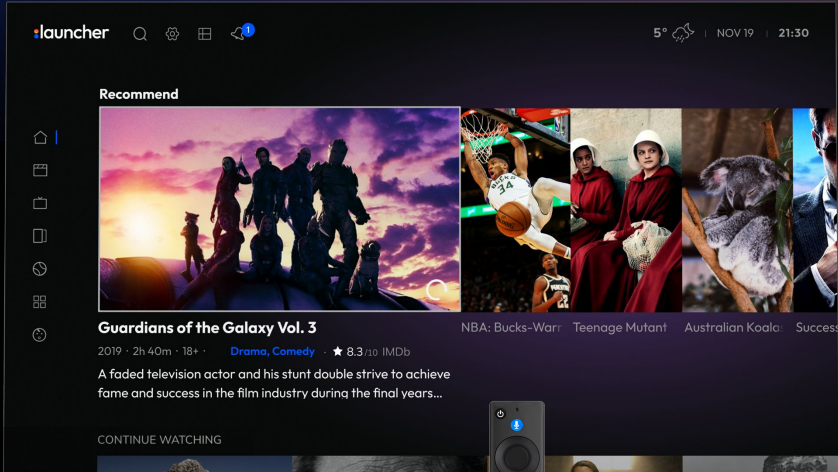# Accedo Android TV Launcher

A Product Guide.

In a previous report, we discussed the key features and benefits of Android TV Launcher. We will now provide a guide to Accedo Android TV Launcher - a specialist solution which was developed in response to Google's launch of its Operator Tier program.

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launcher

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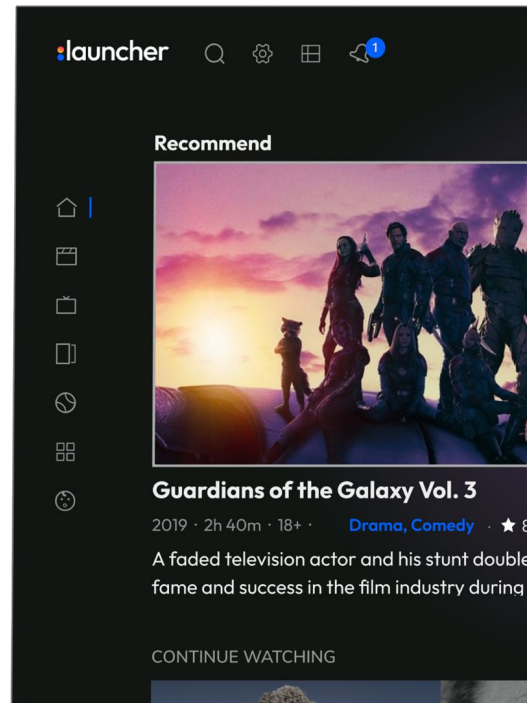5° | NOV 19 | 21:30

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— Introduction

A guide to the **Accedo Android TV Launcher**

The Accedo Android TV Launcher is designed to reduce the time spent on development and testing, allowing operators to reduce the time to market and experience lower total cost of ownership (TCO).

The solution offers a collection of prebuilt UX themes that are certification ready, meaning that they meet all of the UX requirements defined by Google under the Operator Tier program. Architected from the bottom-up for rapid configuration, customization, and flexibility of integration, the Accedo Android TV Launcher marries the best of bespoke development with the advantages of a productized platform, including a short time to market, low risk delivery, and a future roadmap.

The Accedo Android TV Launcher has the ability to support new screen designs, either from Accedo's existing solution portfolio or from an operator's custom design. Accedo uses the Android TV Input Framework to access an operator's linear channels (including DVB broadcast and IP Multicast services), and also integrates with an operator's head-end API to gain access to metadata and video for on-demand movies and catch-up TV services. Furthermore, the Accedo Android TV Launcher leverages Accedo's cloud-based UI- management platform, Accedo Control, for dynamic UI configuration and customization. Menus, pages and rails of content may all be configured dynamically in real time to allow the UI to be adapted, enhanced and improved together with offering the ability to serve promotional and seasonal content to end users. On the following pages, you will find a detailed outline of the features and benefits provided by the solution.

— **Part 1**

Access to operator OTT & broadcast channels

The Accedo Android TV Launcher can readily support pure OTT channels, as well as linear broadcast DVB channels, and may even mix channels from different content sources within the same configurable EPG.

The solution has been designed to maximize the use of TIF for consumption of all linear channels; a setup that allows the launcher to be hardware agnostic and provide immediate re-use of Google's Common Broadcast Stack.

Using TIF also ensures that the launcher has common controls across all channels for features such as Parental Control, HDMI CEC, subtitling and multiple audio tracks, displaying all associated EPG data. Depending on the source of the channel (e.g. an OTT channel vs a DVB channel)

The player may be provided by different parties. The binding of the player with the launcher is orchestrated by the pre-integration of the Launcher and TIF.

