
- Guidance regarding product development and customer research.

Details of previously published work including papers, conference presentations and articles can be found at the following links:

1. ACB's report, **PVRs and Advertising Exposure: An Ethnographic Study**, won Best Paper by International Journal of Qualitative Research 2008

<http://www.acbuk.net/pdfs/FINAL%20ACB%20PVR%20I%20SEP%2006.pdf>

2. ACB also delivers insights at research conferences. The report on the seminal **London Business School Conference**, including an updated analysis on PVR audience behaviour, as well as material from other speakers at the conference, can be seen on the following link:

http://www.acbuk.net/pdfs/PVR_CONFERENCE_REPORT_AND_UPDATE.pdf

3. Top-line results of three years of research from the **I-3-9 Media Lab**, conducted in 2007, 2008, 2009, can be accessed via the following link: www.acbuk.net/presentations.php

4. Presentations from the **Convergence Half Day Conference** held on July 7, 2009, including results from the Neilson Consumer Mapping Study; predictions from Enders Analysis on the adoption and use of VoD; BBC research on iPlayer, in addition to ACB's study on the impact of Converged TV technology on actual audience behaviour, with an introduction from Emeritus Patrick Barwise, can be found at the following link. www.acbuk.net/conferences.php

5. The Economist, **A Special Report on Television**, May 2010. The special report included full international coverage featuring articles on online TV, Piracy, Mobile, Sport, 3DTV, New Directions for

TV, Interactive and a three page feature on ACB's research entitled: 'How People Really Watch Television'.

http://www.economist.com/specialreports/displaystory.cfm?story_id=15980817 .

The research is of interest to industry broadcasters, ISP's and even APEX (the world airline passenger experience) who used the research as a benchmark in understanding how future audiences view in the home to understand appetite in the air. Our insights are also used by companies such as Microsoft for its departments in advertising, gaming and VoD, and by the BBC for news, audiences, children's and connected TV strategy. The research and conferences have been supported by Ofcom (the UK regulator), Channel 4, BBC, Microsoft, Nielsen (US), BARB, and LBS. In Phase 4 the lab was financed by Microsoft, BBC, Ofcom, Sky, Starcom MediaVest Group and Channel 4. Phase 5 continues to be supported by some of these members including BBC and Microsoft together with new members Samsung and ITV, illustrating the value of this research.

Exclusive Members meeting during World IPTV Week, London held at Microsoft HQ on Friday 25th March 2011

Feedback following the presentation of the results of Phase 4 was extremely positive and there was much interest in shaping the next phase of the lab. Members worked in mixed groups to discuss their questions for future studies. ACB have developed Phase 5 in response to these questions.

Generic research questions for all consortium members, Phase 5:

- 1. How do Freesat households differ from those with Sky or Virgin TiVo?***
- 2. How will the introduction of Connected TVs affect viewing behaviour?**
- 3. How has the engagement in live, near-live, VoD, gaming, and social networking on various platforms changed?**
 - i. How does the PVR compete with TV VoD?
- 4. What are the drivers and barriers to viewing on different platforms?**
 - i. How do viewers navigate through content (i.e. through their recordings when looking for something to watch on the PVR)?
- 5. What proportion of overall viewing is simultaneous vs. solus?**
- 6. How does social viewing differ from private viewing?**
 - i. What will be the impact of the increase in personalisation of content on social viewing?
 - ii. What is the effect of social viewing on enjoyment and engagement, and on the use of other devices?
- 7. How will audience profiles change over time?**
 - i. What effect will multiple PVRs have on the relationships of dominance within our households?
- 8. How do individuals discover new content?**
 - i. Through Facebook?
 - ii. What content is window shopped or predetermined? Where do they plan? At home or at work?
 - iii. From recommendations through TiVo boxes or similar?
- 9. Initial insights from tablet capture:**
 - i. How is it used as a companion device, allowing people to record content onto their PVR through relevant apps?
 - ii. How will this affect dominance on the main set?

**This question will now be reserved for Phase 6 when we have Youview households in the study. We already have members signed up for Phase 6 to understand these insights.*

Phase 5: The Design – The Sample

This is a working sample that is dependent on funding. The design of Phase 5 will involve a minimum of 8 households of 34 family members, in addition to an unconfirmed number of guests. The sample will include:

Andrews (M46, F46, F11, F9, F9)

Phase 1: BT Vision and PC

Phase 2: BT Vision and PC with iPlayer and 4oD

Phase 3: BT Vision (max subscription VoD) and PC + laptop with iPlayer, 4oD and Joost

Phase 4: BT Vision (max subscription VoD rejected) and PC + laptop with iPlayer, 4oD. Wii with iPlayer in lounge.

