STN VIDEO AND CORE WEB VITALS
What is a cumulative layout shift?
What is a cumulative layout shift?

Recommendations

- Precompute sufficient space for embeds with a placeholder or fallback
- Using browser dev tools and obtaining the final height of your embed code
- Using media queries for responsive sites, reserve a min-height for the size
CLS – HOW DO YOU IMPROVE YOUR SCORE?

Standard Embed Code

STN Video embed code in your article
<div class='s2nPlayer k-abcGNIaU' data-type='float'></div>
<script type='text/javascript'
src='https://embed.sendtonews.com/player3/embedcode.js?fk=abcGNIaU&cid=1234&offsetx=0&offsety=112&floatwidth=400&floatposition=bottom-right' data-type='s2nScript'></script>

Sample CSS Media Queries

```css
@media only screen and (max-width: 400px) {
  .s2nPlayer {
    min-height: 250px;
  }
}

@media only screen and (min-width: 400px) {
  .s2nPlayer {
    min-height: 350px;
  }
}

@media only screen and (min-width: 600px) {
  .s2nPlayer {
    min-height: 450px;
  }
}
```

NO CSS

Parmesan Roasted Cauliflower
The combination of nutty, caramelized, roasted cauliflower florets and some just-the-side-of-burnt onions has become our go-to winter side dish recipe.

Cauliflower has gone from a trusted side dish to the superheroes of low-carb replacements and everything in between. Get our best cauliflower recipes, from basic roasted cauliflower to cauliflower pizza, right here.

Raw cauliflower transforms into golden, caramelized deliciousness in the oven. If you roast it with just olive oil, salt, and pepper, it’s a tasty snack. This roasted cauliflower recipe is the perfect simple side dish for your fall and winter meals.

As much as I love basic roasted cauliflower, it’s the perfect vehicle for creative flavorings. I carry this knowledge from my culinary school training.

CSS

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0.170
0.00
FID – FIRST INPUT DELAY
IMPROVING YOUR SCORE

STN Video avoids long tasks and large JavaScript files by implementing the following:

- Scripts are modularized to reduce the amount JavaScript needed at any given time.
- The script tag is split into two components - critical and non-critical scripts
  - The critical scripts are optimized to avoid blocking the initial render (and your LCP).
  - To further reduce unnecessary JavaScript, the second half of the script will not be loaded unless a player is embedded on the page.
LARGEST CONTENTFUL PAINT (LCP) – IMPROVING LOADING PERFORMANCE

STN applies adaptive loading techniques to adjust the video quality to be appropriate for the user’s bandwidth

Non-critical components are loaded in a non-render blocking manner

Publishers can control when STN video loads through async and defer. STN recommends using async as a balance between performance and revenue
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STN VIDEO AND YOUR USER EXPERIENCE
STN VIDEO IS A GCPP BECAUSE WE ARE DEDICATED TO YOUR SUCCESS

Strategy

Content

Sales

Product

Tech

Marketing

Training

Rev Ops

Development
WHY CORE WEB VITALS?

STN VIDEO IS FOCUSED ON HELPING PUBLISHERS WITH CORE WEB VITALS BECAUSE THEY GIVE YOUR USERS THE BEST POSSIBLE EXPERIENCE

HOW WE HELP

STN will dedicate a team devoted to your Core Web Vitals Strategy

We know this isn’t a “one size fits all” solution. Our team will address any specific challenges you have

We work with you over the course of several weeks in regard to video, helping boost CWV for your site(s)
STN VIDEO
SUCCESS STORY

LAS VEGAS REVIEW-JOURNAL

After working hand in hand with STN Video on their user experience strategy and adopting our full OVP in September 2020 the ReviewJournal.com saw:

- **Local News**
  - Page View Increase: 57%
  - Visitors Increase: 51%

- **Raiders/NFL**
  - Page View Increase: 63%
  - Visitors Increase: 42%

- **Entertainment**
  - Page View Increase: 28%
  - Visitors Increase: 23%

ENHANCED ENGAGEMENT: the Review-Journal also saw user engagement increases on specific sections, illustrating the power and quality of STN’s full content library.

