

International Convergence

Investigating media convergence in
U.S.A, U.K, Germany and Japan
Market Research Report

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International Convergence Communications

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1. INTRODUCTION

We are currently experiencing a period of rapid technological change and if anything, the pace of change seems to be accelerating at the moment. This certainly makes it an exciting world in which to live, but the sheer rapidity of change brings a lot of uncertainty.....for example, in which of the many new technologies should people invest? With such a breathtaking array of new technologies available, it is extremely difficult to pick which will succeed.

In order to get a **glimpse into the future**, we spoke to early adopters of new technology in four of the most advanced economies in the world.



UK



Japan



USA



Germany

Between them these countries account for a huge proportion of the world's technological innovation and consumers in these countries are some of the most sophisticated in the world.

In order to focus on people at the cutting edge of new technology we interviewed only **early adopters**. We defined early adopters of new technology according to their **attitude** towards new technology and their **usage** of the technology (broadband internet access) that brings the world closer together, and has arguably been the most influential new technology in the last 10 years.

i.e. **all** respondents met **all** of the criterion below.

- technophiles (based on their attitude to new technology)
- had a home broadband connection
- accessed the internet everyday.

Including internet usage and a home broadband connection in the definition of an early adopter of technology means that usage of internet technologies will be relatively high in this report.

Typically early adopters of new technology make up no more than 10% of a countries population. Studying what early adopters are doing now is important because what is popular amongst this group often becomes mass market approximately 3-5 years later. This observation is based on separate technology reports on digital TV, the internet and mobile phones that we have been producing for over 15 years which have looked at take-up of new innovations in these markets.

Interviewing people across a range of markets also helps us to predict the future. What consumers are doing now in the U.S or Japan is often a sign of what will become popular in the U.K in the future, or vice versa. In addition the growth of the internet has brought the world closer together and enabled new innovations to cross national boundaries with ever increasing speed.

1.1. Method

In January 2007 Continental Research and KNOTs Research interviewed online 768 adults aged 16 years or older via the internet. The interviews were spread between the four countries surveyed (UK 217, Germany 199, Japan 182, and USA 170).

All interviews were carried out over the internet and the initial sample polled reflected the online population in each of the four countries – subsequent filters screened out those respondents who did not meet the criteria of an early adopter of new technology (described on previous page).

Given the broadly similar demographics in each country, the profile of early adopters in each country is broadly in line in each country. Overall 56% are male and the age profile is relatively young - 64% are aged 15-45 compared to only 36% over 45. This makes the profile of early adopters younger and more male than internet users as a whole.

1.2. Data reporting

When interpreting the data shown in this report it should be observed that:

1. **Data is not designed to be nationally representative**, its purpose is more to illuminate what people at the cutting edge of new technology are doing – enabling us to gain insight into future trends.
2. When data for all four countries is presented collectively this data does not take into account the different population sizes in each country i.e. the US sample has not been up-weighted to reflect its greater population size.

2. Convergence background & key trends

With Convergence we can perform similar activities through a range of different platforms. Consumers can now...

- Watch TV, listen to the radio, and make phone calls via broadband
- Watch TV and access the internet on their mobile phones
- Access the internet and listen to the radio through their digital TV

However not all of the new convergence technologies will succeed and flourish. Generally the winners so far look to be technologies such as internet TV and VoIP that are based on **broadband** internet access.

Sky moving into the provision of broadband in the U.K can be interpreted in a defensive way. IPTV offers an alternative platform to Satellite or Cable for receiving TV channels.

In practice Convergence means that previously separate industries such as telecoms and provision of TV channels are now feeling the full impact of the Internet, just as other diverse industries such as banking, newspapers, travel agents, music and retail have been revolutionised by consumers going online.

In many areas the U.K is relatively advanced when it comes to internet technologies. Interestingly this may be a result of being behind in other areas: Pay TV channels are expensive in the U.K and large numbers still receive only the 5 terrestrial channels, in addition the number of radio stations available is very limited. Consequently the importance of the internet in providing significant TV and radio alternatives is greater in the U.K than in the U.S where the number of TV channels and radio stations available is generally greater.

