Response to ACCC Digital Platform Services Inquiry – September 2024 report on general search services

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Thank you to the ACCC for the opportunity to respond to the Digital Platform Services Inquiry Issues Paper revisiting general search services.

I welcome the ACCC's emphasis on general search services, defined as "[s]earch engines [that] function by maintaining a large index of websites available on the internet and displaying a list of curated, ranked results … in response to a consumer's search query" (ACCC 2024: 3).

The filtering and sorting of search results have long been acknowledged as important areas for public policy. Public access to unbiased search is essential to the proper functioning of our economies, polities, and knowledge systems (Pasquale 2015, Noble 2018). A foundational principle here is the idea of search neutrality: that search returns should be free from commercial bias and should use relevance as the key criterion for filtering and sorting search returns. At the same time, it is recognised that offering search as a free service requires providers to monetise search results through some form of paid advertising. Accordingly, web search engines have devised ways of separating organic results from ads – and regulators have intervened at times to ensure that this separation is robust.

Current market arrangements for the structural separation of organic and advertiser content in search are by no means uncontroversial. Many Australian users of web search struggle to tell the difference between labelled ads and organic results (Scardimaglia and Daly 2016). Nonetheless, the basic principle of separation is generally accepted by industry, with the effect that organic and advertiser results are treated as distinct elements of the search returns page. This is an important principle that ensures consumers are not misled when seeking online information. However, these norms apply only to web search on desktop and mobile devices and are not widely implemented on newer Internet of Things (IoT) devices.

In this submission I want to draw attention to particular IoT devices that do not respect this principle of structural separation, and which therefore poses a problem for competition and consumer policy. I refer specifically to **smart TVs**. As I will show, smart TV search operates differently from desktop and mobile search, and it challenges some of the assumptions about search made in the DPSI issues paper. If Australian regulation is to keep pace with how search is being implemented in IoT devices, the ACCC will need to consider these differences and respond appropriately.

This submission presents our research team's findings from a programme of empirical testing of smart TVs that we have been conducting in the RMIT Smart TV Lab since 2022. Full details of our methodology can be found in a separate publication (Lobato, Scarlata and Schivinski 2023).

Competition issues in smart TV search

Smart TVs are internet-connected, app-enabled TVs that allow users to stream content and use interactive services. More than two thirds of Australian households now have a smart TV at home (Lobato, Scarlata and Schivinski 2023, ACCAN 202).

Use of search on smart TVs is very common in Australia. A nationally representative survey we conducted with 1069 Australian smart TV users in late 2022 (Lobato, Scarlata and Schivinski, unpublished data) found that 47% of Australian smart TV users have used universal voice search on their smart TVs, 77% of Australian smart TV users have used universal text search on their smart TVs, and 85% of Australian smart TV users have used in-app search on their smart TVs

Are smart TVs specialised or general search engines?

Smart TVs straddle the boundary between specialised and general search engines as defined in the ACCC Issues Paper. They are specialised in the sense that universal search on a smart TV generally returns only video results rather than webpages. However they are general in the sense that users can search for a very wide array of different material on their smart TVs, including news content about local, national or international affairs, as well as particular shows, episodes, or movies hosted by streaming services installed on the TV. Users also have access to a built-in browser within the TV which can be used for searching the web. The potential scope of smart TV search is therefore significantly wider than the specialised search engines discussed in the Issues Paper (e.g., flight booking search engines). We would suggest that smart TV search is best considered as a particular form of general search.

The organisation of search in smart TVs

Smart TVs enable at least three different kinds of search.

1. Users can search within apps (**in-app search**). For example, searching in Netflix for “horror” will return Netflix horror movies and series. This in-app search is relatively uncontroversial and is not presently a focus of regulatory attention.
2. Smart TVs come with a preinstalled **browser** for surfing the web. This browser has its own default search engine (often Google) which can be used to run web searches as on a mobile or desktop computer. In some cases, the default search engine in the browser can be changed according to the user’s wishes.
3. Most smart TVs also offer **universal search** which searches across a wider range of installed or preinstalled apps to show the user relevant results. To access universal search, a smart TV user typically types a search query into the search bar on the TV home screen, or uses the voice search button on their remote control. These universal search results are curated by one or more tech gatekeepers (see Table X). This process allows those gatekeepers to monetise visibility in search results through commercial arrangements with content providers (typically, streaming apps).

Accordingly, universal search is the most important site within the smart TV for the purposes of competition regulation.

