



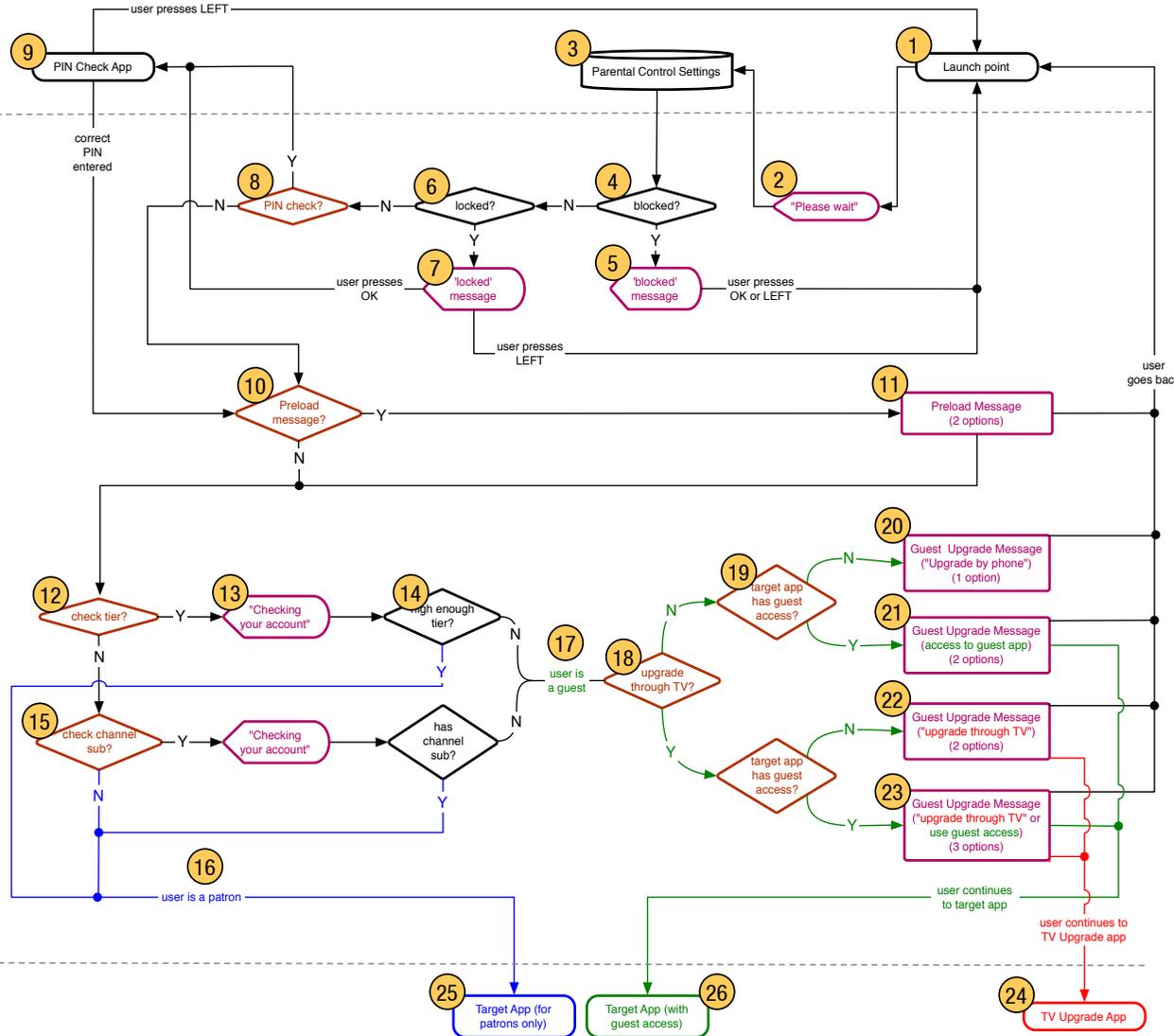
Connected TV Applications for TiVo

Gateway app

Flowchart and Design Mock-ups

15 Oct 2013

Activity Flowchart



This application controls a user's access to a target app. It can request a PIN for parental control, check the user's entitlements for premium apps, show preload messages, and give choices for upgrading if the user does not have the requested entitlements.

