



Office of the *e-Envoy*

Leading the drive to get the UK online

delivering



digital television

A policy framework for delivering e-government services to the home

draft for public consultation
October 2002



Consultation Overview

Title of consultation

The Office of the e-Envoy draft digital television policy framework for delivering e-government services to the home.

Consultation period

Consultation will be for a period of three months. The start date of the consultation period will be decided once Ministerial clearance is achieved.

Consultation objectives

The Office of the e-Envoy is seeking views on this draft consultation document.

The purpose of the consultation is to allow for the wider stakeholder environment within the public sector and industry to comment on the vision for digital television (DTV) within the e-government space.

The primary consultation question is:

“Does this policy framework, as developed in consultation with a joint government and industry working group, address the issues to enable digital television to play an important role in supporting the Government’s objective of the delivery of e-government services by 2005.

Specifically, feedback is desired on the seven draft policy statements and action plan outlined in the document in terms of their appropriateness for supporting the achievement of the above objective and in turn any perceived gaps in the policy framework.

Who’s consulting?

The Office of the e-Envoy (OeE).

Who do they want to consult?

The wider stakeholder environment within the public sector and industry.

Preface

Almost everybody has a television at home. Many have several. The television screen in the home can become a window to a digital world of new experience, linking citizens to each other and to information and services.

Digital television is set to become a medium for all kinds of communication. Reaching out to people in their homes, it presents many opportunities for Government to improve its services and the way in which they are delivered. It can provide greater choice in the ways to deliver information, interact and transact, allowing Government to tailor services more closely to citizens' needs and lifestyles.

This is not hollow ambition, but is already happening for real. For example, UK online interactive was launched in April 2002 and is currently on the BSkyB satellite platform; work is also in progress to extend the service across all available platforms. Central Government departments such as Department of Health, Department for Education and Skills and Department of Work and Pensions are already engaged in a number of innovative digital television (DTV) pilots to trial and better understand how the medium can be used for best effect in the delivery of e-government services. While in Local Government, a number of local authorities such as Suffolk, Somerset, Kirklees, Knowsley and Newcastle are currently undertaking cutting edge DTV pilots.

Digital television has the potential to allow many of those who have not so far been engaged by the digital revolution to get online and to take up emerging opportunities in new and exciting ways. Interactivity and internet access on digital television present us with a tremendous opportunity to bridge the digital divide, to uphold social inclusion and give all of us an opportunity to join the emerging information society from the comfort of our homes.

But this will not happen unless we are clear about our objectives and work together to overcome the technology, business and cultural challenges that lie ahead. Government has a role to play in providing leadership in delivering e-Government through DTV, but must work closely with industry to ensure innovation and competition can flourish. It is crucial that all citizens can reap the full benefits of the information society unhampered by choice of platform or where they live.

Achieving all this will require working in close partnership between government, industry, media and other leading bodies if this exciting and strategic medium is to deliver its full promise for providing government services.

Contents

Consultation Overview	2	4. The Policy Framework	18
Title of consultation	2	Policies to Deliver e-Government Services	18
Consultation objectives	2	Co-ordination	19
Who's consulting?	2	5. Next Steps	21
Who do they want to consult?	2	Action Plan	21
Consultation period	2	Annex A – UK online interactive Architecture	23
Preface	3	Annex B - Consultation Process	24
Executive Summary	5	Annex C – Consultation Criteria	25
Policy Framework Objectives	5	Feedback	26
Target Audience	5		
Digital Television	5		
e-Government and DTV	5		
Policies	5		
Making it Happen	6		
1. Television in the Digital Age	7		
Digital TV	7		
The Current Situation	11		
What it Means	11		
2. e-Government and DTV: Our Vision	13		
3. Current Government DTV Initiatives	14		
UK online interactive	14		
ODPM National Project	15		
Other Public Sector Initiatives	16		

Executive Summary

Policy Framework Objectives

In *'Opportunity for all in a world of change'*¹ which the Government published in February 2001 the aim was set for "the UK to have the most dynamic and competitive market for Digital Television (DTV) in the G7, as measured by take-up, choice and cost."

In addition, DTV has a part to play in the objective of delivering e-government services by 2005. The policy framework addresses this objective. It also forms one task within the Digital Television Action Plan². Other actions to address the availability and take-up of digital television services are being taken forward through other tasks in the Digital Television Action Plan.

Target Audience

The target audience for this policy framework is primarily strategic planners, marketing and communications professionals in public sector organisations who are responsible for service delivery. In addition, the document aims to inform a wider audience of industry stakeholders and citizens of the Government's vision on the role of DTV in delivering government services.

Digital Television

Over 97% of households possess at least one television set, making it one of the most pervasive, familiar and accepted devices in the home. DTV is already changing the way nine million of these households think about TV, by offering greater choice and a more engaging experience.

Currently DTV in the UK is delivered in one of four ways – cable, satellite, terrestrial and DSL

(digital subscriber line). Each platform has given rise to different innovations, allows customer choice and is helping to increase the penetration of DTV across the UK. The vision set out in this document applies equally to all four platforms.

There are broadly three types of payment mechanisms for viewers to access DTV services – free-to-view, subscription and pay-per-view. Free-to-view services can be viewed by anybody with the appropriate equipment; with subscription services, viewers pay a fixed fee to be able to access a wider range of channels; and with pay-per-view, viewers pay a one-off fee to view a particular broadcast.

There are three different types of interactive services content that can be delivered through DTV – stand alone information services, transactional services and enhanced programming services.

e-Government and DTV

DTV potentially provides a means for Government to reach the whole population, giving people a new way of accessing government services, taking advantage of all the features of DTV to blend rich information content with interactivity. It can also help overcome social exclusion, bringing e-government services to people who may currently be reluctant or unable to use them over the internet.

Policies

We have worked across central and local government, and closely with industry, to develop the following set of policies to grasp the opportunity presented by DTV for the delivery of e-government services. These fall into two areas: action required across government to deliver e-government services on DTV; and co-ordinating actions across

¹ <http://www.dti.gov.uk/opportunityforall/>

² <http://www.digitaltelevision.gov.uk>

Government and with industry. These policies are presented below.

- 1. Government at all levels, from central to local, should evaluate DTV as a key channel for e-government using the strengths of this medium to deliver richer services and inclusivity.**
- 2. Government should work with broadcasters, programme makers and Internet Service Providers to integrate links to e-government services with relevant programme content.**
- 3. Government will continue to develop and deliver a citizens' portal on DTV (UK online interactive), providing a one-stop shop for government and other public sector services.**
- 4. UK online interactive will provide a common access point and a one-stop shop for the delivery of government and other public sector services on DTV. Public sector bodies will consider UK online interactive as a portal solution in any DTV business case and/or funding bid.**
- 5. The e-Envoy will review Pathfinder and other pilot initiatives for DTV and share best practice for delivering e-government across the public sector. The e-Envoy will also publish on its website DTV information and statistics relating to the delivery of e-government services.**
- 6. Through UK online interactive the Office of the e-Envoy will lead on defining standards on navigation, style and branding for e-government services on DTV.**
- 7. The Office of the e-Envoy will produce best practice guidelines on content, usability and accessibility issues for government presence on DTV.**
- 8. Government will promote awareness of the benefits that delivery of e-government services over DTV can bring.**

from all concerned. Government will need to work within itself and with industry in an environment of innovation and flexibility. This document outlines some of the next steps, but we must continue to be responsive to changes in technology, markets and the demands of citizens and their representatives. In acknowledgement of the fast-changing environment for DTV we will update this policy document as required – and as such it should be treated as a living document, including the progress on actions detailed in Section 5. The latest version of this document will be found on www.govtalk.gov.uk.

