

waptv

Technology Briefing



Open....

sky

Welcome

Tobin Ireland
Group Sales Director – Sky Interactive



Open....

sky

The Agenda

- Welcome Tobin Ireland
- Digital Services in an Internet World
Ian Valentine
- Technology Overview (waptv) Patrick Sansom
- Service Demonstrations Ian Valentine
- Platform Launch Points and Styles John Withnell
- Coffee
- The waptv developers' programme Gary Smith
- Interactive Advertising Miriam Douglas
- Q&A



Open....

sky



Digital Services in an Internet World

Ian Valentine



Open....

sky

A Blast from the Past

- *"The Internet is a Tidal wave. It will wash over nearly all industries drowning those who don't learn to swim in its waves"* - Bill Gates
- *"One third of consumers interviewed said they expected to do most of their shopping in the future via the Telephone, Internet or television."* (Bossard Consultants research, 1997)
- *"According to the CBI, the Internet technology available in 10 years (2007) will be sufficient and widespread enough to outstrip the high street in terms of sales"* Internet Business Report - 1997



Open....

sky

A Blast from the Past

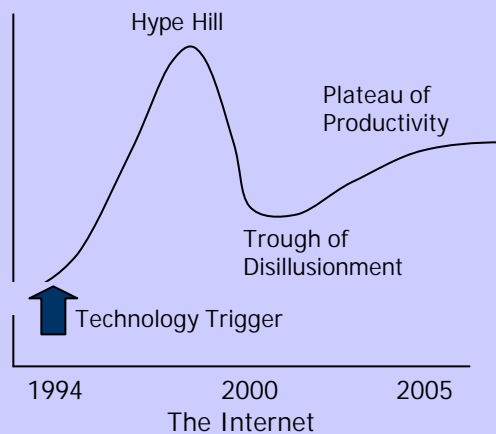
- *"By the year 2000 a third of the most attractive households will be ready to buy online"* - (McKinsey)
- *"Consumers are clearly looking for a way to divide shopping for staples distinct from browsing for fresh/novelty/impulse/luxury purchases"* (Financial Times Management report)
- *"There will be a new wave of growth around the middle of the next decade responding to new user-friendly easy access low cost technology. It will enable the 15-20% hard core of "reluctant shoppers" who dislike going to the store to become near dedicated electronic shoppers instead"* (CSC Kalchas research)



Open....

sky

Technology Adoption Profile



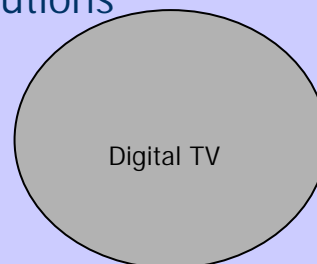
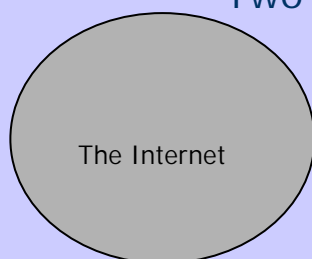
- When a Technology Trigger occurs, its effects are hard to predict.
- Fax machines did not replace the post office!
- The Internet did not create a "new economy"
- Now's the time to see benefits



Open....

sky

Two Revolutions



- The Network
- The "Content"
- Technologies
- Skills
- Infrastructure

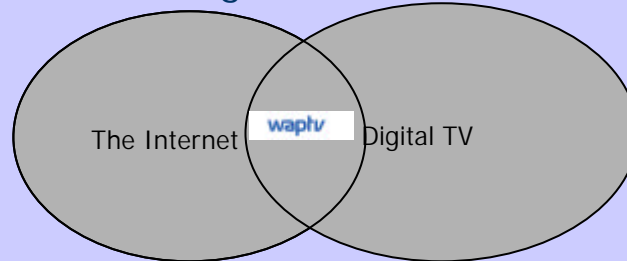
- The Platform
- The Subscribers
- Digital Broadcasting
- Skills



Open....

sky

Combining the Two Revolutions



- waptv - Not a new technology trigger
- waptv – Not Internet on the TV
- waptv – An innovative way to combine two revolutions, delivering new value for both
- Sky – “Digital Services for everyone”



Open....

