Producing Digital Interactive TV

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Producing Digital Interactive TV

- Where are we, where are we going?

- A complex landscape

- Evolving services

- Building Bridges

- Structure or chaos

- Interface design

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Interactive TV - what is it? On the TV…

- •"It's like a fast web site with full screen video"

- •"It's like a CD Rom with a TV programme"

- •"It's like you are the film editor & director"

- •"It's your own TV channel, you choose what you want and when you want it"

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Where are we, where are we going?

- We are new pioneers
- This Alexandra Palace, this is 1946?
- This is the Internet in 1984
- The real goal, as ever is to understand what the audience wants
- No one really knows what will work yet, but the ones who try are more likely to succeed

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Where are we, where are we going?
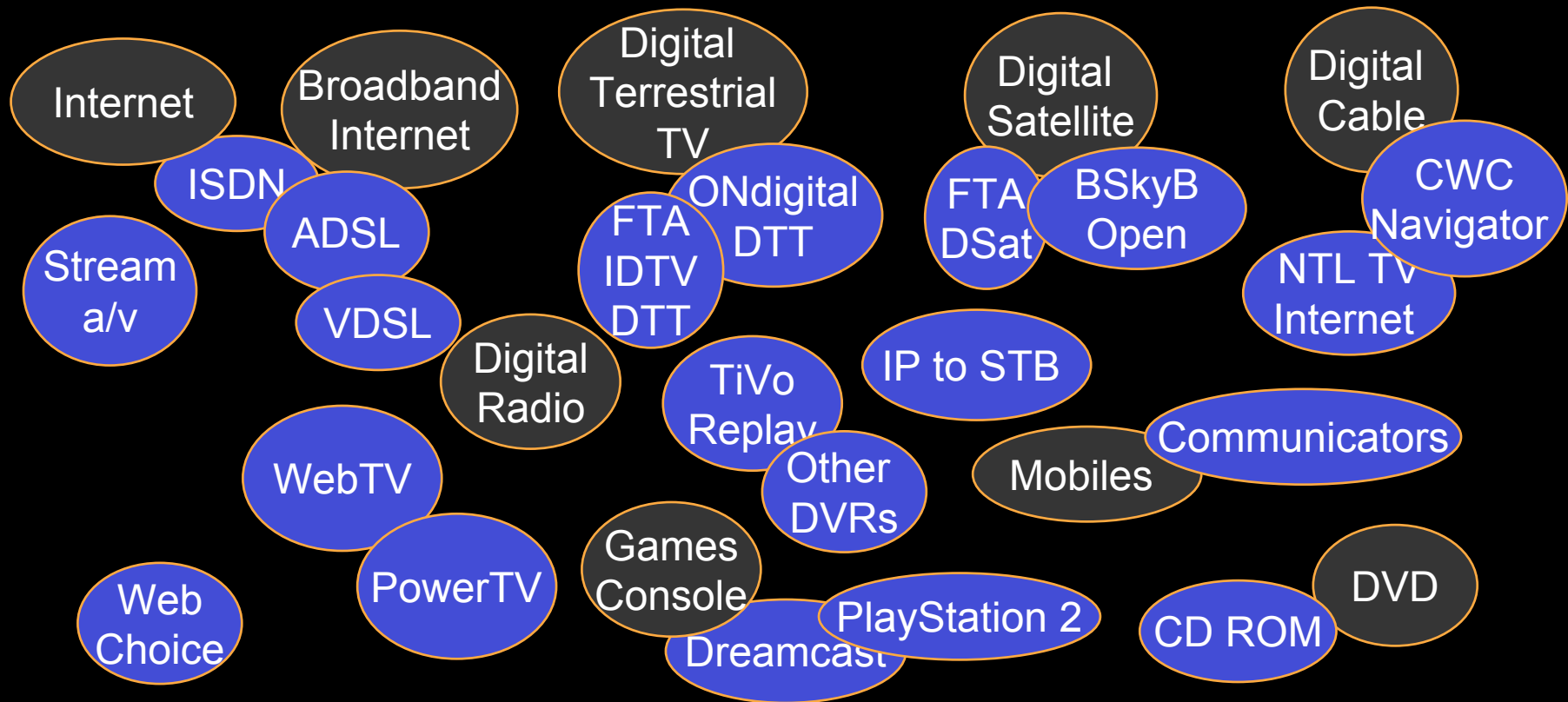
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Where are we, where are we going?

