Chiclet UX Specs

Engage Headline Chiclet

Visual specs:

iOS: https://zpl.io/Vxlxe9R
Android: https://zpl.io/bevRezW

The Engage Headline Chiclet:

- Displays different sizes Engage videos (16:9 is the most common so far)
- The video vertical alignment is center
- Horizontally a video takes the entire width of the screen (edge to edge)
- There is a mute/unmute toggle in the bottom left corner. Default state: muted.
- There is a video countdown display in the bottom center. A countdown display appears only after a pre-roll ad is done or a user taps on SKIP AD button. A countdown displays M:SS if a video duration is longer than 60 seconds. Example: 1:05. A countdown displays :SS if the duration (or what's left) is less than 60sec. Example: :08.
- Once the video comes to an end a countdown display is :00 and the video stops playing.
- If a user taps on a video a Timeline control and a play/pause toggle in the center appear. A user can pause/resume playback by tapping the pause/play button. If a video was playing and a user scrubs the timeline and let go the video playback resumes from that point. If a video was paused and a user scrubs timeline and let go - a user has to tap a play button to resume a playback.
- If a user swipes to a different chiclet and swipes back to a headline chiclet the video starts playing from where it was left off.
- If a user closes the app and re-opens it, the video starts playing from the beginning.
- 1 Engage video (highest priority only) per WT experience
- No headline -- no chiclet
- No Landscape mode for mvp
- No scrubbing controls for mvp
- No vertical swipe possible for Engage chiclet

Multiple Engage Headlines

Maximum 3 videos

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?seid=5d8a622cf60ef3617382b096
Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?seid=5d966f23f7537c6119176279

General Ideas

- The video player only plays the 3 highest priority videos, all others are ignored.
- If there are 2 or 3 videos, they form a sequence, either 1-2-1-2 or 1-2-3-1-3. The user can random access videos at most points, but if a particular video is playing, the “next” video in the sequence is defined per that order.
- If there are 2 videos, the thumbnail for the “other” video (the one not loaded into the player) is presented as a thumbnail below the viewer, centered horizontally.
- If there are 3 videos, the thumbnail for the “next” video in the sequence is present below and left of the viewer, and the “next next” video below and right of the viewer. (Smart readers will note that “next next” and “previous” mean the same thing when there are only 3 videos :))
- We will keep track of which videos have been played for this invocation of the weather tour. If a video has been viewed for > 1 second, it will be considered played. Played videos are presented with a “replay” button vs a “play” button to visually distinguish them. Also 60% opacity black mask is applied to a viewed video thumbnail.
- Some videos will have pre-roll ads associated with them as defined below.

On initial presentation:

- The highest priority video loads into a video player.
- If there is only a second video, thumbnail shows below.
- If there are two other videos, #2 is below left, #3 is below right. These both have play buttons and are tappable.
- The loading animation is displayed as the first video is loading
- When the first video has completed loading, all thumbnails disappear immediately.

On video pause

- When a user taps on a playing video the pause button, timeline and additional video thumbnail(s) come into view per order above.
- User can tap on main video to resume, or can select one of the other videos.
- Assuming they resume, the controls and video thumbnails fade out.

Near video completion

- 5 seconds before video completion, additional video thumbnail(s) fade into view.

Upon video completion

- A timer is started. If 2 seconds elapse, the next video in sequence is presented.

Upon another video being selected

- This happens because the user taps on a thumbnail to select a non-playing video, or because the current video has completed and the timer above has fired off.
- The thumbnail for the new video grows a bit to indicate it's coming up. The other thumbnail (if present) shrinks in size.
- The thumbnail displays a loading animation until that video is actually playing in the player (any associated ad has finished, and/or the video has queued successfully)
- That thumbnail no longer has a play button and it is not tappable.
- If there is another thumbnail being displayed, that thumbnail is tappable.
- Once the video starts playing (after the ad if there is one), all thumbnails disappear immediately.

Pre-roll Ad rules:

First video always comes with a pre-roll.

A single video is in a queue
A pre-roll ad runs only once per tour. After the ad's completion (or tapping Skip This Ad button) no more ads are presented even if timer fires or user manually replays.

Two and three videos in a queue
First video always has pre-roll. A pre-roll repeats with every rotation cycle.