sky

This week's FT

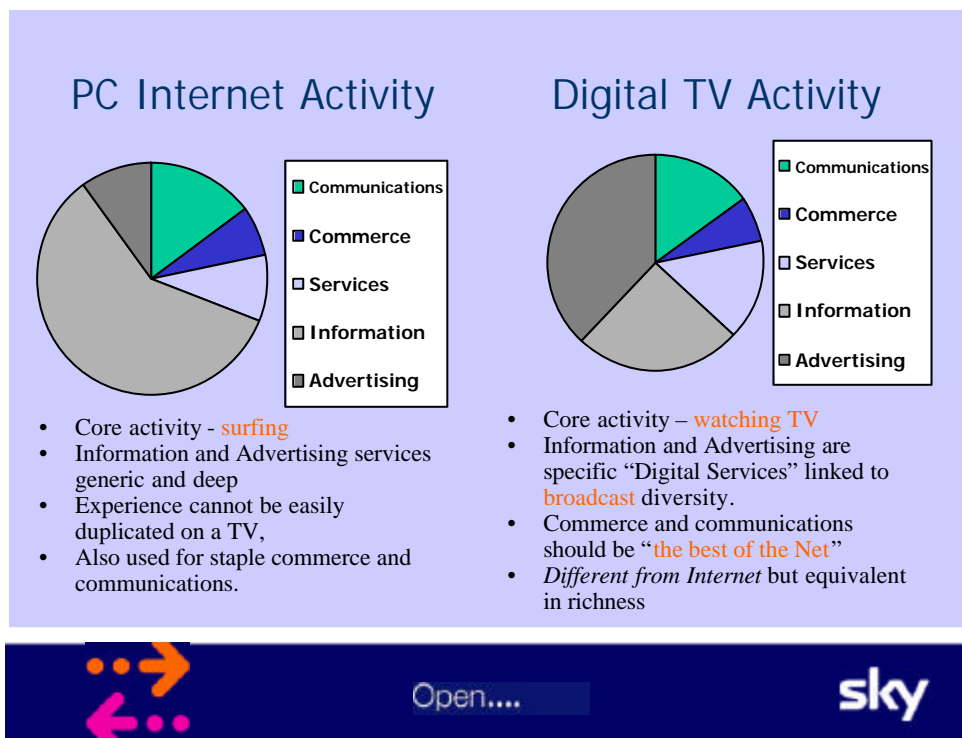
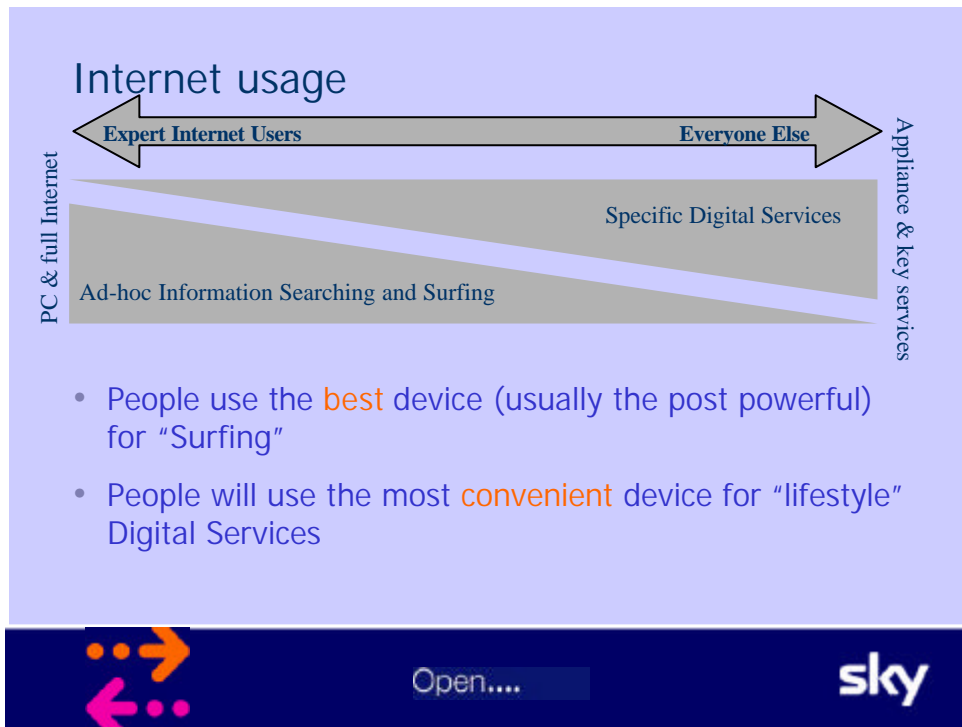
“Digital TV reaches almost as many UK homes as the internet .
ITC’s annual report notes more than 30% have access to
digital, against 33% of homes with web access”

(FT p3, 26 March 2001).