- How big an audience - 7 million interactive by 2001
- 32% of households will take up interactive TV
- 5 years time half of all programmes interactive
- Key early target groups will be Kids, Young Male Sharers, Young Parents
- Early genres - News, Sport, Education, Children's and Entertainment
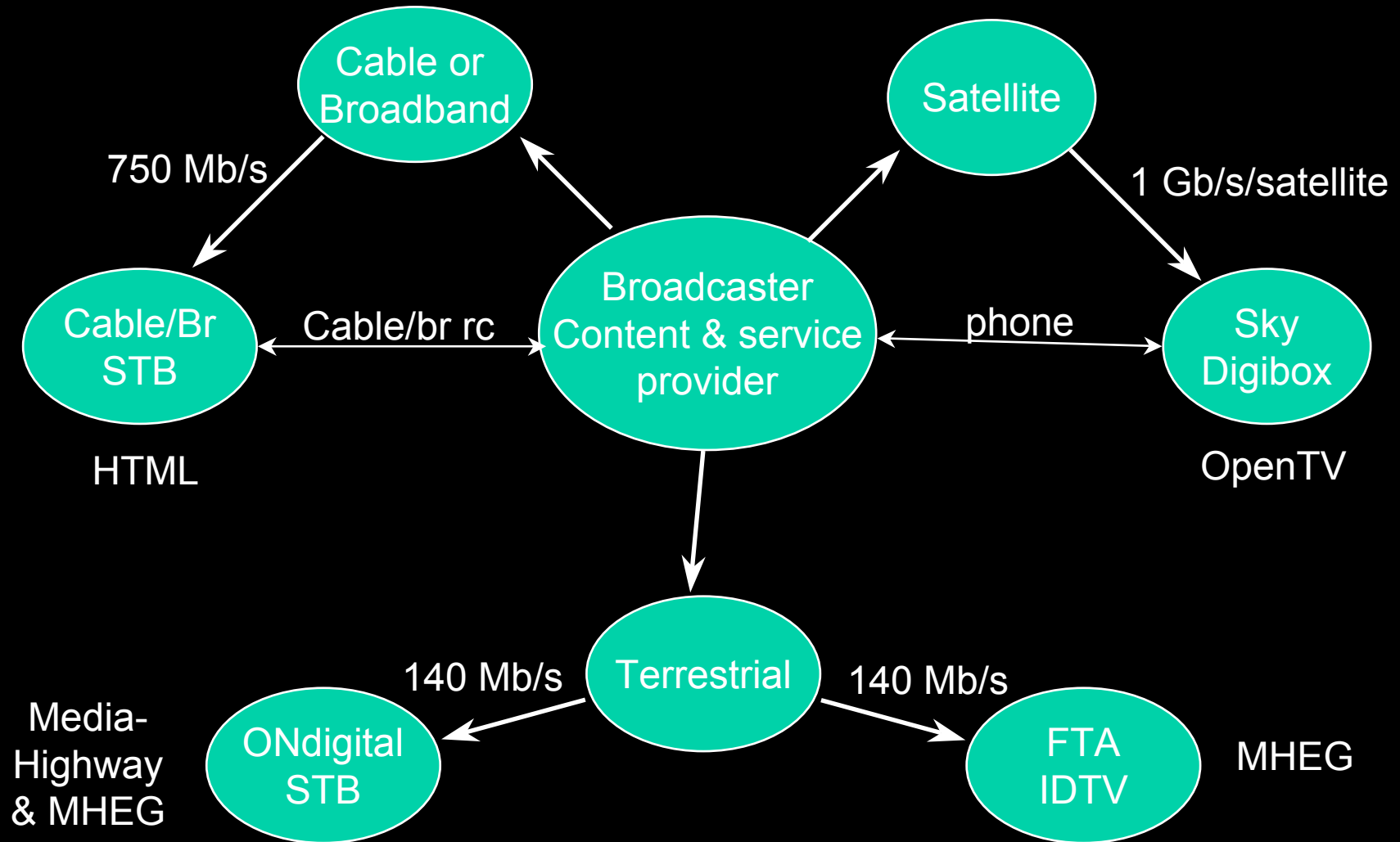
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A complex landscape

Quick, choose a distribution platform!

Internet

Broadband Internet

Digital Terrestrial TV

Digital Satellite

Digital Cable

ISDN

ADSL

ONdigital DTT

FTA DSat

BSkyB Open

CWC Navigator

Stream a/v

VDSL

FTA IDTV DTT

NTL TV Internet

Digital Radio

TiVo Replay

IP to STB

WebTV

Other DVRs

Mobiles

Communicators

Web Choice

PowerTV

Games Console

PlayStation 2

DVD

Dreamcast

CD ROM

UK Environment - R.Cooper

Cable or Broadband

750 Mb/s

Satellite

1 Gb/s/satellite

Cable/Br STB

Cable/br rc

Broadcaster Content & service provider

phone

Sky Digibox

HTML

OpenTV

140 Mb/s

Terrestrial

140 Mb/s

Media-Highway & MHEG

ONdigital STB

FTA IDTV

MHEG

BBC Broadcast   © Gary Hayes, Senior Producer 2/10/99   Interactive TV

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Where are we, where are we going?