If a user keeps tapping on different thumbnails a pre-roll ad continues playing until it's done. Only after that (or tapping on SkipThis Ad button) an Engage video starts playing in the video player.

Background animation

Let's allow Ken Burns effect for Engage chiclet and evaluate how videos "compete" with a background animation.

* Subject to testing

Intro Chiclet

Visual specs:

iOS: https://zpl.io/bPxyKAx
Android: https://zpl.io/adNrw4K

The Intro Chiclet:

- 3 sec video INTRO
- The intro chiclet should support a sponsorship
- The sponsorship should be visible for at least 3 seconds and reference a URL website
- Sponsorship and branding should be contained in the same image
- Duration is mapped to loading data animation. Duration is at least 3 sec + the time app needs to load data for the WT. After the animation is done the next chiclet slides in to view.
- Intro chiclet only appears after the initial launch of the WT. When a user swipes back to the beginning of the Tour there is no Intro anymore. Swiping Right on the first chiclet produces no results.

The config tool will ask for:

- A sponsorship/brand image (size TBD)
- Background image for Launcher Button
- Brand/Logo Image for Launcher Button (Photoshop Template will be provided by IBM design)
- Entry field for the right-side FUE wing (16 character max)

What do we do if the map is not there?
What do we show if the WT isn't ready?
How long do we show each part?
Communicating pin point successfully?

*For now. Subject to testing.

Outro Chiclet

Visual specs:

iOS: https://zpl.io/bz7AReX
Android: https://zpl.io/aNDOnn9

The Outro Chiclet:

- Displays “GOODBYE” message (configurable in config tool)
- Contains three links: Hourly, Daily and Radar (the same labels that are in the config tool). When a user taps on those links The Weather Tour is over. *Android:* back button takes a user to scrolling homepage. Ripple effect for each of the buttons.
- There is no progress indicator
- Duration is 5 sec*, after 5 sec of inactivity it slides down out of the view. This time should be customizable via code (is not planned to be exposed in the config tool).
- Single swipe from the right to the left exits the tour to the left
- When a user taps on a close button the Outro chiclet slides down and reveals the home scroll. Tap on an Hourly button slides Outro down and reveals an Hourly page, and so on.
- Outro chiclet will support a sponsor image. See: https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?tag=OUTRO

  *subject to testing

Day Ahead Chiclet

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?seid=5d39d5c75189ea2e1423417d
Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?seid=5d4081b0d8801e35690e34f1

The Day Ahead Chiclet:

- Displays 4 parts of the day. Depending on what time it’s viewed a user will see the following:

        - When opening between Midnight and 12pm, view:
            - Morning, Afternoon, Evening, Overnight
        - When opening between 12pm and 7pm, view:
            - Afternoon, Evening, Overnight, <Day of the week> Morning
        - When opening between 7pm and midnight, view:
            - Evening, <Day of the week> Morning, <Day of the week> Afternoon. *Example: Friday Evening, Saturday Morning, Saturday Afternoon*
- Each Day Part displays:
    - temperature (high) value; *format:* right justified
    - a sky condition icon (a night version of a sky condition icon for EVENING); *format:* centered
    - a weather phrase; *format:* centered
    - precip percentage; *format:* right justified
- A highlight (a color gradient), is possible for any element.
- Optional components:
    - Vertical Chiclet “hook up”
    - 320X50 Ad
    - Alert box
- Beyond scope of developing base layout for Day Ahead Chiclet:
    - When pressing on a highlight, there will be a pop-up box displaying additional weather information.
    - When pressing on the Alert Box, the bulletin text will expand out with an animation on top of the rest of the chiclet
    - Widget different sizes/orientation?

Chiclet Animation:
https://drive.google.com/open?id=11mWKVBn5RypKuOfIUySqyHsIRhE5Xm_y

Next 5 Hours Chiclet

Updated 03/12/2020

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?tag=WT%20HOURLY
Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?tag=WT%20Hourly

Next 5 Hours Chiclet:

- Displays next 5 hours weather data.

