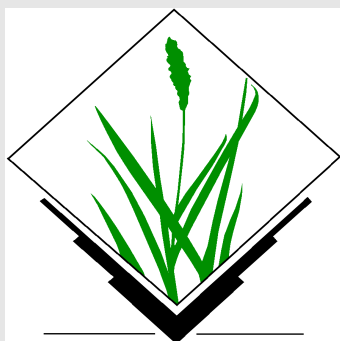
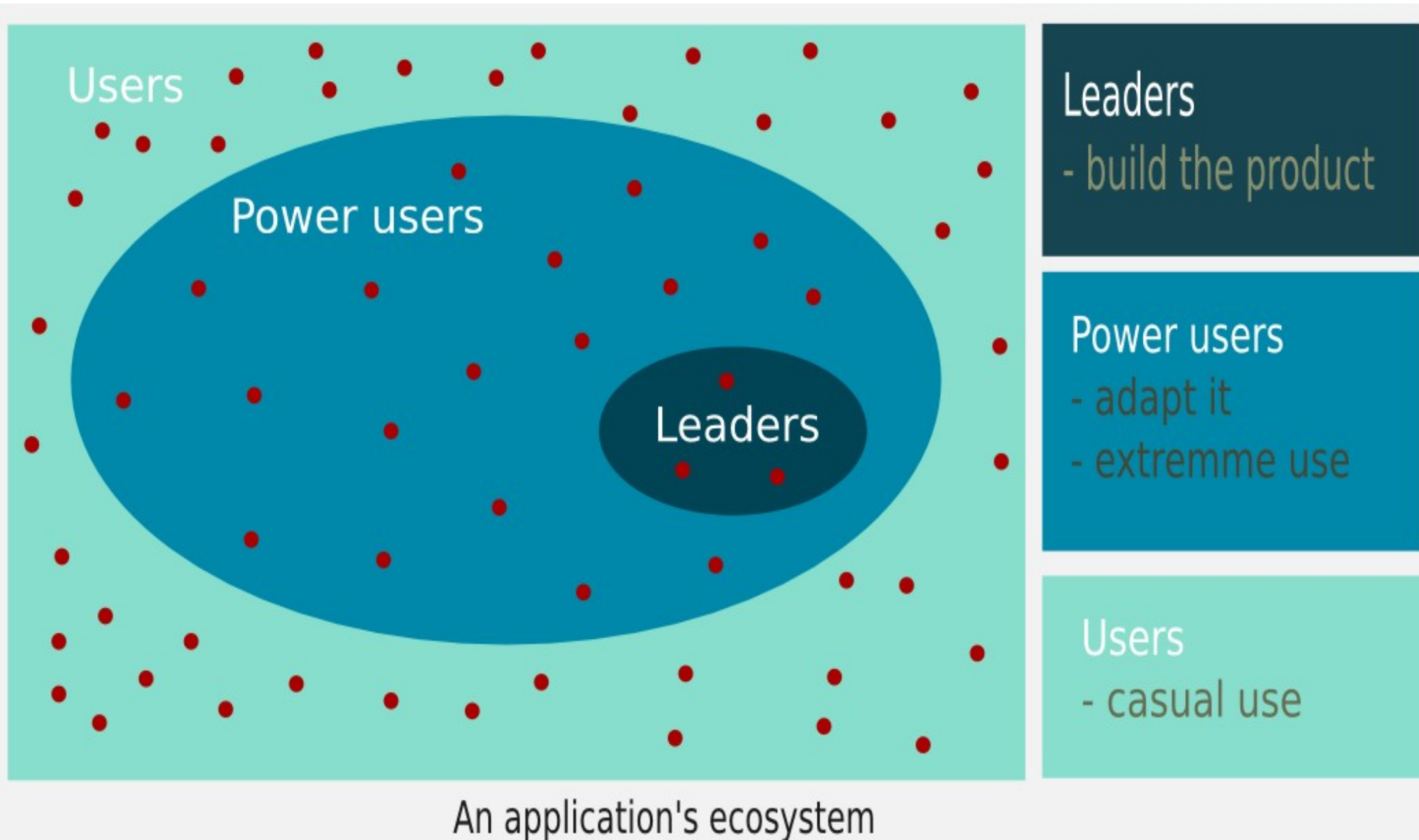


A quantitative study on GRASS, gvSIG and QGIS Communities



V jornadas SIG Libre. 23-25 March, Girona
Authors: Andrés Maneiro, Francisco Puga, Adrián Eirís, Alberto Varela