% of Households in the UK

100%
90% — 1997 US multi-channel penetration[1] — FTA ATT   25%
80%
70% — Possible Announcement of timetable for Analogue switch — FTA DTT   18%
60% — Pay DTT
50% — Interactive services available
40%   12%
30%
20%   Dcab   24%
10%
0% Asat   Dsat   21%

1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

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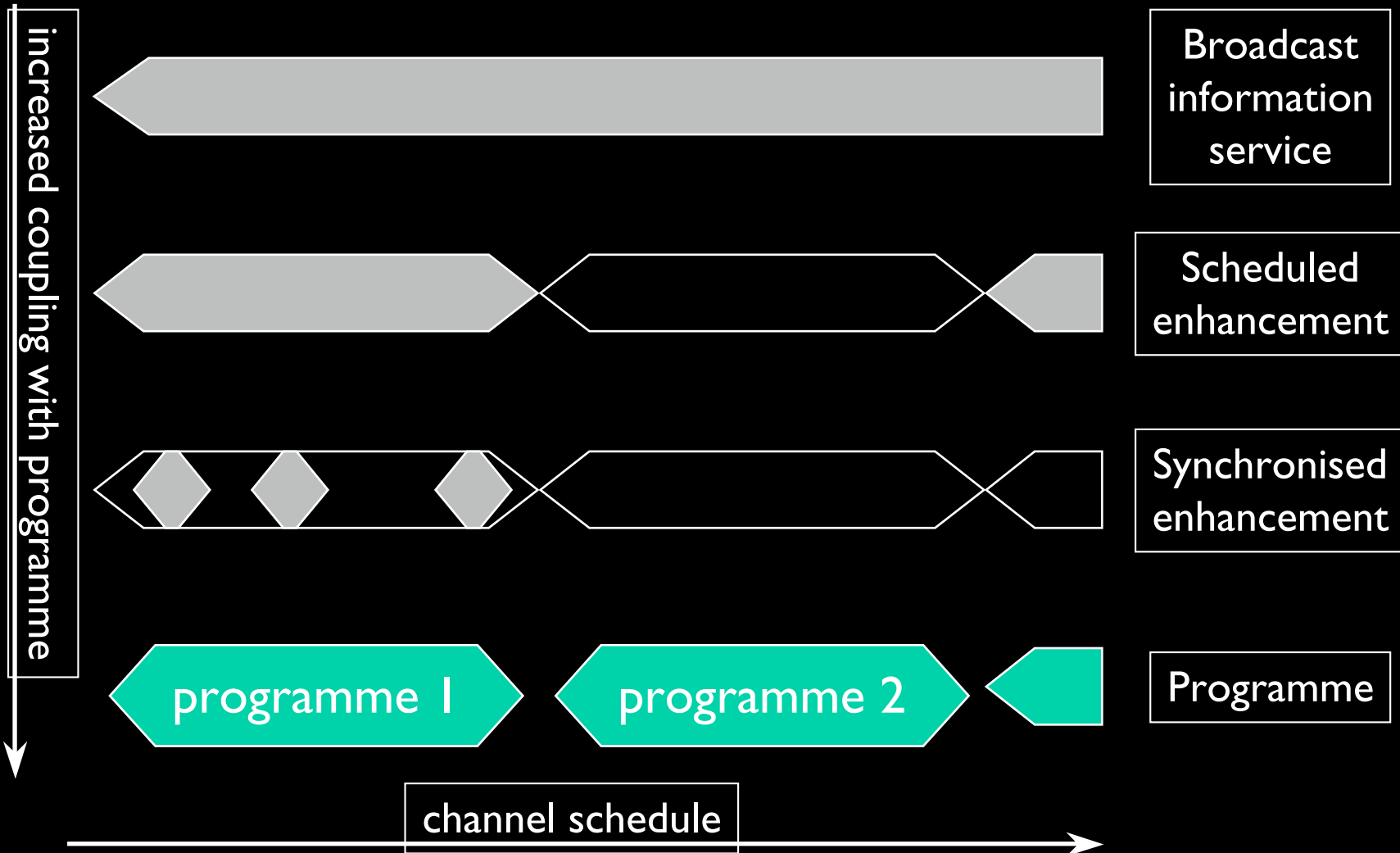
Evolving Services

Simple, evolving enhanced TV models

- Text & graphics available with video
- Dynamic data synchronised with vision
- Multiple audio streams with the vision
- Multiple vision streams - one event, parallel activity
- Multiple vision steams - alternative views of same event

Adding storage

- Access to background-stored, book marked items
- Multiple routes through a programme - non linear
- Personalised programming - virtual channels

Levels of Programme Enhancement

increased coupling with programme

Broadcast information service

Scheduled enhancement

Synchronised enhancement

programme 1

programme 2

Programme

channel schedule

BBC Broadcast   © Gary Hayes, Senior Producer 2/10/99   Interactive TV

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Where are we, where are we going?