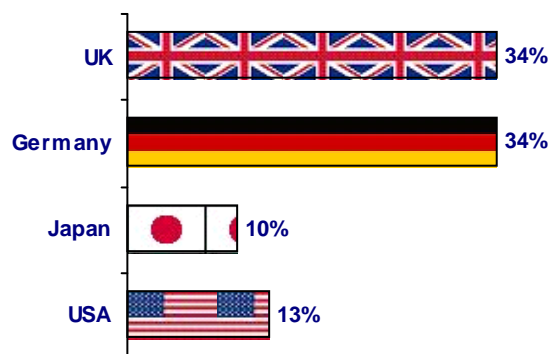
3. Broadband (PC based) internet as a convergence platform

The extra speed provided by broadband has fuelled the growth of convergence, allowing people to make phone calls and watch TV online. This section explores how early adopters are using internet telephony, TV, and radio.

3.1. Internet Telephony

VoIP has huge potential, linking people up around the world and utilising the power of the internet to offer cut price telecoms connections. With the ability to reduce telecoms costs VoIP has the potential to grow rapidly.

% Using VoIP at least **once a week**



Base: early adopters, 217, 199, 182, 170

Source: Continental/KNOTs Research





Usage of VoIP differs considerably by country. In the US - where local calls are free - usage is low (as it is in Japan too). VoIP is far more popular amongst early adopters in both the U.K and Germany.

VoIP looks set to grow rapidly. Overall (across all countries), **43%** of those ever using VoIP expect to increase their usage in the next 12 months. In addition **17%** of those not using VoIP expect to use it in the next year. As issues of sound quality improve, internet telephony may not only offer just cost savings, but combined with video calling, a functional comparative advantage (not just novelty value) over traditional fixed line telecoms.

In the U.K using VoIP for international calls helps drive the take up of VoIP. **51%** of U.K VoIP users are using VoIP for international calls, where cost savings are most pronounced.

The huge British diaspora in both the English speaking world (Canada, Australia, the U.S), and Europe (especially France and Spain) along with a very substantial number of immigrants means a significant proportion of the U.K population will have immediate family members overseas. International calls are of course relatively expensive and are where VoIP can provide the biggest cost savings.

Type of calls VoIP users are making

				
National calls	82%	84%	84%	72%
International calls	51%	39%	20%	31%
Calls to mobiles	26%	13%	18%	28%

Base: all using VoIP, 87, 87, 26, 28 (caution small base sizes)

Source: Continental/KNOTs Research

The Japanese with far fewer immigrants and emigrants have less incentive to use VoIP.

Calling mobile phones from a fixed line phone can also be expensive, and VoIP can also offer cost savings here.

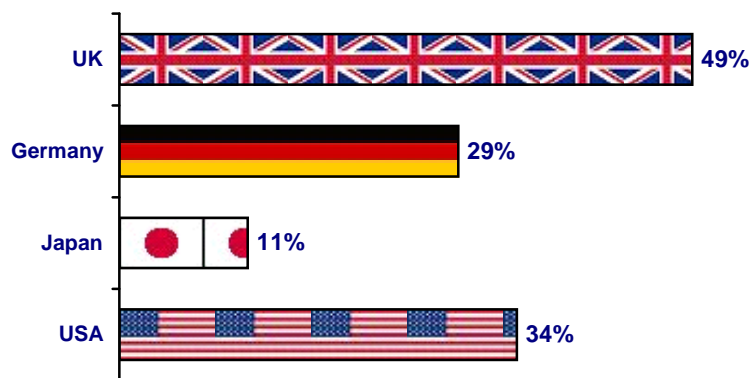
3.2. Internet Radio

The internet is a great way to listen to the radio:

- > You can listen to the radio whilst using a PC - it can make performing tedious tasks more bearable
- > You can pick up radio stations that don't broadcast locally
- > Sound quality is good
- > It's easy to do (of great importance for any new technology).

The number of early adopters who have listened to the radio over the internet is high, especially in the U.K. U.S. and Germany.

*% Listening to live radio via the internet on PC/ laptop at least **once a week***



Base: early adopters, 217, 199, 182, 170

Source: Continental/KNOTs Research





The internet has given a huge boost to a relatively old technology, and for many people it is already an important way to listen to the radio. It also makes it far easier for new or local stations to reach a wider audience.

Internet radio is particularly popular in the U.K where the number of frequencies (and therefore stations) available via a normal radio is limited.

Internet radio is a more mature technology than VoIP and consequently future growth is not likely to be as rapid, however as people spend more and more time online Internet radio should grow steadily. **26%** of those (across all countries) ever listening to live Internet expect to increase the amount they listen to in the next year. **5%** of those not listening expect to do so in the next year.