- Each Hour displays: an hour tied to selected location, a temp value, a sky condition icon, a precip icon + precip percentage (icon reflecting the precip type, ex. rain). If there is no precip the label is “0%”; both 0% and the icon are displayed at 50% opacity.
    - Temperature format: rounding and clipping rule apply (as in main B2B app).
    - Timestamp: font size should accommodate military time.
    - *Format:* the data and icons (an hour, a temp value, a sky condition icon, Precip Icon+Precip Value) are horizontally centered within their own columns.
- A highlight (a linear gradient), is possible for any element. Each individual element that is “highlighted” is scaled up in a solid background box with a drop shadow. *The specs for highlight will be provided by design.*
- Optional components:
    - Vertical Chiclet “hook up”
    - 320X50 Ad / Video Ad
    - NWS alert box
- Beyond scope of developing base layout:
    - When pressing on a highlight, there will be a pop-up box displaying additional weather information.
    - When pressing on the NWS Alert Box, the bulletin text will expand out with an animation on top of the rest of the chiclet

Chiclet animation:
https://drive.google.com/open?id=1JwnUspapLAALWefZpfMSukaNNwRJy2HY

Nowcast Chiclet

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?tag=WT%20Nowcast

Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?seid=5d5432daccabfe9c03611be0

Nowcast Chiclet:

- 2 different layouts:
    - a temp value, a “feels like” temp value, a sky condition icon, a weather phrase, wind strength + wind direction.
    - a temp value, a “feels like” temp value, a sky condition icon, a comfort index dial (warm weather) or a wind chill dial (cold weather), wind strength + wind direction.

    - *Format:* temperature if left justified, “feels like” temp is left justified, an icon is centered, a weather phrase is centered, wind is centered.
- We switch to “feels like” + comfort index gauge when DEW Point temperature is 65F and higher.
- Comfort index gauge is selected from 4 levels.
    - DewPoint 65f to 69f. Fill bar 1 and display “sticky” (spanish: pegajoso)
    - DewPoint 70f to 74f. Fill bar 2 and display “very sticky” (muy pegajoso)
    - DewPoint 75f to 79f or Heat Index >= 100, but less than 105. Fill bar 3 and display “steamy” .
    - DewPoint 80f+ or Heat Index >= 105. Fill bar 4 and display “dangerous heat”.
- We switch to “feels like” + A wind chill gauge takes place of a weather phrase when wind chill temperature < 21f.
- Wind chill gauge is selected from 4 levels.
    - Wind Chill 1f to 20f. Fill bar 1 and display “very cold”.
    - Wind Chill -19f to 0f. Fill bar 2 and display “bitter cold”.
    - Wind Chill -69f to -20f or Frostbite time <= 10 minutes (but more than 5 minutes). Fill bar 3 and display “dangerous cold”.
    - Wind Chill < -70f or Frostbite time of 5 minutes or less. Fill bar 4 and display “extreme cold”
    - From https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwiEm66o5_jkAhVoh-AKHVQRBcgQjRx6BAgBEAQ&url=https%3A%2F%2Fwww.iweathernet.com%2Fdfw-weather%2Fwind-chill-at-dfw&psig=AOvVaw08l1A_nZRRaApCCVmWkGm6&ust=1569941858150762
- When a temperature and “feels like” temperature are identical a “feels like “temp is displayed on one line.
- If the wind is 0 the wind info block displays “CALM”.
- Wind turbine animation speed:
    - Wind speed 0-3MPH : 0.0
    - Wind speed 4MPH-10MPH : 0.25
    - Wind speed 11MPH-20MPH : 0.5
    - Wind speed 21MPH-32MPH : 0.75
    - Wind speed 33MPH+ : 1.0
- A highlight (a color gradient) is possible for any weather parameter on the screen. EG - temp value, a sky condition icon and win*d* data.
- Optional components:
    - NWS alert box
    - Vertical Chiclet “hook up”
- Beyond scope of developing base layout:
    - When pressing on a highlight, there will be a pop-up box displaying additional weather information.
    - When pressing on the NWS Alert Box, the bulletin text will expand out with an animation on top of the rest of the chiclet

Chiclet Animation:
https://drive.google.com/open?id=1iboogtWhH8IvcnendP9jQez8dKfHt2Fe

Next 7 Days Chiclet

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?seid=5d4d7a730ed6835247b768b8

Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?seid=5d544b4bb19d5635107fdbaf

Next 7 Days Chiclet:

- Displays future 7 days. Excludes today data.
- Each Day displays:
    - day of the week (abbreviated format: MON, TUE, WED, THU, FRI, SAT and SUN), *format:* left justified
    - date MM/D, *format:* left justified (eg: 11/7, do not show leading 0 for the day)
    - high temperature value, *format:* right justified
    - low temperature value, *format:* numeric values are left justified with a minus for negative temps in the space between a number and vertical divider on the left
    - a sky condition icon, *format:* centered horixontally
    - a precip icon + precip percentage (icon reflecting the precip type, ex. rain). If there is no precip then the label is “0” and both value and icon are displayed at 50% opacity. *format:* centered horizontally; keep the distance between precip icon and precip value a fixed number of units.
- A highlight (a color gradient), is possible for any element.
- Optional components:
    - Vertical Chiclet “hook up”
    - 320X50 Ad
    - NWS alert box
- Beyond scope of developing base layout:
    - When pressing on a highlight, there will be a pop-up box displaying additional weather information.
    - When pressing on the NWS Alert Box, the bulletin text will expand out with an animation on top of the rest of the chiclet

Chiclet animation:

https://drive.google.com/open?id=1JwnUspapLAALWefZpfMSukaNNwRJy2HY
(use Hourly as an animation guidance since layout grid is similar)

Weekend Chiclet

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?seid=5d4b412113a4919b36d0ecdf

Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?seid=5d542e7e42322e35284f7295

Weekend Chiclet:

- Displays Saturday and Sunday weather data. If a user views a tour on Saturday after 10am - only display Sunday data. On Sunday after 10am - the chiclet displays upcoming weekend data and it's that last chiclet in the deck. All other ranges should display both days for the upcoming weekend.
  The separate JIRA task will outline rules for chiclets behavior (appearance/disappearance/etc).
- Each day displays:
  - A header: day of the week (fully spelled out), date MM/DD where month is abbreviated (JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEPT, OCT, NOV, DEC), high temp value with a label "high" and low temp value with a label "low"
  - Three day parts: a day part name as a header to each section (morning, afternoon, evening), a temp graph (spans across all three day parts), a sky condition icon, a precip icon + precip percentage (icon reflecting the precip type, ex. rain). Display a night version of sky condition icon for an EVENING section.
- A temp graph maximum height is 50 px (dp) including a dot and a gradient that falls below a graph line. Extend a gradient 10 pix (dp) below the line.
- To determine the curve shape on both ends we will look into temp values for a day segment before/after:
  - If a temp was equal enter/exit straight line
  - If a temp was lower - display curve going down
  - If a temp was greater - display curve going up
  - If no data - display curve down
- Graph Details
  - The graph shows the delta in temperature between the morning/afternoon/evening temperature values.

        - The lowest temperature value is plotted vertically at the bottom edge of the graph area. Higher temperatures are plotted vertically relative to that bottom edge.
        - For temperatures where the delta above the low is <= 20 degrees, the vertical position will be scaled proportionally to the available area.
        - For temperatures where the delta above the low is > 20 degrees, the vertical position will be limited to the top of the available area.
            - Example: Sunday has values of 30,40,30. 30 will be at the lowest position, 40 will be at 50% of the area height.
            - Example: Sunday has values of 30,50,40. 30 will be at the lowest position, 50 will be at 100% of the area height. 40 will be at 50% of the area height.
            - Example Sunday has values of 30,60,45. 30 will be at the lowest position, 60 will be at 100% of the area height and 45 will be at 50% of the area height.
            - Example Sunday has values of 30,30,30. 30 will be shown at the lowest position, creating a straight line.
- A highlight (a color gradient) is possible for any element.
- Optional components:
    - Vertical Chiclet “hook up”
    - 320X50 Ad (*when displaying one day ONLY*)
    - NWS alert box

Chiclet Animation:
https://drive.google.com/open?id=1wXWZDpk1zD8wNmBhF1jhTbmzUbTg38SD

Alert

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?seid=5d5473603e300b352e64ee91

Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?seid=5d556b3ab19d5635108f22cd

Alerts issued by <Issuing Agency> (comes from a data feed) appear on a chiclet if the alert is in effect within chiclet’s time frame. The alerts might appear on: Nowcast, Day Part, Next 5 Hours, Next 7 Days, Weekend. Example: Next 5 hours (let’s say 2pm - 6pm) will display 2 alerts in the following situation:

- One that is active and will continue to be in effect in the 5 next hours (and beyond)
- A second alert that starts at 4:45pm.