Making it Happen

This document outlines the vision and initiates the necessary policy actions. We recognise, however, that if we are to deliver the full potential of DTV it will require commitment

1. Television in the Digital Age

Digital TV

DTV is concerned with the way that broadcast content is encoded for transmission. In some respects the transition from traditional analogue broadcasting to digital broadcasting parallels the move from vinyl LP records to CDs, with many of the same objectives and benefits.

One of the main advantages of DTV is transmission efficiency – typically supporting up to six digital TV channels in the same ‘bandwidth’ (broadcast spectrum or frequency) required for a single analogue channel. This allows the delivery of many more channels and programme services.



DTV arrives in the home via a cable connection, satellite dish, aerial or telephone connection. The signal is digital, like the data on a computer disk, and is passed through a decoder. This can be a set-top box that selects channels and sends the signals to the TV screen - which can be an ordinary, analogue television set, such as most people have today. Alternatively the decoder can be built into integrated digital televisions that already have the electronics inside to decode digital signals, thereby not requiring a set top box for most interactive services.

Text-based services have already helped to change our attitude towards the TV being a source of specific information. However, the relatively low bandwidth available on analogue services has resulted in a limited service. Digital services provide the opportunity to revolutionise home access to government services, useful information and other electronic services. This is primarily achieved through improved navigation, content presentation and access speeds (with caching and/or greater bandwidth).

The area of greatest potential strategic benefit for DTV lies in the opportunity it affords for the convergence of the TV and Information Technology worlds by extending beyond pure broadcasting into interactive communication. This can range from simple selection facilities, such as an electronic programme guide or advanced text services to programme related information (such as multilingual captioning or sports statistics) and more advanced interactive services such as shopping or banking. Interactive DTV therefore offers a new way of enabling connectivity in the home – with the potential for much broader penetration than the personal computer.

The following sections describe in more detail how DTV works, provide an outline of the current situation, and summarise the implications of current developments.

How it Works

There are three elements to DTV services: the physical path that the signals take to get to the screen, the service that assembles programme content and makes it available to users, and to enable interactivity (which may include a ‘return path’ to send signals back from the user to the broadcaster).

DTV signals are transmitted in one of four ways, by:

- Cable
- Satellite

· Terrestrial

· Telephone connection (DSL)

Cable

This platform has the capacity to offer up to 200 digital TV channels to the home. In addition, a dedicated 'always on' broadband digital cable modem is available for fast internet access, as well as a standard telephone connection. There are two principal cable suppliers in the UK, ntl and Telewest. Under franchise arrangements overseen by the ITC each company supplies services in different geographical areas of the country. However, these franchises are non-exclusive and there can be more than one supplier in any given area.

Satellite

This platform currently provides one-way digital transmission covering the whole country, with capacity for hundreds of channels. BSkyB is the principal supplier of access services in the UK, but homes with satellite dishes can receive programming from other organisations that have arranged to use transponders on the same satellites.

Terrestrial

This provides one-way digital transmission through a multiplex and a 'conventional' TV aerial. The ITC defines a multiplex as a single digital transmission comprising several programme services and sometimes additional data services. In the Broadcasting Act 1996, the term is applied exclusively to digital terrestrial television.

The BBC has one multiplex under its charter and there are a further five licensed 'multiplexes': one for Digital 3 and 4 which carries ITV and Channel 4, one for BBC, two for Crown Castle, and one for SDN which carries Channel 5 and S4C in Wales. Each terrestrial multiplex is typically able to provide up to six channels of similar quality (however, if services are interactive this would likely be fewer). However, the ITC is currently consulting on whether the mode of the multiplex is changed to allow greater signal robustness at the expense of capacity.

Telephone connection (DSL)

With additional equipment in the home and at the exchange, the bandwidth of a conventional telephone line can be increased to carry TV signals. Using this technology, the signal for only one TV programme is actually transmitted to the home. Although this is the personal

choice of the viewer made from a wider menu offered by the service provider, the perception of the viewer is of a wide channel selection. HomeChoice and Kingston Interactive Television are examples of video on demand services offered, utilising the above technology.

Broadcasting Models

There are broadly three types of payment mechanisms for viewers to access DTV services – free-to-view, subscription and pay-per-view. Free to view services can be viewed by anybody with the appropriate equipment – and typically consist of a range of channels (including the current analogue channels). With subscription services, viewers pay a fixed fee to be able to access a wider range of channels. An additional service is pay-per-view, where viewers pay a one-off fee to view a particular broadcast such as a film or sporting event.

There are three different types of interactive services content that can be delivered through DTV – stand alone information services, transactional services and enhanced programming services. Consider a travel example, here the viewer could access travel information through a travel provider on an interactive menu (stand alone information service), then book a holiday through the interactive menu (transactional service) or get more information on a holiday destination featured on a travel program during the program broadcast (enhanced programming service).

Broadly, there are two ways in which digital content can be delivered to digital television. Conventionally, scheduled programmes are transmitted as TV channels and sent to everyone. In some cases, the same programme may be transmitted through different channels with staggered timing (e.g. at 15 minute intervals) – allowing viewers a choice of start time, and therefore providing more control over the viewing experience. Alternatively services such as HomeChoice enable the viewer to choose the video content transmitted to them. This service gives true 'video on demand', and requires a dedicated broadband digital connection to the TV. The introduction of Personal Video Recorders also enables a new way of reviewing and viewing television content, and is likely to enable consumers to add much of the functionality of

'on-demand' services to scheduled programming.

Interactivity

Interactivity is the critical function that changes the whole concept of the TV by engaging with the individual on a personal basis and allowing for a rich array of services to be delivered to the home. Services can range from simple text information to full access to the internet.

Enhanced TV in particular offers new potential for interactivity through the television. With enhanced TV different pictures and text are transmitted simultaneously through a single channel. Viewers can select different combinations of these to be displayed on their screen using the remote control. The attraction of enhanced TV is that the viewer no longer has to leave the programme when interacting with the broadcast stream. The ability of enhanced TV to tie together content, context and convenience provides significant potential for the provision of interactive services.

An interesting use of enhanced services was BBC's coverage of tennis from Wimbledon in June 2002. Viewers could switch between matches being played simultaneously on different courts and on demand call up results, statistics, players' profiles and news reports. The exact depth of functionality depended on the platform used to deliver the content. Other examples include the 'active' digital news channels. Here text can be displayed next to a choice of smaller video windows.