Listening to previously downloaded radio shows or podcasts is also popular amongst early adopters. This is especially true in the U.K where many stations strongly promote their downloads and internet radio substantially increases the number of radio stations available.

% listening at least **once a week** to downloaded internet radio/ podcasts

				
% listening	26%	15%	9%	16%

Base: early adopters, 217, 199, 182, 170

Source: Continental/KNOTs Research

22% of those (across all countries) ever listening to downloaded radio/ podcasts via the internet expect to increase the amount they listen to in the next year.

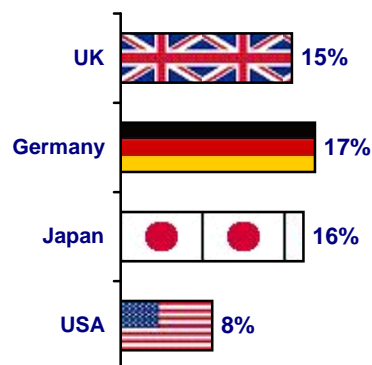
7% of those not listening expect to do so in the next year.

3.3. Internet TV

In terms of popularity, Internet TV (IPTV) is still some way behind internet radio. Unlike internet radio, internet TV will have to compete with many other technologies for screen space. However improving technology and greater programme availability means that we expect IPTV to grow rapidly in future.

Many companies, such as BT Vision in the U.K are investing heavily in IPTV. Also in the U.K Tiscali has purchased Homechoice and is to start distributing it as an IPTV service. However a serious limitation of IPTV is that you generally need to watch it on a PC screen, so in the short term (2007) screen limitations are likely to severely restrict the growth of IPTV. However once IPTV can be watched on television via a broadband socket on the set top box (as the Sky HD box already allows) it does have the potential to be an extremely disruptive technology for traditional TV broadcasters. Many industries from travel, to music and banking have been revolutionised by the internet. TV could be next.

*% watching live TV via the internet at least **once a week***



Base: early adopters, 217, 199, 182, 170

Source: Continental/KNOTs Research

In the US the majority have such a proliferation of channels available that the incentive to go online to watch TV may be less. Watching TV online is a way for Europeans and the Japanese to get the latest US TV shows, and can explain why Europe and Japan is leading the way with IPTV.





28% of those (across all countries) who have ever watched live Internet expect to increase the amount they view in the next year. **11%** of those not viewing expect to do so in the next year, suggesting encouraging demand for this convergent technology.

3.3.1. Downloading TV programmes

The internet has the potential to act as huge TV library, where old shows can be stored & the viewer can watch at a time that suits them, removing the need to store videos/ DVDs of favourite shows.

Whilst a lot of TV (especially for certain categories such as news and sport) is about being current, a large proportion of TV shown is already repeats, and especially in the U.K there is substantial nostalgia for favourite old shows.

% watching downloaded TV over the Internet at least once a week

				
% viewing in last week	15%	15%	8%	9%

Base: early adopters, 217, 199, 182, 170

Source: Continental/KNOTs Research

28% of those (across all countries) ever watching downloaded Internet expect to increase the amount they view in the next year. **10%** of those not viewing expect to do so in the next year, suggesting that growth will be strong despite the competition posed by VOD (Video on Demand).

The advantage of IPTV over other forms of on-demand television (i.e. VOD) is the sheer breadth and depth of programming available. With IPTV it is possible to access programming from any country and any channel (often obtaining it 'unofficially') – literally any programme that has been uploaded to any website anywhere in the world. By comparison, to access Video on Demand it is necessary to have a dedicated set-top box from a specific supplier, and the user will only be able to access a (comparatively) very limited range of programming – restricted to what is currently offered by their supplier. For example, in the UK, the most recent high profile VOD supplier to launch is Virgin Media, and they offer 'just' 500 movies on demand at any one time.

Video on Demand does in most cases still have two notable advantages over IPTV, namely screen size and quality. As yet, most people still view the internet via their PC monitors, which are generally 20 inches or less in diameter, and not designed specifically for TV content. VOD on the other hand is typically watched via a TV set, potentially providing significantly larger screen size and greater quality. However, as more and more users connect their PCs to their TVs and view all their PC (and their internet) usage in this way, this advantage will decline.

