



Connected TV Application for TiVo

# TV Upgrade App

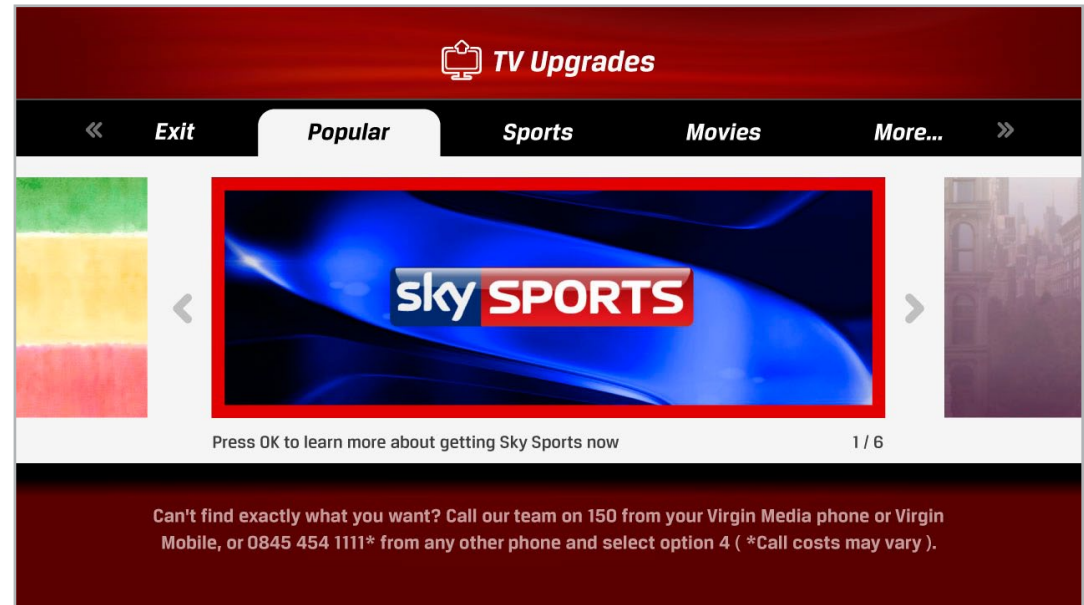
UI Design Outline

20 Nov 2013

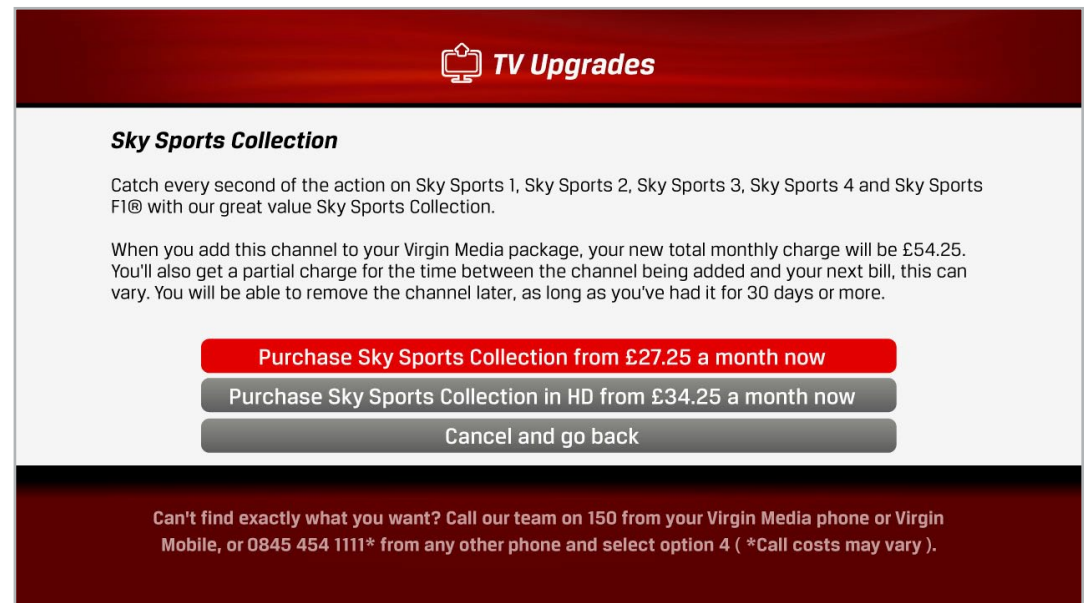
## Overview

This app allows Virgin Media customers to upgrade or downgrade their TV service through their TV screens. By providing a convenient on-screen tool the app aims to increase sales of premium channels while also reducing call volumes to the Call Centre. For the business to get the quickest benefit the scope of the app is limited to processing simple transactions of channels that tend to be temporary for Virgin customers, like Sky Sports, Sky Movies, Box Nation, Picture Box, and Asian Mela.

nb. Some of the content shown in this document may not represent the final images or copy, as these are configurable and subject to change.



Store Front Screen

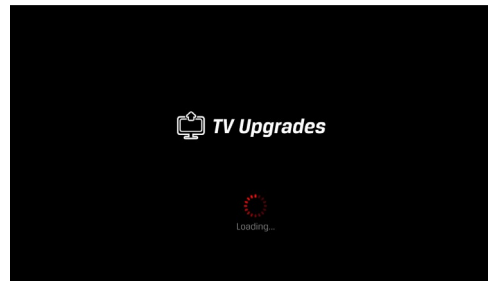


Purchase Screen

## Example User Journey 1 : Successful purchase from 'Apps & Games'



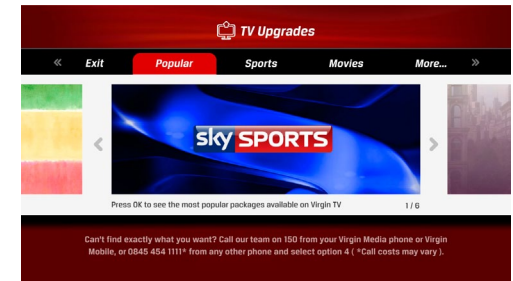
1. Apps & Games. OK pressed.



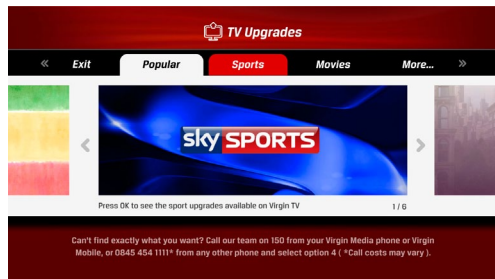
2. Loading screen. The loading message communicates to the user what is happening during the wait. Message updates should occur every 3 seconds at minimum.



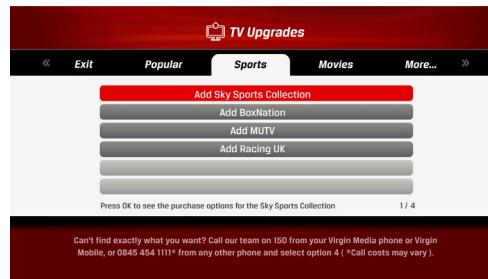
3. Store Front screen. Focus on carousel. Carousel advances automatically until user takes manual control. Carousel item number indicator at lower right advances (eg. 1/5, 2/5, 3/5, etc).



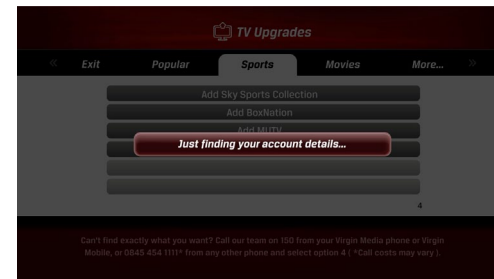
4. UP pressed. Carousel stops. The tooltip updates with every new focus.



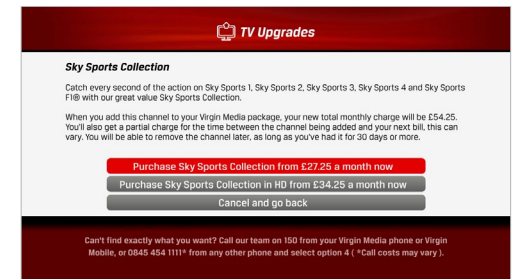
5. RIGHT pressed.



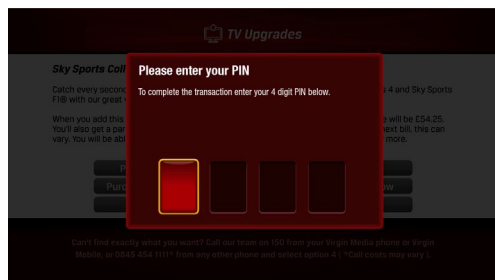
6. OK pressed. Focus jumps to the first item in the list.



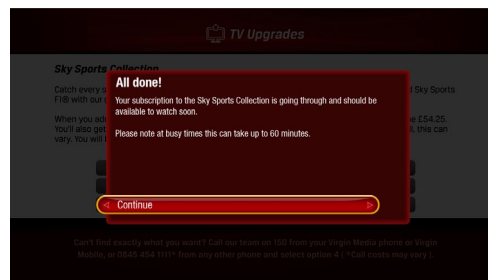
7. OK pressed, account retrieval message appears immediately. Other messages may appear every 3 seconds to assure the user the system is still processing.



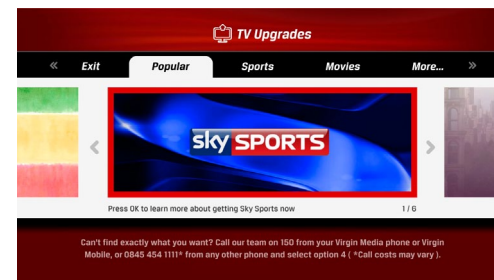
8. Purchase screen. This screen describes what is being purchased and what the particulars (if any) of the transaction are.



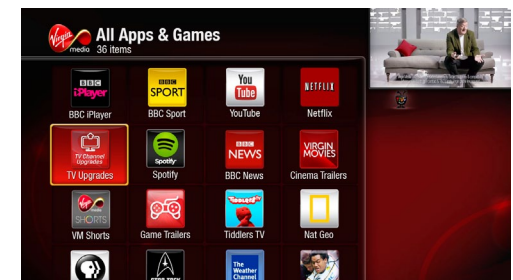
9. OK pressed. PIN challenge appears.



10. 4 digit PIN entered. 'Success' message appears confirming the purchase. The message repeats the particulars of the transaction mentioned on the Purchase Screen.

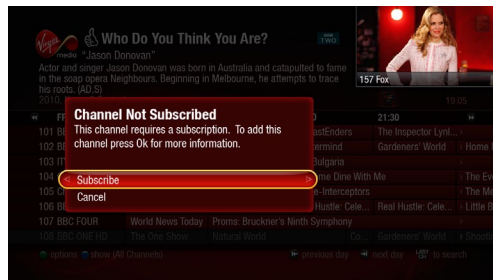


11. OK pressed, user is returned to Store Front screen.

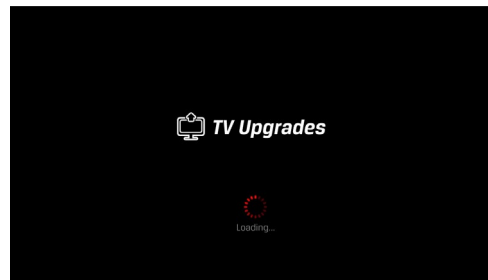


12. User exits (UP, LEFT, and OK pressed) and are returned to launch point.

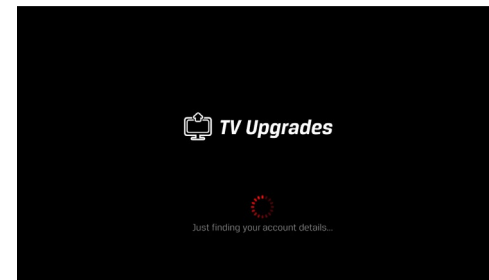
## Example User Journey 2: from a greyed-out channel the user is asked to continue the purchase by phone



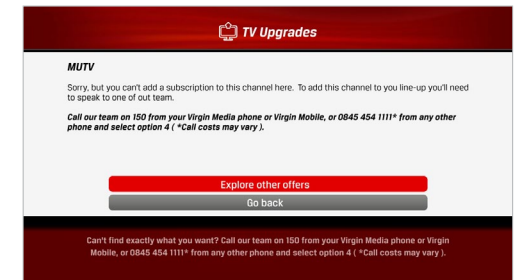
1. OK pressed on greyed-out channel, and this pop-up appears.



2. OK pressed on on-screen 'Subscribe' button. App Loading screen appears. The loading message communicates to the user what is happening during the wait (nb. message should be updated every 3 seconds minimum).

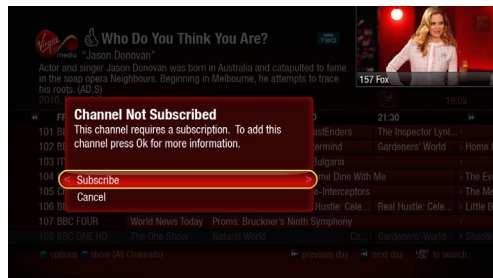


3. The user's account information is retrieved. The loading message tells the user.

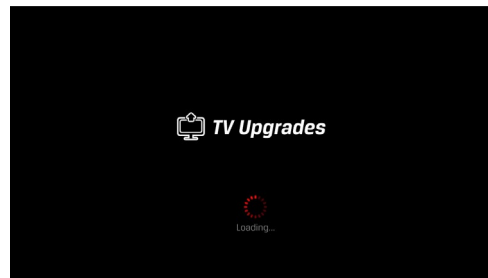


4. This channel is not available to be purchased on screen in the app, so the user is directed to the call agent to continue with the transaction.