Open....

sky



Eventual Device Comparison – c. 2002

	PC based Internet	Mobile Phones (GSM/WAP)	Digital TV (Inc. SkyDigital)	Multi-Service Appliance	Simple Appliance
Coverage	50% UK homes	High penetration but low usage	Most Homes	Fragmented, as sold and promoted	Fragmented, as sold and promoted
Full Internet Browsing	Yes – Full experience	No, unless connected to full device	No, but TV broadcasts enhance experience	Yes, but limited experience	No, limited services only, e.g. email phones
Key “Lifestyle” services	Yes – Full Choice	Some	Yes – Best of the Net	Some as supported	Some as supported
Target Audience	PC owning experienced users	Mobile experts	Anyone at Home	Anyone at Home	Those without other devices
Comments	Not always convenient. Most expensive option	Expensive air time, hard to use, limited by devices and bandwidth	Key issue is usability	Has no TV or Voice related services, unless co-marketed (e.g. OnNet)	Limited Market



Open....

sky

Sky - Digital Services in an Internet World

- Digital Services based on Internet Technologies
- Low consumer cost
 - No new device
 - No Subscription
- Good consumer experience
 - Fast
 - Easy - "Use the arrow keys to highlight your choice and press select"
 - Reliable
 - Convenient
- Easy to develop
 - Standard mark-up language
 - Existing WML sites "just work"
 - Lever existing Internet Investments
- Large device population (> 5million and growing)



Open....

sky

Browser Overview



A look at the SkyDigital platform and the
WML browser

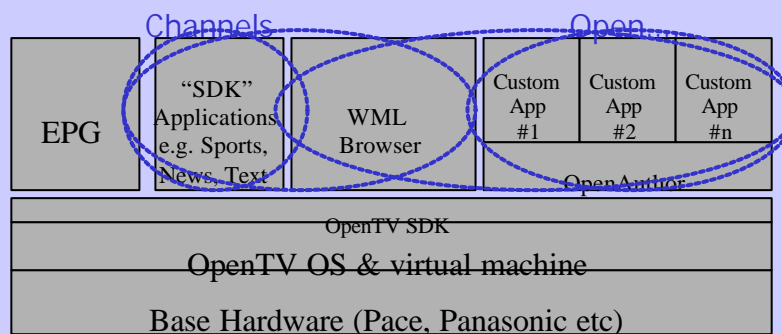
Patrick Sansom



Open....

sky

The SkyDigital development platform



- Offers RAD environment for custom applications
- Offers SDK for "crafted" applications
- Offers Browser for Internet applications – hence today....



Open....

sky

HTML vs WML

A Typical Web Page

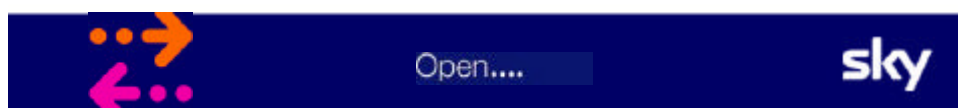


A Typical WML Deck Organised as Cards



Key WML features relevant to STB use

- Navigation control between cards provides high "Interactivity"
- Specific concept of "options menu"
- Specific control of History movement "Back"
- Specific mapping of device buttons to actions
- Efficient communications due to compression and compilation.
- Service development with "standard" tools and web infrastructure



The browser in action

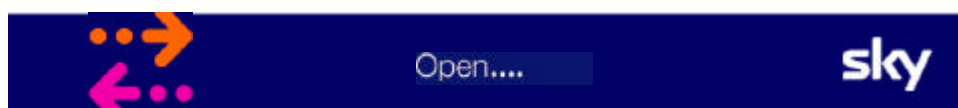


- Always visible “options” menu
- Full layout control
- Field validation with hint text and tab order
- Action accelerators
- Multi-card decks
- Domain branding
- Integration with the video
- Online & Offline content
- Service specific charging