The ecosystem of a software product

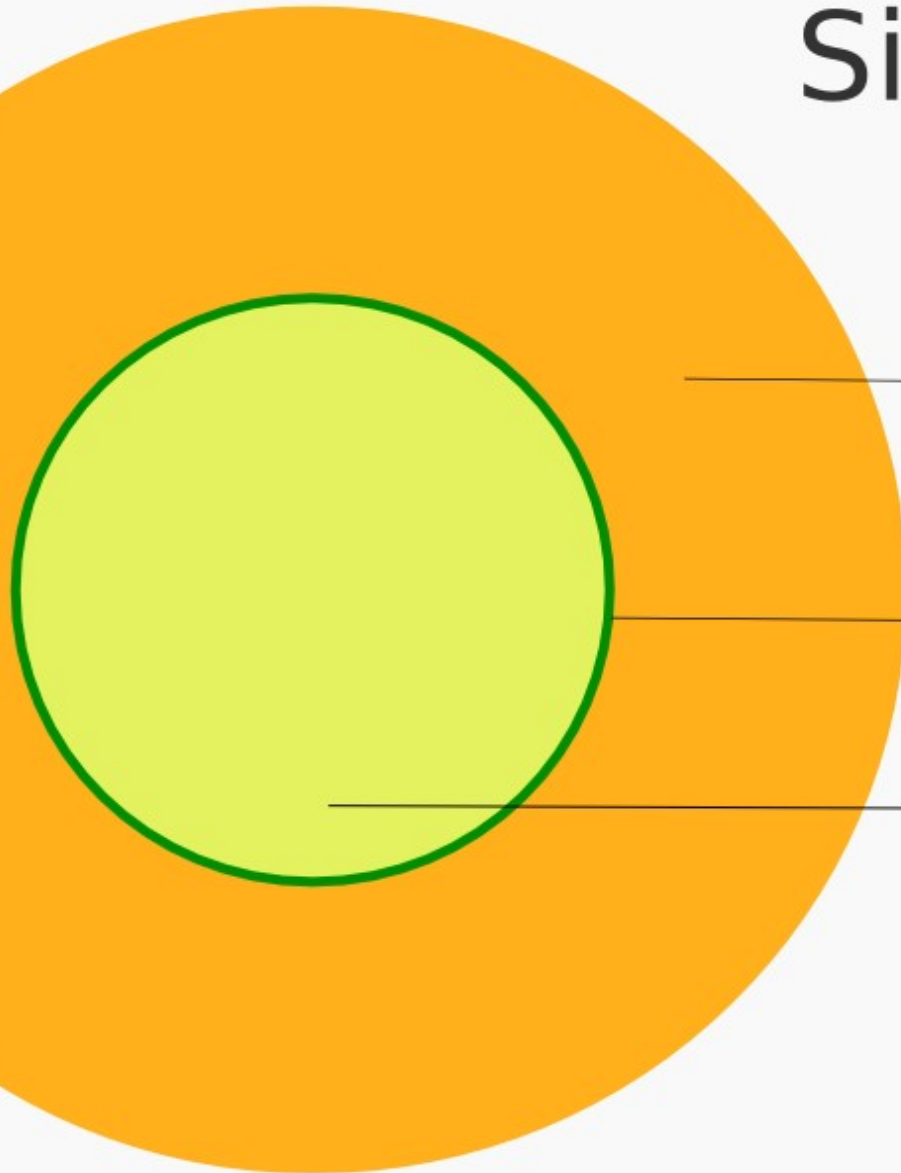


A quantitative study on GRASS, gvSIG and QGIS Communities

5 indicators for communities and *core* product (default installation)

- **User trends:** based on mailinglists
- **Developers trends:** based on mailinglists
- **Activity and manpower:** based on code contributions
- **Community workhours:** based on code contributions
- **Generational analysis:** based on code contributions

