“Free Software and the Death of Copyright” and “Code, Culture and Cash: The Fading Altruism of Open Source Development”

Week 7

Announcement

- Midterm 1
  - Wednesday, Oct. 20
  - Scope
    - Week 1 – Week 6
  - Multiple choice questions
  - Bring a scantron
- Review session for midterm 1
  - Wednesday, Oct 13
  - Using homework assignment #6

Homework Assignment #6

- Create (or select) five multiple choice questions about the previous individual homework assignments (homework assignments week 1 – week 5, except the homework assignment, “Oracle sued Google”)
  - Each question includes five answers
  - Email the five questions to twang@csun.edu by Oct. 12th

(Team) Homework Assignment #5

- *"With enough eyeballs, all bugs are shallow."*
- Exchange SRC documents between team 1 and team 4, and team 2 and team 3, respectively.
- Inspect other team's SRS document and fill out the review form
  - http://www.csun.edu/~twang/595OSE/LectureSlides/ReviewForm.docx
- Due date
  - The beginning of the Oct. 13th lecture

"Code, Culture and Cash: The Fading Altruism of Open Source Movement"

- True and underlying cause of open source software development
  - Cultural factors vs. economic pressures
- It is difficult to gather accurate data about cultural factors. Why?

"Code, Culture and Cash: The Fading Altruism of Open Source Movement"

- *The nexus of development has shifted towards Europe over the last ten years*
- *A very few countries produce a completely disappropriate amount of free software*
- *Differentials in international market conditions appear to play a decisive role in determining the relative vibrancy of open source software worldwide*

Argument on “The Cathedral and the Bazaar”

- "The 'utility function' Linux hackers are maximizing is not classically economic, but is the intangible [product] of their own ego satisfaction and reputation among other hackers."

Typology of Open Source Projects

	ANTI-PROPRIETARY	COMPLEMENTARY
HIGH COMPLEXITY		
LOW COMPLEXITY		

Which quadrant is crucial?

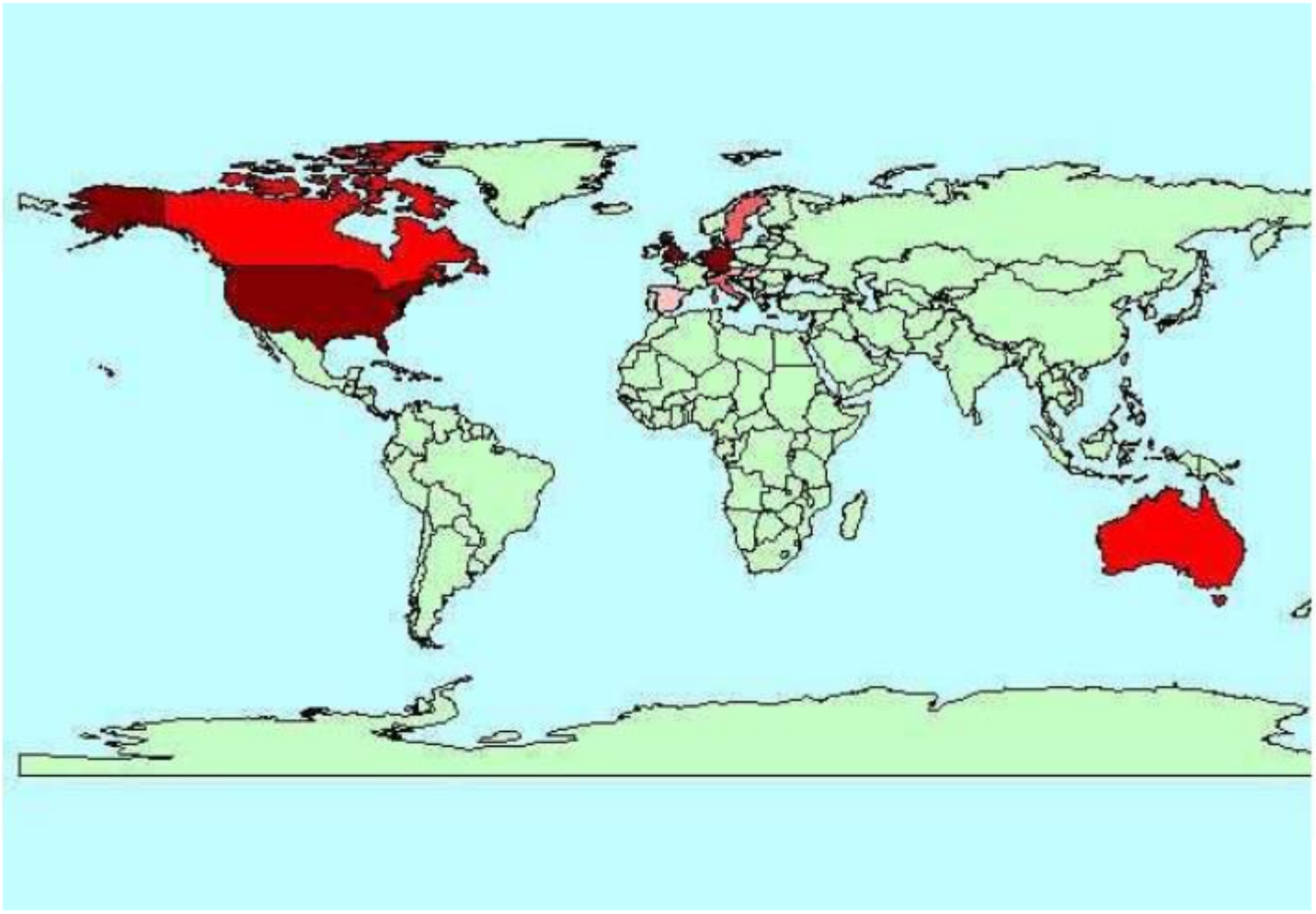

Figure 1: Absolute Linux Developers Worldwide
All maps are color-coded by quintile. Darker colored countries are more active in Open Source development. Calculations only include countries with greater than two developers in any project. Actual delimiting points vary map to map. See the Appendix for supporting data.