Interaction with the TV display can be taken a stage further by passing a signal from the viewer back to the broadcaster using a telephone line or cable connection. This is commonly called the 'return path' and changes the TV from a one way communication device to a two way communication device that opens up the possibility of additional interactive services, including transactions.

For example, consider an enhanced TV broadcast of a football match where a return path is in place. Here, as in the Wimbledon example, the viewer can choose different camera angles and pull up statistics onto the screen (which does not require a return path). However, the presence of a return path means the football fan can also now shrink the picture and whilst still watching the game use



transaction services such as placing a bet and ordering home delivery.

Content Models

As well as offering the potential for a vast number of channels, DTV provides a spectrum of added information content and interactivity.

At its most simple, this could involve text services – built on the same principle as current offerings on analogue television. The next step is to provide information specifically tailored to the broadcast being viewed – such as sports statistics or more in-depth news items. Another facility is the Electronic Programme Guide (EPG), which is a text-based service providing programme and schedule information to the viewer.

At the next level, viewers access a range of sites provided by the platform provider, which are specifically designed for DTV. These can include information services, home banking, gambling, games and shopping. By controlling the range of sites the provider can assure functionality, quality of service and suitability. This type of service is called a 'walled garden'. Walled gardens also provide an opportunity for platform owners to generate revenue by charging for 'plots' in the walled garden. This approach has its advantages to users (such as allowing viewers confidence that the content they are viewing is likely to be of a suitable nature for the whole family) and platform owners (providing a potential revenue stream). However, there are also benefits to be gained from connectivity to the vast information resources of the internet. All platform providers are already supplying the viewer with the option to access the internet (walled garden and/or full internet access), either as a stand-alone option and/or bundled

with their DTV offering, and are working on the challenges that this presents.

Internet access through the TV, for example through a DTV package, which allows for a bundled offering of digital television and internet access, has the potential to increase internet usage and take-up. This is premised on offering viewers the current primary attraction of DTV, namely the offer of multi-channel digital program content, bundled with the added benefit of being able to access the internet. The potential for increasing internet penetration through a bundled DTV internet offering is most prevalent amongst that proportion of the population without internet access via a personal computer.

Opportunities for increasing internet usage amongst existing internet users lie in the television's position of prominence in the home living room. For existing internet users, internet access through the TV would most likely compliment rather than replace other internet access channels. However, it also has to be recognised that some people may not want to use their TV for non-broadcast viewing purposes.

Viewers currently use TV internet access for simple applications such as email, home shopping, gambling and games. Over time, it is anticipated this would move onto a range of other electronic applications and services, but this will require technology challenges to be overcome and users to become more comfortable with the medium.

As today's television and PCs are very different devices that have been designed for very different purposes. Web pages have primarily been designed to be viewed on a PC monitor where the user can interact with the content using a mouse and keyboard. TV sets and computer monitors display their pictures differently. A computer screen is typically viewed from about half a metre distance and is designed primarily to show text and still images. A TV screen, although larger, has a much lower resolution and is seen from much further away at a smaller viewing angle, so text needs to be much larger on TV. The screen uses an interlaced display, designed to show moving images, but this can cause fine detail and horizontal lines in static screens to flicker.

The usual means of interacting with a TV is using a remote control. Most remote controls have limited functionality although some now include a small keyboard, similar to that available with a PC. Viewing web content on a TV is probably not going to be a compelling experience unless the content is designed specifically with the restrictions of TV taken into consideration. There are also the challenge of providing an easy and quickly navigable structure for accessing services for viewers interacting with the television for interactive services or the internet.

As with PCs, there are also some concerns around full internet access leading to exposure to potentially unsuitable content. Platform owners are rightly working on how to provide the appropriate level of control without adding undue complexity or constraining legitimate use.

Standards

The key technical challenge of delivering content across DTV platforms is that they each use a different format: cable uses a system called Liberate; satellite uses Open TV and terrestrial employs the open MHEG-5 standard.

While there are common standards for the basic transport and presentation of TV picture and sound, different proprietary systems have become established for the application programming interface (API). The API controls text, data delivery and the return path – the interactive elements of DTV. But there are moves towards standardisation. The Digital Video Broadcasting Project (DVB), founded in September 1993, is a consortium of currently around 300 companies that came together to establish common international standards for the move from analogue to digital broadcasting. They have recently completed a suite of specifications called Multimedia Home Platform (MHP). The DVB specifications for satellite, cable and terrestrial transmission are designed to enable content to be moved from one platform to another. These transmission specifications have been standardised by the European Telecommunications Standards Institute. The first receivers with MHP functionality are expected to reach the European market during 2002.

Furthermore, it is important to recognise that content may not only need to be reformatted for different platforms (for example, based on

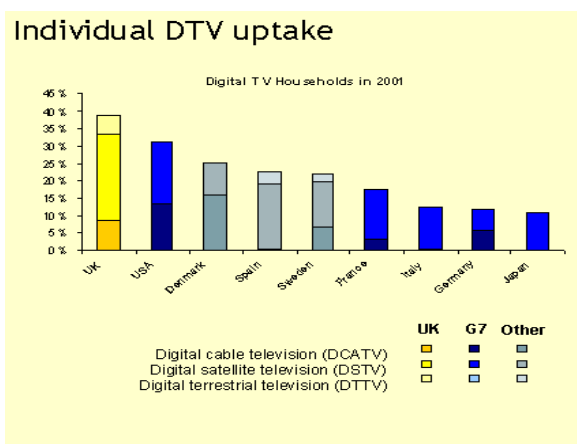
platforms having different API's), but possibly repurposed for different devices such as DTV to accommodate device constraints and the needs of customers who use the device.

The issue of industry standards for DTV is being addressed through the Digital Television Action Plan.

The Current Situation

DTV Uptake

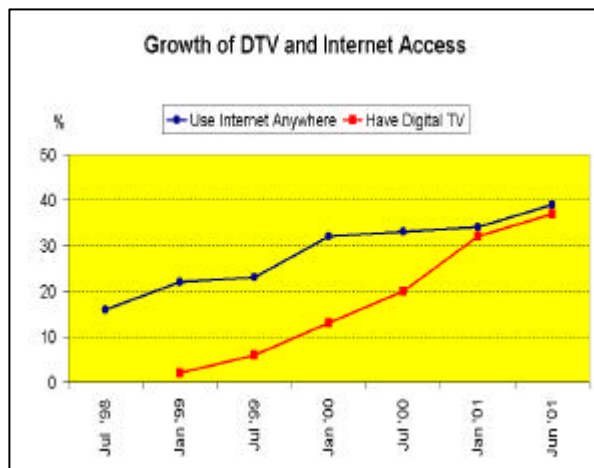
As shown in the chart below, the UK is a world leader in terms of uptake of DTV services.



By the end of 2001, 38% of households had DTV. As shown in the chart, the majority received DTV via satellite that is in over 5.5 million homes.

