



Broadband Bananas

Impact of Personal Video Recorders

Justin Hewelt, June 17th, 2004

www.broadbandbananas.com

BroadbandBananas

Some leading PVR Deployments

Platform	Launch Date	No of PVRs	% of subs
Echostar	Jan 2001	1.4 million	10%
 DirecTV	Sept 2000	1 million	9%
Sky+	Sept 2001	300,000	4%
Canal Satellite	April 2003	65,000	2%
ExpressVu	Sept 2001	Est: 150,000	10%

PVR Growth in UK

- Enders project 2.5-4.5 million PVR households by 2008, representing circa 10-17% of UK TV homes and 12%-20% of the population
- Enders say over 75% will be Sky Digital households

PVR Homes are valuable homes

- Lowest Rates of Churn in PVR Homes
- Early Adopters & 'Power Users of TV'
- '9/10 customers likely to recommend it to a friend'
- PVR user demographics are amongst some of the most interesting to advertisers & also most difficult to reach

Multi-box & PVR Homes earn biggest returns

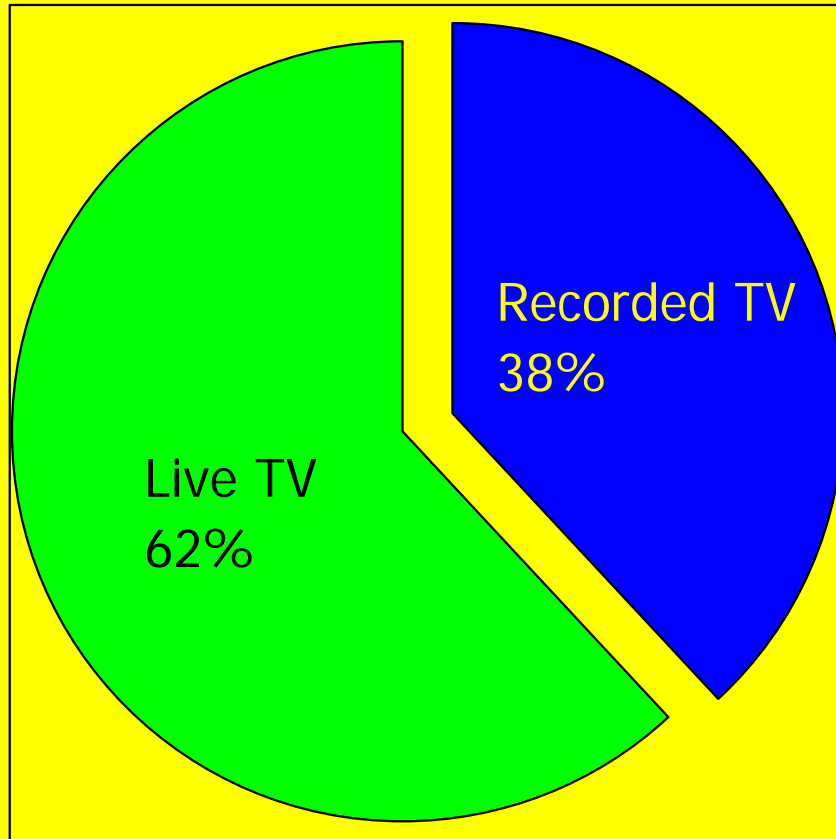
	1 STB	2 STB	1 STB + 1PVR
ARPU	\$58	\$65	\$80
Churn	24%	18%	6%

•Source: DirecTV June 2004

How do PVR's impact TV viewing habits?

- Time Shifting
- Create own Schedule
- Action Replay
- FF & RW, Commercial Skipping
- Convenience Factor