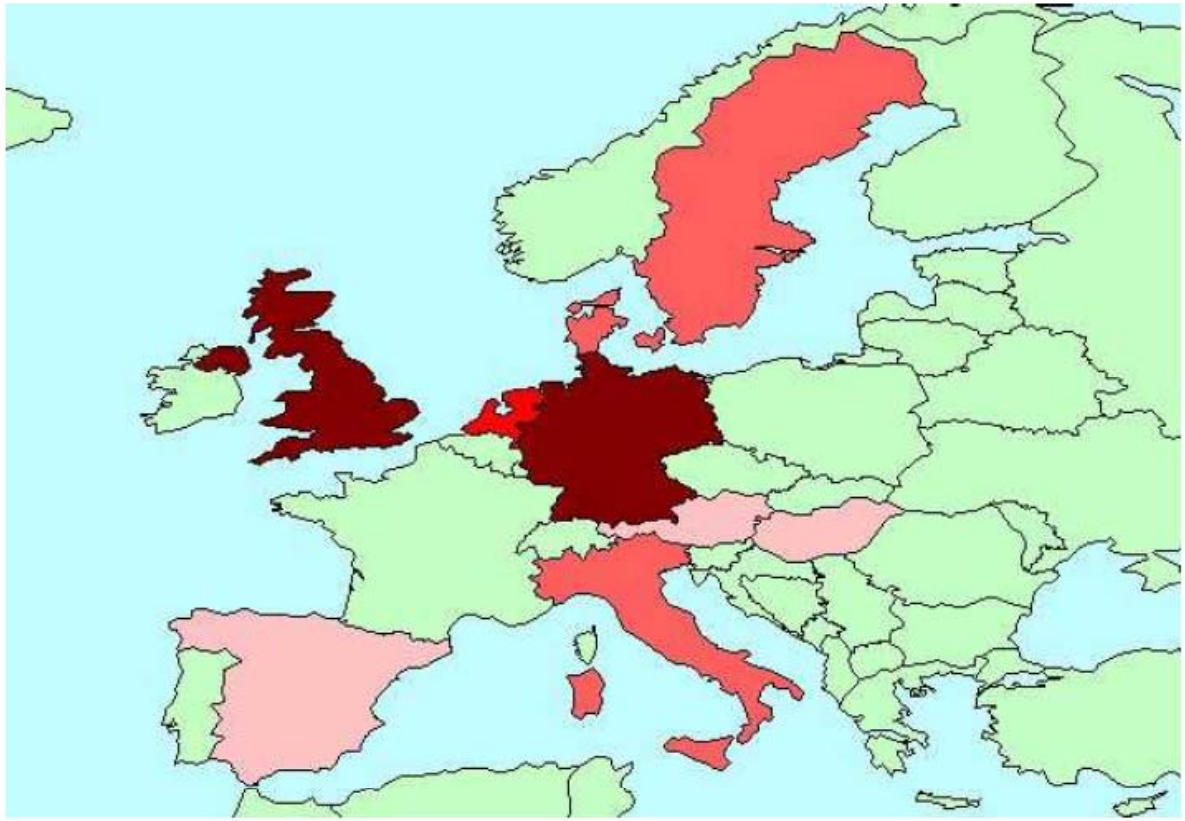

Figure 2: Absolute Linux Developers in Europe

Several immediate observations are striking. The first is the apparent dominance of the United States over free software development. The country contributes more than twice the number of developers to Linux as its closest runner-up, and nearly three-times as many to the Gnome project as any other country. A brief glance at the data confirms that large contributors in absolute terms also tend to be developed industrial countries with legacies of international openness and highly-educated, English-speaking populations. Northern Europe is particularly well represented. Not a single developer in either project comes from the Middle East, while all of Africa contributes but two in total - one from Egypt and one from South Africa. Asian and South American countries - presumably because of language barriers - are also underrepresented. Open Source development *does* appear - on first glance - to be highly correlated with "post-industrial" states and high levels of material development, an observation that supports the post-scarcity hypothesis.