Size of projects



gvSIG

~1.200.000 lines of code
80 months of development

GRASS

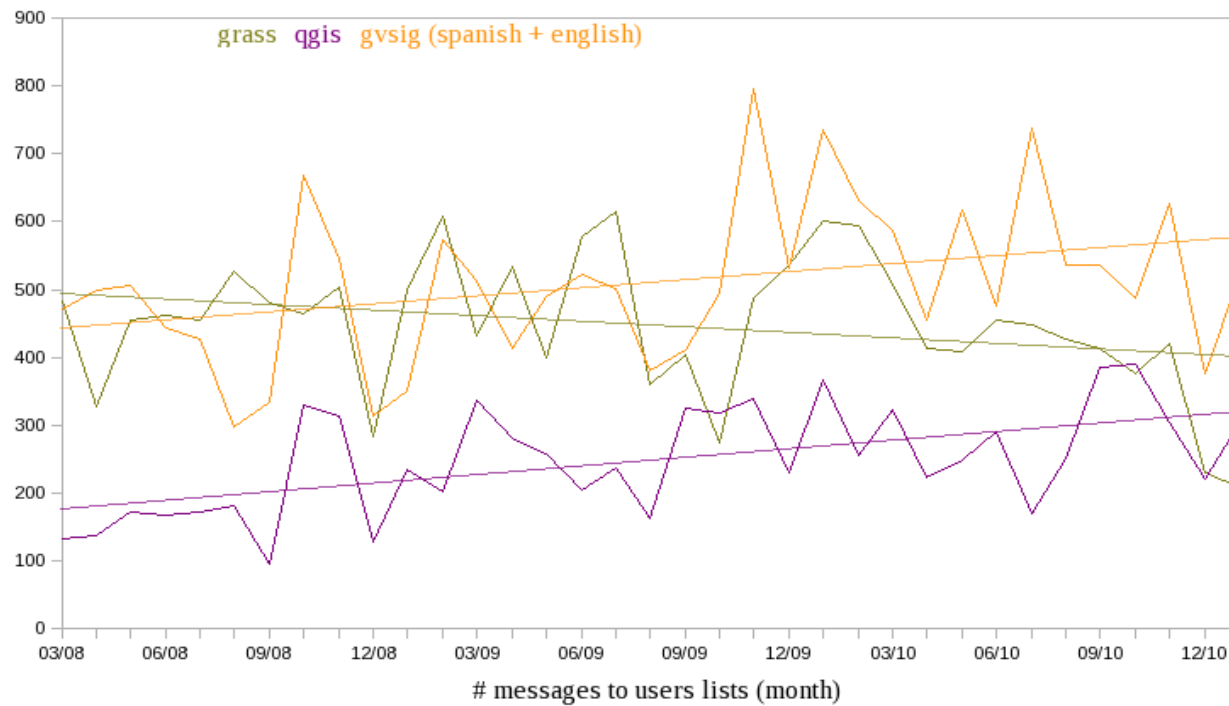
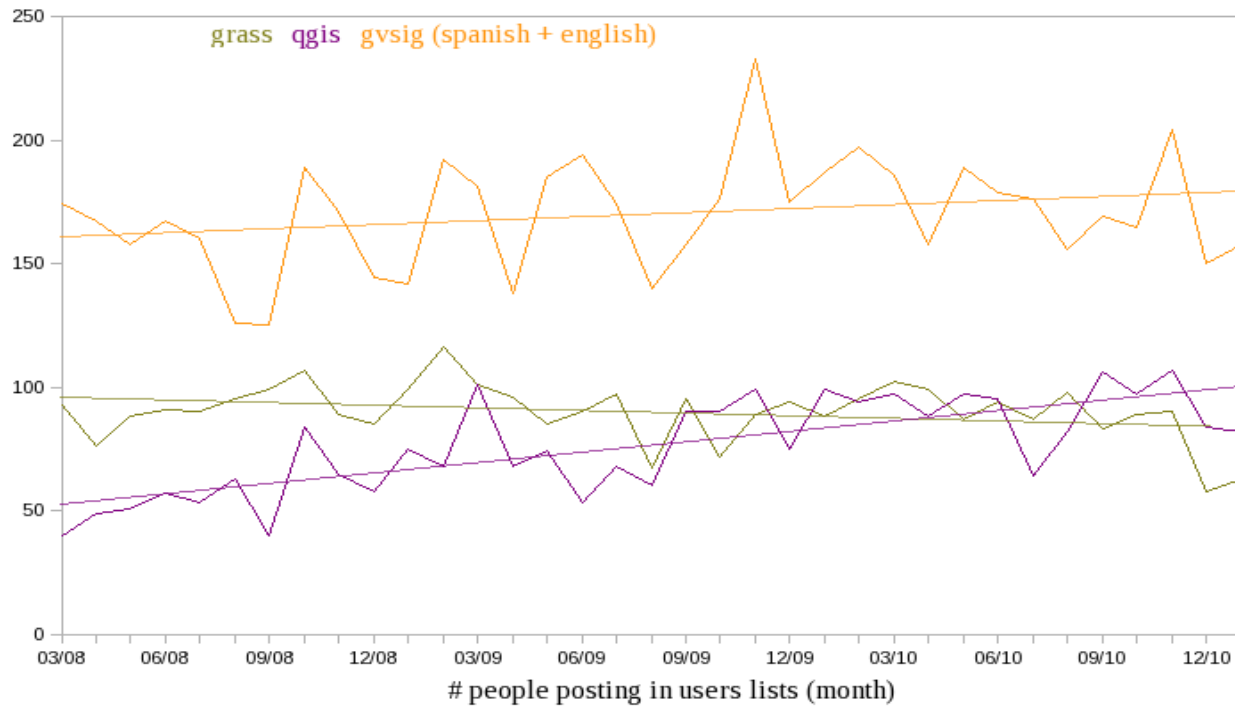
~515.000 lines of code
132 months of development ^[1]