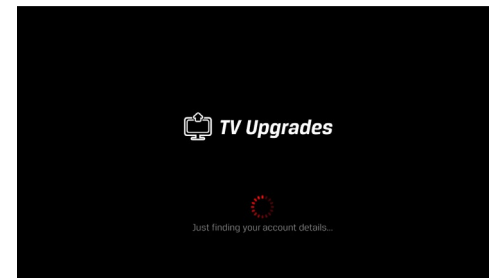
## Example User Journey 3: Successful purchase from a greyed-out channel



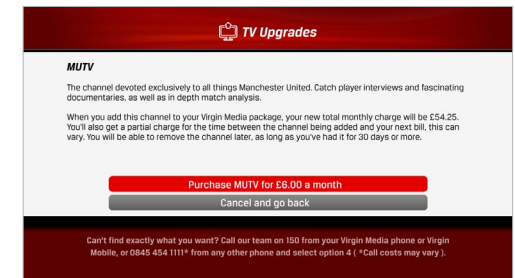
1. OK pressed on greyed-out channel.



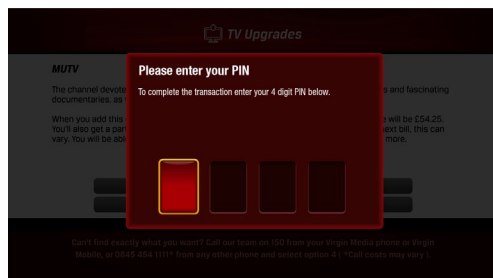
2. OK pressed on on-screen 'Subscribe' button. App Loading screen appears. The loading message communicates to the user what is happening during the wait.



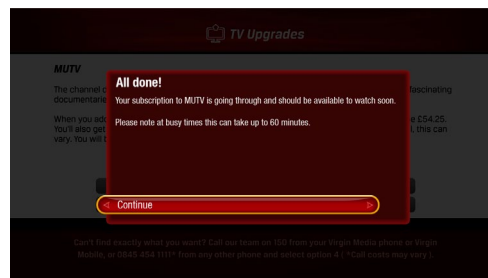
3. The user's account information is retrieved. The loading message tells the user.



4. This channel is available to be purchased on screen in the app.



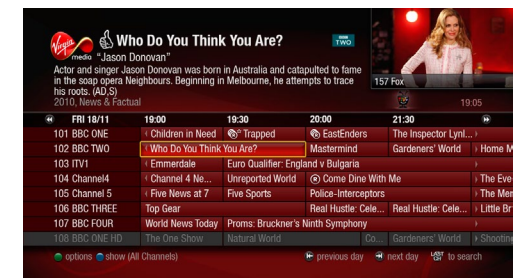
5. OK pressed. PIN challenge appears.



6. 4 digit PIN entered. 'Success' message appears confirming the purchase.



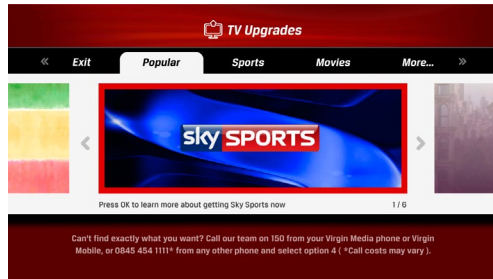
7. OK pressed, user is taken to Store Front screen.



8. User exits (UP, LEFT, and OK pressed) and are returned to launch point.



## Example User Journey 4: Successful removal of a channel



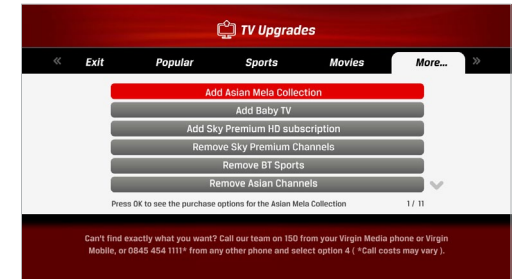
1. Store Front Screen.



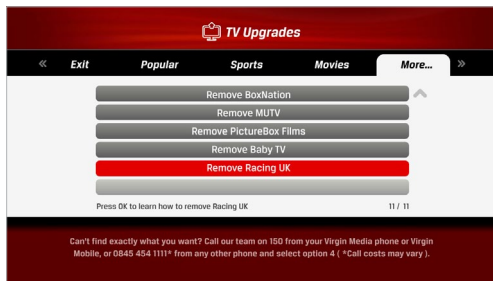
2. RIGHT pressed 3 times.



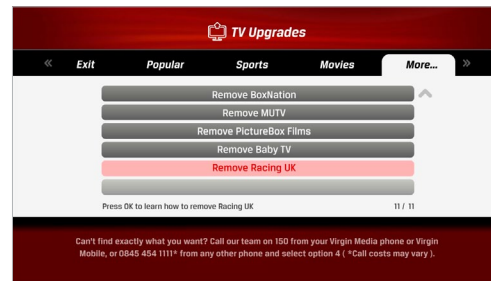
3. OK pressed. On-screen button flashes it's activated state for 1 second (see page 18).



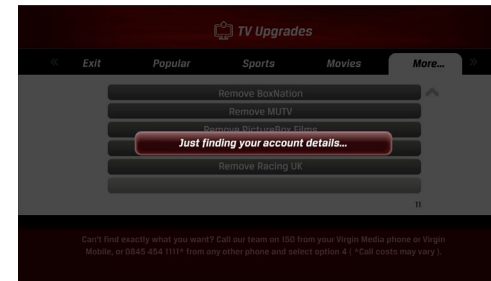
4. List loads, focus moves to the first item on the list.



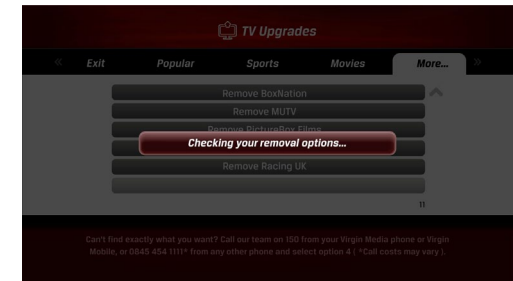
5. DOWN pressed 10 times.



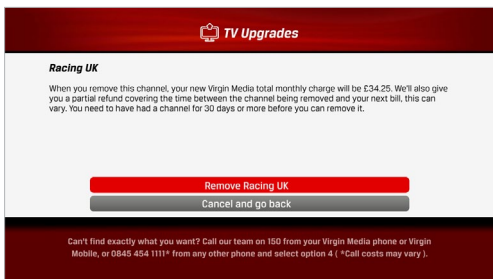
6. OK pressed, activated button state flashes.



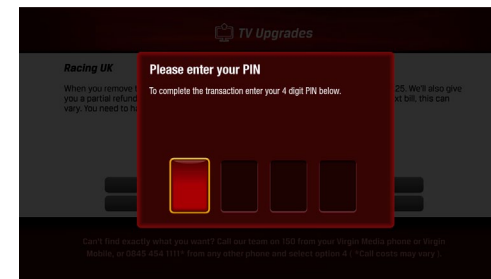
7. System message appears while account information is being retrieved (should appear 1 second after OK press).



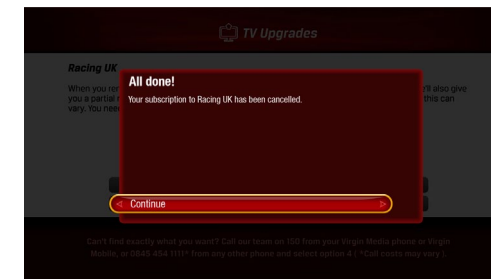
8. If system is processing for over 3 seconds additional messages update every 3 seconds to assure the user that processing is still proceeding.



9. Removal Screen loads. This screen describes what is being removed and what the particulars (if any) of the transaction are.



10. OK pressed. PIN challenge appears.

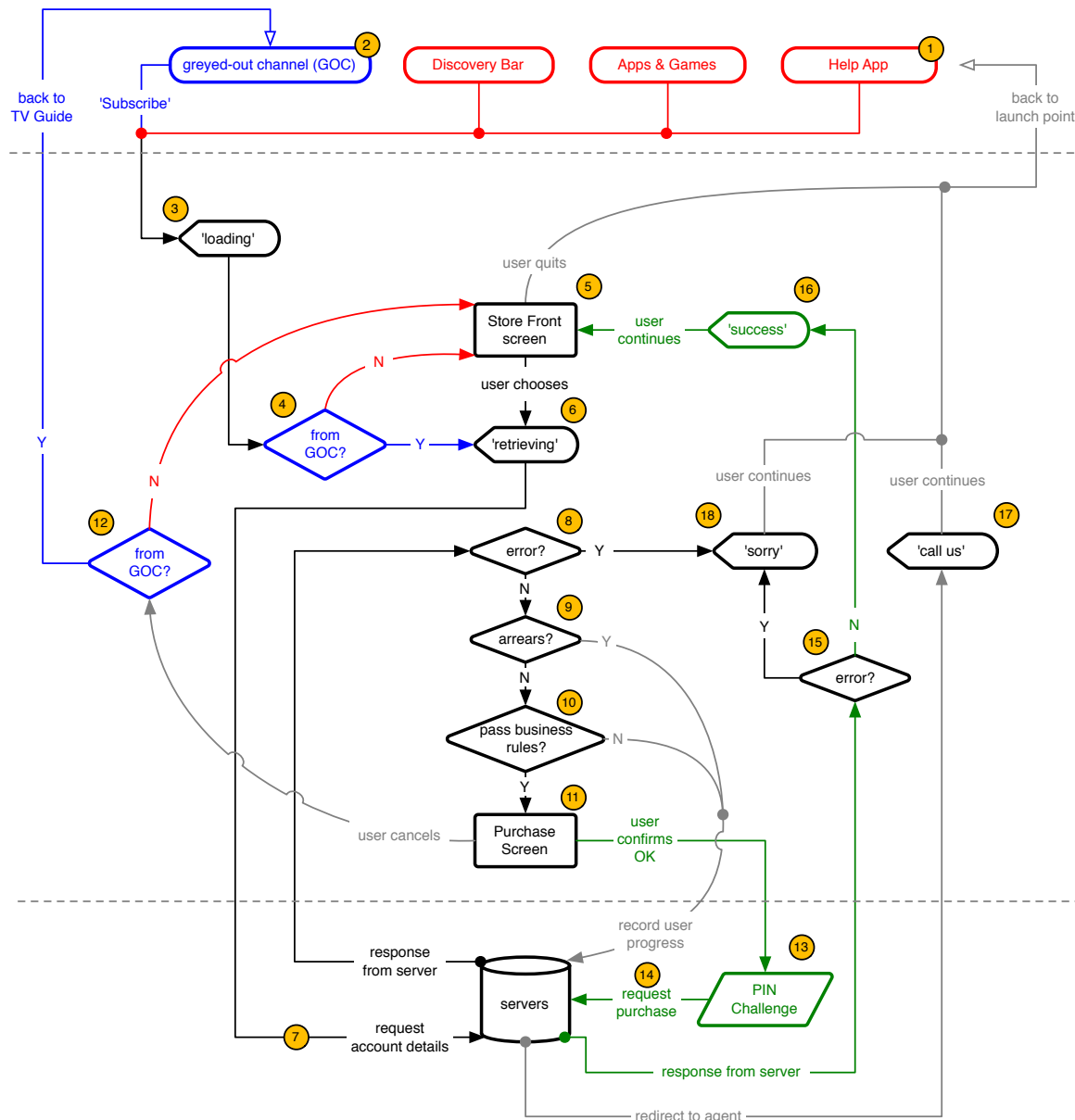


11. OK pressed. 'Success' message appears confirming the removal.



12. OK pressed, the user is returned to the Store Front Screen.

## Activity Flowchart



### Summary of a Happy User Journey

Upon load the app presents a Store Front screen displaying a variety of Virgin TV offers. If the user presses OK on an offer the app then retrieves the customer's account information and checks against a set of business rules to see if the customer is eligible to perform the transaction on-screen. If they are eligible a Purchase Screen displays information about the offer and prompts the user to confirm, and if they do confirm the user is prompted for their PIN. Upon successful PIN entry the transaction is performed and an on-screen message confirms the purchase. The user is then taken back to the Store Front screen. If the customer is not eligible to perform the transaction on-screen they will be directed to complete the transaction over the phone.

If the app is launched from a grey-out channel on the TV Guide the app retrieves the customer's account information immediately and asks the user to confirm subscription on the Purchase screen, bypassing the Store Front screen.

### (1) (2) App launch points

The app is launched from the Discovery Bar, the Apps & Games Area, the Help App (shown in red), or a greyed-out channel on the TV Guide (shown in blue). If launched from a channel the user will be prompted to purchase the channel immediately (if permitted by the business rules, see number 10).

### (3) Loading screen

Informs the user what the app is doing while it is loading.

### (4) User came from a Greyed-Out Channel?

If the user launched from a greyed-out channel the app will immediately ask the user if they want to purchase the channel they have chosen (subject to business rules, see 10). If launched from another location the user is presented with all the purchasing / removal options available on the Store Front screen.

## Activity Flowchart

### (5) Store Front screen

displays all the purchasing options available to the user.

The user may:

- a) choose something to purchase
- b) choose something to remove or
- b) quit the app.

### (6) 'Retrieving your account details'

onscreen message Informing the user the app is retrieving their account information (nb. feedback such as this should appear as soon as possible after a user action, not wait until a computer server has responded. As a principle the app should always keep the user informed about what the system is doing while the user waits).

### (7) Customer identification, verification, and account details retrieval

Once a user has made a selection on the Store Front screen the app will attempt to retrieve their account information, including what Virgin TV package and monthly rental charges they currently have.

### (8) Error check after account retrieval attempt

A technical error may occur at this stage, and the user will be informed on screen (19) before quitting.

### (9) Customer is in arrears or over credit limit?

If after the account information is retrieved and:

- a) the customer's bill is overdue or
  - b) adding new chargers exceeds their credit limit
- the progress in the app will be recorded and the customer will be encouraged to call VM or visit the MyVM website to get more information.

