QGIS Application - Feature request #16839
Improve UI for proportional point size representation

2017-07-10 05:47 PM - Dominique Lyszczarz

Status:	Open		
Priority:	Normal		
Assignee:			
Category:	Symbology		
Pull Request or Patch supplied:	No	**Resolution:**	
Easy fix?:	No	**Copied to github as #:**	24738

Description

Proportional point size is one the best map representation for quantitative data, J. Bertin in his book 'Sémiologie graphique' explains why :
- point size is absolutely proportional, so there no need to defines classes (classification results on data simplification and it's often painfull to choose the best breaks)
- human eye is good to detect changes in size but not so good to locate a color in a gradient
- using a ponctual implementation we can directly represent quantities whereas with zonal implementation we must only report densities otherwise it will produce wrong representation

In QGIS we can achieve this kind of representation through 2 ways:
- using the diagram tool
- using data defined size for point layers

The second solution seems the most natural way to do this because it takes place into the style panel, but there are some issues :

- it's hidden : the main style drop down list for a ponctual layer allows to setup graduated size with classes, but true proportional size is only available with data defined size and its assistant. IMHO this assistant must be exposed in the main drop box.

- it's not available for polygon layer : most of the time we have quantitative data on polygon, but for polygon layers the only way offered by QGIS for representing quantitative data is through a color gradient based on a classification. There are some workaround to produce point size from polygon layer but none of then is completly satifying:
1. convert the layer to centroid : bad because it results on duplicated data
2. use the centroid fill and then data defined size assistant: better approach but in this case the legend does not report markers size as for a true point layer
3. create virtual layer with ST_CENTROID : limited to advanced users

In summary, it would be better if "proportial point size" had its own entry in the main drop down list for both point and polygon layers style.

History

#1 - 2017-07-10 05:59 PM - Regis Haubourg

+1 having a dedicated renderer would be a lot more easy to find.
(I funded the size assistant and never was happy by having it hidden to average user's eyes)

One question for polygon (and lines) , how would you like it to behave with multipolygons? Having duplicated points is not good from Bertin's point of view I guess, centroid can fall outside of any polygon, and pointOnSurface could do but I think we should put it on the biggest polygon part.

#2 - 2017-07-10 08:30 PM - Dominique Lyszczarz

Otherwise for polygons, Bertin has introduced another solution called proportional circle on zonal implantation following a regular grid

Here an example : http://www.geotests.net/blog/images/3.jpg

and an old paper in both French and English langage : http://www.numdam.org/article/MSH_1966__17__71_0.pdf

I never see any sofware implementing this technique. It's not so hard to reproduce this in QGIS following a few steps. The main advantage of this representation is that it show densities and quanties in the same time, there is a double legend.