Phase 5:

- **Connected Sony Bravia TV**
- **Panasonic Blu-ray player with Skype camera**
- **Laptop with BBC iPlayer, 4oD usually based in Kitchen**
- **Nintendo Wii (with BBC iPlayer)**
- **Xbox 360 with Kinect and Microsoft Live Gold Membership**

We have been studying this household for five years. They are heavy viewers of online VOD. We will observe whether the link to BBC iPlayer on Wii will encourage this family to seek out more content from iPlayer on other platforms given the choice on the Connected TV. We will also see if the children will access the other screens in their house to find content that suits their social and private viewing, and will look at the increases in simultaneous viewing of all members of the family. The Andrews children have viewed a large quantity of catch-up and archive content in previous phases from iPlayer accessed via the Wii and the BT Vision PVR that was given in Phase 1. This family are early majority and relatively enthusiastic about new technology but discerning about content; the three girls are all fully converged and whilst parents' perceptions are that they too are converged – our evidence would suggest that they are more linear in their viewing. We will see if they use the Xbox with Kinect similarly to the Wii for gaming or VoD. Since Phase 4 this family have purchased an Internet Ready Connected TV without a dongle, so it is our intention to supply a dongle and Blu-ray player to see how the family use this Connected TV.

Baileys (M49, F48, M19, M17, F16)

Phase 1: Sky +HD and PC

Phase 2: Sky+ HD (with Anytime) and PC and laptop, both with iPlayer and 4oD

Phase 3: Sky+ HD with 500 GB hard-drive and PC and laptop, both with iPlayer, 4oD and Joost

Phase 4: Sky+ HDTV / TB hard drive, Laptop and PC, both with iPlayer, 4oD, SeeSaw, Sky Player in Lounge.

Second TV in hallway with Xbox 360 with Microsoft Live Gold including Sky Player and Zune. Mobile capture from M18.

Phase 5:

- **Sony Connected TV with Sky+, 1TB hard-drive PVR and Skype camera**
- **Xbox Kinect with Microsoft Live Gold in Lounge**
- **Laptop with BBC iPlayer, 4oD in Lounge**
- **PC with BBC iPlayer, 4oD in the hall**
- **Mobile capture from M49 and F16 (with Sky Mobile app)**
- **Tablet for M49**

This family uses their PVR heavily. They have had a 1TB PVR hard-drive for over a year which they were given in Phase 4 to understand the impact of the increased hard-drive space on viewing behaviour. We are interested to see how the online viewing of the teens has changed, and if the father will continue to dominate the main set. We will observe whether the appetite for video content on the 3ft screen still takes place predominantly in the lounge, or whether it has also shifted to the PC in the hall, or to the Xbox 360 with the VoD available on this platform. We will observe whether the teenage daughter will start to integrate more TV viewing into her lifestyle as she gets older, and whether she will continue to compete for dominance of viewing choices on the main set alongside her father. We will also look at how the daughter and her brother (M17) use the Sky+ application on their phones and tablets to create more personal viewing time on the TV. We will also be interested to see gaming interaction between this household and their cousins The Knights who are new to the study. Both families have the Xbox and we are interested in how the Knights (aged 13,15) game online and interact with their cousins M19 and M17 on the Xbox. The Knights have been routinely regular guests in the Baileys households and we have been interested to see their behaviour driving exploration on YouTube in Phases 2 and 4 on the laptop and

mobile. Overall the Baileys household's viewing increased year on year perhaps due to the introduction of the laptop in the lounge in Phase 2 and the introduction of the ITB hard-drive in Phase 4, and it will be interesting to see not just if this continues but where it is most engaging. It is Martin Bailey who has frequently used Channel 4 content to add to his sense of self and we saw his friends also doing this on Facebook status updates viewed on the mobile during the final episode of Inbetweeners in Phase 4 with much mourning for the last episode. We are also interested to see how they use Skype on their TV with the Knights household and how much value they gain from the connected TV and tablets.