### (10) Do the purchases / removals requested pass the business rules?

The app (in this phase at least) handles only simple transactions based on restrained business rules. If the user has to weigh multiple pricing and bundling options, for example, they are directed to an agent (17) in order to continue towards the purchase / removal (see the table "Business rules for making Virgin TV purchases and removals on the TV set top box" on page 26).

### (11) Purchase Screen

Informs the user what they are about to purchase or remove. The user may:

- a) confirm to go ahead with the purchase/removal, or
- b) change their mind and go back

### (12) User is cancelling and came from a Greyed-Out Channel?

If the user launched the app from a greyed-out channel initially and then cancels, they will be taken back to the TV Guide launch point. Otherwise they are taken back to the Store Front Screen.

### (13) PIN challenge

Before making a transaction the user will be asked to enter their 4 digit PIN, which is handled by a PIN entry app. The entry of a valid PIN allows the transaction to continue.

### (14) Request purchase

If the PIN entry is successful the app will proceed with the purchase.

### (15) Error check after purchase attempt

A technical error may occur after a purchase attempt, and the user will be informed (18).

### (16) Purchase / removal confirmation

If there are no errors the user is informed that their purchase or removal was successful (eg. "Your new channel selection should be available within a few minutes, but at busy times may take up to an hour"). After an OK press to continue the user is taken to the Store Front screen (5) so that the user may make additional purchases.

### (17) Agent referral / 'call us'

If the app can't handle the purchase or removal because:

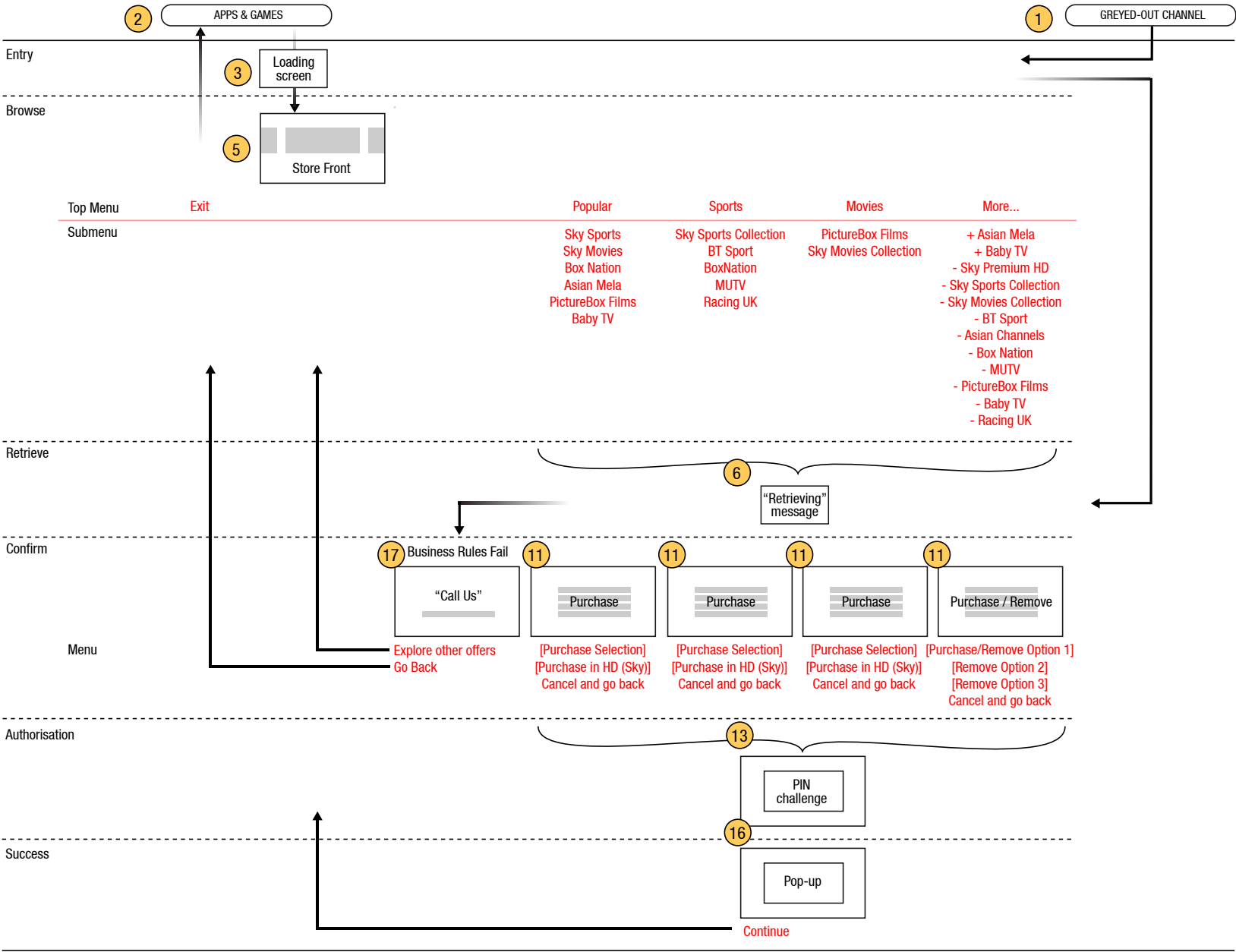
- a) the customer's bill is overdue or
- b) the customer has exceeded their credit limit or
- c) the purchase or removal breaks a pre-defined business rule (see 10)

the customer will be asked to call in to get more information or continue with their purchase or removal by speaking to an agent. An OK press would then quit the app from there.

### (18) Automatic quit / 'sorry' message

Users are told they are kicked out of the app if there is a technical error that interrupts the user journey (users are encouraged to call in). The message is dismissed with an OK press, after which the app quits and the user is returned to the launch point.

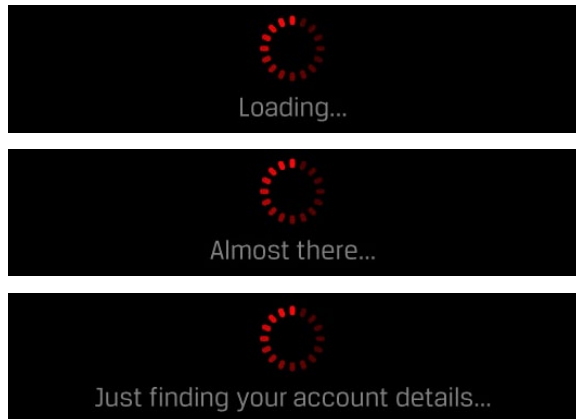
App Map



nb. Offers shown are subject to change, as they are configurable. This layout covers the scenarios outlined in the business rules (page 26).

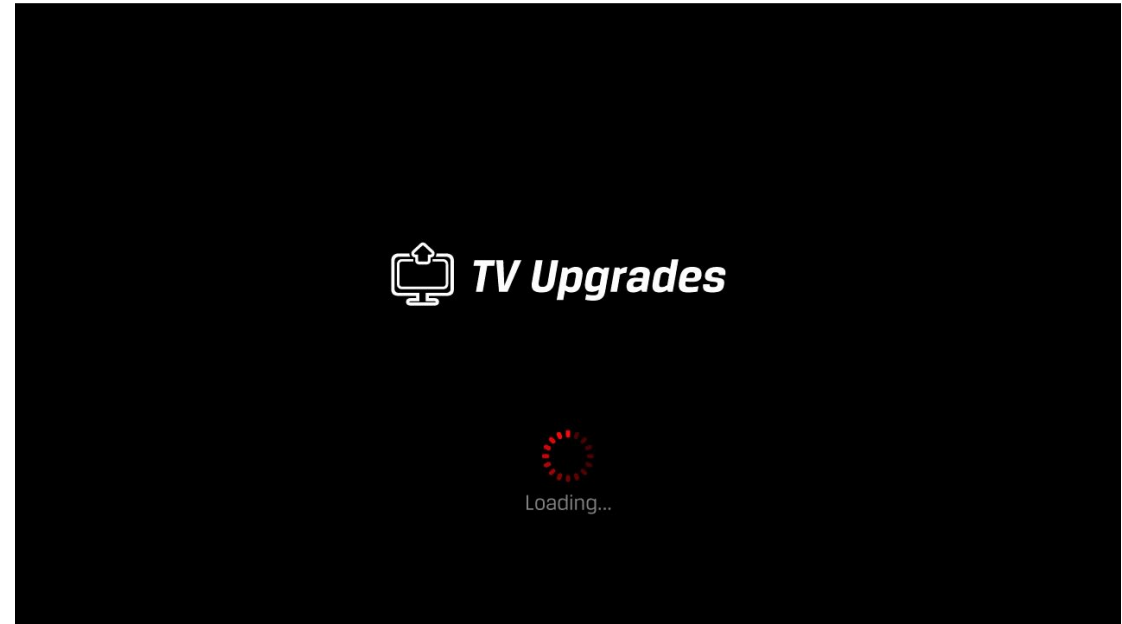
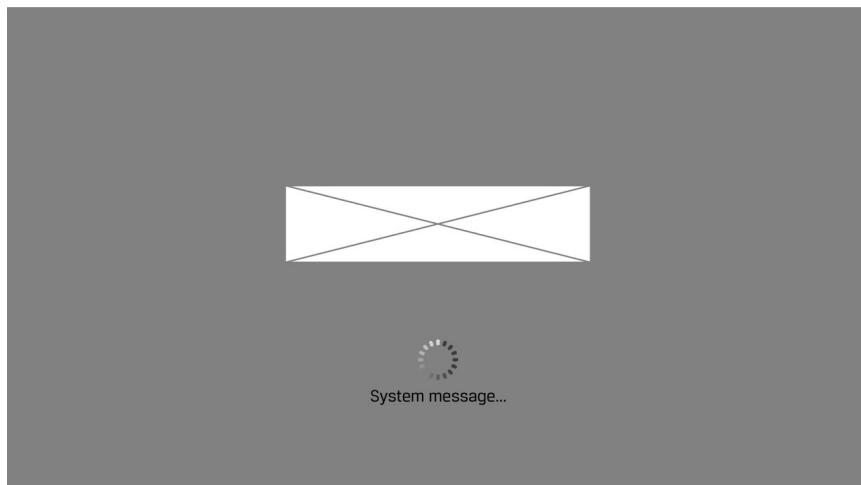


## Loading Screen 3

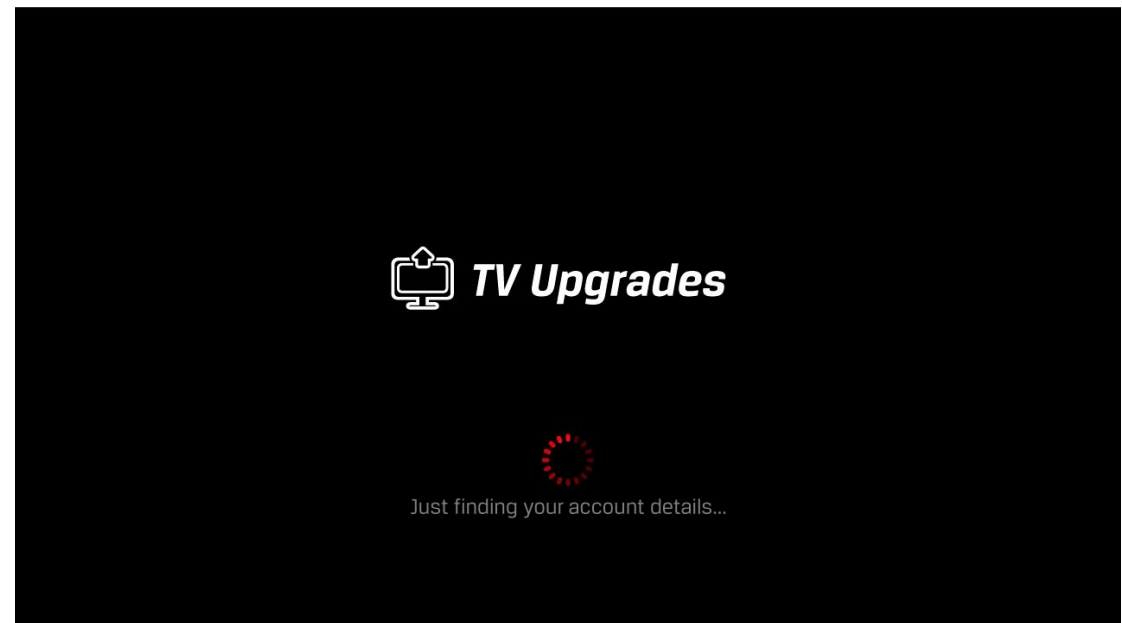


So that the user is always assured a process is continuing forward, especially when it's taking a long time, the app should give feedback about what the system is doing every 3 seconds. This encourages patience in the user. If the user believes that the system has frozen they will exit and the opportunity for a purchase is lost.

nb. Message shown subject to change. In principle it's best to tell the user what the system is doing, but as this might not always be meaningful to the user a general variation on "please wait a little longer" is fine.

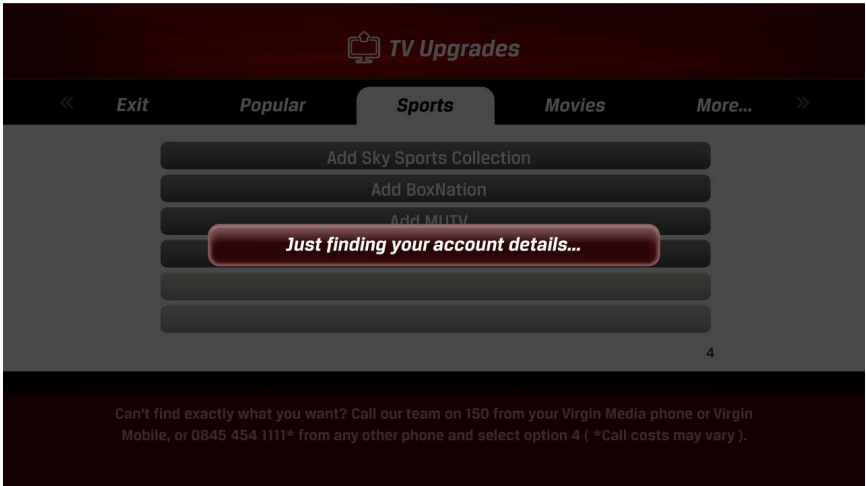


Loading screen with animated clock and system message.

