Flexible Player Embed Requirement

When embedding a video or playlist player we want to give the user as much flexibility as possible in the generation of the Brightcove player embed code so they can control the look and feel of the Brightcove player on the web page, but not expect them to be HTML or JavaScript experts.

Player Embed Dialog Behavior

There should be a dialog allowing the user to control the formatting of the player on the web page. This dialog should allow the user to set the fields listed below. The assumption is that the user has already selected a Brightcove account and a video or playlist prior to this dialog being displayed. Otherwise, selection of the Brightcove account and video or playlist should occur first as described in Appendix A.

1) **Player**: The user should be able to choose a player from the available Brightcove players. If they are embedding a video player, then only non-playlist enabled players should be available to choose from. If they are embedding a playlist player, then only playlist enabled players should be available to choose from.
2) **Autoplay**: The user should be able to enable/disable Autoplay. Default is disabled.
3) **Mute**: The user should be able to enable/disable Mute. Default is disabled.
4) **Embed Type**: The user should be able to choose between iFrame and Javascript embed code.
    a) For a video player, the default should be Javascript.
    b) For a playlist player, the default should be iFrame.
5) **Sizing**: The user should be able to select between Responsive** or Fixed sizing.*
    a) For a video player, the default should be Responsive.
    b) For a playlist player,
        i) If iFrame, the default should be Responsive.
        ii) If Javascript, the default should be Fixed.
6) **Aspect Ratio**: The user should be able to select the Aspect Ratio.*
    a) Choices are 16:9, 4:3, Custom. Default should be 16:9.
7) **Width, Height**:The user should be able to enter Width and Height.*
    a) If Aspect Ratio is 16:9 or 4:3, the Height field should be greyed out and automatically calculated based on Width and Aspect Ratio.
    b) Default values should be 640 for Width and 360 for Height when Aspect Ratio is Custom.

The dialog should have the following additional behavior:

1) The generated Brightcove embed code should be displayed to the user in the dialog
2) The user should be able to make edits to the embed code. Even though we are trying to give the user as much flexibility as possible in configuring the embed code, there might be cases where they need to override what is automatically generated.
3) If the user modifies one of the previous selections in the dialog, the user's edits will be overwritten by newly generated code.

* Note: If the CMS provides a native container for embedding code that allows the user to specify Responsive vs Fixed and Width/Height, it might make more sense to use the container for sizing and have the Brightcove embed code always be responsive.
** Note: The Responsive embed code included below uses the Width as a maximum width.

Related Brightcove Documentation

Integrating Your CMS with Video Cloud
https://support.brightcove.com/integrating-your-cms-video-cloud

Get List of Players
https://brightcovelearning.github.io/Brightcove-API-References/player-management-api/v1/doc/index.html#api-Players-Get_All_Players

Identifying Playlist Players
The sequence below is an easy way to determine if a player is playlist enabled or not.

1) Use this API endpoint: https://players.api.brightcove.com/v2/accounts/{pubid}/players
2) Check for "playlist": true, if yes then it is a playlist player, if not or "playlist": is non-existent do step #2
3) Iterate through plug-ins on the player and look for a registry_id == "@brightcove/videojs-bc-playlist-ui", if yes then it is a playlist player, if no then it is not a playlist player

This is an example of what's returned from the endpoint:

```
"items": [
    {
        "account_id": "4031511818001",
        "branches": {
            "master": {
                "configuration": {
                    "id": "NkVhrXzug",
                    "playlist": true,    // this is a v1 playlist player
                    "plugins": [],

    {
        "account_id": "4031511818001",
        "branches": {
            "master": {
                "configuration": {
                    "playlist": true,
                    "plugins": [
                        {
                            "options": {
                                "playOnSelect": true
                            },                      // this is a v2 playlist player
                            "registry_id": "@brightcove/videojs-bc-playlist-ui",
                            "version": "2.x"
                        }
                    ],
```

Embed Parameters and Code

The section describes how to generate the Brightcove player embed code based on user selections. The %XYZ% values are substituted into the embed code as described below.