Which "gates" are employed (ie. which checks are performed) should be controlled by a manually edited configuration file that is unique to each target app (except for the block and lock settings, which are set in the Parental Controls app).

(1) Launch point

The launch point for the target app (this is generally Apps & Games, but some apps may be launched from the Discovery bar or a greyed-out channel).

(2) "Please wait" message

This message should appear as soon as possible to communicate to the user that the app is functional and loading. Ideally there should never be a black screen showing for more than 2 seconds (which leads the user to wonder if the app is broken or frozen).

(3) Parental Control Settings

These are the user settings that have been set in the Parental Controls app, either "unlocked", "locked" (which results in a PIN challenge for an app), and "blocked" (which prevents launch and does not ask for a PIN).

(4) Blocked?

Is the target app set to 'blocked' in the Parental Controls app?

(5) 'Blocked' message

This informs the user that the target app has been blocked by the Parental Control app. An OK, RIGHT, or LEFT press takes the user back to the launch point.

(6) Locked?

Is the target app set to 'locked' in the Parental Controls app?

(7) 'Locked' message

This informs the user that the target app has been locked by the Parental Control app, and that the user must answer a PIN challenge to load the target app. An OK or RIGHT leads to the PIN Check, a LEFT press takes the user back to the launch point.

(8) Check for PIN?

Optional boolean, default set to false. If the target app contains material that is not age appropriate for younger viewers Virgin Media will assist parents by preventing access except through a correct PIN. The variable that controls the appearance of the PIN challenge is checked here, which is retrieved from a configuration file that is unique to each target app. Note that if a guardian in the household has set the target app to 'locked' in the Parental Controls app this check is skipped in favour of the Parental Control settings.

(9) PIN Check app

The app that presents the PIN challenge. Correct PINs allow the user to continue, incorrect PINs will keep the user in limbo, and a LEFT press will return the user to the launch point.

(10) Display the Preload Message?

Optional boolean, default set to false.

(11) Preload Message

Dialog box with 2 options, either continue to the target app or go back to the launch point. The message text for the

dialog box will be retrieved from the per target app config file (so that each target app can have its own preload message).

(12) Check tier?

Optional boolean, default set to false. Manually set based on the target app (eg. for a premium target app that's only available to Virgin TV XL customers).

(13) "Checking your account" message

If the app is set to check the tier and/or a channel subscription, the user will see this message while the account details are being retrieved.

(14) Is the user subscribed to a high enough tier to view the target app?

If the Gateway app has been set to check the user's tier subscription it will retrieve the account holders subscription information and check it against the setting in the config file (usually the check would be for XL customers to allow only them to view premium apps).

(15) Check channel subscription?

Optional boolean, default set to false. Manually set based on the target app (eg. for premium bonus content for Sky Sports Collection customers).

(16) The user is a patron

If the user does have the entitlements being asked for they are considered a patron, and are allowed access to the target app.

(17) The user is a guest

If the user does not have the entitlements being asked for they are considered a guest and will be presented with

a Guest Upgrade Message. This dialog box may include options to upgrade (via the TV Upgrade app) or to launch a guest version of the app (possibly an app that contains ads).

(18) Upgrade through the TV Upgrade app?

Optional boolean, default set to false. Should be manually set based on the target app (eg. if the target app requires the Sky Movies Collection, this option can be turned on to give the user the option of upgrading via the TV Upgrade app). If set to true an extra option will appear on the Guest Upgrade Message.

(19) Does the target app have guest access?

Optional boolean, default set to false. Should be set automatically based on the target app (eg. can be set manually in the config file if this is impossible). If set to true an extra option will appear on the Guest Upgrade Message.

(20)(21)(22)(23) Guest Upgrade Messages

If the user does not have the entitlements being asked for they will be shown a dialog box with a number of user options. At most the user will have the option to upgrade through the TV Upgrade app, to launch the app in guest mode (eg. with ads), or to go back to the launch point.

The message text for all 4 variations of the dialog box will be in the per target app config file.

(24) TV Upgrade app

This app allows customers to upgrade certain channels on their TV. It may be useful to direct users here if the

target app requires a channel subscription that can be purchased on the upgrade app.

(25) Target app (for patrons only)

Premium version of an app, requiring proper entitlements to view.