Collapsed view:

- Alert headline (truncated if needed to fit one line)
- **Time stamp (make the same as in map UI. Note: do not include time zone and year, eliminate :00 (minutes) if it's HH:00). Display on one line**.
- Alert count, ex. 1 of 3. If only one alert is issued - do not show.
- Multiple alerts will animate in and out of view (the animation guidance will be provided by design). A user can also swipe through them. Give 6* sec to each headline to stay in the view.

Expanded view:

- Single Alert has a fixed headline on top and scrollable bulletin below
- Multiple Alerts (accordion):
    - Headline headers are stacked in priority order, the highest on top.
    - Tapping on a headline header will display a scrollable bulletin in a space below.
    - As an Alert expands fade out chiclet Close Button (X in the bottom right corner). When an alert is fully expanded Close Button fades into view but inside Alert box now.

Tapping on a headline in the collapsed view opens an appropriate bulletin in the expanded view.

Alert stacking should follow these rules:
Display in the following priority order:

- Warnings
- Watches
- Advisories
- Statements

If there are any tie-breakers, sort by valid time with the newest alert first

Apply the same formatting treatment to the bulletin as it's implemented on Android platform now.

Alert animation:
https://drive.google.com/open?id=1pgMtT2F6JCBIvcTbFNwaVeW0flawUjP0

Weather Event Highlighting

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?seid=5d5c619f8d5c26520bcc4d0c

Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?seid=5d5c625e2ffb679bba801e6a

A Weather Highlight is a visual indication of a weather event on a particular chiclet.

An event:

- Has a unique priority relative to other events.
- Can be classified as neutral/positive (green color) or alerting (red color).
- Covers the time range “now” or a single hour/day or a range of hours/days.

Highlighting Weather Events Rules:
https://docs.google.com/spreadsheets/d/18zMYnVxfK0Izns--ZoCfmcVVPw6uBfnUPutZI9Ui5FU/edit#gid=0

A user taps on a highlighted element to get more information and a callout gets displayed. A callout contains a description of the event and information about the time range that it covers.

Selecting Events for Presentation

Given a set of events for a particular location, each chiclet will select the events appropriate to the time range and parameters presented by that specific chiclet. The mapping of particular events to particular elements of chiclets is covered in the rules spreadsheet. See the tab “Items to Highlight on Chiclets”

Given that there may be multiple overlapping events selected for a particular time and/or parameters presented, there are rules that govern which events are selected.

Rules for Currents Chiclets

For the currents chiclet, we select the highest priority event for current data and display it.

Rules for Daily/Hourly/Daypart/Weekend

There are two rules for event selected on the daily/hourly chiclets.

- Select only the highest priority event for each day/hour/daypart.

- If an event is selected for a particular day/hour, we wish to select it for all the other days/hours that particular event covers.

Because the two rules conflict, it is possible and expected that for a particular chiclet element there may be multiple selected events.

Highlighting Selected Events

Elements on a chiclet that have associated event(s) are highlighted. There are five possible cases:

- The element has a single negative event - a light red gradient is displayed.
- The element has a single positive event - a light green gradient is displayed.
- The element has more than one negative events - a darker red gradient is displayed.
- The element has more than one positive events - a darker green gradient is displayed.
- The element has a mix of negative and positive events. - a darker gradient colored based on the highest priority event.

iOS:
https://app.zeplin.io/project/5b968c0f0335644184e490d4/dashboard?tag=WT%20Weather%20Highlight

Android:
https://app.zeplin.io/project/5b968c41e9050a63b38793ed/dashboard?tag=WT%20Weather%20Highlight

Note that highlighting does not give a visual indication of which elements share a common event. That only becomes evident when an element is tapped.

Tapping with A Highlighted Element

When a user taps on a highlighted element, we wish to “pop out” that element and all other elements that share the highest priority event associated with that tapped element. In addition we want to present a callout showing the details for highest priority event associated with that element.

Pop Out

When an element is “popped out” the container scales up and the gradient changes to a solid color. Color is based on the event to be presented (e.g. red or green). The inside element content (weather data, icon, etc.) scales up proportionally and attempts to preserve alignment within a container. The anchor point for animation and scaling up is based on where the callout will be positioned. See discussion in the following section. Once the callout position is determined, the anchor for this animation is:

- Bottom right of the highlighted elements (when callout is going to appear below).