Common Parameters

%AUTOPLAY% = autoplay if Autoplay enabled, else it is a null string
%MUTED% = muted if Muted enabled, else it is a null string
%ACCOUNTID% = User selected Brightcove account ID
%VIDEOID% = User selected video ID
%PLAYLISTID% = User selected playlist ID
%PLAYERID% = User selected Video player ID or Playlist player ID
%CMS% = Name of CMS
%CMSVERSION% = Version of CMS
%CONNECTORVERSION% = Version of connector

iFrame "Video" Player Embed

Parameters for Responsive Sizing (with Max Size)	**Parameters for Fixed Sizing**

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = 0px
%WIDTH% = 100%
%HEIGHT% = 100%
%PADDINGTOP%
       if (Aspect Ratio == "16:9") {
        %PADDINGTOP% = 56%
       } elsif (Aspect Ratio == "4:3") {
        %PADDINGTOP% = 75%
       } elsif {
        %PADDINGTOP% = (Height / Width * 100) . "%"
       }

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = Width . 'px'
%WIDTH% = Width . 'px'
%HEIGHT% = Height . 'px'
%PADDINGTOP%
       if (Aspect Ratio == "16:9") {
        %PADDINGTOP% = 56%
       } elsif (Aspect Ratio == "4:3") {
        %PADDINGTOP% = 75%
       } elsif {
        %PADDINGTOP% = (Height / Width * 100) . "%"
       }

Brightcove Embed Code

```
<div style="display: block; position: relative; min-width: %MINWIDTH%; max-width: %MAXWIDTH%;">
  <div style="padding-top: %PADDINGTOP%;">
    <iframe src="//players.brightcove.net/%ACCOUNTID%/%PLAYERID%_default/index.html?videoId=%VIDEOID%
            &usage=cms:%CMS%:%CMSVERSION%:%CONNECTORVERSION%:iframe
            &%AUTOPLAY%
            &%MUTED%"
      allowfullscreen=""
      webkitallowfullscreen=""
      mozallowfullscreen=""
      style= width: %WIDTH%; height: %HEIGHT%; position: absolute; top: 0; bottom: 0; right: 0; left: 0;">
    </iframe>
  </div>
</div>
```

Example Implementation

Player Filter:	Search 🔍
Player:	Brightcove Player Luna Skin Playlist Enabled V2 Player V6 ▾
Options	☐ Autoplay ☐ Muted
Embed Type	⦿ iFrame ○ JavaScript
Sizing	⦿ Fixed ○ Responsive
Aspect Ratio	16:9 ▾
WxH	Player Width 640 px Player Height 360 px

Brightcove Snippet (Paste to Script Editor web part or publishing zone):

```
<div style="display:block;position:relative;width:640px;height:360px"><iframe src="https://players.brightcove.net/4875109344001/default_default/index.html?videoId=5778839482001&usage=cms:sharepoint:16.0.7618.1208:3.0.0-beta17:iframe" style="width:100%;height:100%;position:absolute;top:0px;bottom:0px;right:0px;left:0px" allowfullscreen="" webkitallowfullscreen="" mozallowfullscreen=""></iframe></div>
```

Javascript "Video" Player Embed

Parameters for Responsive Sizing (with Max Size)

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = 0px
%WIDTH% = 100%
%HEIGHT% = 100%
%PADDINGTOP%
        if (Aspect Ratio == "16:9") {
         %PADDINGTOP% = 56%
       } elsif (Aspect Ratio == "4:3") {
         %PADDINGTOP% = 75%
       } elsif {
         %PADDINGTOP% = (Height / Width * 100) . "%"
       }

Parameters for Fixed Sizing

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = Width . 'px'
%WIDTH% = Width . 'px'
%HEIGHT% = Height . 'px'
%PADDINGTOP%
        if (Aspect Ratio == "16:9") {
         %PADDINGTOP% = 56%
       } elsif (Aspect Ratio == "4:3") {
         %PADDINGTOP% = 75%
       } elsif {
         %PADDINGTOP% = (Height / Width * 100) . "%"
       }

