

# The Home Networked Consumer

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BBC New Media

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*TV-Anytime Forum*

# The Home Networked Consumer

Baby steps towards residential gateways...

BBC perspective - content delivered to what's already in the home and what 'will' be connected to these in the future



# The Home Networked Consumer

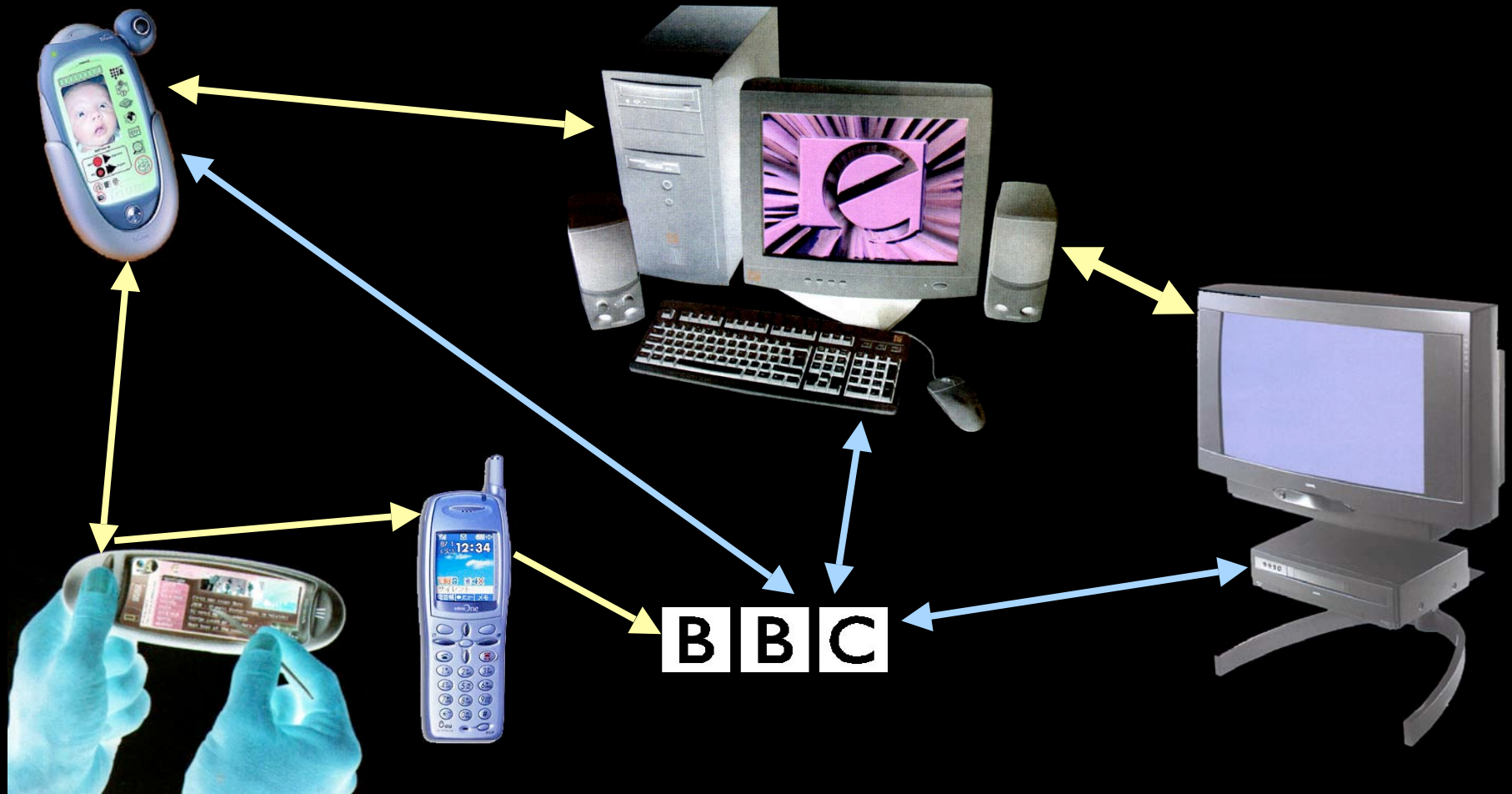
But first - What will really drive mass Home Network penetration? A little background...

- BBC delivers digital linear and iTV services to over 8 million households (Dsat/Cable/TT)
- BBC (co.uk) is the most used content web site in Europe
- BBC is delivering services via aDSL to TV and PC
- BBC New Media is personalisable on mobile/PDA
- BBC regarded world-wide as the provider of the highest quality content

# The Home Networked Consumer

## The BBC networked viewer

*(NB: the images are metaphors for the services!)*



# The Home Networked Consumer

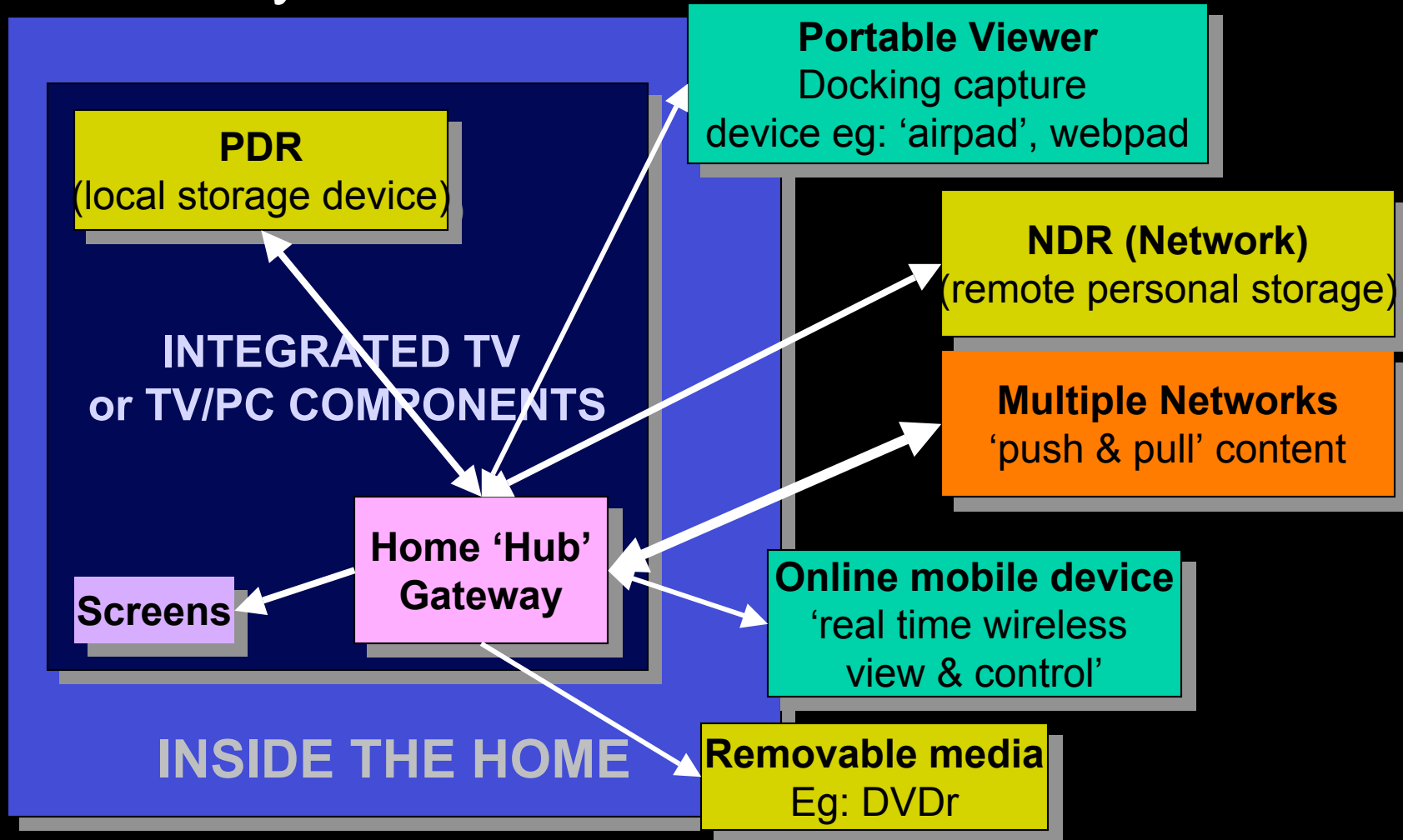
## KEY THEMES

- Technical advances Vs business models
- Content provider (BBC?) aspirations
- Consumer adoption & use of digital devices
- Consumer use of digital networks - sDistribution
- Standards used in home networks. TV-Anytime personal networks, super distribution.