- Top right of the highlighted elements (when callout is going to appear above).

For daily/hourly chiclets when a single element is being popped out:

- Scaling is 15% horizontally and vertically.
- The anchor point is the top right/bottom right of the selected element (as determined by callout position)

For daily/hourly chiclets when multiple elements are being popped out, there is special handling to avoid elements overlapping when popped out and so that the elements remain visually associated with the hours they represent.

- The scaling is 15% horizontally and 5% vertically.
- The anchor point for the topmost/bottommost elements is the top right/bottom right of those elements (as determined by callout position)
- The anchor point for other elements moves as the elements are scaled so that the elements in their final positions do not overlap.
- We wish to add a white line separator between the multiple elements to preserve their separation.

For daypart/weekend chiclets, whether a single or multiple elements are being popped out.

- The scaling is 15% horizontally and vertically.
- The anchor point is the top right/bottom right of the selected element (as determined by the callout position)

Callout

The callout animates into view at the same time as highlighted element scales up. To watch a callout animation click here:
https://drive.google.com/open?id=16Ef6H6WW3DTMrDdDxJWGbVdoQWapRvW-

A callout shrinks back out of the view (a highlighted element and a background gradient scale down back to their original size) if a user taps anywhere outside of a callout. Tapping on another highlighted element on a screen also dismisses an open callout and at the same time opens another one.

A callout takes 55% of the entire screen width.

A callout height is dynamic depending on text amount. For this version, we'll display as much text as is present in the event, and use the event engine to limit text length.

For callouts covering an hour/hours or day/days, the first line of the callout displays the time range of the event. Details on the formatting are in a section below.

The callout image will only draw when the callout is positioned below a selected element. The callout presents a (branding) image at the bottom. This image is centered horizontally relative to the callout, and centered vertically on the bottom edge of the callout. The bottom edge of the callout is moved such that there is 16 pix/dp between the bottom of the last line of text and the top of the image.

When a callout is drawn above a selected element, do not show the branding image. Any space reserved for the branding image should be removed.

Whenever we show temperature (or any variable weather data), we should be including the unit. E.g. “The temperature will drop 5°F.”

Positioning for callouts is as follows:

- The desire is to position the callout vertically below the selected elements.
- If that positioning causes the bottom of the callout to be below a fixed (code constant, currently 14dp) margin at the bottom of the widget view, we next consider positioning the callout vertically above all the selected elements.
- If that positioning causes the top of the callout to be above a fixed (code constant, currently 14dp) margin below the top of the widget view, then we will position the callout off the lowest possible element where it’s bottom is at the margin described above.
- The callout is positioned horizontally so that it is centered on the center of the highlighted element unless the left/right of the callout would be within a fixed (code constant, currently 14dp) margin at the left/right of the widget view, in which case the callout will be positioned justified at that margin.
- The “ear” on the callout is always positioned horizontally at the center of the highlighted element.
- For weekend chiclets, there is special handling for hourly events that cross multiple dayparts.
    - Vertically positioning is the same (e.g. prefer below the lowest selected element)
    - Horizontally
        - If we are positioning below elements, we wish to position relative to the lower rightmost selected element.
        - If we are positioning above selected elements, we wish to position relative to the upper leftmost selected element.
        - Example - a temperature hourly event from Saturday at 2pm to Sunday at 11am would select the temperatures for Saturday after noon, Saturday evening and Sunday morning. If the callout could be positioned below, it would be horizontally centered on Sunday morning. If it was positioned above, it would be horizontally centered on Saturday afternoon.

More Animation Considerations

When a user swipes to the other chiclet with an opened callout - the callout disappears, highlighted elements scales down to original size as the transition from one chiclet to another occurs.