Accedo Android TV Launcher has components designed to integrate with a cloud PVR manager and catch-up content system providing easy access to users own recordings and missed programs. It also provides a mini EPG to provide quick access to what's on now including the ability to filter content by genre.
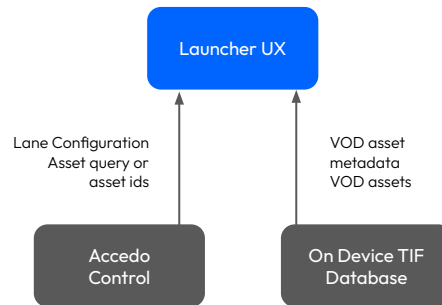
Access to operator on-demand content

The Accedo Android TV Launcher has an abstraction layer to allow for rapid integration of an operator's VOD catalog.

Once integrated, content presentation may be dynamically controlled from a cloud based configuration server. The presentation and playback of VOD content in the Launcher is managed by 3 components

Launcher UX is responsible for retrieving VOD asset metadata from the Operator VOD catalog and for providing the player.

Accedo Control is responsible for defining where the VOD assets are presented in the UX and for providing the query parameters used by the launcher to fetch VOD content.

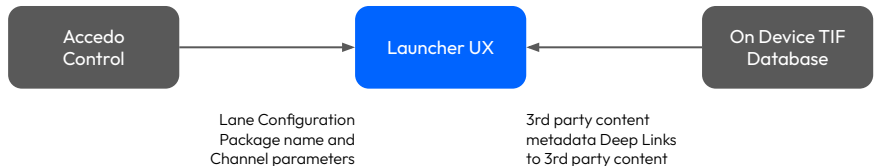Operator VOD Catalog provides the VOD asset metadata and content for playback.

By separating the layout and by providing the queries via Accedo Control, the Operator has full flexibility for how to present its content catalog, allowing optimal re-use of the existing VOD system.

Aggregation of 3rd party content

The ability to aggregate content is often considered the cornerstone of a successful deployment where the operator STB becomes a central entertainment hub.

| Accedo Control | → | Launcher UX | ← | On Device TIF Database |

Lane Configuration Package name and Channel parameters

3rd party content metadata Deep Links to 3rd party content

The Accedo Android TV Launcher is built to use Android's 3rd Party Channel's to simplify the integration of 3rd party services. To display content from a 3rd party application, the configuration details are defined using Accedo Control. This allows the placement of 3rd party content to be controlled from the cloud without requiring new software releases to successfully integrate partner content data. Similar to on demand content, the presentation and playback of aggregated 3rd party content is managed by 3 components. Accedo Launcher is responsible for retrieving and presenting 3rd party content metadata and launching a deep link direct to the content application.

Accedo Control is responsible for defining where the 3rd party content is presented in the UX and for providing the query parameters used by the launcher to query the TIF database.

3rd Party applications are responsible for promoting their content through TIF using the channels API according to recommendations from Google.

Additionally the Accedo Android TV Launcher also supports Netflix custom DET and PADI authentication mechanisms, enabling integration of Netflix content and optionally direct carrier billing.

— Part 4

Search & assistant features

The Accedo Android TV Launcher is designed to fully support Google search actions, extending and simplifying the viewing experience. The solution supports all of the following use cases...

Movie & TV show search
If the Launcher is in the foreground and a match is found, operator content will always be prioritized over that from 3rd party services.

Channel change
Making it possible to change channel directly using commands such as "change to channel 100".

Open apps page
Making it possible to open the Apps and Games page directly using the command "open apps".

Open an application
Making it possible to open a specific application by name using a command such as "open Netflix".

Playback actions
Enabling playback related voice actions. The following commands may all be used: "pause", "continue the movie", "play the next episode", "turn on captioning", and "rewind 2 minutes".
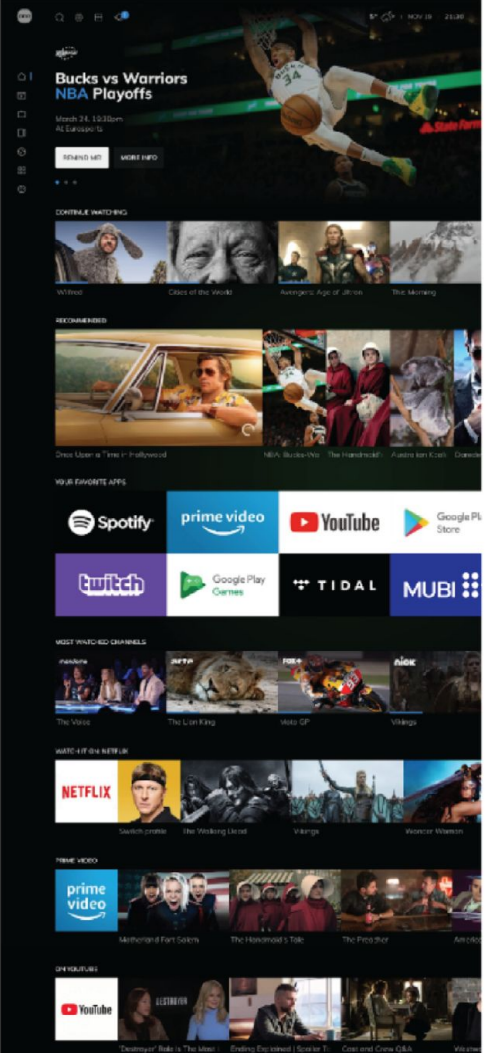
— **Part 5**

Customizable UX

The Accedo Android TV Launcher is designed with dynamic customization in mind.