# The Home Networked Consumer

## The TV-Anytime Environment



# The Home Networked Consumer

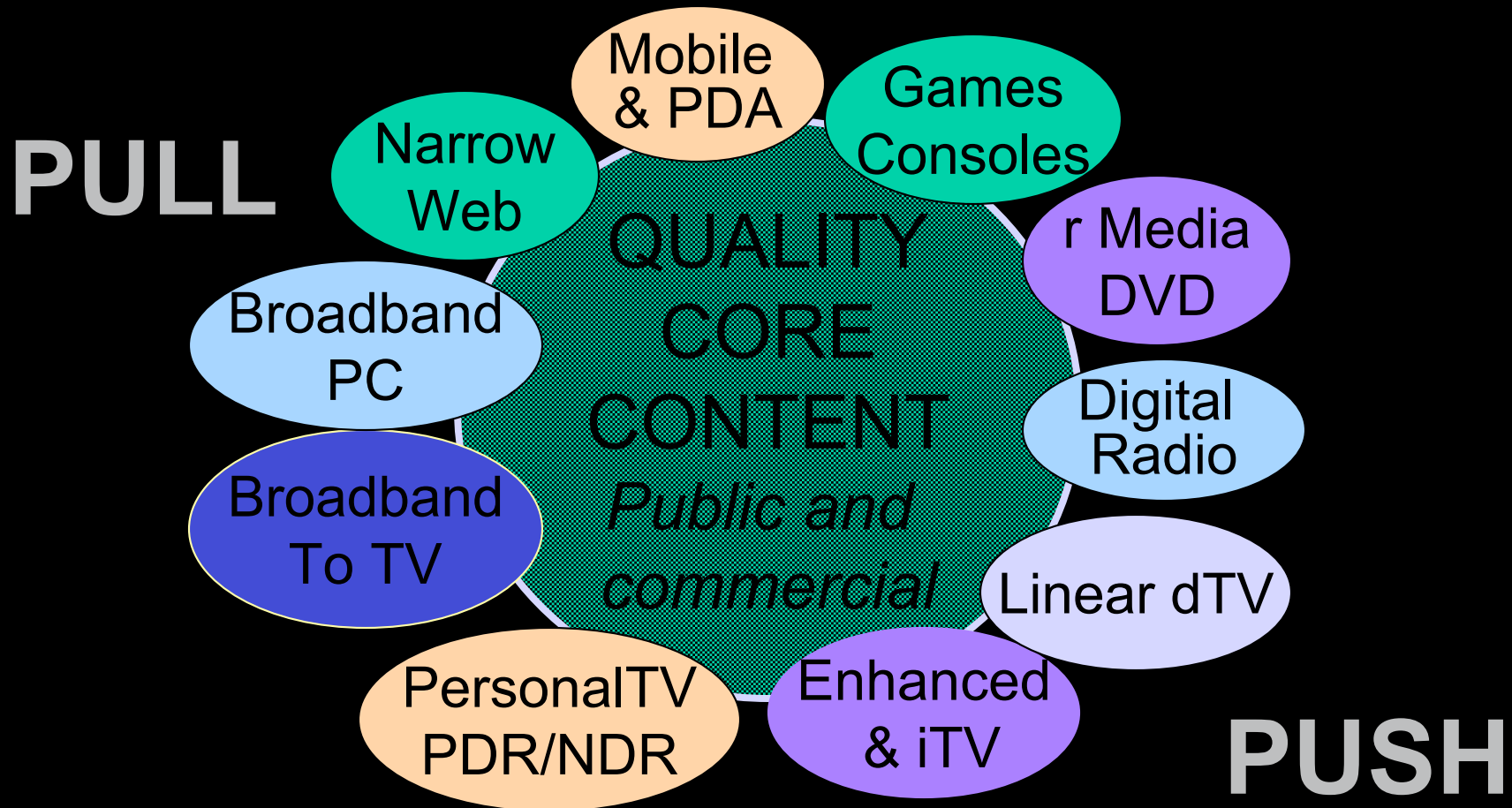
## Technical advances Vs business models

What will really drive mass Home Network penetration?