- **536% INCREASE IN DIGITAL VIDEO REVENUE**
- **710% INCREASE IN MONTHLY VIDEO PLAYS**
- **41% INCREASE IN MONTHLY PAGE VIEWS**
- **22% INCREASE IN MONTHLY VISITORS**
- **9% INCREASE IN RETURNING TIME ON PAGE**
What are “Core Web Vitals”? 
Core Web Vitals is an initiative by Google to provide unified guidance for quality signals that are essential to delivering a great user experience on the web.

- Core Web Vitals Announcement
Two primary goals:

1. **Simplify** the landscape around measuring site experience
2. Help sites focus on the **metrics that matter most**
Three focus areas in 2020:

**Loading**
*Is it happening?*

**Interactivity**
*Is it responsive?*

**Visual Stability**
*Is it delightful?*
Loading
Largest Contentful Paint (LCP)

**What:** The time it takes to render the largest image or text block within the viewport

**Units:** seconds

**Why:** This is a good measurement of how fast the user perceives content to load.
Example
Top 10 Videos - The best demonstration of animal athletics! Come watch kitties play yarn soccer, penguins stealing second base, and will the rabbit beat the tortoise?
Common Problems

- Render-blocking JavaScript and CSS
- Slow server response times
- Slow resource load times
- Client-side rendering

More optimizing LCP tips: https://web.dev/optimize-lcp/
Interactivity
First Input Delay (FID)

**What:** Time between a user's first touch/interaction and the time it takes the main thread to respond.

**Units:** milliseconds

**Why:** This is a good measurement of how the user perceives the site's interactivity.
FID and the Main Thread

It can take longer for a site to respond to a user’s input if the main thread is busy with long JavaScript tasks.

source: web.dev/fid
Common Problems

Primary cause: heavy JavaScript execution. Possible fixes:

- Break up long tasks
- Optimize your page for interaction readiness
- Use a web worker
- Reduce JavaScript execution time

More optimizing FID tips: https://web.dev/optimize-fid/
Visual Stability
Cumulative Layout Shift (CLS)

**What:** A sum of measurements based on the unexpected shifts a user experiences on a page.

**Units:** custom

**Why:** This allows us to measure how often and interruptive layout shifts are during the user journey.
2021 Updates to CLS

In April 2021, the Core Web Vitals Team announced changes to CLS to have the metrics be more reflective of user experiences on long-lived pages. The changes include:

- CLS will now be measured in session windows
- Session windows have a max of 5 seconds
- Session gaps are 1 second
- The largest CLS in of all the session windows will be reported
Common Problems

- Images without dimensions
- Ads, embeds, and iframes without dimensions
- Dynamically injected content
- Web Fonts causing FOIT/FOUT
- Actions waiting for a network response before updating DOM

More optimizing CLS tips: https://web.dev/optimize-cls/
“This is cool and all, but why do I care?”
22% lower abandonment rate in news sites with excellent Core Web Vitals measurements

source: The Science Behind Web Vitals
Research Study:

“On unfamiliar sites, 2 seconds of delay was enough to cause most of the drop”

- The Science Behind Web Vitals
When researchers increased visual feedback on buttons from 100ms to 150ms, people rated the quality of the buttons as significantly lower.

- *The Science Behind Web Vitals*
Recommended Thresholds
Core Web Vitals has research-based thresholds for each metric.

- **LCP** (Largest Contentful Paint): GOOD 2.5 sec, NEEDS IMPROVEMENT 4.0 sec, POOR
- **FID** (First Input Delay): GOOD 100 ms, NEEDS IMPROVEMENT 300 ms, POOR
- **CLS** (Cumulative Layout Shift): GOOD 0.1, NEEDS IMPROVEMENT 0.25, POOR

[source: web.dev/vitals]
Aim for the 75th percentile of real users to experience good metrics.
Measuring Core Web Vitals
## Core Web Vital Tools:

<table>
<thead>
<tr>
<th>Tool</th>
<th>LCP</th>
<th>FID</th>
<th>CLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PageSpeed Insights</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Chrome UX Report</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Search Console</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Chrome DevTools</td>
<td>✔</td>
<td>TBT</td>
<td>✔</td>
</tr>
<tr>
<td>Lighthouse</td>
<td>✔</td>
<td>TBT</td>
<td>✔</td>
</tr>
<tr>
<td>Web Vitals Extension</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