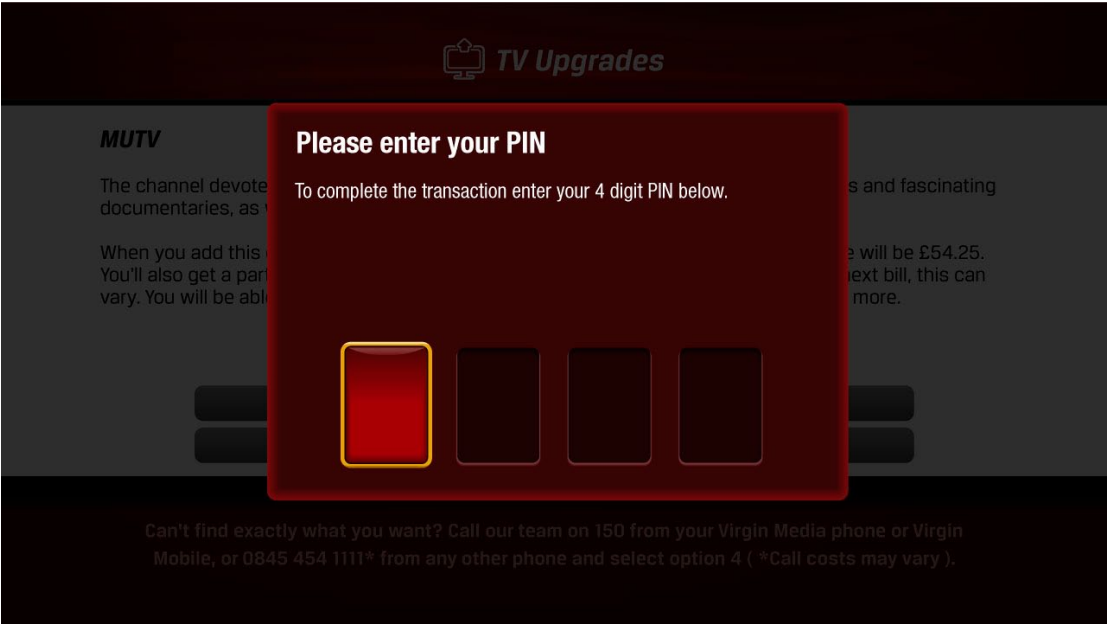


Account information retrieval message is on the loading screen if the app is launched from a greyed-out channel (otherwise this message is on a pop-up that appears after the Store Front screen).

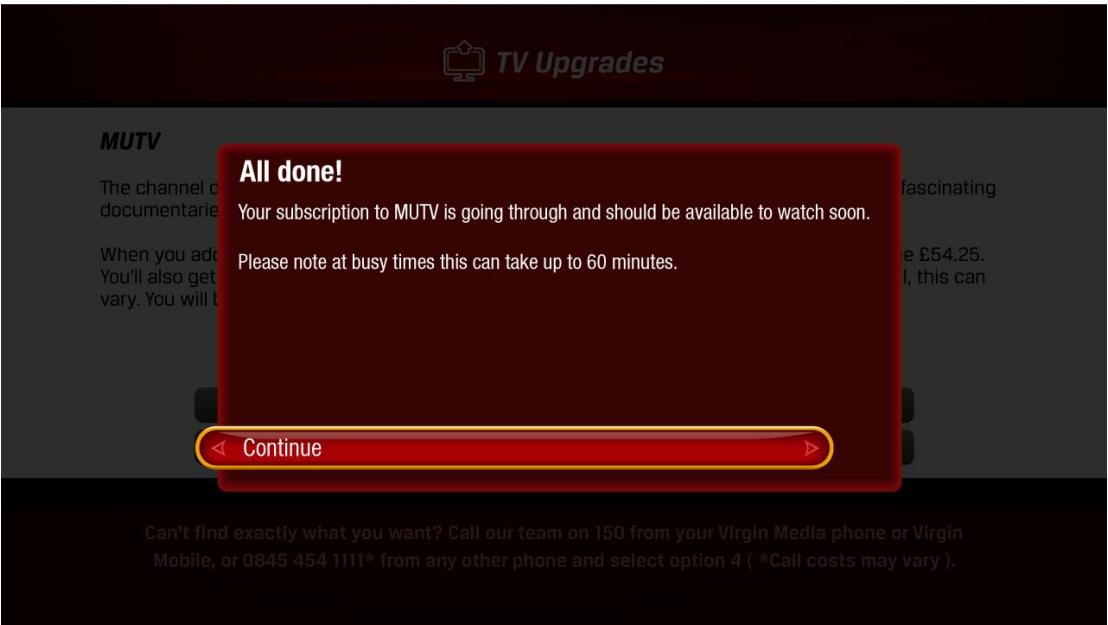
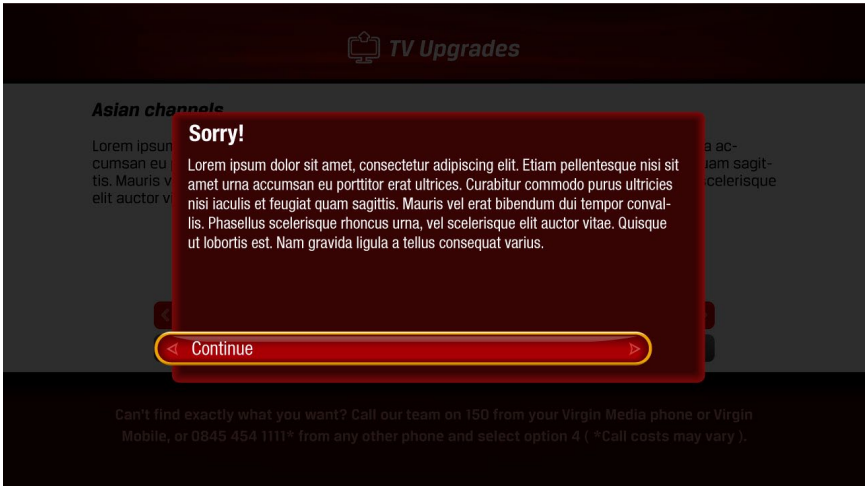
Pop-ups 6 13 16 18



Account information retrieval message is on a pop-up if the app is not launched from a greyed-out channel.

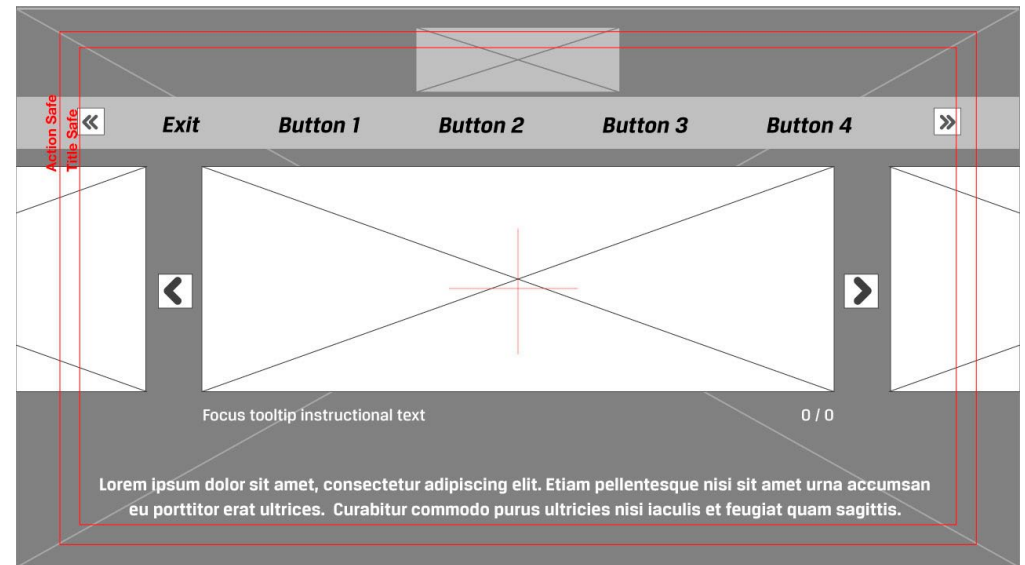
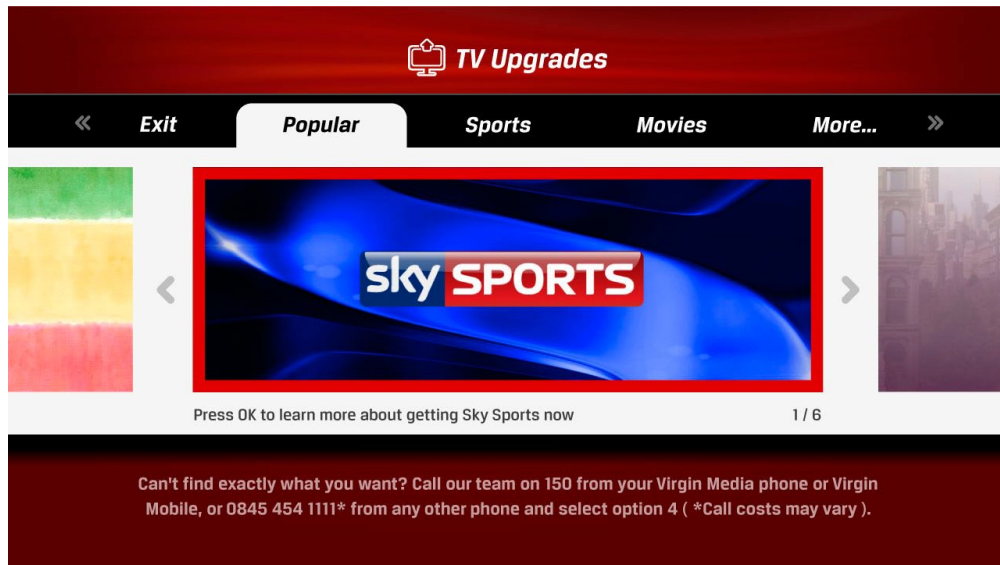


Standard PIN entry prompt for TiVo.

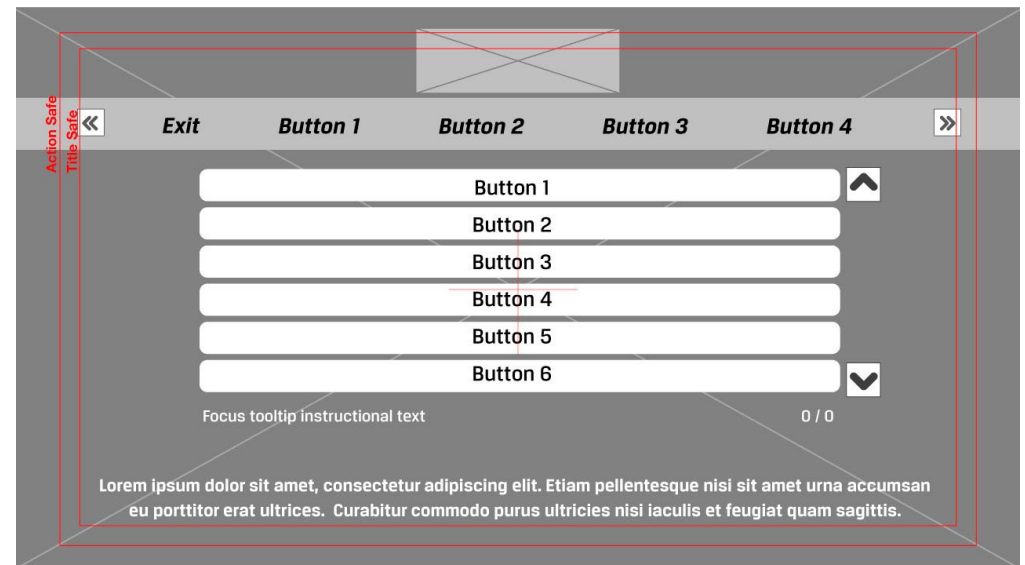
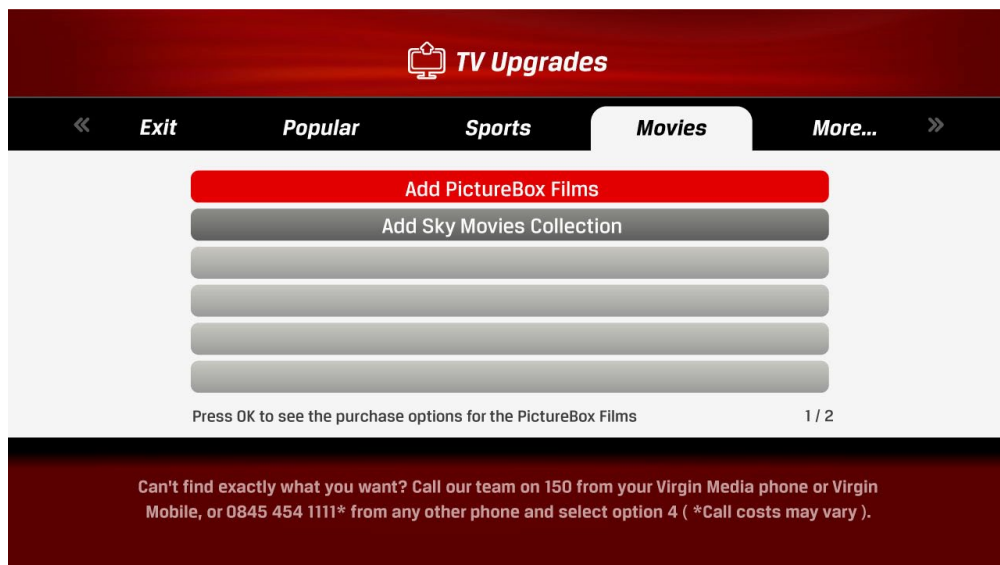


Pop-up for confirmation and error messages. Note lightbox effect (background dims). The confirmation message will show the price of the successful transaction just completed.