QGIS

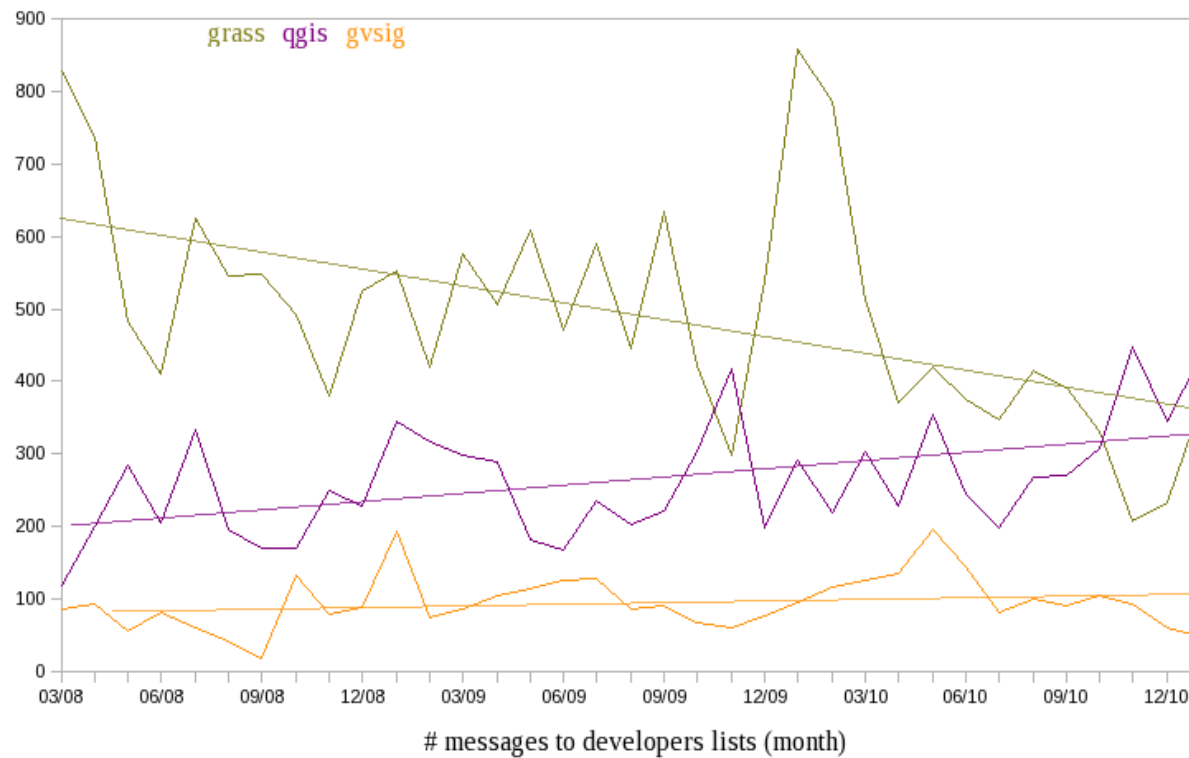
~500.000 lines of code
102 months of development

[1] The project declares that was initiated at 1982, but there is no data before 1999, probably due to using different version control systems for the code which provoked information loss.

Users trends (based on mailinglists activity 2008-2010)

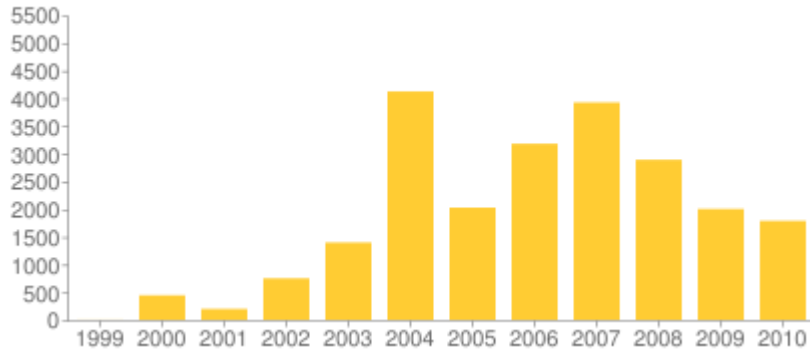


Developer trends (based on mailinglists activity 2008-2010)

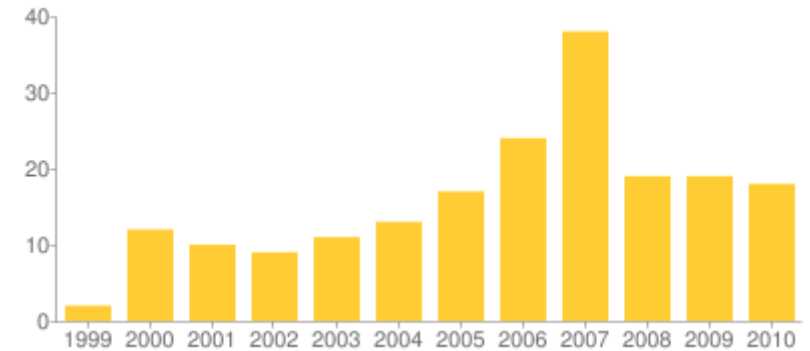


Activity and manpower (based on code contributions 1999-2010)