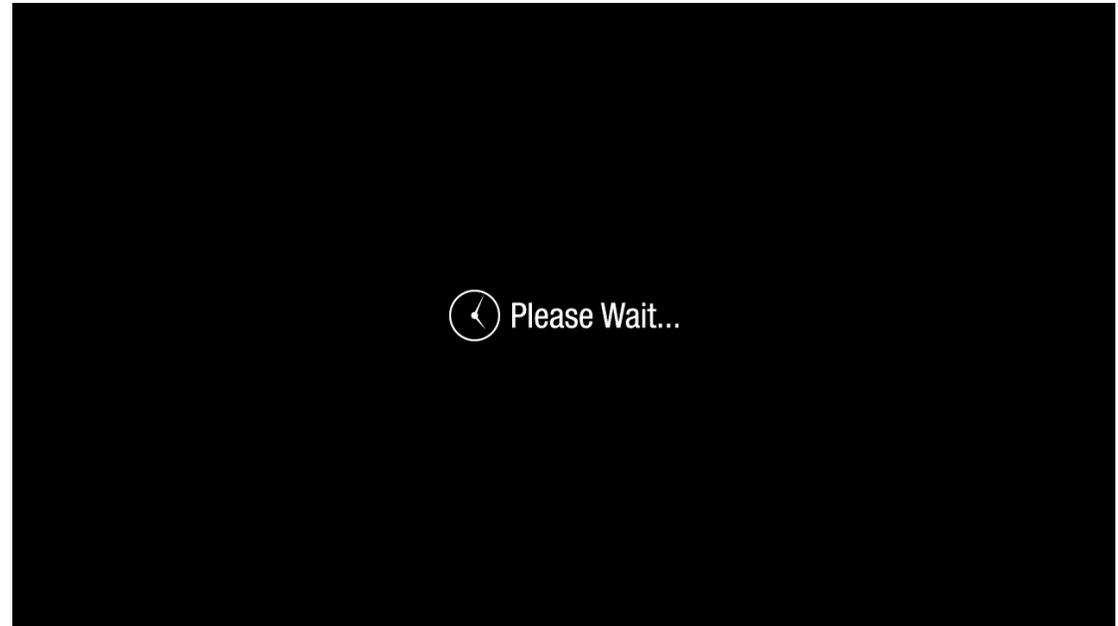
(26) Target app (for guest only)

Optional. Version of a target app that any user can view. In some cases the the target app may have a guest mode and patron mode instead of entirely separate apps.