Percentage of Live vs Recorded viewing in Sky+ Homes

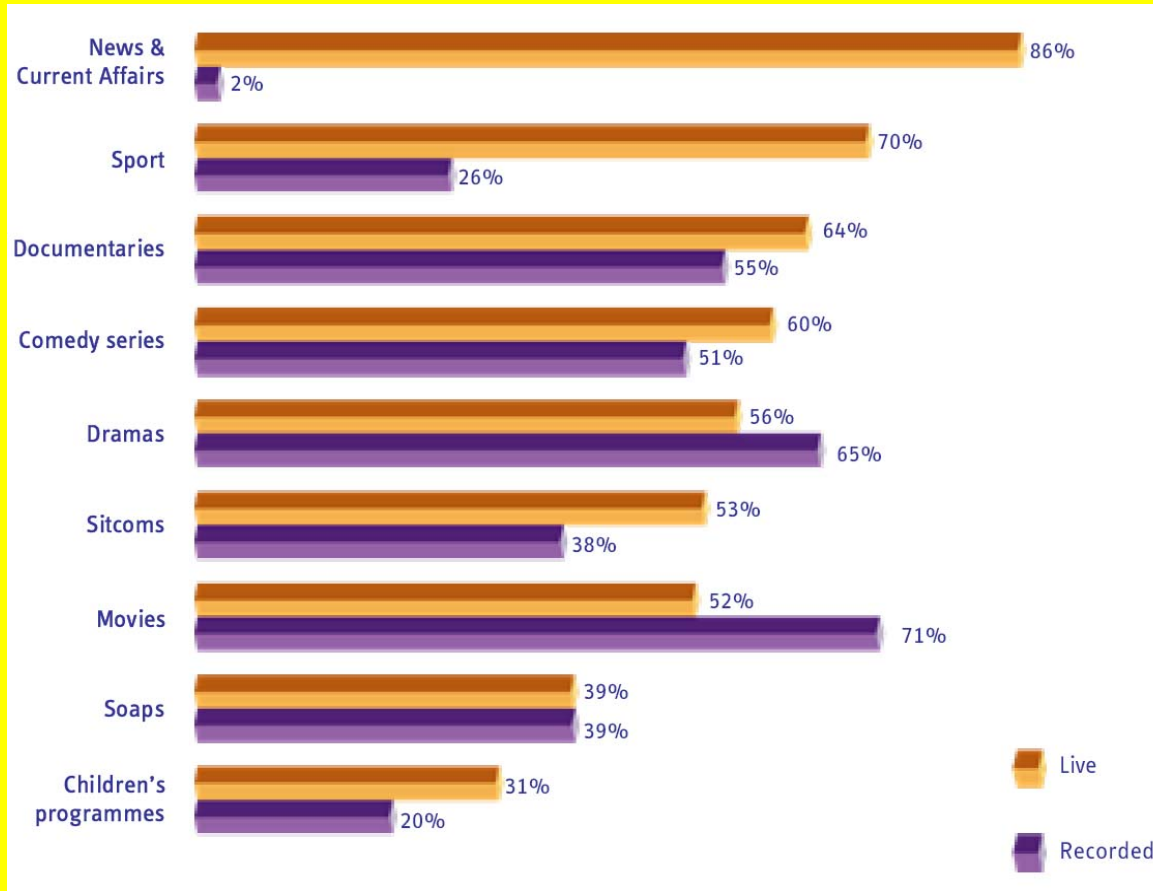


The PVR supplements core viewing, doesn't replace it



•Source: BSkyB June 2004

Timeshifting depends on genre. PVR increases overall total viewing



Primarily Movies & Drama

Av. 27.3 hours p/w with Sky+ vs. 23.4 hours before

•Source: BSkyB June 2004

PVR homes watch a wider range of channels

- 54% of Sky+ homes watch a wider number of channels
- Spread of viewing in favour of multi-channel and away from the 'trusted' terrestrials
- Terrestrial viewing decreases by 21%

Impact on Advertising...

- 76% do not watch any ads during recorded content (BSkyB)
- Sky researching impact with key clients

Strategies for Broadcasters

- Encourage loyalty through better use of promos before/after programmes
- Fold programme sponsorship into elements viewers aren't able to skip

Penetration Threshold for PVRs

- 75 of advertisers said they likely will cut spending on television advertising when DVRs penetrate 30 million households
- (108 Mil US Households)
Approx 40 Million US digital TV Homes
- Impact in the UK?

•Source: Forrester Research

PVR's Impact on iTV

- PVR's allow viewers to time-shift video
- Confusion of DTV vs Interactive TV vs PVRs.
- PVR's of today have almost nothing to do with interactive TV

When using current Sky Plus....

- No access to ETV if watching with delay or recorded programming!
- No iTV Advertising!

When in an iTV application:

- No Pause, no rewind etc.

Future PVR developments

- Able to record some ETV programmes but perhaps not multi-stream services such as Walking with Beasts or D-Day
- Technical & organisational challenge. E.g. return path would need to accommodate interactions from recorded applications & programmes
- Ask ourselves what ETV applications on platform today would make sense recorded?

CSat Approach to local storage



- Part of HD belongs to Csat; Box Rented.
- Disk can be used for cache of data & video e.g. clips & PPV with instant start

Applications specifically for PVR STB

- What level of penetration required before it becomes a market worth developing applications for?
- Broadcasters may be allowed to have access to PVR storage but at what cost? Who owns storage space?
- Could be a richer, more interactive environment. DVD-style instant access to content. No need to constantly stream loops or constantly carousel data

Local storage then raises the issue of networking of content in home

- 43% of PVR owners in the US have bought 2 or more PVRs for the home
- Solutions to network multiple TV's off a single PVR – as with Echostar's premium PVRs
- Eventually digital home networking