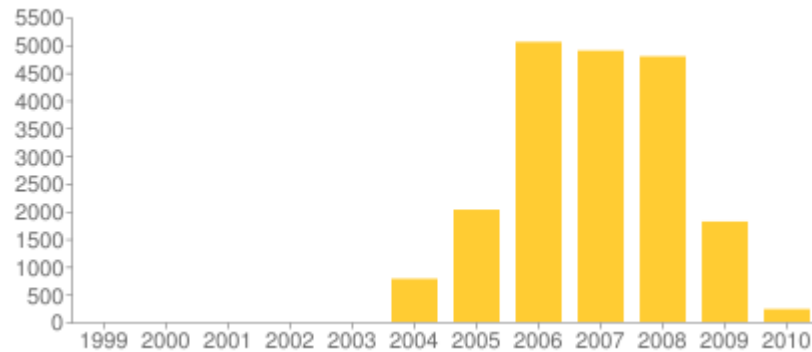
GRASS - # of commits/year



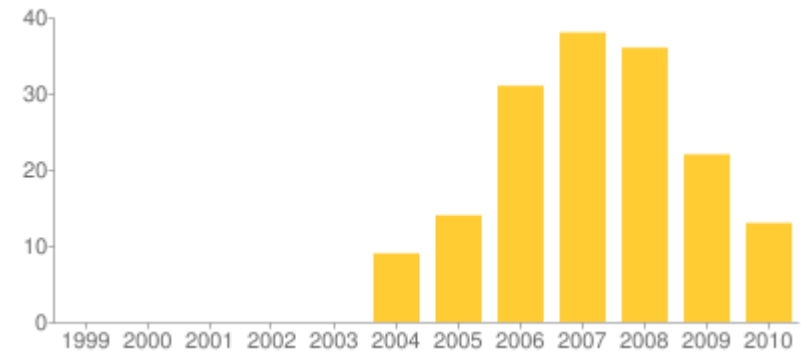
GRASS - # of developers/year



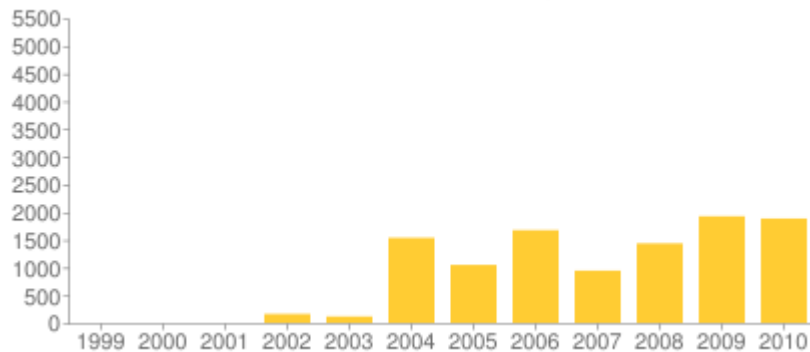
GVSIG - # of commits/year



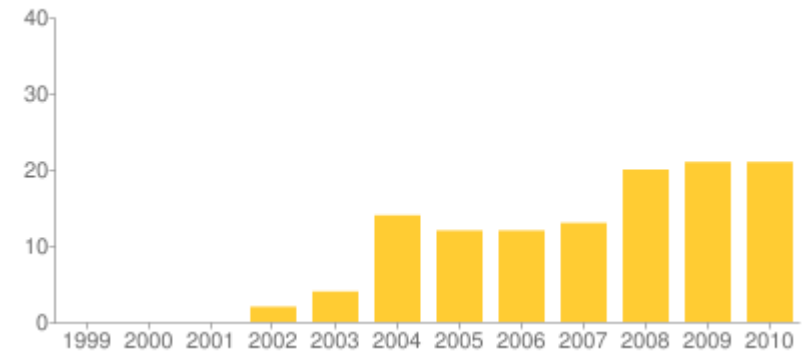
GVSIG - # of developers/year



QGIS - # of commits/year

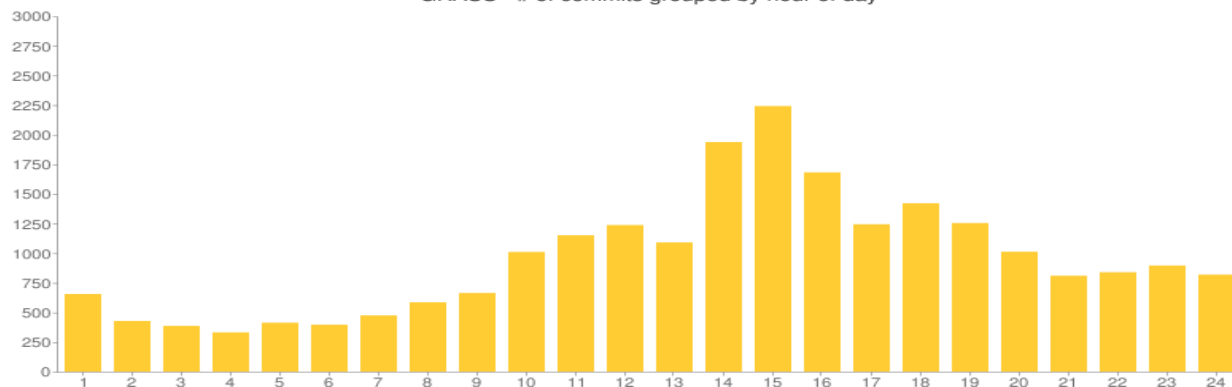


QGIS - # of developers/year

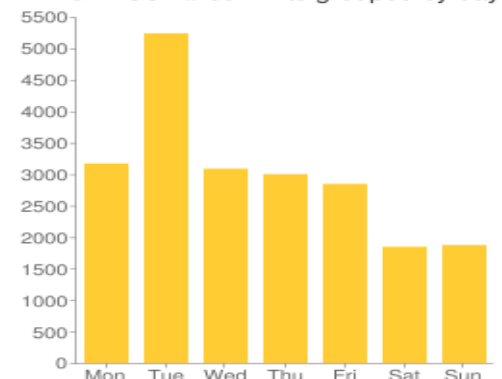


Community workhours (based on code contributions 1999-2010)

