

TV-Anytime. Business Models

Personal Digital Recorders

“New relationships, new business models”

Gary Hayes

Senior Producer, BBC Interactive Television

Chair of TV-Anytime Business Models

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Presentation

- Statistics for thought & *'why a business models' wg*
- Transactional & public service opportunities
- The environment - *"from local storage to home server"*
- Towards a definitive set of scenarios

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Some figures PDR's

Forester research in to Personal Storage

- by end 2001 900,000 people will be using PDR's
- by 2004 there will be 4 million
- by 2009 80% of the world's media consuming population will be using Personal Storage systems - whether PC or set top based

Price Waterhouse

- 95% of content in US will be viewed from off-line devices 2005

More than half of UK population prefer ppc (pay per choice) rather than subscription

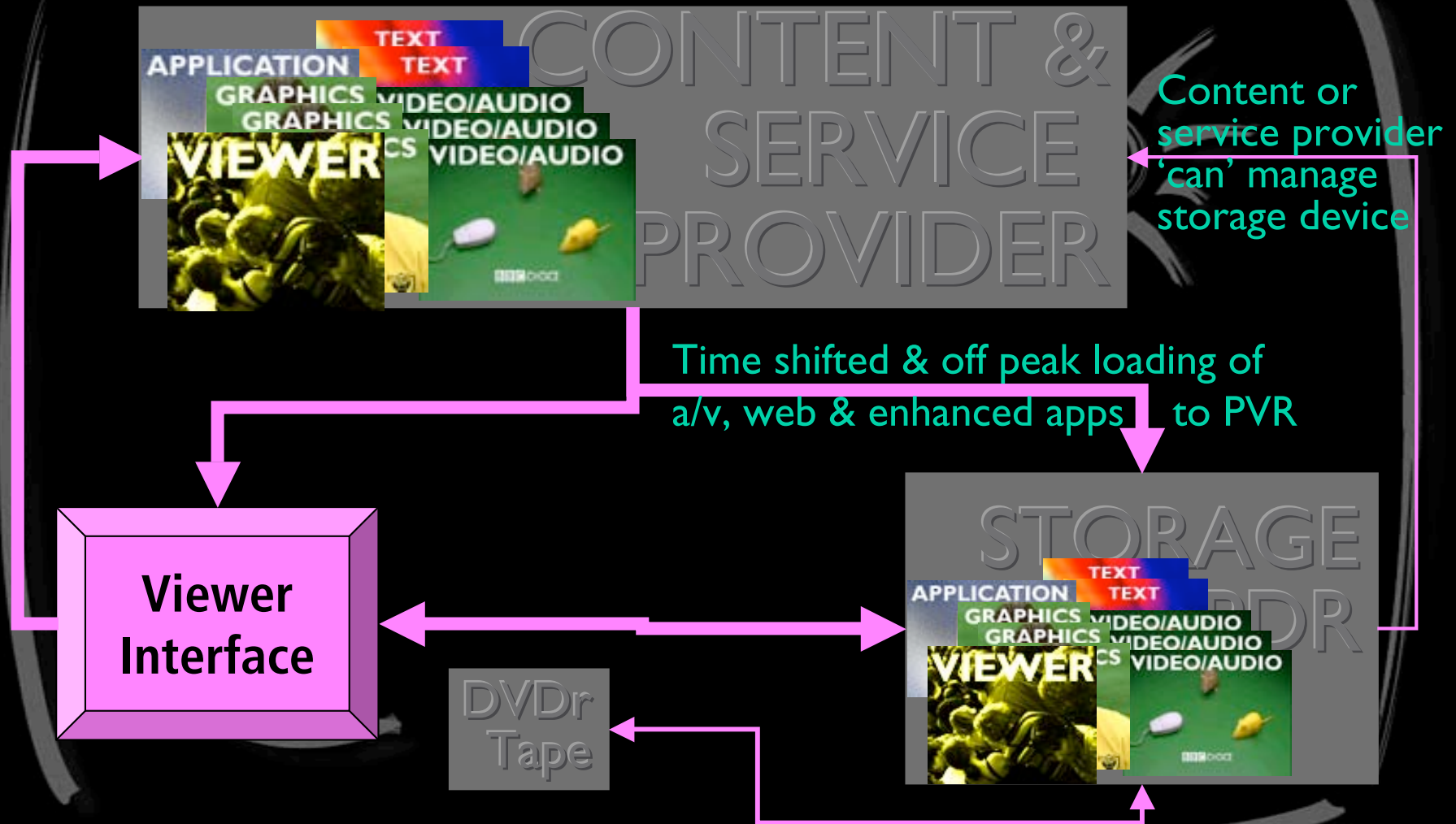
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TVAF - Business Models Group Methodology