The future?

- Box storage - 500 hours intelligent storage in 5 years
- Faster processors in STBs - PC inside TV in 3 years
- Personalisation - Digital TV knows you in 2 years
- Transaction - Digital TV becomes a life tool, now!
- Broadcasters Navigators - truly integrated services

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Local storage - a future!

Storage possibilities - Introduction

- In the last 10 years there has been a 100 fold increase in the capacity/cost ratio of hard disks - doubling every 10 months

- In 2000, 10 GB of hard disk storage will cost $100, providing four hours of MPEG2 audio-visual storage

- The capacities below, doubling every 10 months or a pessimistic 18 months, are based on 5.5Mbit/s video stored on a $200 disk,

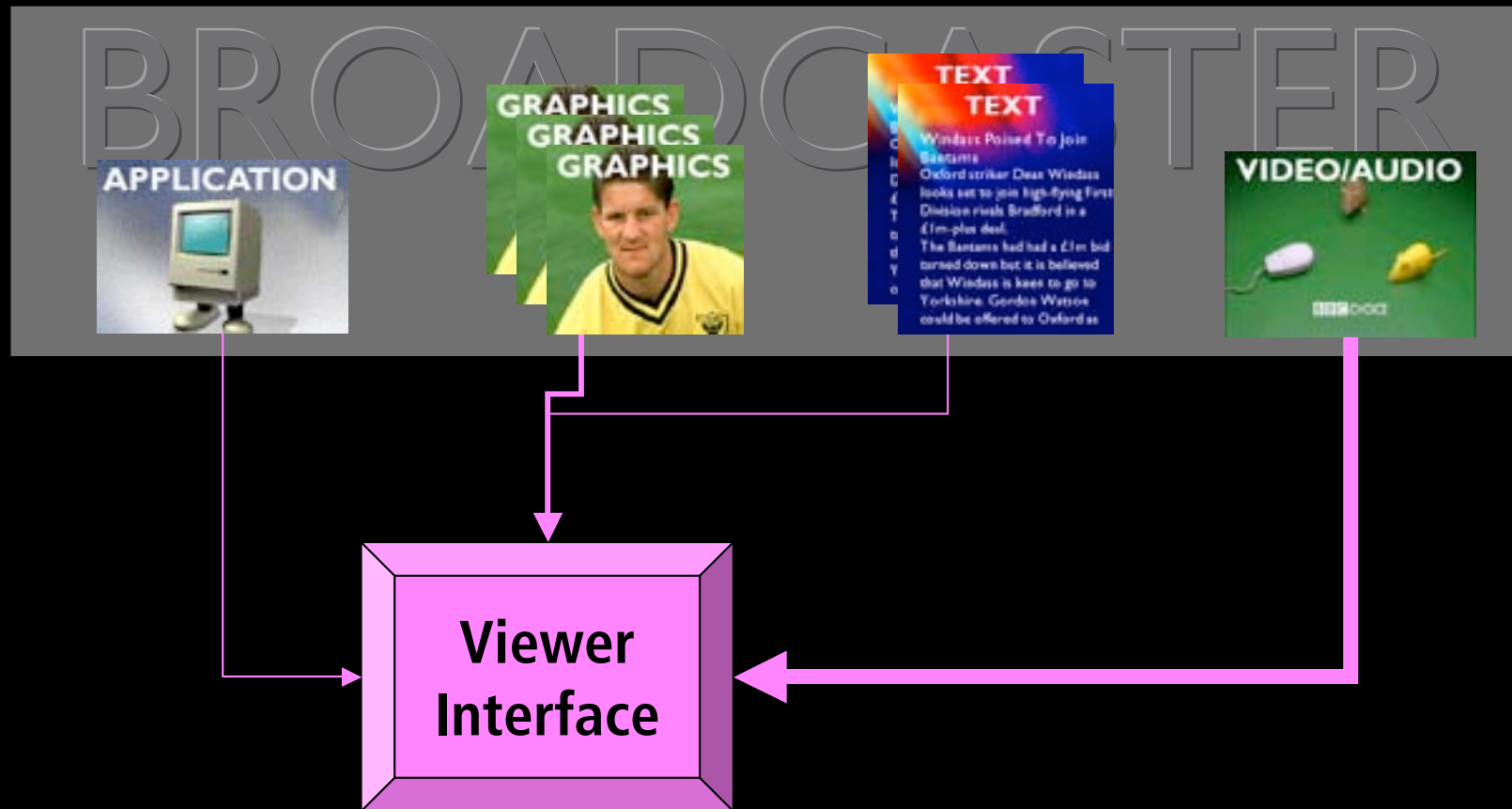| Year	Pessimistic	Expected
2000	8 hours	8 hours
2005	80 hours	480 hours
2010	800 hours	28,800 hours

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Local storage - a future!