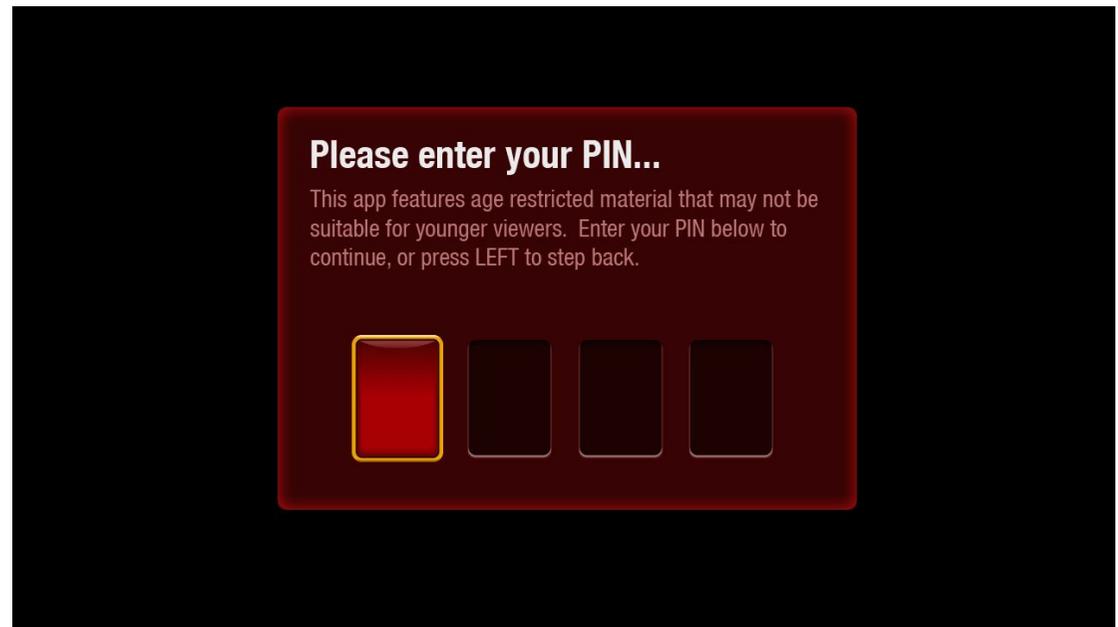
General functionality

- 1) On-screen buttons function as other TiVo red pill buttons do: OK or RIGHT executes an action, LEFT cancels it.
- 2) If there is no user interaction for 15 minutes the app will quit and the user will be returned to the launch point.
- 3) There should be some basic error checks (eg. the network is down) and a dialog box should appear to communicate that there has been an error. A 'continue' button quits the app when pressed.

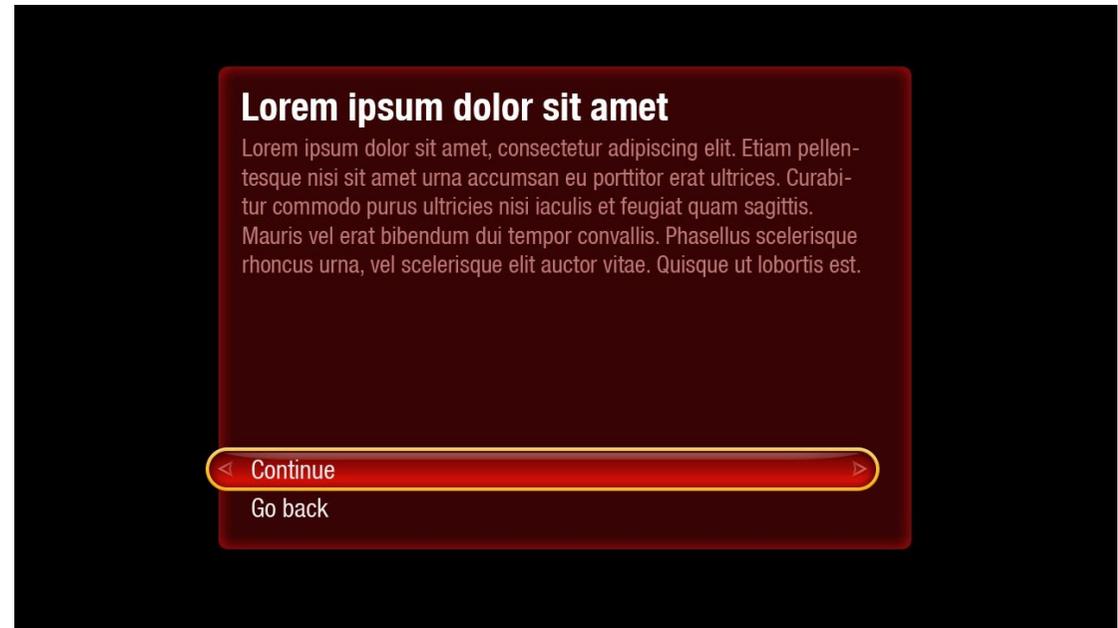
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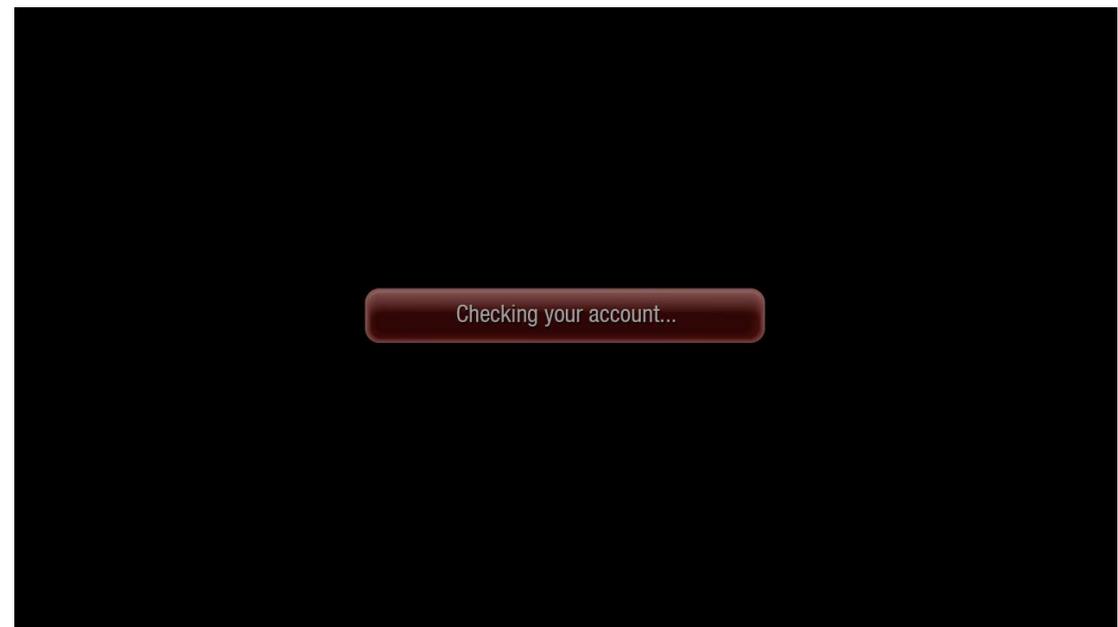