LCP = Largest Contentful Paint, FID = First Input Delay, CLS = Cumulative Layout Shift, TBT = Total Blocking Time
Lighthouse
Lighthouse / Chrome DevTools

What is it?
● An automated website auditing tool that provides metrics, opportunities, and diagnostics

Good for:
● Quick way to test lab view
● Suggestions for improvements
● Integration into other developer tools
● Community Plugins like Publisher Ads provide more insights and suggestions
Lighthouse / Chrome DevTools

Tips:

- If running in the browser, use Incognito Mode to keep extensions from affecting the results
- Keep the tab with Lighthouse running in focus and close as many other tabs as possible
- Results will vary on different computers
Lighthouse / Chrome DevTools

The top section shows the summary of every section audited in Lighthouse, including plugins.
**Lighthouse / Chrome DevTools**

- Includes the Core Web Vitals
- FID is replaced by Total Blocking Time (TBT)
- Click “View Trace” to analyze the network and main thread activity

<table>
<thead>
<tr>
<th>Performance Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Contentful Paint</td>
<td>5.2 s</td>
</tr>
<tr>
<td>Speed Index</td>
<td>8.1 s</td>
</tr>
<tr>
<td>Largest Contentful Paint</td>
<td>11.3 s</td>
</tr>
<tr>
<td>Time to Interactive</td>
<td>19.2 s</td>
</tr>
<tr>
<td>Total Blocking Time</td>
<td>2,400 ms</td>
</tr>
<tr>
<td>Cumulative Layout Shift</td>
<td>0.171</td>
</tr>
</tbody>
</table>

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.
### Lighthouse / Chrome DevTools

**Opportunities** — These suggestions can help your page load faster. They don't directly affect the Performance score.

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Estimated Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove unused JavaScript</td>
<td>3.87 s</td>
</tr>
<tr>
<td>Defer offscreen images</td>
<td>0.15 s</td>
</tr>
</tbody>
</table>

**Diagnostics** — More information about the performance of your application. These numbers don’t directly affect the Performance score.

<table>
<thead>
<tr>
<th>Potential Solution</th>
<th>Estimated Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largest Contentful Paint element</td>
<td></td>
</tr>
<tr>
<td>Avoid large layout shifts</td>
<td></td>
</tr>
<tr>
<td>Does not use passive listeners to improve scrolling performance</td>
<td></td>
</tr>
<tr>
<td>Avoid document.write()</td>
<td></td>
</tr>
<tr>
<td>Avoid an excessive DOM size — 2,739 elements</td>
<td></td>
</tr>
<tr>
<td>Minimize main-thread work — 8.9 s</td>
<td></td>
</tr>
<tr>
<td>Serve static assets with an efficient cache policy — 44 resources found</td>
<td></td>
</tr>
<tr>
<td>Reduce JavaScript execution time — 5.3 s</td>
<td></td>
</tr>
</tbody>
</table>

- The Opportunities and Diagnostics sections offer potential solutions.
- Expanding the sections will give more details.

Remove unused JavaScript to reduce bytes consumed by network activity. Learn more.

If you are not server-side rendering, split your JavaScript bundles with `React.lazy()`. Otherwise, code-split using a third-party library such as loadable-components.
Community Plugins (new in 2020) can help customize your Lighthouse audit.
Lighthouse / Chrome DevTools

Resources:

- Lighthouse documentation:  
  https://developers.google.com/web/tools/lighthouse/
- Lighthouse Github:  
  https://github.com/GoogleChrome/lighthouse/
- Chrome DevTools documentation:  
  https://developers.google.com/web/tools/chrome-devtools/
Chrome User Experience Report
Chrome User Experience Report

What is it?
- Public dataset of aggregated real user performance data from opted-in Chrome users
- Data is bucketed in Good, Needs Improvement, and Poor categories

Good for:
- Viewing real user data trends over time
- Doesn't require any additional tags on your site
Chrome User Experience Report

Tips:

- Data is aggregated monthly and at the origin level
- You can filter the data by device
- API allows for querying for the past 28 days
- Redesigned dashboard helps visualize the data
Chrome User Experience Report

Resources:

- **Chrome User Experience API:**
  

- **Redesigned dashboard:**
  
  http://g.co/chromeuxdash

- **Dashboard tutorial:**
  

- **Advanced API tutorial:**
  
  https://www.youtube.com/watch?v=YGcA-h4YM6w&list=PLNYkxOF6rcIDCo-BiwSL52yQon9rNozaF
Page Speed Insights
Page Speed Insights

What is it?
- Combined performance data from Chrome User Experience Report and Lighthouse

Good for:
- Comprehensive details of a single URL
- Real User Metrics for the past 28 days
- Performance-focused audits
Page Speed Insights

Field data:

- Field data is from the Chrome User Experience Report
- If there isn't enough data available, the aggregate origin level will be shown
- The Core Web Vitals are marked with ■
Page Speed Insights

Lab Data

- First Contentful Paint: 3.2 s
- Speed Index: 3.2 s
- Largest Contentful Paint: 3.7 s
- Time to Interactive: 4.5 s
- Total Blocking Time: 60 ms
- Cumulative Layout Shift: 0

Lab Data and Opportunities:

- From Lighthouse

Differences from Lighthouse:

- Runs on dedicated servers
- Only surfaces performance audits
- Available as an API call
Page Speed Insights

Resources:

- Page Speeds Insights Web Interface: https://developers.google.com/speed/pagespeed/insights/
- Page Speed Insights API: https://developers.google.com/speed/docs/insights/v5/get-started
- Page Speed Insights documentation: https://developers.google.com/speed/docs/insights/v5/about
Search Console
Search Console

**What is it?**
- Helps measure your site's Search traffic and performance

**Good for:**
- Grouping together pages with similar Core Web Vitals problems
- Helping prioritize Core Web Vitals work
- Viewing Core Web Vitals performance throughout the site
Search Console

Resources:

● Google Search Console: https://search.google.com/search-console/about
● Search Console Training: https://youtu.be/ONr5Z7VhNFI
LCP Resources:
- https://web.dev/lcp/
- https://web.dev/optimize-lcp/

FID Resources:
- https://web.dev/fid/
- https://web.dev/optimize-fid/

CLS Resources:
- https://web.dev/cls/
- https://web.dev/optimize-cls/
Additional Resources:

- Core Web Vitals Announcement: https://web.dev/vitals/
- Core Web Vitals Tools Overview: https://web.dev/vitals-tools/
- Science behind Core Web Vitals: https://blog.chromium.org/2020/05/the-science-behind-web-vitals.html
- How AMP helps with Core Web Vitals: https://blog.amp.dev/2020/05/06/amp-web-vitals-a-better-web-together/
- Latest advice and talks at: https://web.dev
Team up with a Google Certified Publishing Partner

Leverage the Extra Support

Bianca Jochimsen - Head of GCPP
The Current Ecosystem
In 2021, publishers seek a clearer path through the highly ambiguous ecosystem

- Who can we trust?
- Which products to use?
- Business model?
- The competitors?
- What’s my potential?
- Best practices and new features?
The Need for Support

Many publishers desire additional support so that they can focus on doing what they truly enjoy, such as publishing amazing content on their site.

Advertisers, Publishers and Google work toward the common goal of sustaining a high quality network within a dynamic environment.
What is a Google Certified Publishing Partner?
A Google Certified Publishing Partner is a company that we've reviewed and has proven to be an **expert using Google products and provides publishers with innovative solutions and services.**
Look for the Badge

The Certified Publishing Partner badge assures that you’re working with a partner who’s been carefully evaluated by Google. It’s a guarantee that the partner is a trained expert on AdSense, Ad Manager, or AdMob.

All partners are required to maintain their certifications by passing updated product exams and other requirements every year.
Why should you consider working with a GCPP?
Benefits of working together

Rely on your Partner’s **expertise to set up and optimize your digital content** so you can attract the most profitable and relevant advertising.

From app design to ad optimization, **receive insights, services, and technology** to help you make more informed decisions and strengthen your bottom line.

As your partner leverages the best advertising technologies **to maximize your revenue potential** you’ll have more time for what matters most: creating quality content!
The impact of working with Google¹

95% of Publishers say their Google Certified Publishing Partner is important to their business success.

84% of Publishers are very satisfied, overall with their Google Certified Publishing Partner.

73% of Publishers count on their Google Certified Publishing Partner for all sales support.

Source: ¹2019 publisher satisfaction study conducted by Netpop Research LLC