Prior to ITV Digital ceasing to broadcast, terrestrial growth had made steady progress reaching 1.2 million subscribers, while cable has a combined take-up of over 1 and a half million homes.

Source: e-Mori Tech Tracker Jun 2001



The graph above highlights that DTV take-up has enjoyed strong growth since the commencement of DTV services, with DTV

penetration anticipated to shortly overtake internet access penetration. Analysts project that between 60% to 75% of UK households will take digital TV by 2005.

Interactive Services

So far most customers have switched to DTV because of the wider choice of TV channels. Despite an initially slow take up of interactive services, due largely to unfamiliarity and the limited range of services available, more recent evidence suggests that usage is increasing. Some operators claim that the majority now uses interactive services.

What it Means

As described above, take-up of DTV will bring a whole new range of information and services to citizens, raising implications for viewers, suppliers and Government as discussed below.

The Viewer

With interactive digital television the TV becomes a means of gaining access to new kinds of information and entertainment. The Department of Health pilots have already shown that the provision of e-health services via DTV reaches parts of the population that are 'information poor' and client groups such as young men that are hard to reach by other means.

DTV will fundamentally change the TV experience for viewers. This will be achieved through more choice from a significant increase in the number of channels and much greater functionality enabling viewers to become participants in the content. Digital transmission enables TV to move from a broadcast experience, directed to large audiences, towards personalisation where the content is selected by the viewer.

Interactive viewers will still use the TV mainly for passive, 'lean-back' viewing, but they will also become accustomed to using the 'lean forward', interactive features. The offer of enhanced TV, which allows for interactivity without having to leave television programmes will help promote interactive usage. This all contributes to a subtle culture shift involving increased participation in the TV experience.

Interactive DTV puts the viewer much more in control and with a return path from the TV and the ability to connect to the internet, the

television becomes a powerful channel of communication that is available to all sectors of society. The use of interactivity through DTV could also be a powerful application for building digital 'communities of interest'. E-mail, online transactions and access to information are just some of the other benefits of digital connectivity.

Suppliers

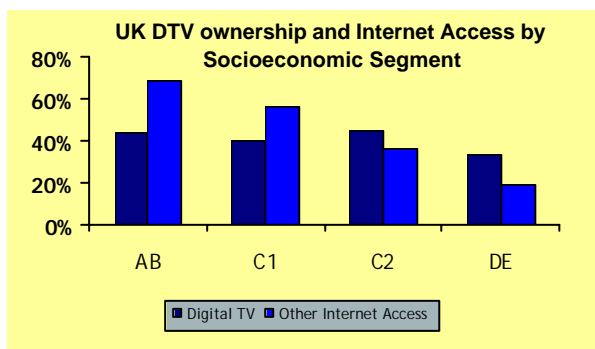
The facilities provided by DTV give an opportunity for the integration of traditional broadcasting content with interactive information services. This will bring opportunities for partnering between the suppliers of these services. There will be new opportunities across the spectrum from design through to management. For example, an educational programme could provide links to access additional resources or to purchase the relevant textbook. The convergence of TV and IT also provides equipment manufacturers with an opportunity to produce new types of integrated devices.

Government

DTV provides a new way of providing government services to a wide range of citizens – particularly those who up to now have been unable or reluctant to use services over the internet. Through providing interactive access to a wide range of information to the majority of the population, DTV provides a way for much greater participation in the information society – with the attendant economic benefits. This is evidenced by the graph below which highlights that DTV has higher access than the internet for lower income groups.

powerful marketing and communication messages to customers is covered in *Channels Framework: delivering government services in the new economy*³.

The Government's vision for the role of DTV in delivering government services, current government initiatives and the policies to help achieve this vision, are covered in the next sections.



Source: e-Mori Tech Tracker, Dec 2001

DTV's ability to offer a rich blend of content also provides public sector organisations with exciting opportunities in terms of the marketing of their services and communication of messages to customers. The use of electronic channels such as DTV to provide more

³ <http://www.govtalk.gov.uk>

2. e-Government and DTV: Our Vision

DTV potentially provides a means for Government to reach the whole population, giving people a new way of accessing government services, taking advantage of all the features of DTV to blend rich information content with interactivity. For example, Government could use DTV to alert people to crises, such as broadcasting flood warnings and supplying access to supporting information and services. Another example could be the provision of interactive public information broadcasts, on subjects such as crime prevention. In this example, links could be provided to more detailed information, such as advice on how to secure the home or local crime statistics, and there could be the opportunity to participate in community discussions. All this will be in a package that is familiar to users, and delivered to them in the comfort of their homes.



The take-up of DTV is also an important driver for increasing broadband penetration, particularly for DTV delivered through cable and ADSL (asynchronous digital subscriber line) platforms (although currently only localised video on demand services are available through ADSL). Driving up broadband penetration in the home offers the potential for public sector organisations to deliver a richer array of information and services to citizens through other home access devices such as PC's as well as providing a potentially more powerful two way communication channel through DTV access.

DTV provides the Government with a new means to communicate and deliver services to its citizens, in a way that is responsive to social needs and offers the potential for efficiency and cost-effectiveness. It could overcome many of the issues of social exclusion currently experienced by the delivery of e-government services over the internet, which people may currently be unaware of or unwilling, reluctant or unable to use.

Government would like to see any of its services offered on DTV, orientated towards the needs of users, rather than services designed around existing organisational structures. This will complement the www.ukonline.gov.uk citizens' portal currently delivered over the internet.

As an initial step, a UK online interactive DTV service was launched in early 2002. This is described in more detail in chapter 3.

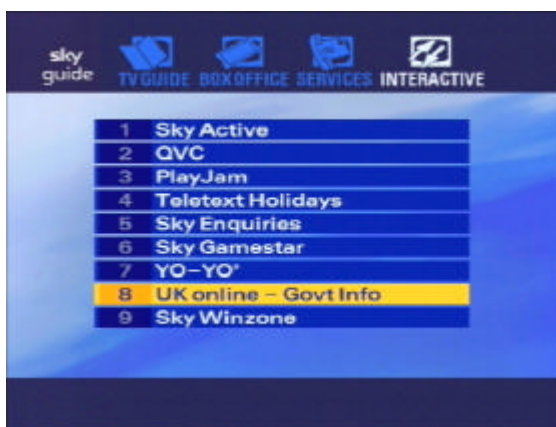
3. Current Government DTV Initiatives

UK online interactive

The UK online interactive service – the planned common entry point for central and local governments’ DTV services - was launched in April 2002. Currently provided over the BSkyB Satellite platform, work is in progress to extend across all available DTV platforms.