All weather data and design elements (example: vertical and horizontal dividers) animate into view first. After that the highlights are animated into view from the top of the screen to the bottom if there are multiple highlights on a screen. An individual highlight animates from bottom to top.
View animation:
https://drive.google.com/file/d/11mWKVBn5RypKuOfIUySqyHsIRhE5Xm_y/view?usp=sharing

Examples

Example 1a: Multiple Highlights on a SINGLE Parameter with the SAME Category

Time	Category (Priority #)
1	Temperature Delta (920)
2	Temperature Delta (920)
3	Wind Chill (350) <overriding Temperature Delta (920)>
4	Wind Chill (350) <overriding Temperature Delta (920)>
5	Temperature Delta (920)

1. The Weather Parameter, Temperature, is highlighted for all hours
2. Times 3 and 4 have a different highlight style to signify that two events are valid for the same time
3. Pressing on 1, 2, or 5 will highlight all 5 times and use the text associated with Temperature Delta (920)
4. Pressing on 3 or 4 will highlight only times 3 and 4 and use text associated with Wind Chill (350)

Example 1b: Multiple Events (1 of which is ignored) on a Single Parameter with the Same Category

Time	Category (Priority #)
1	Wind Chill (350)
2	Wind Chill (350)

3	Wind Chill (350) <ignored: Temperature Delta (920)>
4	Wind Chill (350) <ignored: Temperature Delta (920)>
5	Wind Chill (350)

1. The Weather Parameter, Temperature, is highlighted for all hours
2. All times show the same style of highlight (only a single event)
3. Times 3 and 4 completely ignores Temperature Delta (920) since it is never the highest priority event for an individual hour
4. Pressing on any hour will highlight all 5 times and use the text associated with Wind Chill (350)

Example 1c: Overlapping Highlights on a Single Parameter with the Same Category

Time	Category (Priority #)
1	Wind Chill (350)
2	Wind Chill (350)
3	Wind Chill (350)
4	Wind Chill (350) <overriding Temperature Delta (920)>
5	Temperature Delta (920)

1. The Weather Parameter, Temperature, is highlighted for all hours
2. Time 4 has a different highlight style to signify that two events are valid for the same time
3. Pressing on 1, 2, or 3 will highlight times 1 through 4 and use the text associated with Wind Chill (350)
4. Pressing on 4 will highlight only times 1 through 4 with the darker red color and use text associated with Wind Chill (350)
5. Pressing on 5 will highlight only times 4 and 5 with the lighter red color and use text associated with Temperature Delta (920)

Example 2a: Multiple Highlights at the Same Time on MULTIPLE Parameters with a DIFFERENT Category

Time	Category (Priority #)	Temperature	Wind
1	Temperature Delta (920)	T	W
2	Temperature Delta (920)	T	W
3	Wind (580) and Temperature Delta (920)	T	W
4	Wind (580) and Temperature Delta (920)	T	W

5	Temperature Delta (920)	T	W

1. The Weather Parameter, Temperature, is highlighted for all times
2. The Weather Parameter, Wind, is highlighted on hours 3 and 4 because the rule for Wind (580) is higher priority than Temperature Delta (920)
3. Pressing on the temperature for any of the times will highlight all 5 times and use the text associated with Temperature Delta (920)
4. Pressing on wind for hours 3 or 4 will highlight Wind for the hours 3 and 4 and use text associated with Wind (580)

Example 2b: Multiple Highlights (1 of which is ignored) on Multiple Parameters with a DIFFERENT Category

Time	**Category (Priority #)**	**Temperature**	**Wind**
1	Wind (580)	T	W
2	Wind (580)	T	W
3	Wind (580) <ignored: Temperature Delta (920)>	T	W
4	Wind (580) <ignored: Temperature Delta (920)>	T	W
5	Wind (580)	T	W

1. The Weather Parameter, Wind, is highlighted for all hours
2. The Weather Parameter, Temperature, is NEVER highlighted because it is NEVER the HIGHEST priority event for a particular time period (NOTE: The time period could be Daily, Hourly or Daypart)
3. Pressing on any time with Wind will highlight all 5 times and use the text associated with Wind (580)

Example 2c: Overlapping Highlights on MULTIPLE Parameters with a DIFFERENT Category

Time	**Category (Priority #)**	**Temperature**	**Wind**
1	Wind (580)	T	W
2	Wind (580)	T	W
3	Wind (580)	T	W
4	Wind (580) and Temperature Delta (920)	T	W
5	Temperature Delta (920)	T	W

1. The Weather Parameter, Wind, is highlighted for hours 1 through 4

2. The Weather Parameter, Temperature, is highlighted for hours 4 and 5 because the event is the highest priority event for hour 5 and therefore, we highlight all times where the event is valid (hours 4 and 5)
3. Pressing on any time with Wind will highlight all 4 times and use the text associated with Wind (580)
4. Pressing on any time with Temperature Delta will highlight hours 4 and 5 and use the text associated with Temperature Delta (920)