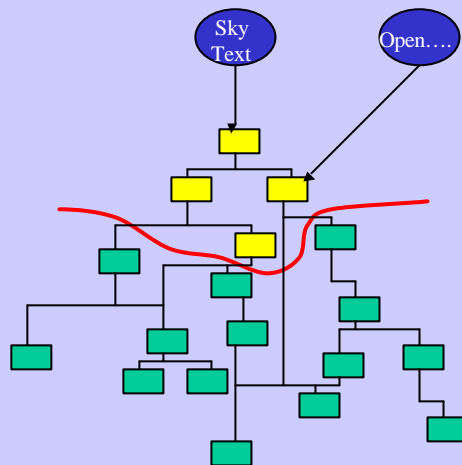


SkyDigital's new WML browser

- New Browser makes Internet Content as easy to use as “teletext”
- Can be used with “Channels” or within Open....
- Separation of configuration (layout and style) and content (wml)
- Closely integrated with platform functionality
 - Application control over: menu orders, colour buttons, history etc.
 - User toggle to full video
 - Quarter screen or full screen browser
 - Special layout control enhancements
 - Broadcast resource “cache”
 - Jpeg/Mpeg image support
 - Platform security for dial-in network
- Communications bandwidth for each user 28kb/s (guaranteed)
- *Easy to develop services*



Site structure



On-air content

- Requires broadcast bandwidth
- WML Text
- XML Config
- JPEG/ MPEG images
- BMPs
- + Video.....

On-line content

- Unlimited extent
- WML Text
- JPEG/ MPEG images



Open....

sky

skytext

ukphonebook.com

National rate

Search

This service is brought to you by ukphonebook.com

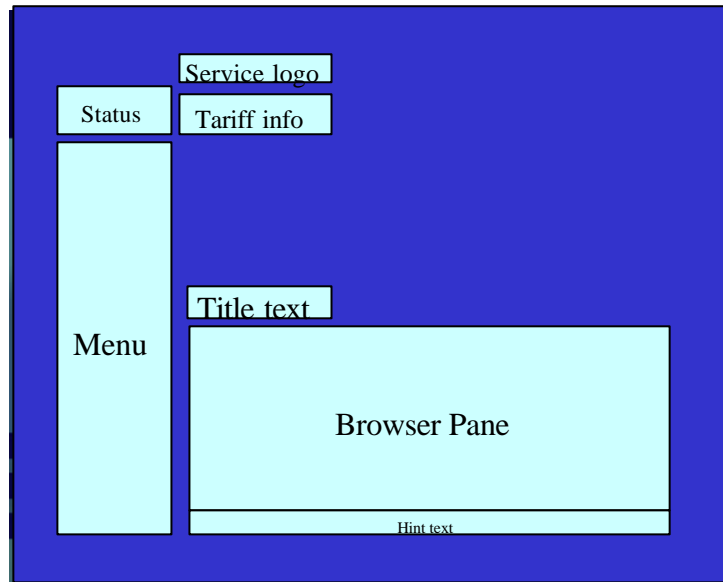
Name Initial Location

☐ Residential ☐ Business

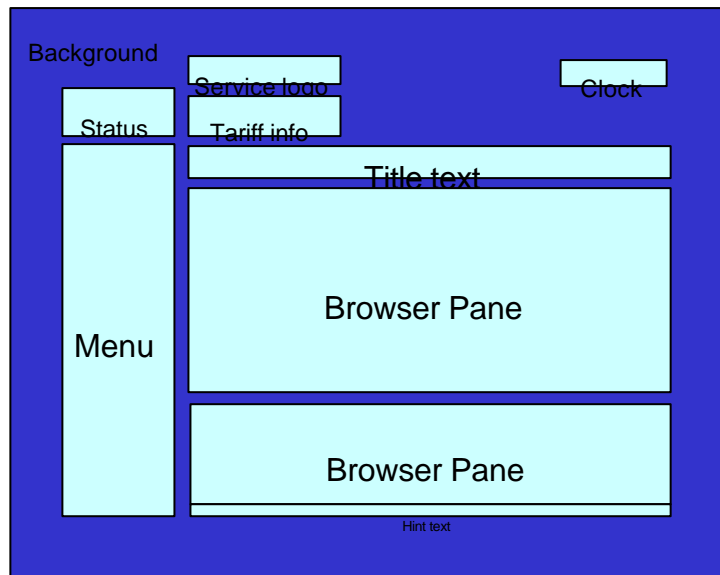
Enter a surname or business name, then press Select