3.4. Blogs and personal websites.

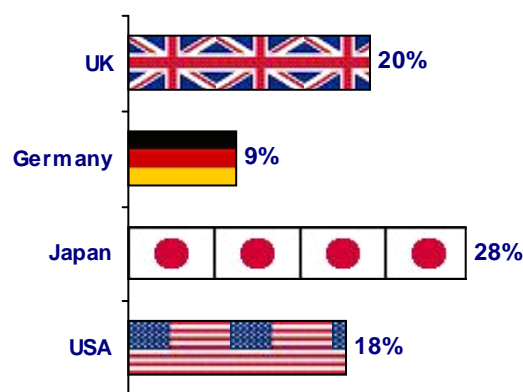
The internet has revolutionised the media landscape and blurred the once clear boundary between **producers** and **consumers** of media. By lowering the cost of entry the internet has enabled those with the necessary technological savvy and communication skills to gain a (sometimes substantial) audience.

Whilst many blogs are of dubious quality, others are very professional, and can often provide an alternative perspective to the mainstream media. The internet enables specialists in niche areas, or those who are passionate about a particular subject who may not get a voice in traditional media, to reach a wider audience.

At present these new initiatives are being observed with considerable interest by mainstream media operators to determine:

- (a) what impact they might have on traditional media audiences and
- (b) identify what idea might emerge as the next big media phenomenon

% with own blog or online journal updated with news, information or social content



Base: early adopters, 217, 199, 182, 170 Source: Continental/KNOTs Research

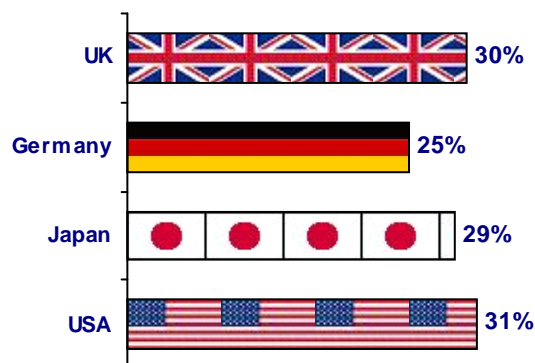
A significant minority, especially in Japan have their own blog/ online journal. In Japan, where the pressure to conform is strong, the internet may allow people an opportunity to express themselves.

Blogs are particularly popular amongst younger early adopters, **25%** of 16-34's (across all countries) have their own blog compared to **14%** aged over 35.

Early adopters clearly see these as a forum to voice their opinions and share their views with a significant number. In years to come it will be interesting to see if an increasing number attach as much importance to their online personality as they do their real life version?

Generally involving less maintenance than a blog are personal websites. Results are remarkably similar in each country with around **30%** having their own personal website.

% with their own personal website such as MySpace



Base: early adopters, 217, 199, 182, 170 Source: Continental/KNOTs Research

Personal websites are especially popular amongst the young. **44%** of 16-34's (across all countries) have their own personal website compared to **19%** aged over 35.

Could we reach a point where for young people having their own website is almost standard, and instead of sending CVs, people may just provide prospective employers with a link to their website? Already there have been instances of

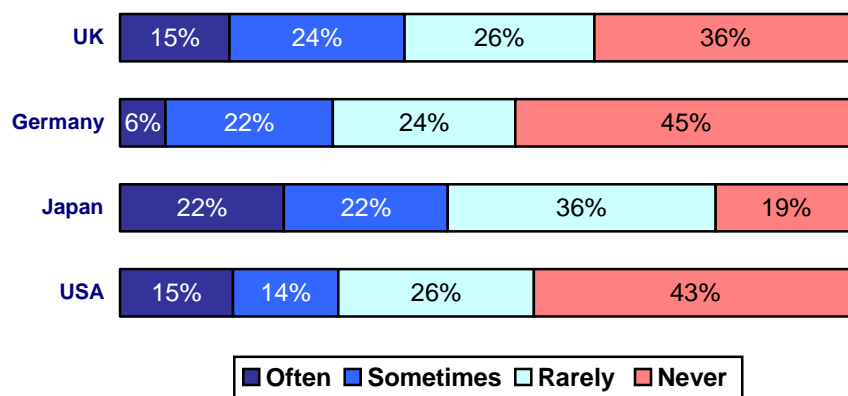
employers checking potential employees 'personal website' to see if this matches their submitted CV.

It is now possible to live a virtual, online life (distinct from 'real' life) complete with a wide circle of friends & even lovers. How this will impact on people's social skills and real life experiences is yet to be understood.