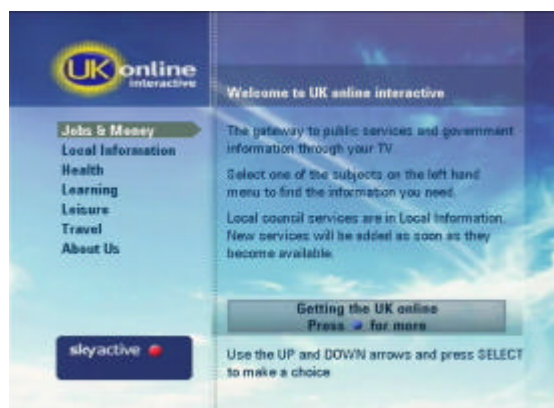
The service provides information based on key topics and themes. Content is regularly updated. There is also a searchable database where viewers can find their nearest internet access point, and an e-mail feedback facility for comments and suggestions. In the future, it will act as the access point to the DTV services of all central and local government organisations. Through these services, users will eventually be given more personalised and localised content, and will ultimately be able to undertake transactions.

The following screen shots show how the initial UK online interactive service appears on the BSkyB platform. A notable feature is the listing within the main interactive menu on the electronic programme guide. This facilitates ease of entry into the service – where UK online interactive is only ‘two clicks’ from any channel or interactive service.

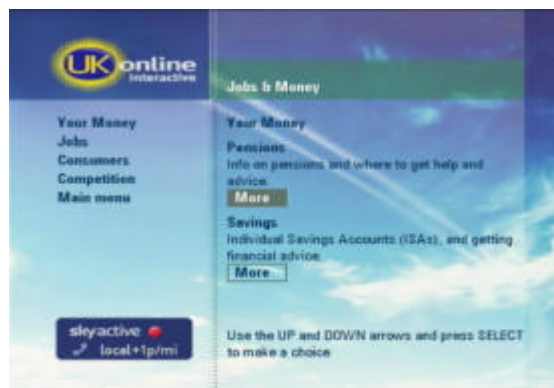


In selecting 8 from the main Sky interactive menu the viewer is brought to the UK online

welcome page which highlights the different menu options available to the user.



In then selecting the relevant menu option of interest to the user this then brings the viewer to the relevant sub-menu page which highlights that in proceeding the user will incur call charges.



Although the service will appear slightly differently on the other platforms, the architecture has been designed so that all platforms share a common content database.

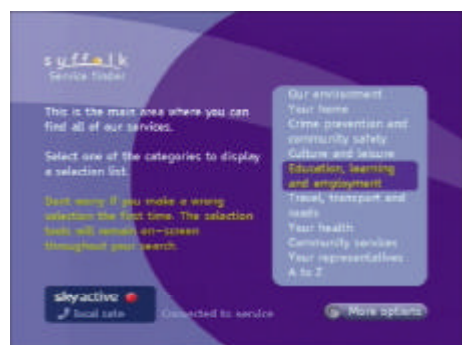
A high level overview of the UK online interactive architecture is at Annex A.

A number of other government departments and local authorities are, or are considering piloting the delivery of their services over DTV on the UK online interactive service. Of particular note are projects in Suffolk and Somerset, which are being funded by the

Office of the Deputy Prime Minister (ODPM) as Pathfinder Projects. Both projects seek to provide information about a wide range of local services, and also a means to allow people to contact the council – for example to report faulty street lights, non-collection of rubbish or abandoned cars.

Viewers are able to access the Suffolk County council service through UK online interactive and then from a Local Selection on the UKonline interactive home page. The first phase will include the following features:

- Tell the council about – complaints or suggestions about a variety of subjects e.g. street cleaning needs, collection of rubbish, faulty street lights, abandoned cars etc
- Council services – information about council services including descriptions of service and facilities, images, contact details, opening hours, addresses etc
- Multiple access methods to services e.g. a-key word search by use of district selection or post code input
- Navigation and data entry aimed at remote control services, although a free text area is also provided



Department already has launched a information only service on cable (ntl and Telewest) in May 2002. Interactive elements, namely a leaflet request service and on line survey, were added in August 2002.

These projects are at the design stage, although they will share the UK online interactive infrastructure described above.

This will ensure they benefit from the prominent position in the platform owner's menu system, avoid the duplication of unnecessary effort, and promote a continuity of navigation and design to enhance the user experience.

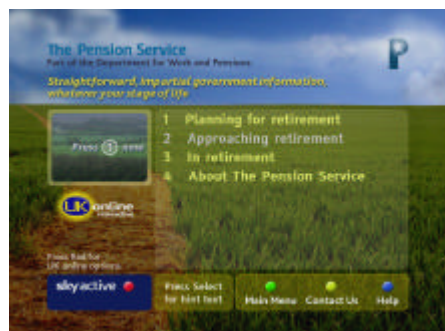
Over the first 20 weeks since the launch of the trial, nearly 100,000 households have used the UK online interactive service. Users of UK online interactive service have been asked what sort of service they want in order to further develop the service. In the first 20 weeks since the launch of the trial, over 17,000 people responded to the questionnaire.

The main findings of the questionnaire were:

- 67% would be very or quite likely to apply for a passport on interactive TV
- 9% would be very or quite likely to book a driving test on interactive TV
- 51% mostly use the service for information
- 88% felt that the information provided was very or quite clear
- 90% said that they were very or quite likely to return to this service

The Department for Work and Pensions (DWP) is also planning to provide pensions

The DWP DTV pilot service is aimed at customers who are planning, approaching and who have already retired. Largely information based, the service will provide helpful information to people making decisions about their financial future.



ODPM National Project

Local authorities play an important role in the delivery of public services. Getting local authorities onto DTV is therefore vital if Government is to deliver public services (and in particular local public service) to citizens through the medium. Helping local authorities to get on to DTV has been identified as one of the 10 key National Projects set out in the Local Government Online strategy. This includes the development of a 'starter kit' for local authorities, for which a central route to market will be the UK online interactive service. The national DTV project is led by three local authorities: Suffolk, Somerset and Kirklees, the former two who are already on the UK online interactive service.

information over DTV through the Sky Active and UK online interactive service (launch anticipated to be in Q4 2002). The

Other Public Sector Initiatives

There are also a number of other government initiatives.

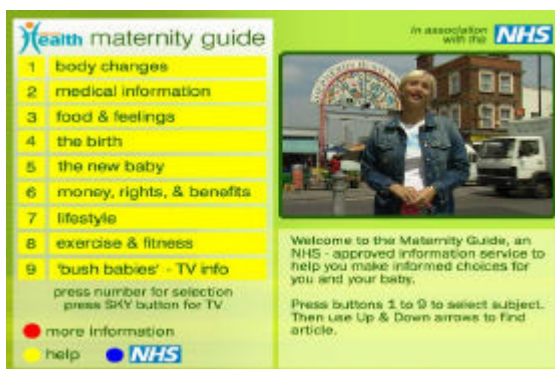
The Department of Health has conducted a number of DTV pilots. These include the Living Health, Channel Health and Communicopia projects.

The Living Health project involved piloting a range of digital TV health applications to an audience of 50,000 in the Birmingham area via the Telewest cable network. During this pilot, users were able to view 21,000 pages of NHS accredited health information and advice, use interactive health tools, book an appointment with their GP, access a local services directory for surgeries and pharmacies etc. The project also included NHS Direct inVision, a service that allows callers to view a NHS Direct Nurse on-screen. The nurse was able to show videos and images to help identify medical conditions and advise on the best course of action.