## Store Front Screen 5



Carousel state of the screen. Carousel has 3 minimum items (actual lower limit), 10 maximum items (recommended). When the screen first loads (and all the images are visible) the carousel advances automatically, switching to the next item every 4 seconds. As soon as the user presses a button on their remote the carousel stops and the user has manual control.



List state (nb. all users see the same offers upon entry. Account lookup occurs after the user has made a choice about what to purchase).

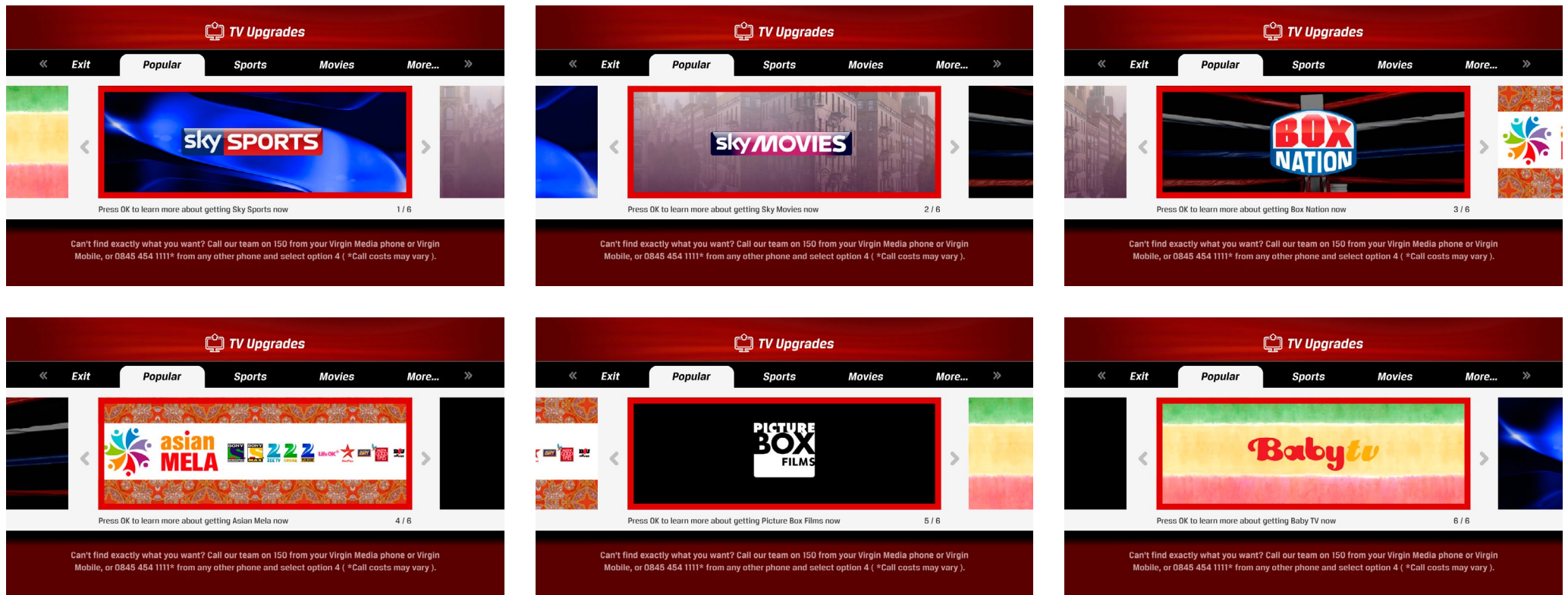
## Store Front Screen 5



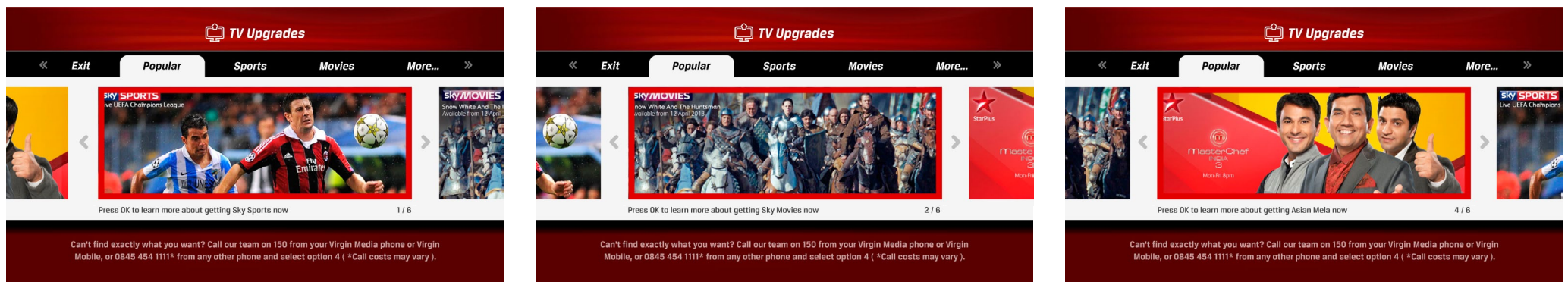
The header shows additional messaging when needed. When this message is on the layout of the header adjusts to make room for the message.



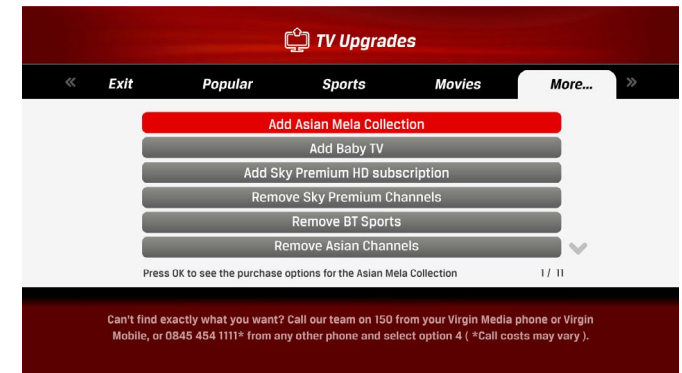
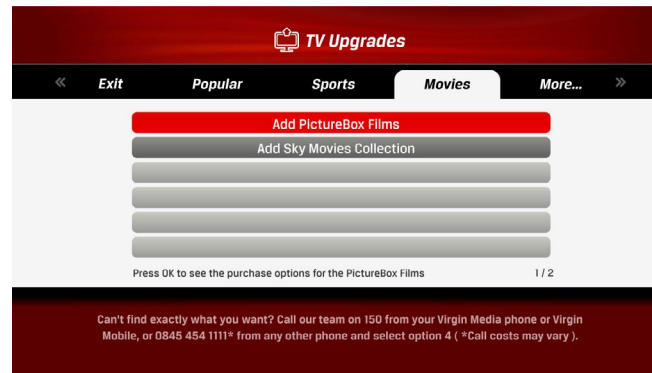
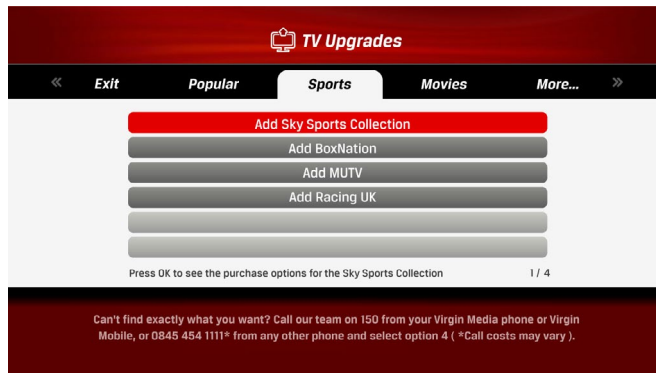
## Store Front Screen 5



Example carousel banners. Shown above are examples of generic evergreen versions, but the app can display any promotional image from the top shows on a particular channel (below).



## Store Front Screen 5



Example list screens. The Fast Forward and Rewind buttons on the remote control are used to quickly navigate from tab to tab while the focus is on the list

(nb. this will be a good user experience if the redraw time is under a second, and the app responds quickly. What we want to avoid is for the app having no response in the first second after a remote control button press, as this often gives the user the impression their action was not read by the set top box and they are prone to repeat the action until they get visual feedback. So the above needs to be tested if it's to work as illustrated. If the redraw time is too slow, adding a loading animation (or similar) may be needed to cover the lag).

## Purchase Screen 11

### Text block on the Purchase Screen

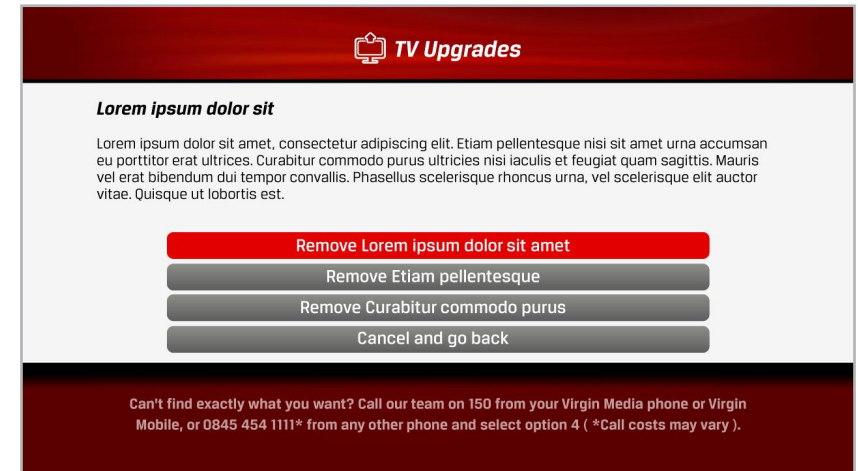
The text that populates the block will have the following types of information:

- 1) the first line is the name of the channel or collection that has been chosen (either from the Store Front screen or from a greyed-out channel).
- 2) next is a block of text that relates to the choices available through the buttons below:
  - a) If the transaction is allowed in the app the text describes:
    - i) what is being purchased/removed (eg. a short, glowing description of the Sky Sports Collection).
    - ii) conditions of the transaction, if any (eg. when removing customers must still pay for the remainder of the month, as contracts are monthly).
    - iii) a URL reference to a web page listing terms and conditions.
  - b) If the transaction is not allowed in the app but one can continue the transaction on the phone the text describes:
    - i) that they should call in to continue
    - ii) the phone number

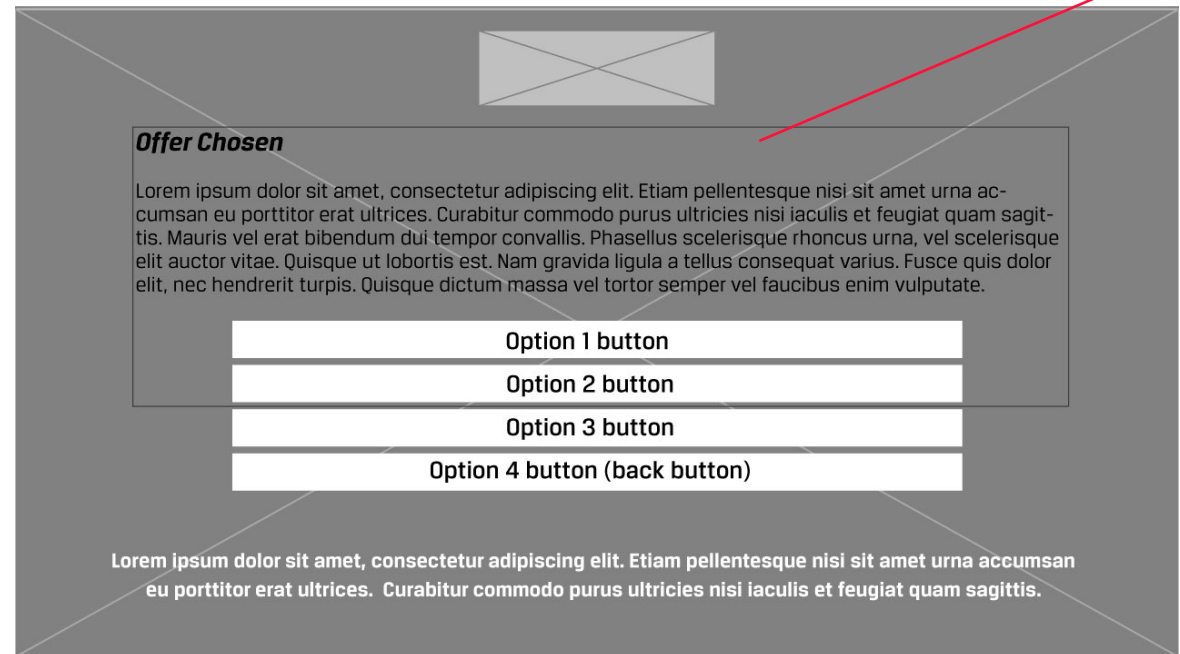
### On-screen buttons

Below the text block are on-screen buttons:

- 1) the bottommost button is a “Cancel and go back” button, taking the user back in the history stack (either back to the Store Front screen or to the TV Guide)
- 2) Transaction Option buttons:
  - a) If the transaction is allowed in the app the user sees purchase/remove options (1 to 3 buttons can be shown).
    - i) if a purchase the button(s) show(s) the name of the channel/collection on offer and the price it will cost.
    - ii) if a removal the button(s) do not show the price, only the name of what the customer can remove.
  - b) If the transaction is not allowed in the app the user sees a “Explore other offers” button which leads to the Store Front screen.