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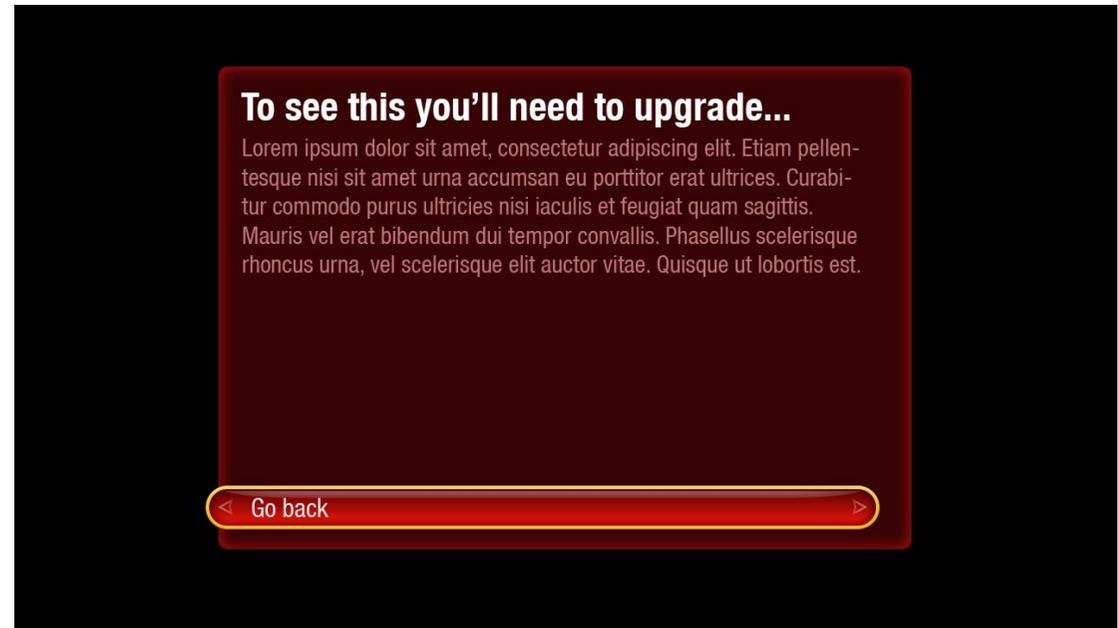