> Find New
> FAQs
> Home

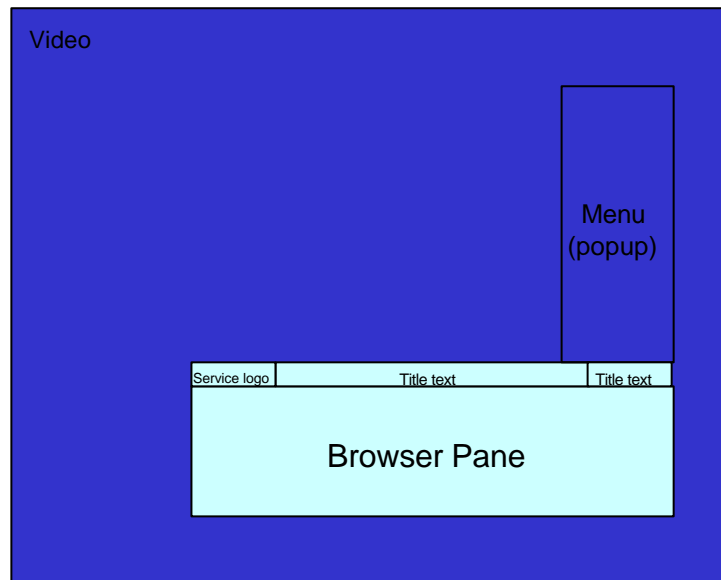




Browser template: **Quarter browser with single browser panes**



Browser template: **Full screen browser with multiple browser panes**



Browser template: **Popup browser with full screen video**

Development Roadmap

- V1 (Today) SkyText
- V2 (May) Alternative browser styles
(e.g. Open....)
- V3 (July) Complex distribution of broadcast
resources
Service specific styles
Additional markup features
- V4 (Sept) Dynamic broadcast updates



Using WML for Interactive Digital TV

- Conclusion
 - The STB is more like a mobile phone than a PC
- WML is ideally suited for Interactive Services
 - Ease of use for the general population
 - Defines content, not configuration
- Great experience for normal viewer
 - Faster than HTML on PC or TV
 - Better than WML on mobile phone
- Again, Sky is innovating and adopting "best of breed"



Open....

sky



Demonstration of the browser in Action

Sky.com, Email, Betting, Third Party sites,
The Developers' Program



Open....

sky



Platform Launch Points and Styles

John Withnell

Head of Service Creation



Open....

sky

Potential Entry Points

- Open Top Level Menu
- SkyText Menu
- Banner Advertisement
- Interactive Advertisement
- Teleshopping Window
- Programme Enhancement
- Channel Enhancement
- Electronic Programme Guide



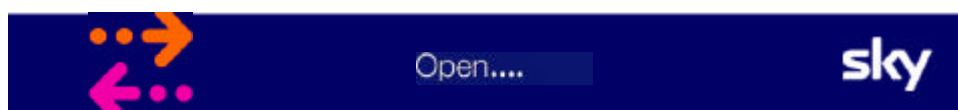
Open....

sky

Open Top Level Menu



Open Top Level Menu



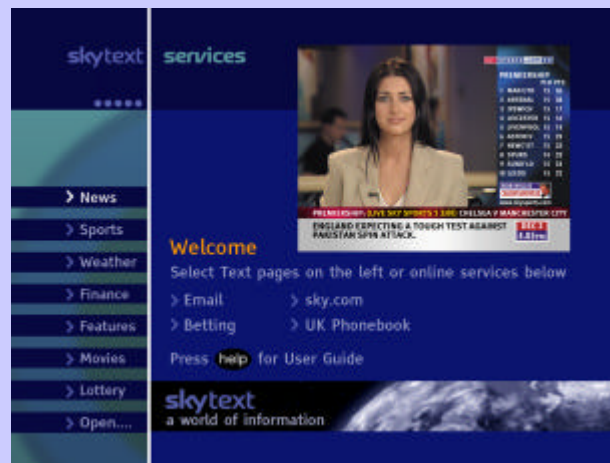
Retail Service



Open....

sky

Skytext Menu



Open....

sky

Banner Advertisement



Open....

sky

Interactive Advert



Open....

sky

Interactive Advert



Open....

sky

Teleshopping Window



Open....

sky

Programme Enhancement



Open....

sky

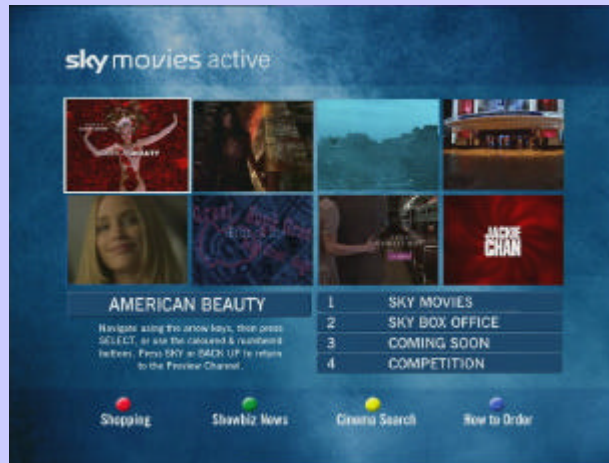
Programme Enhancement



Open....