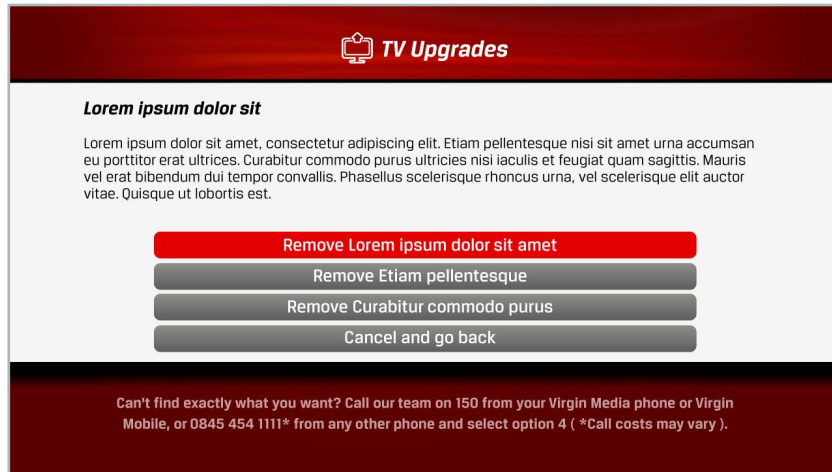


Text block

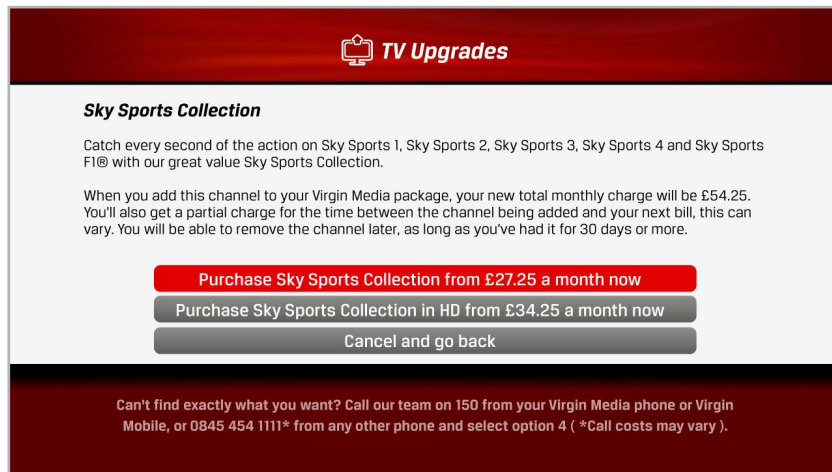


The screen has a minimum of 1 button and maximum of 4 buttons, that list from top down but populate from the bottom up (ie. vertically aligned to the bottom).

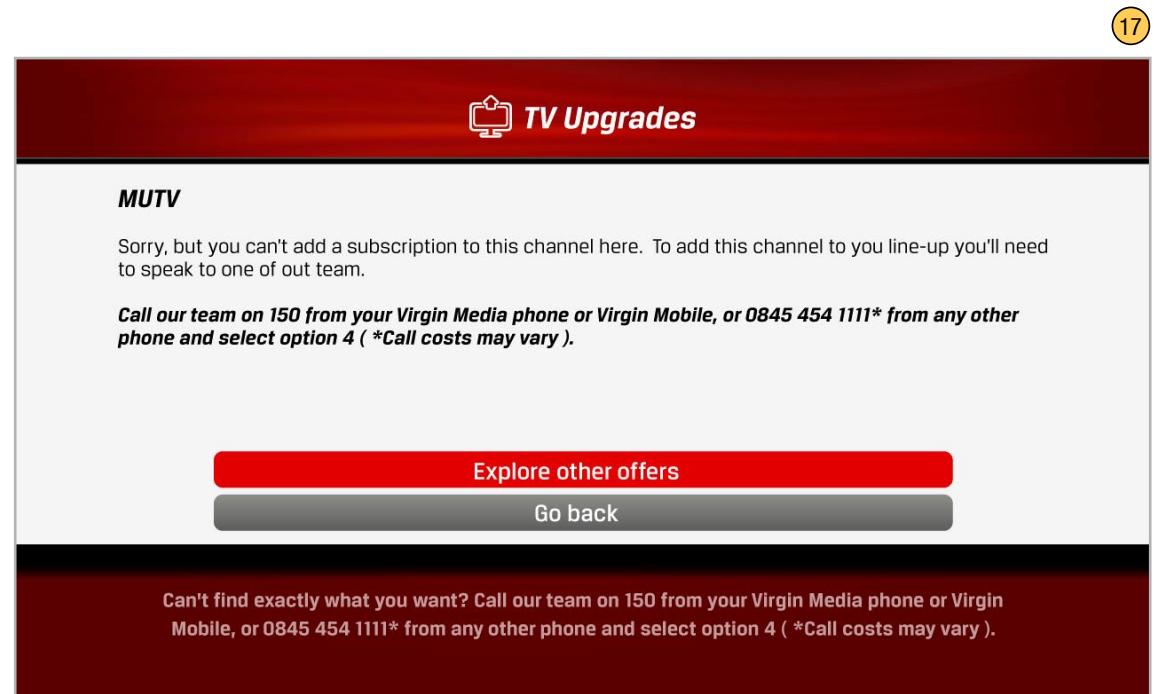
## Purchase Screen 11



If a removal transaction the items are named on the buttons.



If a purchase transaction then the buttons show the price of the transaction as well.



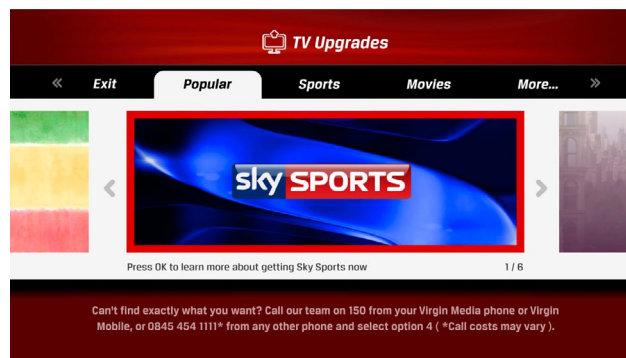
The 'Call Us' message is displayed on the Purchase Screen when the transaction can't be handled by the app but can be completed over the phone.



## Configurable Parameters

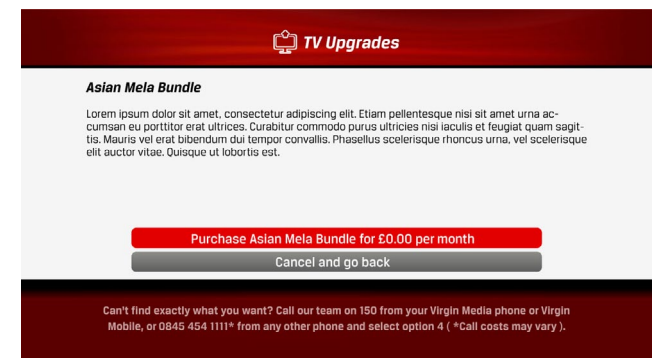
### Global

- all text (except logo graphic on the header)  
this includes styling of HTML tags, like:
  - font (as the branding could change)
  - emphasis font (Usually bold version of the main font)
  - font size (this is so if text overruns it can manually be adjusted down a few point sizes. Also there must be the ability for different paragraphs to have different font sizes)
  - font colours (including the 3 button states, shown right)
  - paragraphs (to align paragraphs separately, eg. have a left aligned paragraph followed by a centred paragraph. See “Call Us” version of the Purchase screen (ref 17) shown on the previous page)
- link references  
these include these parts:
  - name
  - image (optional. eg. carousel image)
  - tooltip message (a description of what happens upon OK press)
  - description (eg. of the offer shown on the Purchase screen. See previous page)
- bitmap graphics
  - background
  - carousel images
  - loading screen/header logo (these are the same graphic file, only it's scaled down on the header)
- Vector colours  
these need to be adjustable outside the SWF
  - focus graphics (focused and activated states)



Store Front Screen 5













- tab widths on the top menu (so that menu items can be changed)
- gap between tabs (the space between text buttons must be equal. Recommend this be calculated dynamically based on text widths of the buttons)




Purchase Screen 11


- number of buttons (dynamically driven by content. Buttons always populate from the bottom up)

Configurable Parameters: Colours and Button States


	normal colour	focused colour	normal colour	focused colour	activated colour	active / emphasis
text copy	 #000000					 #FFFF65
button text	 #F0F0F0	 #F0F0F0	 #333333	 #E28082	 #E50017	 #000000
button focus		 #E50017		 #E50017	 #FFB3B3	 #F0F0F0
	actionable list button		inactionable list button		active tab	




normal (not in focus)





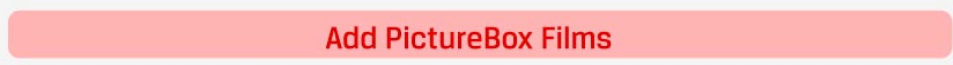
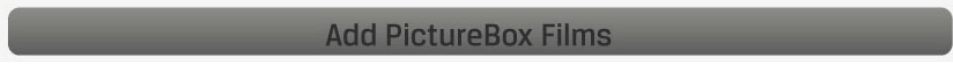
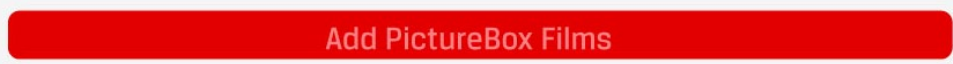
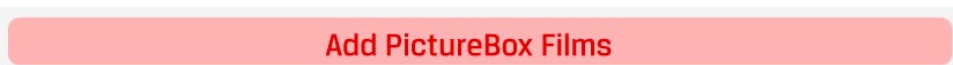
focused



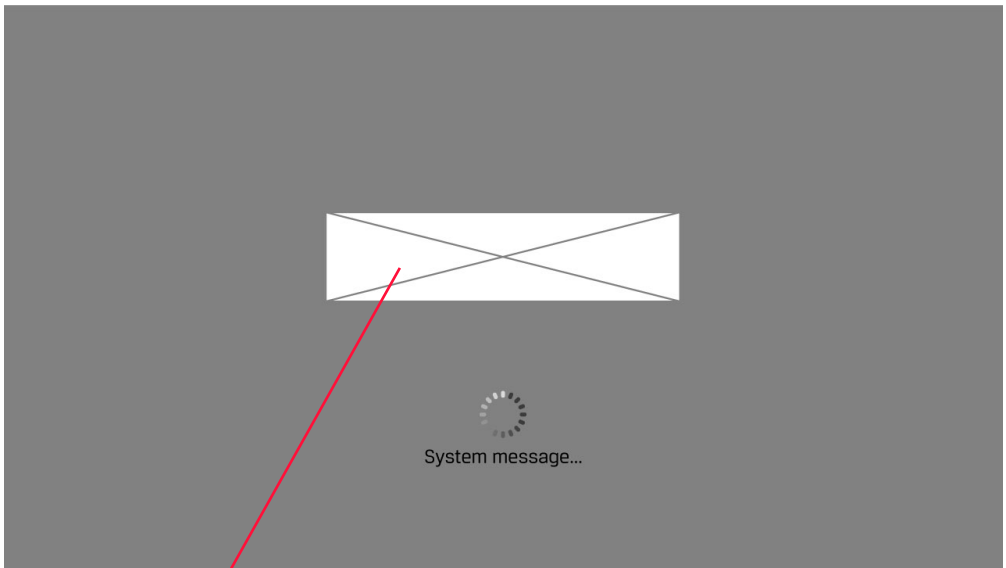
activated (1 second flash just after OK button press).



active ('on' while not in focus).

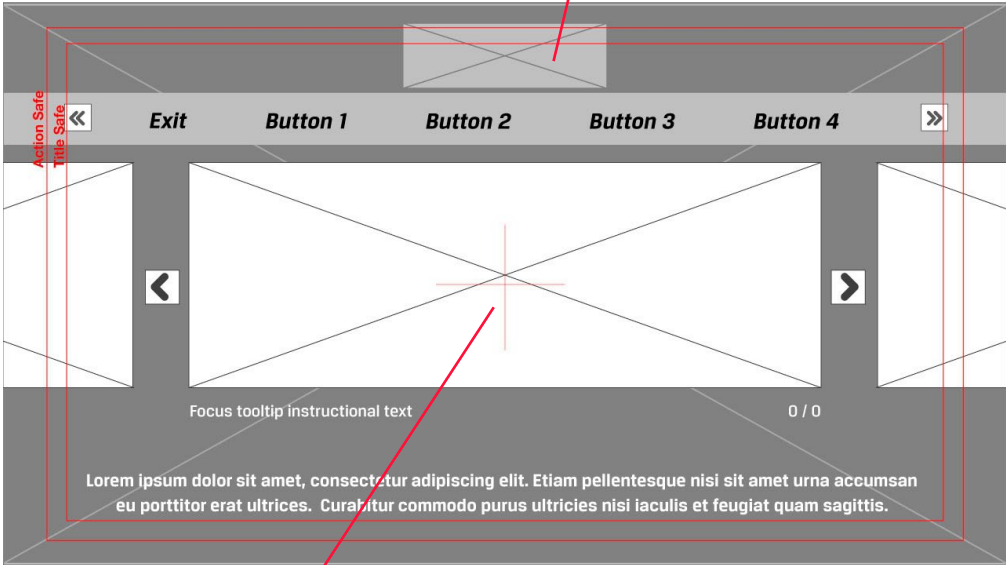
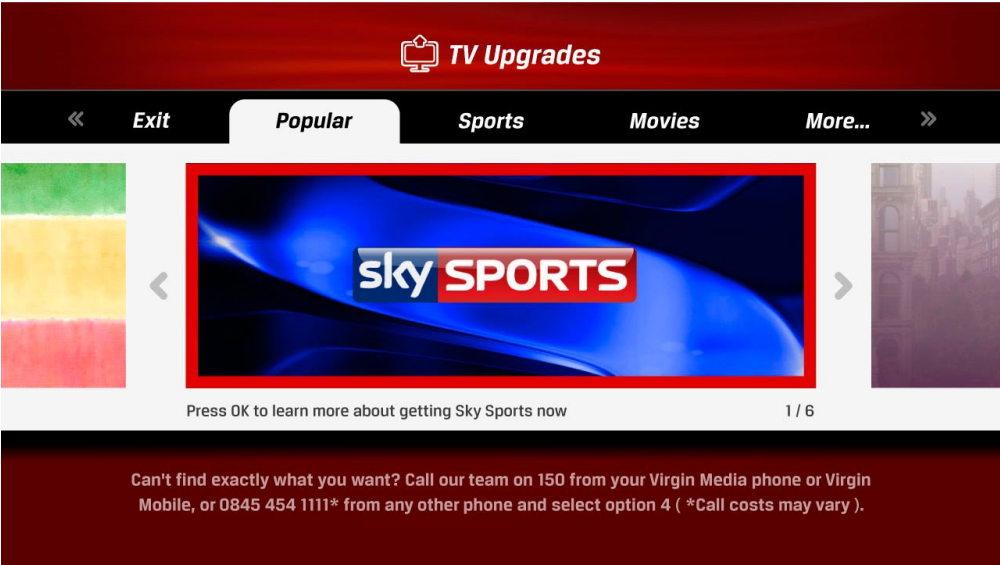
normal	
focused	
activated	
normal (not actionable)	
focused (not actionable)	
activated (not actionable)	