Brightcove Embed Code

```
<div style="display: block; position: relative; min-width: %MINWIDTH%; max-width: %MAXWIDTH%;">
  <div style="padding-top: %PADDINGTOP%; ">
    <video data-video-id="%VIDEOID%"
        data-account="%ACCOUNTID%"
        data-player="%PLAYERID%"
        data-embed="default"
        data-usage="cms: :%CMS%:%CMSVERSION%:%CONNECTORVERSION%:javascript"
        class="video-js"
        controls %AUTOPLAY% %MUTED%
        style="width: %WIDTH%; height: %HEIGHT%; position: absolute; top: 0; bottom: 0; right: 0; left: 0;">
    </video>
    <script src="//players.brightcove.net/%ACCOUNTID%/%PLAYERID%_default/index.min.js"></script>
  </div>
</div>
```

Example Implementation

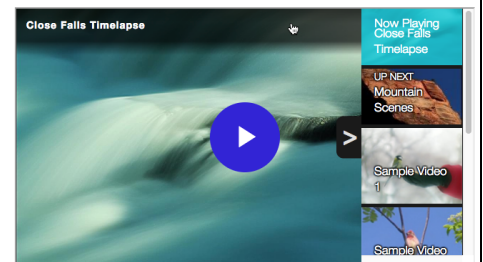|		
Player Filter:	Search 🔍	
Player:	Brightcove Player Luna Skin Playlist Enabled V2 Player V6 ▾	
Options	☐ Autoplay ☐ Muted	
Embed Type	○ iFrame ● JavaScript	
Sizing	○ Fixed ● Responsive	
Aspect Ratio	16:9 ▾	
WxH	Player Width 640 px	Player Height 360 px

Brightcove Snippet (Paste to Script Editor web part or publishing zone):

```
<div style="display:block;position:relative;min-width:0px;max-width:640px"><div style="padding-top:56.25%"><video data-video-id="5778839482001" data-account="4875109344001" data-player="default" data-embed="default" data-usage="cms:sharepoint:16.0.7618.1208:3.0.0-beta17:javascript" class="video-js" controls="" style="width:100%;height:100%;position:absolute;top:0px;bottom:0px;right:0px;left:0px"></video><script src="//players.brightcove.net/4875109344001/default_default/index.min.js"></script></div></div>
```

iFrame "Playlist" Embed

<table>
<tr>
<td>

Parameters for Responsive Sizing (with Max Size)*

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = 0px
%WIDTH% = 100%
%HEIGHT% = 100%
%PADDINGTOP% =
       if (Aspect Ratio == "16:9") {
        %PADDINGTOP% = 56%
       } elsif (Aspect Ratio == "4:3") {
        %PADDINGTOP% = 75%
       } elsif {
        %PADDINGTOP% = (Height / Width * 100) . "%"
       }

</td>
<td>

Parameters for Fixed Sizing*

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = Width . 'px'
%WIDTH% = Width . 'px'
%HEIGHT% = Height . 'px'
%PADDINGTOP% =
       if (Aspect Ratio == "16:9") {
        %PADDINGTOP% = 56%
       } elsif (Aspect Ratio == "4:3") {
        %PADDINGTOP% = 75%
       } elsif {
        %PADDINGTOP% = (Height / Width * 100) . "%"
       }

</td>
</tr>
</table>

Brightcove Embed Code

```
<div style="display: block; position: relative; min-width: %MINWIDTH%; max-width: %MAXWIDTH%;">
  <div style="padding-top: %PADDINGTOP%;">
    <iframe src="//players.brightcove.net/%ACCOUNTID%/%PLAYERID%_default/index.html?playlistId=%PLAYLISTID%
              &usage=cms:%CMS%:%CMSVERSION%:%CONNECTORVERSION%:iframe
              &%AUTOPLAY%
              &%MUTED%"
        allowfullscreen=""
        webkitallowfullscreen=""
        mozallowfullscreen=""
        style=" width: %WIDTH%; height: %HEIGHT%; position: absolute; top: 0; bottom: 0; right: 0; left: 0;">
    </iframe>
  </div>
</div>
```

Example Implementation

* Note: These settings are optimized for the v2 playlist player in Video Cloud where the thumbnails pop in from the right side inside of the video player frame. The user will need to manually update the settings for the v1 playlist player.