Cunninghams (M48, F49, F20, M19, M17)

Phase 1: Freeview TV, PC, Virgin+

Phase 2: Virgin+, PC, Laptop

Phase 3: Virgin+ 80 hours, Mac, Apple TV, Laptop

Phase 4: Sky+ with 500 GB hard-drive in Lounge. Laptop Mac with SeeSaw, iPlayer and 4oD. Playstation 3 with iPlayer in Family Room. Xbox 360 with Sky Player and Zune in Lounge. Sky+ 250 GB in Family room. Mobile capture from M18.

Phase 5:

- **Samsung 3D Connected TV with Skype camera in Lounge**
- **Laptop with BBC iPlayer and 4oD in Lounge**
- **PS3 with BBC iPlayer in Family Room**
- **Xbox 360 with Microsoft Live Gold Membership in Lounge**
- **Sky+ Multiroom 250 GB in Family Room**
- **Mobile Capture from M17, M19, and M48**
- **Tablet capture from F49**

In Phase 4 we found that the relationship of dominance within this household had a dramatic effect on the viewing habits of each individual. The teenage sons dominated the main set, watching mainly linear content. There was some exploration of the VoD service Sky Anytime and some viewing of time-shifted content from the planner, demonstrating the boys' breadth of usage of this platform. Their high proportion of near-live viewing is a demonstration of how the use of PVR functions such as fast-forwarding and rewinding has become a fully embedded behaviour.

Because the boys dominate the main TV, their mother uses the back room TV to watch live content – we will see whether the introduction of a tablet for F49 affects this dynamic. The father feels often forced to use the Mac in the back room for private viewing to sometimes stream simulcast content and view VoD. We will continue to capture the young males' mobile phones to monitor how this device is used to complement viewing on other platforms, and whether they will be used to disrupt pre-existing dynamics of dominance. We will also see if the installation of a Samsung 3D Connected TV will encourage the children to dominate the TV more, as they have an appetite to use Facebook and view sports simultaneously. However, we will also see whether the parents might find time to use the main set more for their favourite viewing of Sky Sports, or perhaps films from LOVEFiLM.

Elton Peters (M32, F28)

Phase 1: Virgin+ and Laptop

Phase 2: Virgin+, Linksys Kiss Media Extender, 2 Laptops

Phase 3: Virgin+, Linksys Kiss Media Extender, 2 Laptops

Phase 4: Virgin+, Linksys Kiss Media Extender, 2 laptops, Xbox 360 with Sky Player & Zune

Phase 5:

- **Samsung 3D Connected TV with Virgin TiVo**
- **Laptop in Lounge – high speed with BBC iPlayer and 4oD on desktop**
- **Linksys Kiss Box in Bedroom**
- **Xbox 360 with Microsoft Live Gold Membership in lounge**
- **Mobile capture from F28 and M32**
- **Tablet capture from F28 and M32**

This couple have had their media connector for three years and have a near- full, but well-used and well-managed PVR. Each have a laptop positioned in front of the main set and viewing on the 9ft is usually accompanied by simultaneous 3ft viewing. Social viewing is prevalent but there is a strong dominance dynamic in the household, with F27 dictating the content whenever she is in the room, while M32 finds time only occasionally to access his My TV choices. The male is fully converged and spends a great deal of time gaming on his laptop while simultaneously viewing TV, so his engagement in the 9ft content tends to be comparatively neutral. In Phase 4 he enjoyed

using the Sky Player VoD service on the new Xbox, also using it for gaming when he was alone. The female is also fully converged and has a strong routine of TV viewing which contains a mix of urgent and non-urgent My TV choices. She is adept at using the PVR to plan her viewing, having most of her soaps on series link and will also use the VoD service as back up if need be, although this is extremely rare. We will observe how the 3D Connected TV, mobiles and tablets will affect their viewing routine, whether it will encourage exploration, and whether the dynamic of dominance will continue given a wider range of viewing options. This couple have purchased Virgin TiVo independently of our research, so we will be interested to see how this affects their viewing.

Foster-Jacobs (F33, M31, F2)

Phase 1: Sky + and PC

Phase 2: Sky + and Laptop

Phase 3: not selected for study

Phase 4: TV in Lounge with Sky+ HD Box 500GB, Laptop and PC in Lounge, with iPlayer, 4oD, SeeSaw. Xbox 360 in lounge with Microsoft Live Gold with Sky Player and Zune. Upgraded Sky Package.