3.4.1. Visiting blogs and personal websites.

Whilst many people prefer to keep a lower profile, and the time and energy required to produce and maintain your own blog will not be for everyone, visiting other people’s websites is extremely popular, again particularly amongst the young.

% visiting blog or online journal



Base: early adopters, 217, 199, 182, 170

Source: Continental/KNOTs Research

The established media are increasingly incorporating blogs into news coverage to gain even further insight and feedback on stories. Similarly advertisers and marketers are using blogs and discussion forums as a valuable source of information to obtain a greater understanding of their customers.

The internet has made the media much more interactive and democratic. It is no longer simply a small number of print, radio or broadcast journalists telling people what is going on in the world, and even what people should be thinking. It is not uncommon for some of the most interesting and even well written part of an online article to be in the comments or ‘have your say’ section.

4. Mobile phones as a convergence platform

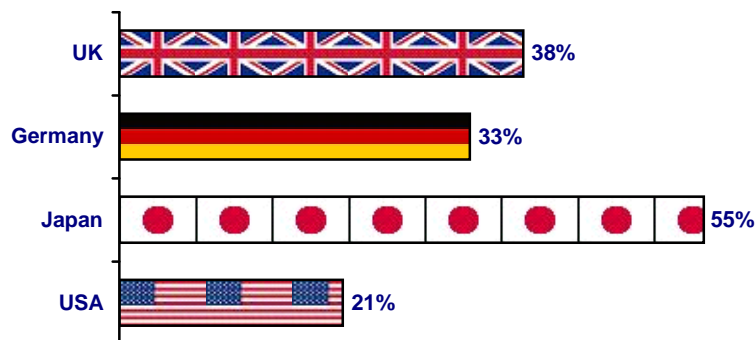
This section looks at mobile phones as an alternative platform to the internet. Advanced mobiles now enable users to do a host of different things with their handset such as watching TV and accessing the internet. In comparison to internet access via a PC a mobile has the advantage of mobility, but suffers seriously in terms of limited screen size.

For some time now mobile networks have been looking to branch out beyond traditional voice and text messaging and generate additional revenue streams such as mobile internet access and mobile TV. A few years ago picture messaging was also heralded as the next big mobile application, yet in reality people mainly used the handset to take and store pictures rather than sending them on. At times it has appeared as if the mobile networks have almost thrown a series of new technologies at consumers hoping that at least one of them will be a success.

4.1.1. Access internet via Mobile

The table below shows that significant number of early adopters have used their mobile to access the internet in the last 12 months.

% of early adopters accessing internet via mobile phone in the last 12 months



Base: early adopters, 217, 199, 182, 170 Source: Continental/KNOTs Research

The US is a world leader for many new technologies, but for many years it has lagged behind both Europe and particularly Japan in terms of advanced mobile technologies. Whilst Japan is not always leading the way with PC based internet technologies, mobile Internet access is particularly important for early adopters in Japan.

Japan does of course have a fantastic heritage of miniaturisation - producing and using small gadgets and this may help explain the relative popularity of advanced mobile technologies. The opposite is generally true in the U.S where traditionally big is seen as beautiful.

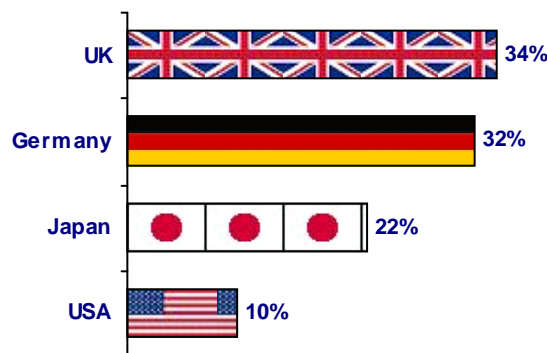
However in all other countries only a minority of early adopters have gone online via their mobile phone in the last **12 months**. Mobile internet access, although improving remains a poor substitute for internet access via a TV. Separate research we have conducted in the U.K shows satisfaction with mobile internet access to be relatively low (although improving), particularly for key measures like the **websites** that are available, **speed**, and **cost**.