# The Home Networked Consumer

Home gateways & devices





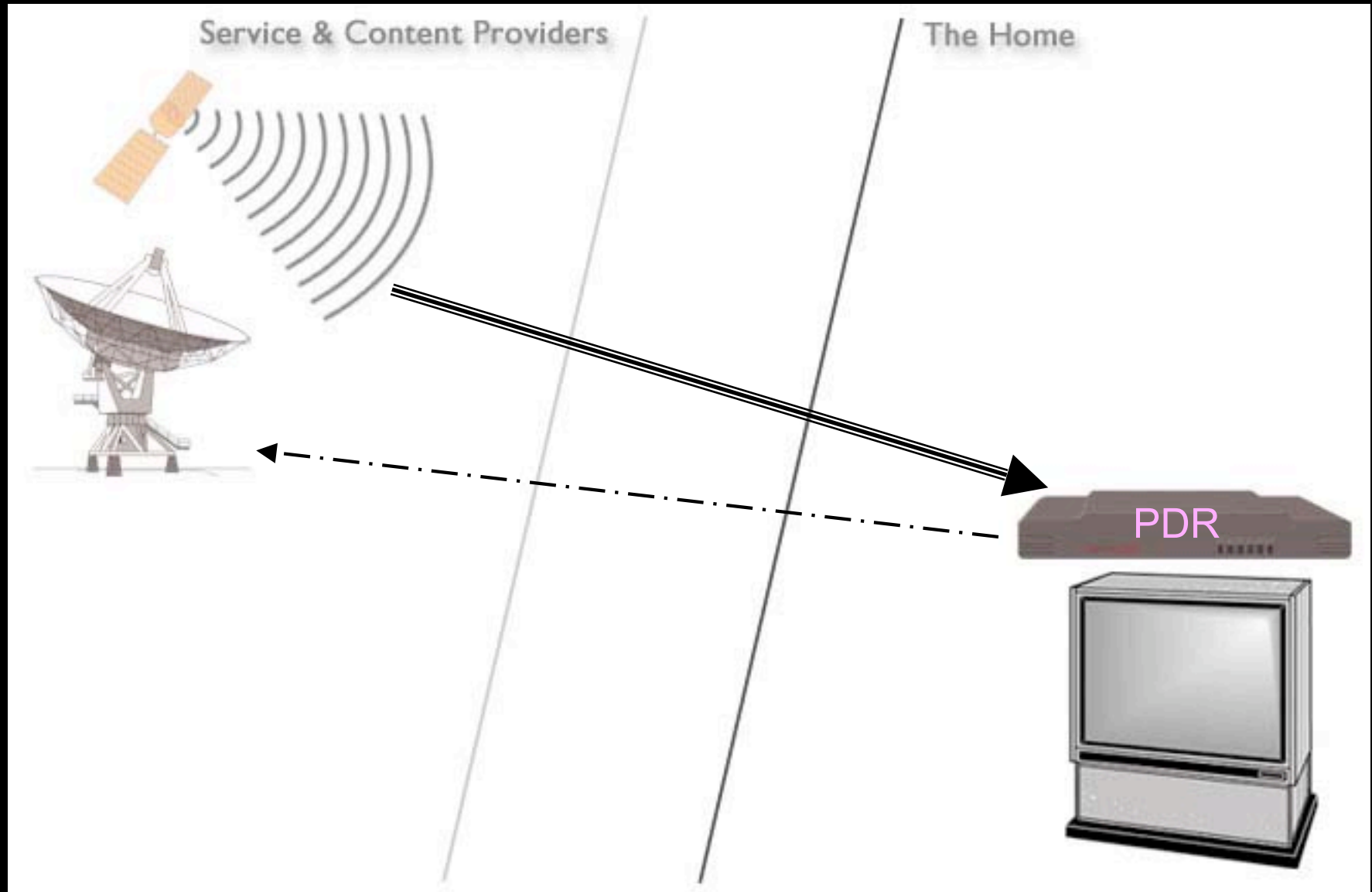
# The Home Networked Consumer

## Integrated Devices - PVR or 'Trojan servers

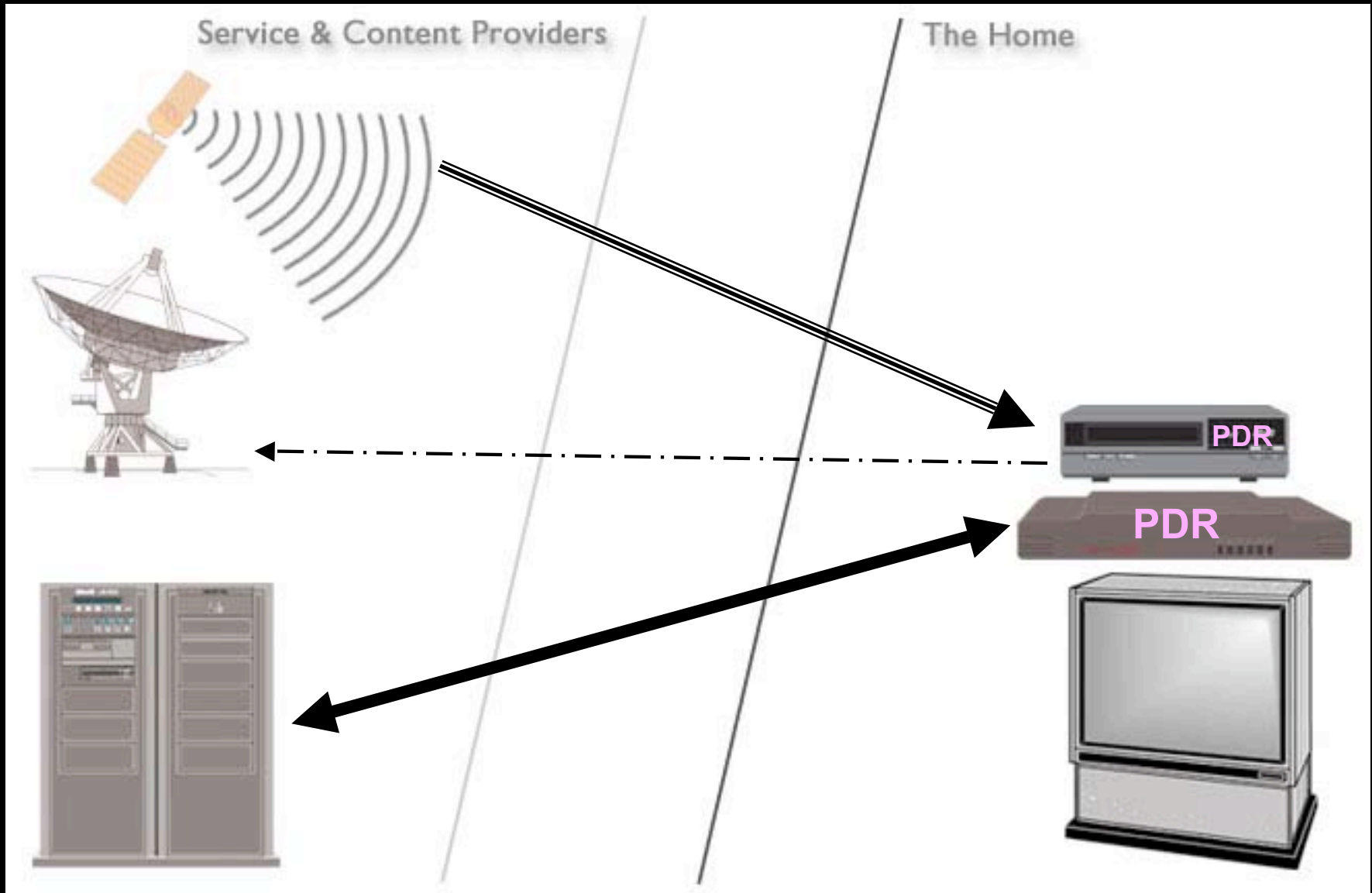
STB's become 'entertainment' stores (aka PVRs)

- Nov 2000. TiVo becomes first UK PVR
- Aug 2001. USA. Microsoft Ultimate TV - PDR
- Sep 2001. Sky launch Sky+, 1st digital PDR
- Sep 2001. USA SONICblue's ReplayTV 4000, 320 hours of tv or other media, video clips around home
- May 2002. UK. Nokia Media Terminal
- Many other devices from most stb manufacturers...
- The future as X-box becomes HomeStation and Playstation 3 has storage and receives TV

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# The Home Networked Consumer