- 1. Irvine (9/99) - Mission of our working group: *“That no system can be developed without first imagining & documenting every conceivable present and future way that it could be used”* - [link](#)
- 2. Geneva (11/99) - Identified **benefits** for consumers, content & service providers, advertisers and devised simple system for a CFC. Developed a range of scenarios based on feature sets 1 and 2 (simple & complex), *with and without return path*
- 3. Sunnyvale (1/00)- Compiled user centric experiences & classifications. Developed cross-linked business benefits
- 4. Osaka (3/00)- Converged all previous and developed ‘TVA Environment’ document including functionality road map
- 5. New York (5/00) - Phase 2, definitive value chain scenarios

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TV-Anytime. Typical delivery structure



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TV-Anytime. Revenue Opportunities

- For ALL - service & content providers, network operators, advertisers & equipment vendors
- Increased revenues from traditional models e.g.: subscription, pay per choice, network connectivity, search, selection & capture - navigational services such as user profiling & virtual channels
- New services (non-exhaustive)
 - Targeted trails and ads (matched to viewer profiles)
 - Skip 'options' - safeguarding ad revenue, protection & benefit
 - Audience tracking and aggregating, real time market research
 - Metadata provisioning e.g.: highlight packages
- Hybrid new media, delivered in linear packets, viewed non-linear - av, graphics, eTV apps, nVOD & VOD combinations

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What kinds of services could the BBC offer via TVA?

- Delivery of niche content to specialised audiences outside peak viewing
- Segmented & targeted international news bulletins
- Segmented regional news & magazine programming
- Packages of theme'd or popular programming eg: BBC comedy
- Highlight modes of key sports or live event programmes
- Educational packages with segmented, targeted learning levels
- Packages of interactive TV or web linked enhancements
- Effective 'targeted' promotion of other programmes to specific target audiences
- Creating communities using 'return path' based on programme or genre brand interest (demo)

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WG. The Environment “three evolving models”

- Model 1a and 1b - Basic ‘push’ model. Free via Unidirectional
“does not require communication from the end user to the service provider”
- Model 2 – User Response model Free + PPC via Bi-directional
“communications channel provides the capability to inform the service provider of user selections, profiles and other requests”
- Model 3 - Full interactive model Free + PPC via Bi-directional
“integration between multiple content providers, services providers, resource locators and the Internet”
- Road Map - *“step by step increase in functionality” >>>*

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Priority	PDR Functionality	Scenario	Models			
			1a	1b	2	3
1	Instant Record	I				
2	Record and playback an AV stream	I				
3	Simultaneous record and playback	I				
4	Live pause	I				
5	Content Search and Access	II				
6	Playback of content in indexed/highlight mode	II				
7	Book marking (personalisation/agents)	III				
8	Portability of user profile (personalisation/agents)	IV				
9	Updating of content	III				
10	Storage management – basic & advanced (e.g: quality)	I - III				
11	Profile management (personalisation/agents)	III				

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Priority	PDR Functionality	Scenario	Models			
			1a	1b	2	3
12	Multi-user profile support (personalisation/agents)	III				
13	Multi-modal operation	IV				
14	Targeted services using local profiles (personalisation/agents)	III				
15	Compliance to all content delivery mechanisms	IV				
16	Synchronisation of stored & 'live' content	IV				
17	Supports a variety of content types regardless of source, delivery channel or medium	IV				
18	Transferring/archiving content to & from other local devices	IV				
19	Using other devices to control PDR remotely <i>Rights Management & Protection</i> <i>Return Path*</i>	IV				