JavaScript "Playlist" Player Embed

Parameters for Responsive Sizing

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = 0px
%PADDINGTOP% = na
%WIDTH% = 100%
%HEIGHT% = 65%
%THUMBNAILWIDTH% = Round((Width-NumThumbnails*4)/ NumThumbnails);
%THUMBNAILHEIGHT% = Round(%THUMBNAILWIDTH% * %HEIGHT% / %WIDTH%);

Parameters for Fixed Sizing

%MAXWIDTH% = Width . 'px'
%MINWIDTH% = Width . 'px'
%PADDINGTOP% = na
%WIDTH% = Width . 'px'
%HEIGHT% = Height . 'px'
%THUMBNAILWIDTH% = Round((Width-NumThumbnails*4)/ NumThumbnails);
%THUMBNAILHEIGHT% =Round(%THUMBNAILWIDTH% * %HEIGHT% / %WIDTH%);

Brightcove Embed Code

```
<style type="text/css">
 .vjs-playlist {
  background-color: #000000;
  width: %WIDTH%;
  height: calc (%THUMBNAILHEIGHT% + 16px);
  text-align: center;
  overflow-x: scroll;
  overflow-y: hidden;
  white-space: nowrap;
  margin: 0;
  padding: 0;
 }
 .vjs-playlist-title-container {
  color: #FFFFFF;
  /*display: none;*/
  opacity: 1;
  font-size: 0.7em;
  font-family: sans-serif;
  font-weight: bold;
 }
 .vjs-playlist-now-playing-text {
  color: #FFFFFF;
  /*display: none;*/
  opacity: 1;
  font-size: 0.7em;
  font-family: sans-serif;
  font-weight: bold;
 }
 .vjs-up-next-text {
  color: #FFFFFF;
  /*display: none;*/
  opacity: 1;
  font-family: sans-serif;
  font-weight: bold;
  text-align: right;
 }
 .vjs-playlist-duration {
  color: #FFFFFF;
  /*display: none;*/
  opacity: 1;
  font-family: sans-serif;
  font-weight: bold;
 }
 .vjs-mouse.vjs-playlist {
  background-color: #000000;
 }
 li.vjs-playlist-item {
  background-color: #000000;
  height: %THUMBNAILHEIGHT%;
  width: %THUMBNAILWIDTH%;
  display: inline-block;
  border: 2px solid #000000;
  padding: 0;
  margin: 0;
  cursor: pointer;
  vertical-align: middle;
 }
 li.vjs-playlist-item:hover {
  border-color: #FFFFFF;
 }
</style>
<div
 style="
  display: block; position: relative; width: %WIDTH%; height: ;  min-width: %MINWIDTH%; max-width: %MAXWIDTH%;  ">
  <video data-playlist-id="%PLAYLISTID%"
    data-account="%ACCOUNTID%"
    data-player="%PLAYERID%"
    data-embed="default"
    data-usage="cms:%CMS%:%CMSVERSION%:%CONNECTORVERSION%:javascript"
    class="video-js"
    controls %AUTOPLAY% %MUTED%
    style="
     width: %WIDTH%;
     height: %HEIGHT%;
     position: relative;
     top: 0px; bottom: 0px;
     right: 0px; left: 0px;
    " >
  </video>
  <script
src="//players.brightcove.net/%ACCOUNTID%/%PLAYERID%_default/index.min.js"></script>
  <ol class="vjs-playlist vjs-csspointerevents vjs-mouse"></ol>
</div>
```