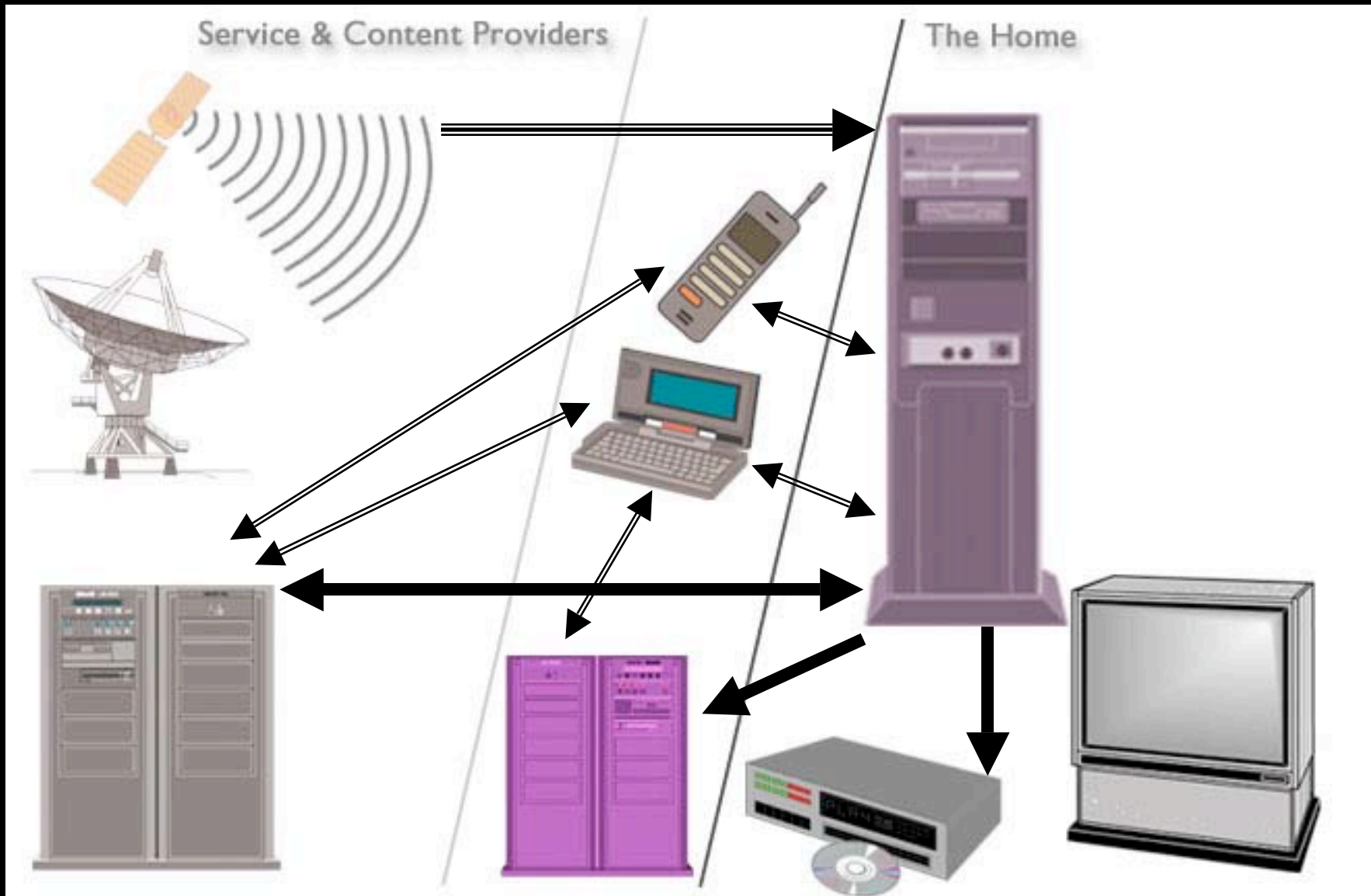


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Sep 2001. Rumour or truth. HomeStation. PC-Xbox hybrid running Windows, will also contain a hard drive to act as local media storage and digital VCR. Microsoft will build .NET servers to supply HomeStations with content via integral Broadband. The box itself will use 802.11 and/or HomeRF to pump movies and audio to remote playback devices around the home.



# The Home Networked Consumer

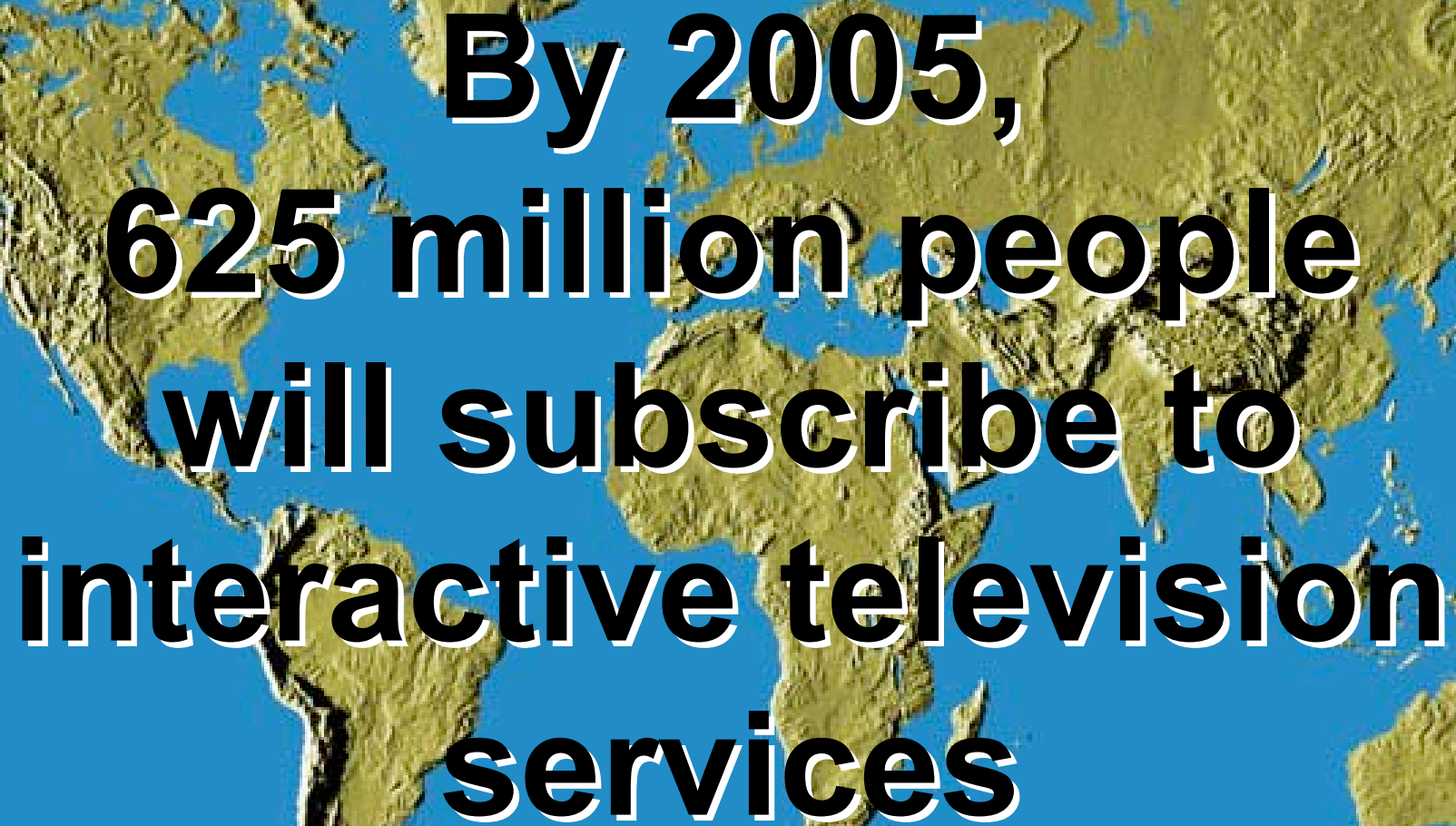


# The Home Networked Consumer

Content provider aspirations

Content providers are 'shoe-horning' diverse content to discrete devices...