Over 45% of Telewest customers in Birmingham used the Living Health service at least once during the pilot and up to 50 customers a week also requested a live consultation with an NHS Direct nurse via their TV with the NHS Direct inVision service.



Channel Health involved piloting a series of broadcast TV programmes on maternity to a national audience of over 5 million, with linked interactive information services via the Sky satellite system.



The Communicopia project involved piloting a version of NHS Direct Online on digital TV in East Yorkshire via Kingston Interactive's ADSL network and in London via VNL's Homechoice service.



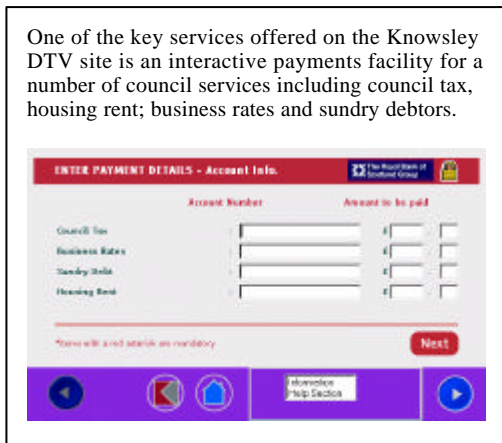
The Department for Education and Skills has made its ChildcareLink service available within Sky Active on the BSkyB Satellite platform since February 2002. Developed in partnership with UpMyStreet, the service provides interactive local information about childcare. This follows the launch of the ChildcareLink national telephone line and website in December 1999, with the delivery of the service through DTV a key part of the Department for Education and Skills' drive to make childcare information more accessible to parents and carers.



In addition to the local government pathfinder DTV projects in Suffolk and Somerset; Knowsley, Newcastle and Kirklees councils are making their services via cable DTV.

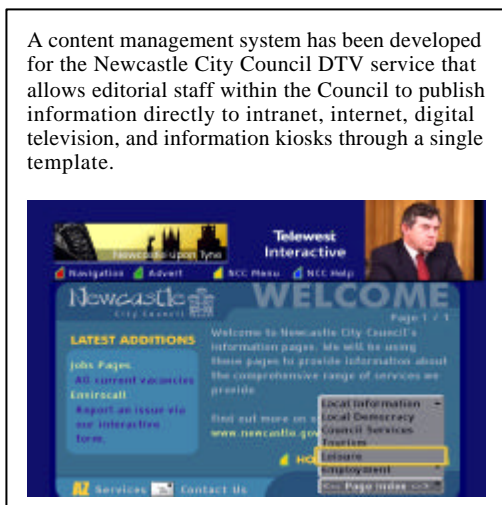
Knowsley Council has since July 2000 provided a DTV service offering a range of Council services via the Telewest cable network to currently some 7000 homes in the area. Services offered include: interactive payments facility for a number of council services including council tax, housing rent;

business rates and sundry debtors; information on job vacancies, training and childcare facilities; maps of local walks; local history information; consumer advice with facility to request additional information; and email facility to provide feedback on Knowsley services and request for assistance.



The Knowsley DTV site continues to grow with the addition of a golf booking system piloting the potential for similar facilities. Future plans include expanding the service as a tool for community engagement and including non-Council information and services.

Newcastle City Council introduced an interactive digital television service via the Telewest cable platform, in October 2000. In the two years since, the Council has experimented with the medium to learn about the technology as well as attempting to understand who would use the services and what might make them attractive to use.



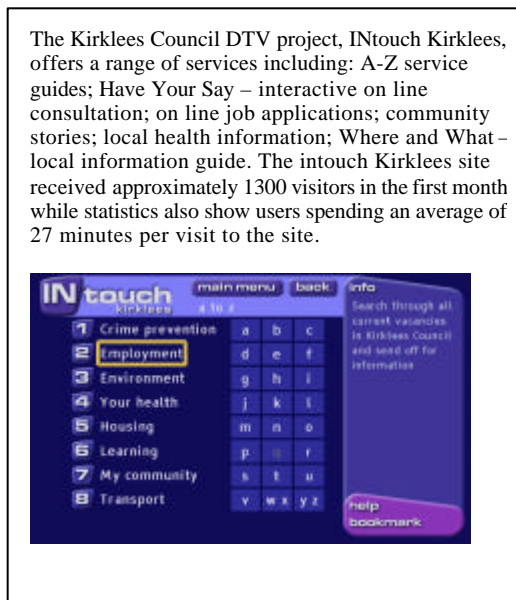
Features of the Newcastle City Council service include allowing customers to ask the Council

to clear bulky refuse from their property or to request job application forms. The opportunity to make comments for improving Council services is also available.

Newcastle City Council's future plans for its DTV service includes widening the service into a regional offering and extending the service to include other information sources and delivery platforms.

The Kirklees Council DTV project followed success in obtaining funding via the ODPM Invest to Save Budget to support a DTV pilot project. The objective of the project is to explore and evaluate the attitudes of Kirklees residents to accessing public information and local services using digital TV.

The project called INtouch Kirklees aims to create an interactive television site run over the ntl cable platform, that contains information about council services and local health services. The pilot was launched in Summer 2002 and is due to finish in July 2003, with over 500 homes involved in the pilot (in addition, some 13,000 ntl digital subscribers within Kirklees also have access to the site).



The Kirklees Council DTV project, INtouch Kirklees, offers a range of services including: A-Z service guides; Have Your Say – interactive on line consultation; on line job applications; community stories; local health information; Where and What – local information guide. The intouch Kirklees site received approximately 1300 visitors in the first month while statistics also show users spending an average of 27 minutes per visit to the site.

4. The Policy Framework

Building on the vision described in Chapter 2, this chapter introduces our policy framework for driving forward the UK's ambition for DTV's role in delivering government services.

Policies fall into two areas: action required across government to deliver e-government services on DTV, and co-ordinating actions across Government and with industry.

Policies to Deliver e-Government Services

1. Government at all levels, from central to local, should evaluate DTV as a key channel for e-government using the strengths of this medium to deliver richer services and inclusivity.

DTV presents a unique opportunity for Government to deliver its services right into the homes of citizens. Although it is one of a number of channels that can be used for e-government, DTV is particularly attractive for several reasons. These include: the position that TV has gained in most people's homes as a familiar medium, its rich, multimedia capabilities and its ability to promote inclusivity and address the needs of minority groups. There are, though, issues around the extent to which households want to use their televisions for services other than entertainment.

Recognising that DTV falls within a wider strategy for government services, many government organisations are already exploiting this to improve their service. The use of DTV will be considered as part of each department's channel strategy for service delivery to customers that must form an integral part of their business strategies and support wider government policies on universal access, modernising Government and social inclusion. The use of any particular channel will be dependent on the costs and benefits involved.