Configurable Parameters: Images



360 x 114 px PNG

same logo graphic (360 x 114) scaled to 72%



940 x 335 px JPG

## Behaviours

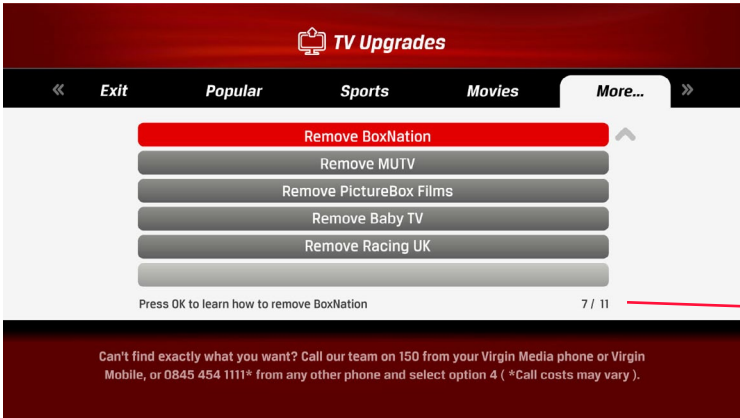
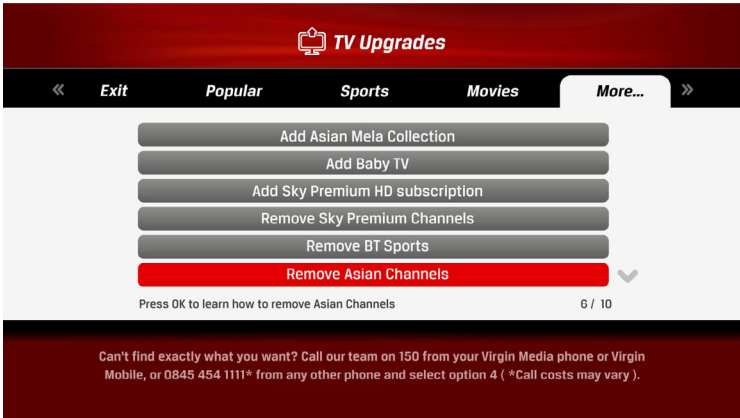


Element	Button	Description
All (Global)	Press OK	Plays SELECT sound. An on-screen button flashes its activated state for 1 second. If carousel was advancing automatically this stops it and the carousel now is subject to manual control.
Store Front screen	Press LEFT, RIGHT, UP, DOWN, CH DOWN, CH UP, SKIP FWD, SKIP BACK, FWD, RWD	Plays UPDOWN sound.
	Top Menu	
	Press OK	Loads the content (a carousel or a list) below the tabbed menu, except on the 'Exit' button, which quits the app. If the content associated with the tab in focus is already loaded the focus jumps to the first item in the content window (ie. reloads the screen state)
	Press LEFT	Moves the focus to the next selectable menu item to the left. If the focus is already on the leftmost menu item then BONK.* The tooltip text updates with the associated message.
	Press RIGHT	Moves the focus to the next selectable menu item to the right. If the focus is already on the rightmost item then BONK. The tooltip text updates with the associated message.
	Press UP	BONK.
	Press DOWN	Focus jumps to the next selectable item below in the content window. The tooltip text updates with the associated message.
	Press FFWD	Makes the next tab to the right active, moving the focus to first selectable item in the redrawn Content Window. If the active tab is already on the rightmost tab then BONK.
	Press RWD	Makes the next tab to the left active, moving the focus to first selectable item in the redrawn Content Window. If the active tab is to the right of the 'Exit' tab then move the focus to the 'Exit' tab. If the active tab is already on the leftmost tab then BONK.
	Content Window	
	Carousel	
	Press OK	Triggers account lookup and loads the associated content on the Purchase screen.
	Press LEFT	Moves the carousel item on the left to the centre. The tooltip text updates with the associated message, and the item number indicator decreases by 1.
	Press RIGHT	Moves the carousel item on the right to the centre. The tooltip text updates with the associated message, and the item number indicator increases by 1.
	Press UP	Moves the focus to the active tab above.
	Press DOWN	BONK.
	Press FFWD	Makes the next tab to the right active, moving the focus to first selectable item in the redrawn Content Window. If the active tab is already on the rightmost tab then BONK.
	Press RWD	Makes the next tab to the left active, moving the focus to first selectable item in the redrawn Content Window. If the active tab is to the right of the 'Exit' tab then move the focus to the 'Exit' tab. If the active tab is already on the leftmost tab then BONK.

\* BONK - This is a sound indicates that a button press on the remote was received, but there is no action to perform.



Behaviours

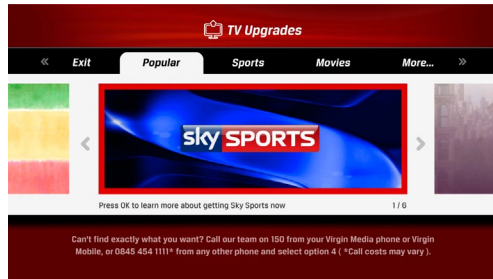


Item number indicator

Scrolling on a vertical menu list on the Store Front screen. If there are more than 6 items in a list the additional items flow to new pages. Note the arrow button hints that appear to indicate additional pages.

Element	Button	Description
Store Front screen	Content Window	
	List Menu	
	Press OK	Triggers the activated state of the button, which flashes for 1 second. If the button is actionable then this is followed by an account lookup and the loading of the associated content on the Purchase screen. If the button is not actionable (greyed out) then the tooltip flashes red along with BONK.
	Press LEFT	BONK.
	Press RIGHT	BONK.
	Press UP	Moves the focus to the next selectable menu item above, updates the tooltip text with the associated message, and decreases the item number indicator by 1. If already on the topmost menu item it moves the focus to the active tab above, the tooltip is updated and the item number indicator updates to only show the total number of items in the list. Paging: if there are more menu items before those on the visible list then UP on the topmost visible item loads the next screenful of menu items and moves the focus to the bottom.
	Press DOWN	Moves the focus to the next selectable menu item below, updates the tooltip text with the associated message, and increases the item number indicator by 1. If already on the bottommost menu item then BONK. Paging: if there are more menu items after those on the visible list then DOWN on the bottommost visible item loads the next screenful of menu items and moves the focus to the top.
	Press CH DOWN	Moves the focus to the bottommost visible item, changing the tooltip text and item number accordingly. If already on the bottommost visible item move the focus to the bottommost visible item on the next page. If already on the the bottommost selectable item on the last page then BONK.
	Press CH UP	Moves the focus to the topmost visible item, changing the tooltip text and item number accordingly. If already on the topmost visible item move the focus to the topmost visible item on the previous page. If already on the the topmost selectable item on the first page then it moves the focus to the active tab above.
	Press SKIP FWD	Moves the focus to the bottommost selectable item on the last page, changing the tooltip text and item number accordingly. If already on the bottommost selectable item then it moves the focus to the topmost selectable item on the first page.
	Press SKIP BACK	Moves the focus to the active tab above.
	Press FFWD	Makes the next tab to the right active, moving the focus to first selectable item in the redrawn Content Window. If the active tab is already on the rightmost tab then BONK.
	Press RWD	Makes the next tab to the left active, moving the focus to first selectable item in the redrawn Content Window. If the active tab is to the right of the 'Exit' tab then move the focus to the 'Exit' tab. If the active tab is already on the leftmost tab then BONK.

## Example User Journey 5: Navigating the around the Store Front Screen



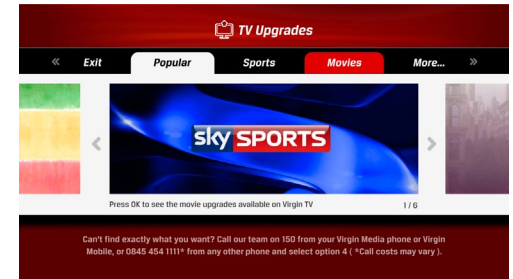
1. Store Front Screen.



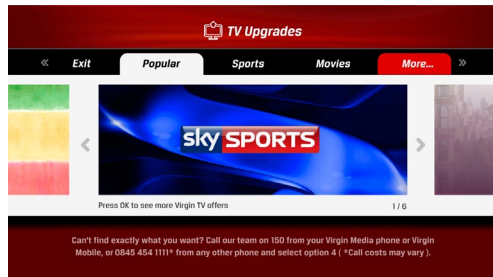
2. UP pressed.



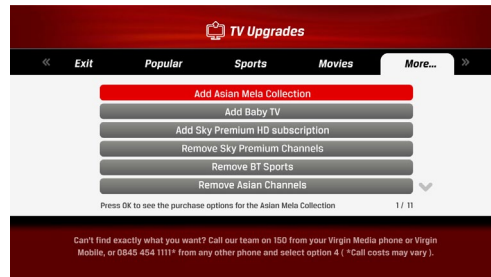
3. RIGHT pressed.



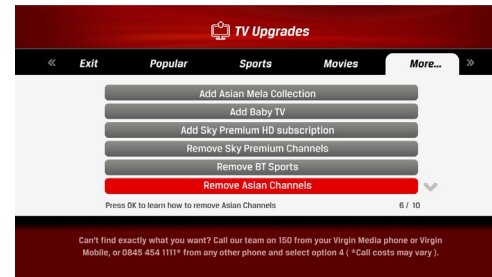
4. RIGHT pressed again.



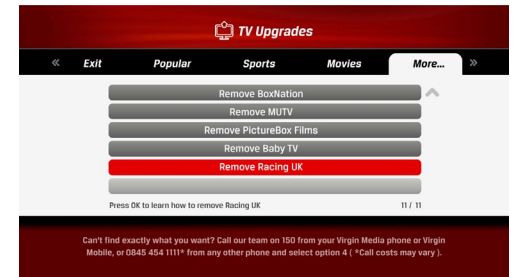
5. RIGHT pressed again.



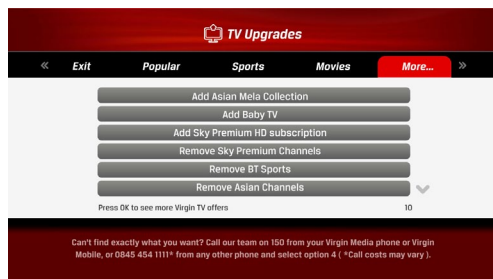
6. OK pressed. Focus jumps to the first item in the list.



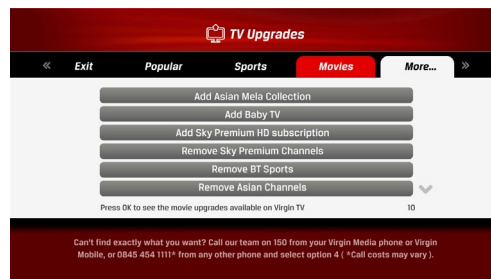
7. CHANNEL DOWN pressed.



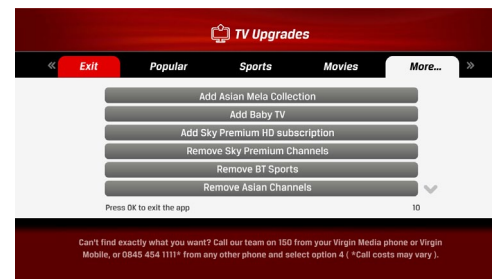
8. CHANNEL DOWN pressed again.



9. SKIP BACK pressed. Focus jumps to active tab, list is reset back to the top.



10. LEFT pressed.

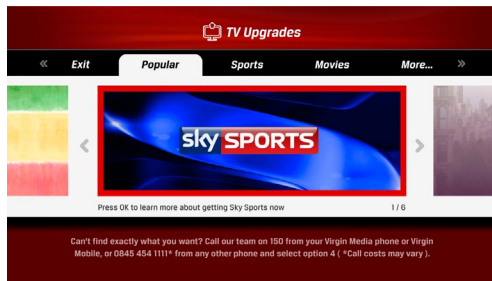


11. LEFT pressed 3 times.



12. OK pressed, user is returned to launch point.

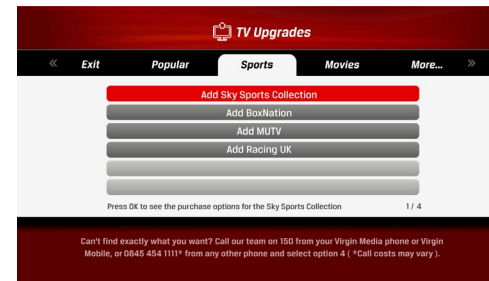
## Example User Journey 6: Visual differences before and after account lookup



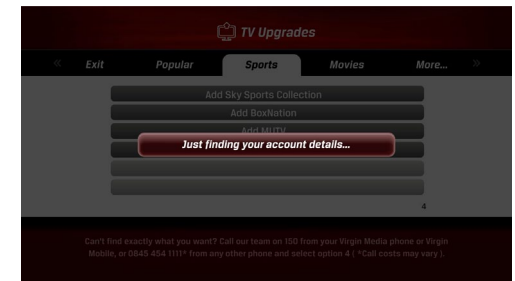
1. Store Front Screen.