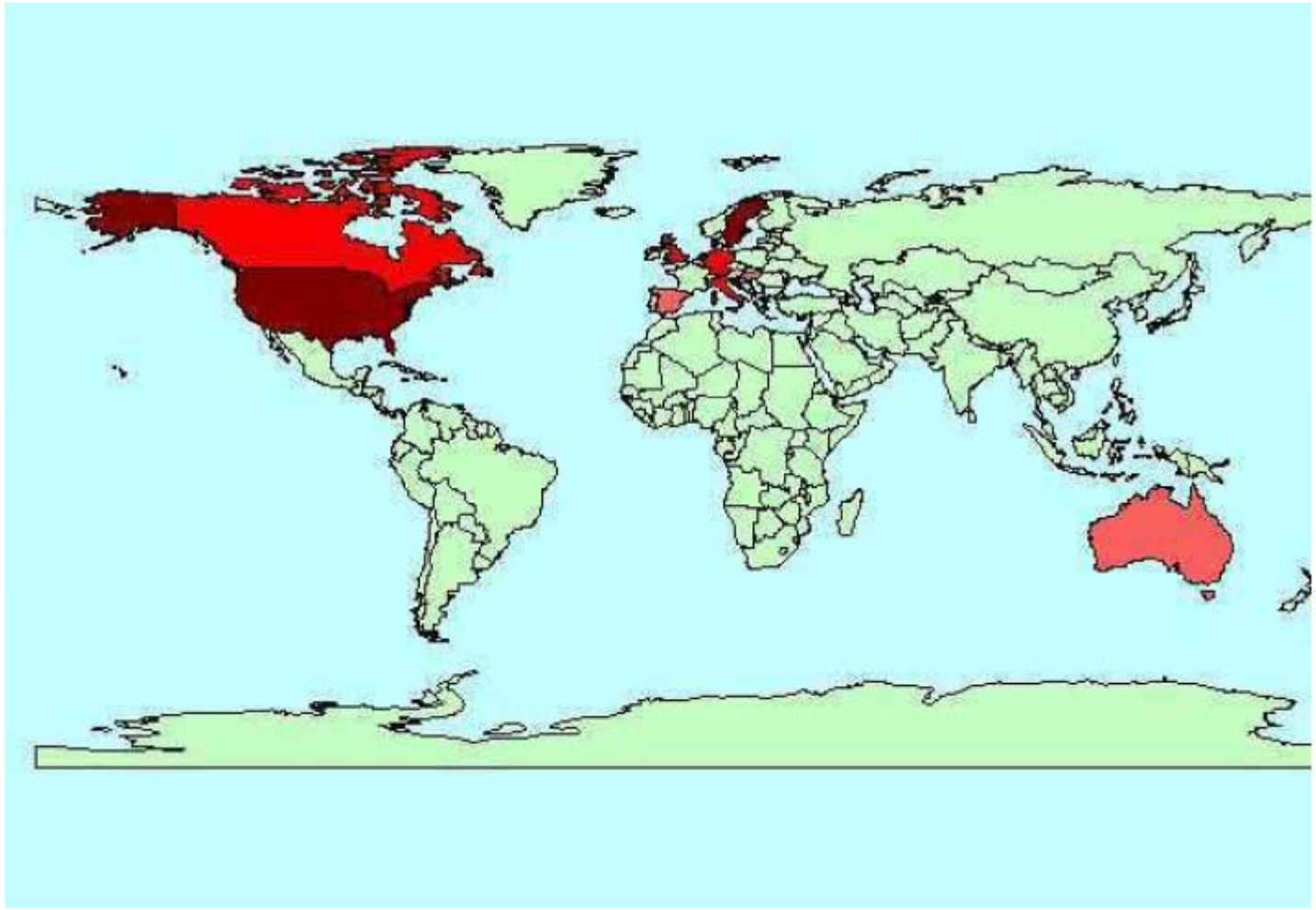

Figure 3: Absolute Gnome Developers Worldwide

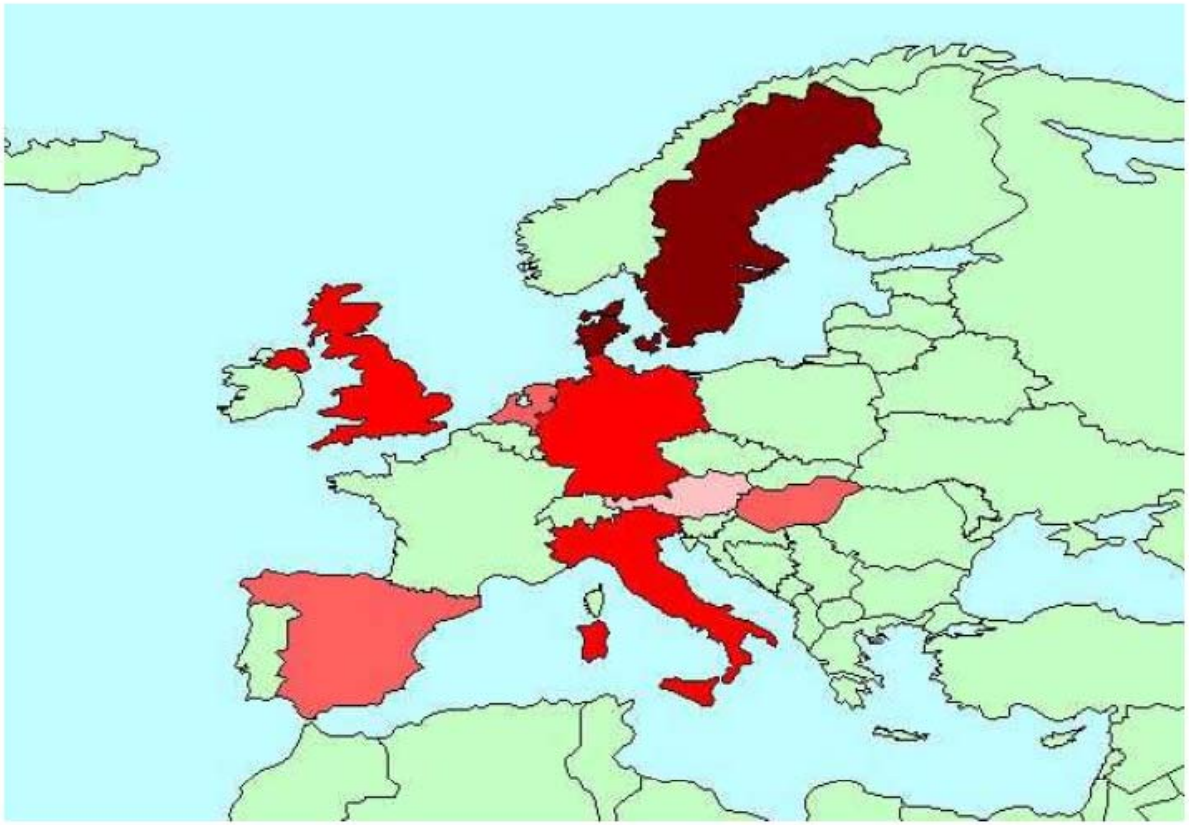

Figure 4: Absolute Gnome Developers in Europe

Less visible but also interesting is the fact that while most nations significantly active (developers > 1) in one project tend to be active in the other, smaller and less-developed nations cluster in support of particular projects. Brazil and the Czech Republic, for instance, contribute nine and 10 developers to the Linux project respectively, but not a single soul to Gnome. Mexico contributes three times as many developers to Gnome as Linux, and Finland (perhaps understandably considering its status as the homeland of Linus Torvalds) appears unwaveringly in the Linux camp. This tendency offers tentative support for those who claim that goegraphic location matters; even in an age of global electronic communication, national or sub-national communities appear to be influential determinants of which projects national developers support.

