



# ExperienceLab

## Navigating your TV: The Usability of Electronic Programme Guides

Owen Daly-Jones

First published January 2000

Email: [owen.daly-jones@serco.com](mailto:owen.daly-jones@serco.com)

RESTRICTED COMMERCIAL

# Summary

## Abstract

In this paper, we describe some of the key findings of our research into the usability of Electronic Programme Guides (EPG's). EPG's are intended to provide access to a wide range of content on digital television platforms. However, little is publicly known about the best way to design these new types of interactive service. To address this, usability tests were conducted with 15 users, who used four different kinds of EPG to plan an evenings viewing. The main usability pitfalls, which primarily relate to navigation, are discussed. Key issues for future research are also highlighted.

## Keywords

Interactive TV, Electronic Programme Guides, EPG's, Digital Television, Usability.

## Introduction

Interactive TV services have been launched across much of Europe as well as in the USA. In the UK, Sky and On Digital have launched interactive services and cable companies are planning further launches at the time of writing. Each platform promises to offer a variety of interactive content, including:

- Electronic programme guides
- Interactive programmes
- Digital text services
- Email and Internet access
- E-commerce and games

There are now millions of digital television subscribers across Europe, and Sky has been acquiring up to 60,000 new subscribers a week in the UK [1]. The widespread penetration of these services will result in an audience for Interactive TV applications that is more diverse than that for PC-based information. The TV is at the social centre of many households and is enjoyed by all generations in a family, often at the same time. Given this, a user or 'viewer-centred' focus during the design and evaluation of Interactive TV services is critical. The fact that many of the services are intended for use with just a TV remote control also means that usability should be a key design goal.

However, most trials conducted by the platform providers are commercially sensitive and thus little is known publicly about how to design a successful interactive service on Digital TV. There are no established guidelines and it is not known if design conventions emerging in the Internet domain will be appropriate.

To address this shortfall in knowledge, Serco ExperienceLab have carried out a programme of usability research into Interactive TV applications. This paper reports on the findings of one strand of this research – that relating to Electronic Programme Guides. EPG's are particularly important because they offer a mechanism for users to access programmes and interactive content from the wide choice available. Their usability is therefore an important contributor to the overall success of Interactive Television.

## Approach

The aim of the study was to explore user reactions to a range of alternative EPG's in order to identify the main usability issues and offer generic insights relevant to all Digital TV platforms. Fifteen users, most of whom participated in pairs, tried the following EPG's:

- Sky Guide
- BBC Digital Text
- Digital Teletext
- On Digital TV guide

These EPG's are available on terrestrial UK digital television platforms. The order of exposure to the different EPG's was varied between sessions. Users were aged 18 to 66 (the average was 28) and had a range of experience with the Internet and TV services.

A cooperative style of evaluation [2] was adopted, with a member of the research team present to probe for information and feedback from the users. The participants were encouraged to explore the EPG's and then use them to plan an evenings viewing.

## Results

Most problems related to difficulties users experienced when: navigating into, around and out of the services; and when looking for programmes and using the remote control. These issues are discussed below.

### General Navigation

Users coped with differences in design when moving between the four services, consistency within a service was more important than between services. In some services users chose options from a menu or from tabs, while in others they used numbers. Navigation by numbers worked particularly well. Probably because people's existing experience with TV remote controls revolves around pressing numbers. However, users frequently navigated to where they didn't want to go and ended up looking at a television channel that they hadn't expected to see.

### Clicking through to Programmes

Some of the EPG's allowed users to 'click through' to a programme. Several times a session users clicked through to a programme with no warning and no cue to help them get back. Failing to find their way back to the original service they often ended up in a 'rival' service. Click throughs appealed to the users, but when they selected an item in a listing they expected to be shown information on that programme, rather than be taken to that channel. Providing the user with information first, and then clicking through could be a better model. Clear instructions to help users get back into a service will also be essential.

### Getting in and out of the Services

Most users also experienced difficulties getting into the services, particularly those available via On Digital. This seems to be because people don't expect to have to switch to a particular channel for a specific text service. Users also found it hard to leave some services. They were observed trying to find an 'exit' via the top level screens and several complained that there was no simple 'quit' option.

In the case of Teletext they tried to press numbers to switch channels but these were registered as page requests.

## Searching Programme Listings

The EPG's present programme listings in different ways. For example the Sky Guide lists all channels at once, the BBC and Teletext services show details for individual channels. In the latter approach, users had difficulty comparing across channels. They wanted an easy way to flick between individual listings. The use of tabbed screens on Teletext made this somewhat easier to achieve than did the BBC's hierarchical structure.

The 'all channels' listing on Sky received criticism. Users found it overwhelming and disliked the poor alignment of columns, the abbreviated titles, and the confusing ordering of channels. However, users appreciated the categorisation schemes available on Sky. These offer listings for different types of programmes (movies, news, entertainment etc). But users also wanted the ability to store favourites.

The On Digital listing, while more basic than the others, did allow users to see what was coming up on another channel while they watched a current programme.

## Getting Programme Information

Users wanted details on individual programmes and their information requirements depended on the programme type. For example, users complained that there was not enough information on movies. They wanted to know who directed and starred in a film as well as a description of the plot. They also wanted to know who was appearing on a chat show. One-off programmes or those with changing content needed more explanation. Some users also wanted added-value content such as reviews.