- Storage possibilities - Benefits for content providers
- Usage reporting data - did people request & store
- Profiling the audience - aggregating individual tastes
- Targeted push/pull services - ads, trails, programme
- Downloading (Web, TV and eTV) in off-peak hours
- Transaction control - monetary based services
- Rights management - conditional access models

INTERACTIVE TV EVOLUTION - 2000 +
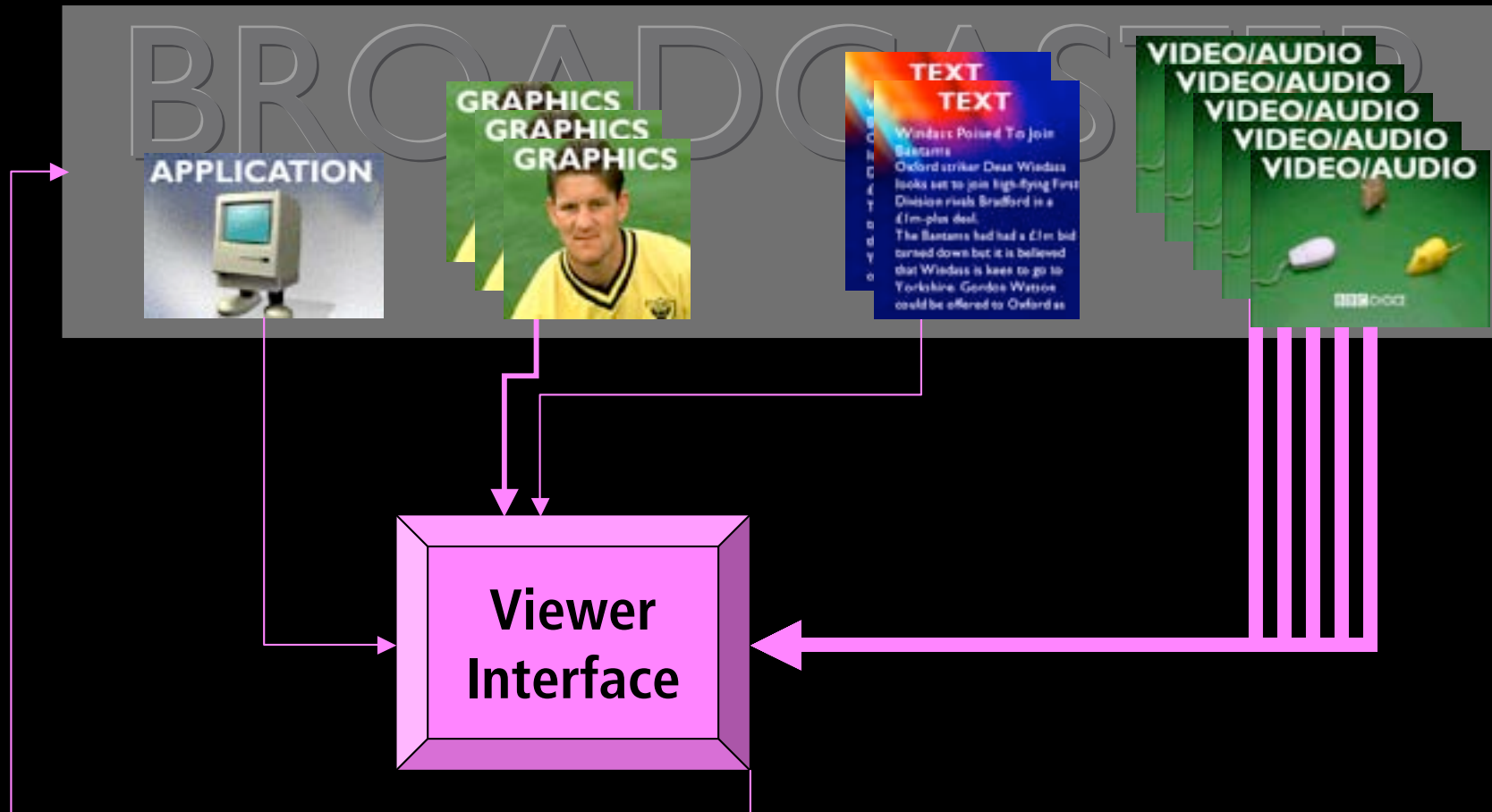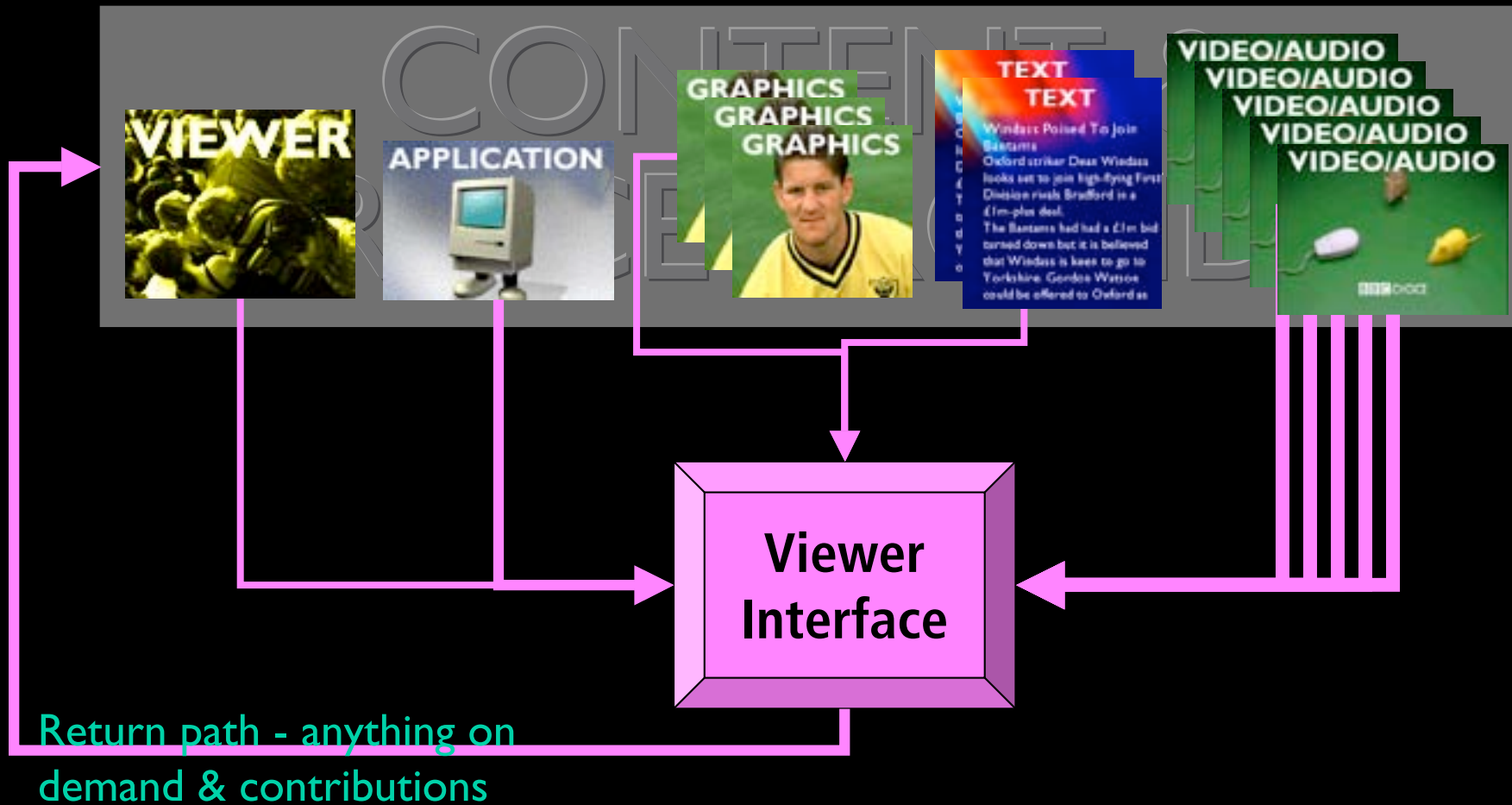
- Model 2 - Broadcast scheduled services, multiple audio/video
- Note: may or may not have a return path, some personalisation