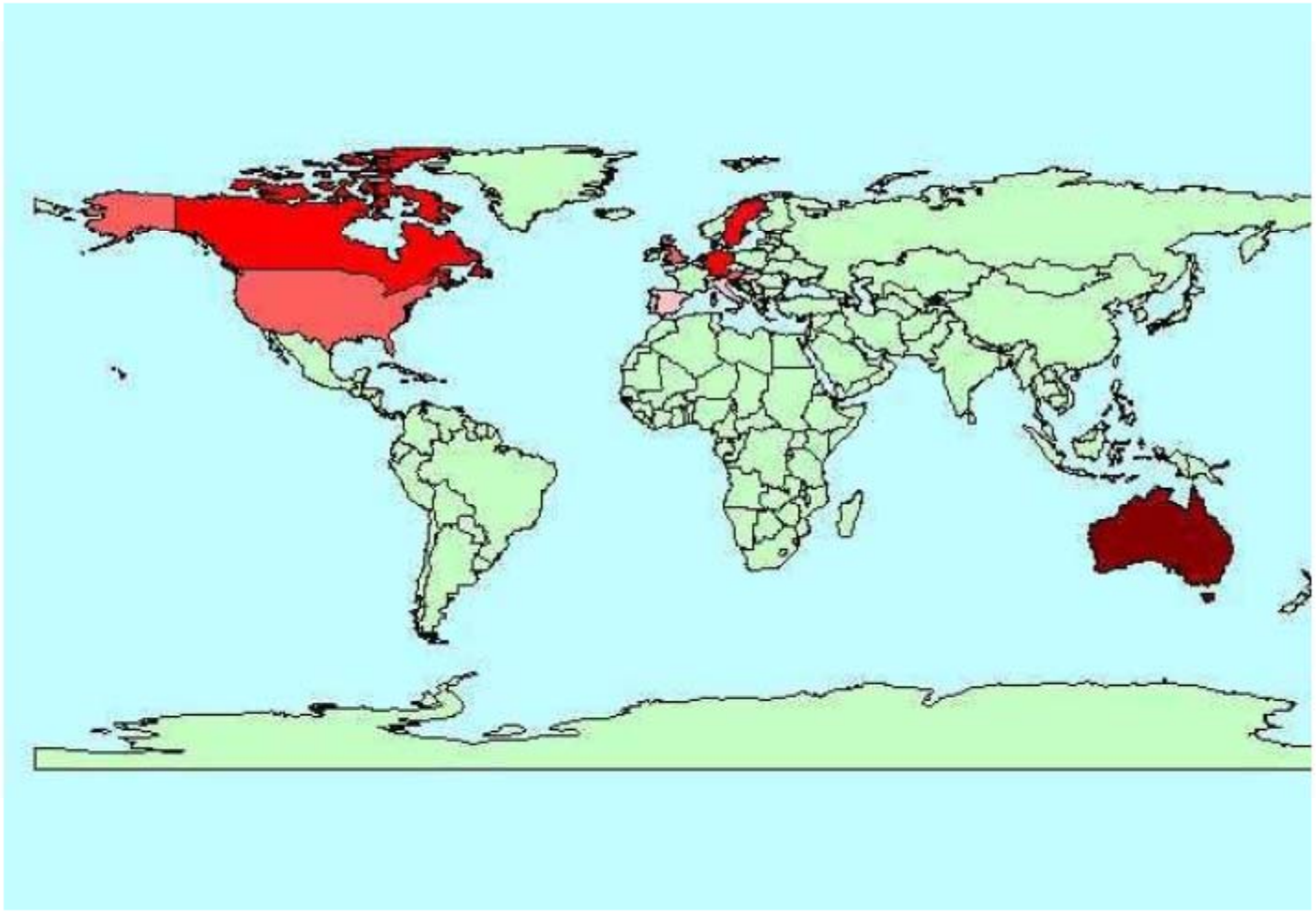

Figure 5: Linux Developers per capita Worldwide

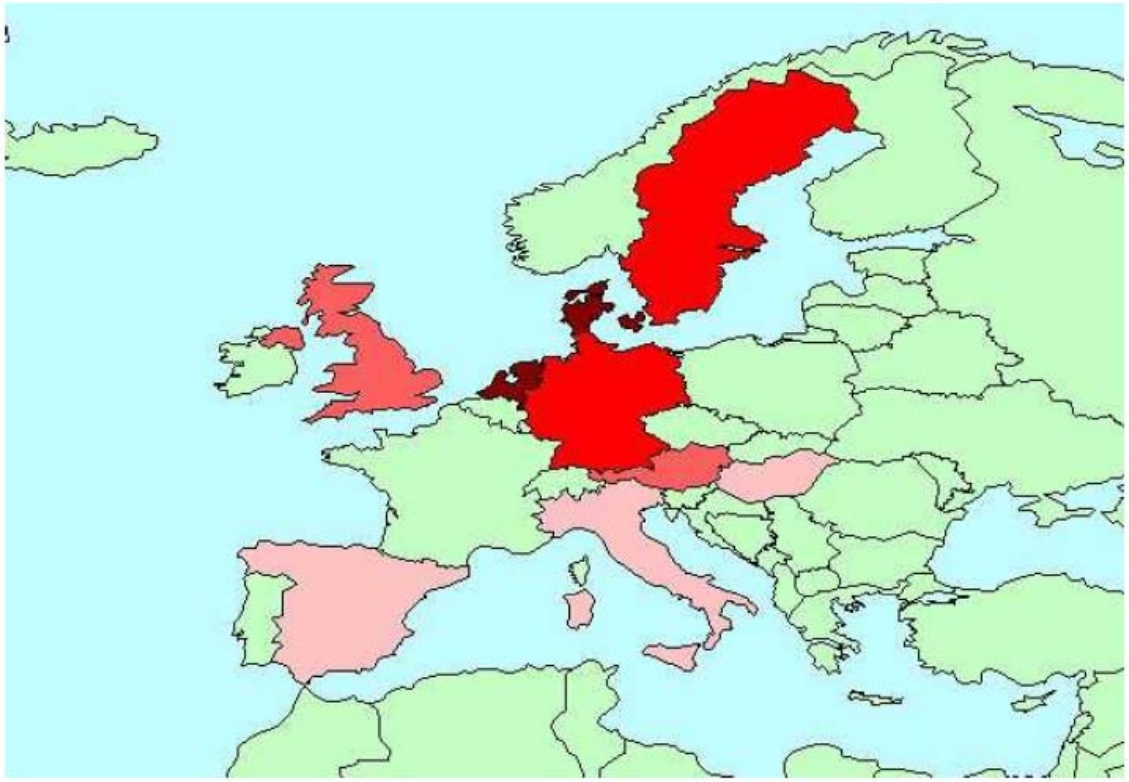

Figure 6: Linux Developers per capita in Europe

The problem with using absolute figures, however, is that they can be completely misleading. After all, the assumption of *ceteris paribus* in the economic model implies only that nations will contribute an equal number of developers to open source projects given their relative capabilities. And when our figures are adjusted to reflect population differences between nations, the list of "top contributors" to both projects changes significantly. When ranked with all other countries which contribute at least two developers to each project, the United States falls into an averaged tenth place overall - tied with Hungary and Spain [24]. Although it is possible to argue that the European-origins of the Linux project unfairly privilege Europe in these rankings, what little evidence we have suggests that the geographical origins of open source projects do not distort the distribution of developers in more populous nations. The United States contributes comparatively the same amount of effort to the European-based Linux initiative as it does to its own domestic Gnome project. Northern European countries are disproportionately represented among the top-tier of developers in both projects.