In some cases users were unable to find programme details, due to inconsistent selection metaphors in the EPG's. The mechanism for getting further details should be intuitive and clearly sign-posted on the TV screen. So that users who need to know can get at the additional layers of information. Also note that some users did not like seeing the term 'loading' when accessing information and suggested alternative phrases like 'please wait'.

## Using a Remote Control

Users made frequent selection mistakes with the remote control. They pressed buttons by accident and were shown things they did not want. This may be due to the lack of direct manipulation, as users can no longer move a mouse pointer to where they want to go.

Users are also fixated on the screen, they tended to only look at the remote control when there were no on-screen prompts and they were having difficulties. Despite this, some functions are not visible on screen, they are accessed from the remote control. For example, users had problems moving backup through the information on Sky as they were unaware of the Backup button on the remote control.

Users expected a direct correspondence between on-screen elements and the design of remote control buttons, i.e. they looked for buttons that had the same symbols, colours, and terms as those seen onscreen. They also associated coloured elements on-screen with remote control buttons of the same colour. Users also called for more explicit feedback after pressing remote control buttons.

## Conclusion

For EPG's to be a central navigation device they need to be easy to enter, leave and return to. This research has shown that users have fundamental difficulties navigating in this way with the first generation of UK services. The presentation of programme information also handicapped users ability to find suitable programmes. Further research into people's natural planning strategies is needed. How do people currently plan their viewing? How far in advance do they plan? How much information do they need? How do they compare options? What would people really like to do most of the time? In short, to create EPG's that add real value and are easy to navigate requires greater user involvement in their design and evaluation.

## Acknowledgements

We would like to thank the BBC Interactive department for their support and cooperation during this research.

## References

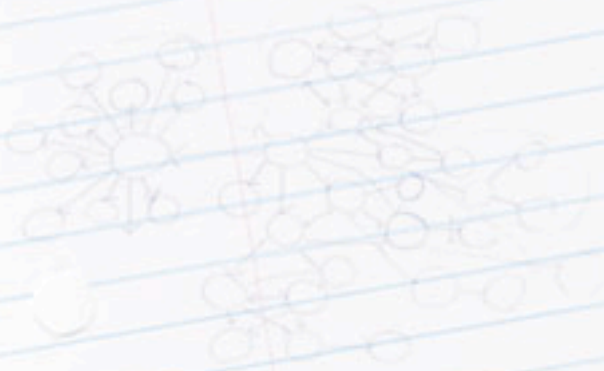
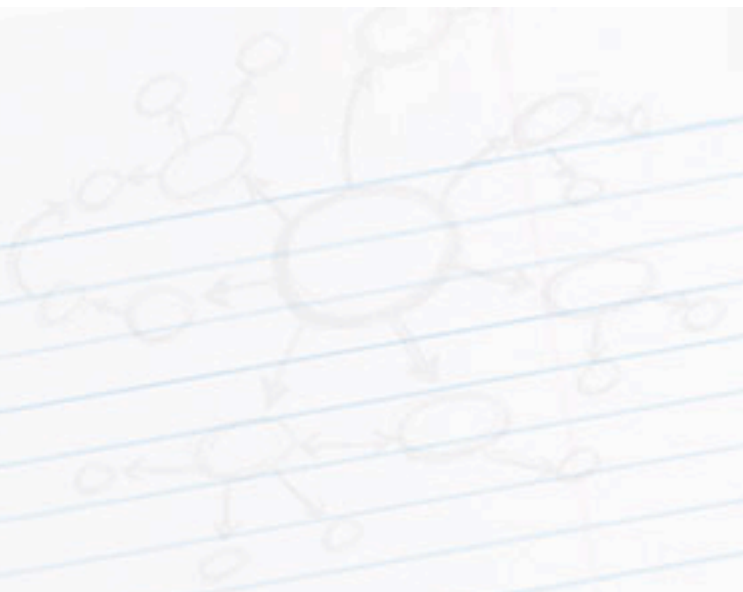
1. Curtis, J. Interactive TV: Does the reality match the hype? *Revolution* 30, (24 November 1999), 30-33.
2. Monk, A., Wright, P., Haber, J., and Davenport, L. (1993). *Improving your human-computer interface: A practical technique*. New York: Prentice Hall.

### *About ExperienceLab*

ExperienceLab (formerly Serco Usability Services), are a global experience design research agency. They help organisations optimise their customer experiences, from web to TV and mobile, from advertising to physical environments. They've been doing this for a while, pretty much since the first computers and networks were created, so they know a thing or two about how to make people, processes and technologies work in harmony.

ExperienceLab use a wide range of techniques to tailor a research solution that fits your business objective, including ideation sessions, proposition analysis, customer needs mapping, usability testing, benchmarking and touch point integration studies. As a co-founder of the UXalliance we also provide research on a global scale.

Why not visit the ExperienceLab blog ([www.experiencelab.info](http://www.experiencelab.info)), which features the latest thinking on experience design issues.



**Serco ExperienceLab**

22 Hand Court  
London  
WC1V 6JF

+44 (0)20 7421 6499

[info@experience-lab.co.uk](mailto:info@experience-lab.co.uk)

[www.serco.com/experiencelab](http://www.serco.com/experiencelab)

ExperienceLab is part of the International Serco Group of companies.