2. Government should work with broadcasters, programme makers and Internet Service Providers to integrate links to e-government services with relevant programme content.

One of the most exciting opportunities offered by DTV is the ability to mix traditional broadcast content with interactive services. Already broadcasters frequently work with government to develop public information services, while maintaining their own independence. One example is the collaboration between the Police and the BBC Crimewatch programme (see box below) which has resulted in linking television content and a website. Interactive DTV provides a further opportunity to enhance viewer participation. Entertainment programmes have also grasped the opportunities for increased viewer participation and revenue generation through promoting interaction via the remote control, SMS text messaging and enabling viewers to express their views on the programme content by voting.



The BBC Crimewatch series is an example of collaboration between a broadcaster and the Police – the programme refers viewers to a website for up-to-date and more in-depth information, the site also provides the opportunity to interact.

3. Government will continue to develop and deliver a citizens' portal on DTV (UK online interactive), providing a one-stop shop for government and other public sector services.

Enhancing and widening the functionality and breadth of UK online interactive will enable Government to provide its services in a more convenient and accessible way on DTV. The Office of the e-Envoy will continue to work with local and central Government in developing the UK online interactive portal to support their needs in the delivery of government services. This will include developing greater personalisation and regionalisation, together with providing the capability to handle forms and transactions.

4. UK online interactive will provide a common access point and a one-stop shop for the delivery of government and other public sector services on DTV. Public sector bodies will consider UK online interactive as a portal solution in any DTV business case and/or funding bid.

A number of government organisations have already expressed an interest in using DTV to deliver their services. This is a new and complex area, in which expertise within government is still developing. Furthermore, the potential costs to individual organisations for development and carriage can be considerable. Through joining the UK online interactive service, organisations will be able to benefit from the experience already gained, share knowledge and avoid duplicating resources and effort. This also simplifies the relationship between Government and platform owners, who won't have to deal with a large number of separate entities within Government. Furthermore any changes in platform specification will only have to be addressed once, rather than for each individual organisation.

It will benefit users in presenting them with a single point of access for government services and information on DTV. It will also promote a common look and feel for these government services.

To support this policy, the Office of the e-Envoy will develop detailed guidance for those organisations seeking to implement services on DTV, in the form of an engagement pack (refer Action 1, Supporting Actions). In the

interim, organisations seeking guidance can contact the Office of the e-Envoy UK online interactive project team by email at idthv@e-envoy.gsi.gov.uk.

Co-ordination

5. The e-Envoy will review Pathfinder and other pilot initiatives for DTV and share best practice for delivering e-government across the public sector. The e-Envoy will also publish on its website DTV information and statistics relating to the delivery of e-government services.

Local Authority DTV Pathfinder Projects are funded by the ODPM, and are providing exciting and innovative solutions for using DTV to deliver e-government. As a consequence of the innovative nature of these projects the experiences that are being gained need to be given wider visibility, especially to other public sector bodies that could develop the ideas and concepts to deliver their own services. The Office of the e-Envoy will engage in initiatives focused at sharing experience from the projects and assist in developing best practice from central to local level.

Already departments have made progress in evaluating pathfinder projects. The focus of these evaluations should include: patterns of customer usage (e.g. which customer groups use the service, how they use it, how often and why); service impact (e.g. use of traditional services, perception of providers); users experience (e.g. trust, usability, perceived value and satisfaction).

To assist with the dissemination of best practice, the Office of the e-Envoy will also publish on its website DTV information and statistics relating to the delivery of e-government services.

6. Through UK online interactive the Office of the e-Envoy will lead on defining standards on navigation, style and branding for e-government services on DTV.

People need to be able to find and identify e-government sites easily on whatever channel they are using. Clear and consistent navigation is as important for DTV as it is for the World Wide Web. Government's presence on DTV needs to become as recognisable to

users as a commercial brand. There is considerable work involved in preparing interactive content, but common templates and design frameworks can achieve economies of scale, as well as develop a common 'look and feel' for e-government services on DTV. Different platforms will also need different common templates and design frameworks. The e-Envoy will lead on defining the standards (in consultation with central and local government organisations) on navigation, style and branding of e-government services on DTV.

7. The Office of the e-Envoy will produce best practice guidelines on content, usability and accessibility issues for government presence on DTV

Government is committed to offering high-calibre public information and services on DTV. Following consultation with DTV content providers in departments and local Government, the Office of the e-Envoy will publish broad guidelines on best practice in content, usability and accessibility issues relevant to delivery of e-government services. These guidelines will be updated regularly and will help ensure that Government's presence on DTV, both local and central, is coherent, consistent and high quality.

8. Government will promote awareness of the benefits that delivery of e-government services over DTV can bring.

Promoting the benefits of DTV is also a key activity within the DTV Action Plan.

The UK online campaign is already promoting the benefits that the internet can bring to the country, its citizens and the economy. DTV will provide an important step towards enabling connectivity for those who have up to now been unable or unwilling to access electronic government services via existing channels. Government will widen the campaign to include DTV as a means of access to interactive services.

The Office of the e-Envoy will work to communicate these benefits to central and local government departments.

5. Next Steps

This document outlines some of the next steps, but we must continue to be responsive to changes in technology, markets and the demands of citizens and their representatives.

In acknowledgement of the fast changing environment for DTV, the table will be updated as required to reflect work in progress.

The latest version of the document will be found on www.govtalk.gov.uk.

