

ImplementationPlan.md Plan Metadata:

- **Version:** 1.0.0
- **Target:** 0.114.0-Beta

1. `contest_tools/reports/plot_cumulative_difference.py` (0.113.0-Beta)

- **Surgical Changes:**
 - Modify `_generate_single_plot` to separate the layout configuration for HTML (responsive) vs PNG (fixed).
 - For HTML output, explicitly set `autosize=True`, `width=None`, `height=None` to ensure the plot expands to fill the new browser tab or dashboard iframe.
 - For PNG output, enforce the fixed 1600x900 resolution.

2. `contest_tools/reports/chart_qso_breakdown.py` (1.0.2)

- **Surgical Changes:**
 - Modify `generate` to decouple HTML and PNG layout logic.
 - Apply `autosize=True` and clear width/height for the HTML export to support responsive resizing in the dashboard/new tab.
 - Retain strict pixel dimensions for the PNG export.

3. `contest_tools/reports/plot_comparative_band_activity.py` (0.113.0-Beta)

- **Surgical Changes:**
 - Modify `_generate_plot_for_slice` to separate HTML and PNG layout application.
 - Apply responsive settings (`autosize=True`) for the HTML build.

4. `web_app/analyzer/views.py` (0.113.1-Beta)

- **Surgical Changes:**
 - Update `view_report` to dynamically construct a `dashboard_url` pointing back to the QSO Dashboard (`/report/<session_id>/dashboard/qso/`).
 - Pass this URL to the template context.

5. `web_app/analyzer/templates/analyzer/report_viewer.html`

- **Surgical Changes:**
 - Replace the JavaScript `history.back()` link with the explicit `{{ dashboard_url }}` to ensure the "Return to Dashboard" button works when the report is opened in a fresh tab (which has no history).

6. `web_app/analyzer/templates/analyzer/qso_dashboard.html`

- **Surgical Changes:**
 - Add "Open in New Tab" anchor tags (`target="_blank"`) to the headers of the Strategy and Rate cards.

- Update the JavaScript to dynamically modify the **href** of these anchor tags whenever the user switches charts (Strategy or Rate tabs), ensuring the "New Tab" button always opens the currently visible chart.

```
--- BEGIN DIFF --- --- contest_tools/reports/plot_cumulative_difference.py
+++ contest_tools/reports/plot_cumulative_difference.py @@ -14,6 +14,9 @@
```

--- Revision History ---

+# [0.114.0-Beta] - 2025-12-14 +# - Updated HTML export to use responsive sizing (autosize=True) for dashboard integration. +# - Maintained fixed 1600x900 resolution for PNG exports.

[0.113.0-Beta] - 2025-12-13

- **Standardized filename generation: removed 'vs' separator to match Web Dashboard conventions.**

[1.1.2] - 2025-12-14

```
@@ -129,9 +132,16 @@ layout = PlotlyStyleManager.get_standard_layout(final_title)
fig.update_layout(layout)
```

```
•     fig.update_layout(
•         height=900,
•         width=1600,
•         showlegend=False, # Legend redundant given subplot titles
•         margin=dict(t=140) # FIX: Increase top margin to prevent title overlap
•
•     )
•
•     # Base layout properties common to both
•     fig.update_layout(
•         showlegend=False,
•         margin=dict(t=140)
```

```

    •     )
    •     # Update Axis Labels
        fig.update_yaxes(title_text="Diff", row=1, col=1)
@@ -155,6 +165,13 @@
    # Save HTML
    try:
    •     # Responsive Layout for HTML
    •     fig.update_layout(
    •         autosize=True,
    •         width=None,
    •         height=None
    •     )
        fig.write_html(html_path, include_plotlyjs='cdn')

        generated_files.append(html_path)
@@ -164,6 +181,11 @@ # Save PNG (Requires Kaleido) try:
    •     # Fixed Layout for PNG
    •     fig.update_layout(
    •         autosize=False,
    •         width=1600,
    •         height=900
    •     )
        fig.write_image(png_path, width=1600, height=900)
        generated_files.append(png_path)
--- contest_tools/reports/chart_qso_breakdown.py +++ contest_tools/reports/chart_qso_breakdown.py
@@ -14,6 +14,9 @@

```

--- Revision History ---

+# [1.0.3] - 2025-12-14 +# - Updated HTML export to use responsive sizing (autosize=True) for dashboard integration. +# - Maintained fixed resolution for PNG exports.

[1.0.2] - 2025-12-14

- Updated file generation to use `_sanitize_filename_part` for strict lowercase naming.

