

## Poster H-43

### Vector Graphics to improve Blast graphic representations



#### Authors:

Rafael Jimenez (*NBN*)

**Short Abstract:** Vegra Blast is a Python Object Orientation Library based in BioPython to yield graphical visualization results for Blast utilizing Vector Graphics. Vegra is not just an improvement for blast visualization but a model of how other visualization approaches could be developed.

#### Long Abstract:

Blast reports can be complicated. Viewing them graphically helps understanding them better, especially when the reports are very long. At present "Web Blast" and the stand-alone "wwwblast" versions, distributed by the NCBI, includes graphical viewing of Blast results. An alternative approach called "Blast Graphic Viewer" developed by GMOD as part of the BioPerl library, provides a prettier and more informative graphical visualization to represent Blast results. All the strategies mentioned above are based in Bitmap graphics and dependent on JavaScript code embedded in HTML. We present Vector Graphic Blast (Vegra) a Python Object Orientation Library based in BioPython to yield graphical visualization results for Blast utilizing Vector Graphics. Graphics produced by Vegra are better than bitmaps for illustration, more flexible because they can be resized and stretched, they require less memory, and their interactivity is much effective being independent of tertiary technologies due to its integration into the graphic. In addition, the library permits easily definition of the layout of the different components of the graphic and adjustment of size and color properties. Vegra is not just an improvement for blast visualization but a model of how other visualization approaches could be developed. By now Vegra works with blast, nevertheless the library has been written to be extended to represent other visualization problems. An example is provided through a Vegra Blast Web Service in: <http://www.vegrablast.nbn.ac.za>