1. Search

1.1 Search Features

1.1.1 Search will be global in nature across each content type including Shows, Live Channel, Web shorts, On-Demand, EPG, Brand. Genres.

1.1.2 Search will be based on selected profile in the App. For e.g. If Kids profile is selected, then Adult rated content will not be displayed in Search result.

1.1.3 Predictive search will be used. When user enters the characters, then relevant Title of different contents (Title, Artist, Genre etc.) will be shown to the user .

1.1.4 Predictive search will start working after 2 characters for Channel and after 3 characters for rest of the content.

1.1.5 If user decides to ignore predictive search and searches the character on his own by clicking search button, then user will be shown search result page based on the text he searches.

1.1.6 Keyword driven search will be supported. Keyword will be provided in meta-data of each content type and search result will be shown based on Keyword.

1.1.7 Last 5 keywords that user has manually entered and clicked on search will be shown will be shown to user so that user need not to type those keyword again.

1.2 Search behavior for Regular Profile

1.2.1 Search will be global in nature across each content type.

1.2.2 Search result based on search query will be having all the available content irrespective of Content Rating.

1.2.3 Last 5 searches of each regular profile will be saved separately on Device level and it will be shown to the user when user taps on Search Bar.

1.2.4 If User does not have any search history, then user will be shown 10 keywords as search suggestion. These keywords will be configured in Video Ready CMS.

1.2.5 If No result is found, then user will be shown 10 keywords as search suggestion. These keywords will be configured in Video Ready CMS.

1.2.6 Predictive Search feature will be there and suggestion will be shown across all contents irrespective of Content Rating.

1.3 Search Behavior for Kids Profile

1.3.1 Search will be global in nature across each content type. Content rated not for kids will be excluded.

1.3.2 Search result based on search query will be having all the available content having UA rating.

1.3.3 Last 5 searches of each Kids profile will be saved separately on Device level and it will be shown to the user when user taps on Search Bar.

1.3.4 If User does not have any search history, then user will be shown 10 keywords as search suggestion. These keywords will be configured in Video Ready CMS.

1.3.5 If No result is found, then user will be shown 10 keywords as search suggestion. These keywords will be configured in Video Ready CMS.

1.3.6 Predictive Search feature will be there and suggestion will be shown across all contents having UA rating.

1.4 Search Priority

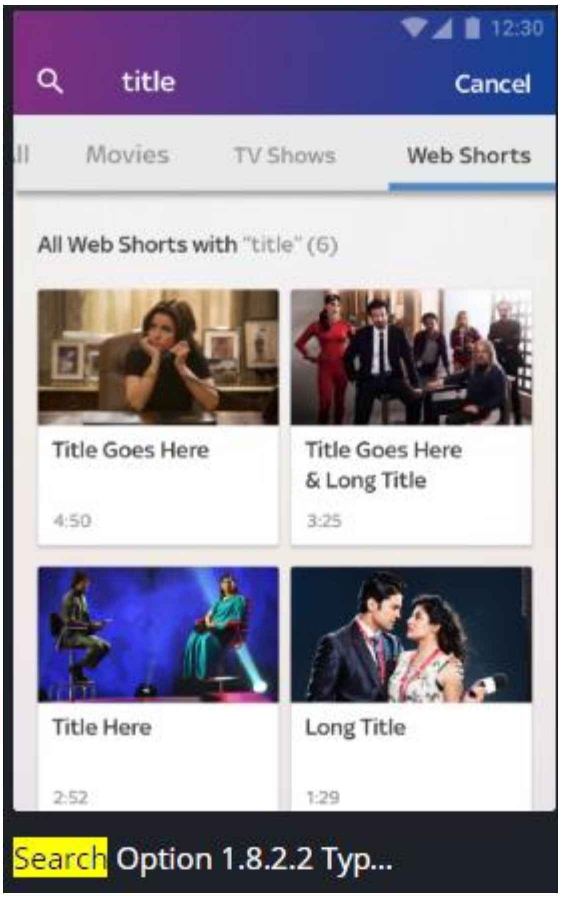
Search priority is given in below table in Descending order.

Sr. no.	Field	Description	Priority
1	Title	Content title	P1
2	Keywords	Keywords associated with each content	P2
3	Summary or Synopsis	Content summary	P3
4	Genre	Content genre's title	P4
5	Star Cast	Actors present in a particular content	P5
6	Channel Name	Content's channel name	P6

1.5 Search Result Page

13.5.1 Search result page will be having 4 tabs* (Header section) -

I. All - It will display the concatenated results for movies, shows and web shorts.
II. Movies - It includes all the content of type movies.
III. Shows - It includes all the content of type TV shows.
IV. Web shorts - It includes all the content of type web-shorts.
V.



13.5.2 There will be 3 Rails under each tab –

I. Live – This rail will contain all the content which are On-Air at that time.

II. On-Demand – This rail will contain all the VOD contents, Catchup etc.

III. EPG – This Rail will display searched content from Remote EPG.

Note – Design for above rails will be provided by Accedo after approval of this Doc.