BROADCASTER

APPLICATION

GRAPHICS
GRAPHICS
GRAPHICS

TEXT
TEXT

Windass Poised To Join
Bantams
Oxford striker Dean Windass
looks set to join high-flying First
Division rivals Bradford in a
£1m-plus deal.
The Bantams had had a £1m bid
turned down but it is believed
that Windass is keen to go to
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could be offered to Oxford as

VIDEO/AUDIO
VIDEO/AUDIO
VIDEO/AUDIO
VIDEO/AUDIO
VIDEO/AUDIO

Viewer Interface
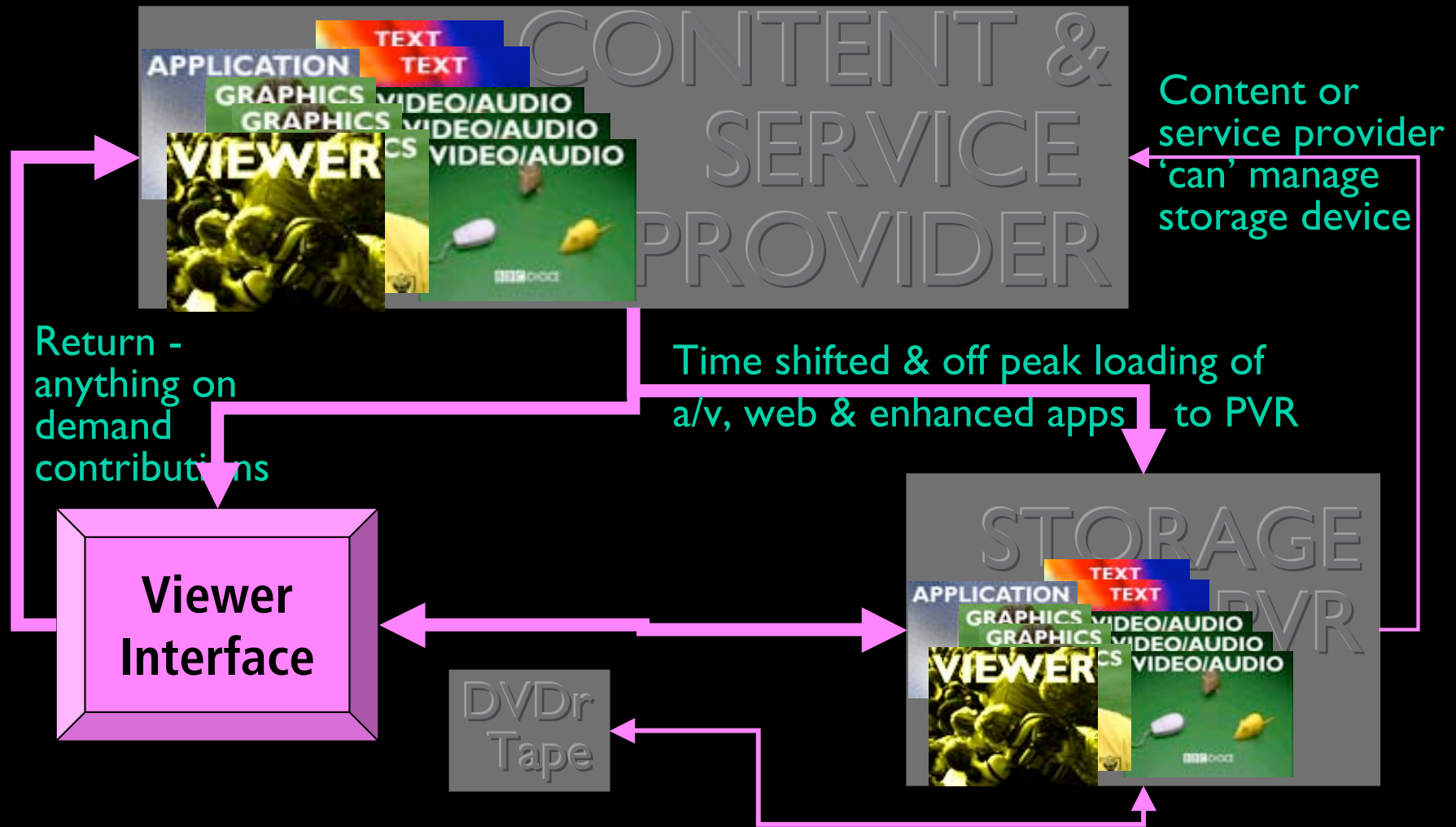
Return path, votes, transactions

INTERACTIVE TV EVOLUTION - 2001 +
- Model 3 - On demand services, 'fat' return path (Dcable/broadband)
- Note: content from broadcaster and/or service provider

VIEWER

APPLICATION

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Viewer Interface

Return path - anything on
demand & contributions

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INTERACTIVE TV EVOLUTION - 2001 ++
- Model 4 - AOD, 'fat' return plus unlimited storage

CONTENT & SERVICE PROVIDER

Content or service provider 'can' manage storage device

Return - anything on demand contributions

Time shifted & off peak loading of a/v, web & enhanced apps to PVR

Viewer Interface

STORAGE PVR

DVDr Tape

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Building Bridges

Golden Rules (already?)