4.1.2. MP3 usage via the mobile handset

Mobile handsets have only been incorporating MP3 players on any significant scale relatively recently, given this usage of the MP3 feature is relatively high. Unlike other previously-hyped killer applications (WAP, photo messaging, watching live TV) playing **MP3s** is not subject to the same limitations of screen size. As sound quality and user-friendliness (such as having a more advanced search facility and dedicated external buttons) improve to a point where they are comparable to dedicated players, the proportion of people using their mobile phone as their primary portable music device is likely grow considerably.

It is unlikely that mobile phone handsets will be ever match the top-end dedicated players for capacity, but as long as the combined phone/players can keep pace with the mass-market players (or at least not fall too far behind) with regard to user friendliness and sound quality, the MP3-enabled handset will be considered by most consumers as a credible alternative.

% of early adopters using on MP3 facility on mobile phone in the last 12 months

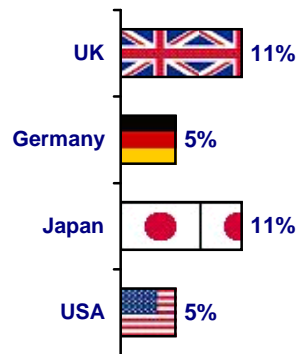


Base: early adopters, 217, 199, 182, 170 Source: Continental/KNOTs Research

4.1.3. TV Viewing via mobile phone

Mobile TV has received considerable publicity recently, however it is MP3 players and mobile internet that we expect to see growing more rapidly in the short term.

Mobile TV is still in its infancy and appears to suffer from the same problems that other mobile applications that use visual content have. Consequently relatively few early adopters have used the technology so far.

% of early adopters watching TV on mobile phone in the last 12 months

Base: early adopters, 217, 199, 182, 170 Source: Continental/KNOTs Research

Mobile TV is also very much still a minority pursuit, even for these early adopters of new technology. We have further data from the U.K market that suggests that frequency of watching mobile TV remains relatively low, and a large number of those that try mobile TV are using it only occasionally – i.e. mobile TV is failing to make the transition from being used experimentally to being used regularly and habitually by a substantial number. The key advantage of mobile TV is that we can watch on the move, ‘anywhere, anytime’. However it remains to be seen if this USP will be enough to drive regular usage amongst substantial numbers of mobile users. Given the current limitations of mobile TV it is unlikely people will choose to watch mobile TV if a traditional TV is available. This does somewhat limit the niche for mobile TV to times when travelling on public transport – of less use to those who drive, walk or cycle to work, or indeed to those underground on the subway/ tube.

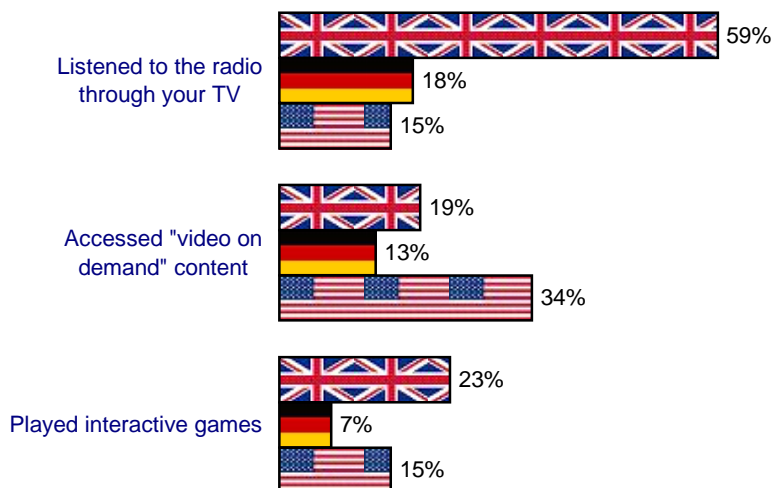
Providing mobile TV free in return for receiving advertising offers perhaps the best route for the numbers using mobile TV, however the obstacles detailed above mean that it is difficult to see it fulfilling much more than a niche viewing role in the medium term

5. TV as a convergence platform

The TV provides an alternative home entertainment hub to the internet, but only in the U.K are early adopters using additional TV functions in any significant numbers.

To date radio listening via TV is the most popular activity carried out by early adopters. Internet access via digital TV, once a major talking point now appears to be a brave new world that faded away.