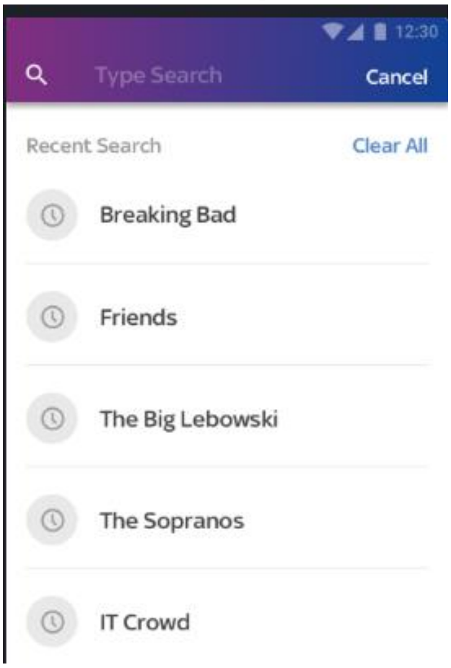
	All	**Movies**	**Shows**	**Web-Shorts**
Live	Consolidated search results of Movies, Shows and Web Shorts that are on air now	Search results of Movie that are on air now	Search results of Shows that are on air now	Search results of Web Shorts that are on air now
On Demand	Consolidated search results of Movies, Shows and Web Shorts that are part of VoD and Catchup Content	Search results of Movie that are part of VoD and Catchup Content	Search results of Shows that are part of VoD and Catchup Content	Search results of Web Shorts that are part of VoD and Catchup Content
EPG**	Consolidated search results of Movies, Shows and Web Shorts that are part of full set top box EPG	Search results of Movie that are part of full set top box EPG	Search results of Shows that are part of full set top box EPG	Search results of Web Shorts that are part of full set top box EPG

**We are assuming that the content received from Irdeto's Media Manager can be either movies, TV shows or web-shorts.*

***EPG is not part of 1A deliverables. EPG cannot be categorized into Movies/Series/Web-Shorts categories due to lack of information received from XTI server. The data received from XTI cannot be segregated into Movies/Series/Web-Shorts categories.*

13.5.3 Visual References for Search Result Page –

I. User's Last 5 search representation



Breaking Bad

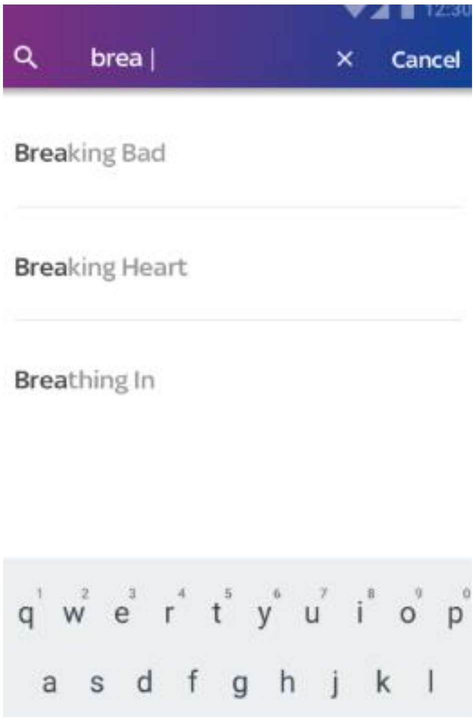
Friends

The Big Lebowski

The Sopranos

IT Crowd

II. Predictive search



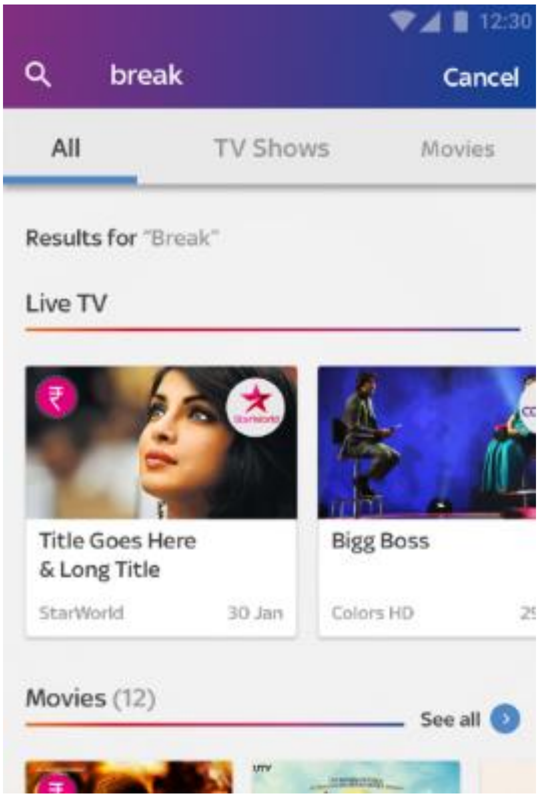
brea |

Breaking Bad

Breaking Heart

Breathing In

III. Search Result page – “All” tab



break

Results for "Break"