- If linear works don't mess with it
- Make sure you are adding value
- It is not technology for technologies sake
- Make sure you know what the viewer should be doing
- Understand your audience
- Have you a team with correct complementary skills
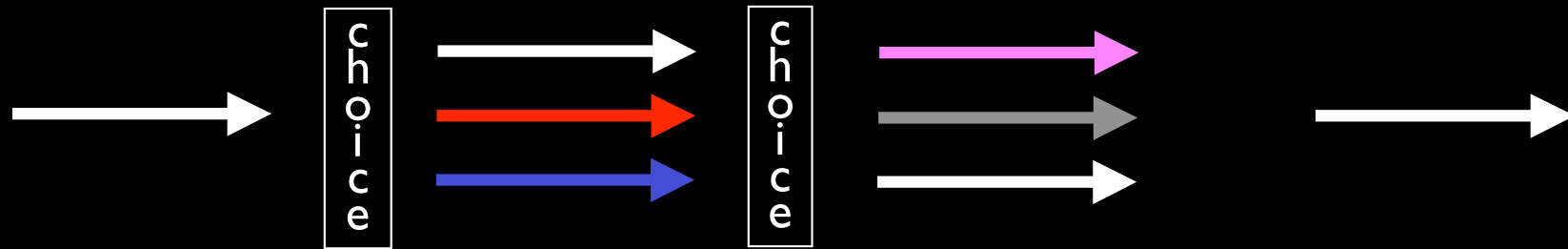
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Building Bridges

The concept. Questions, questions, questions
- The programme - is it a new format or existing brand?
- Can value be added through interactivity?
- How are you going to make audiences interact?
- Which is your ideal platform? Five and counting
- Does it have depth. Will people stay & come back?
- Will the involvement & personalisation create loyalty?

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Structure or chaos - types of non linear TV

Broadcast multiple routes - temporally limited
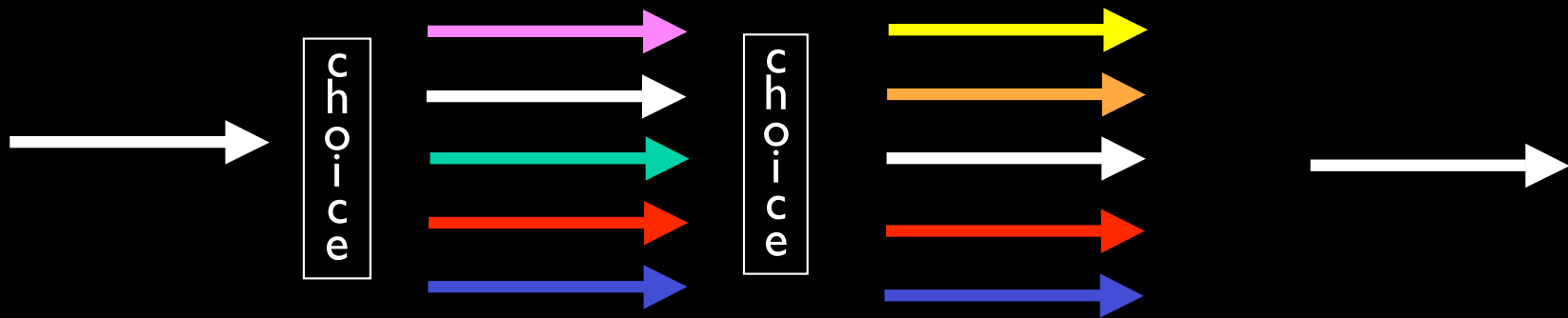
On demand routes - semi structured content, user controls time

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Building Bridges

Lets get going

• Is the editorial direction based on interactive relevance?

• Have you listed what is relevant or just what you have?

• Where is the content going to come from - web teams or new iTV teams?

• Are there templates already available which roughly fit your plans?

• Rights - can the material be used?

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Building Bridges

Designing choice

- KISS for your audience, guide by the hand in early days
- In this development period listen to the programmers & test, test, test & then test a little more
- Too much choice, endless menus, hierarchical horrors
- Breadcrumbs, no more where am I, lost switch off?
- Depth of interactivity reveals navigational metaphors
- In sync - build moments of passivity & activity

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Structure or chaos

The intention: to engage, entertain or inform. This dictates the type of interaction

- Discrete - viewer selects and receives in own time
- Continuous - time based selection in varied environs
- Concrete - viewer is represented in the interface
- Character - viewer is a character in the interface
- Resonant - what viewer does changes content

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Interfacing design for beginners

- What on earth can you really get on a TV screen
- Branding - make sure people do not overdose on logos
- Crossing over - where does broadcast & web design end and TV interface design begin?
- Creating the programme identity without hiding the interface?
- Fitting in to a family. Be different, but not that different

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And finally!

- Over to the programmers. Specifying the impossible
- Ignorance of platform is suicide
- Responding to change
- TV's do not crash, well they didn't do
- Keep it live, keep it real
- Learn from our interactive past