sky

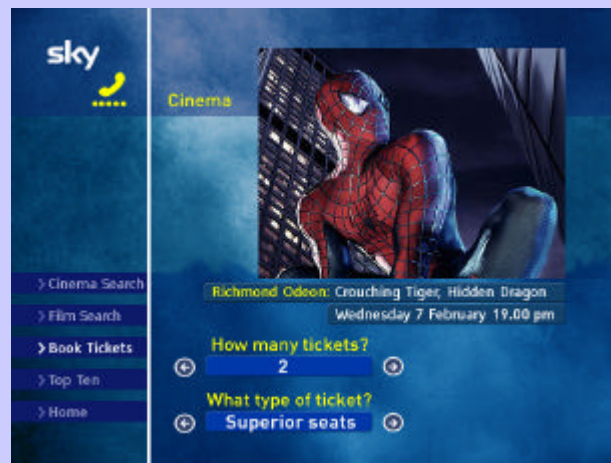
Channel Enhancement



Open....

sky

Channel Enhancement




Open....

sky

Electronic Programme Guide



Electronic Programme Guide



Phone Bill

Statement since last payment

date	phone number	time	duration	cost
12/3/00	0207 332 7000	14:23	00:05:45	£0.47
12/3/00	0207 234 6789	14:32	00:02:09	£0.42
13/3/00	0208 134 6734	11:09	00:03:55	£1.47
14/3/00	0208 134 6734	09:15	00:05:45	£2.12
14/3/00	0207 456 7789	11:23	00:12:34	£0.07
14/3/00	0208 134 0098	12:23	00:27:12	£0.63
15/3/00	0207 392 7470	14:23	00:07:55	£0.47

Page 2 / 3

total £33.06

Press i for information

> Next

> Previous

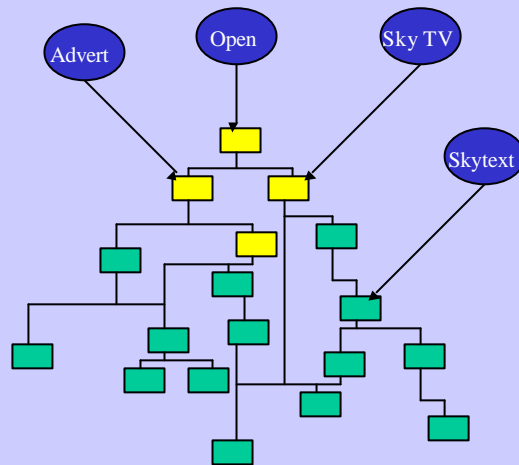
> Pay bill

> Help

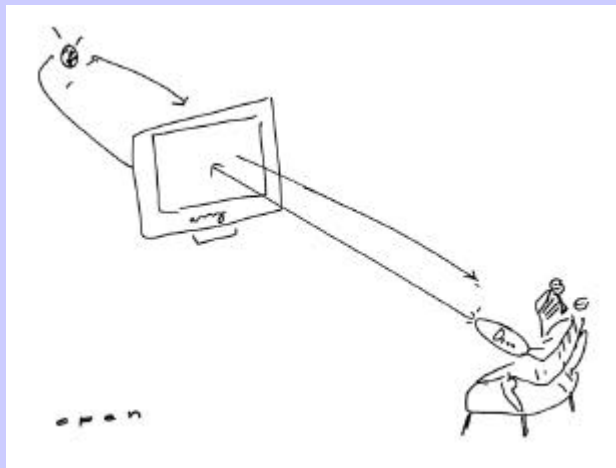
> Home



Multiple Entry Points



Design for Interactive TV



Service Design Principles

- Keep it simple
- Refresh content regularly
- Get the viewer to interact
- Use clear intuitive design
- Offer easy to understand deals
- Play to the power of the medium



Open....

sky

Design Objective

Take the best qualities of TV and combine them with intuitive interactivity to create a service that is fun, reliable and above all successful

Consider:

- Overall look and feel
- Brand and audience
- Intuitive interface design
- Dynamism and richness of television



Open....

sky

Navigation

The user should be given clues about navigation in the form of on screen instruction & graphic aids