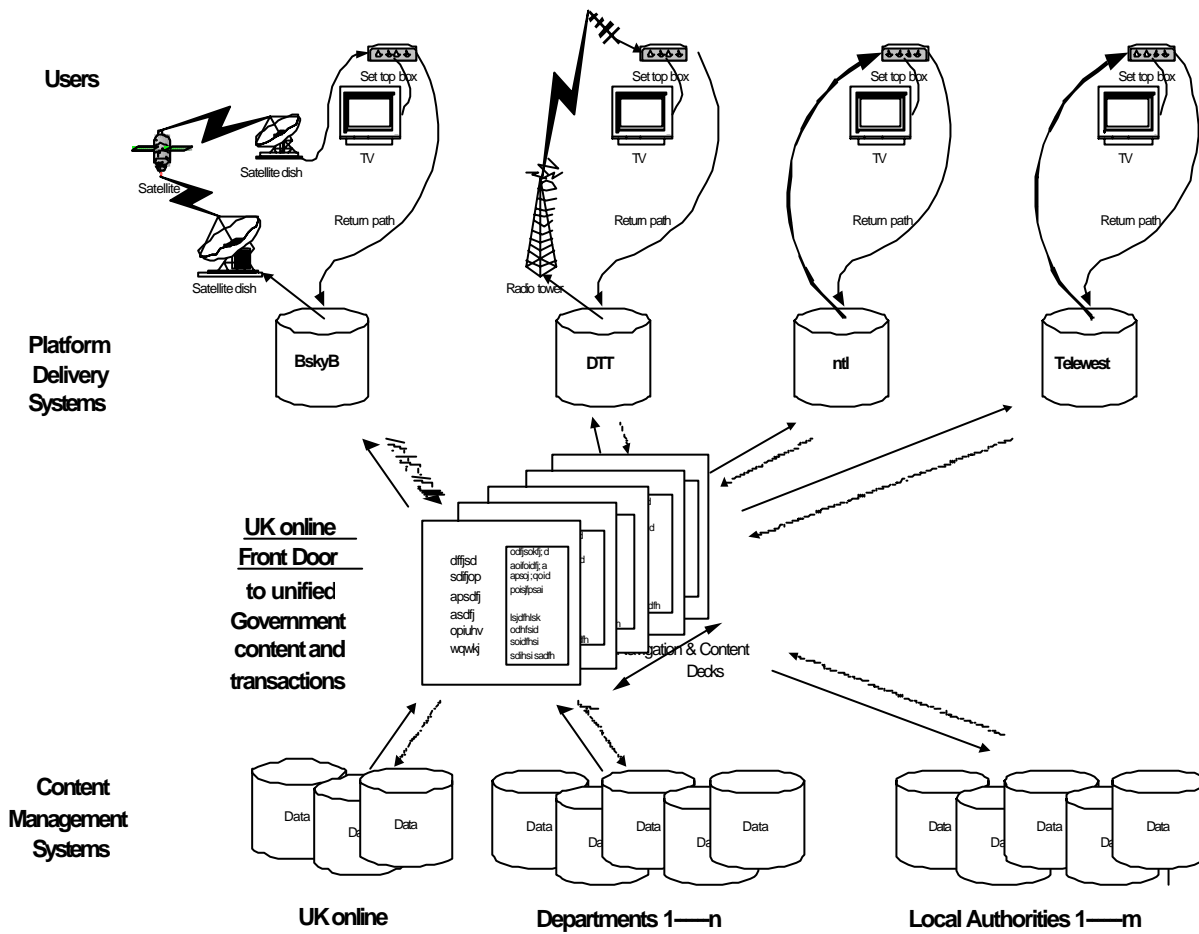
Action Plan

Policies	Who	By when
1. Government at all levels, from central to local, will evaluate DTV as a key channel for e-government using the strengths of this medium to deliver richer services and inclusivity.	All public sector bodies	Ongoing
2. Government should work with broadcasters, programme makers and Internet Service Providers to integrate links to e-government services with relevant programme content.	All public sector bodies	Ongoing
3. Government will continue to develop and deliver the citizens' portal onto DTV (UK online interactive), providing a one-stop shop for government and other public sector services.	OeE + platform owners	Ongoing
4. UK online interactive will provide a common access point and a one-stop shop for the delivery of government and public sector services on DTV. Public sector bodies will consider UK online interactive as a portal solution in any DTV business case and/or funding bid.	All public sector bodies	Ongoing
5. The e-Envoy will review Pathfinder and other pilot initiatives for DTV and share best practice for delivering e-government across the public sector. The e-Envoy will also publish on its website DTV information and statistics relating to the delivery of e-government services.	OeE	Ongoing
6. Through UK online interactive the Office of the e-Envoy will lead on defining standards on navigation, style and common branding for e-government services on DTV.	OeE All public sector bodies	Q1 2003
7. The Office of the e-Envoy will produce best practice guidelines on content, usability and accessibility issues for government presence on DTV.	OeE All public sector bodies	Q3 2003
8. Government will promote awareness of the benefits that delivery of e-government services over DTV can bring.	OeE	Ongoing

Supporting Actions	Who	By when
1. To facilitate central and local government organisations joining the UK online interactive service, the Office of the e-Envoy will develop detailed guidelines.	OeE	Q4 2002

This action plan is maintained on GovTalk (www.govtalk.gov.uk). Please go to the website to check progress and links to other information.

Annex A – UK online interactive Architecture



Annex B - Consultation Process

The importance of the digital revolution was recognised by the Government some years ago. Improving public services through electronic service delivery was a central theme of the Modernising Government White Paper published in 1999. Since then, the Government has made substantial progress in transforming itself.

The digital television (DTV) policy framework describes the Government's vision for delivering e-government to the home. The policy framework has been published to allow for informed public debate on the policy framework underpinning this vision. The aim is to utilise this consultation process to ensure the capture of the key policy issues.

Throughout the development of this framework we have been keen to gather input from a variety of relevant sources. As a result, the policy framework in its current state has been developed in close consultation with key Public and Private Sector stakeholders assisted by external consultants who have brought complementary specialist input.

We would like to continue our consultation effort and invite anyone who wishes to contribute to this document to do so.

There are four methods to respond to this consultation. Using the feedback form at the back of this document, responses may be made in writing to:

Phil Craig

Assistant Director

Office of the e-Envoy

3rd Floor

Stockley House

130 Wilton Road

London SW1V 1LQ

2) By fax to: Phil Craig, 020 7276 3292

3) By e-mail to:

phil.craig@e-envoy.gov.uk

4) By e-mail to the open discussion forum on <http://www.govtalk.gov.uk>

Responses must arrive no later than <date> 2002.

Responses will not be acknowledged unless specifically requested. This consultation conforms to the Cabinet Office's Code of Practice on Written Consultations. The seven criteria of the code are reproduced in Annex C (as required by the code).

Annex C – Consultation Criteria

1. Timing of consultation should be built into the planning process for a policy (including legislation) or service from the start, so that it has the best prospect of improving the proposals concerned, and so that sufficient time is left for it at each stage.
2. It should be clear who is being consulted, about what questions, in what timescale and for what purpose.
3. A consultation document should be as simple and concise as possible. It should include a summary, in two pages at most, of the main questions it seeks views on. It should make it as easy as possible for readers to respond, make contact or complain.
4. Documents should be made widely available, with the fullest use of electronic means (though not to the exclusion of others), and effectively drawn to the attention of all interested groups and individuals.
5. Sufficient time should be allowed for considered responses from all groups with an interest. Twelve weeks should be the standard minimum period for a consultation.
6. Responses should be carefully and open-mindedly analysed, and the results made widely available, with an account of the views expressed, and reasons for decisions finally taken.
7. Departments should monitor and evaluate consultations, designating a consultation co-ordinator who will ensure the lessons are disseminated.



Feedback

digital television: October 2002

Personal information

Name:

Job title:

Organisation:

E-mail:

Telephone:

Address:

Comments

Please return forms by <Insert Date> to: Office
of the e-Envoy, Stockley House, 130 Wilton
Road, London, SW1V 1LQ

© Crown Copyright 2002

The text in this document may be reproduced free of charge in any format or media without requiring specific permission. This is subject to the material not being used in a derogatory manner or in a misleading context. The source of the material must be acknowledged as Crown copyright and the title of the document must be included when being reproduced as part of another publication or service.

The majority of photos in this document have been kindly provided by Telewest. Photos may only be reproduced in the context of this document.

Online copies of this document will be made available at: www.govtalk.gov.uk

Office of the e-Envoy, Stockley House, 130 Wilton Road, London, SW1V 1LQ