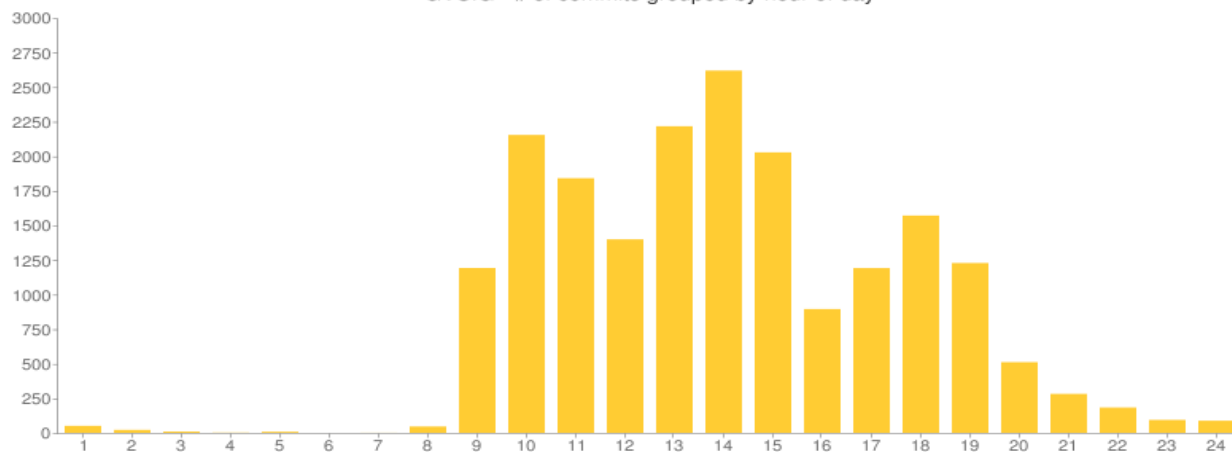
GRASS - # of commits grouped by hour of day



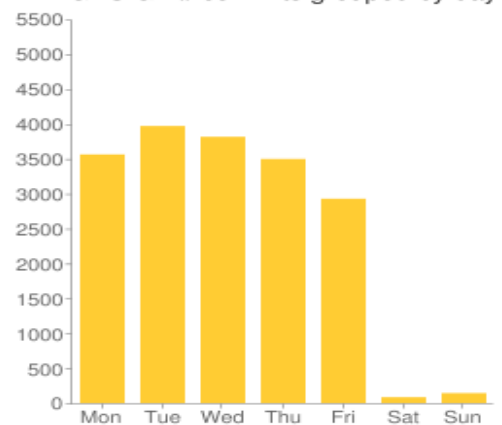
GRASS - # commits grouped by day



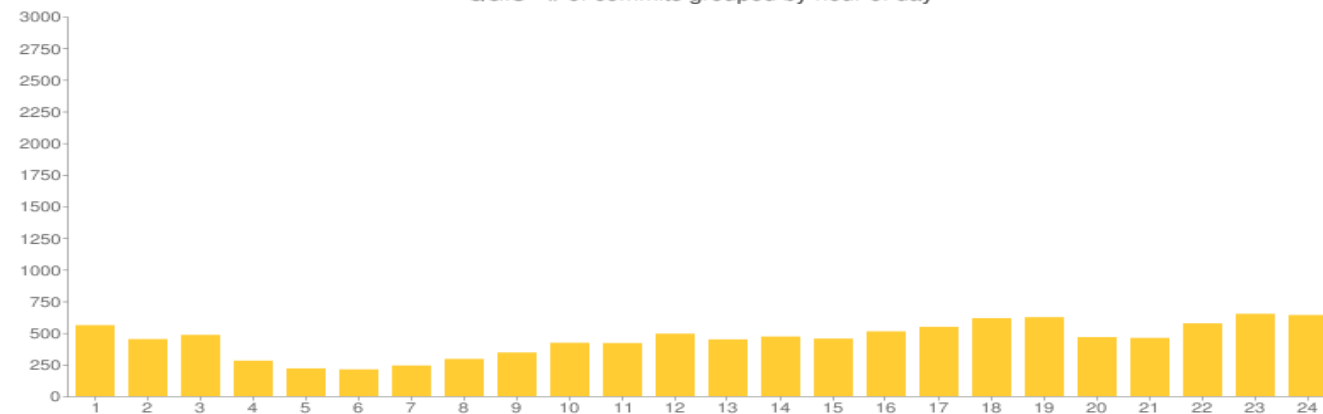
GVSIG - # of commits grouped by hour of day



