Queue & Autoplay UX for Google Cast

Detailed notes are available in following slides.
Basic AutoPlay
Up Next notifications alert users of upcoming content. This is not necessary for all content types, but is especially helpful for episodic playback (so users don’t accidentally watch a whole season).

Receiver

- The receiver displays a countdown timer and the sender displays a static message “Up Next” (to prevent timing issues)
- The Up Next notification should appear at least 30 seconds before the end of the video or immediately when the credits start

Up Next notifications include three key actions:
1. Wait = Waiting till the current content ends (e.g. 30sec) will start playback of the item Up Next
2. Play = Immediately starts playback of content Up Next
3. Stop = Stops automatic playback of content Up Next, and finishes content currently playing
   a. This does not clear the queue
   b. Automatic playback of queue items can resume on next play
Timeout notifications alert users to continue playing content. This is not necessary for all content types, but is especially helpful for episodic playback (so users don’t accidentally watch a whole season).

Receiver

- The receiver displays a message (e.g. Are you still watching?) and the sender displays a static message “Up Next”
- The Timeout notification should appear at least 30 seconds before the end of the video or immediately when the credits start
- The Timeout notification should stay visible for 10-20 minutes (providing the user enough time to respond if they were away)
Dynamic Playlisting
**Persistent control**

- Always display basic control to the user, not matter where they are in your app
- Persistent control should include: title of content, casting to device message, artwork, play/pause, progress
- Tapping on the persistent control opens the Full control view

**Full control**

- Provide a place in your app where the user has all the controls for content in one place
- Full control should include:
  - title of content playing
  - casting to device message
  - cast button
  - queue button (if available)
  - next/prev if queue (if available)
  - play/pause or play/stop
  - timeline scrubber (if possible)
  - volume icon (iOS only)
  - a link to the content entity page or info
  - ...and any other actions or info necessary
Queue

- The queue view is accessed via the queue button (e.g. queue icon in upper right of header in other screens)

- Queue should include:
  - queue title
  - cast button
  - ability to clear all items (if items were manually added)
  - ability to manually reorder items (if possible)
  - ability to remove items (if possible)
  - ability to play/pause current item
  - ability to see history of items (if possible)
  - ...and any other actions necessary (e.g. shuffle items)
Adding to the queue

Add options
- Top level options for adding to the queue can aid the user in build a queue quickly
- Queue options can always be available or only appear when the users is connected to a cast receiver

Add / play option
- Options can appear when the user taps play while other content is already playing
- Options can appear when the user taps the Add to Queue (plus icon) button in the header

Added notification
- User is shown a snackbar (temporary notification) after adding an item to the queue
- Snackbar can include an action to undo the addition
- Snackbar does not need to appear in other connected sender devices
Tapping on an item in the queue starts playback of that item.

**Reorder items**
- If possible, provide the ability for users to reorder any item
- Only allow items to be reordered if the user touches the dragger icon on the right
- After reordering items, always ensure that the item following the currently playing item becomes the item Up Next

**Remove items**
- If possible, allow users to remove items (e.g. swipe left or right)
- Indicate that they are removing the item (e.g. show a remove icon)
- Provide a confirmation dialog if necessary

**Clear all items**
- Allow users to clear all items from the queue (e.g. action added to options menu in upper right)
- This action does not need to be visible

**History**
- Allow users the ability to see what they previously played
- Indicating previous content with a slight tonal shift will help users identify
• history
Up Next notifications alert users of upcoming content. This is not necessary for all content types, but is especially helpful for episodic playback (so users don’t accidentally watch a whole season).

Up Next notifications include three key actions:
1. **Wait** = Waiting till the current content ends (e.g. 30sec) will start playback of the item Up Next
2. **Play** = Immediately starts playback of content Up Next
3. **Stop** = Stops automatic playback of content Up Next, and finishes content currently playing
   a. This does not clear the queue
   b. Automatic playback of queue items can resume on next play

**Persistent control**
- Display an Up Next notification below the persistent control
- Do not cover up or remove the ability to control what is currently playing

**Full control**
- Display an Up Next notification within the Full control view
- Do not cover up or remove the ability to control what is currently playing

**Queue**
- Display an Up Next notification directly on the list item that is Up Next
- When users reorder items in the queue, always make the item following what is currently playing become the item Up Next
Controls & queuing for music follow the same guidelines from previous slides, with the key difference being that the user may have additional options (e.g. shuffle, loop, etc).
Summary of Recommendations
<table>
<thead>
<tr>
<th>Show What’s Next</th>
<th>sender</th>
</tr>
</thead>
<tbody>
<tr>
<td>While the casting content is ending, show a visual indication on the <strong>sender</strong> device indicating the next content that will autoplay.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-buffer</th>
<th>receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begin buffering the next content on <strong>receiver</strong> prior to the end of the current content, to minimize delay for the user.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Allow autoplay disable</th>
<th>sender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow the user to disable autoplay in a menu or settings screen within the <strong>sender</strong>.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Skip unnecessary filler</th>
<th>receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>When auto-playing episodic content, playback should begin after any intro content, such as “previously on xyz”, as the user just finished watching the previous episode.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Play immediately</th>
<th>sender</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the <strong>sender</strong> device, give the user an option to immediately play/cast the next content, without having to wait for the countdown timer.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Display countdown timer</th>
<th>receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show a countdown timer on the <strong>receiver</strong> until new content autoplays, with at least 30 seconds for the user to notice and act.</td>
<td></td>
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<table>
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<tr>
<th>Stop autoplay</th>
<th>sender</th>
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<tbody>
<tr>
<td>Give the user an option on the <strong>sender</strong> to stop the next content from auto-playing. This should not permanently disable autoplay.</td>
<td></td>
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<table>
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<tr>
<th>Timeout</th>
<th>sender + receiver</th>
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</thead>
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<tr>
<td>If there is no user intervention for some period of time or number of autoplay events, consider confirming with the user that they wish to continue the autoplay behavior.</td>
<td></td>
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</tbody>
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thank you