This is intended to reduce operators' development efforts and time to market while also allowing the ability to easily adapt and reconfigure the service to meet ongoing customer needs.

The following concept, using Accedo's Aurora UX theme, shows an example Homepage design. Each of the sections within the Home page are configured using Accedo Control. Operator content is displayed at the top of the page with 3rd Party application content accessible from individual content rails which have been given a lower priority.

Featured content

Now on TV

Recommended content

Highlighted applications

Promoted content

Partner content

Management of operator tier deployments

A critical consideration (but one that is sometimes overlooked at the beginning of a project) is how to manage infield updates to the launcher UX. Accedo has overcome this problem by providing operators with the Accedo Android TV Launcher Updater; a separate application provided alongside the Accedo Android TV Launcher. The Updater has three primary capabilities; to update itself, to update the launcher and to update 3rd party system applications.

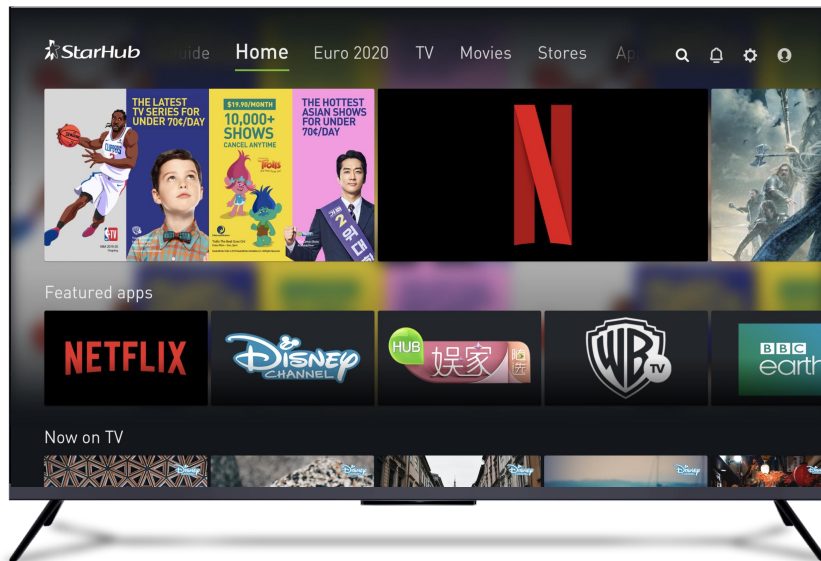Just as with the launcher, the updater is managed and configured from the cloud using Accedo Control. From an end-user perspective, the first interaction with the updater is likely to occur during initial installation, when it is triggered to check for updates during the device set-up. During normal operation, updates are notified to the end user using the Google notification system and are configured with a range of priorities which define how they are being presented. In addition, deployed devices may be segmented to allow new versions to be trialled by a subset of users prior to full deployment. Accedo Control also offers the ability to stagger the rollout of software to percentages of the user base so that new features can be introduced in a staggered and controlled manner.

— Part 7

Your dedicated Android TV UI partner

As a long-standing player in the video service industry, and a certified Google partner, Accedo is well positioned to help operators take advantage of the Android TV Operator Tier program. By intentionally adopting a highly-modular application architecture during the development of the Accedo Android TV Launcher, we can easily offer operators their choice of user interface on Android TV, including a fully-productized Android TV Launcher for the Operator Tier. Accompanied with Accedo Control, operators are further positioned to sustain a rapid rate of change and modification while developing new services, rebranding, or opening up new features to the viewer.

As a committed partner to Google's Operator Tier program, and as a champion for operator-driven user experience on all platforms, Accedo stands ready to offer modular, product-based, user-interface solutions for Android TV.

:launcher

Core components & features

- EPG (Mini & Grid)
- Reminders
- Channel Tuning
- Time-shift TV
- Catch-up TV
- Payment Workflow
- Purchase PIN Support
- Geotargeting & Whitelisting

- Google Search/Assist Integration
- Network PVR
- Android TV Apps & Games
- User Settings & Preferences
- Operator Initial Setup Workflow & Screens
- Parental Controls
- App Recommended Channels (ARC for 3rd Party App)

- Netflix Pre-integration
- Linear TV
- Multi-Language UI
- "For You" Home Screen
- Personalized Recommendations
- Editorial Recommendations
- Google Watch Next
- Movies on Demand
- TV on Demand
- Instant-restart / Start-over TV

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Accedo is a global video solutions provider delivering premium video experiences. We offer a combination of products and services to support customers at every stage of the video business journey, from strategy and design, to delivery and post-launch optimization. Accedo has over 600 employees in 17 offices across the world.

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