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Priority	PDR Functionality	Scenario	Models			
			1a	1b	2	3
20	Limited eCommerce	VI				
21	Ability to pull content	II-IV				
22	Synchronisation of cross media with pull elements	IV				
23	Usage data can be exploited (e.g: rights)	III+VI				
24	Consumer profile data can exploited by all	III+VI				
25	3rd party management of PDR	III+VI				
26	Updating of content with verification	III				
27	Content usage verification	III-VI				
28	Networking using the PDR (e.g: email, remote control by mobile, etc)	IV-V				
29	Full Pay Per Choice eCommerce capable	I-VI				

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WG. Towards a definitive set of Scenarios

- Basic PDR functionality – general record features
- Navigation & Selection – the capabilities of integrating ECG with sophisticated digital recorders
- Personalisation – ways that a viewer can manage the PDR system and make it more relevant to them
- PDR and TV enhancements – beyond audio and video, into web and interactive TV applications & PDR advanced features
- Communication – two way interaction between viewers based around their PDR
- Transactional opportunities – a range of monetary or benefit based relationships between viewer and provider

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WG. Transactional opportunities - *user centric*

- *I want to buy from a large selection with a range of prices - m2*
- *I would like various return or credit options – m2*
- *I would like to buy packages of content or subscribe to programming at a discount – m3*
- *I want to choose who I buy the service from – m1*
- *I want choices whether to watch or not to watch commercials or trailers – m1*
- *I would like to be paid if ‘they’ know what I am watching – m2*
- *I want to buy video segments or archive footage –m3*
- *I want to have the option to buy product or get more info immediately when watching ads – m2*
- *I would like to reassign ownership rights in my movie to someone else eg: just as I used to give a VHS cassette I already own to a friend – m2*

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Basic PDR functionality

- Dynamic Record
- Pause Modes & Time Shift
- Transport Modes



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Navigation & Selection

- Selecting content
- Selection enhancements
- Segmentation, skipping, highlight viewing & track changing
- Non-ECG capture options
- Scheduled TV or Online browsing

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Personalisation

- Multi user log in, PDR operation, PDR management
- Personalised filtering and search
- The Intelligent Agent
- Personalised capture modes & 'targeting'
- Preferred providers
- Playback & updating preferences
- Preferred quality

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PDR and TV enhancements

Non ECG or TV content capture

TV to web/data services links

URL & link collection, favourites

- Remote content selection & transfer
- Archiving
- Portability of personal profiles
- Personal content

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Communication

Mail and the PDR

- Sending trails/ads & receiving trails or ads attaching metadata to allow easy capture
- Sending indexes of their own 'highlight edit'
- Attaching low/high bandwidth content to mails
- Integration with existing mail devices, mobile, PC etc.

Forward content to a friend, send as a gift

Popular choice involvement

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Summary - Key Implications for Broadcasters

Away from 'prime time' & 'genre channels' to 'programme package'

- Most content on demand, micro payments, packaging of specialist, popular and diverse content

Understanding the audience

- Usage reporting - profiling the audience, aggregating individuals, public service feedback loop, content usage steers commission

Targeting of services for all

- Ads, trails, segments and highlights of programmes & interactive services can be cross-promoted and viewer relevant material captured on the PDR

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www.tv-anytime.org
TV-Anytime
Combining the immediacy of
television with the flexibility
of the internet