Phase 5:

- **Samsung 3D Connected TV in lounge with Sky+ HD Box 500Gb**
- **Laptop in Lounge with BBC iPlayer and 4OD**
- **Xbox 360 with Microsoft Live Gold Membership in Lounge**
- **Mobile capture from F33 and M31**

The majority of this couple's TV viewing from is from the planner in the evenings. The larger hard-drive introduced in Phase 4 encouraged M31 to record much more content, including whole series and weeks of football matches, despite not being able to watch it all. F33 spent the majority of time at home with their new baby watching live TV, and time-shifting content to watch in the evenings with her partner. F33 routinely enters competitions she sees on programmes during the day, using the 3ft as complement to the 9ft, and it will be interesting to see how this alters as the baby gets older. M31 is also a big gamer and sports fan, and there were moments in Phase 4 when online games were bought for social purposes so they could both play. The Xbox has given this couple much choice and engagement in viewing, not only with online games, but also Zune and Sky Player on the Xbox were used to watch archive and catch-up content. The restrictions of looking after their baby has meant they feel they cannot fully concentrate on TV content during

the day, but in the evening are able to do so when the baby is asleep. It will be interesting to see if their exploratory behaviour when using the Xbox will be transferred to the Connected TV in this phase. We will also see how these busy parents use their smart-phones in conjunction with the smart TV.

Gardner-Jones (M46, F37, F2)

Phase 1: Virgin +, Playstation 2, PC

Phase 2: Virgin +, Playstation 2, PC and Laptop

Phase 3: not selected for study

Phase 4: HDTV, Sky+ 500GB, PC, Apple TV, Apple iPad

Phase 5:

- **Sky+ HDTV with 500GB hard-drive PVR in lounge**
- **Panasonic connected Blu-ray player with Skype camera in lounge**
- **Apple TV in Lounge**
- **PC with BBC iPlayer and 4oD in Family Room**
- **Tablet capture from M46**

In Phase 2, F37 described herself as “time-poor and cash-rich”. Between Phase 2 and 4 this couple switched to Sky and upgraded to HDTV due to a customer services issue with Virgin. In Phase 4 the Gardner-Jones were given an iPad and the latest version of Apple TV. The iPad was popular and F37 used it regularly for work and play and organising her life. Apple TV was less successful, affected by perceptions of the ease-of-use and its place in their viewing schedule. Their evenings are dominated by social compromise viewing, a great deal of which is planned in advance and viewed from the PVR. We would like to see whether F37 becomes more empowered to make choices and whether either uses more space on the PVR (which is used for compromise viewing) for their personal My TV choices. We will observe how M46 uses his tablet and how this compares to F37’s use of the iPad, and how the couple use the interactive features of the Blu-ray player alongside other devices.

Knights (M40, F38, M15, M13, F11, F7)

New family for Phase 5

Phase 5:

- **Sony 3D connected TV with Skype camera**
- **Xbox 360 with Kinect and Microsoft Live Gold Membership**
- **Second TV with Xbox 360 with Kinect and Microsoft Live Gold Membership in hall**
- **Mobile capture from M40, M13, F11**
- **Tablet capture from M40, M15 and F11**

This family is an addition to the I-3-9 Media lab, and has been added at the request of members to further understand the role of regulation in the use of technology. They already own a Sky+ HD TV, an Xbox 360 and a PC and are known to us as they are related to the Baileys household and frequently guests of the Baileys. In this way we have seen how the young boys' viewing is dynamic and how it has driven the Bailey children to explore content on their mobile devices. It will be very interesting to see how their online gaming and viewing works, whilst we also capture the Baileys. We anticipate they will play online, social network and use Skype to communicate with the Baileys.

Lakes (M50, F50, M11, M8)

New family for Phase 5

Phase 5:

- **Sky+ HDTV with Sony connected Blu-ray player and Skype camera**
- **Xbox Kinect with Microsoft Live Gold Membership**
- **Tablet capture from M50**

This family is an addition to the I-3-9 Media lab, and has been added at the request of members to further understand the role of regulation within families in the use of technology. This household participated in an earlier study in 2005 that looked at the impact of PVRs on audience behaviour. They already own a Sony Bravia TV which requires a dongle, Sky+, 2 laptops and a PC.