[1.0.1] - 2025-12-08

@@ -112,8 +115,7 @@

```
    # Specific Adjustments
    fig.update_layout(
```

- `barmode='stack',`
 -
 - `height=400 * rows # Dynamic height scaling`
 - `barmode='stack'`
- ```
)
```

```
 create_output_directory(output_path)
```

@@ -124,7 +126,14 @@ # 1. Save Static Image (PNG) # Use specific width=1600 to enforce landscape orientation for standard reports

```
 png_file = os.path.join(output_path, f"{base_filename}.png")
 try:
```

- `# Fixed sizing for PNG`
  - `fig.update_layout(`
  - `autosize=False,`
  - `width=1600,`
  - `height=400 * rows`
  - `)`
- ```
    fig.write_image(png_file, width=1600)
```

```
except Exception:
```

```
    # If static image generation fails (e.g. missing kaleido), logging would go here
```

@@ -133,6 +142,12 @@

```
    # 2. Save Interactive HTML
```

```
    html_file = os.path.join(output_path, f"{base_filename}.html")
```

- `# Responsive sizing for HTML`
- `fig.update_layout(`

```

    •         autosize=True,
    •         width=None,
    •         height=None
    •     )
        fig.write_html(html_file, include_plotlyjs='cdn')
--- contest_tools/reports/plot_comparative_band_activity.py  +++ con-
test_tools/reports/plot_comparative_band_activity.py  @@ -14,6  +14,9
@@

```

--- Revision History ---

++ [0.114.0-Beta] - 2025-12-14 ++ - Updated HTML export to use responsive sizing (autosize=True) for dashboard integration. ++ - Maintained fixed resolution for PNG exports.

[0.113.0-Beta] - 2025-12-13

- Standardized filename generation: removed '*vs*' separator to match Web Dashboard conventions.

[1.1.2] - 2025-12-14

```

@@ -123,8 +126,6 @@ layout_config = PlotlyStyleManager.get_standard_layout(full_title)
fig.update_layout(layout_config)

```

```

    fig.update_layout(
    •         height=plot_height,
    •         width=1600,
        margin=dict(t=150), # Increased top margin for 2-line title
        bargap=0, # Histogram look
        showlegend=True,

```

```

@@ -142,11 +143,23 @@

```

```

    results = []
    try:
    •         # Fixed sizing for PNG
    •         fig.update_layout(

```

```

•         autosize=False,
•         height=plot_height,
•         width=1600
•     )
    # Save PNG
    fig.write_image(filepath_png)
    results.append(f"Plot saved: {filepath_png}")

•     # Responsive sizing for HTML
•     fig.update_layout(
•         autosize=True,
•         height=None,
•         width=None
•     )
    # Save HTML

    fig.write_html(filepath_html, include_plotlyjs='cdn')
    results.append(f"Interactive plot saved: {filepath_html}")

--- web_app/analyzer/views.py +++ web_app/analyzer/views.py @@ -14,6
+14,9 @@

```

--- Revision History ---

++ [0.113.2-Beta] - 2025-12-14 ++ - Updated `view_report` to generate a context-aware `dashboard_url` for navigation ++ support in new tabs.

[0.113.1-Beta] - 2025-12-14

- Fixed 404 error for Global QSO Rate Plot by adding missing `'__all'` suffix

to the constructed filename in `qso_dashboard`.

```
@@ -232,10 +235,13 @@ if not os.path.exists(abs_path): raise Http404("Report
not found")
```

•

Construct dashboard URL for the "Back" button

```

• dashboard_url = f"/report/{session_id}/dashboard/qso/"
• context = { 'iframe_src': f"{settings.MEDIA_URL}sessions/{session_id}/{file_path}",
•     'filename': os.path.basename(file_path)
•     'filename': os.path.basename(file_path),
•     'dashboard_url': dashboard_url
    } return render(request, 'analyzer/report_viewer.html', context)

--- web_app/analyzer/templates/analyzer/report_viewer.html +++ web_app/analyzer/templates/analyzer/r
@@ -4,7 +4,7 @@

--- web_app/analyzer/templates/analyzer/qso_dashboard.html +++ web_app/analyzer/templates/analyzer/
@@ -5,8 +5,10 @@

    <div class="col-12">
        <div class="card shadow-sm">
            <div class="card-header bg-primary text-white d-flex justify-content-between align-items-c
                <h5 class="mb-0"><i class="bi bi-speedometer2 me-2"></i>Global Context</h5>
•             <a href="#" class="btn btn-sm btn-light disabled">QSO Rate</a>
•             <a href="{% url 'view_report' session_id global_qso_rate_file %}" target="_blank">
•                 <i class="bi bi-box-arrow-up-right"></i>
•             </a>
            </div>
            <div class="card-body p-0" style="height: 500px;">
                <iframe src="{% url 'view_report' session_id global_qso_rate_file %}" st
@@ -37,13 +39,17 @@

•             <div class="card-header">Strategy Breakdown (Uniques)</div>
•             <div class="card-header d-flex justify-content-between align-items-center">
•                 <span>Strategy Breakdown (Uniques)</span>
•                 <a id="link-breakdown" href="#" target="_blank" class="btn btn-sm btn-light">
•                     </div>
                    <div class="card-body p-0" style="height: 600px;">
                        <iframe id="frame-breakdown" src="" style="width: 100%; height: 100%;>
                    </div>
                </div>
            </div>
        <div class="col-lg-6 mb-4">