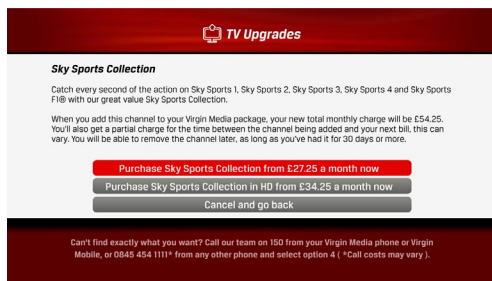
2. UP and RIGHT pressed.



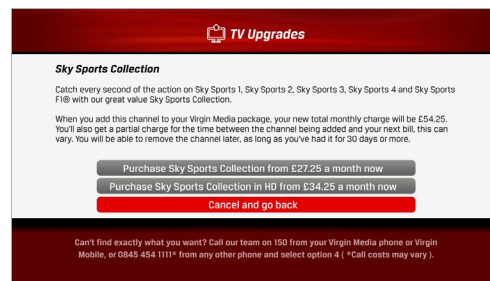
3. OK pressed. Note all the buttons in the list look the same at this point.



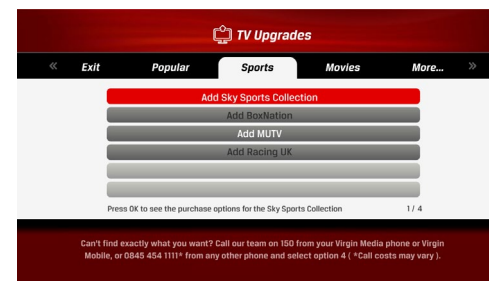
4. OK pressed. The system retrieves the user's account information.



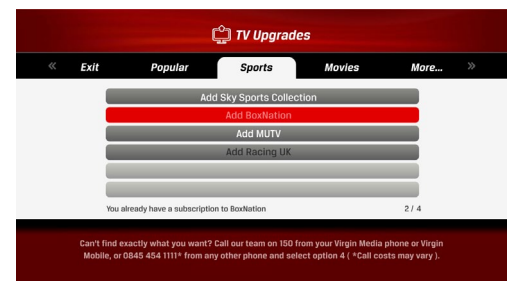
5. Purchase Screen loads. The user decides they don't want to buy.



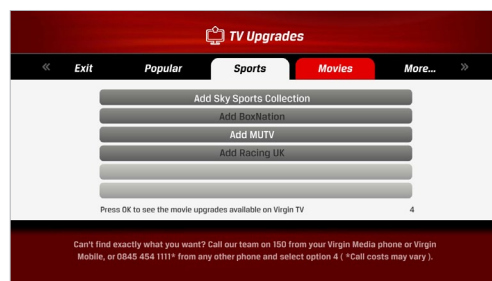
6. DOWN pressed twice.



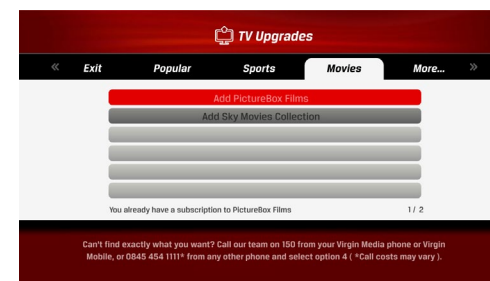
7. OK pressed. The user is returned to the Store Front Screen. Note certain selections are "greyed out," indicating they are not actionable (usually because the user already has those selections and can't buy them again).



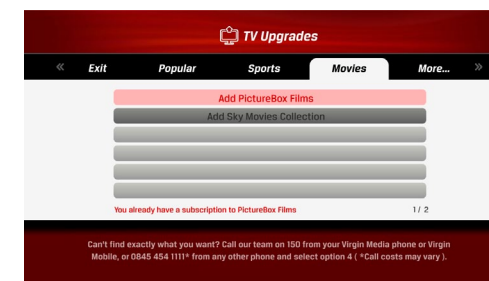
8. DOWN pressed. The tooltip states the reason why the selection is not actionable.



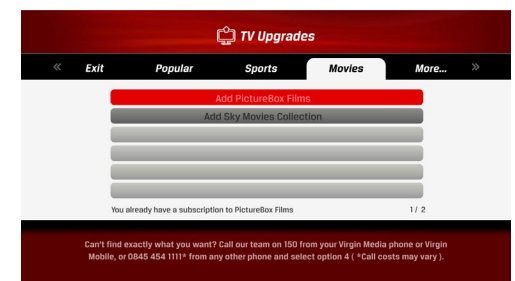
9. UP pressed twice, and RIGHT once.



10. OK pressed. This list has no actionable items.

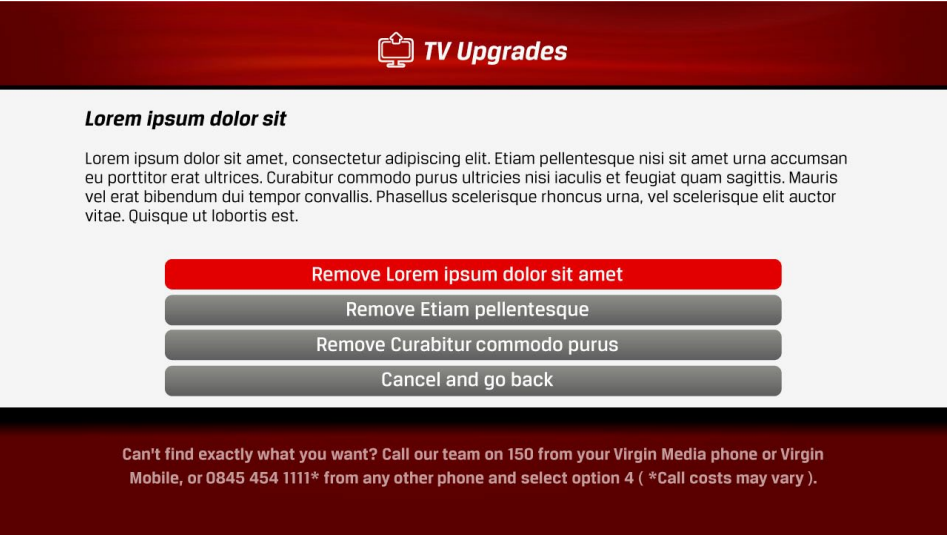
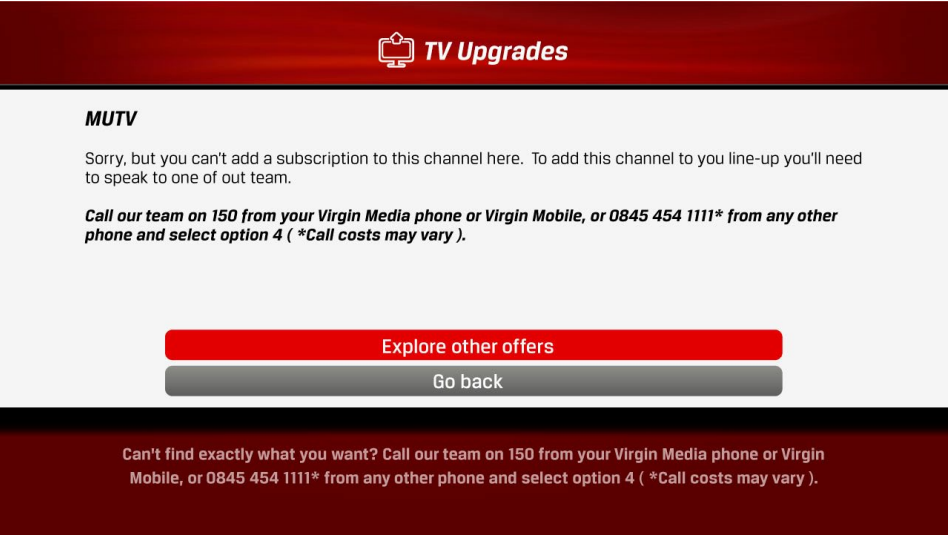


11. OK pressed on the inactionable list item. The app responds, showing the activated state, but sounds a BONK to communicate the button press will not lead anywhere. The tooltip also flashes red to emphasise it.



12. After 1 second the list button returns to its focused state.

Behaviours



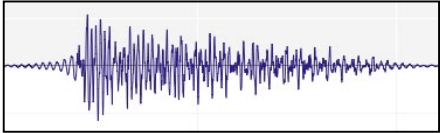


Purchase screen, showing a text block with 2 paragraphs with different fonts and font sizes.

A maximum of 4 buttons always populate from the bottom up.

Element	Button	Description
<b>Purchase screen</b> Content Window List Menu	Press OK	Performs the action shown on the button label.
	Press LEFT	BONK.
	Press RIGHT	BONK.
	Press UP	Moves the focus to the next selectable menu item above. If already on the topmost menu item the BONK.
	Press DOWN	Moves the focus to the next selectable menu item below. If already on the bottommost menu item then BONK.
	Press CH DOWN	Moves the focus to the bottommost visible item. If already on the the bottommost selectable item on the last page then BONK.
	Press CH UP	Moves the focus to the topmost visible item. If already on the the topmost selectable item then BONK.
	Press SKIP FWD	Moves the focus to the bottommost selectable item. If already on the bottommost selectable item then it moves the focus to the topmost selectable item.
	Press SKIP BACK	Steps back to the last screen in the history stack.
<b>Confirmation &amp; Error Pop-up</b> Button	Press OK	Performs the action shown on the button label.
	Press LEFT	Steps back to the last screen in the history stack.
	Press RIGHT	Performs the action shown on the button label (same as OK press).
	Press UP	BONK.
	Press DOWN	BONK.

Sounds

Sounds	Description	
UPDOWN	This is the default sound indicating a remote control button press. Sounds a bit like a single strike on a wood block percussion instrument.	
SELECT	This sound indicates that the OK button was pressed. Sounds a bit like two strikes on a two toned wood block, rising in pitch.	
BONK	This sound indicates that a button press on the remote was received, but there is no action to perform. An example would be pressing DOWN at the right end of a menu. Sounds like a jarring timpani.	



## Business rules for making Virgin TV purchases and removals on the TV set top box

Customer has...	Customer wants to...	What the app does
	+ add Sky Sports Collection or + add Sky Movies Collection	prompt: SD or HD? when customer has chosen • proceed with transaction
no Sky Premium channels & an HD capable set top box	+ add Sky Sports & Movies Collection or + add Sky Sports 1 only or + add Sky Sports 2 only or + add Sky Movies 1 package only or + add Sky Movies 2 package only	• redirect to call agent (the agent will encourage an upsell. The TV app currently does not account for this kind of upsell)
	+ add Sky Sports Collection or + add Sky Movies Collection	• proceed with transaction (customers will not see an option to add HD)
no Sky Premium channels & <b>no</b> HD capable set top box (Liberate only)	+ add Sky Sports & Movies Collection or + add Sky Sports 1 only or + add Sky Sports 2 only or + add Sky Movies 1 package only or + add Sky Movies 2 package only	• redirect to call agent (the agent will encourage an upsell. The TV app currently does not account for this kind of upsell)
VIP Package (Sky Sports & Movies Collection & HD)	- remove any part of the package	• redirect to call agent
	+ add Sky Movies Collection or + add Sky Movies 1 package only or + add Sky Movies 2 package only	• redirect to call agent
Sky Sports Collection	- remove Sky Sports Collection	• proceed with transaction (if customer has Sky HD, this will be removed too)
	+ add Sky Sports Collection or + add Sky Sports 1 only or + add Sky Sports 2 only	• redirect to call agent
Sky Movies Collection	- remove Sky Movies Collection	• proceed with transaction (if customer has Sky HD, this will be removed too)
	+ upgrade to Sky Movies Collection	• redirect to call agent
Sky Sports Collection & Sky Movies 1 package or Sky Movies 2 package	- remove package or collection	• proceed with transaction
	+ upgrade to Sky Sports Collection	• redirect to call agent
Sky Movies Collection & Sky Sports 1 or Sky Sports 2	- remove package or collection	• proceed with transaction
	+ add any extra package or upgrade to a collection	• redirect to call agent
Sky Sports 1 only or Sky Sports 2 only or Sky Movies 1 package only or Sky Movies 2 package only	- remove any package smaller than a collection	• redirect to call agent
	+ add Asian Mela Bundle	• proceed with transaction
no Asian channels	+ add Star Bundle or + add Zee Bundle or + add SET Bundle	• redirect to call agent
Asian Mela Bundle	- remove Asian Mela Bundle	• proceed with transaction
	+ upgrade to Asian Mela Bundle	• redirect to call agent
Star Bundle only or Zee Bundle only or SET Bundle only	- remove any bundle	• proceed with transaction

nb. This table was signed off by Ken Orford on 19 Nov 2013, confirming that all the scenarios outlined are required to be covered by the application.

## Business rules for making Virgin TV purchases and removals on the TV set top box

Customer has...	Customer wants to...	What the app does
Boxnation or MUTV or Picture Box or Baby TV or Racing UK or none of these channels	+ add any extra channel from this group they don't already have	● proceed with transaction
	- remove any channel from this group they have	● proceed with transaction
no BT Sport channels	+ add BT Sport Collection	● redirect to call agent (will encourage an upsell to Premiere Collection)
BT Sport HD	- remove BT Sport HD	● proceed with transaction
	- downgrade to BT Sport SD	● redirect to call agent
BT Sport SD	+ upgrade to BT Sport HD	● redirect to call agent (will encourage an upsell to Premiere Collection)
	- remove BT Sport SD	● proceed with transaction