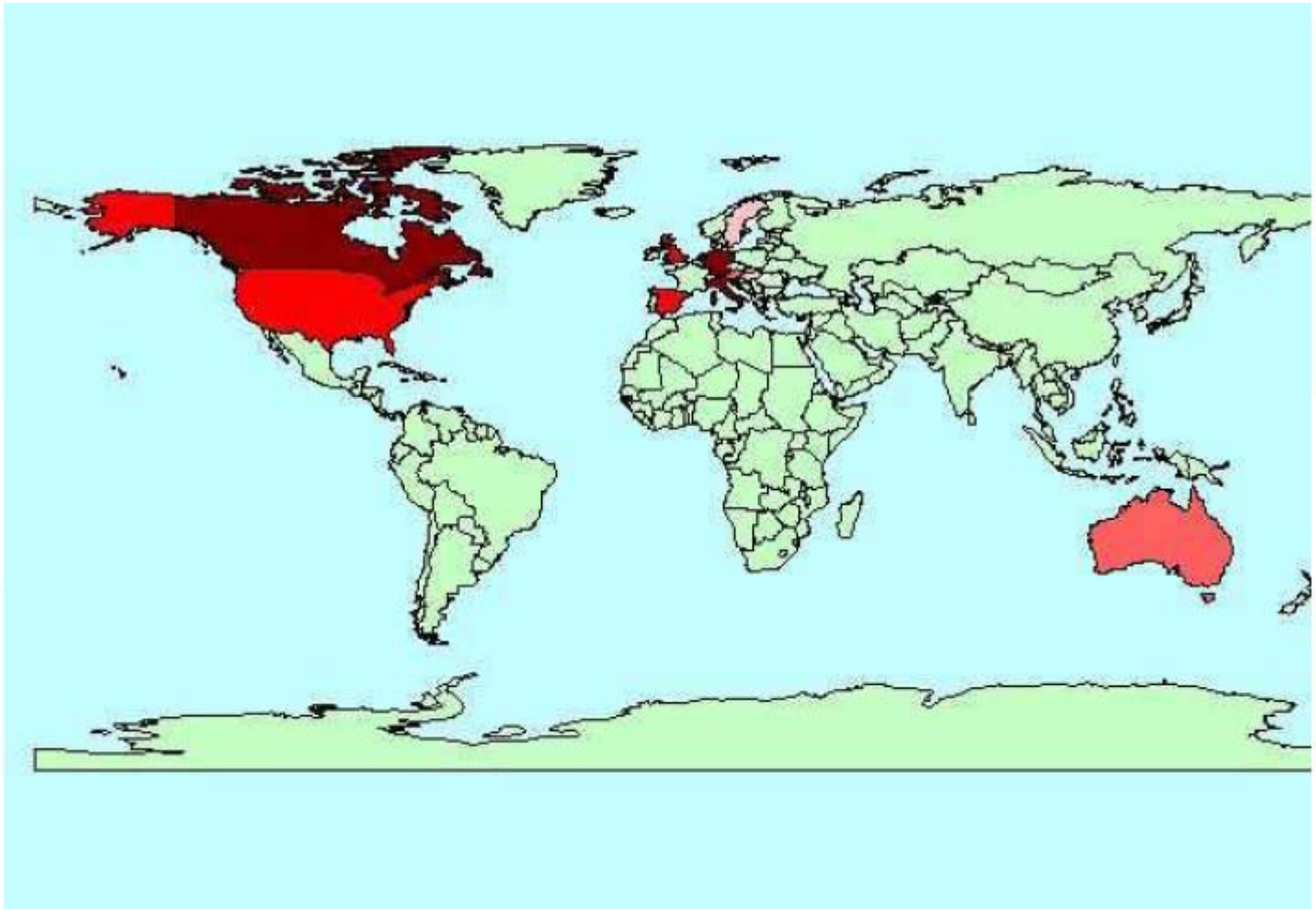

Figure 7: Gnome Developers per capita Worldwide

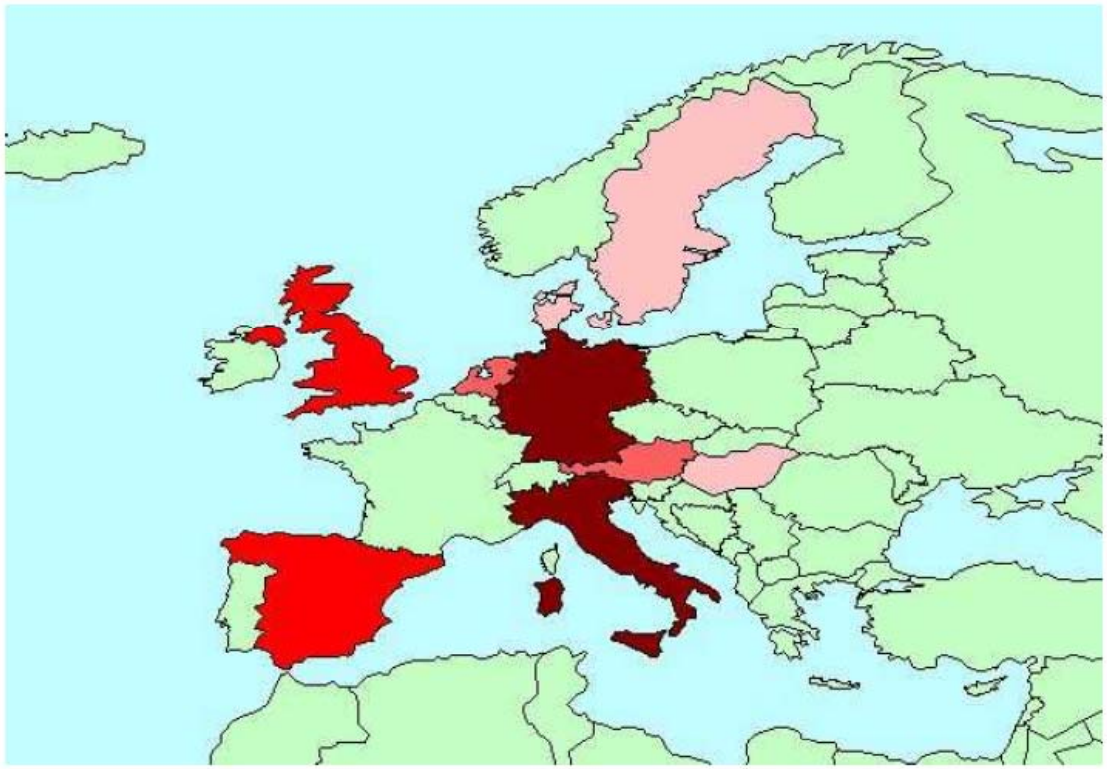

Figure 8: Gnome Developers per capita in Europe

And what makes these changes fascinating is that they are amplified when an even more precise proxy for the size of a country's computer-savvy population is substituted in place of simple population data. Obviously, the ability of a country to contribute to open source projects hinges not only on the size of its population, but on that of its sub-population with both the material resources and technical skills to engage in software development. Simple population data fails to differentiate between countries at different "stages" of development. It privileges small and extremely "wired" countries at the expense of larger and less-developed ones. Might this explain the disproportionate representation of the Northern European social democracies in our rankings? Is the United States simply less "developed" in terms of its technological sophistication?