Phase 5: The Design

Phase 5 (a) Connected TVs: Buying and Installation

In-store and in-home capture of the behaviour and decision-making that surrounds the purchasing and installation of Connected TVs.

Design: Filming five families in-store and at home buying new Connected TVs or Blu-ray players. Participants will also be interviewed about their expectations surrounding the product before and after purchase.

Sample: Five households: Andrews (F46, M46, F11, F9, F9); Cunninghams (F49, M48, F20, M19, M17); Elton-Peters (F28, M32); Foster-Jacobs (F33, M31, plus infant); Lakes (M50, F50, M11, M8).

Phase 5 (b) Connected TVs: Pre Hot-Housing Behaviour

Video-ethnographic analysis of the usage of Connected TVs prior to hot-housing, to identify the propensity to explore connected TVs and the drivers and barriers to use.

Design: ACB's rigs will be installed in a sub-section of the sample to capture behaviour surrounding their new Connected TV or Blu-ray player. We will provide ethnographic analysis of this behaviour, and the families will then be interviewed in-depth about their attitudes to the device and any issues they experienced.

Sample: As above – five households: Andrews (F46, M46, F11, F9, F9); Cunninghams (F49, M48, F20, M19, M17); Elton-Peters (M32, F28); Foster-Jacobs (F33, M31, plus infant); Lakes (M50, F50, M11, M8).

Phase 5 (c) Connected Devices and Simultaneous Use

This will follow the same structure as our previous phases of research, with capture taking place after hot-housing to observe the drivers and barriers to the use of multiple connected screens in the home. This is the main part of the study and will observe all households in the sample.

Our interviews with the participants will address the following questions:

- How people feel about connected TV
- Their expectations around the TV
- Whether they had any concerns around this
- Listing the positive and negative aspects of connected TV
- How they thought they would use the TV
- Knowledge of connected TV
- What they thought they could explore
- Navigational issues
- Stumbling across inappropriate content

Deliverables

Verbal debrief

Presentation of ethnographic analysis and interviews with families from Phases 5 (a) and (b)

Presentations of top-line results from Phase 5 (c)

Report

Bespoke analysis from dedicated researcher to include a presentation and any additional work required

Illustrative Clips

Understanding the Behavioural Coding

Our behavioural coding is extremely detailed and offers the potential for clients to see changes in behaviour over time. Consortium members may access the data set from previous phases to gain insights in addition to the main findings. This is recommended to complement our clients' existing areas of interest. The following list is a summary of some of the current coding:

- Time of day
- Who is viewing
- Who is controlling the remote, or dictating to the remote holder
- Types of viewing
- Internet use and activity – online/offline. Type of online use includes: Video Browsing, General Browsing, Email, Broadband TV, Online and Gaming
- Video ads: product and brand
- Promo vs. commercial
- The impact of heads-in and heads-out concurrent behaviour
- Simultaneous screen viewing (“Media Stacking”)
- Engagement with online tasks
- Private vs. social viewing
- Engagement and interaction with advertising
- Use of technology to record, rewind or pause
- Programme and genre
- Advertising in games: product, brand and impact
- Product placement
- Barrier and drivers of VoD
- Predetermined vs. window-shopped viewing choices

For a final comprehensive list please speak to Sarah Pearson. The coding can be adapted to ensure maximum value for consortium members.

Clips Service

We will have an editor working full time on cutting and subtitling the clips for the top-line results. It would be useful for consortium members to deliver a short list of likely interests for any additional clips they may require. This will ensure that we supply our clients with relevant insights as soon as possible. Consortium members are entitled to 20 clips from Phase 5 as part of the flat fee. If a client requires further clips, it may be necessary to charge a small fee to cover the additional time spent by the editor.

Timeline

August – Phase 5 (a) Filming the buying and installation process

August/ September – Delivery of results from Phase 5 (a): presentation with illustrative clips

August/ September – Phase 5 (b) Cameras installed in homes pre hot-housing

September – Interview with participants before hot-housing

September/ October – Delivery of results from Phase 5 (b): presentation with clips

September/ October – Phase 5 (c) Hot-housing the new technology and filming behaviour

November – Final exit interviews with participants

March 2012 – Top-line results, presentation with clips to consortium at Members' Meeting in London

April 2012 – Follow-up bespoke analysis for consortium members

Costings

Phase 5 (a) – £5,000

Phase 5 (b) – £6,000

Phase 5 (c) – £30,000