Preload message

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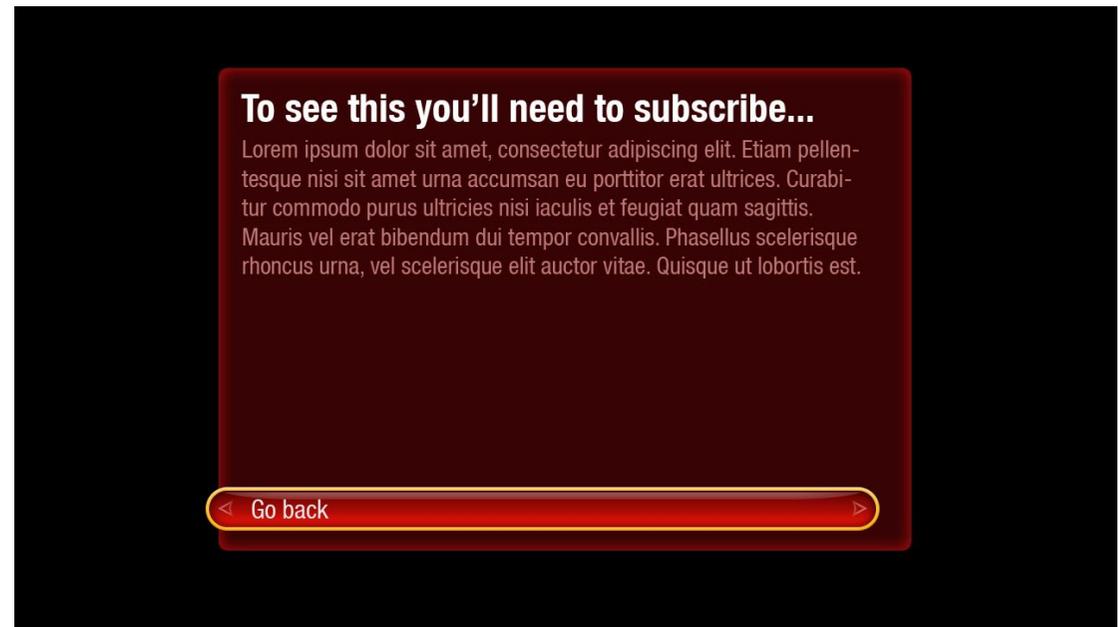


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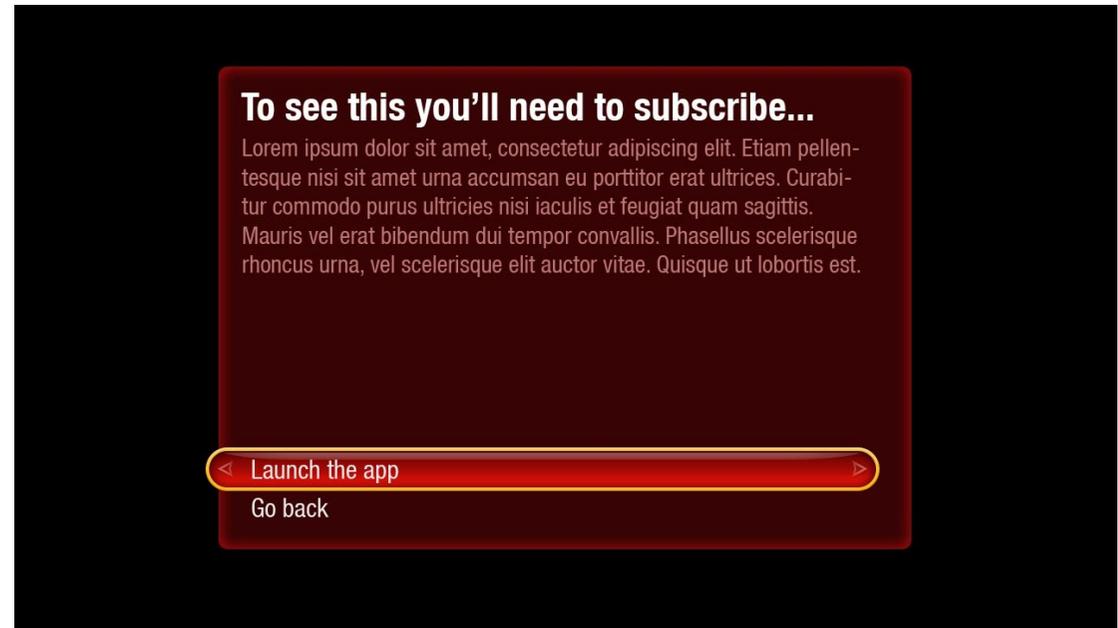
Message text will be configurable through an external file unique to the target app.