Manufacturer	Samsung	LG	Sony	Hisense	TCL
Market share in AU	35%	16%	15%	14%	5%
TV platform	Tizen (Samsung)	webOS (LG)	Google TV	VIDAA (Hisense)	Google TV
Default browser search engine	Google Option: Bing	Google Options: Yahoo, Bing	N/A	Google	N/A
Universal search engine default	Bixby (Samsung) – only returns YouTube results Options: Alexa, Google*	webOS (LG) Options: Alexa, Google	Google	VIDAA	Google

*Varies by model. Some models feature choice screen

Table X: Search engines preinstalled in smart TVs: top-five brands (Australia)
Source: RMIT smart TV user survey and device testing (RMIT 2023)

Monetisation of universal search

Research by international media regulators has established that universal search results in smart TVs are actively monetized through advertising and sponsorship. The UK media regulator Ofcom found that content providers such as Netflix “may negotiate with TV platforms to influence search results” (Ofcom/MTM 2019: 38). This pay-for-play arrangement can include guaranteed inclusion in results and/or a guaranteed position in the order of results (Ofcom/MTM 2019). For example, on Hisense TVs Amazon Prime Video search results always appear first, even when they are less relevant than other search returns.

As this evidence shows, search results on smart TVs are not neutral. Apps are able to boost their visibility in search results by paying fees to the platform operator and/or TV manufacturer. These fees are commercial in confidence and there is no transparency or public oversight of these preferencing arrangements.

Ad labelling in universal search

None of the smart TVs that we tested use a labelling system to distinguish between organic and advertiser content in search results.

This lack of ad labelling in search, as well as in recommendations, is a problem that needs to be addressed by government.

At present, Australians are presented with a mix of paid advertising and organic results on their smart TVs. The boundaries between these categories are rarely clear, and consumer confusion is being exploited for commercial gain. Unlike in web search where ad labelling standards have evolved over time, smart TV operating systems do not yet have an agreed-upon way of distinguishing organic from advertiser results. Nor do smart TV operators respect the principle of separation between advertising and content in their interface design.

Bias in universal search

Research conducted by our team in early 2023 empirically investigated the organisation of search returns in a sample of smart TVs sold in Australia. We focused specifically on TVs manufactured by the top-five brands: Samsung, LG, Sony, TCL and Hisense.

To check for bias, we conducted universal searches for shows made by local free-to-air TV networks to see if the TVs could recognise and correctly direct us to these shows. We then noted which apps and shows were included in the search results as well as the order of those results.

Overall, we consistently found that commercial partnerships influence both the inclusion and ordering of search results on smart TVs sold in Australia.

Example: searching for *Bluey*

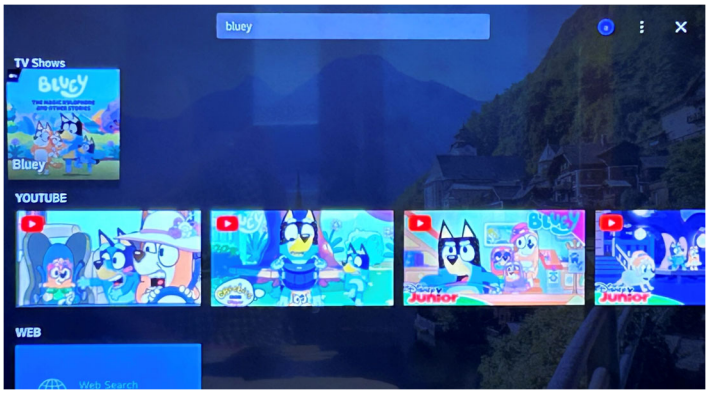
Consider the case of *Bluey*, Australia's most popular kids show. *Bluey* is an ABC production and can be viewed for free on ABC iview. Based on relevance alone, a universal search should therefore direct users to ABC iview as a first option.

However, we found this was not the case in most smart TV brands. Only two of the top five brands, Sony and TCL (Google TVs), directed the user to iview. The other brands – Hisense, Samsung and LG – directed the user first to Prime Video, YouTube, and AppleTV respectively. This suggests a commercial arrangement (advertising deal) between those services and the TV manufacturers.

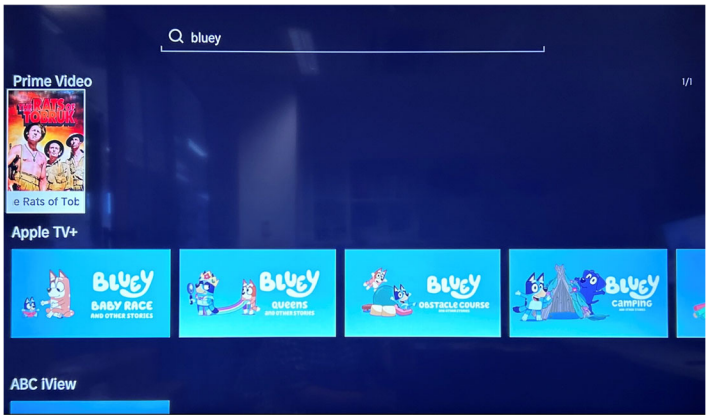
	Sony & TCL	*Hisense*	*Samsung*	*LG*
1st offering	ABC iview	prime video	YouTube	tv
Additional offerings	YouTube	tv ABC iview	-	YouTube

Table X: Order of returns when searching for *Bluey* on top five smart TV brands in Australia
Source: Lobato, Scarlata and Schivinski 2023