Time Range Formatting for Callouts

Time Range Formatting for Callouts Title

Hours

1. Single hour: %Hour% %Day of the Week Full Name%, e.g. 1PM WEDNESDAY
2. All hours on the same day: %Hour% to %Hour% %Day of the Week Abbr Name%, e.g. 4PM to 6PM WED
3. Hours on different days: %Hour% %Day of the Week Abbr Name% to %Hour% %Day of the Week Abbr Name%, e.g. 4PM WED to 6AM SUN

Days

1. Single Day Event: %Day of the Week Full Name%, e.g. WEDNESDAY
2. Multiple Day Event: %Day of the Week Abbr Name% to %Day of the Week Abbr Name%, eg: WED to THU

Time Range Formatting for Callouts Description

Hours

1. Single hour: %Hour% %Day of the Week Full MixedCase Name%, e.g. 1PM Wednesday
2. All hours on the same day: %Hour% to %Hour% %Day of the Week Full MixedCase Name%, e.g. 4PM to 6PM Wednesday
3. Hours on different days: %Hour% %Day of the Week Full MixedCase Name% to %Hour% %Day of the Week Full MixedCase Name%, e.g. 4PM Wednesday to 6AM Sunday

Days

1. Single Day Event: %Day of the Week Full MixedCase Name%, e.g. Wednesday
2. Multiple Day Event: %Day of the Week Full MixedCase Name% to %Day of the Week Full MixedCase Name%, eg: Wednesday to Thursday

Communicating Time for Hourly Precipitation and Non-Precipitation Events

Must have a different time displayed for single- and multi-hour precipitation events vs non-precipitation events. Consider the following situation for temperature values vs precipitation. For precipitation events, we should always display an additional hour whereas non-precipitation

events should present the exact hours highlighted. See examples below. **NOTE: See the formatting section ("Time Range Formatting for Callouts" above) for specifics on the format of the time.**

- Multiple Hour Events:
    - Precipitation: In a situation where 4pm and 5pm hours are highlighted, the text should read 4PM to 6PM
    - Temperature: In a situation where 4pm and 5pm hours are highlighted, the text should read 4PM to 5PM
- Single Hour Events:
    - Precipitation: In a situation where the 4pm hour is highlighted, the text should read 4PM to 5PM
    - Temperature: In a situation where the 4pm hour is highlighted, the text should read 4PM

Banner Ads

Banner ads will be displayed in parts of the weather tour using the following conventions.

- Banner ads are part of the tour itself, not part of the individual chiclets. They will be displayed at the same time as chiclets, and designed to not overlap chiclet content, but chiclets should be generally unaware of them.
- Banner ads will be centered horizontally and aligned vertically such that the ad bottom is on a line just about “X line” at the bottom. The distance from the bottom of the ad to the top of the close button (“X”) should be 14 px/dp.
- A chiclet will have the ability to indicate that banner ads should *not* be displayed on top of them and the tour should respect that.
- The intro chiclet, outro chiclet and headline viewer chiclet should request “no ads on top”.
- Banner ads will be displayed via Google DFP. We will support both 300x250 and 320x50 ads, although at least in this release, we’ll only use 320x50.
- A single ad tag will be used for all ads. Source of that ad tag is TBD, hardcode for now.
- By convention, we will not show a banner ad until the user has moved to the 2nd data card in the tour (currently the hourly card). (Note that doesn’t mean that the hourly card implements the “don’t display banner ads on top of me”, it’s whatever is the 2nd card)
- The banner ad view will auto-refresh on an N second timer (currently 30 seconds).
- The timer begins counting when an ad has been successfully loaded and we’ve faded in the ad view with that new ad, or when we get an “ad load failed” from DFP.
- The banner ad view will not display if it’s empty.
    - If it’s never been loaded before, don’t display until a successful load and then fade in.
    - If it’s loaded with something, and auto-refreshes and no ad is found, it fades out.
- The banner ad view will transition from ad to ad by cross fading.
- If we reach a chiclet that prohibits banner ads, the ad view will fade out and the timer will be reset. When we reach the next chiclet, a new fetch will be initiated and the ad view will fade in if that fetch is successful.
- If a banner ad is tapped, the associated view for that ad is presented and we pause the timer until we are notified that the popover view is gone.