HTML5

Screen Network enables the display of dynamic layouts across all managed locations, featuring real-time data pulled from designated sources. The content is displayed using dynamic boards based on HTML5 technology.

IMPORTANT!

Each campaign using HTML5 creatives requires individual technical arrangements. Before starting production, it is mandatory to contact the Operations Department (realizacja@screennetwork.pl) to discuss the project assumptions and select the most stable and secure method of implementing the HTML layout.

The need for individual technical arrangements results from, among others:

- the scope and type of dynamic data (refresh rate, source, format, presentation logic),
- the creative concept (level of animation complexity, interactive elements, content synchronization),
- the specifications of devices and screen resolutions included in the campaign,
- required performance and optimization (file size, number of assets, JS operations),
- the method of integration with the player system (use of document.data, alternative layouts, fallback mechanisms),
- non-standard formats, aspect ratios, or layout variants,
- additional design constraints (color schemes, readability, adaptation to multiple layouts).

SCREEN NETWORK

GENERAL TECHNICAL SPECIFICATION & BEST PRACTICES

1. Format: HTML5

2. **HTML Creative – Responsiveness & Resolution**

   The HTML creative should be prepared as a single file, responsively adapting to all actual screen resolutions included in the campaign, while maintaining correct scaling, proportions, and element positioning.

   A list of actual screen resolutions is provided before production begins and constitutes the basis for creative development.

   For HTML creatives, standard technical specifications used for closed files (e.g. MP4, JPG) do not apply. Screens displaying standard formats (e.g. 16:9) may, in reality, have slightly different aspect ratios. Therefore, HTML creatives must be based on actual screen resolutions, not only on video format proportions.

   Correct resolutions will be provided during technical arrangements with the Operations Department after the list of campaign screens is confirmed

3. Layouts should be optimized in terms of performance and file size (similar to best practices for websites).

4. The layout must include a script placed in the <body> or <head> section that allows the slide / animation / video to start exactly at the moment of display.

   This is achieved using the onSlideDisplay function (source code below), which must be added to the layout code.

```
<script>

    function onSlideDisplay(){
      var vid = document.getElementById("myVideo");
      vid.currentTime = 0;
      vid.play();

      console.log(JSON.parse(document.data));
    }

  </script>
```

5. All external data passed to the layout is delivered via the global variable document.data, provided by the player application operating the screen. This ensures data correctness and caching, and significantly improves loading and playback performance.
6. JavaScript and CSS must not be embedded directly in the HTML file. Separate files should be created and linked directly in the HTML code.
7. Using BEM naming conventions and the SASS compiler for stylesheet generation is considered best practice.
8. All files must be linked locally – loading assets from CDNs or other external internet sources is not allowed.
9. The display of the layout must not depend on data stored between displays. The use of localStorage, sessionStorage, cookies, or cache is not permitted.
10. The layout must not send or fetch data directly from the Internet. All external data retrieval is handled via dedicated scripts.
11. An alternative (neutral) fallback layout must be prepared. This layout will be displayed if current data cannot be retrieved.The fallback layout should be automatically triggered by the HTML creative when a lack of internet connection is detected.
12. If the layout is to use external data, the HTML creative must include: the data format, a description, the source from which the data will be retrieved. Our software also supports skipping the layout if data is unavailable or if there is a connectivity issue.
13. As a best practice, the final creative should be accompanied by the original design file (e.g. Adobe Photoshop, Animate, XD, or similar) to illustrate correct layout rendering, including dynamic data where applicable.
14. Wherever possible, all graphics should be provided in vector formats (.PNG /.SVG), which facilitates scaling and adaptation to various aspect ratios and resolutions. Avoid using pixel-based units in styles (e.g. font-size, width/height, padding, margins). Use rem / em units instead.
15. All video files embedded in HTML layouts must be delivered in WebM format (.webm). Other formats, such as MP4, are not accepted. The file must be linked locally (not from a CDN), and the file path must be relative. The recommended video codec is VP9.

Delivery Deadline

All files must be delivered at least 14 days before the campaign start date, in order to eliminate potential errors in the creative or issues related to data retrieval.