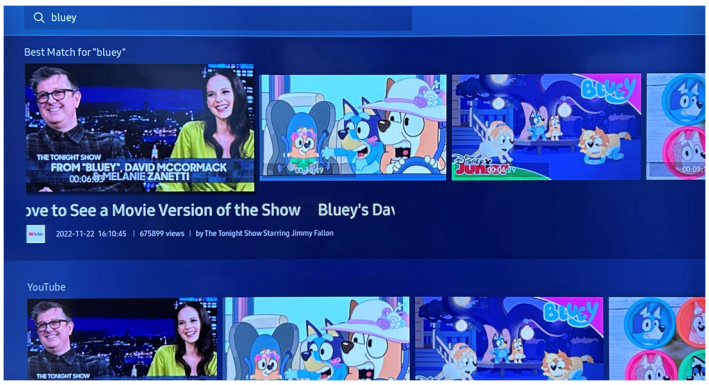
The following screenshots show the order of search returns for each TV brand:



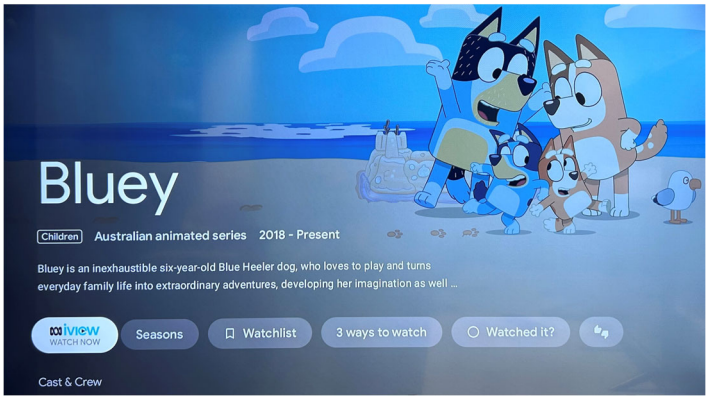
LG TVs direct the user to paid episodes of *Bluey* on AppleTV+ or clips related to *Bluey* on YouTube.



Hisense TVs return (less-relevant) results from Prime Video and paid episodes of *Bluey* on Apple TV+, ahead of iView.



Samsung TVs, which have limited universal search functions, direct the user to YouTube clips about Bluey.



Sony and **TCL** TVs, which use the Google TV platform, correctly direct the user to iview.

As these examples suggest – and as regulators have found (Ofcom/MTM 2019) – smart TVs are more likely to partner with major US-based streaming apps than with smaller national services or public-service broadcasters. Consequently, content provided by these big US players is more consistently discoverable through search. This has an aggregate effect of skewing content discoverability towards US titles and away from local titles. This is one example of how search bias can pose a competition challenge for Australian businesses.

We note that universal search is a complex matter and non-inclusion does not necessarily indicate that a search engine is deliberately excluding particular apps. In some cases, non-inclusion in search results can result from an app failing to provide the TV with appropriate metadata feeds. Nonetheless, our research suggests that the overall effect of commercial arrangements in smart TV search is to make the content of major US streamers (Netflix, Amazon Prime Video, Disney+) relatively more discoverable than content from Australian TV services.

Self-preferencing in smart TV search

Self-preferencing refers to the prioritization of in-house or owned-and-operated services over those of competitors. As the ACCC has noted, self-preferencing is a significant problem in platform markets because it 'risks disadvantaging individual sellers who compete directly against the online marketplaces' own products' (ACCC, 2022: 73).

Our research found several instances of self-preferencing in smart TV search. Notably, in title searches Google TVs position paid offers by YouTube and the Google store above competing offers.

Conclusion

In coming years, more and more internet-connected devices will become equipped with search capacities. For example, watches, cars, fridges, TVs and speakers now offer search capabilities, with other devices yet to come. The search experience offered by these devices will not always resemble what has traditionally been offered on mobile and desktop devices, because each device has distinct affordances – such as the presence or absence of a screen or text entry input – that mean the search experience is bespoke to each device. Additionally, device manufacturers and platform operators are also actively exploiting regulatory defecits when it comes to IoT search because policy expectations of, for example, smart TV search are not as developed as for desktop or mobile search.

It is important for the ACCC to be alert to the distinct curation, filtering and advertising strategies used in these various devices. The evidence we have provided in this submission shows that the structural separation of organic and advertiser content is not being respected in current smart TV design; nor are standard design principles about neutrality and bias.

We believe the ACCC's definition of general search should not be limited to traditional web and mobile search and should also encompass IoT devices including TVs, speakers and watches, and in-car entertainment. These IoT devices are where new kinds of search commercialisation strategies are being implemented by manufacturers and platforms. These strategies offer important clues about what the future of search might look like. As we have demonstrated in this submission, basic competition and consumer protection principles are not always respected in these visions.

Our research team at RMIT would be happy to provide more detailed information on any issues discussed in this submission, or to meet with the ACCC to discuss these matters further.

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