Example Implementation

| Player Filter: | Search | 🔍 |

Player: | Brightcove Player Luna Skin Playlist Enabled V2 Player V6 ▾ |

Options: ☑ Autoplay ☑ Muted

Embed Type: ○ iFrame ● JavaScript

Aspect Ratio: 16:9 ▾

WxH: Player Width [640 ⇕] px   Player Height [360 ⇕] px
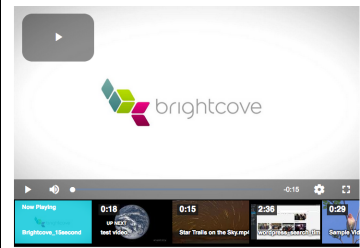
Brightcove Snippet (Paste to Script Editor web part or publishing zone):

```
<style type="text/css">
        .vjs-playlist {
            width: 640px;
            height: calc(70px + 16px);
            text-align: center;
            overflow-x: scroll;
            overflow-y: hidden;
            white-space: nowrap;
            margin: 0;
            padding: 0;
        }
        .vjs-playlist-title-container {
            color: #FFFFFF;
            /*display: none;*/
            opacity: 1;
            font-size: 0.7em;
            font-family: sans-serif;
            font-weight: bold;
        }
        .vjs-playlist-now-playing-text {
```

Appendix A

If a video or playlist is not selected prior to opening the player embed dialog, the video or playlist (and Brightcove account if necessary) should be selectable in the dialog. The dialog should present to the user the fields listed below:

1) **Brightcove Account**: The user should be able to choose a Brightcove account if one is not already selected.
2) **Search Filter**: The user should be able to enter a search string to filter the list of displayed videos or playlists. If using Brightcove search API, the search string should be URI encoded (see example below).
3) **Folder**: The user should be able to select a Folder name from the Brightcove account to filter the list of displayed videos. The Brightcove API does not provide a built-in filter for folders so the client code will need to retrieve all videos and then filter by folder. (Does not apply to playlists)
4) **Limit**: The user should be able to limit the number of videos returned, primarily to improve performance of the search. When using Brightcove search, the maximum limit that can be specified is 100. To return more than 100 videos, a paging mechanism must be implemented. Also, if the user has selected a Folder to filter, the client needs to request all videos in the account using the paging mechanism and then locally filter that list by Folder and return the number of videos specified by the user limit. (Does not apply to playlists)
5) **Sort By**: The user should be able to select a sort field.
   a) For videos, the user should be able to choose the video name, updated date, creation date, start date, and total plays. The default should be the updated date.
   b) For playlists, user chooses either the name and modified date. The default should be modified date.
6) **Sort Order**: The user should be able to select ascending or descending sort order. The default should be descending.

The dialog should have the following behavior:

1) Display a list of videos or playlists based on the user selection above. Allow the user to select one video or one playlist.
2) When displaying a list of videos:
   a) Only Active videos should be listed.
   b) The thumbnail image, video name, and ID should be shown.
   c) Only one video can be selected.
3) When displaying a list of playlists:
   a) If the playlist is a manual playlist, display the playlist name, ID, and the number of videos in the playlist
   b) If the playlist is a smart playlist, display the playlist name, ID and --- in place of the number of videos.
   c) Only one playlist can be selected.
4) Display a clickable link that will open the video or playlist player in a new browser tab.

Related Brightcove Documentation

Integrating Your CMS with Video Cloud
https://support.brightcove.com/integrating-your-cms-video-cloud

Get List of Videos
https://brightcovelearning.github.io/Brightcove-API-References/cms-api/v1/doc/index.html#api-videoGroup-Get_Videos

https://support.brightcove.com/cmsplayback-api-videos-search

Get List of Playlists
https://brightcovelearning.github.io/Brightcove-API-References/cms-api/v1/doc/index.html#api-playlistGroup-Get_Playlists

Example Dialog Implementations

URI Encoding Examples

Search string: wordone+wordtwo

String in CMS API call should be: wordone%2Bwordtwo

Videos returned: all that include the words: wordone AND wordtwo

Search string: wordone wordtwo

String in CMS API call should be: wordone%20wordtwo

Videos returned are all that include the words: wordone OR wordtwo

Search string: "wordone wordtwo"

String in CMS API call should be: %22wordone%20wordtwo%22

Videos returned are all that includes the complete phrase: wordone wordtwo