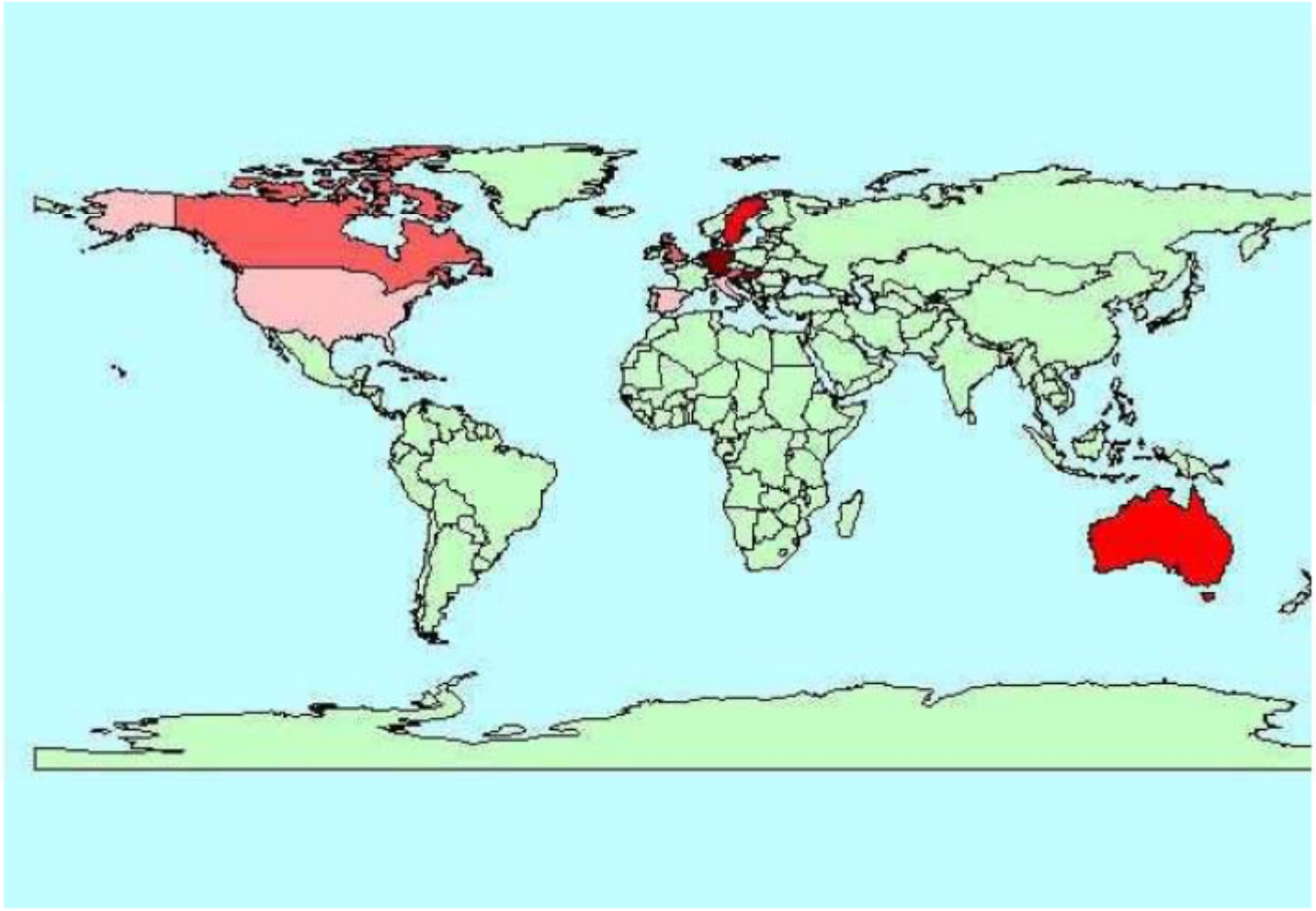

Figure 9: Linux Online per capita Worldwide

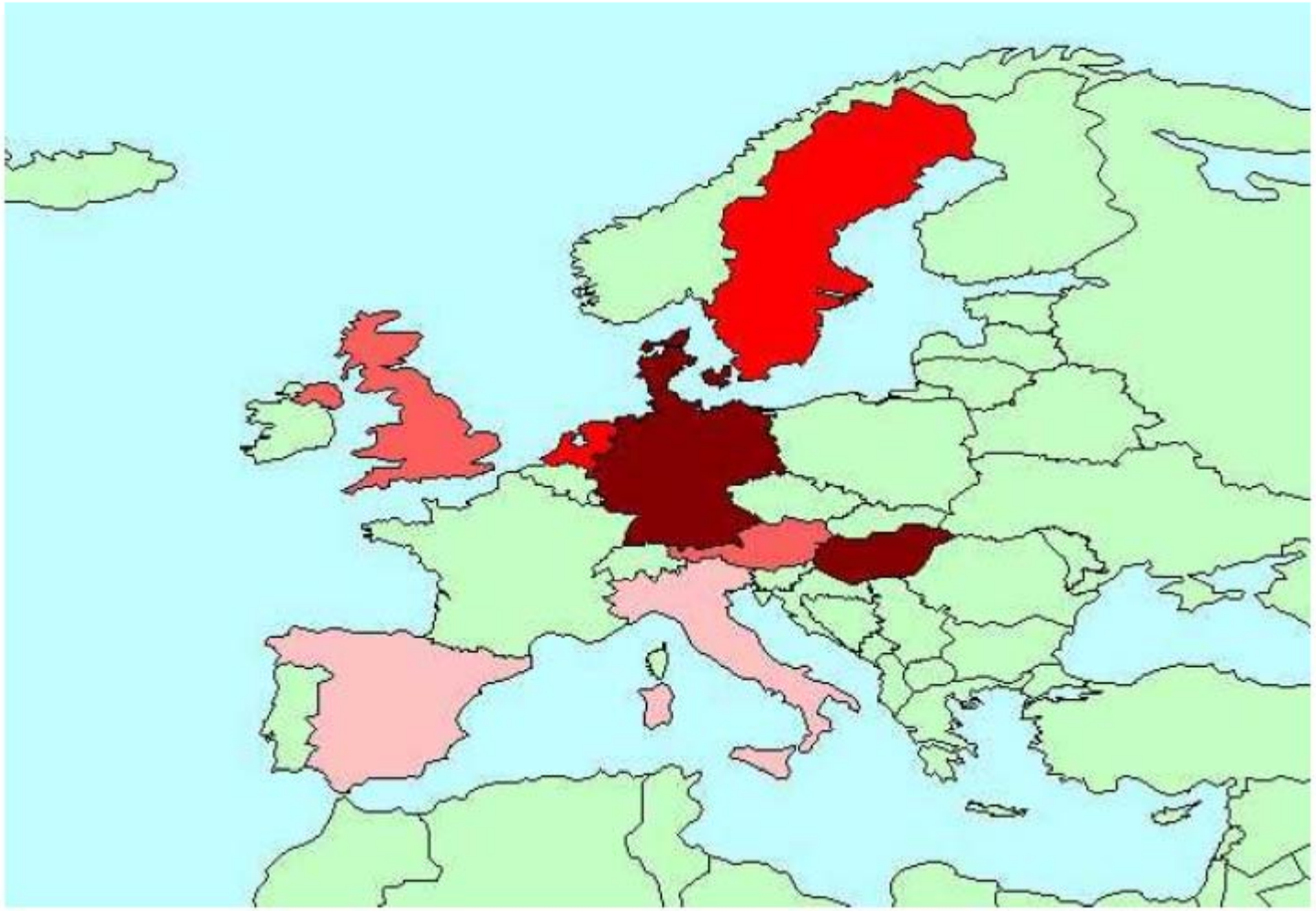

Figure 10: Linux Online per capita in Europe

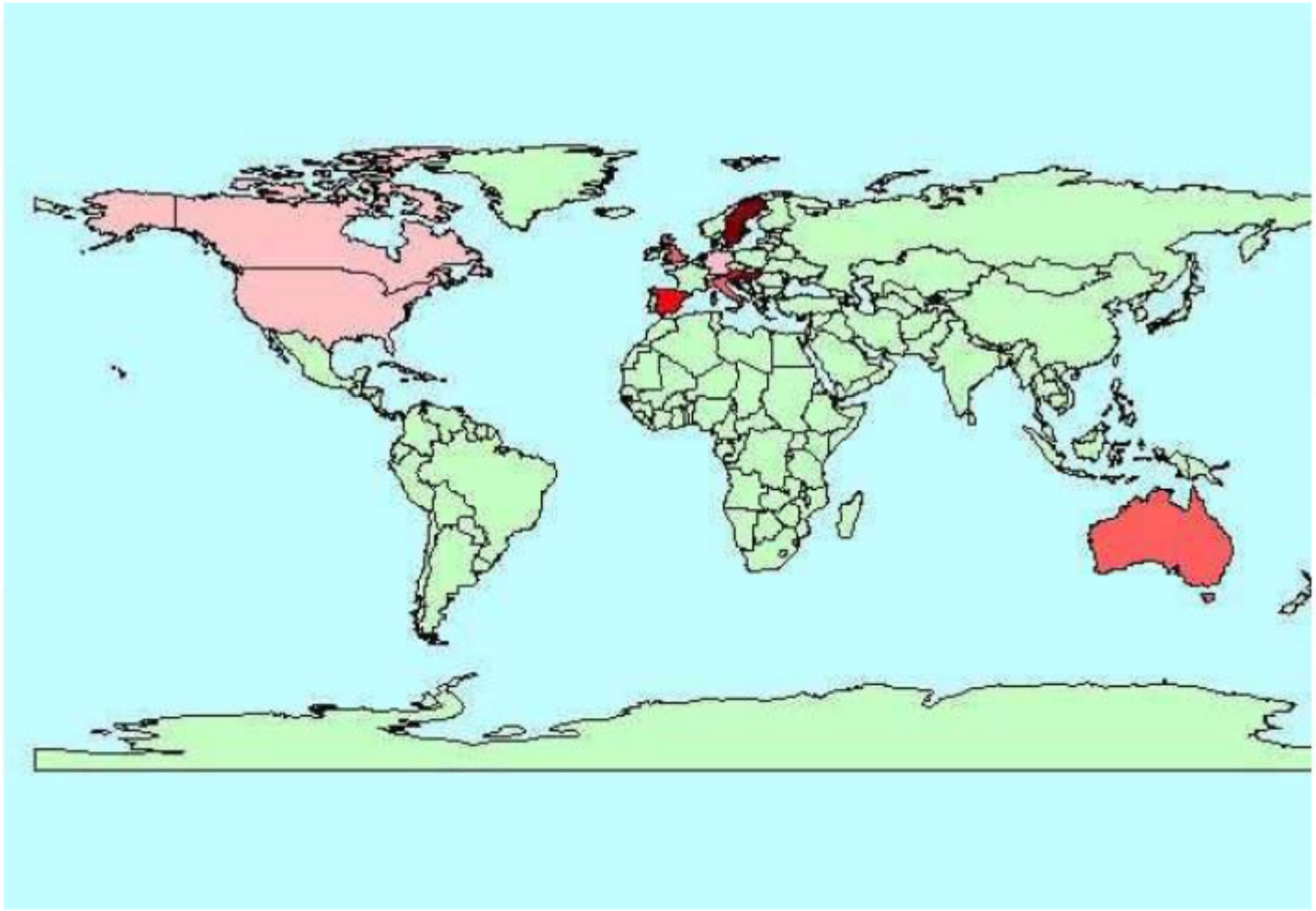