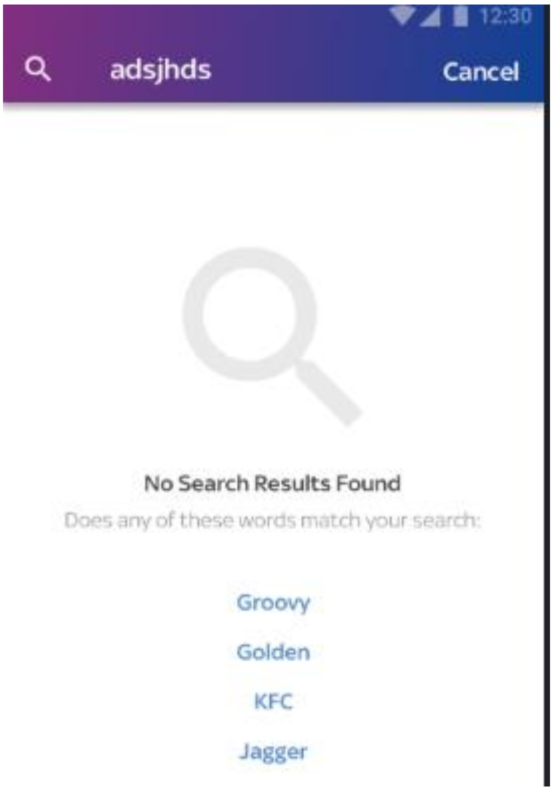
Live TV

Title Goes Here & Long Title
StarWorld 30 Jan

Bigg Boss
Colors HD 2

Movies (12)

IV. No result found page



No Search Results Found

Does any of these words match your search:

13.5.4 Search Example

Example 1 –

Let us consider a simple example of search string “Bigg Boss”

Assumptions -

I. “Bigg Boss” is the title of a show that is available on Colors channel.
II. “Bigg Boss” is in the summary of a show named “Best of this Week”.
III. “Boss TV” is a channel name.

Following will be the search result order:

I. “Bigg Boss”
II. “Best of this Week”
III. “Boss TV”

In this example we can see since priority of title is more than priority of summary and channel name, hence “Bigg Boss” show appears on top of search results.

Example 2 –

Let us consider a another example of search string “Kapil Sharma Movie”

Assumptions -

I. “Comedy Nights with Kapil” is the title of a show that is available on Colors channel.
II. “Kis kisko pyaar karu” is a movie with keyword “Movie”, and Star Cast “Kapil Sharma”
III. “Filmfare Awards” is a show with star cast “Kapil Sharma”.

Following will be the search result order:

I. “Kis kisko pyaar karu”
II. “Comedy Nights with Kapil”
III. “Filmfare Awards”

In this example we can see since keyword and star cast is more relevant than title for search terms therefore “Kis kisko pyaar karu” show appears on top of search results.

1.6 Search Ordering

Each section (i.e. live, on demand and EPG) on the search results page will have different sort order when we have identical results:

I. Live: Ordered by nearest airing time
II. On Demand: Ordered by time (latest to oldest in case of catchup and year of release in case of VoD)
III. EPG: Ordered by content airing time

1.7 Technics used for Search

1.7.1 NGRAM Tokenizer -

The ngram tokenizer first breaks text down into words whenever it encounters one of a list of specified characters, then it emits N-grams of each word of the specified length.

Example - With the default settings, the ngram tokenizer treats the initial text as a single token and produces N-grams with minimum length 1 and maximum length 2:

```
POST _analyze
{
  "tokenizer": "ngram",
  "text": "Quick Fox"
}
```

The above sentence would produce the following terms:
[Q, Qu, u, ui, i, ic, c, ck, k, "k ", " ", " F", F, Fo, o, ox, x]

1.7.2 Standard Tokenizer –

The standard tokenizer provides grammar based tokenization (based on the Unicode Text Segmentation algorithm) and works well for most languages.

```
POST _analyze
{
  "tokenizer": "standard",
  "text": "The 2 QUICK Brown-Foxes jumped over the lazy dog's bone."
}
```

The above sentence would produce the following terms:
[The, 2, QUICK, Brown, Foxes, jumped, over, the, lazy, dog's, bone]

1.7.3 Edge NGRAM Tokenizer –

The edge_ngram tokenizer first breaks text down into words whenever it encounters one of a list of specified characters, then it emits N-grams of each word where the start of the N-gram is anchored to the beginning of the word.

Edge N-Grams are useful for search-as-you-type queries

Example - With the default settings, the edge_ngram tokenizer treats the initial text as a single token and produces N-grams with minimum length 1 and maximum length

```
POST _analyze
{
  "tokenizer": "edge_ngram",
  "text": "Quick Fox"
}
```

The above sentence would produce the following terms:

```
[ Q, Qu ]
```