THE END

Contact
gary.hayes@bbc.co.uk

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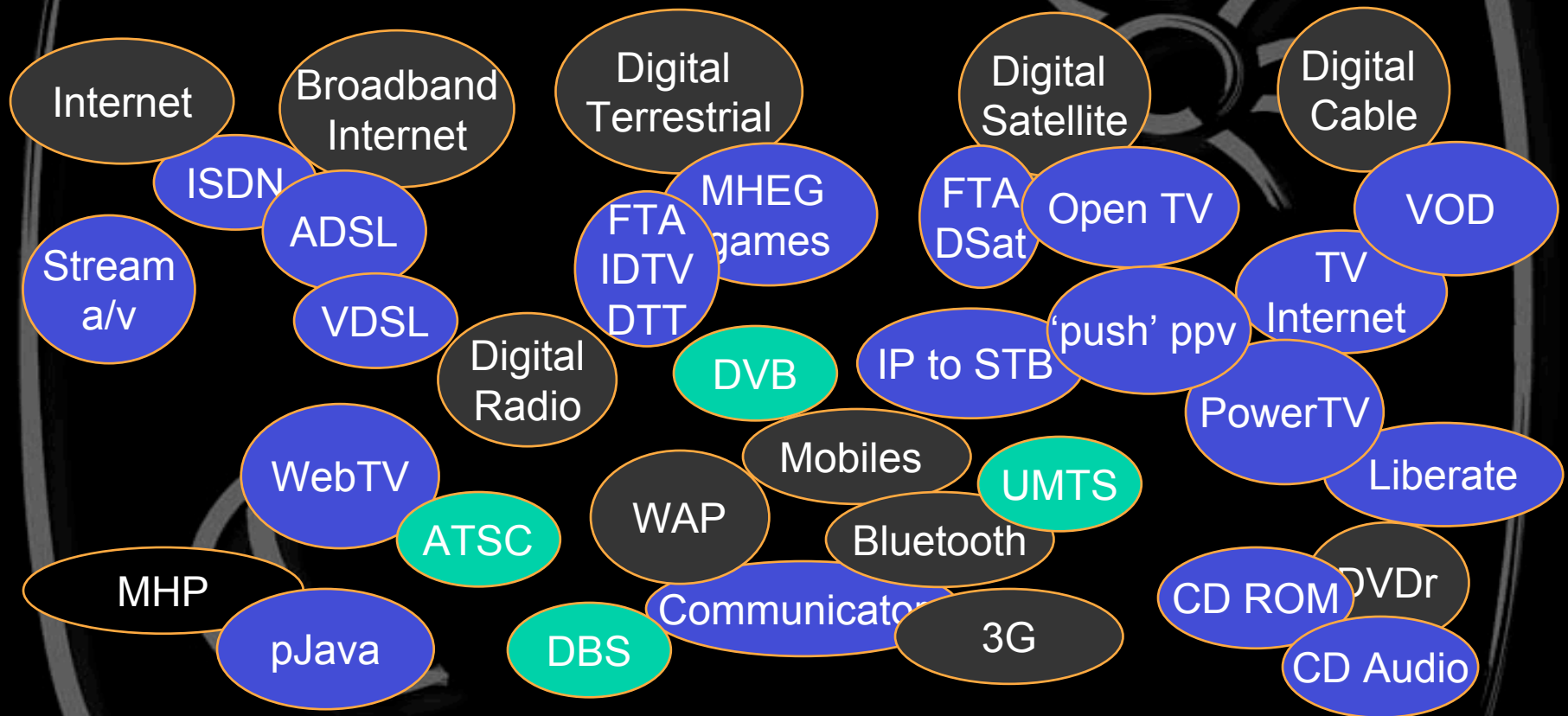
UK Digital 'Interactive' - diverse environment

Platform	Audience '99	Audience '00
Internet on PC	2.5 mill	3.8 mill
Digital Terrestrial TV 550 000		1.2 mill
Digital Satellite TV	1.8 mill	4.6 mill
Digital Cable	100 000	2.1 mill
DSL services (e.g.:ADSL)	100 000	1.1 mill
Games Consoles	(6 mill)	4 mill (net access)
Mobile 'Assistants' wap etc	25 mill	10 mill (data access)

Estimates aggregated over several UK research companies

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Agnostic - what/how content gets to the viewer



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BBC Digital Portfolio (excerpts)

- All BBC analogue services available on all new digital platforms - DTT, Dsat, Dcable, ADSL, web streaming, Digital Radio
- BBC Online - largest contentweb site in Europe
- New BBC digital channels - Choice, Knowledge, News24 and 'UK various - Play, Gold, Horizons etc'

BBC Worldwide (commercial arm)

- BBC America & World distributed world-wide digitally
- Beeb.com - successful commercial web site & ISP
- Audio CD, CD ROM & DVD titles all UK best sellers
- Playstation (Teletubbies & Noddy) and other console games

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Some key benefits for content providers

- Reduction of scheduled programming turned to advantage
- Down-loading (Web, TV and eTV) in off-peak hours
BBC has 19 streams mostly dormant 1-6 am (95 hrs!!)
- PDR's intelligently 'fish' for content in regular schedule - thereby making diverse output appear personally relevant
- Cross promoting & capture of other viewer relevant content
- Managing rights - conditional access tracking
- Providing segmented, more compact programming if the viewer requires