The navigation must be:

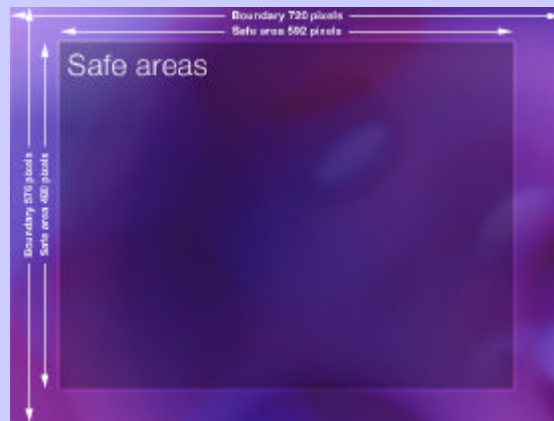
- Simple
- Intuitive
- Consistent
- Easy to map
- Clearly signposted



Remote & Keypad



Design for Television



Consider:

- Safe Areas
- PAL Safe Colours
- Interlace Flicker
- Font Size



Open....

sky

Interactive TV **Not** Internet on TV



Open....

sky



Overview of the waptv Developers' Programme

Gary Smith



Open....

sky

The waptv Developers' programme

1. Purpose of the programme
2. Categories of membership
3. Content development process
4. Services available to members
5. Service launch points
6. Costs
7. How to join



Open....

sky

Purpose of the developers' programme

- To promote awareness of the technology
- To create a wide community of developers and skills
 - Cost effective development
 - Not limited by capacity of any one organisation
- Simple route for CPs to develop content ready for launch
- Technical forum for CPs
 - FAQs
 - Technical specs
 - Style guides
 - Technical support database
 - Technical support facilities



Open....

sky

Membership categories

Associate membership

- Potential content providers
- Software developers
- E-commerce application/framework providers
- System integrators
- Consultants



Full Membership

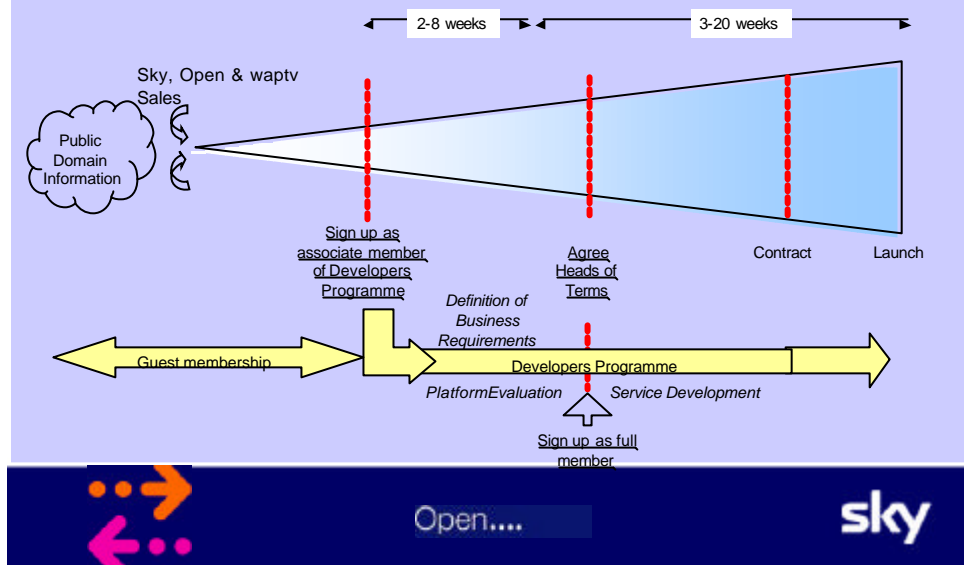
- Content providers committed to launching a service



Open....

sky

Procedure to bring CPs on to the Platform



Services available to Associate members

- Single USL listing
 - Mapped to up to 5 standard viewing cards
- Access to web facilities
 - Technical specifications, style guides
 - FAQs
 - Technical support database
- Technical support by e-mail
- Optional services (provided at extra cost)
 - Technical support by telephone
 - On-site technical consultancy
 - Sky STB installation (commercial subscription)



Additional services for Full members

Pre-requisite for membership

- Service definition workshop

Pre-requisite for launch

- Service quality audit
 - Application quality for the TV
 - User error messages
 - Usability
 - Application responsiveness
- Service load assessment
 - Forecast loads
 - Scalability of service
 - Behaviour under load
- Support arrangements review
 - Customer support
 - Technical support
 - Service level agreement
- Other included services
 - Telephone support
 - 2 days on-site consultancy