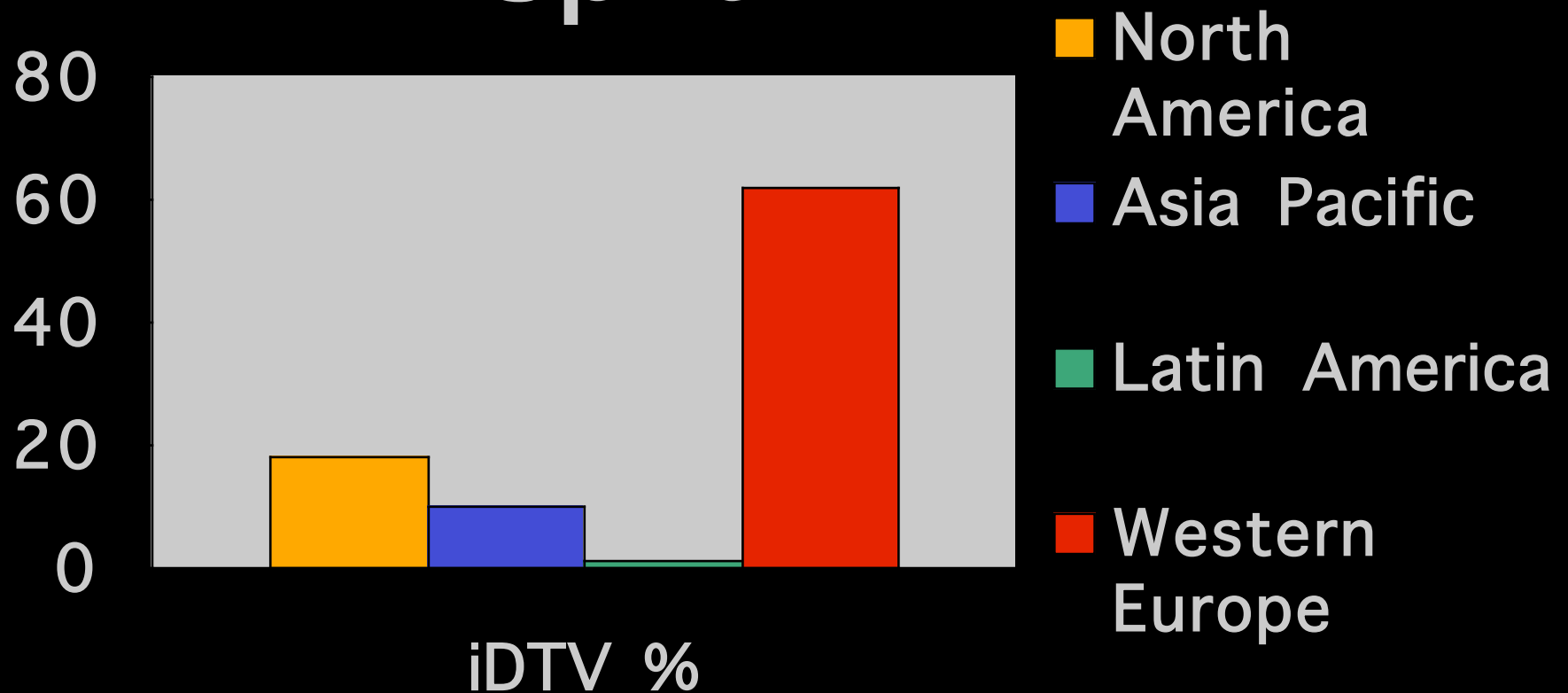
A world map with a blue background and a topographical color scheme for the landmasses, showing the continents in shades of green and brown. The map is centered on the Atlantic Ocean.

**By 2005,  
625 million people  
will subscribe to  
interactive television  
services**

*Strategy Analytics*

# The Home Networked Consumer

## World iDTV Split





# The Home Networked Consumer

What will really drive mass Home Network penetration? - again

- 66% of all UK homes can receive Ceefax/Teletext (source BBC News/Nations 1998)
- It has 23% daily reach, 55% weekly reach, 60% monthly reach
- Only 38% of UK adults (not kids) have used the internet in the last month (source BMRB Access, June 2001)

# The Home Networked Consumer

## BBC Interactive Services to Television

- DSat - 5.3m subscribers
- DCable - 1.5m subscribers
- DTT - 1.1m subscribers
- Broadband to TV - 26k subscribers
- Games consoles - 6.5m
- Web on TV - 3.2m
- There will be more people using the web via TV than PC in 2003
- Half of all UK households will be connected to the Internet through their TV's by 2005
- BBC is committed to facilitating the conversation of the BBC public



Home

13.35 16 Mar

◆ News

Sport

Weather

What's On

Entertainment

Finance

Help



Press the HELP key  
for assistance at any time

**BBC** SHORTCUTS CHANGE TV BACK MENU

# Weather Regional 24 Hour Forecast

13.35 16 Mar

The North Wednesday 12:00

Temp °C

Carlisle 8

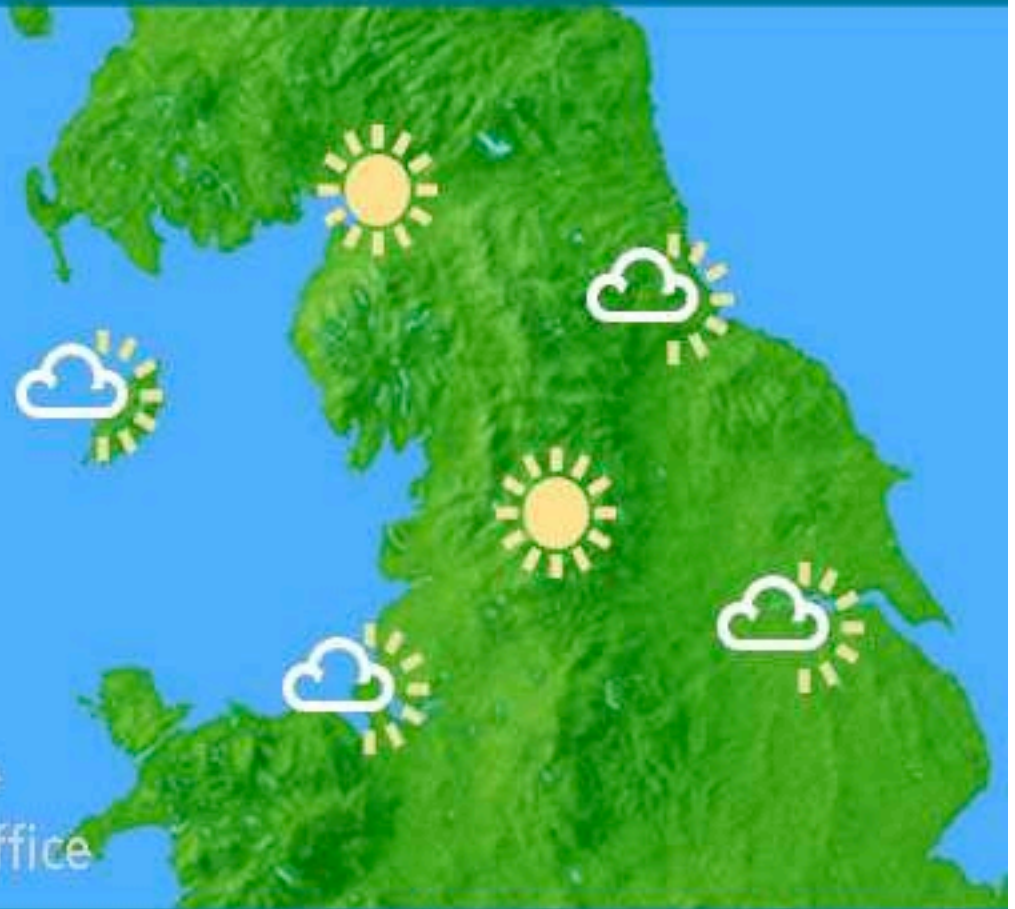
Hull 9

Isle of Man 7

Leeds 9

Liverpool 8

Newcastle 8



From the BBC Weather Centre  
in association with the Met Office

⏪ Page 1 of 9

Press RIGHT for next region ⏩

**BBC**

**SHORTCUTS**

**CHANGE TV**

**BACK**

**MENU**

Club Statistics News Info

Goals/Shots Ratio



Shooting Accuracy



Cross Completion



Tackles Won



Page 1 of 3

FT D2 Swansea 3 (Toshack) Wolverhampton 0



Key LEFT / RIGHT for other Team Info

# The Home Networked Consumer

## The way people are using iTV based services

- 19 million users per week of 'Teletext' Services
- In UK WebTV trials 44% of audience actually click through to more info (BBC News, TOTP and Eastenders the top 3)
- 46% use the 'personalisation' function - 44% play live GAMES
- Top three iTV service areas -  
1 Email/Web, 2 Educational and 3 VOD
- Top three content areas of Interactive Services -  
1 Games, 2 Entertainment, 3 Sports
- 57% would pay for educational content as part of interactive services

# WIMBLEDON 2001

## Multiscreen



BBC Two

Today at Wimbledon



Centre

Norman	2	6	3
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Keifer	*6	4	2
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⇄ Court 1 Press RED for full screen coverage

Kournikova / Zverev	3	6	2
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Williams / Williams	*6	7	4
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Court 2

Henman	4	7	1
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Agassi	*6	5	1
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Court 18

Pioline	*6	4
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Sampras	2	2
---------	---	---

**FULL SCREEN**

**BBC SPORT**

A tennis player with light brown hair, wearing a white polo shirt, is shown in a medium shot. He is holding a tennis racket with a red frame and a yellow ball. The background is a green wall with an 'IBM' logo. In the top right corner, there is a green and red graphic that says 'PRESS RED'.