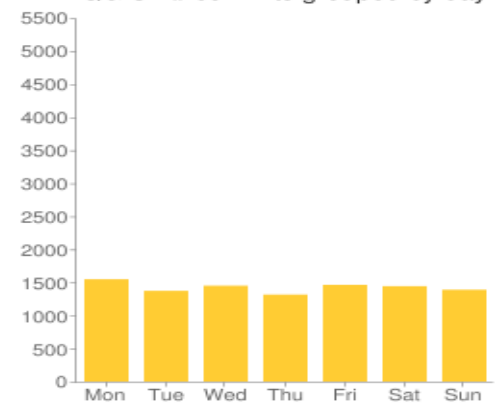
GVSIG - # commits grouped by day



QGIS - # of commits grouped by hour of day

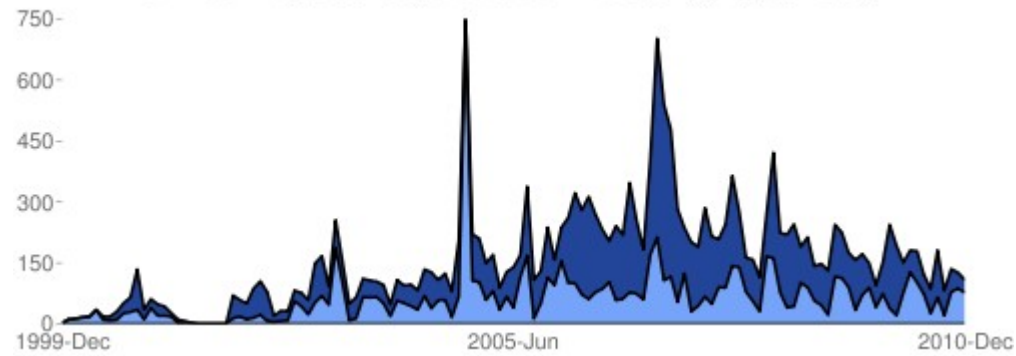


QGIS - # commits grouped by day

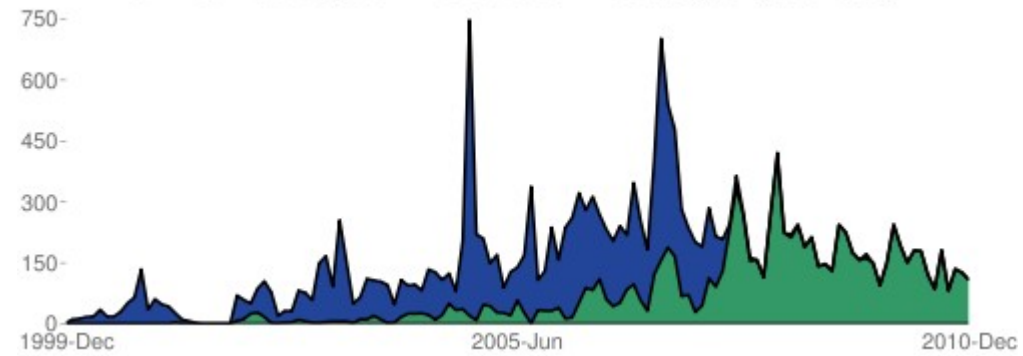


Generational analysis (based on code contributions 1999-2010)

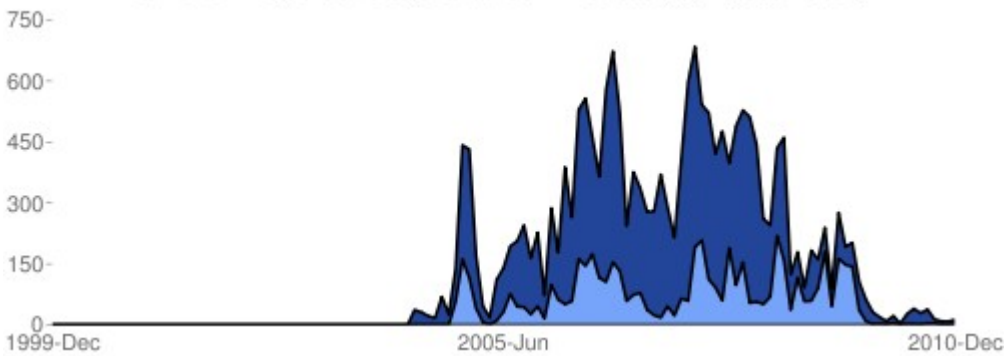
GRASS - Top3 developers: % commits along project history