Open....

sky

Costs and T&Cs

- Costs
 - Associate membership £5,000 ex-VAT, annually renewable.
 - Full membership t.b.c.
- T&Cs
 - Simple, standard letter of agreement with waptv
 - Covers development programme only
- Separate contract required for actual service

Developers Programme Is For Technical Evaluation And Does Not Guarantee Access To The Platform



Open....

sky

How to join

1. Contact waptv and register interest
mirage.islam@bskyb.com
garyj.smith@bskyb.com
ian.valentine@bskyb.com
2. Sign letter of agreement
3. Pay membership fee
4. Arrange Sky box installation
5. Agree USL with waptv
6. Register viewing cards against USL



Open....

sky

Interactive Advertising WML - Bridging the Gap

Miriam Douglas
Product Manager



Open....

sky

Interactive Advertising Background

- Interactive Advertising launched on 28 March 2000
- Total number of campaigns to date is 24
- Available on 13 channels



Open....

sky

What Products do we currently offer?

- Interactive advertising “jump to” application
- retailer or advertiser

GOLD

- Dedicated Advertising Locations (“DALs”)

bronze

- Interactive Posters – launch April

bronze

- Direct Response Banners

- User behaviour tracking



Open....

sky

What does WML mean to IA?

- WML will compliment our interactive advertising portfolio
 - Adds ability to link into existing WML backend systems
 - Allows for authoring of services using industry standard protocol
- WML bridge the gap between
 - Sky digital IA propositions and
 - Advertisers own website and systems
- WML will facilitate cost effective Enhanced Interactive Advertising ("EIA") on TV
- WML will enable companies to re-purpose web design and associated content for WML
- WML will open up new markets for interactive advertising - DRTV



Open....

sky

How does WML effect retail services?

- Current functionality still available



- Direct jump to service for retailers with presence on channel
 - Keep within TV
 - Faster access



Open....

sky



How does WML effect advertiser services?

GOLD

- DALs continue with multiple audio and video streams – rich broadcast content

bronze

- IA Posters and Banners stay the same

NEW

SILVER

- EIA using WML
 - Stay within TV
 - Ideal for channel associated audio/video or single audio/video services
 - On-line response for DRTV – using Sky Interactive backend infrastructure
 - Re-use of advertiser web content and infrastructure
 - Consumer names and addresses as offered with established Open applications



Open....

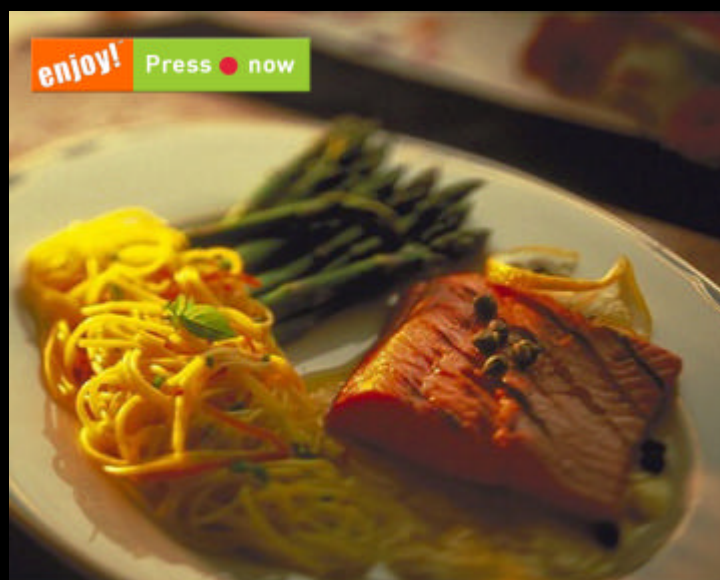
sky

Imperial Cancer Research Fund

Press  now

£2 a month Appeal

Digital viewers
please touch the  red button to give





Summary of IA Product Portfolio

GOLD

- DALs using multiple audio/video streams, complex animation and visual rich creative
- EIA for infomercials with media rich content

SILVER

- EIA with content from WLM based internet sites
- EIA with simple direct response mechanism

BRONZE

- Interactive Posters with full screen Mpeg and simple response mechanism
- Direct Response Banners provide for simple response mechanism



Open....

sky

Questions?



Open....

sky

Questions?



Open....

sky