PRESS  
RED

Press the RED key to return to the interactive service



# The Home Networked Consumer

What will really drive mass Home Network penetration?

- **Interactive TV - iWimbledon** - Total of 4.2m used it - 38% of all live Wimbledon viewers
- On average, 0.9m viewers watched daily
- They used it 7.2 times a week, with 54% of people claiming to have used it at least once a day

## Leaderboard

Use the UP & DOWN arrow ◀▶ keys to see full leaderboard



Hole 18 Press RED for Full screen

### First Round

1	T Woods	USA	-12	18
2	M Jimenez	SPA	+3	18
	E Els	USA	+3	18
4	J Hutson	ENG	+4	18
5	L Westwood	ENG	+5	18
	P Harrington	NZL	+5	18
7	N Faldo	ENG	+6	18
8	V Singh	CHI	+7	18
	S Cink	FNW	+7	18
	D Duval	NFI	+7	18
	L Roberts	CBA	+7	18
12	P Azinger	ITA	+8	18

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**FULL SCREEN**

**BBC** SPORT

# The Home Networked Consumer

## How viewers will consume BBC content

- Data and vision and audio to separate devices
- Personalised content from one home 'server' to personal devices
- Inter and extra communities - virtual communities
- Multiple, combination av streams around the home
- Synchronicity on discrete connected devices
- Creative applications – vision/audio editing, mixing
- Home network games
- Segmented content - clips (PDA), cross links
- Targeted promotions to individuals on discrete devices

# The Home Networked Consumer

Consumer adoption & use of digital devices



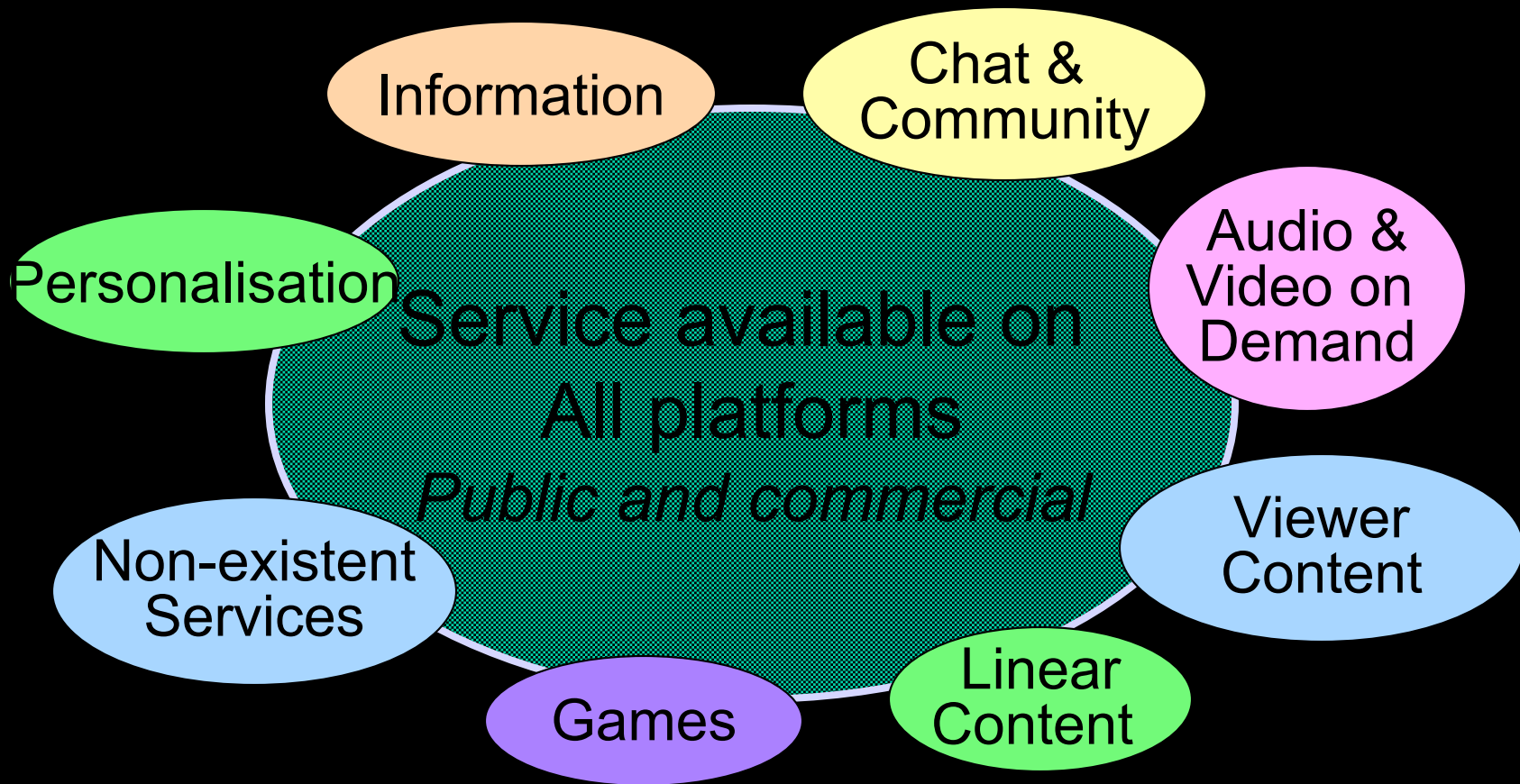
# The Home Networked Consumer

## Home network 'components' confusion

- The average number of TV per UK household was 1.74, this is expected to rise to 1.85 by 2010
- Unit sales of digital cameras will grow from over 4 million in 2001 to 19.8 million in 2006
- In Europe, 15% households will have wireless networks by 2005
- Chip manufacturers are producing single chip multi decode – NEC up to 4 streams by 2003
- 36% of homes will have multiple PCs, 9% broadband Internet, and 4% wired networks. *Strategy Analytics Jul 99*