Figure 11: Gnome Online per capita Worldwide

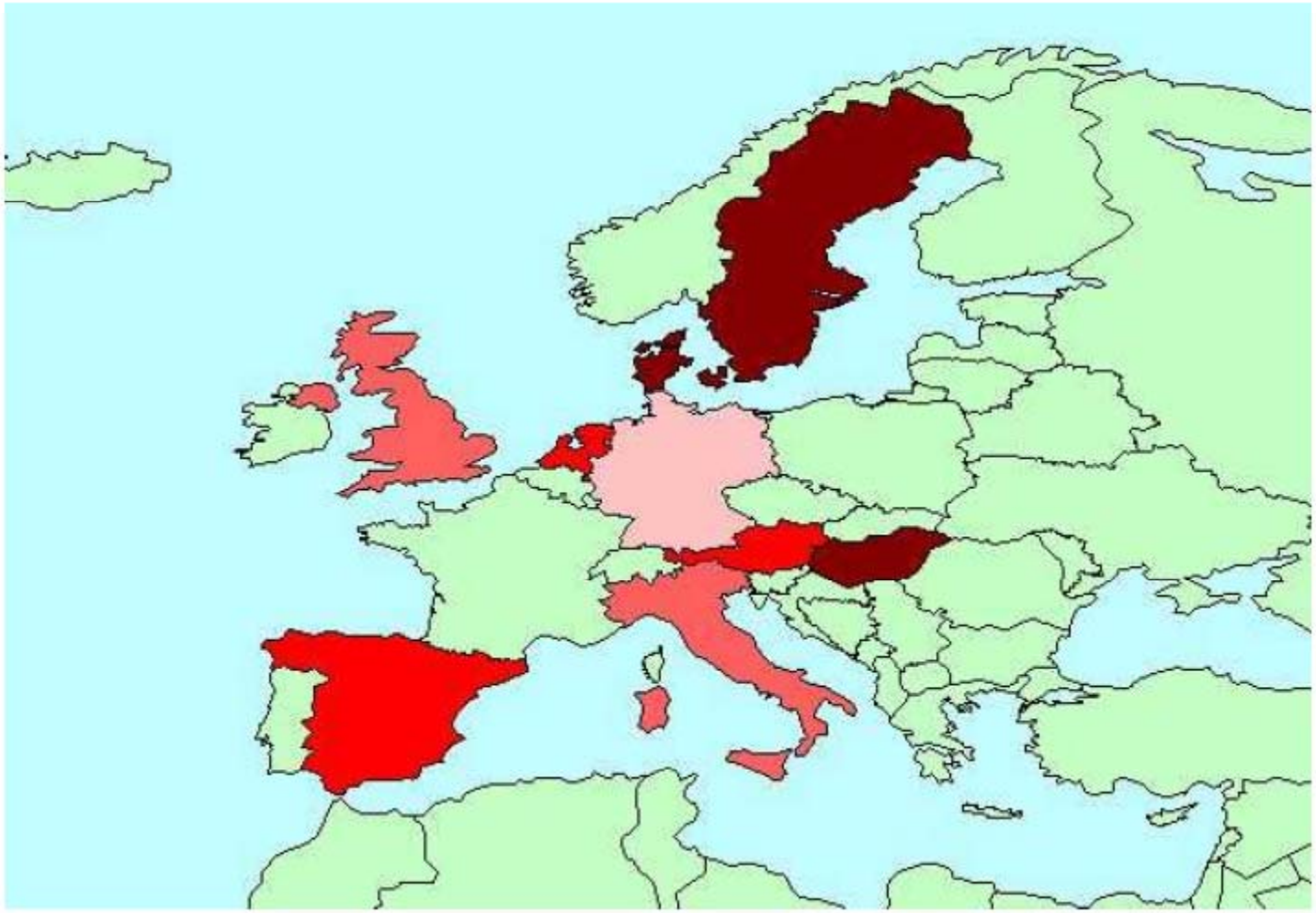

Figure 12: Gnome Online per capita in Europe

Lab Activities

- Work on team homework assignments
- Submit a weekly project progress report, addressing
  - The team number and a list of team members' names
  - A list of activities that have done in the previous week and the names of the corresponding contributors
  - A list of activities that will be conducted next week