Activities performed in last 12 months via TV



Base: early adopters, 217, 199, 182, 170 Source: Continental/KNOTs Research

The U.K (through Sky who have pushed the technology) is the clear market leader for interactive TV advertising (**25%** of U.K early adopters have interacted with TV ads in the last 12 months). There could well be considerable potential (cable technology permitting) for interactive TV advertising to grow in other countries, especially the U.S. This may provide considerable opportunities for U.K based companies who already have experience in this field.

Key to the success of interactive TV advertising is ensuring that it does not disrupt the viewing experience.

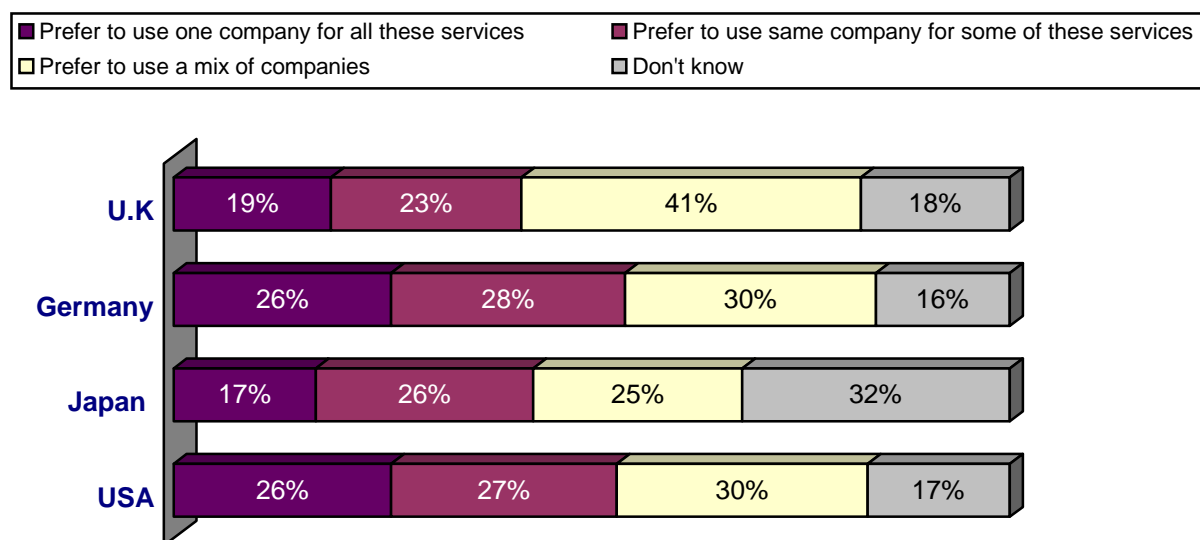
Video on demand is particularly popular in the U.S where cable is extremely strong (and IPTV relative low). In the U.K, where the number of stations available via traditional radio is limited, both the internet and digital TV have become serious alternative platforms for additional radio stations.

Although everyday internet usage and a home broadband connection are included in the definition of an early adopter of technology used in this report, neither mobile phones or digital TV seems to offer a serious platform alternative to broadband internet.

6. Bundling

A single supplier offering a bundled product combining services such as broadband, fixed line telecoms, TV channels and even mobile phone services (often referred to triple or quad play) has become common in the U.K through Sky, Virgin Media, Carphone Warehouse and Orange. Despite, or perhaps because of this the U.K has the highest proportion who would prefer to use a ***mix*** of companies to provide services such as fixed and mobile telecoms, broadband internet access and additional TV channels. In the U.K there have been many reports on the poor quality of the ‘free’ broadband that is often included in bundled services.

Reactions to receiving bundled services



Base: early adopters, 217, 199, 182, 170

Source: Continental/KNOTs Research





Some people believe that using just one supplier provides more streamlined and efficient customer services and better convergence between different technologies. Others, on the other hand prefer not to put all their eggs in one basket and risk losing all their home entertainment and communication channels should a problem arise with the suppliers service. At present between one in four and one in five early adopters in the four countries would prefer the single supplier option.

So far bundling is all about broadband, with both existing providers of broadband offering new services (e.g. BT Vision), and new players such as Sky, Orange and Carphone Warehouse entering the broadband market. As broadband threatens the status quo in TV & telecoms it is not a surprise that a number of companies are looking to muscle in on the provision of broadband, resulting in increased competition.

7. Convergence technology forecasts

Based on the data collected from the early adopters survey the number of people we estimate who will be using different convergent technologies in the next three years are shown in the following table. Forecasts were calculated using a model that took into account usage amongst early adopters and anticipated future use.