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Ubiquitous services



# The Home Networked Consumer

## Consumer use of digital networks - sDistribution

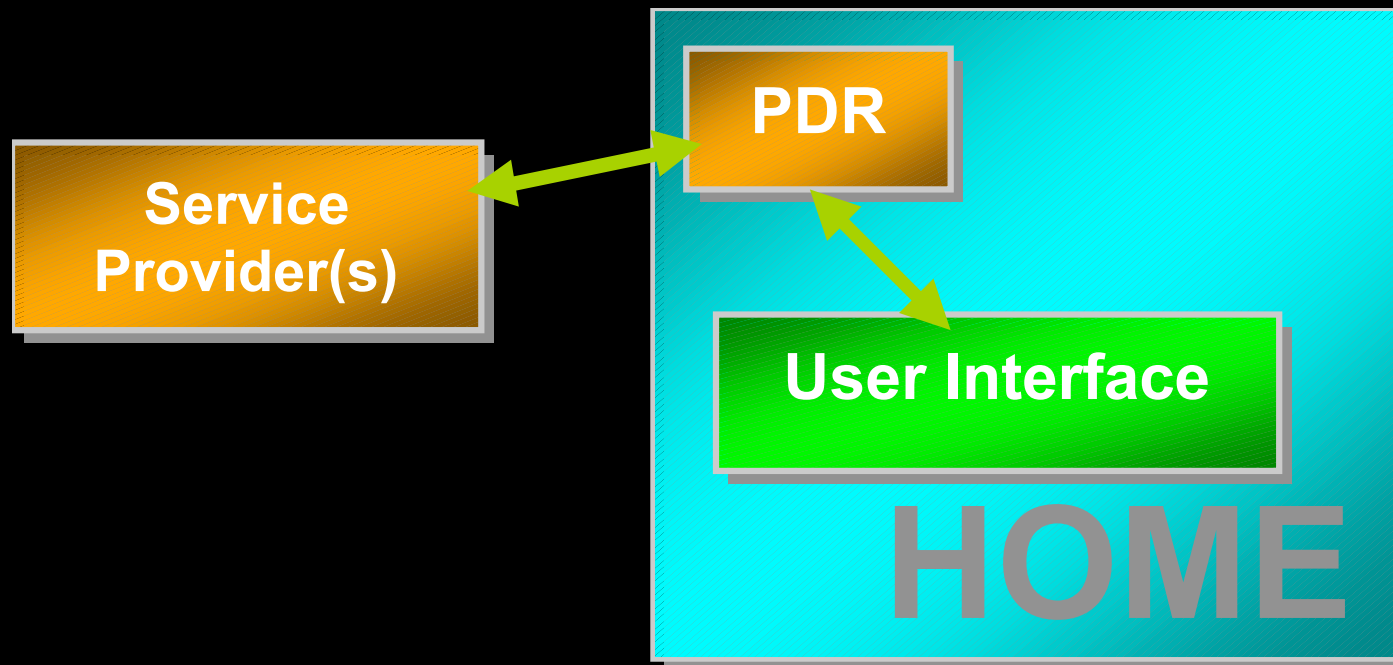
- Four new, peer to peer, file-sharing systems -- FastTrack, Audiogalaxy, iMesh and Gnutella -- were used to download 3.05 billion files during August 2001
- That's more copyrighted material than was ever shared using Napster
- Sharing/communities. BBC facilitates Britains conversation (even sharing content) and content creation and collaboration?



# The Home Networked Consumer

TV-Anytime Benchmark Document

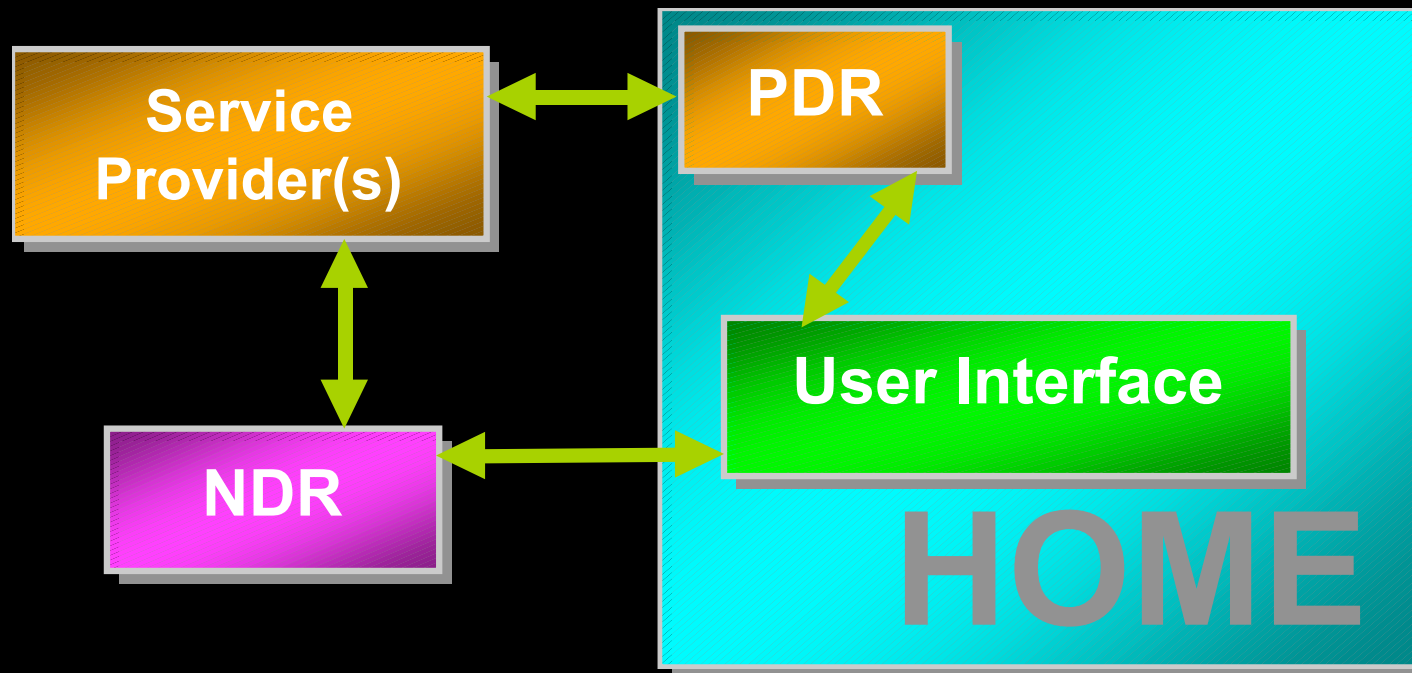
- a) Local TV-Anytime Implementation





# The Home Networked Consumer

TVAnytime - Benchmark Document  
Hybrid TV-Anytime Implementation



# The Home Networked Consumer

Standards used in home networks. TV-Anytime  
personal networks, super distribution.



# The Home Networked Consumer

- The *TV-Anytime* Forum is a non-profit association of organisations which seeks to develop specifications to enable audio-visual services based on persistent local storage
- Membership is open to all who sign the Memorandum of Understanding and attend meetings

Full information at:

<http://www.tv-anytime.org>

# The Home Networked Consumer

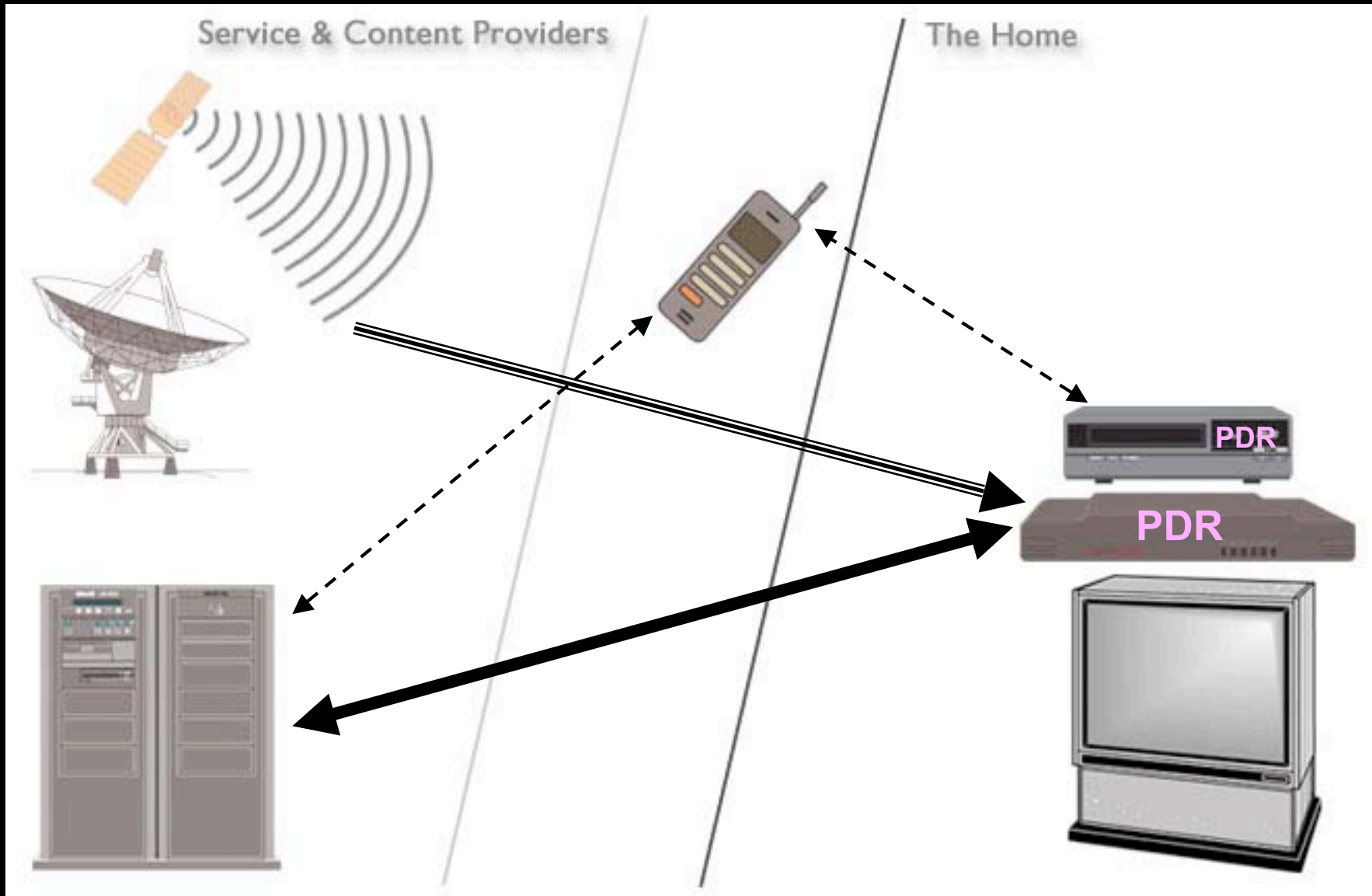
## Low-cost mass storage

- Disk drives enabling local storage, retrieval and manipulation of audio, video and data are increasing in capacity and falling in price
- Future projections vary only as to the *rate* for these trends

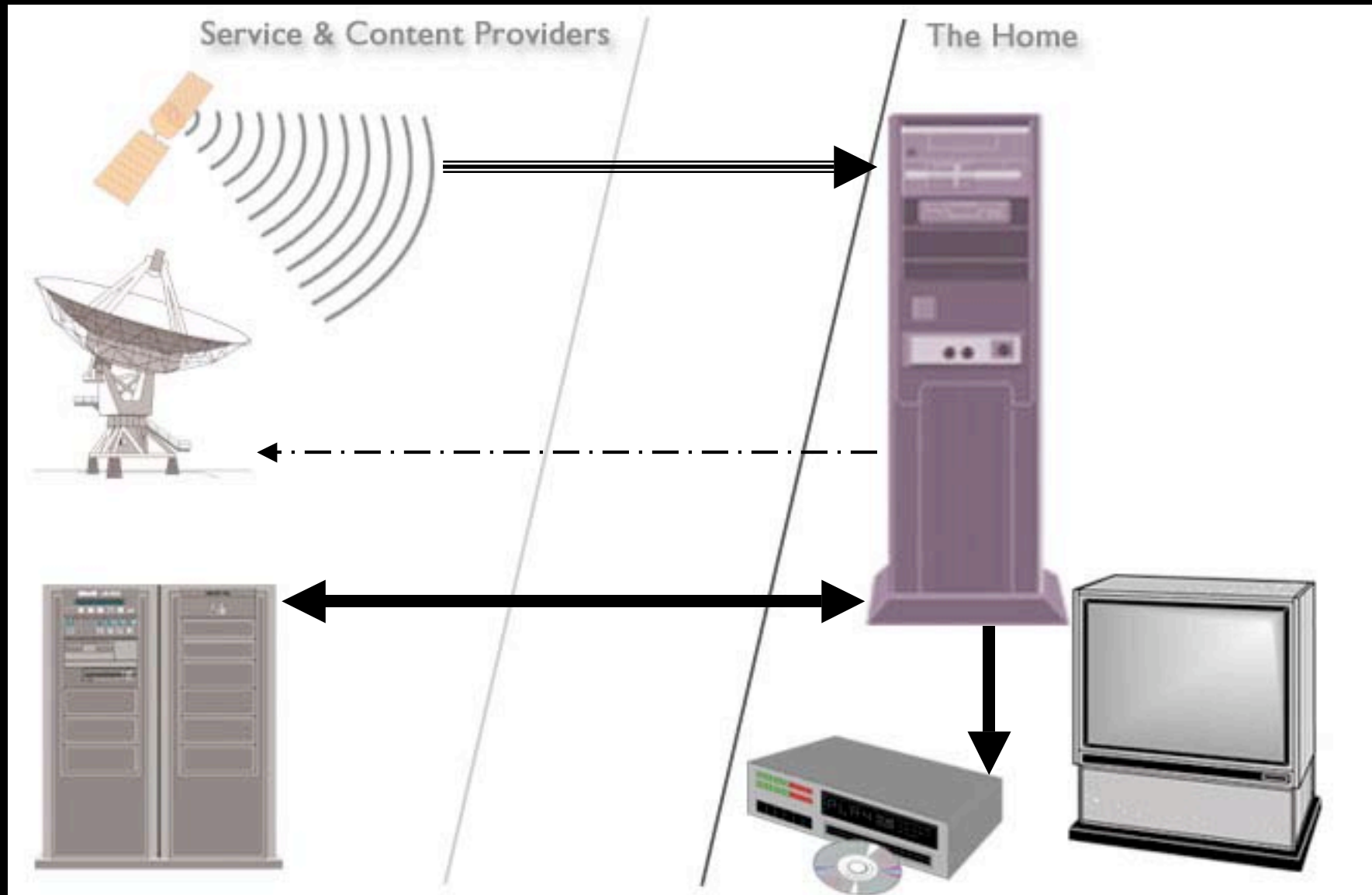
### Hours of video for \$100

Year	<i>Conservative</i>	<i>Aggressive</i>
	Factor of 2 every 18 months	Factor of 2 every 10 months
2000	4	4
2005	40	256
2010	400	16,384

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## Local Storage (Personal TV - eg: TiVo, Sky+)

- 95% of content in US will be viewed from off-line devices 2005 (*In USA in 1999 over 1.9 mill DVD players sold in 2000 4.2 million. In Japan - DVD's now outselling VHS tapes*)
- by end 2001 900,000 people will be using PDR's
- by 2004 there will be 4 million
- by 2008 80% of the world's media consuming population will be using Personal Storage systems - whether PC or set top based



# The Home Networked Consumer

**Thank you**

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