

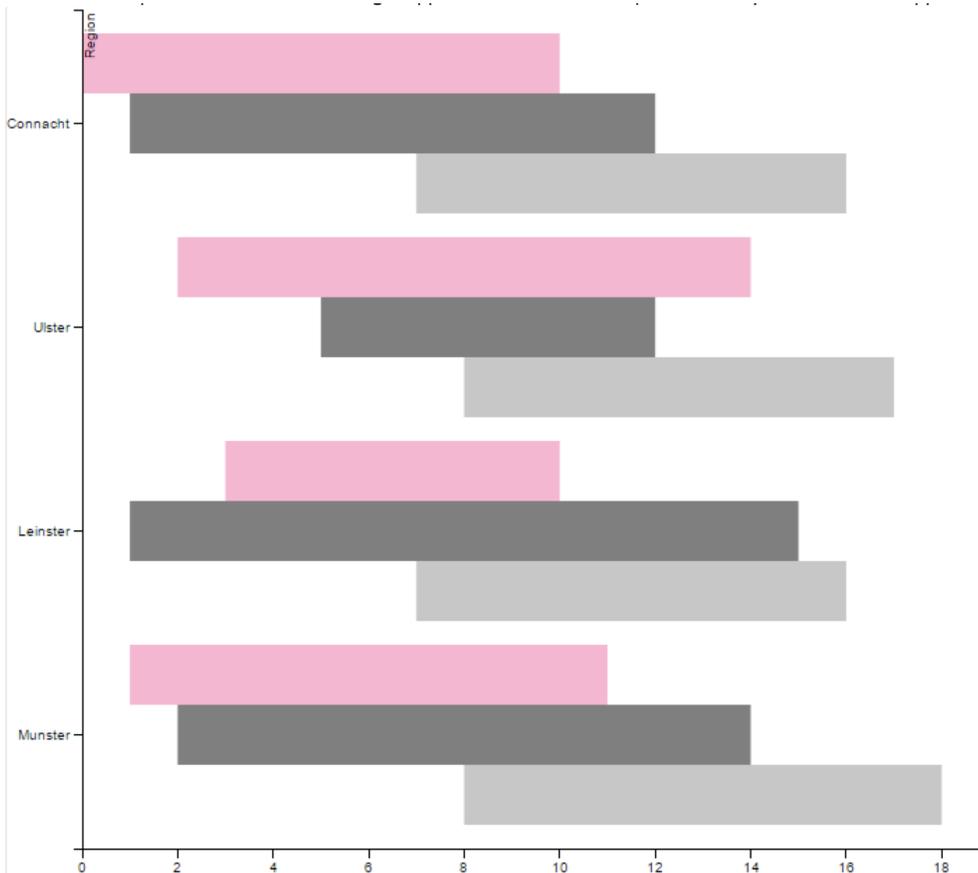
# Expand the HPCC Systems Visualization Framework (Web Based)

Anmol Jagetia completed this project as part of the GSoC program in 2015. You can read [Anmol's blog](#) and [review his commits](#) on github for more information. Watch his [YouTube video](#) where he speaks about his project and experience working with us.

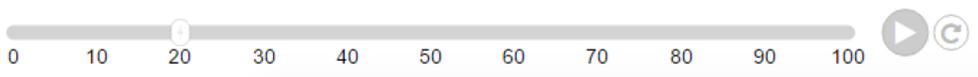
Currently the HPCC Systems® Platform has very little support for visual analytics. While there are plenty of “off the shelf” visual analytic tools and dashboard creators, none are really suitable for “Big Data” because they typically work with local datasets (think charting with an excel spreadsheet). The HPCC Systems® Visualization Framework aims to solve the issue by bringing together existing “best of breed” visualizations as well as bespoke HPCC Systems® visualizations into a consistent framework, which can then be driven by HPCC Systems® hosted analytics.

Anmol Jagetia’s work involved adding unit tests and linting as well as adding new visualisation widgets and enhancing existing ones. He used his existing experience to enhance our build quality infrastructure and has also added a range of new features to the existing framework including the addition of a time lapse capability and a number of features which enable bar charts to be used as Gant charts.

Below is an illustration of the work Anmol did to add range support in a column chart where there is both an upper and lower bound.



He also added a playback facility which walks through the range at preset intervals.



The work he has done will significantly improve the user experience.

## Project Description

The Visualization Framework is a Client Side HTML5/JavaScript library, with the following goals:

- Provide a comprehensive set of visualizations with a consistent API:
  - Reuse existing open source visualizations as appropriate.
  - Develop new visualizations as needed.
- Simplify the construction of new Visualizations via composition:
  - Ability to combine "widgets" to create new "widgets"

- Combine HTML5 and SVG layers into a single view.
- Other:
  - Simplify the fetching of data from the HPCC-Platform.

Examples of work:

- Wrap D3 Tree/Graph visualizations (Co-occurrence Matrix, Dendrogram).
- Use D3 to create new Visualizations (Gant, Graph, Timeline etc.)
- Document and Unit test API

By the GSoC mid term review we would expect you to have implemented:

- A wrapped third party visualization
- A custom built visualization
- Both driven by data on the HPCC Platform.

Mentor	<p>Gordon Smith  <a href="#">Contact Details</a></p> <p>Backup Mentor: Dinesh Shetye  <a href="#">Contact Details</a></p>
Skills needed	<ul style="list-style-type: none"> <li>• Ability to write Client Side HTML5/CSS/JavaScript.</li> <li>• Basic ECL and HPCC Platform knowledge.</li> </ul>
Deliverables	<ul style="list-style-type: none"> <li>• A wrapped third party visualization</li> <li>• A custom built visualization</li> <li>• Both driven by data on the HPCC Platform</li> <li>• Test cases demonstrating the correct behavior and performance</li> <li>• Supporting Documentation</li> </ul>
Other resources	<ul style="list-style-type: none"> <li>• <a href="#">HPCC Systems Visualization Homepage</a></li> <li>• <a href="#">Current Demo/Test Page</a></li> <li>• JIRA issue for this project: <a href="https://track.hpccsystems.com/browse/HPCC-12720">https://track.hpccsystems.com/browse/HPCC-12720</a></li> <li>• Learning <a href="#">ECL documentation</a> and <a href="#">on-line training courses</a>.</li> </ul>