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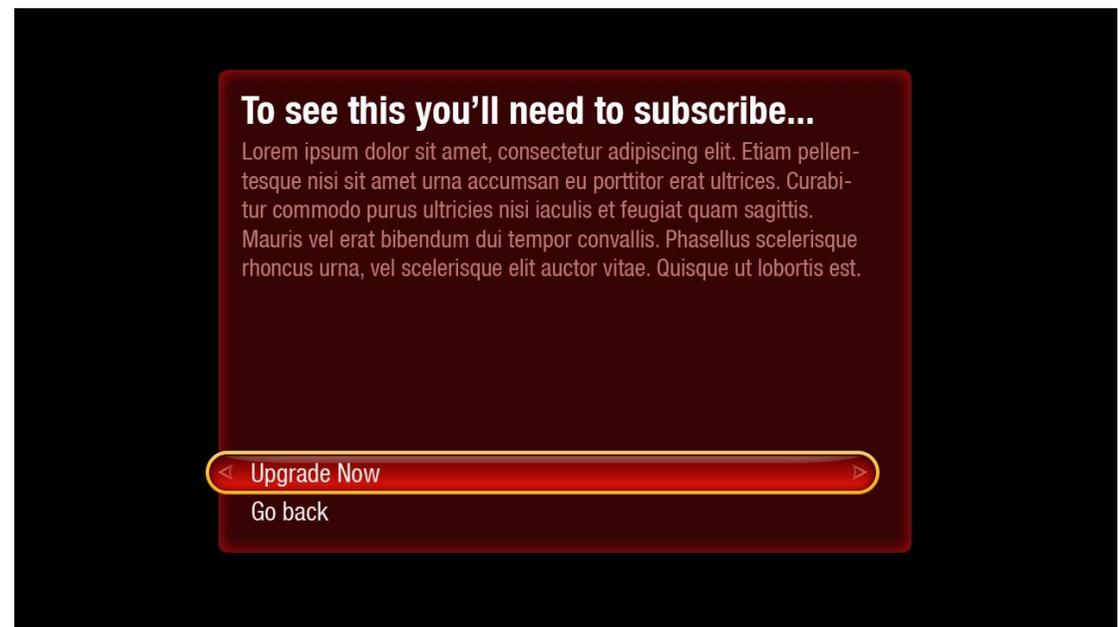


Note: pressing LEFT will quit the Gateway app.

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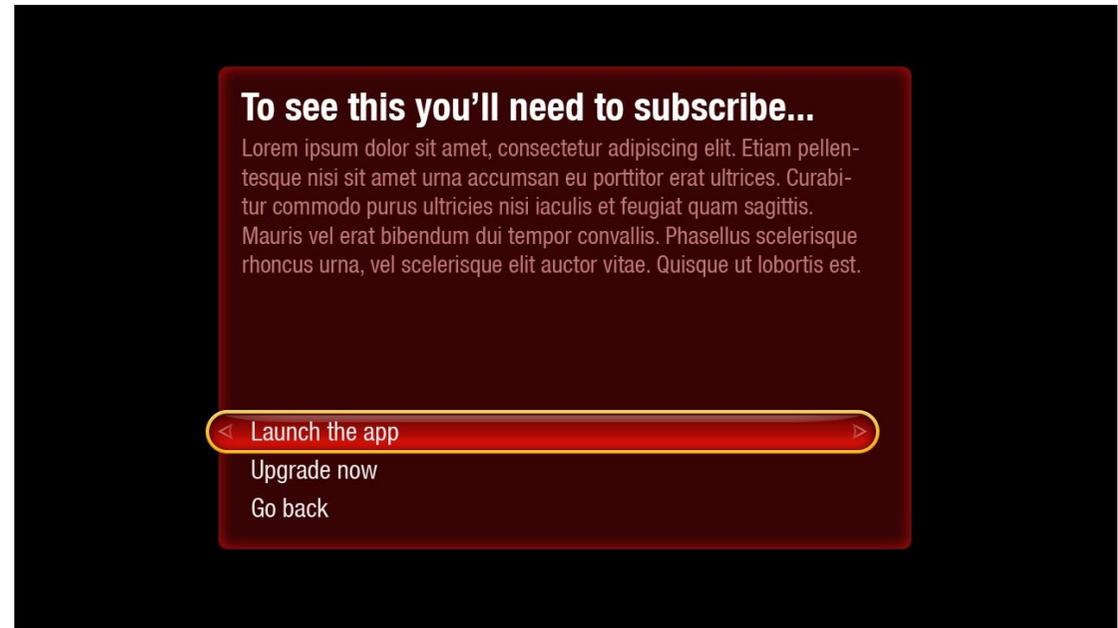


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Note: pressing LEFT will quit the Gateway app.

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Error message. To be shown if there are technical errors, like network disruptions.