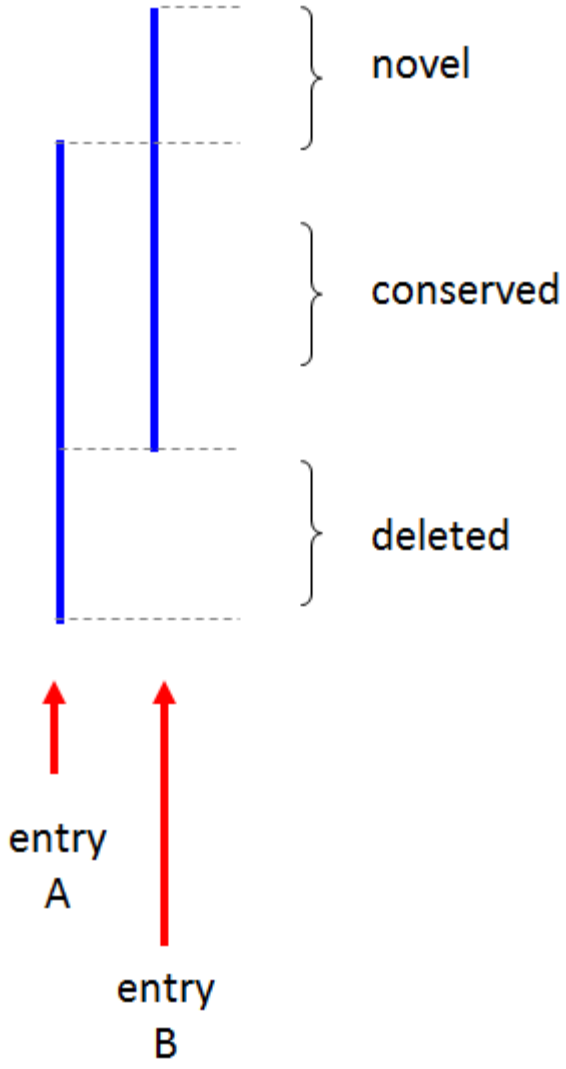
Step Charts

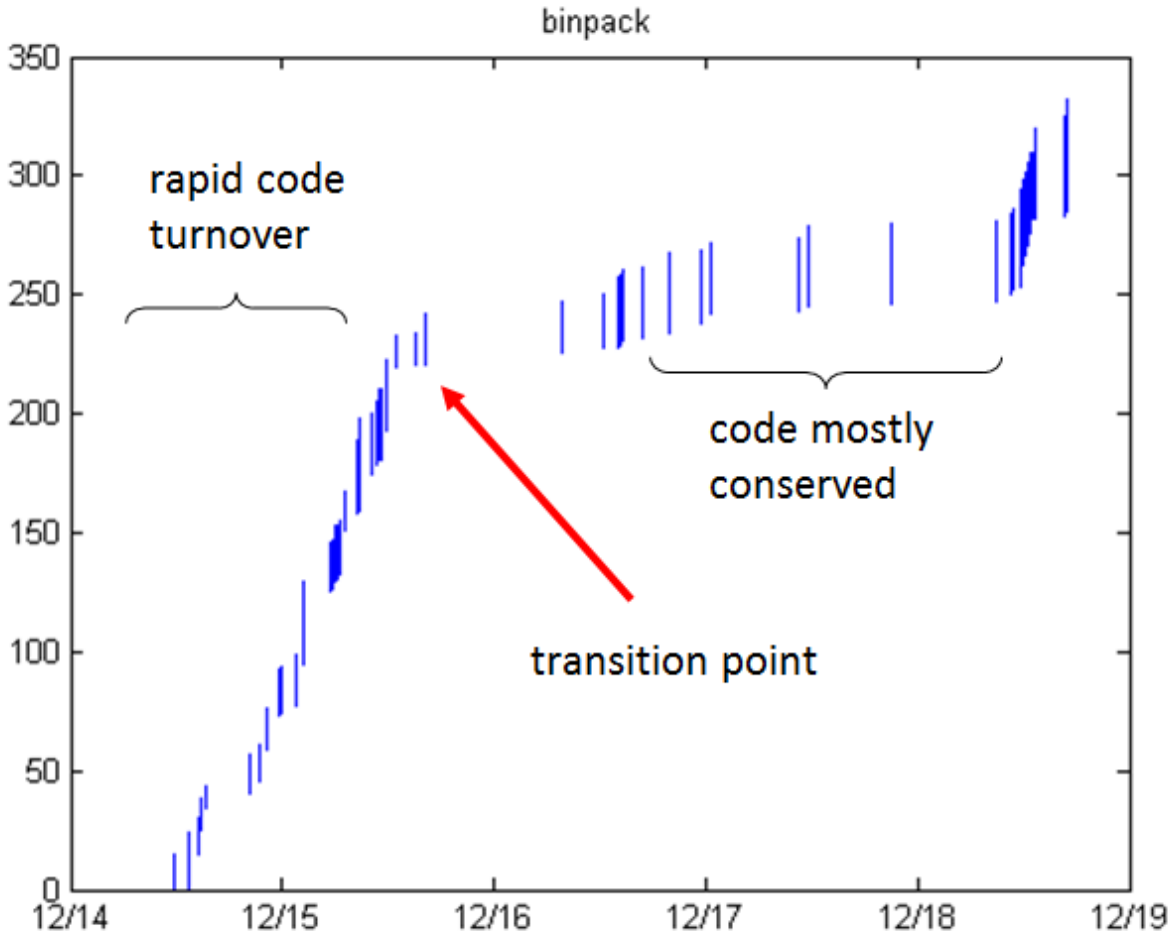
I was struggling to figure out how to show changes in the code without drowning in details. Eventually I stripped it down to an extremely simple model. Consider two contest entries A and B, where A was submitted before B. In a line-by-line inspection of A and B, we observe that

- some of the lines will be conserved (common to both A and B)
- some of the lines will be deleted (present in A but not in B)
- some of the lines will be novel (present in B but not in A)

Graphically we can represent this as shown below. Each vertical bar corresponds to an entry. The height is the number of lines of code in the entry, and the overlap between the two lines encodes the amount of conserved, deleted, and novel code.



This is what an actual contest step chart looks like. Note that the step chart is not showing all entries. It is showing only the leading entries. The x-axis correponds to the time at which a particular entry came in.



This step chart clearly illustrates some distinct regimes: one with rapid turnover of relatively short programs, and a later one with longer programs and smaller changes between leaders. Finally, there is a rapid succession of small tweaks at the very end.