Number of adults we forecast will be doing these activities at least once a year in 2010

				
Via INTERNET				
VoIP	7.9m 17%	11.4m 16%	5.1 5%	13.0m 6%
Live internet radio	10.9 m 23%	6.5m 9%	7.6 8%	40.2m 17%
Downloaded internet radio	7.9m 17%	11.4m 16%	5.9 6%	27.7m 13%
Live TV via the internet	6.5m 14%	8.6 12%	8.4 9%	24.5m 10%
Downloaded TV	7.2m 15%	6.8m 10%	5.8m 6%	23.1m 10%
Via MOBILE				
Access the internet	11.5m 24%	13m 19%	39.5 41%	28.8m 12%
MP3	10.0m 21%	13.1m 19%	12.8m 13%	14.6m 6%
Watch TV	2.8m 6%	1.7m 2%	6.4m 7%	7.2m 3%
Total adult population (Millions)	47.9m	70.2m	95.7m	235m

We expect services that offer a functional advantage to consumers (such as VoIP with reduced bills) to grow the fastest. The actual take up of the new technologies will depend not only on consumer interest but also on how attractively the technologies are packaged (pricing/ ease of use).

8. Continental Research and KNOTs Research

Continental Research is a full service research agency based in the UK. It carries out online surveys worldwide with our Global Online Consumer Access Partner KNOTs Research, which has its HQ in Japan and the Netherlands.

Continental Research was found in 1989 and specialises in media, public sector, travel, advertising and financial research.

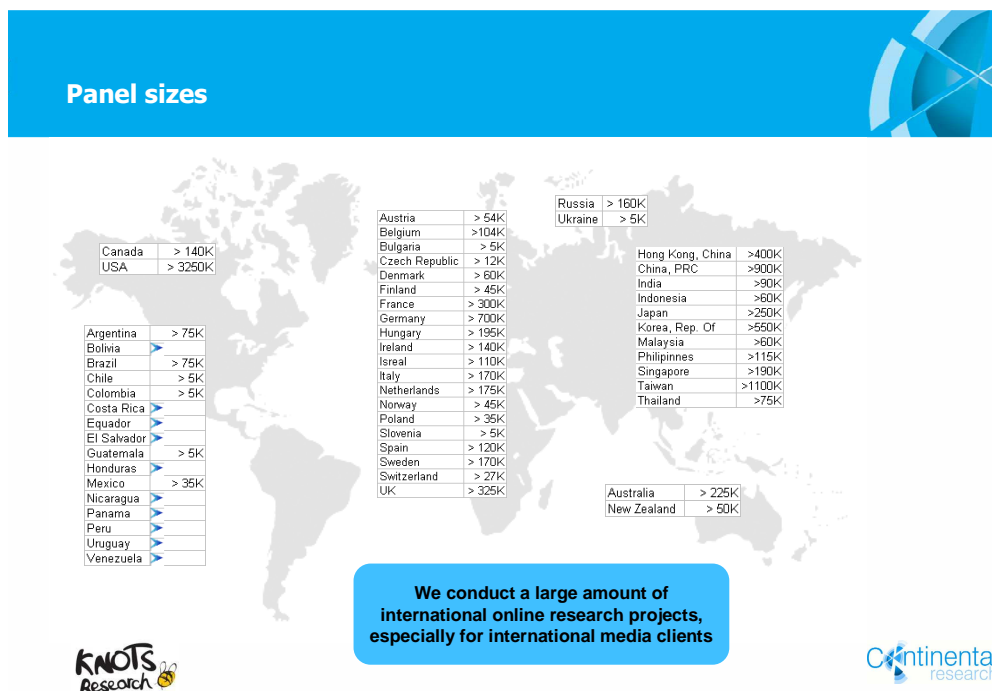
More detailed information on the data supplied in this report is available on request from:

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www.continentalresearch.com

Continental/KNOTs Worldwide panels available for Research surveys



9. Other Reports

Besides this report, Continental Research also provides reports on the following markets in the U.K:

- Internet Report **£175 ex VAT**
- Digital TV **£175 ex VAT**
- Mobile phone **£175 ex VAT**

All three technology reports (Internet, Digital TV and Mobile) can be purchased for the price of two: **£350 ex VAT**.

Continental also publishes a separate report on digital **convergence** across different platforms in the U.K price: **£400 ex VAT**.

For more details contact:

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