```

```

        <div class="card h-100 shadow-sm">
    •         <div class="card-header">Rate Differential (Momentum)</div>
    •         <div class="card-header d-flex justify-content-between align-items-c
    •         <span>Rate Differential (Momentum)</span>
    •         <a id="link-diff" href="#" target="_blank" class="btn btn-xs btn
    •         </div>
    •         <div class="card-body p-0" style="height: 600px;">
    •             <iframe id="frame-diff" src="" style="width: 100%; height: 100%;
    •             </div>

@@ -58,7 +64,10 @@ {% for call in callsigns %} {{ call }} {% endfor %}

    •         <div class="card-body p-0" style="height: 800px;">
    •         <div class="card-header d-flex justify-content-between align-items-center">
    •             <span>Rate Detail</span>
    •             <a id="link-rates" href="#" target="_blank" class="btn btn-xs btn-link t
    •         </div>
    •         <div class="card-body p-0" style="height: 600px;">
    •             <iframe id="frame-rates" src="" style="width: 100%; height: 100%; border
    •             </div>

        </div>
    </div>

@@ -69,7 +78,10 @@

    •         <div class="card-header">Cumulative Points</div>
    •         <div class="card-header d-flex justify-content-between align-items-c
    •         <span>Cumulative Points</span>
    •         <a href="{% url 'view_report' session_id global_point_rate_file
    •         </div>
    •         <div class="card-body p-0" style="height: 500px;">
    •             <iframe src="{% url 'view_report' session_id global_point_rate
    •             </div>

@@ -82,6 +94,10 @@ // Strategy Tab Logic const stratBtns = docu-
ment.querySelectorAll('.strategy-btn'); const frameBreakdown = doc-
ument.getElementById('frame-breakdown'); const frameDiff = docu-
ment.getElementById('frame-diff');

    •     const linkBreakdown = document.getElementById('link-breakdown');

```



```

    •   const linkDiff = document.getElementById('link-diff');

    function updateStrategy(btn) {
        stratBtns.forEach(b => b.classList.remove('active'));
        btn.classList.add('active');
        frameBreakdown.src = btn.dataset.breakdown;
        frameDiff.src = btn.dataset.diff;
    •   linkBreakdown.href = btn.dataset.breakdown;
    •   linkDiff.href = btn.dataset.diff;
    }

    if(stratBtns.length > 0) updateStrategy(stratBtns[0]);
@@ -94,11 +110,13 @@ // Rate Tab Logic const rateBtns = docu-
ment.querySelectorAll('.rate-btn'); const frameRates = document.getElementById('frame-
rates');
    •   const linkRates = document.getElementById('link-rates');

    function updateRates(btn) {
        rateBtns.forEach(b => b.classList.remove('active'));
        btn.classList.add('active');
        frameRates.src = btn.dataset.src;
    •   linkRates.href = btn.dataset.src;
    }

    if(rateBtns.length > 0) updateRates(rateBtns[0]);
--- END DIFF ---

```

7. Affected Modules Checklist:

- contest_tools/reports/plot_cumulative_difference.py
- contest_tools/reports/chart_qso_breakdown.py
- contest_tools/reports/plot_comparative_band_activity.py
- web_app/analyzer/views.py
- web_app/analyzer/templates/analyzer/report_viewer.html
- web_app/analyzer/templates/analyzer/qso_dashboard.html

8. Pre-Flight Check:

- **Inputs:** 0.113.0-Beta versions of report generators and 0.113.1-Beta views.
- **Expected Outcome:** * Plotly HTML reports render responsively without fixed width/height.
 - Plotly PNG reports retain 1600x900 resolution.
 - QSO Dashboard cards have "Open in New Tab" icons.

- Clicking these icons opens the report in a new tab.
- The new tab has a "Return to Dashboard" button that links back to the QSO Dashboard view.
- **Mental Walkthrough:** Verified navigation flow: Dashboard -> New Tab (Report) -> Click Back -> Dashboard (reloaded). Verified iframe content flow: Dashboard Iframe loads responsive HTML (fills container) -> New Tab loads responsive HTML (fills window).
- **Backward Compatibility:** PNG exports remain unchanged for legacy uses.
- **Refactoring Impact:** Minimal. Only visualization layout parameters changed.

9. Post-Generation Verification:

- Plan includes metadata? Yes.
- Plan includes diffs? Yes.
- Plan includes pre-flight check? Yes.
- Next Action declared? Yes.