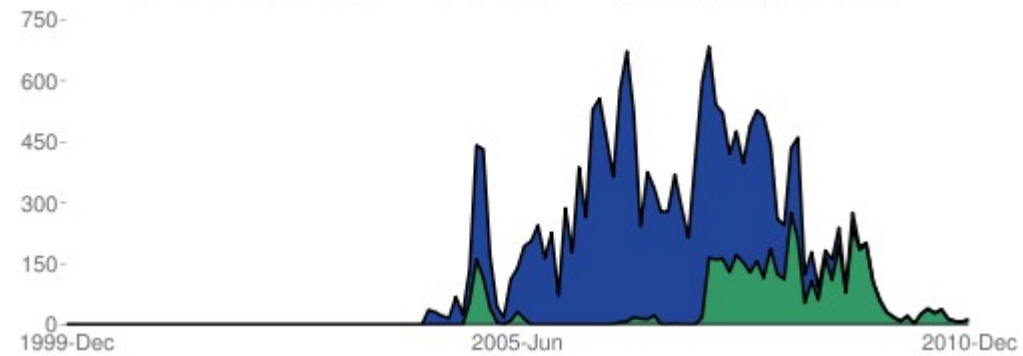
GRASS - developers in 2010: % commits along project history



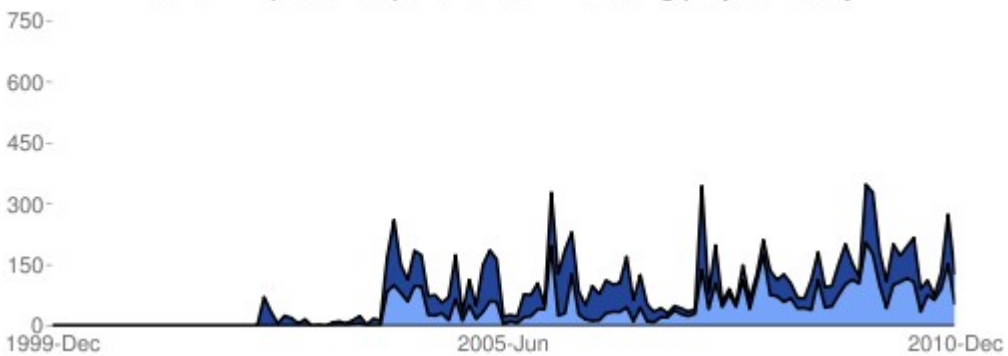
GVSIG - Top3 developers: % commits along project history



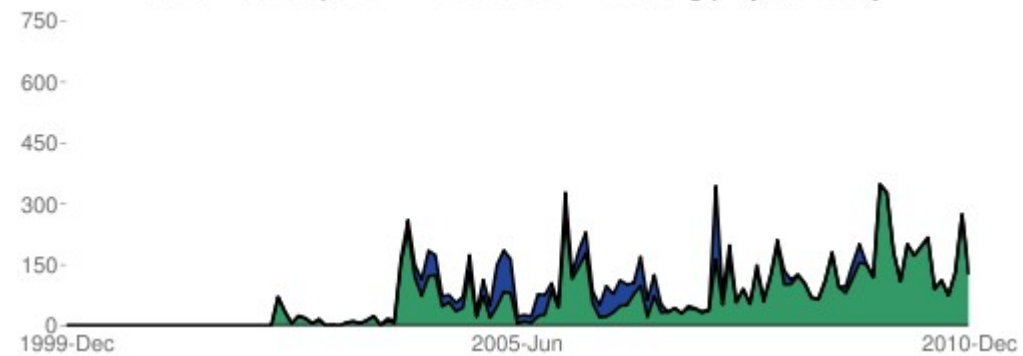
GVSIG - developers in 2010: % commits along project history



QGIS - Top3 developers: % commits along project history



QGIS - developers in 2010: % commits along project history



Could we guess *some* patterns?

Lead users

- GRASS current leaders have grown internally in the project and have broad expertise in it.
- gvSIG development seems to be led *by contract*. No signs of external contributions and volunteer development are shown in the *core*.
- QGIS development seems to be led by a large volunteer and highly distributed base. It has aggregated around it 3 different generations of people. Signs of a *hacker-friendly* culture.

Power users

- GRASS contributors seems to be slowly decreasing.
- gvSIG seems to have a stabilized contributors base.
- QGIS is getting *momentum* as more and more people is joining the community.

Casual users

- GRASS is decreasing in adoption to general public.
- gvSIG seems to have some advantage and leads the way.
- QGIS has a slow and steady growing.

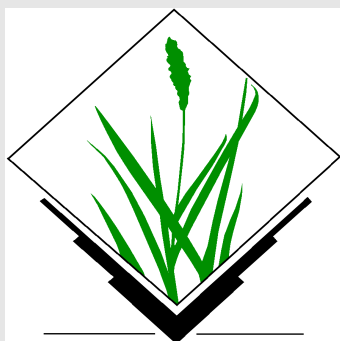
Further research

This study was a first step. For 1st time we can learn how our communities work based on facts. But, needless to say, it needs further work. Some ideas we have:

- Same analysis for other branches of the product (future versions, ...).
- Include more sources of information: issue tracking analysis.
- How active and big is the “power users” community? # of plugins, ...
- Which and how many companies support the product?
- Trends for users and developers disaggregated by regions. ...

Let us know more analysis you see interesting and help us to build them!

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